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The CANADIAN THRESHERMAN AND FARMER

WINNIPEG CANADA
JUNE
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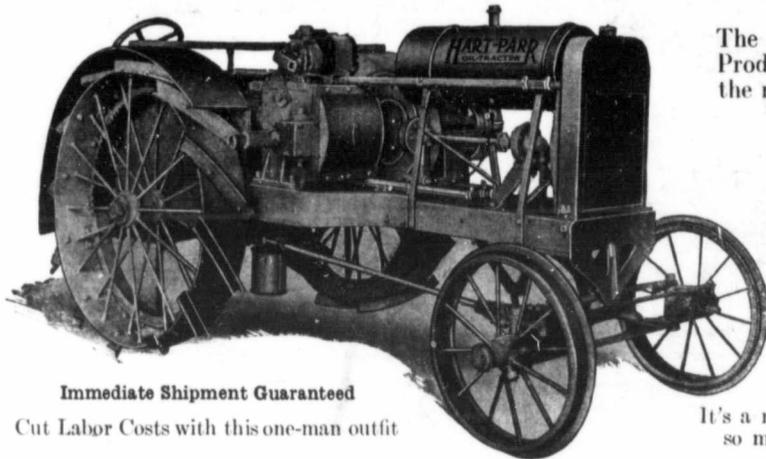
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Photo by Jessop, Gladstone, Man.

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The Ideal Three Plow Outfit

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The New Hart-Parr Tractor will do as much or more work on Kerosene as can be done on Gasoline. This is guaranteed.

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Write To-day for Fully Illustrated Folder.

HART-PARR OF CANADA, LIMITED

**WINNIPEG
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A Farmer writes :

The reason that horse plowing is not done as deep as tractor plowing is that the farmer is either shy a horse at plowing time, or it is too hot; so he lifts the plow out of the ground a notch or two. With the tractor it makes not the least bit of difference whether it is warm or cold; it will pull just the same and do deep plowing regardless of the heat or cold. Also with the tractor longer days can be put in and plowing done more nearly the correct time, and this is important.

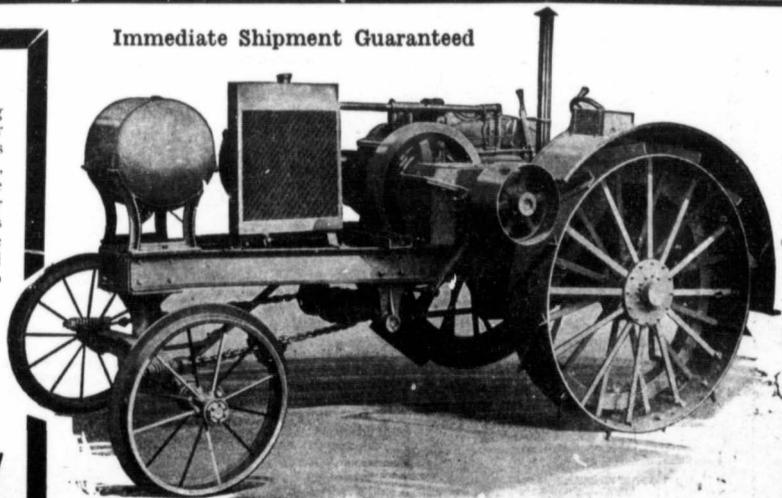
Waterloo Boy One-Man Kerosene Tractor

—In use the country over. They are increasing farm production and lowering the cost. They offset the existing labor shortage. They are returning their owners a profit.

Developing 12 h.p. at the drawbar and 24 h.p. at the belt, the Waterloo Boy Tractor has ample capacity to meet every power requirement on the farm.

You need a Waterloo Boy Tractor, and you need it **NOW!**

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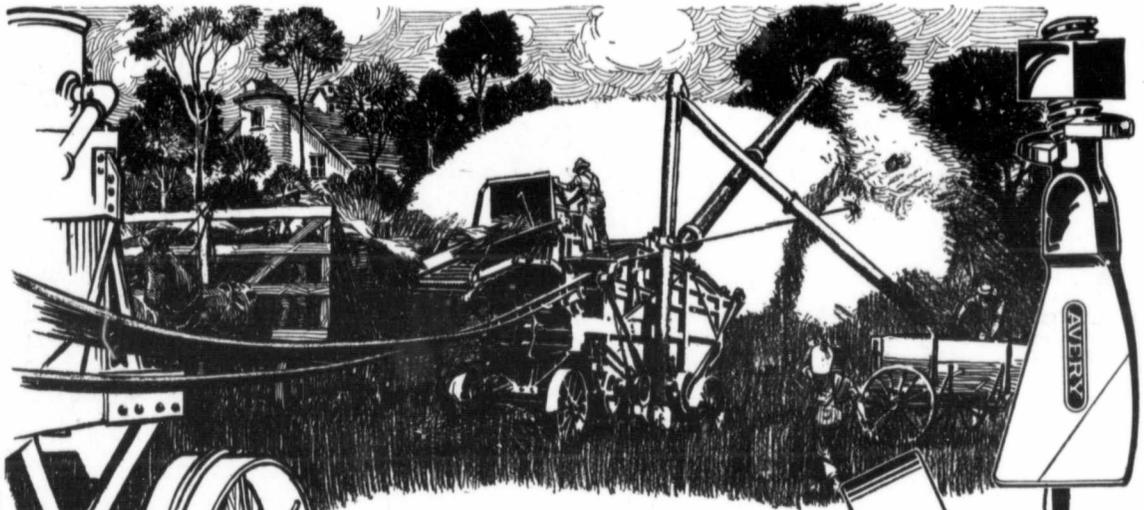
For Economic Operation, for Greater Power, Endurance and Reliability, you need a

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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.

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Waterloo Boy Kerosene Tractor of Canada, Limited, Winnipeg



These Teeth and Fingers Make Avery Threshers Champion Grain Getters

The big Jumbo tool steel teeth in the Avery cylinder and concaves thresh the grain out of the heads no matter what condition the straw may be in—wet or dry, tough or brittle. They are guaranteed for life against breakage. They are made of genuine tool steel. If you break one from any cause we replace it free.

The fingers in the I.X.L. separating device dip into the straw 6.375 times every minute. They spread the straw into thin layers—tear up the bunches—and the kernels drop into the grain pan below. In twenty-seven field

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With an Avery Separator you can guarantee your customers that you will save their grain—put it into their wagon boxes where they want it and not in their straw stacks.

No other threshers have grain saving fingers. No other threshers have teeth that are guaranteed for life against breakage. Only Avery "Yellow Fellows" and "Yellow Kids."

THERE IS A SIZE AVERY THRESHER FOR EVERY SIZE RUN

No matter how big or small a threshing run you have you can get an Avery Thresher that will exactly fit your needs. They are built in eight sizes, two "Yellow Kid" sizes, 19 x 30 and 22 x 36 inch, and six "Yellow Fellows," made in 26 x 40, 28 x 46, 36 x 60, 42 x 64 and 42 x 70 inch sizes.

All eight sizes have the same exclusive grain saving devices that made the Avery champion grain saving record. All eight sizes also have many other exclusive features such as adjustable concaves, both front and rear; adjustable grates behind the cylinder; paper center cylinder pulleys that grip the belt tighter than iron

or wood and reduce slippage; cone pulley main belt guides that keep the belt in line even on the windiest day or when the machine is out of line; solid rubber feeder webs that prevent waste of grain at the feeder; tank steel windstacker drums that won't wear out; and a windstacker fan with boiler plate wings that don't break.

These are only a few of the exclusive features that make Avery Separators "Job Takers" and "Money-makers" for the thresherman and "Grain Savers" and "Grain Cleaners" for the farmer.

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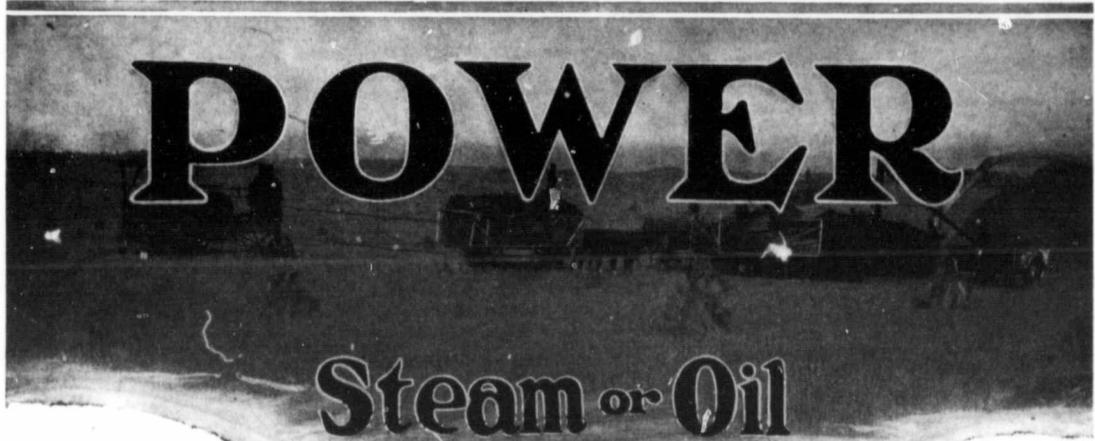
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Advance-Rumely Steam Engines

16, 20 and 25 H.P.
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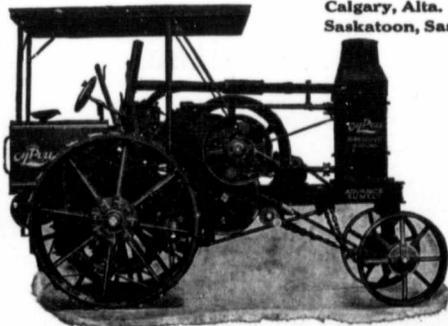
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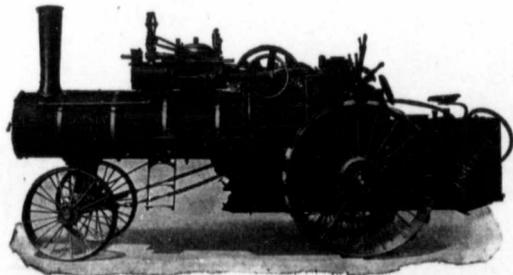
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16-35 OilPull Tractor



20H.P. Advance Rumely Steamer

ADVANCE-RUMELY



Vol. XXIII

WINNIPEG, CANADA, JUNE, 1918

No. 6

FORAGE CROPS

By W. C. McKILLICAN

Superintendent, Brandon Experimental Farm

WITH the development of the live stock industry in Western Canada the question of forage crops becomes each year a more pressing one. Cattle and other stock are introduced as a sideline to grain growing, and the by products and the waste products of the grain growing farm must necessarily be an important part of their feed. But it is not possible to feed satisfactorily on these feeds alone; something of a more varied nature must be provided. And, as a consequence, the question of forage crops is one that is coming more and more to the front in agricultural discussion and research. It is a rather difficult problem under our climatic conditions. The light rainfall and short growing season of the prairie regions in Canada are well suited to growing first class cereal crops, but the growing of forage crops is more easily accomplished where more moisture and a longer growing period lend their aid. Consequently the choice and development of the most suitable kinds

of crops and the learning and application of the best methods are of greater importance here than in districts where these crops are more favored by the climate.

Forage crops like all other plants are annual, biennial or

produce crops for a number of years from one sowing. All permanent hay land or pasture must be produced by perennial crops. They are, in all live stock producing countries, the mainstay in the production of hay and pasture.

HAYMAKING is an operation that must be done in a certain space of time that is short at best and that is always liable to be made shorter by bad weather. For this reason there is perhaps no farm operation in which system and efficiency count for more than in haymaking; yet throughout the hay-growing area more or less haphazard methods of haymaking are still very common. If ever there was an excuse for haphazard methods in any farming operation, it is not now. What are you doing in forage crops?

perennial in the duration of their life. These differences determine the methods used in growing them.

Perennial Crops

Perennial crops are those that

Grasses are the most widely used crops for this purpose, but perennial legumes, such as alfalfa and alsike, also play a most important part. In all crop rotations where more than one crop of hay or pas-

ture is to be grown the perennial grasses must be used. In the maintenance of soil fertility and physical condition they are of vital importance, as the fine turf-forming roots of the grasses renew the vegetable fibre of the soil and the nitrogen fixing properties of the legumes renews its fertility.

The growing of perennial hay crops in a dry country is beset with peculiar difficulties. The methods of moisture conservation which are used in successful grain growing cannot be applied to grass crops except at the start. Summer fallowing and other methods of cultivation are, of course, inapplicable to sod land. Therefore, suitable sorts must be chosen that will grow on the least possible moisture supply and conditions must be made as favorable as possible at the time of seeding down in order to give them a good start.

Brome Grass

Brome grass is the most drought resistant and most productive of the grasses that succeed in Western Canada. It produces hay of



Who said: "Labor shortage?" Query: How many horses and men does this outfit replace?

good quality when cut at the right time and properly cured. However, it has its faults which are well known, and are due to the same qualities which give it its value. It is difficult to kill out, and it spreads rapidly both by seed and root. Consequently it has become a pest on many farms. There is no plant grown in the West the opinions on which vary so widely. Thousands "swear by" it and equally as many "swear at" it. It certainly has a great value, and until something better is discovered is necessary for many parts of the West, but it must be used with discretion, especially in avoiding sowing it where it will get into shelter belts, gardens and other places where it is difficult to keep it under control.

Western Rye Grass

Next to brome grass, Western rye grass is the most drouth resistant and the heaviest yielding grass under cultivation in the West. It is a native grass and is perfectly hardy. It does not form a sod like brome grass, but forms detached clumps, hence it is not as effective in restoring vegetable matter to the soil, and is not particularly good for pasture. However, for hay production it is very satisfactory, giving a large yield of excellent quality of hay when cut early. If allowed to stand too long it gets very woody.

Timothy

Timothy is probably the most generally known of all grasses, but in many districts it might better be replaced by Western rye grass or brome grass, as it does not produce nearly as much hay as either of them when the seasons are dry. In districts where rainfall is plentiful, and in the sheltered bushy country it produces well, but on the open prairie does not yield enough. In regard to quality, it is generally considered the most acceptable hay for horses.

Kentucky Blue Grass

This grass is the great permanent pasture grass of the humid regions of the East. Where the rainfall is plentiful it is unexcelled for this purpose, as it produces an abundant growth of the finest quality of pasture. It is suited to limited areas in the northern parts

of our western country, but not to open prairie conditions. It is of little value for hay, as it grows too short and fine to harvest successfully, and does not produce enough even if all could be harvested.

Red Top has little value under Western conditions. It is suited to sour wet land, but is hard to start and usually kills out easily.

Orchard Grass, Meadow Fescue, Perennial Rye Grass, etc.—There are many grasses that are of great value in damp mild climates, but are not suited to the severe conditions of the Western Prairie. The settler from Britain is disappointed when he finds his favorites are not a success, but the sooner he recognizes that practically none of the grasses that

purple and yellow flowered alfalfa, and is variegated in color of flower. Others of similar type are Baltic and Canadian variegated; these are harder than the pure purple-flowered kinds.

Alsike

Alsike is a perennial clover, which produces a very fine quality of hay and is used much in Eastern Canada to mix with timothy for horses. It requires plenty of moisture, and on the whole has not been of much value in the West. Occasional reports of success with it have come from Alberta, but the areas where it will produce abundantly are quite limited.

Biennial Crops

Red Clover is the most valuable biennial hay crop wherever it will

used successfully. It has to be handled very carefully or it becomes woody. Most stock do not like it at first, on account of its bitter taste, but they can be trained to eat it.

Methods of Growing Perennial and Biennial Hay Crops

Nurse Crop.—All these grasses and clovers do best when sown alone, but they will usually start when grown along with a crop of grain. Which is the best policy depends on moisture supply. At Brandon we are able to get a good catch with a nurse crop, and the added yield gained by sowing alone is not sufficient to pay for the lost crop of grain. In drier districts sowing done would be necessary to obtain a successful stand of hay. The three common grain crops can all be bred for nurse crops. Wheat and barley are rather better than oats, being less rank and leafy.

Time of Sowing.—Best results are obtained from sowing the grass seed early. These plants all stand frost well. They may be sown along with wheat in the middle of April and suffer no more damage than the wheat itself is liable to. By early sowing they are given a better start and are better able to stand the dry weather of mid-summer.

Preparation

—Grasses and clovers start best when sown after summer fallow or corn. This ensures a good supply of moisture for the first season. When they are sown after grain crops the moisture is usually deficient, and the nurse crop is likely to draw it away from the tiny grass plants and leave them unsupplied.

Rates of Seeding.—In sowing alone the following quantities per acre are found to be about right: Brome grass, 10-12 lbs.; Western rye grass, 10-12 lbs.; timothy, 5-6 lbs.; Kentucky blue grass, 15 lbs.; alfalfa, 12-15 lbs.; red clover, 8 lbs.; alsike, 5-6 lbs.; sweet clover, 12-15 lbs. When mixtures are used the amount should be reduced, so that the total of the mixture is proportionately slightly greater than would be sown of the same grasses singly.

Inoculation for Clovers.—All members of the legume group require that the soil be inoculated with the bacteria which grow on



A Fine Manitoba Crop of Alfalfa.

Courtesy: Manitoba Dept. of Immigration.

succeed in the Old Land are satisfactory here, the better for his own success.

Alfalfa

Wherever alfalfa can be grown with success, I have no hesitation in saying that it is the most valuable hay crop that we have. Unfortunately it has not been a success everywhere. Its roots go very deep in search of moisture, and probably one of the chief causes of failure is an impervious subsoil through which they cannot penetrate. Alfalfa produces two good cuttings of hay per season in this climate, and where successful may be counted upon to double the yield of timothy. Being a legume, it stores nitrogen in the soil and produces a hay very high in protein, and therefore of special feeding value. There are several varieties and strains of alfalfa and a good deal of difference in hardness among them. The hardest is one known as Grimm. It is a cross between

it. It is not hardy in all parts of the West, but in some locations where the snow protects it, it succeeds. At the Experimental Farm we have had very good success, and use it constantly in our hay mixtures. Being a biennial, it is usually sown with perennial grasses. One crop of the clover is harvested, and then in the next year the grasses occupy the land. Grasses will yield better a second year on account of the clover having been with them as it adds nitrogen to the soil. It often ripens seeds when the aftermath is not cut or pastured, and in that way reseeds itself and prevents disappearance.

Sweet clover is a very hardy biennial crop. It will grow where scarcely any other fodder crop will, and hence has a value for land that is not well suited to the growing of fodder crops that are of better quality. It yields abundantly, and if cut at the right time makes a grade of hay that can be

their roots and convert the nitrogens of the air into the form they can use. Alfalfa is specially dependent on this and when sown on land that has not previously grown it should be helped by supplying the bacteria by means of nitro culture. Red clover and alsike are also benefited; sweet clover seems able to accomplish self-inoculation.

Annual Forage Crops

In this dry country with its severe winters annual forage crops are more easily grown than perennial, but they do not have the value as fodders, nor as soil improvers that the others have. Therefore they should be considered as supplementary to the perennial crops and not as the main source of fodder.

Grain Crops Cut Green.

The main source of forage of this type is obtained by cutting our ordinary grain crops in an immature condition. Two especially, oats and rye, are used for this purpose.

Oats are used for this purpose more than all other crops, and experimental work done at Brandon confirms the general opinion as to their excellence. They produce more feed than any other annual crop we have tried, and the quality is very good. A mixture of peas with oats adds to the nutritive value of the green feed, but in our experience it is very hard to get any peas worth considering as they are crowded out by the oats. The best grade of oat hay is made by cutting when the oats are fully headed, but have not begun to ripen.

Rye is also used for this purpose. The quality of the feed is not quite equal to oats, nor is the yield as great. On the other hand, it is ready to cut much earlier, and in that way is a more effective weed fighter. Rye sown in early spring is ready to cut for hay early in July, thus preventing weed seeds from ripening and allowing for a partial summer fallow after it has been harvested. Rye should be cut for hay immediately it heads out. If left later it rapidly deteriorates in quality.

Millet is decidedly inferior to oats as green feed, both in quality and yield. It has, however, a place in sowing very late after some other crop has failed. It

requires better prepared soil than either oats or rye, and does not do well if sown early when the weather is cool. Twenty to twenty-five lbs. of seed per acre is required. Common and Hungarian are the best varieties.

CONSERVING MOISTURE FOR 1919 CROP

(Experimental Farms Note.)

MOISTURE is one of the main controlling factors in crop production in the Prairie Provinces.

Three methods of conserving moisture are:

First, to have the ground in such a condition that the rainfall will soak down and not run off.

It is sometimes thought that plowing down a crop of weeds will have manurial benefits. Experiments conducted have shown that there is not only a loss of moisture due to the weeds using it, but it is difficult to cover the weeds and make them decay in a reasonable time. Then, too, the ground is left in a more open condition, permitting drying out. Experiments at the Scott Station have shown that plowing down green crops, such as peas and vetches, does not give as good returns as does incorporating barnyard manure into the soil.

Early plowed summer fallows, well cultivated with the duckfoot cultivator, will mean an increase in yield and the frequency with which the land is summer fallow-

bushy to warrant the use of a tractor for such a purpose.

We also disked and harrowed about 120 acres of summer fallow, attaching the disc to the engine and dragging three sections of ordinary straight teeth iron harrows. On this job it did perfect work. I am no expert nor mechanic to give you profuse details, but I think 50 to 65 cents per acre would be an average cost.

I should perhaps say that before I had this tractor I was inclined to be prejudiced against them for the simple reason that I was vitally interested in raising horses and perhaps the scarcity of these only induced me to invest. This is a mixed farming district, and immense fields of grain very uncommon, and I still believe the large outfit is not a success.

I was in the habit of doing all the plowing with a gang plow and five horses and a sulky with three horses. The former took the long rounds and the latter the short rounds. This took two men, whereas the tractor was operated by one man and he turned three furrows and pulled one section of diamond harrows behind that. The balance of the work was done by the brood mares and we had a very successful foaling season.

I can never foresee these tractors however displace the horse on the farm, but they most certainly are to be commended as a very useful service of power on these prairies. It is a fallacy to suppose however that all one needs to do is to "fill up" fuel and oil, throw in the plows and make a record—not so. I find there is a considerable "chore" around such an outfit if one expects to meet success in operating them, but one must bear in mind that when it is idle it is not to feed.

I might also say that the amount of work done and the way it is done lies entirely with the zeal of the operator. His main effort ought to be to get the wheels turning early and quit when it is dark. The fact that the tractor never gets tired permits of this, and not only so but one feels inclined to believe that this is perhaps the main advantage possessed by the tractor over the horses and it is these extra

(Continued on Page 58A.)



A Sea of Red Clover.

Courtesy: Manitoba Dept. of Immigration.

Second, to keep the surface of the soil sufficiently fine and loose that the upward movement of the water is checked two or three inches from the surface and held there.

The third method of conserving moisture is to destroy all weed plants on cultivated ground.

Most farmers summer-till a part of their farm with two objects in view, to store up moisture and destroy the weeds. Experiments at the Scott Station have shown that early plowed summer fallow will store up more moisture and give heavier crops the succeeding year than late plowed fallows. Plowing the middle of May has given 3 2-3 bushel more wheat per acre than plowing in July. June plowing has given 2 2-3 bushel more than July plowing. This increased yield from early plowing is due to not only storing more moisture but to less loss of moisture from weed plants, that grow up on the late fallows.

ed and the number of weeds present will be determining factors in regulating the amount of cultivation necessary.

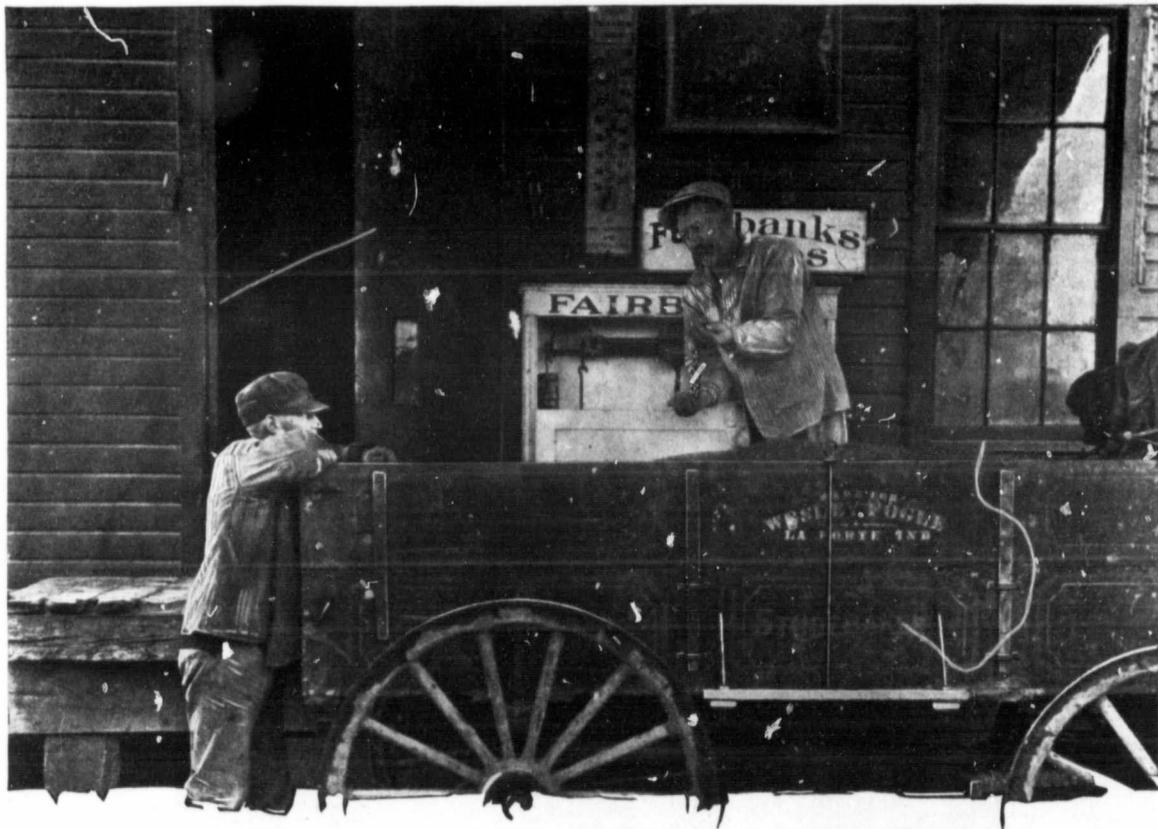
It might be pointed out that where summer fallowing alternate years is practised and there is a reasonable amount of moisture the land will not stand the same amount of cultivation that land will that is only summer fallowed once in three or four years. Especially is this true in the northern districts where early autumn frosts prevail.

A HORSEMAN'S TESTIMONY

Box 33

Strome, Alberta, Jan. 24, 1918.

REGARDING farm tractors, I may say I have an 8-16 Mogul Tractor. The work principally accomplished by this machine has been plowing, and this proved very satisfactory. We also used it in seeding and dragged two seed-drills, but I consider this district here just a little too



"This grain went through a RUMELY, that's sure - it's clean"

YOU ought to see some of the stuff that comes in here—full of chaff, broken stems, seed, dirt. And they wonder why they get "docked."

And it looks to me as though a machine that does that kind of cleaning, must be wrong from the start. How about the grain that "goes over"?

What gets me is how a man who raises and harvests a good crop will let a poor machine do his threshing.

I can spot a Rumely Ideal's work every time and sure like to handle it. I only wish all threshers did the same kind of work.

—especially these days when every farmer's motto should be "produce more and save all."



ADVANCE-RUMELY



Here's Why the RUMELY IDEAL delivers a clean job

The Rumely Ideal traveling chain rake that delivers the straw to the rack in a *steady, even flow*—and the sure acting straw rack with its *six sets of lifting fingers*—couldn't do the trick alone. It takes the Rumely system of cleaning to complete the perfect job of threshing that the Ideal turns out.

Extra long chaffer is the first reason—seven feet of chaffer length in the grain pan alone—an additional chaffer in the cleaning shoe. This gives the Ideal *more chaffer area* than any other separator made.

The value of that *extra grain pan chaffer* is plain. It takes care of the coarse stuff—the straw joints and broken stems. It relieves the shoe of that work, prevents overloading, choking up and *lost grain*—allows the shoe to do a perfect job of cleaning without waste, no matter what conditions may be.

The grain pan chaffer and cleaning sieve are adjustable to any kind and condition of grain, while the machine is in motion.

Then notice how that important item of the wind blast and its control is taken care of in

the Ideal. The blast is obtained from a four-winged overshot fan, and the force of the blast regulated by shutters, *adjustable from the outside*.

To direct the blast where you need it, there's a wind board, *adjustable from the outside*. The wind can be concentrated on the front, rear or over the entire length of shoe and sieves, according to the condition of the grain. And to distribute the wind evenly, you'll find vertical wind distributors behind the fan.

Last, but not least, there's the cheat screen. It's in the bottom of the shoe and takes out all the sand and foul seed.

So the man who owns a Rumely Ideal not only saves all the grain—but cleans it fit for seed.

Built in six sizes—Ideal Junior 20x36 and 24x44
Ideal 28x48, 32x52, 36x60 and 40x64

ADVANCE-RUMELY THRESHER COMPANY

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Calgary, Alta.
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ADJUSTABLE CHAFFER IN SHOE

ADJUSTABLE CHAFFER

ADJUSTABLE WIND BOARD

EXTRA GRAIN PAN CHAFFER WIND DISTRIBUTORS



THE CANADIAN THRESHERMAN AND FARMER

CANADA'S LEADING AGRICULTURAL MONTHLY



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June

The "Bohunk" Farmer

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 is 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."

I MET him by the jitney bar of the city's big department store near the noon hour. Wearing a well ventilated suit of overalls and sadly in need of a barber, he didn't look "like ten cents." But I knew that he owned a section of Manitoba, and as a man who owns a section and contents himself with a cheese sandwich and a cup of coffee is not to be trifled with, I spoke to him after the manner of one who at least approaches his equal, most probably his superior in a hundred and one points. Knowing all the risk I took, I even invited him home to lunch or to supper. For the reason that the women folk don't like to offer certain guests the mere gobbets of pot luck, I blew a breath of relief when he declined. "Mercy, no," he answered. "My wife would flay me if she knew I sat down like a bohunk at any decent woman's table."

He would not budge, so I bought him a cigar and we hid ourselves to a seat in the Central Park; one of those democratic benches which are the common property of bohunks, bolsheviks and baronets. I would like to give you his name but he doesn't

advertise. The nearest I can lead you to him is to say that he is George B— of K—, Manitoba, not found on the honor roll of any organization of farming interest, but nevertheless one who in his own way is a more lively wire to the business end of production than many of its more noisy exponents. He was the first man from the West I had met that week who had not a complaint of some sort. Crops looking A.1. Wife and the three girls in the pink of condition. The two boys in France all right—one wounded but "getting on fine."

Knowing the man's enormous capacity for work and for getting others on the move, I "presumed" he had come to the city in search of hired help. But there I was wrong. "No: the youngest boy, (I had forgotten he had another) was coming up to Minto Street Barracks and I took the chance to accompany him; *we'll maybe no see him again for a while.*" Exemption? "Exemption be d—d!" were the exact words that greeted my suggested inquiry; and this from a Presbyterian *deacon!* His first born volunteered for active service on 25th of August, 1914; his second enlisted as soon as seeding of 1915 was finished, and now the youngest spark of this great fighting stock gets into uniform on the second day following his nineteenth birthday! And there was no complaint or grievance and I never saw a prouder heart gleaming through such a defence work of grime and whiskers.

I have space only for the merest fragment of what information of this man's affairs I dug up in this brief conference. Roughly, these are the main facts: Notwithstanding his contribution to the military necessities of the hour, he had something like 115 acres more land under crop this year than he ever had before, 65 of which was new breaking. He admitted putting in a considerable acreage of night work as the seeding season had been so good and he feared it might break up suddenly. But then he had gone to the help of two neighbors with both engine and horses in which work the *oldest girl handled the tractor* and the boy and himself the horse teams. The "whole dam family" could run the tractor which the young folks "took" to as they took to their playthings. It was the second he had bought—the first being "a big white elephant."

We discussed the war and we discussed a lot of nearby things connected with the war and the winning of it, but as memory reviews the line of our conversation, I can recall very little of this man's statements which were matters of opinion. It was a simple relation of facts, of what he had been doing and proposed doing to meet the times as far as he, a representative working farmer could on his own domain; and these were forthcoming only in response to a direct fire of questioning and cross-questioning. The only voluntary statement he made was a tribute to his wife's help both in the field and in the home since the boys left the farm. (By the way I found that the money he and his boy and girl had earned from the neighbors whom they helped to "seed" is to be divided between the Red Cross and the local "Prisoners of War" fund).

We parted at a quiet corner of the park, and having gone a few paces on my way, I involuntarily turned to regard that retreating unmilitary figure of the self-styled "bohunk" farmer. There goes a man for whom the future has no terrors! A self-contained, sincere soul who recognises no "trouble" he cannot outflank. With no better "start in life" than his health and his mother wit, there's nothing in credit or service he cannot command from any soul who knows him. Who does his own chores and can spare a bit for his neighbor. Who is less interested in governments and elections than in keeping himself and his household gods clean and at concert pitch. Who—but we're at the bottom of the page. This is not an "editorial" It's just the story of a simple man—for children who have "more need of models than criticism." And we're all children combing the world for the models that move us.

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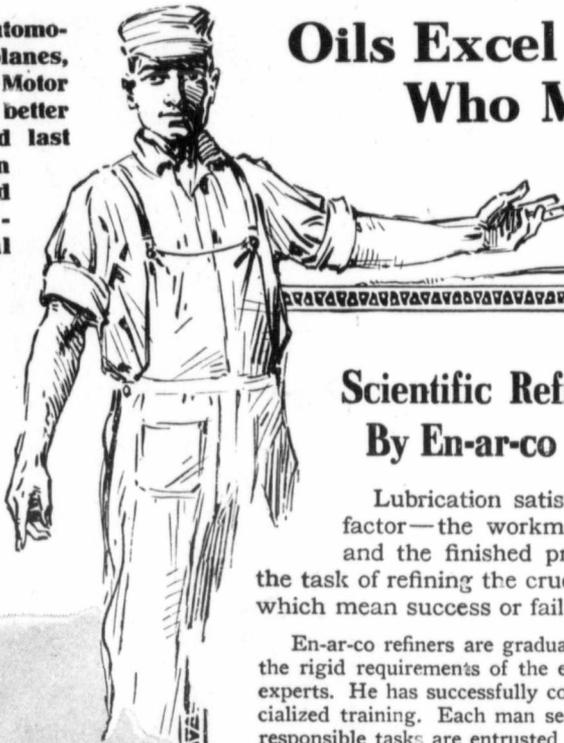
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USING THE TRACTOR FOR BELT PURPOSES

By ROBERT WHITEMAN

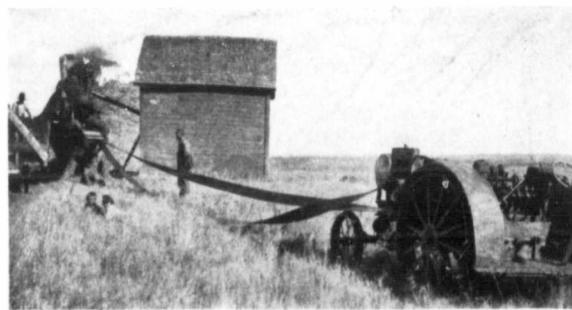
IN purchasing an engine, and especially one of the light tractors, we expect that it will do a great deal more than plow. Belt work always increases as time goes on and one has found that the engine can be depended upon for nearly every job around a farm. All tractor manufacturers make their engines with this general purpose standpoint in view, but not all attain the object sought. In order to get best results on the belt, it must be an easy matter to line up to the machine to be driven. Some manufacturers seem to add the belt pulley as an afterthought and make it extremely difficult to get the engine pulley in line for belt work. Not long ago a splendid article appeared in *The Canadian Thresherman and Farmer*, giving various devices for lining up the various types of engines which should be of great help to those who have engines of the types illustrated. But why make it necessary for the farmer to be forced to stake down the engine to prevent its turning sidewise or to carry a jack around to shove the engine over in order to line up the belt? In threshing time, especially, with only a limited number of days suitable for work, we cannot afford to lose two or more hours a day in setting the machine. Why manufacturers persist in fitting a perfectly good engine with an inconvenient belt pulley, has caused considerable warm feelings by the man out in the field. True, many light tractors are purchased for plowing only, but in order that the farmer be fully satisfied with his investment, it must also be equipped with a pulley easy of access.

Practically all small tractors are high speeded, ranging from 600 to 1,200 revolutions per minute. This means a small belt pulley ranging anywhere from 8 to 20 inches. In order that the belt stay on a pulley of this size, it must be almost perfectly in line with the driven machine. When it is the intention to do some belt work with an engine of this type: For quick setting, the pulley should be on the same side as the steering wheel in plain sight of the operator in order that he can sight over it to the pulley which he wishes to drive. This means quick lining up and will save a new engineer a good many hours of time.

Size of Pulleys

A gas engine is usually made to run at a set speed. Some few makes are so arranged that while the engine is still running at its

set speed the pulley can be run at a wide range of revolutions per minute. With this type of machine you are still getting the maximum power from your engine even though the pulley is running fast or slow. This means that it can be attached to any machine without necessitating a change of pulleys. Other makes of engines, however, have very little range of speed, and when it is changed do not develop the rated horsepower. This means, then, that if one has a separator a proper size pulley must be obtained before he can expect satisfactory results. Otherwise, a uniform speed cannot be kept. The engine may be slowed down while the separator is running empty to run properly, but once the grain starts going in,



F. K. SCHMITT of High River, Alta., making money for himself and a neighbor with his tractor and belt

there is a slacking of speed. On the other hand, one may set the speed while the separator is full, but once it is empty the speed is such that the separator almost racks itself. The writer had an experience of this kind when trying to fit a high speed engine to a separator with a belt pulley too small. The result was that even though the engine had plenty of rated horse power it was constantly laboring owing to its being run too slow and the separator speed was very uneven. A separator being run in this way cannot be expected to do first class work owing to the uneven speed it is bound to throw over. If one has a small engine belted to a cream separator, the proper size pulleys must be obtained or the separator will not skim clean. All machines are made for a rated speed, and we can obtain that speed only through proper size pulleys, if we want satisfactory results.

Figuring Size of Pulleys

The following rules should enable anyone to figure out just the right size pulley for his requirements. The speed of the

engine is always known also the size of the pulley on it. Supposing then we have a separator and the manufacturers state its speed is 1,000 revolutions per minute, what size pulley would be necessary to run it at this speed with the engine running 500 revolutions per minute, the engine pulley being 20 inches in diameter? The speed of the engine multiplied by the diameter of the engine pulley, divided by speed which separator is to run, will give the sized pulley required for separator.

Taking the above example:—
Engine—500 rev. by 20 pul. diam.

Separator—1,000 rev. per min.
(10-inch pulley for separator)

When one has an engine with

the belt's life by half and very often more than that. With belts at the present price it pays to take good care of them, and when buying a new one be sure it is wide enough for the load it must carry.

There seems to be quite a diversity of opinion among power users as to which way a belt should be placed on a pulley. Experienced threshermen, however, tell us that the hair side should be next to the pulley because the other side stretches more than in keeping an equal strain on the fibres of the leather. This means lengthening the life of the belt. More uniform stretching occurs, reducing slippage, and a belt placed this way does not need re-lacing so often. A single belt one inch wide will carry approximately 33 pounds per square inch. A double belt, one inch wide, will carry 83 pounds per square inch. To find the strength of belt:—

D—Diam. of large pulley

N—No. rev. per min.

W—Width of belt

Using as divisor 2,750 for single belt, 1,925 for double belt.

Example:—An engine has 30-inch pulley, speed 250 rev. per minute, uses 6-inch belt (double).
30 x 250 x 6

—————=23.5 h.p. delivered to
1925 driven machine

To find width of belt—Where a man has bought machinery and wishes to find the belt suited to the power required, it works out just as simply. Supposing the engine listed above was a 20 h.p. engine. Example:—

20 x 1925

—————=5.13-inch belt

20 x 250

We see from the above example that a 6-inch belt furnishes nearly 3 horse-power more than is necessary, making a good safe reserve power and greatly lengthening the life of the belt. Another precaution is that of fitting the pulley properly for its load. Large pulleys have sufficient grip to insure against slippage, but a small pulley carrying much of a load must be lagged with leather because the pulley surface is so small that unless a very thin belt is used, slippage cannot be prevented.

When lacing a belt much power can be lost by not cutting both ends straight across. Leather or rubber belting is always stretching more or less particularly when exposed to weather conditions. Also those requiring frequent removal, as on separators, stretch very much, due to putting them on and off the pulleys so often. An unevenly cut belt soon

variable speeds, the present separator pulley does not need changing. We have then to find the proper speed at which to set pulley on engine. It works practically the same way as the above illustration, except we use the separator speed in pulleys instead of the engine. Supposing separator is to run at 1,200 and has a pulley 8 inches in diameter and your engine has a 15-inch pulley?

Separator—1,200 x 8

—————=640

15

This formula may be used for any belting purposes, is a very simple one to remember, and every power user should memorize it.

Belting

Once we have our pulleys sized properly, the next thing is to see that our belting is of the right size and thickness. Many seem to think that a belt is suitable so long as it runs, not paying any attention to power it is supposed to transmit. If the belt is too narrow or too thin it will slip, and in order to overcome this we tighten the belt, and this throws a great strain on it and also on the bearings of the machine. It short-

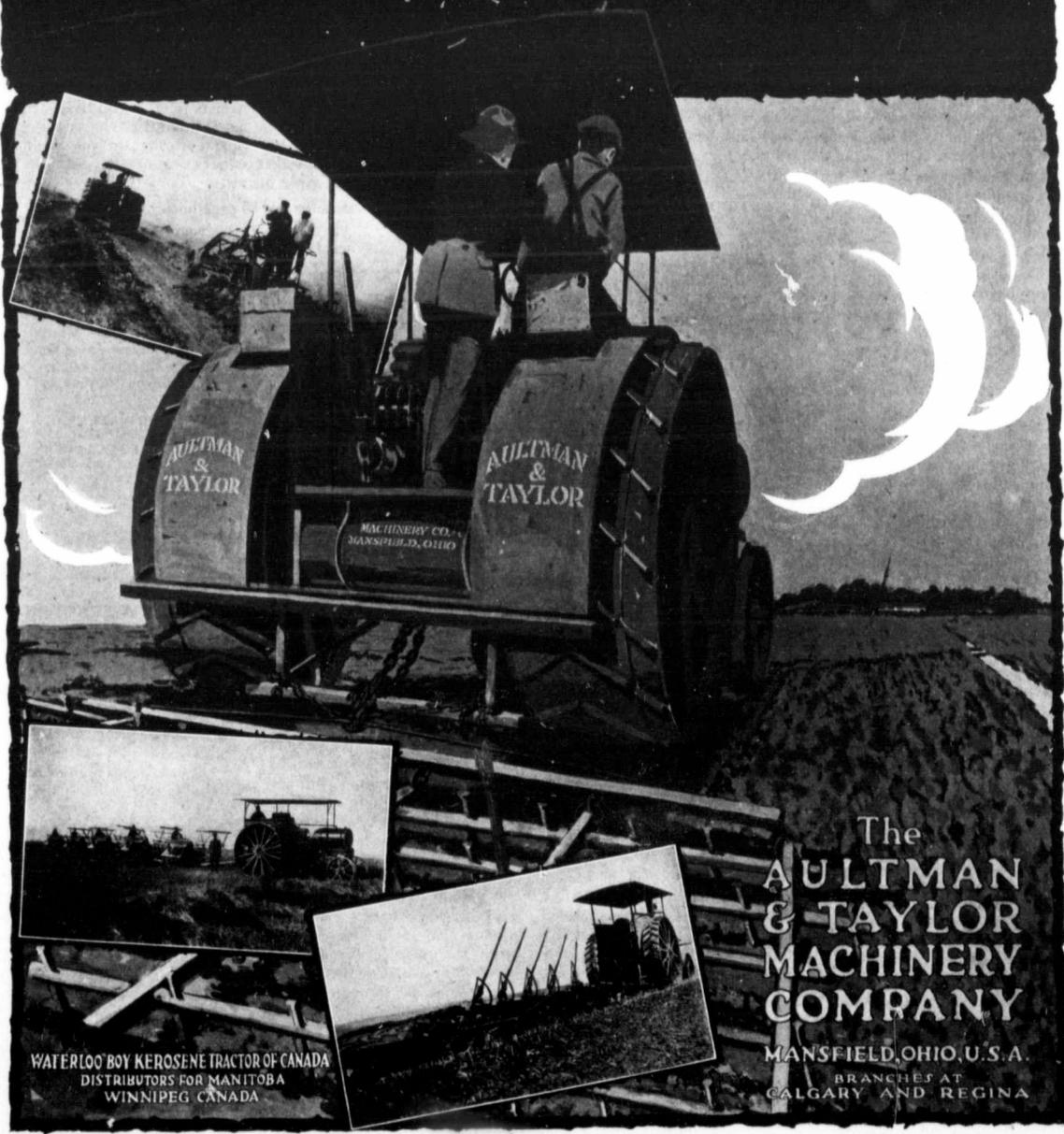
AULTMAN-TAYLOR KEROSENE TRACTORS

A tractor performs strenuous work; therefore you should consider power and sturdiness in your selection. Quality must be built in to get service out of the tractor. Don't be fooled by price and pay double the original cost in repairs and disappointment.

Put a sturdy Aultman-Taylor Kerosene Tractor to work on your farm in the field, on the road, or in the belt, and

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stretches out of shape. The tendency always is for a belt to work toward the crown of the pulley. This, with a properly cut belt, means smooth running and practically no trouble with the belt coming off; but where one side is longer than the other we find it almost impossible to keep the belt on, especially with small sized pulleys. A small try square is a very handy tool to have when lacing a belt, and with it both ends may be cut exactly square.

Lacing a belt is considerable of an art. Nearly anyone can make some kind of a lace, but watch an old thresherman and note how neatly and rapidly he does the work. In order that even distribution of the lace is made, care must be taken to keep each ply of lace even in tension. Otherwise, in a short time, one side will be longer than the other, and this means that the belt will work over past the centre of the pulley and oft-times, perhaps, only one-half its bearing surface is really on the pulley. When one considers that a belt must carry so many pounds strain, it becomes apparent that one running like this cannot deliver full power for any length of time.

A belt up to three inches in width can stand single lacing because it is not required to carry a very heavy load. Over three inches in width needs two rows of holes, and when we get up to really heavy power belts, three rows of holes are sometimes necessary. In making the holes be careful to see that they are evenly spaced and exactly opposite each other. If this is not done, the belt will not run straight. Also where double holes are used it must be remembered that these back holes will, when the time comes to shorten the belt, become front ones. They should then be as evenly spaced as the front ones are. In lacing, the only care is to see that the laces on the under side are straight across, crossing over on the top side only; that the lace is drawn tight, evenly throughout, a square knot tied at the finish, which should be gently tapped with the hammer to prevent its coming loose. Where it is necessary for a belt to pass over a tightener instead of a knot a slit is cut in one end of the lace, a small notch made in the other end which is pulled through the slit, given a half turn and flattened with a hammer. This form of knot very often holds better than a real knot where the belt is rapidly passing over a small tightener.

Remember

Success in business depends not so much upon lying awake nights as in keeping awake daytimes.

How to keep your Ford engine running like new

Every car has different lubricating problems. In the Ford the special problem arises from the exclusive and ingenious construction by which the disc clutch and transmission gears are enclosed with the engine.

In other makes of cars, these three parts are separate, and the oiling requirements of each are met by a different lubricant.

In the Ford, one oil must lubricate all three of these parts—the engine, transmission gears and the disc clutch.

Faulty lubrication causes 90% of trouble

A careful analysis of the causes for trouble in the Ford engine shows that improper lubrication is to blame for 90% of them. This is largely due to the sediment formed by ordinary oil which breaks down under the heat of the engine. This sediment crowds the oil with lubricat-

ing qualities away from points where it is most needed, causing friction and rapid wear.

The ideal lubricant for your Ford

Ford owners are rapidly learning that Veedol Medium is the ideal lubricant for their cars.

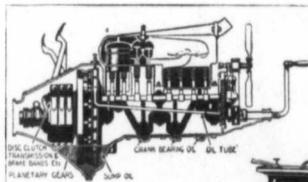
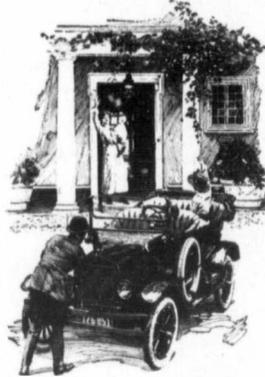
It is heavy enough for the engine and gears, yet light enough so that the clutch does not drag.

Ordinary oil evaporates rapidly under the heat of the engine. Ford owners get 25% to 50% more mileage per gallon with Veedol, because Veedol not only resists destruction by heat and minimizes the consequent formation of sedi-

ment, but also reduces evaporation loss to a negligible quantity.

Send for this 80-page book on lubrication.

The most complete book ever published on automobile lubrication, written by a prominent engineer. Contains Veedol Lubrication Chart, showing correct grade of Veedol for every car, winter or summer. Send 10c for a copy. It may save you many dollars.



The famous Sediment Test, showing how Veedol reduces the formation of sediment under engine heat 80%. The left-hand bottle contains ordinary oil and the right-hand bottle Veedol, both taken after 50 miles of running.



In the Ford power plant the engine, transmission gears and disc clutch are ingeniously enclosed together. One oil must meet the different lubrication requirements of these three important parts. Veedol medium is specially made to do this.



TIDE WATER OIL COMPANY
VEEDOL DEPARTMENT
1924 Bowling Green Bldg.
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Branches or Distributors in all principal cities of the United States and Canada

SOME COMMON SENSE HERE

Windthorst, Sask.,

May 27th, 1918.

To the Canadian Thresherman & Farmer.

HAVING read quite a lot about small farm tractors, I would like to express myself, as I see it, from a farmer's viewpoint. One can glean a lot of information from the different writers re the problems confronting us to-day.

I have had considerable experience with big and small tractors, and where a farm is suitable for tractor work, they are O.K. We have a 10-20 Mogul, and it gives good results both for plowing and tillage.

But I consider the operator has to be well schooled and be mechanically inclined to do the machine justice. Things will crop up that need careful con-

sideration to know just what is best for remedy.

Our government has been doing some fine things with a view to economizing and conserving. I admire them for commandeering all wheat in farmers' hands, as it is all needed for our Allies. I think that most farmers are conscientiously patriotic, but are handicapped in more than one way. When a farmer goes to buy an implement, the price has not been set. He has to pay just what the manufacturer asks, and those things are as vital as the grain itself, whereas our grain produce has a set price. There are as many farmers going bankrupt to-day as before the war. No doubt some go through ill management, but the majority of cases show too little produce and too much for equipment.—Yours respectfully,

William C. Barber.

DRIVE A TRACTOR

(From "Farm and Fireside")

When it's ninety in the shade,

Drive a tractor.

When the seed bed must be made,

Drive a tractor.

For its hamestrings never burst,

And when dogdays are the worst,

It will hardly have a thirst;

Drive a tractor.

When the ground is hard and dry,

Drive a tractor.

It will plow when horses die;

Drive a tractor.

Laughs at hornets, flies, and bees,

Never known to have disease,

Saves you veterinary fees;

Drive a tractor.

He—So young March and his father are carrying on the business? She—Yes. The old man runs the business while young March does the carrying on.

SEAGER WHEELER'S NEW WHEAT

A Wheat That Yields More Bushels Per Acre and Ripens Earlier Than Marquis

TH E name of Lord Roberts will be associated for all time with the highest and best traditions of the British and Anglo-Saxon people. It is quite fitting that the name of this great soldier should also stand for the best in agriculture. A new variety of wheat of great promise has been named after Lord Roberts. It is also particularly appropriate that this new wheat should be introduced to the farmers of Western Canada at the present time.



SEAGER WHEELER

So acute has become the food situation that the farmer on his farm in Western Canada to-day is as important a factor in holding back the enemy as is the soldier in the trenches. The best authorities in the Empire declare without hesitation that unless the food supply is sufficient the Allies cannot possibly win. The necessary food supply must come from Canada and the United States. Wheat is the chief requirement, and whatever will tend to increase the wheat crop will help to beat the enemy. In discovering and developing Red Bobs wheat Seager Wheeler has contributed more than any other farmer to the great work of increasing the food supply on the farms of Western Canada.

Great efforts have been made to secure an early ripening strain of Marquis wheat. No person has contributed more towards this than Seager Wheeler, of Rosthern, Sask., the world's most famous wheat grower. Mr. Wheeler has four times captured the world's international championship with Marquis wheat. He has taken more prizes for growing wheat than any other man in the world. By his experiments

he has vastly improved the quality of Marquis wheat, but he and all others have failed in their efforts to develop an early ripening strain of Marquis that still retains all the other good qualities of this standard wheat.

The Story of Red Bobs

But while failing to develop an early ripening Marquis, Seager Wheeler has discovered and developed an entirely new wheat with all the good qualities of Marquis and, in addition, ripens from six to ten days earlier than Marquis. This is his famous new wheat, Red Bobs.

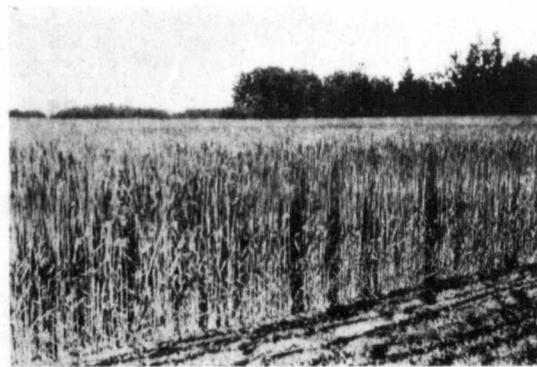
The story of Red Bobs is extremely interesting. In the year 1905, a plant breeder named Wm. Farrer, of New South Wales, Australia, sent to Dr. Saunders at the Central Experimental Farm, Ottawa, a sample of what he called White Bobs wheat. He stated that it was obtained by cross breeding between an unnamed variety of wheat and a variety of hulless and beardless barley known as Nepal. Whether or not this remarkable story is correct, the White Bobs wheat was white in color and absolutely

it a commercial success, because of the prejudice against white wheat and the discrimination against it in the Canada Grain Act. Under the Canada Grain Act nothing but hard red wheat can receive a high grade.

In 1907 Dr. Saunders introduced White Bobs wheat at the Experimental Farms at Indian Head, Sask., where it was grown for several years, but was finally discarded, as it still remained white. Seager Wheeler, having read of this new Australian wheat, secured a ten-pound sample from the Indian Head Experimental Farm and seeded it. In 1908 it produced 60 bushels per acre on his plot. He found it to be considerably earlier than any other hard wheat he had ever grown. It was to Mr. Wheeler's mind the nearest to the ideal wheat for Western Canada, if it could only be developed to be red in color.

Scientific Search Rewarded

Seager Wheeler is a man not easily discouraged. The new wheat had everything but the color. He continued to grow it on his plots the second year, determined, if possible, to develop



beardless. It is, in fact, the only absolutely beardless wheat grown in Canada to-day.

Dr. Saunders tested the White Bobs wheat for a couple of years on the Central Experimental Farm. He found it considerably earlier than Marquis in ripening, and in milling and baking tests it proved to be equal to Marquis. It remained, however, a white wheat, very hard, and possessing a good straw and head. It was a splendid wheat in everything but color; being white, however, it would be difficult to make

a red strain. In 1909 his search was rewarded, while examining some heads on his White Bobs plots just before harvest, he discovered one with red kernels. Further careful examination of the whole of his plot revealed two or three more heads containing red kernels. The straw, the plant and the head in each case had all the desirable characteristics of the original White Bobs. He allowed these heads to ripen and carefully preserved the seed from them, which he seeded next year in small head rows, and anxiously



The Late Field Marshal EARL ROBERTS

watched to see if they would reproduce red seed.

In most cases the progeny of the red seed came back red and some of it was very early in ripening. By the process of elimination, Mr. Wheeler selected the best red heads that came true to type and ripened the earliest; from these he developed what he has since called Red Bobs wheat.

Mr. Wheeler was naturally greatly pleased with his discovery, but he was determined to be sure of the new wheat before giving it to the world. He began immediately making comparative tests with Marquis and Red Bobs.

In 1912 he sowed the two wheats on plots side by side on old land on the 22nd day of May. The Red Bobs was ripe and was cut ten days earlier than the Marquis, and turned out a beautiful sample. An early frost got the Marquis before it was ripe and it was frozen black.

In 1913 hail destroyed Mr. Wheeler's entire crop. A few days after the storm as he was examining his plots he found a few heads of his Red Bobs and Kitchener wheats still standing. These he ripened and secured seed for the following year. While Mr. Wheeler does not claim that Red Bobs straw is proof against hail,

it was remarkable that even a few plants were standing when the storm had passed.

A very severe test of Red Bobs was made by Mr. Wheeler in 1915. He sowed the wheat on stubble land in the first week of June. Even under these conditions his Red Bobs wheat ripened



well and yielded him 28 bushels to the acre.

"International Sweepstakes"

The only time that Mr. Wheeler has exhibited Red Bobs was at the International Dry Farming Congress at Peoria, Ill., in 1917, but exhibited a sheaf only and not any threshed grain. The sheaf won the international sweepstakes. Mr. Wheeler has selected from his plots heads of Red Bobs wheat that contained as high as 95 perfect kernels. He has never been able to find any such number of kernels in a single head of any other kind of wheat.

Prof. Bracken at the Saskatchewan University, Saskatoon, tested Red Bobs on his plots in 1917, and found that this wheat ripened nearly a week earlier than Marquis. The season was very dry which would narrow the spread in ripening between the different plots of wheat. At the School of Agriculture, Vermilion, Alberta, a small plot of Red Bobs was grown in 1917 by Prof. Gris-dale, and was found to ripen six days earlier than Marquis.

As a milling wheat Red Bobs is equal to Marquis. In 1917 Prof. Bracken had tests made showing Red Bobs to have high milling and baking value. The Grain Growers' Guide sent samples of Red Bobs and Marquis wheat to the Howard Testing Laboratories in Minneapolis last fall, and the report from this test showed Red Bobs to be even superior to Marquis as a milling and baking wheat.

In the matter of grading Red Bobs also stands high. A sample of this grain together with milling tests were submitted to Geo. Serls, Chief Grain Inspector, for the Dominion Government, at Winnipeg. After examining the sample, Mr. Serls graded it No. 1 Hard, showing that Red Bobs will grade as high as Marquis or Red Fife.

Mr. Wheeler believes that in Red Bobs he has an ideal wheat for Western Canada and that it will save millions of dollars to grain growers in this country. He has experimented with it and tested it most carefully for seven years, and on the average he found that it ripens from one week to ten days earlier than Marquis and has a deep Red Fife color. By its early ripening, Mr. Wheeler expects Red Bobs to escape the greater part of the damage now sustained by frost and rust. The black rust, Mr. Wheeler says, usually occurs the latter part of July or early in August, therefore, by advancing the date of ripening by from six to ten days the kernel is mature and immune from rust damage. It is estimated that the loss from rust to the wheat crop of 1916 was not less than \$20,000,000, while in

Here's the SEPARATOR You'll want with your Light Tractor



**—the straw is shaken—thrown up—struck
from beneath—and driven forward.**

NO deck ever devised can so thoroughly free the grain, yet this complete wheat saving separation is secured in the simplest possible manner.

The large steel beater is located in Fairbanks-Morse separators in such a position as to effectually check the straw upon leaving the cylinder, the straw being spread evenly over the entire width of the deck. In this operation it is so thoroughly agitated and picked over that any grain still amongst the straw is almost perfectly separated.

The straw deck is built in two sections, hinged together and carried by bails at either end. Is operated directly by a crank shaft which gives the deck four distinct motions—up, down, forward and backward. The effect is to so thoroughly toss and

tease the straw that every possible kernel is removed. The action of the rear bail in conjunction with the crank causes the speed of the straw to be increased as it travels the triangular slats and fish-backs, which compose the deck. This, of course, spreads the straw thinly, pulls it apart and completes the most perfect separation that could be obtained.

Fairbanks-Morse Junior Separators are built in two sizes, viz., 20 x 42 inch, and 24 x 46 inch. Just what you need for use with your light tractor. They are recognized everywhere as Canada's greatest wheat-saving separators. They will do the same splendid work for you as they are doing for thousands of other proud owners. Ask for all the facts to-day; also get particulars on combination outfits.

The Canadian Fairbanks-Morse Co., Limited
Saskatoon Winnipeg Calgary

the United States the loss was much greater. If Red Bobs wheat will escape damage by rust the profit to the farmers and to the country will be immense.

In addition to all the other advantages which Mr. Wheeler has found in Red Bobs is that of heavy yields. In his experiments he found that Red Bobs on the average yields considerably heavier than Marquis, and although the straw is strong and upright, and the head very compact, it, nevertheless, is not a hard wheat to thresh and does not present as much difficulty as is found with Marquis wheat.

Of the 1917 crop of Red Bobs Mr. Wheeler sold a small quantity in small lots at \$4.800 per bushel. The Grain Growers' Guide pur-

chased 85 bushels of Red Bobs from Mr. Wheeler at a very high price and distributed it free to readers of The Guide throughout the three prairie provinces. It was only distributed to those who were willing to assist in introducing The Guide to new subscribers. No person was allowed to secure more than 40 pounds of Red Bobs wheat, and in most pound packages.

cases they received only 10 to 20 pound packages.

The Grain Growers' Guide has arranged with Mr. Wheeler and with others of the most expert growers in the West to grow Red Bobs wheat in 1918. The Guide has made an exclusive contract with Mr. Wheeler and these other growers to purchase all the wheat

they have both in 1918 and in 1919. The Guide is making arrangements at present to distribute this seed.—(Advt.)

The Call

The late Booker T. Washington at his Tuskegee school advised his negro charges to adopt hardworking trades and, above all, to eschew the pulpit.

"Whenever I hear of a husky young negro boy going in for the ministry," he would say, "I think of the old uncle in the cotton field on a hot August afternoon who straightened up and mumbled:

"'Oh, Lawd, de cotton am so grassey, de work am so hard, an' de sun am so hot, Ah fink dis darkey's done got a call to preach!'"

Have You Got RED BOBS?

Seager Wheeler's New Wheat

The Seed is Being Distributed **NOW!** GET YOURS

Seager Wheeler, the wheat wizard of the North American Continent, has developed a new wheat. Of this grain Mr. Wheeler says:

"I believe **Red Bobs** will revolutionize the grain industry of Western Canada. Grown on my own farm, side by side with Marquis, it has outyielded Marquis by eight to ten bushels per acre, and ripens from six to eight days earlier."

Mr. Wheeler has been ten years in developing this wheat. In both plot and field test he has found that

RED BOBS

RIPENS Six to Ten Days Earlier than Marquis
YIELDS More Per Acre than Marquis
MILLING VALUE Equal to Marquis
GRADES NO. 1 HARD

Due to its earlier ripening **RED BOBS** is seldom injured by rust or frost.

You can secure seed of this new wheat, but you will have to make your reservation now. Clip the coupon on the lower right-hand corner of this page, it will bring details by return of post.

This Red Bobs Book will be sent FREE!

It tells the interesting story of the development of Red Bobs Wheat and how you can get the seed.

Free!

GET THE "RED BOBS" BOOK NOW

Red Bobs Wheat

Red Bobs wheat is the most important agricultural development of recent years. The evidence establishing the superiority of this new variety is conclusive. Under ordinary circumstances this discovery would have been seized upon by private interests and exploited. Enormous prices would have been charged, the middleman would have taken extortionate profits, and only the wealthiest farmers could have purchased the seed.

The Grain Growers' Guide will distribute all of Mr. Wheeler's different varieties of wheat during the next two years. The Guide has paid a high price for this wheat. Mr. Wheeler is entitled to this, but through its system of distribution The Guide, instead of cornering the wheat for personal profit, is placing it within easy reach of every farmer in Western Canada.

To make it easy for anyone to secure Mr. Wheeler's new wheat ALL of the available supply will be distributed during the summer months. You cannot BUY any of this grain. You can secure as much as you care to earn by aiding us in extending The Guide's field of usefulness.

The Guide has published a **Red Bobs Book** that tells the secret of Mr. Wheeler's unusual success. It also gives the records of this new wheat and tells the interesting story of its discovery and development. This book should be read by every man raising grain in any one of the three western provinces.

Since its organization The Guide has always endeavored to render a practical service—a service that would aid in making agriculture more profitable. The **Red Bobs Book** was published with this end in view.

We will send a copy of this valuable book **FREE** to any person upon application. There is a copy of this book for **YOU**. It will be mailed without any obligation on your part. Mail the coupon to-day and **YOUR** copy will be forwarded by return of post.

The Secret of More Bushels Better Grades More Dollars

is told in the Red Bobs Book. Send in the Coupon and we will forward this book **FREE** by return of post.



Red Bobs Head and Grain Enlarged One-and-a-Half times.



The Grain Growers' Guide
WINNIPEG Manitoba

Do This Now!

FILL IN YOUR NAME AND ADDRESS ON THE COUPON OPPOSITE. MAIL TO US AT WINNIPEG IT WILL BRING THE RED BOBS BOOK AND THE CHANGE TO GET SEED OF THIS NEW VARIETY.

COUPON

TEAR THIS COUPON OFF HERE

The Grain Growers' Guide, Winnipeg, Man.

Send me FREE, the Red Bobs Book.

Name _____ P.O. _____ Prov. _____ C.T.F. 1

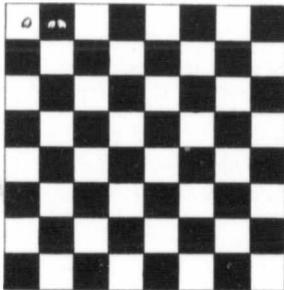


Uncle Hiram ON CONSERVATION

THE REVELATION OF THE CHECKER BOARD

THERE'S just the difference between hoarding and saving that there is between vice and virtue. Hoarding is a crime in these days; scarcely less is it a crime to neglect to save the small things that make the hoard. Don't squander a kernel of your 1918 wheat.

Men! Have you ever figured out what one kernel multiplied on itself can do? Did you ever see it worked out on the checker board? I have amused and bamboozled the school kiddies with it often and the result will amuse and astound you.



Here is a checker board with the usual sixty-four squares. Place one nice plump kernel of wheat on the first square, two on the second, four on the third and so on, doubling up the numbers until the 64 squares have been taken in.

Assuming it were possible to place the whole of the wheat this would amount to on the checker board, what do you suppose would be the grand total? We have often asked the question and the uncalculating novice has generally answered: "perhaps a bushel."

There is not elevator capacity and ocean tonnage in the world's mercantile marine sufficient to store or carry that wheat, for it runs into something like two hundred billions of tons; not bushels, mark you, but TONS.

We find that an average sample of wheat gives about 1,025 kernels to the ounce; so to shorten the labor, we start that square as one ounce till we get to the sixteen ounce or pound square, then

into tons when the result of each square is then multiplied by two.

An "eye-opener," you say! But it is not more so than the result of what five children on one farm home did in five years with all the grain they were able to find in a straw pile near the barn during the process of moving it inside.

The checker board scheme cannot be worked out in practice, but the multiplied efforts of the five kiddies can, and it was worked out in Saskatchewan in the years 1907-1911 inclusive and I'll tell you all about it next month.

One of the greatest sermons from the voice of God in Nature is preached from the text: "Never despise the day of small things." For good or ill, for greatness or pettifogging uselessness, it all begins and must begin with the small things. George Washington and Abe Lincoln were once very small things. So was the Kaiser.

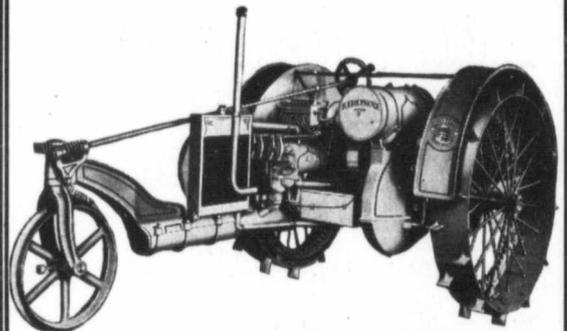
The two first saved the wheat in the straw pile of their character; the third party banked on the straw. He had the biggest pile, but a lucifer match will make an end of it in the near future. Meanwhile, the pupils of George and Old Abe are building and building on something that will outlive the crack of doom.

"Fight the Kaiser in the kitchen," someone aptly says. Food is ammunition in these days, and there's an eternity of possibility in what a few young people who cannot fight may accomplish if they have the freedom of some straw-piles. Every kernel is a bullet, and it is a bullet that multiplies mightily.

Moral: In the name of all that's just and sane and decent—don't let a grain of wheat escape you that should find its way to the elevator. Remember that North America is the bread-box of the world, and that every man you have sent into the battle line expects that North America will not fail him. Get a grain saving wind stacker, and secure every kernel for the market or to multiply itself in a new crop.

A Kerosene Burner All The Way

THE fact that gasoline cannot be produced without producing a large quantity of Kerosene should be enough to make any farmer decide on a Kerosene Tractor—no matter how high gasoline goes in price—Kerosene must be lower in price and abundant in supply.



Happy Farmer Tractor

has a simple twin cylinder motor—built in every part for the burning of Kerosene. Thousands of these tractors are giving perfect satisfaction—they are absolutely guaranteed to do the same for you. Consider these things:—

- Plows an acre an hour
- Fuel cost less than 40c per acre
- Steel cut gears run in oil
- Hyatt Roller Bearings used throughout
- Handles 3 plows at a speed of 2½ miles per hour
- Handles 22" cylinder separator
- Has a 2,000 lb. Drawbar Pull

We can also supply Huber Separators and J. I. Case Self-lift Plows—All prices now very reasonable—bound to go up shortly—get full particulars now.

Dealers and Distributors— Send for Proposition

We have an exceptionally live proposition for a dealer in each locality—get in touch with us at once. Write to-night and please mention this paper.

Happy Farmer Company Limited

Head Office: WINNIPEG

BRANCHES AND SERVICE STATIONS:
7th Ave. and Halifax St., REGINA.
The Tractor Co., SASKATOON.



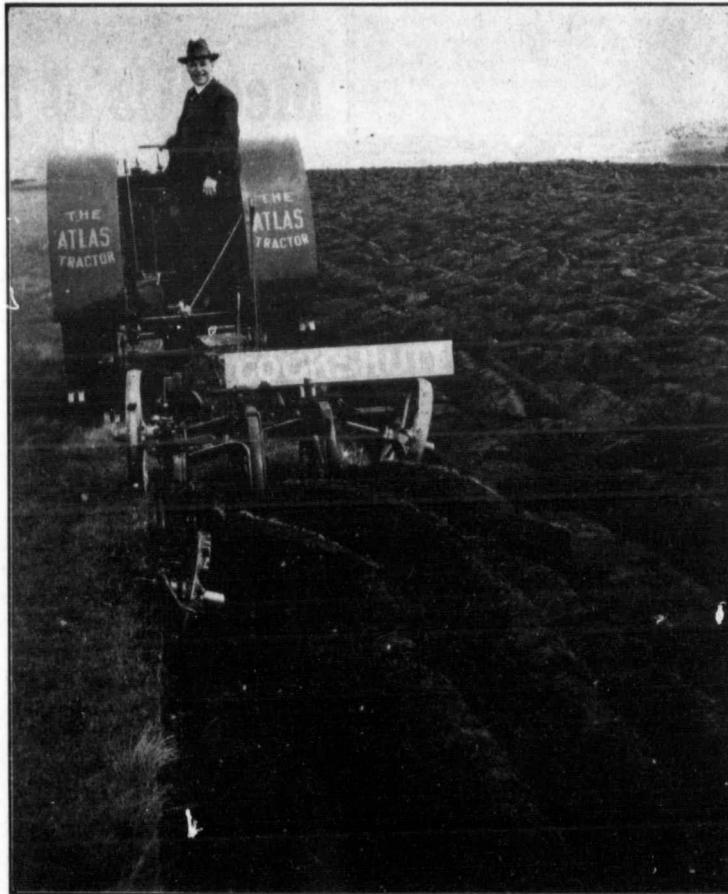
THE ATLAS TRACTOR

POWERFUL

ECONOMICAL

DURABLE

The sensation of the year. See it at the Calgary, Brandon and Regina Fairs



SOME SPECIFICATIONS

- 26 H.P. at belt.
- 16 H.P. at draw bar.
- 2800 lbs. draw bar pull at plowing speed, 2½ to 2¾ miles per hour.
- Pulls three 14 in. bottoms.
- Pulls two 7 ft. tandem discs.
- Runs 26 or 28 in. separator.

SOME SPECIFICATIONS

- Drives 17 in. ensilage cutter.
- Waukesha Motor.
- Bore 4¼ in. Stroke 5¾ in.
- 4 cylinders. L head.
- Engine runs 1000 R.P.M.
- Operating weight 5200 lbs.
- 9 ft. turning radius.
- Fuel — Kerosene, gasoline or distillate.

Taken from actual photograph of the Atlas Tractor pulling THREE 14-inch bottoms through the toughest kind of virgin soil at 2½ miles per hour, plowing from six to eight inches deep, at the demonstration at Crescent Heights, Calgary, on May 29th, 1918

You, Mr. Farmer, know to-day that if last year and the year previously, you could have had plenty of men to assist you, you could have made a great deal more money; you could have saved crops entirely lost. Now to-day the Atlas Tractor with one man will do more work at less expense than 4 three-horse teams with 4 men, and will do it WHEN YOU WANT IT done—on the hottest day or darkest night.

If your farm is anywhere from 160 acres and up, you want a three-plow tractor. You want a tractor that has plenty of power; a tractor that pulls three plows at least 7 inches deep under all conditions; a tractor that will work readily on plowed ground; a powerful, economical and durable tractor for all kinds of farm work. In other words, you want an ATLAS TRACTOR, the real war-time tractor.

IMMEDIATE DELIVERY CAN BE ABSOLUTELY GUARANTEED

For further information write or wire to

The Western Tractor Sales Co.

208 Dominion Bank Building

CALGARY, ALTA.

(Branches will be opened early in July at Winnipeg and Regina)

THE WESTERN TRACTOR SALES CO.
208 Dominion Bank Building
CALGARY, ALTA.

Please send me catalog and information regarding the Atlas Tractor.

NAME.....

TOWN.....

PROVINCE.....

C.T.&F.

THE FARM TRACTOR AND ITS FUEL

(From "Country Life," England)

UNDoubtedly we ought to aim ultimately at using in farm tractors fuels which do not appeal to the private motorist. Those fuels that are subject to the demand of the whole motoring community can never remain for any length of time available at what can fairly be described as the lowest prices consistent with their real value. A motorist is prepared to pay something extra for a fuel that is particularly cleanly, free from smell, and easily carried without spoiling the appearance of his car. These are points which do not matter at all or very much to the farmer. What he wants is the cheapest fuel that he can get and use satisfactorily, and this requirement is not always compatible with consideration of subsidiary merits like extreme cleanliness or extreme ease of starting from the cold.

As regards the near future we may fairly anticipate that the main fuels of farm tractors will be paraffin and coal or coke. A little petrol may be used for starting up the engines in which paraffin is employed as a regular fuel. Benzol will almost certainly be open to the same objections, as petrol, its market price being increased by the demands of motorists. This will not occur in the same degree to paraffin or even heavier oils. The use of these heavier oils deserves encouragement in every possible way, and should really be made a subject of joint research by tractor manufacturers.

For use in farm tractors, coal and similar fuels have one very obvious disadvantage. This is that they are bulky and heavy. In some cases this objection may not amount to much. In others it is a very serious one, since it may entail expensive cartage from the farm to the immediate centre round which the tractor is operating at the moment. The majority of steam tractors also consume considerable quantities of water, which again means a good deal of cartage. It is possible, however, to get over the difficulty in this latter respect by the use of condensers. The boilers of many steam tractors can be adapted without difficulty to use wood as fuel. Probably the chief feature of the steam tractor regarded as an agricultural implement lies in its dual use on the land and on the road.

The possibilities of using coal gas in the engines of farm tractors are at present a little too vague to allow of any exact analy-

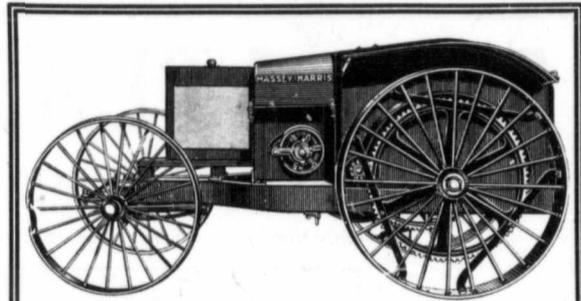
sis. It is, however, believed that they are considerable, and very early developments are confidently anticipated. One of the points in favor of coal gas is, of course, that even in this country at least the network of gas mains is extremely extensive, penetrating even into the great majority of country districts. Supplies on a large scale are thus conveniently situated in most cases.

Looking further into the future, the ideal fuel for the farm tractor is unquestionably alcohol. The tractor engine needs to be stout in construction and does not require to run at very high speed. The slow combustion of alcohol need therefore be no drawback, though to use this fuel very efficiently engines will require to be re-designed and their compression considerably increased. Also, it is requisite to tackle the problem of starting from the cold. The beauty of alcohol as a farm tractor fuel is that this fuel can be most readily produced in agricultural districts. All our other fuels are the result of heat that the sun has communicated to the earth in past years.

Alcohol is the one fuel that we can get in immense quantities by utilizing the sun's heat immediately year by year. In other words, all that is necessary for the production of alcohol is the growing of suitable crops. One can conceive that in the future a certain acreage in every agricultural district will be set aside for this purpose. A distillery will be erected to which the alcohol in the crops of all the local farmers will be taken. From that distillery the farmers will draw the alcohol required for their own tractors, and also a number of valuable residues. The surplus alcohol will then be sold to other motor users, or for any one of the almost innumerable uses to which this spirit could be put, if made available to industry at a really low price.

We shall thus get back sooner or later to a state of affairs not unlike that which now prevails. At present the farmer must set aside some of his acreage for the production of food for his horses. In the future a much smaller proportion of his acreage will suffice to provide him with the food for the tractors and other engines by which his horses will then have been replaced.

The farm tractor movement has been slow in its early developments. It has been given a sudden impetus by the war, and from to-day onwards it will never look back. Undoubtedly, it is destined to become one of the greatest, if not absolutely the greatest, of the consequences of the invention of the internal combustion engine.



Meet Us at Brandon

July 23, 24 and 25

WE want to introduce you to our new 12-25 Tractor and our Improved Power Lift Tractor Plow.

You will have an opportunity of seeing them in operation at the Tractor Demonstration, and we shall hope to have the pleasure of showing you their possibilities.

Some of the Features deserving of especial mention in the Massey-Harris Tractor are: an Underslung Frame which gives a low centre of gravity; the Flexible Front Axle Connection to avoid strains on uneven ground; Short Turning Radius, although the Front Wheels are of large diameter; Transmission through Spur Gears exclusively; Belt Drive from Pulley without Gears; Easy Control; Ready Access to all Parts.

Massey-Harris Tractor Plows are easily controlled by the Tractioneer, the Levers are within easy reach, and, once set at the desired depth, a pull of the rope raises or lowers the Bottoms. Choice of Stubble or Breaker Bottoms which are interchangeable.

Massey-Harris Co. Limited

Head Offices: TORONTO

Branches at MONTREAL, MONCTON, WINNIPEG





TELEGRAM
Save the grain!
 Every bushel brings
 victory nearer.

**The
 Grain
 Saving
 Wind
 Stacker**

The man in the field or at the thresher is fighting as surely as the man in the trenches. Every bushel brings victory nearer!

As a thresherman you know that every separator wastes grain. In the stack it brings no profit and is a national loss.

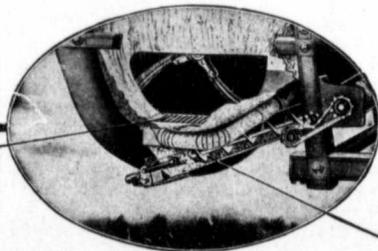
The Grain Saving Wind Stacker prevents this waste. In addition it stacks the straw—eliminates back-lashing—runs on less power, thereby saving fuel—and is superior to all stackers.

"Careful tests gave us a saving of fifty-nine pounds to every fifty bushels threshed—or nineteen bushels to every one thousand threshed," writes Chas. R. Weeks, of the Fort Hays Experimental Station, Hays, Kansas.

"The stacker works perfectly," writes F. L. Kennard, of the University of Minnesota. "The saving was as follows: Wheat, 1%—or ten bushels in every 1000 threshed. Oats, 2½%—or 25 bushels in every 1000 threshed. Barley, 1½%—or 15 bushels saved in every 1000 threshed."

The Grain Saving Wind Stacker costs no more than an ordinary wind stacker—yet it increases your profits and the profits of your customers by saving the grain the separator wastes. Obtain catalog from threshing machine manufacturers illustrating and explaining how the grain is put in the sack, and not wasted in the stack with the Grain Saving Wind Stacker.

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



Grain Trap

Auger for returning grain to separator

Give the Expert a Chance

By H. E. DRYSDALE

ONCE more the expert wends his weary way from place to place hunting for trouble; but often has trouble hunting him. To-day he may live on the best in the land. Tomorrow he may have to work in a snowstorm or sleep in a granary. Often travelling by night and working during the day he strives to do his bit in aiding the farmers in their fight for greater production. Don't make it harder for him by lighting into him like a barrel of wildcats just because your engine has not been running as it should. He did not make the engine, but will do everything in his power to make it give you satisfaction. Greet him with a smile; it will help him in his work.

Last fall I was sent out to fix up a tractor for a farmer who had been having trouble in trying to burn kerosene. He met me at the station with an awful tale of woe and for seven miles I was forced to listen to a monologue on what should be done to a company who guaranteed an engine to burn kerosene and the darned thing stopped every time he mentioned the word kerosene within hearing of it. He then started in to tell me where the manufacturers had fallen down in designing the engine and how he would have done it had he been at the head of things. He had just finished building an engine that would plow an acre on less than a gallon of kerosene, start easily and steer itself when we arrived at his farm. You can bet I was thankful when he said he was too busy to be bothered fooling around that scrap heap. He said that he knew it wouldn't burn kerosene and unless I had it plowing by night he didn't want to see me or the engine again, adding that there was about a gallon of gasoline in it, so I couldn't fool him. I put on my overalls and started the engine. It ran nice. Nothing seemed to be the matter with it. After plowing a short piece I turned on the kerosene in order to conserve the small allowance of gas I had. The engine ran about a hundred yards and stopped. I jumped off and opened the drain cock on the carburetor; it was almost dry, but kept on dripping. The trouble was found. A partially clogged fuel pipe made the kerosene flow so slow that it would not feed the engine. After cleaning out the pipe I plowed all afternoon without a stop. On the return trip to town that

farmer said nothing. He had learned his lesson.

How many farmers are responsible for most of their engine trouble? If the truth was known the percentage would be so large that it would surprise one. They leave everything till the last minute and then do it with a rush. Just the other day I saw an engineer filling his lubricator out of a dirty can without using a strainer of any kind. Upon asking him why he did not use one he told me that the oil was so thick early in the morning that it would not run through it. A lame excuse, for if he had used any foresight he could have had a can of cylinder oil in the house overnight, and it would have been warm and ready for filling up in the morning. Yet the was willing to take chances on pouring a lot of foreign matter into his lubricating pump rather than go to a little trouble in having the oil ready beforehand. The average operator is too careless in these little things. He sometimes strains his fuel and water, but more often he does not, and as a result loses more time in the end than he gained by being in a rush.

Too much care cannot be taken in straining fuel, lubricating oil and the water used in the radiator. It is a good plan to fill the fuel tanks and lubricator at night before leaving the tractor. You will have more time and the cylinder oil will flow better.

In travelling through the country I have noticed that a large number of tractor operators start their engines on cold mornings without making sure that the pump is handling the lubricating oil properly. This is a mistake and often results in burned out bearings, for even though it may start to work properly in a few minutes the cylinders will have become dry and the bearing hot. The oil will burn off them as fast as it is pumped on and they will remain in this condition until some serious harm is done. Always work your lubricator by hand until you are sure oil has reached every bearing.

Notwithstanding

Teacher asked the children to make a sentence containing the word "notwithstanding." Up went Effie's hand. "Well?" asked teacher. "Father wore a hole in his pants," said Effie, "but not with standing!"



Fairbanks Wagon Scales

are the practical heavy load scale for the farm as well as for contractors, builders, hay and grain dealers or coal merchants. They combine convenience, simplicity and accuracy. Fairbanks Wagon Scales fill every weighing requirement in

Capacities 5 and 10 Tons

Every Fairbanks Wagon Scale may be fitted with a Compound or Columbia Grain Beam, adaptable to graduations and standards required by the purchaser. Platforms are of steel frame construction and vary from 8 x 14 ft. to 7 ft. 11 in. x 22 ft. Extension levers to carry beams 20 feet from scales are another convenient device obtainable at small additional cost, making it possible to locate the weighing beam under cover of an adjoining building.

Fairbanks Pitless Wagon Scales

are convenient and accurate scales for use where a pit is undesirable. The height of scale is only nine inches from top of platform to bottom of steel frame. This is an ideal scale for farm, contracting and quarry use. Capacity 5 tons. All prices are exclusive of timber and foundations. Write our nearest branch for full particulars.

The Canadian Fairbanks-Morse Co., Limited

St. John Quebec Montreal Ottawa Toronto
Hamilton Winnipeg Calgary Windsor
Saskatoon Vancouver

73

The Farmer's Need

OF Life Insurance is probably greater than that of any other business man. In the early stages of his career he is often struggling with a mortgage, and as he progresses he puts back what he earns into equipment in order to increase his production. Should anything happen, and he is not insured, the savings of years would be lost. Life insurance is always the



first asset realized on, and this provides funds to immediately retire all outstanding obligations. On the other hand, if you survive the investment period, the proceeds provide a competence for your declining years.

The Manufacturers' Life INSURANCE COMPANY

Head Office, - Toronto, Canada

P. S.—Fill out the attached coupon to-day, and mail to the above address. It places you under no obligation.

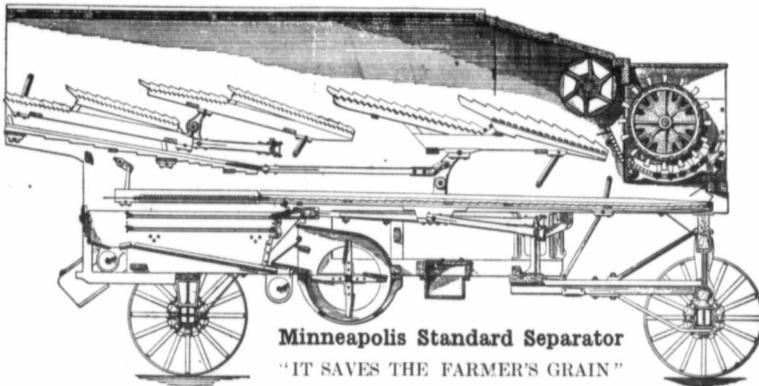
I would like to save \$ yearly through the medium of Life Insurance.

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

Name Address

SAVE WHEAT SAVE

- 16 Bar Cylinder
- Tool Steel Teeth
- 2 1/4 in. Cylinder Shaft
- 3 Self-Oiling Cylinder Shaft Foxes
- 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



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

- Heavy frame bolted and rodged 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

There are many reasons for the Great Popularity of Minneapolis Separators

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

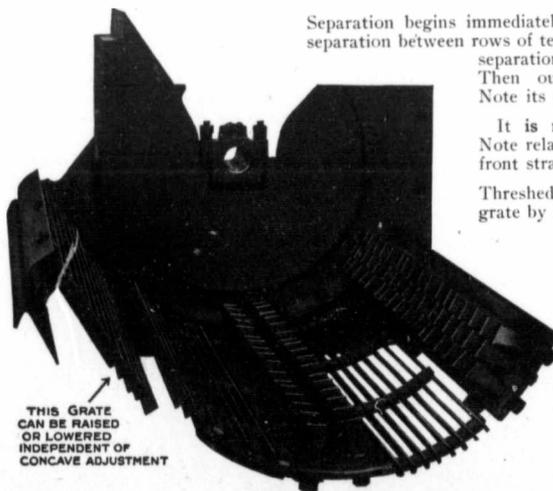
Ask the Owner

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**



THIS GRATE CAN BE RAISED OR LOWERED INDEPENDENT OF CONCAVE ADJUSTMENT

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.

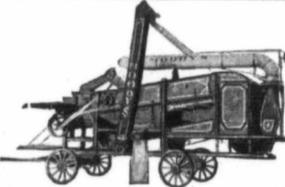
HOPKINS (WEST MINNEAPOLIS) MINN.

Winnipeg Regina Calgary Edmonton

"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.



Our Guarantee

The sixty years experience in building Moody Separators, enables the manufacturer and their agents to guarantee that the Moody Separator will thresh the grain clean from the straw. Not put the grain in the straw pile. Also clean it ready for seed or the elevator. Also guarantee to replace free any parts that break or wear out the first year.

The 1918 Moody is made in four sizes. Equipped with either blower or straw carrier. Hand feed attachments or self-feeders. The 12-25 Parrett Tractor is guaranteed to pull three 14-inch plows in any soil. With six years actual field work to back up this guarantee, it is made by a company with three million dollars paid-up capital, and in a factory with a capacity of 400 tractors a week. We carry a full line of repairs for everything we sell, and a competent staff of service men.

For further particulars, prices and terms, write the following distributors for Western Canada:

FRANCOEUR BROS.
Camrose, Alta.

THE NEW HOME MACHINERY CO. Ltd.
Saskatoon, Sask.

MITCHELL & MCGREGOR
Brandon, Man.



THE ART OF HAYMAKING

By H. B. McCLURE

HAYMAKING Need of Reducing Haymaking Costs

THE HAY CROP causes more worry, anxiety and disappointment than any other crop. It is the most widely grown crop on farms devoted to general agriculture; the time for harvesting is comparatively short and haymaking can not be postponed without a consequent loss of quality. In many sections there are other crops that require attention about the time that the hay should be made, and often there is small grain to be cut, corn to be cultivated, and hay to be made, all at once. Labor is not only scarce but expensive. And there is the weather to be reckoned with, a factor that has a very important bearing upon quality and one over which the farmer has no control.

Choice of Method of Curing—For Market or For Home Use

The first point to be considered in making plans for putting up hay is the quality desired. This is especially necessary when making timothy and timothy mixed hay. Quality, in this instance, refers to the differences in grade between properly cured cuttings of hay made at different stages of maturity.

Every farmer tries to make the best quality of hay possible, as it is more nutritious and more saleable than hay poorly made, but many a farmer's idea of "choice" hay is radically different from that of those who feed hay in the city. Farmers often prefer timothy hay that is cut after the "full-bloom" stage is passed, while "choice" hay on the city market is hay that is cut during "first bloom." There is a difference of more than a week between

dates of cutting these two kinds of hay.

"Choice" hay is not handled as is late-cut hay. It contains more moisture when cut, and to cure it requires a longer time and often more labor than to cure hay cut later. If the hay is to be sold on the city market the grower will have to exercise special care in curing, and possibly use haymaking machinery not needed in curing hay for use on the farm.

Acres to be Harvested

The acreage grown has an important bearing upon the method of making hay. When the acreage is small, it would not be practical to make a heavy investment in machinery that would only be used a very few days each year, while with a large acreage it is advisable to use machinery as much as possible in order to do away with expensive and arduous hand labor and to increase the tons handled per hour per man.

Crop Grown

Grass hays are, as a rule, easier to cure than legume hays, since grasses have hollow stems, a finer texture, and fewer leaves. Care must be exercised to rake legume hay before the leaves become so dry and brittle that they will break off and cause a heavy loss of the most nutritious part of the plant. The leaf loss caused by raking grass hay is small compared with the loss sustained in handling legume hay.

The first and last cuttings of alfalfa in non-irrigated sections are often very hard to cure. In some sections rains are frequent during the first cutting, and cool weather during the last cutting, which prolongs the curing, making it necessary to cock the hay and cure it in the cock.

Grass hay is usually made in

mid-summer, when the temperature lends itself to rapid curing in the swath and windrow, and, as a rule, cocking is not necessary.

Labor Supply

Availability of labor has an important bearing on the method that should be chosen for making hay. Very often, when labor is hard to get, a small crew can be so handled as to do the work customarily done by a larger crew. In some cases, when labor is scarce, the method used when there is plenty of help, will have to be discarded and an entirely new method adopted, which will require different machinery from that formerly used. For example, in cases where the old method of pitching the hay on to the wagon by hand and hauling it to the stack, has been followed, the work may be done with fewer hands if push rakes and the stacker are used.

Yield Per Acre

The yield per acre influences in two ways the method to be used. First, if the yield is heavy and if the hay is a legume or a legume mixture, it will necessitate the use of the tedder and, perhaps, cocking the hay. Second, many farmers plan to cut their hay at the stage of maturity when the greatest weight will be obtained, and this raises the question of the proper time to cut hay. In determining this, the question of time to cut to obtain the greatest feeding value should be considered, as well as that of securing the greatest number of tons.

When To Cut

Timothy cut just as it is coming into full bloom, is much harder to cure than when cut with the seed in the dough stage or nearly ripe. When cut early it contains a larger percentage of moisture



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than when cut later, and consequently must remain longer in the swath and windrow and run greater risk of being injured by rain. For this reason, many hay growers prefer to wait until the hay can be cut and hauled in the same day. Also if cut after blooming period, it will yield more to the acre by weight than when cut in full bloom, but the feeding value decreases quite rapidly after the plant is in full bloom.

Waters found that the yield of a timothy crop coming into bloom was 3,411 pounds of dry matter to the acre; the yield at full bloom was 5,433 pounds; the yield when seed was formed was 5,793 pounds; the yield when seed was in the dough, 5,750 pounds; and when the seed was ripe, the yield was 5,193 pounds per acre. From this and other experiments it will be seen that the dry matter increases up to the time the seed is in the dough, after which it decreases.

The protein content when coming into bloom was 260.9 pounds per acre; was greatest (292.6 pounds) when the plant was in full bloom, and decreased from the time of full bloom until the seed was ripe, when it amounted to 218.6 pounds per acre.

From this it will be seen that the greatest feeding value is secured if the hay is cut at about the time the plant is in full bloom. The yield per acre is somewhat greater if the hay is cut after full bloom, but the gain in feeding value and grade, as

indicated by color, when cut at full bloom, more than offsets the value of the gain in weight per acre when cut later.

How Hay Cures

When hay "cures" there are, perhaps, a number of processes or changes that take place within the plant, but there are two that are very important, i.e., the throwing off of a comparatively large amount of water and a chemical change commonly known as heating or fermenting.

The quality of hay depends upon the ability of the farmer

properly to control the manner in which these changes take place. Of the two changes mentioned, the first is the more important, for if the hay is properly dried the second, or heating process, will take care of itself.

There is no time limit in the curing of hay, for it is simply a matter of reducing the moisture in the plant from about 75 per cent down to about 15 or 20 per cent in the quickest time possible.

In order to cure hay properly, so that it will retain the natural green color and save the greater

per cent of the leaves, it is necessary to get rid of the moisture as quickly and evenly as possible from all parts of the plant at the same time. **The Function of the Leaves in Curing**

In growing plants there is a constant stream of water entering the roots, carrying plant food through the plant to the leaves, where the water is thrown off by transpiration. When the plant is cut off, as



A Healthy Corn Crop from the Portage Plains

in the case of hay cut off, as in the case of hay plants and leaves, if kept alive, will continue to transpire or "pump" the water from the plant until a large per cent of it has evaporated.

Keeping the leaves alive and giving all of the plants in the swath as nearly an equal chance as possible to get rid of moisture, is the whole art of curing hay. It has been said that "Sun kills the hay plant, but wind lets it breathe itself to death." When the yield is heavy and the hay is exposed to the direct rays of the sun, the leaves on top of the swath soon lose their moisture, become brittle and dry, and are of no further use in helping to remove the water from the plant, and curing must continue by means of direct evaporation, which is a slow process as compared to curing by transpiration through the leaves.

Fermenting or Heating of Hay

In addition to the loss of moisture in curing, there is the other process, commonly known as fermenting, heating, or sweating, which takes place in the cock, barn, or stack. This process is stacked or barn hay is usually finished in from three to six weeks.

Exactly what takes place during this process is not known. The change is a chemical one, and is due to the presence of moisture in the hay. It is thought that the hay develops aroma and becomes more palatable during this process. It is known that fermentation is accompanied by a loss of moisture.

Hay that is put up not sufficiently cured, or that is wet with rain, develops considerable heat from fermentation, and spontaneous combustion may occur rarely in grass hay, but more often in clover or alfalfa hay, especially first cuttings.

Spontaneous combustion is indicated by the hay becoming darker in color until it is finally black, by a sooty odor, and by smoke irritating eyes. The ash of the burnt hay has a characteristic grayish-white appearance and feels like sand. The burnt hay is surrounded by a layer of charred but not burnt material, which is a poor conductor of heat. A number of cases of spontaneous combustion of alfalfa hay are described in detail in Bulletin 109 of the Kansas State Agricultural Experiment Station, issued in 1902.

Effect of Rain

It is a matter of common knowledge that hay exposed to successive rains is injured in quality and loses in aroma and palatability. A light rain or a heavy dew does but little injury to freshly cut hay in the swath. Indeed, many farmers whose acre-

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2. Weakened power.
3. Frequent repairs.

Let us look at the symptoms of premature old age.

(1) Excess fuel consumption is one of the first effects of improper lubrication and careless operation.

(2) The most serious causes of permanently weakened power are worn or scored cylinders and worn pistons and piston rings. They are caused by failure of the lubricant either to reach and protect the friction points, or to seal the piston rings.

(3) During the first year, engine repairs usually are infrequent — even with the incorrect oil. But with

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 Gargoyle Mobiloil "BB"
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TRACTORS	1916		1917		1918		1919	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Albion-Dover (Square Top)	BB	B	B	A	B	A	A	A
Allis-Chalmers	B	B	B	A	B	A	A	A
All Work	B	B	B	A	B	A	A	A
Andrews	B	B	B	A	B	A	A	A
Appleton	B	B	B	A	B	A	A	A
Adrian-Taylor (18-30)	B	B	B	A	B	A	A	A
Avery (5-10 HP.)	B	B	B	A	B	A	A	A
.. (Lonsville)	B	B	B	A	B	A	A	A
Bates-Spot Motor	B	B	B	A	B	A	A	A
Bean Tractor Pull	B	B	B	A	B	A	A	A
Best (8-10)	B	B	B	A	B	A	A	A
Big Bull	B	B	B	A	B	A	A	A
Bower City	B	B	B	A	B	A	A	A
Buckeye (Indiana) Giant/Haly (Ohio)	B	B	B	A	B	A	A	A
Case (9-15)	A	A	A	A	A	A	A	A
.. (10-20)	A	A	A	A	A	A	A	A
.. (12-25)	A	A	A	A	A	A	A	A
.. (20-40)	A	A	A	A	A	A	A	A
Chas. Cleveland	B	B	B	A	B	A	A	A
Common Sense	B	B	B	A	B	A	A	A
C. O. D.	B	B	B	A	B	A	A	A
Coro Bolt	B	B	B	A	B	A	A	A
Creeping Grip	B	B	B	A	B	A	A	A
Electron-Bronxington (E.B.) (E.B. 10-14) (Big Pull)	B	B	B	A	B	A	A	A
.. (Bowers)	B	B	B	A	B	A	A	A
Farm Horse	B	B	B	A	B	A	A	A
Flow City (Heavy Duty)	B	B	B	A	B	A	A	A
Galloway	B	B	B	A	B	A	A	A
Gas Pull (Rumley Co.)	B	B	B	A	B	A	A	A
Grain Belt	B	B	B	A	B	A	A	A
Gray	B	B	B	A	B	A	A	A
Happy Farmer (Model B)	B	B	B	A	B	A	A	A
Hart Parr	B	B	B	A	B	A	A	A
Heiler	B	B	B	A	B	A	A	A
Holt Caterpillar (Model 45)	B	B	B	A	B	A	A	A
.. (Model 18)	B	B	B	A	B	A	A	A
Huber	B	B	B	A	B	A	A	A
Imperial Forty	B	B	B	A	B	A	A	A
Logan	B	B	B	A	B	A	A	A
Mandell	B	B	B	A	B	A	A	A
K. C. Prairie Dog	B	B	B	A	B	A	A	A
Kinmond	B	B	B	A	B	A	A	A
Low	B	B	B	A	B	A	A	A
Little Chief	B	B	B	A	B	A	A	A
Little Giant	B	B	B	A	B	A	A	A
Mering	B	B	B	A	B	A	A	A
Manassas	B	B	B	A	B	A	A	A
Manitowish (I. H. Co.)	B	B	B	A	B	A	A	A
.. (I. H. Co.)	B	B	B	A	B	A	A	A
.. Universal	B	B	B	A	B	A	A	A
New Age	B	B	B	A	B	A	A	A
Nichols & Shepard	B	B	B	A	B	A	A	A
Nelson	B	B	B	A	B	A	A	A
Oil Pull (Rumley Co.) (8-10, 10-20, 20-40) (Rumley Co.)	B	B	B	A	B	A	A	A
Parrett	B	B	B	A	B	A	A	A
Prairie	B	B	B	A	B	A	A	A
Prentiss	B	B	B	A	B	A	A	A
Flow Boy	B	B	B	A	B	A	A	A
Flow Man	B	B	B	A	B	A	A	A
Fortuna	B	B	B	A	B	A	A	A
Rumley (8-10)	B	B	B	A	B	A	A	A
Russell (Little Four)	B	B	B	A	B	A	A	A
Sandusky	B	B	B	A	B	A	A	A
Samuel	B	B	B	A	B	A	A	A
Standard	B	B	B	A	B	A	A	A
Stearns	B	B	B	A	B	A	A	A
Titan (I. H. Co.)	B	B	B	A	B	A	A	A
Tom Thumb (4 cyl.)	B	B	B	A	B	A	A	A
Twin City	B	B	B	A	B	A	A	A
.. (Model 15)	B	B	B	A	B	A	A	A
.. (Model 16)	B	B	B	A	B	A	A	A
Walls Cub (Junior)	B	B	B	A	B	A	A	A
Waterloo Boy	B	B	B	A	B	A	A	A
Waucon	B	B	B	A	B	A	A	A
Yale	B	B	B	A	B	A	A	A



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age is not large, disregard dewfall and prefer to mow hay in the afternoon, thus giving the hay a chance to wilt overnight. Rain causes partly cured hay to become bleached and mouldy, and continued warm rains dissolve and carry away a considerable portion of the nutrients.

Hay should never be raked, cocked, or put into the stack or barn when there is any dew or rain on it. Such hay is very liable to mould or heat, and even spontaneous combustion may occur.

If a rain comes on when the hay is partly cured in the swath, it is bad practice to rake it into windrows, for it will be damaged no more in the swath than in the windrow. Hay that gets wet in the windrow will have to be spread out later to dry. The same holds true about cocking. In case of rain, nothing is gained by hurriedly cocking or bunching hay that is almost cured, unless large hay caps are put on the cock. When such hay is rushed into the cock it will not turn water and will be wet all the way through, and if not scattered out after the rain is over will soon begin to heat and will spoil.

HAYING OPERATIONS

Mowing

Sizes of Mowers Used.—The most common size of mower in use to-day is the 5-foot cut. A fair day's work with this machine is about nine acres, while with the 7- or the 8-foot machines, which are gradually growing in favor among farmers who grow considerable hay, 13 or 15 acres per day, respectively, is a fair day's work. In other words, two horses and one man with an 8-foot mower will do two-thirds more work per day than when a 5-foot mower is used. With the 8-foot cut the cost per acre for man and horse labor will be 30 cents, while with the 5-foot cut it will be 50 cents. The saving in labor charges with the larger machine will, in almost all cases, consider-

ably more than offset the slight additional overhead expense of interest and depreciation on the larger initial investment involved.

Unless there is a valid objection to the use of the 7- or 8-foot mower, such as a very limited acreage, exceptionally heavy growth of fine grasses and weeds, or rough and uneven ground, the larger machines should be employed. Too many farmers have continued the use of the small machines because of fancied objections to the larger sizes. In many instances where one large mower will cut sufficient hay per day to keep a crew busy, the use of a smaller size makes it necessary to use a second mower a few hours per day. At harvest time labor is usually extremely scarce and at a premium, and any saving which can be effected is especially valuable for that reason. The larger sizes of mowers reduce the size of the crew required and save time at critical periods, the value of which is often considerably greater than the mere wages involved.

Mowing Practices.—There is considerable difference of opinion among hay growers as to the best time of day to mow hay. Some never cut hay when the grass is wet, others start mowing at any time, and some mow in the afternoon only.

When considerable hay is grown it is necessary to keep the mowers going most of the day. Some growers of alfalfa in the south and east mow hay even when a light rain is falling, because unfavorable weather makes it impossible to get the crop up in time if the mowing is all done in good weather.

When the acreage grown is small, it is customary to wait until the dew is off or to cut only in the afternoon. While this practice is desirable in some cases, in others it is merely wasting valuable time and it should be followed with careful judgment. In other words, the hay grower should inform himself by

Cushman Combination Thresher

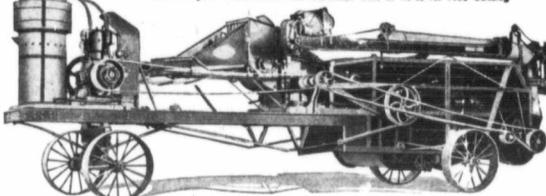
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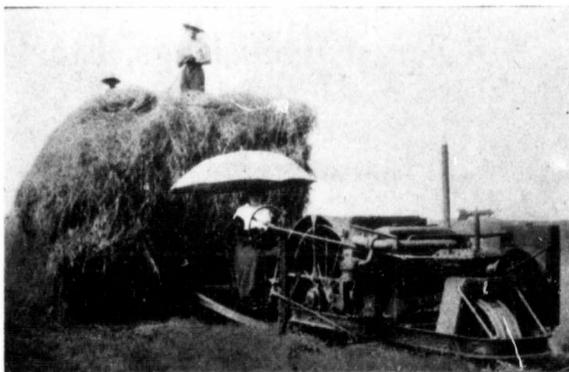
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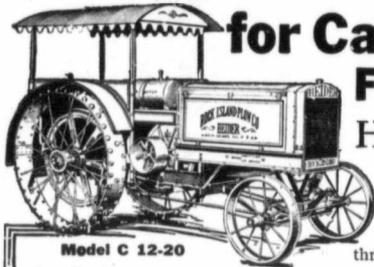
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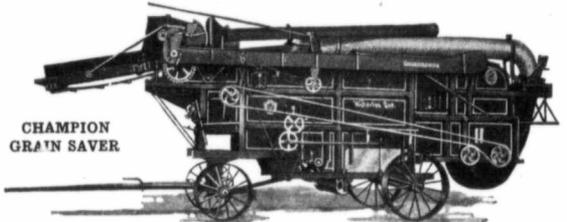
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49 Harriet Street

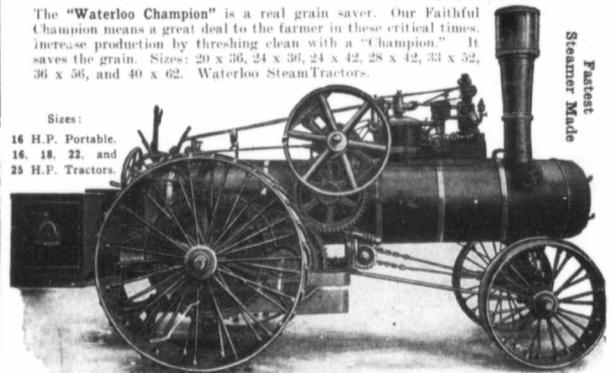
THE WATERLOO MANUFACTURING COMPANY, Ltd.
REGINA, SASK. PORTAGE LA PRAIRIE, MAN. SASKATOON, SASK.

Faithful Waterloo "Champion" Separators



CHAMPION GRAIN SAVER

The "Waterloo Champion" is a real grain saver. Our Faithful Champion means a great deal to the farmer in these critical times. Increase production by threshing clean with a "Champion." It saves the grain. Sizes: 20 x 36, 24 x 36, 24 x 42, 28 x 42, 33 x 52, 36 x 56, and 40 x 62. Waterloo Steam Tractors.



WATERLOO RELIABLE STEAM POWER NEVER BEEN EQUALLED AS THE THRESHERS' REAL FRIEND

Patented Steamroller Made

Sizes:

- 16 H.P. Portable.
- 16, 18, 22, and
- 25 H.P. Tractors.

experiments or by the experience of his neighbors as to the earliest possible time in the morning after a heavy dew at which it is safe to start mowing under different conditions, considering the amount of moisture contained in the upper surface of the soil, whether the yield is light or heavy, the weather, and whether or not a tedder is to be used. All possible loss of valuable time, such as is entailed by having hired help idle or employed at work which is less profitable and necessary than making hay, should be avoided.

It is important to know how much hay to have down at one time. It is not good practice to have two or three times as much hay cut down as can be hauled or taken in one day. Loss of quality can be avoided somewhat by having the mowers only one day ahead of the crew hauling; then if a rain comes up a minimum amount of hay will be damaged.

Tedding

The best way to cure out freshly cut hay is to stir up the swath with a tedder before the top leaves dry out. When the leaves lose their moisture and become dry before the moisture from the stem is removed, the process of curing is very much retarded. The tedder is especially

valuable in curing alfalfa and clover hay, or heavy yields of any kind. No set rule can be given for using the tedder, but it should follow the mower from two to six or more hours later, depending upon yield, kind of hay, velocity of the wind, temperature, clouds, etc. The function of the tedder is to kick up the hay and allow it to cure out evenly. The tedder does more damage than good by breaking off the leaves, if used after the leaves have become dry. It is used on hay in the swath, seldom on hay in the windrow. To induce rapid curing, it is the custom of some hay growers to ted the hay twice the same day.

Raking

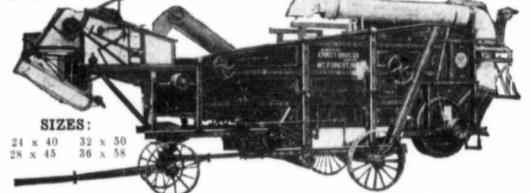
The practice of raking hay into windrows with either a sulky (dump) or side delivery rake is almost universal. The exceptions are where the hay is loaded on the wagon directly from the swath by means of a hay loader, or is gathered from the swath with a sweep rake. These practices are rare, being followed usually only when the yield is heavy.

It is safe to say that most hay is cured almost entirely in the swath; indeed it is a common practice to commence hauling or stacking hay immediately after it is raked. Under certain conditions this practice is allowable. When the yield is light, or when

TRADE SAWYER MARK
Registered
STITCHED CANVAS BELTING
PLEWES LIMITED (Distributors) WINNIPEG

Mr. Farmer! Mr. Thresherman! Mr. Tractor Owner!

You are wanting a separator that is EASY RUNNING, SIMPLE, DURABLE, EFFICIENT and ECONOMICAL. These are the qualities that have made for THE FAVORITE a marvellous success, and made our machine a true FAVORITE wherever operated. Be sure to investigate the FAVORITE REPUTATION, and, if possible, try to see a FAVORITE before placing your order for a threshing separator. It will pay you.



SIZES:

- 24 x 40 32 x 50
- 28 x 45 36 x 58

THE NEW FAVORITE

Equipped with Garden City Feeder Perfection Weigher and Side Fan Stackers.

An Owner's Testimony:

"We threshed with a 12-24 Tractor, using 24-in. Cylinder Favorite from 700 to 1,000 bushels of wheat per day on an average of 15 gallons of fuel oil. The grain was so well cleaned and separation was so good and everything so thoroughly satisfactory that I would heartily recommend the New Favorite to any intending purchaser." (Name furnished on request).

A FAVORITE in your district is our best salesman. A FAVORITE OWNER IS OUR BEST ADVERTISER. The names of owners at widely different points in the West, and their opinions as to the FAVORITE will be gladly furnished on request. A BETTER MACHINE FOR LESS MONEY. WRITE TO-DAY FOR REASONS, our catalog, and our proposition, when sold direct from factory representative to farmer.

The Favorite Thresher & Supply Co., Limited
45 Notre Dame East, WINNIPEG

a heavy yield is stirred several times with the tedder, and especially if the day is cloudy and there is a good breeze stirring, hay can be entirely cured in the swath and a good quality made.

During hot, dry, sunshiny weather in the middle of the summer, however, this practice of curing in the swath will not produce the best grade of hay. Under such conditions hay, especially clover and alfalfa, should be raked into the windrow just after it is all well wilted and before the leaves become dry enough to break off when raked.

After being raked, the hay may be left in the windrow until it is ready to be moved, or it may be put into cocks and left until thoroughly cured. Hay is ready to be removed from the windrow when a wisp can be broken to pieces if given two or three twists in the hands.

The side-delivery rake has one advantage over the sulky rake. When the curing is done in the swath the crew can start taking the hay from the windrow as soon as the side-delivery rake has made one double windrow across the field, whereas when the sulky rake is used they will have to wait until the rake has gone several times across the field.

Some hay growers object to the use of the side-delivery rake for clover and alfalfa, claiming that it breaks off so many leaves as to cause a serious loss of the most nutritious part of the plant. This is undoubtedly true if the hay is raked when sufficiently cured to be put into the stack or barn, but this objection does not hold good if the raking is done when the leaves are merely well wilted.

Curing in the Cock

One of the best methods of curing hay is to cure in the cock. This method is not generally practised except in regions where unfavorable weather is the rule rather than the exception, or when the best quality of legume hay is desired. Throughout the Middle West, where hay loaders are used, hay is not cocked because of the extra labor required and the inability to handle cocked hay with the hay loader.

It has been shown that it is necessary to get rid of the water in the plant evenly. On a sunshiny day hay must be raked after it has been in the swath a certain length of time, or the leaves will become dried out and lose color. When it is raked into the windrow a smaller proportion of the hay is exposed to the action of the sun's rays. After remaining in the windrow, where further curing is done, the time is reached when it becomes necessary to remove the hay in order to retain a good color and aroma.

When this stage is reached the

next thing to do is to put the hay into the cock, where a still smaller proportion of the hay will be exposed to the sun. The curing process is not stopped when hay is cocked, but goes on less rapidly than when in the windrow and much more slowly than when in the swath. The hay in the cock continues to lose its moisture slowly until it is cured out sufficiently to be baled or put into the stack or barn. The time required for curing will depend upon the moisture content when cocked, the amount of hay put into the cock, and also upon weather conditions.

Under ordinary conditions hay will cure in the cock in from three days to a week. Hay cocked too "green" will cause heating. The larger the cock the more danger there is of heating when under-cured hay is cocked. Hay is put into cocks containing from 75 to 700 pounds of cured hay. About 100 pounds is the size most commonly used in many sections.

Cloudy and rainy weather not only retards curing, but may cause heating if the rain enters the cock. When cocked hay shows danger of becoming too hot it will be necessary to open the cock and scatter the hay out until it has lost enough moisture to be re-cocked.

Hay can be put in small cocks greener than in large ones. Some farmers take hay from the windrow and make very small bunches, each containing about three forkfuls of hay, before the hay is in condition to be put into a regular sized cock. The second day several of the small bunches are put into a large cock, where it remains until thoroughly cured.

Another reason for curing hay in the cock is that there is a very considerable saving of leaves when making legume hay. The economy of curing in the cock must be governed by other factors to be mentioned later.

How to Cock Hay

There are two ways to make a hay cock. One is to roll up the hay in the windrow into a rather loose cock or bunch, or to round up (cock) bunches of hay that have been bunched with the sulky or push rake, after the hay is almost cured. The bulk of the hay in this kind of a cock is not handled, being left rolled up and tangled from the action of the rake. The edges are pulled out with a pitchfork and put on top of the cock. Such cocks are subject to considerable settling, and flatten out and do not shed rain. This practice is suitable for curing in good weather, as a man can handle more than twice as much hay as when cocking the other way. It is a waste of time, however, to cock hay in this manner if it is to be exposed to rain, un-

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Water for the Far Pasture

The water question in the far pasture is no longer a nuisance when you install a TORONTO Windmill. No more windmills, you say? Wait! The Toronto **double gears** put an entirely new face on the matter. Instead of the old uncertainty and constant worry with repairs, the new Toronto double gear windmill gives ample power in the lightest wind, requires practically no attention, abolishes rattling and replacing of bushings, because there is so little wear. The double gears remove side strain, the bugbear of the old style windmill. If you want to save days of work watering the stock on the far pasture, in your barns or elsewhere, write to-day for the Toronto Windmill Booklet. 144W

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

PROVINCIAL EXHIBITION

BRANDON, MAN., JULY 22nd to 26th, 1918

WESTERN CANADA'S GREATEST FARM MACHINERY DISPLAY IS SEEN AT BRANDON.

There will be more and better exhibits than ever before in LIVE STOCK, AGRICULTURAL PRODUCTS, EDUCATIONAL, FINE ARTS AND SCIENCE.

MANUFACTURERS ARE INVITED TO EXHIBIT

Outside space free. Nominal charge for inside space. Apply for space early.

Light Tractor Plowing Demonstration

Brandon was the first Exhibition in Canada to hold a Farm Tractor Plowing Demonstration. Those held in 1916 and 1917 were witnessed by tens of thousands of farmers, who saw the Tractors in operation doing actual work in the field. These Demonstrations have contributed in bringing the Light Farm Tractor into general use. Entries for the Tractor Demonstration close July 1st. See that you are on time. Horse and Auto Races. Special Platform Attractions. Unparalleled line-up of amusements.

A Fair for education, pleasure and vacation.

IT'S THE FARMERS' ANNUAL HOLIDAY

Exhibition rates on all railroads.

R. M. MATHESON, President.

Write for Prize List.

W. I. SMALE, Secretary.

PEDLAR'S PERFECT METAL CEILINGS AND WALLS



HELP make your home fireproof by using Pedlar's Metal Ceilings and Walls for interior finish. Thus you get added safety while making your home artistic. Moreover, by so doing you practice true economy, for this material will not crack or break away, but with ordinary care will outlast the house.

The pattern shown is Panel No. 1602 from the French Renaissance series of designs. Many others of equal merit.

Write for Calling Booklet - CT*

THE PEDLAR PEOPLE LIMITED

(ESTABLISHED 1862)

80 Lombard St., Winnipeg, Man.

Executive Offices and Factories: Ottawa, Ont.
Branches: Regina, Moose Jaw, Calgary, Edmonton, Vancouver

less hay caps are used; for the rain will wet and spoil the hay.

The best and correct way to build a cock, when working with fairly green hay, is to take the hay, a forkful at a time, and spread it out flat. Care should be taken to build a good, symmetrical cock, in the same manner as a stack is built. The top should come to a sharp peak, and, when the last forkful is on the sides, should be raked downwards so that the stems will cause rain to run off and away from the center of the cock. Cocks built in this manner will shed considerably more rain than when most of the hay is rolled up or bunched. Well cocked hay covered with caps can, if necessary, remain in the field over a week.

Systems of Making Hay

There are four distinct systems of making hay, each of which is divided in actual practice, into several methods. The distinguishing features of the four systems are as follows:—

- (1) Loading is done by hand.
- (2) Loading is done with hay loader.
- (3) Push rakes and stacker are used.
- (4) Hay is baled in the field, using push rakes and horse or power press.

System No. 1—Loading Done by Hand

This is the oldest system and the one most generally used in the older hay-growing sections of the east. Its retention in these sections is due largely to the fact that it requires a minimum amount of equipment, which makes it particularly suited to farms where only a limited acreage of hay is grown.

The equipment required includes only mowing machine, rake, pitchfork, wagon and rack, and in most cases, unloading apparatus such as hay forks or slings.

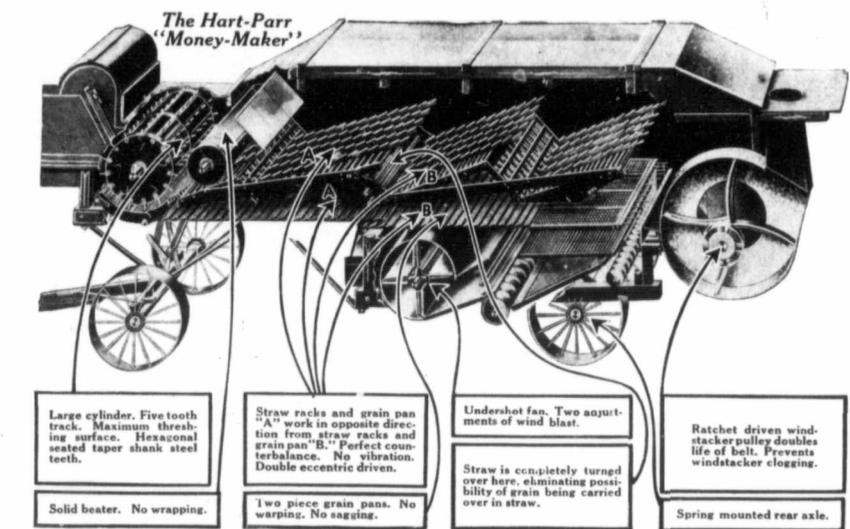
Nearly every one is familiar with this system, which consists merely of pitching the hay on the wagon with hand forks and hauling to stack or barn, where it is either pitched off by hand or unloaded with horse forks or slings.

While it can be used under almost any conditions, this system involves a large amount of irksome hand labor, and for this reason, as well as the greater expense for labor, it should be replaced by some other system whenever practicable.

System No. 2—Loading Done With Hay Loader

The hay loader is used most largely in the timothy and clover hay area. It is used to a certain extent in New York and Pennsylvania, and to a greater extent in Ohio, Indiana, and Iowa.

In some localities there exists a prejudice against the loader. The



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

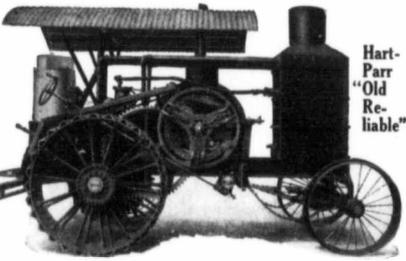
Hart-Parr kerosene burning tractors have been the standard for years. Hundreds are in use today. They mean kerosene supremacy. Not only will they thresh and plow, but they are reliable, economical, powerful tractors for road grading, hauling, field work, etc.

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 loaders.

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

first loaders put on the market were not mechanically perfect, and therefore did not always give satisfaction, and the delay caused by break-downs influenced many to abandon their use. Moreover the loader often has been used on uneven or stony ground, with a resultant frequent breaking of vital parts. This use of the loader, under conditions not recommended by the manufacturers, also has tended to limit its popularity.

Another, and perhaps the most important, reason for the loader not being used more generally is that to use it economically the men on the wagon must work very hard while the load is being put on. A study of the use of the loader in several States has revealed the fact that the hired men as a rule do not like to work on the loader, and for this reason push rakes and stackers have supplanted it on some farms in the Middle West. On one farm it

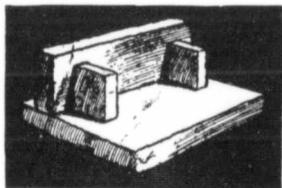
was noticed that when the owner was absent, five loads were hauled in one afternoon, but when the owner was present and working on the wagon, seven loads were taken from the field in the same length of time.

At present there are two types of loaders. One picks up the hay with a revolving drum studded with spurs of spring wire about six inches long. The other type takes up the hay by means of a

Continued on page 58

The Art of Soldering, Sweating and Brazing

A SOLDERING kit is simple and inexpensive, and may be bought all complete in a box. The better way, however, is to buy the things separately. A soldering iron—more generally called a "bit"—is a lump of copper with a pointed end riveted to an iron rod about a foot long, which terminates in a wooden handle. Its sizes run according to the weight of the lump of copper, not the whole weight of the tool. For ordinary amateur's work about a car, one of half a pound, or preferably a pound, is suitable, the advantage of the larger one being that it holds the heat longer and does not require warming up so often.



The Hearth

The iron is the most expensive article of the kit. Solder is sold in lb. sticks, and best hard tinner's solder is the proper kind and quality. It is soft enough to be pared by an ordinary pocket knife, and has a bright, silvery surface under the cut. One stick lasts a year or more.

The Flux

The next item is the flux, which is usually chloride of zinc, called killed spirits. It is made by dissolving strips of zinc in hydrochloric acid (spirits of salts.) This dissolving is best done in the open, as very unpleasant and rather harmful fumes are given off. Zinc should be added, a few strips at a time, until all effervescence has ceased and the mixture is quite cooled. There will probably be some blackened bits of metal at the top; and for small work that is to be thoroughly well done those impurities should be removed by filtering through filter paper or a bit of clean rag. It is a little refinement to filter the flux, but it certainly seems to work rather better, and a little water may be added—about a fourth part by volume. Other fluxes are sal ammoniac, and the proprietary preparation known as Fluxite. This last replaces resin, which is (or should) always be used for the flux in electrical work, and it may be employed for general work as well.

The other instruments are an

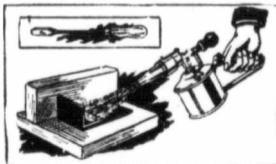
old file and the lid of a tin, or any odd bit of tin; but it must be always clean and bright.

The preliminary to actual soldering is "tinning the bit"—a process where many amateurs have been known to fail, for some reason or reasons unknown. It is extremely simple. The bit is heated over a blow-lamp or in a clear fire, until it is very nearly red hot, but not quite. (N.B.)—It never should be allowed to get red hot. If by accident it does it must be re-tinned. This is important.) When thus warm, it should be taken from the fire, brightened quickly with the file, and dipped momentarily in the flux. Then, its point resting on the piece of tin, the stick of solder is held against it, and a little is melted off and runs on the tin in a molten globule. The iron is now rubbed about in the molten solder, which adheres to the point in a bright, silvery coating, partly amalgamating with the copper of the bit. If the solder does not run freely and sticks on the point, the point may be dipped in the flux again for an instant.

Sometimes it happens with one's early efforts that the solder does not adhere—frequently because the iron is not hot enough. The remedy is obvious. If it adheres in patches the filing has been partial, and some of the dirt, or tarry matter from the fire or flame, has not been removed. The cure is re-heating, followed by a more thorough cleaning with the file. If warm enough, the solder melts as soon as the iron is touched with it, and if clean enough the solder coats the point at once.

A Simple Repair

The outfit is now ready for use, and, as an example, let us take a simple and easy case, like that of a leaky seam in the reservoir of a brass side lamp. It was important to clean the bit thorough-

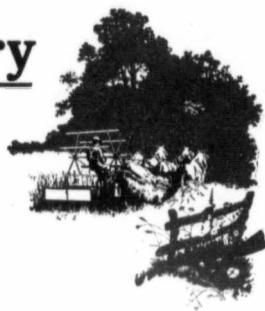


The Outfit

ly before it could be tinned; and it is just as important to clean the work thoroughly before it can be soldered.

The seam will certainly be dirty, and probably dripping kerosene as well. To make a really sound job, the reservoir

No Worry About Harvest



HAVE you noticed how discussion of the food supply situation seems to center around the number of acres it is possible to plant rather than around the harvesting of those planted acres?

It is an unconscious, but none the less wonderful, tribute to the genius of the inventors of the reaper and binder that the public takes the harvesting of the greatest grain crop ever planted as a matter of course. The sole question now is, "How many acres can we plant?" The power and help required by the planting will be amply sufficient for the harvest where Deering binders and binder twine are used.

And, where they are used, the harvest will be complete. No matter whether the grain be tall or short, heavy or light, standing or down, lodged and tangled, a Deering binder cuts and binds it all without waste.

It is an easy matter to be fully prepared for harvest. Buy the largest binder you can use. The larger sizes conserve labor. Buy a new machine if there is any question about the efficiency of the old one. A new Deering is absolutely reliable.

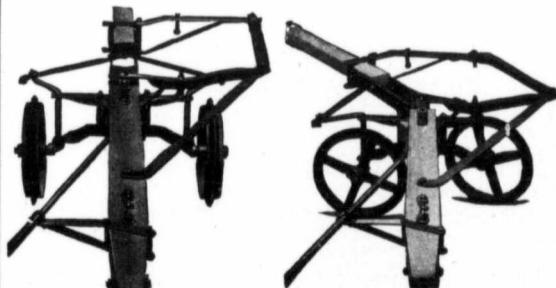
We furnish promptly either new Deering binders or repairs for old ones. Do not hesitate to call on our organization for any help we can give in the harvesting of this year's grain crop—the most important crop ever raised. See the local dealer or write to the nearest branch direct—early.

International Harvester Company of Canada, Limited

BRANCH HOUSES

WEST—Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Lethbridge, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.

EAST—Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N.B.



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.

should be cleaned out in boiling hot soda and water, and some soap and a scrub brush will do no harm. When dried the seam must be scraped with any pointed instrument, such as an old pocket knife or the tang of a file, until the brass and the old solder are perfectly clean and bright.

The soldering iron is put to warm in the blow-lamp or fire, and while this is done some flux may be spread along the seam with a bit of copper wire, or a spent match stalk. When the iron is judged to be warm enough, its point is rubbed lightly on a bit of clean waste—or in the case of the old hand, on the operator's overalls—dipped a moment in the flux, and then applied to the joint, with the stick of solder held against it. A small globule of solder is melted off the stick, flows into the seam, and is drawn where required by the point of the iron. It will be a moment or two before it flows into the seam, because it cannot flow until the seam itself is warm enough to keep it melted, and the heat for doing this is supplied by the iron. In thin sheet the solder flows almost at once; for thicker stuff it may be necessary to warm the iron a second time, and apply it to the work before the latter acquires sufficient heat to melt the solder. For larger and heavier work it is convenient to have a couple of irons, so that one may be heating while the other is in use.

The test of a good job is not the amount of solder left on the work, but the amount that is run into the joint itself; and some of the soundest jobs show hardly any solder outside. When only a very little solder is required, enough may be picked up on the bit from the piece of tin whereon the bit was tinned. Practised workers usually work this way for light jobs.

Closely allied to this form of soldering with the bit is the form known as "sweating." In this the work itself is heated—being, of course, previously cleaned—a little flux dropped on, and the solder run into the joint from the stick itself. It may be led round and along a seam or joint by a piece of stout brass or copper wire flattened at the end. Such a piece of wire also, when properly tinned, makes an excellent soldering bit for very small work, such as the electrical connections sometimes met with in switchboards and other parts of lighting sets.

When Fluxite is used as a flux when sweating, it is advisable to smear a little over the work before warming, and a little more when warmed.

(Concluded in July issue)



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.

HUMOR YOUR MACHINERY

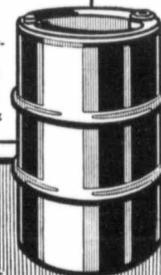
GIVE machines correct lubrication and they behave well. You get smooth-running, quiet engines and full rated horse power day in and day out. But you must humor them. If you are burning kerosene in your motor instead of gasoline, a special lubricant will probably be necessary to meet the changed conditions. A loose bearing and a tight bearing require different treatment. **There is a correct lubricant for every mechanical need.**

At Imperial Oil stations in every part of Canada, you can get the just-right lubricant for every need and service.

All Imperial lubricating oils are sold in steel barrels and half-barrels—convenient and economical. There's no waste. You use every drop you pay for; and you are sure it is uniform and clean.

A Correct Lubricant for every Farm Machine

 <p>For Gasoline Engines, Tractor, Auto or Stationary POLARINE OIL STANDARD GAS ENGINE OIL For Kerosene Engines, Tractor or Stationary POLARINE OIL HEAVY IMPERIAL KEROSENE TRACTOR OIL <small>(Recommended by International Harvester Co.)</small></p>	 <p>For Open Bearings of Farm Machinery PRAIRIE HARVESTER OIL —very heavy body, resists cold, won't thin out with moisture ELDORADO CASTOR OIL —a thick oil for worn and loose bearings</p>	 <p>For Steam Cylinder Lubrication, whether Tractor or Stationary Type CAPITOL CYLINDER OIL —the standard product for steam cylinder lubrication</p>	 <p>THRESHER HARD OIL For Grease Cup Lubrication of Bearings a clean solidified oil high melting point</p>
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FRED. B. FETHERSTONHAUGH, F. C. M. E.
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Is you want quickest returns and most money for your
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Farmers and teamsters all over the Dominion of Canada, know the name Heney Crown Brand Harness. This brand has always stood for Reliability, Endurance and Quality. The makers of Heney Harness back their goods with a guarantee that means satisfaction and continued patronage from all customers. We specialize in
Farm Harness, Team Harness, Extra Heavy Work Harness, Buggy Harness, Delivery Harness

Ask your nearest dealer to show you a set of Heney Harness and note the perfect workmanship and quality of every piece. Remember—the Heney Guarantee means a perfect set of harness and perfect satisfaction to the buyer.
Sold by dealers all over the Dominion for fifty years.
HENEY CARRIAGE AND HARNESS CO., LTD.
Under Management of
CARRIAGE FACTORIES, LIMITED - TORONTO
Western Office, 156 Princess St., Winnipeg

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.

A TIP ON KEROSENE ENGINES

(Given From Experience.)

By F. A. Bickford

WHERE a kerosene mixture is well broken up and mixed and superheated before entering the cylinder, it is not necessary to use water to stop pre-ignition.

The mixture need not be as rich since the combustion is more instantaneous and the power is delivered whilst the piston is at the top of its stroke.

In a richer but not thoroughly atomized mixture, to stop pre-ignition it is found necessary to use water. The water on turning to steam takes heat out of the mixture. But its use makes combustion much slower and the power is not all brought into play until the piston has travelled some distance. Thus not as many units are utilized as power, but are thrown off as heat.

Where water is used it is better to inject it into the cylinder after the air and gas have had a chance to mix whilst travelling together in the manifold.

Water gives more power to some engines, but only by keeping the engine from working against itself, which happens in pre-ignition.

When the design of engine is such that water is not used, it is not necessary to compress it as much to get the same power as you would do if engine used water, since ignition is more instantaneous.

The better designed the engine is the less water it will need.

The piston of an engine at 1,000 feet piston speed travels

one inch in 1-200 of a second, and you will readily see how important it is to get the explosion as instantaneous as possible.

In the evening a motor picks up power. Is this caused by moisture in the atmosphere or by the air becoming heavier and more condensed as it gives up heat?

Pre-ignition causes knocking. Knocking causes wear on bearings.

A superheated and thoroughly atomized mixture deposits little carbon.

NOT ALL PLAIN SAILING

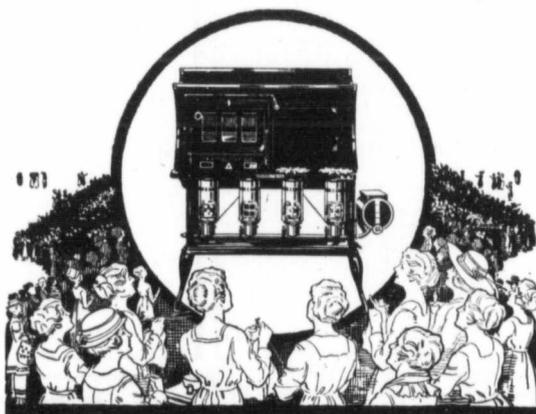
Gray, Sask., Jan'y 30, 1918.

Dear Sir,—

IN the fall of 1916 we bought a Waterloo Boy 12-24 tractor in order to finish the plowing which had got behind owing to very wet season. At the same time we also bought a 4-furrow light engine plow (disc) from the G.G.G. Co., Regina. With this outfit we found we could plow about 8 acres a day by working from 6 in the morning till 8 in the evening, with about 2½ hours off during the day, at an expenditure of 15 gallons kerosene, ½ gal. gasoline and 3 gallons of oil. The land is heavy clay. When the land is in condition to plow, we could turn over 7 to 9 inches without in any way overloading the engine, although the four plows were set to cut about 40 inches.

In the same fall we bought a Case 26-46 separator. The season was exceptionally wet and the separator had a little the best of the argument in the tough straw, although last fall (1917) with a dry season the engine had enough power.

In the winter of 1916-17 we



THE STOVE WITH 3,000,000 FRIENDS

3,000,000 housewives have discovered the way to better cooking, cooler kitchens and less work. They use the New Perfection Oil Cook Stove.

Ask your neighbor. She knows the New Perfection Oil Cook Stove is dependable and easy to operate. She knows the Long Blue Chimney gives a clean, intense heat—without odor, or smoke. She knows the convenience and economy of using oil for fuel.

The New Perfection Oven bakes unusually well—makes the stove a complete cooking device.

The Cabinet adds to the appearance of the stove and provides extra room for utensils.

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



The Red Cross is Yours Just as the Army is Yours

Yours to support with the same fervor that led you to the bottom of your purses for Victory Bonds. Our same loyal fighting men will be assisted by your contribution to the Red Cross—but in their hour of greater need when stricken down by a bursting shell or sniper's bullet.

Red Cross brings to the wounded soldier all those tender attentions that you would pay yourself to your own son, were you on the spot to do so. You who have next-of-kin on the battle-torn fields of Flanders will know what that means—From you who have not sacrificed to so

great an extent, the more will be expected.

Red Cross looks to the Farmers of Manitoba and Saskatchewan for a generous measure of support in the coming campaign commencing June 17th. At home amid comforts and luxuries we have more to-day than ever before—"Out there" those lads whom Red Cross helps have sacrificed everything.

Here's What Red Cross Does With Your Money

Every Canadian wounded soldier becomes a personal care and charge of the Red Cross.

Red Cross maintains four Canadian Hospitals in England.

Red Cross maintains eight Canadian Hospitals in France.

Red Cross has built and maintains a great Hospital in Paris, the gift of Canada to the soldiers of France.

Red Cross maintains a fleet of 80 motor ambulances between the trenches and the hospitals.

Red Cross supplies 23 Casualty Clearing Stations behind the Canadian lines.

Red Cross personally visits 945 hospitals in England and France, and give individual attention and comforts to every Canadian soldier therein.

Red Cross provides \$1,000 per man for treatment of Canadian soldiers at St. Dunstan's Hospital for the Blind, the World's foremost institution of its kind; and provides equally specialized care at Queen Mary's Hospital for facial treatment.

Red Cross is the only institution on earth that is permitted access to our prisoners on enemy soil—over 2,800 of them to-day.

Be Ready with a Generous Contribution

Whether it be cash, or a promise to pay at some later intervals during the year.

SASKATCHEWAN

Headquarters
New Armour Block, Regina

MANITOBA

Headquarters
Kennedy Building, Winnipeg

spent our spare time figuring out hitches for two drills and for two discs. The results, while open to considerable improvement, demonstrated that the tractor would operate successfully with both these implements. We used a 6-horse 28-disc and a 4-horse 16-disc; the wide one hitched close up and the narrow one further back and lapping over a foot or more. This made just a nice load for the tractor and got over a lot of ground. In seeding, we used a 22-disc Sylvester and an 18-disc Superior. The same system was used with the drills as was used on the discs, the wide one close up and the narrow one back and far enough to one side to follow right. We did practically all our discing, drilling and harvesting on a 480-acre farm with this tractor and had no serious trouble. In discing and drilling, extension runs were used, making a 20-inch wheel under a 4,800-lb. tractor.

This tractor pulls the discs and drills on low speed with some reserve power, and easily takes two binders through the heaviest grain on high. No record was kept of fuel consumption in this work, but 15 gallons of kerosene and a proportionate amount of oil will run the engine, pulling either of these three loads for 21 to 22 miles.

For harvesting we bought two patent binder hitches, at a cost of \$35 each, and they gave good satisfaction. Each binder can be steered from the seat for any necessary distance to the right or left. In turning the corners, we found that the best way was to make a square turn. The long point is there just the same as when using horses, but never gets any longer, and no grain is left standing at the turn, nor is any tramped down.

From what experience we have had and also by seeing what others around us have done, I think the small tractor can be used to advantage on any wheat farm from a half section up. Its general utility would give it a place on our farm, and at the heavy work of plowing and discing in the hot weather it is unquestionably better than horses.

I think, however, that a 14-28 or a 15-30 would be a better size for any wheat farmer. A tractor of this size would still be a one-man outfit, and would not only allow the one man to do more work but would have some reserve power at the belt on a separator that would keep four teams in the field.

In fairness, it must be admitted that all is not plain sailing in running a tractor, using gasoline or kerosene, though not much trouble usually develops in warm weather, exasperating delays occur when the weather gets cold.

However, as the manufacturers are always improving their machines, especially where starting troubles occur, and as owners gain experience, most of these troubles will probably disappear.

G. W. McGillivray.

A FEW FIGURES AND SLIGHT CRITICISM

Herschel, Sask., Jan. 26th, 1918.

Dear Sir:

IN reply to your letter of the 18th inst., will say that in my estimation the kerosene tractor, especially the small one, say, 15 drawbar horse-power, or even smaller, is the most economical farm power of the present time, and the one we must depend on to help solve the farm labor question, for with one of them, if properly operated and cared for, one man can do the work of two or three horses.

I have been using a Waterloo Boy 12-24 Tractor during the last two seasons, and will give an outline of what I did with it in 1917.

I pulled two 11 ft. (22 run) drills through seeding, drilled 292 acres. Double discing 186 acres, using an I.H.C. 12 ft. engine disc inthrow and outthrow combined.

During the summer I plowed 274 acres, using a four disc plow. The land in this vicinity is so heavy and sticky that a mould-board plow will not work even under the most favorable conditions. The depth I plow varied from five to nine inches. I also cut 160 acres with two 8 ft. binders, which I find makes a good outfit at three miles per hour.

After threshing I plowed 35 acres, and as the ground was extremely dry I removed one disc and pulled two sections of lever harrows, fastened one behind the other, thus harrowing the land four times while plowing it, which combination I consider excellent work. When using the four discs I plowed from eight to ten and a half acres per day, averaging about eight and a half acres, and using a fraction over two and a half gallons of kerosene, one pint of cylinder oil and slightly more than a pint of machine cotton in the gear pump per acre.

In doing the above work, and numerous small jobs not mentioned, including the grinding of over 2,000 bushels of grain with a twelve-inch plate grinder, my expense bill has been as follows:

Kerosene, at 22 cents, \$251.90; gasoline, 38 cents, \$18.25; gear oil, 46 cents, \$12.90; cylinder oil, 58½ cents, \$36.25; hard oil, 12 cents, \$6.90.

In addition to the above, I had an unusually high repair bill of \$103.00, which I attribute partly to the inferior design and construction of my engine, and part-

Columbia Dry Batteries

WHAT'S the mystery about a dry cell? If there's any, it's on the inside. For anybody can use it—a boy can wire it up!

Because it's so simple, thousands prefer it for running autos, engines, motorboats; tractors, trucks, and toys; for lighting lanterns, ringing bells, and carrying talk through telephone wires.

For any battery purpose the old reliable COLUMBIA is it. Its hot, quick flow of current makes things hum. It's sold most everywhere and, while it costs no more, it lasts a lot longer!

CANADIAN NATIONAL CARBON CO., Limited
Toronto, Ontario

Falmestock Spring Binding Posts
no extra charge



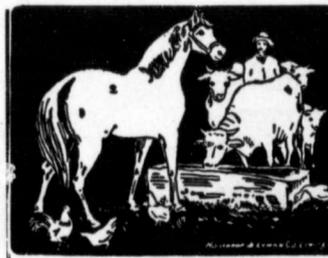
Buy them Anywhere
Easily and Quickly
Wired up

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.



Dr. Thomas'
**Eclectic
Oil**

Relieves all Pain
in Man or Beast
25 Cent Bottles
at all Dealers

ly to the fact that I purchased it second-hand.

Hoping that this is something in the line of the information desired, and thanking you for your courtesies.

Yours truly,
H. A. Dunbar.

TAKE ADVANTAGE OF THE GAS ENGINE SCHOOL

Lebret, Sask., Jan. 28th, 1918.

Dear Sir:

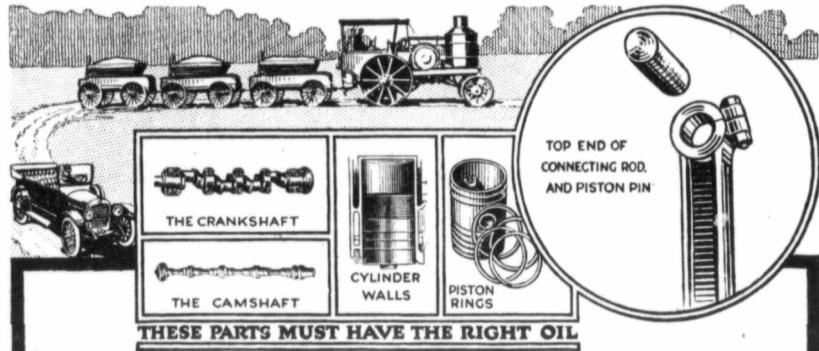
MINE is a 10-20 Titan, I.H.C. I use it for plowing, etc. Last spring I started plowing just as soon as the land was dry enough, and found it ideal power for rushing the work. My land is asandy loam and the fields are half a mile and three-quarters of a mile in length. These long rounds are hard on horses when kept going. With the tractor I used a three-furrow P. & O. Plow, cutting 42 in., and a section of harrows. On the half-mile stretch it takes an average of half an hour, this time including proper attention to engine, etc. I plow to a depth of from five to seven inches. In spring plowing with harrows attached, I use nearly two gallons of coal oil per acre, at 23c. per gallon, about five quarts of lubricating oil, less than a pound of cup grease and about forty gallons of water per day. In fall plowing I use just over two gallons of coal oil. In spring I did nearly an acre an hour, going the round on the half-mile in from twenty-five to thirty minutes, and keep it going without loss of time.

I also use a 12 ft. duck foot cultivator, running on high speed. This makes quick work, and can be run by a boy. My eleven year old son ran this outfit all one Saturday and lost no time.

As soon as the grain was ready to cut, I used two binders, one 8 ft. and one 7 ft., and ran on high speed with the exception of a strip of rising ground, when I had to shut down to low speed for a short distance. I found this very satisfactory and very cheap cutting, as I had my boy run the engine or a binder and another lad on the second binder, and I did likewise, and kept the machinery running. Here again I found the advantage of the long stretch. If anything went wrong with the machinery I had no horses to get into the grain. I cannot give the exact amount of fuel used in the harvest or cultivating as I have lost my records.

For moving grain bins I find it an ideal power. No shaking up of the building.

It is also ideal for threshing running a 24-48 separator complete. A friend of mine used a



THESE PARTS MUST HAVE THE RIGHT OIL

Polarine
FRICTION REDUCING MOTOR OIL

Prevents Friction that Causes Wear

AWAY up at the top of the connecting rod in each motor cylinder is a little pin on whose perfect action depends the smooth operation of the motor in your tractor or automobile. Piston Pin is its name.

This little pin holds the piston to the connecting rod. Every time the piston slides up and down the cylinder this little pin moves in the top bearing of the connecting rod. When the motor is running at high speed it moves about 150,000 times an hour.

Imagine the tremendous heat that can be generated by such rapid action if there's the slightest sign of friction! That's why it is highly important that you use not only good oil but the right oil to meet this condition.

The Piston Pin and the other vital parts of your motor can be lubricated perfectly by Polarine or Polarine Heavy. These oils lubricate at low or high temperatures—they do not "break down" or wear out under maximum engine heat.

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 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.



Write us at Room 704, Imperial Oil Building, Toronto, for interesting Polarine Booklet

IMPERIAL OIL LIMITED
Branches Throughout Canada

Food Will Win the War

Serve your country and yourself by raising FOOD on the fertile plains of Western Canada. The Canadian Pacific Railway makes it easy for you to begin. Lands \$11 to \$30 an acre; irrigated land up to \$50; 20 years to pay. Loan to assist settlers on irrigated lands. Get full particulars and free illustrated literature from

ALLAN CAMERON, Gen'l Sup'l. C.P.R. Lands
912 1st St. East, CALGARY

PEERLESS GATES



Down the road or far across the fields is often an "entrance," a mere hole in the fence, a constant source of danger to stock getting through. The best way to

Keep Your Stock Where You Want Them

is to provide real gates, strong and durable. All Peerless Farm Gates are of heavy open hearth steel wire on strong tubular steel frames electrically welded in one solid piece, and braced like a steel bridge. No sag, no rust, no wearing out. We also manufacture a complete line of the famous Peerless Perfection Farm and Poultry fencing with the famous Peerless lock at all intersections.



SEND TODAY FOR CATALOG.

It tells you how to put up a fence to "stay put."
The Banwell-Hoxie Wire Fence Co., Ltd.
Winnipeg, Manitoba Hamilton, Ontario

Sawyer-Massey 28 inch separator and was well suited.

I use my engine for plowing through small poplar bluffs and scrub, which I have been unable to plow with horses.

My repair bill was very light, a magneto spring and cushion spring, \$1.00, and an air-valve, 75 cents.

As a tractor owner, I would strongly advise anyone intending to purchase to take advantage of the Gas Engine School, and get into the handling of the engine. This will save both time and expense. Before I bought, my lad and I took about eight or nine days at the school and found it the best investment I have ever made. One thing especially necessary is to study your magneto. This is very important. Have an extra spring for your magneto and air-valve, as these springs get out of order and break.

I also use my engine for pulling poplar stumps and find it very satisfactory, also for chopping and cutting feed. In fact, I find it will go and do almost any work a horse can. It will haul three loads of wheat or a road grader.

Trusting this information may be of some use to you.

Yours truly,

W. H. Orman.

WANTS IMPROVEMENT IN COOLING AND OILING SYSTEMS

Box 45, Prelate, Jan. 28th, 1918.

Dear Sirs:—In reference to yours of the 19th inst., I own and operate a Titan 10-20 engine. I purchased it in the spring of 1917, and I think they are the only thing for a half section.

I can handle two 14-inch John Deere plows, five inches deep in breaking, and can plow about seven acres a day of 12 hours at a cost of 85 cents an acre.

The soil here is very heavy and inclined to gumbo in places. It takes five horses on a 14-inch plow. I handled a 24-inch Waterloo Separator last fall and threshed as high as 1,000 bushels of wheat in a day.

I also find the engine just the thing for hauling granaries. There are, however, two things that might be altered to give better satisfaction, and that is the cooling system, also the oiling system, as the engine heats up too quickly under a heavy load.

I am, yours, truly, Thomas Arthur.

The greatest results in life are usually attained by simple means and the exercise of ordinary qualities. These may for the most part be summed up in these two—common sense and perseverance.

CALGARY'S BIG EVENT

The prize list of the Calgary Industrial Exhibition, June 28th to July 6th, has now been issued, and may be had by writing to E. L. Richardson, manager, Calgary, Alberta. The list includes many special features, and special attention should be called to the \$3,500 prize list for girls and boys, possibly the largest ever offered for them exclusively at an exhibition. The judging of their classes will be on Saturday, June 29th, which day will be devoted almost entirely to girls' and boys' work, and will be one of the most interesting exhibition days ever conducted by the Calgary Exhibition.

The entertainment programme of the Calgary Exhibition will be an outstanding one. The best attractions to be found anywhere on the continent have been engaged, and there will be horse racing on the afternoons of the first four days. On July 4th and 5th there will be automobile races with the fastest drivers to be found anywhere taking part.

Prospects are bright for the best exhibition of live stock ever held, even surpassing the wonderful display of last year.

WILD NATURE AROUND OUR LAKES

The Canadian Northern Railway earned the gratitude of all lovers of out-of-doors when, in 1911, it made an entrance, and now serves, through a thousand acres of heavy timbered land, starred with beautiful lakes and winding streams as a resort for the wild things and a recreation ground for the people. They call it the Rainy Lake—Quetico Forest reserve of Ontario—between Winnipeg and Port Arthur. To-day this lovely region remains unspoiled, a perfect refuge for the creatures of the forest and an ideal camping ground for the sportsman and business man.

The two great lakes, Rainy and the Lake of the Woods, in this district annually yield a rich harvest to the commercial fisherman, while the several thousand smaller lakes which are still unfished, interest the angler most.

An illustrated descriptive booklet of the Rainy Lake district has just been issued by the Canadian Northern Railway, and a copy of the same may be had for the asking at the city ticket office, Main and Portage, or by writing to the general passenger department, Union Station.

The Danger

"Pa, a man's wife is his better half, isn't she?"

"We are told so, my son."

"Then if a man marries twice there isn't anything left of him, is there?"

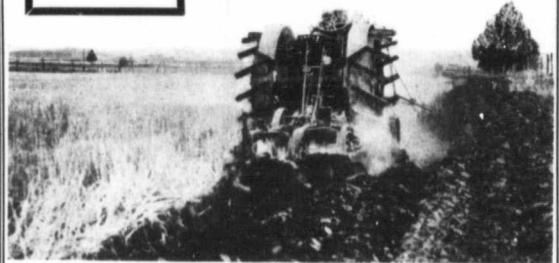


Little Genius Tractor Plows

The Ideal Plow For Your Light Tractor

Before you buy that tractor plow, get every bit of information you can about tractor plows and tractor plowing. When you invest your good money in a tractor plowing outfit, be sure that you are getting an outfit that will deliver the goods. The plow will represent the small end of the investment from a dollar standpoint, but in the field you'll find that everything depends upon the plow. P & O Little Genius Tractor Plows enjoy a prestige unknown to any other tractor plow. They make good all the time, every where, under any plowing conditions.

Write now for Catalog—"P & O Tractor Plows"



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

International Harvester Co. of Canada, Limited

SALES AGENTS FOR CANADA

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Best ANTI-FRICTION BABBITTS

ON THE MARKET

With forty years' experience in manufacturing alloys for all classes of machinery, the HOYT METAL CO. has evolved two alloys which are unsurpassed by anything of the kind now in use.

HOYT'S NICKEL GENUINE Babbitt is especially designed for heavy duty gas tractors.

HOYT'S FROST KING Babbitt is especially designed for threshers, separators and stationary engines of all classes.

If your dealer does not carry these metals in stock, send your order direct to us. In order to insure prompt delivery send postal money order.

Nickel Genuine		Frost King	
Less than 28 lbs.	\$1.50 per lb.	Less than 30 lbs.40 per lb.
30 lb. box	1.48 per lb.	30 lb. box37 per lb.
56 lb. box	1.25 per lb.	60 lb. box35 per lb.

Delivered to your nearest express or post office station.

Hoyt Metal Co. EASTERN AVE. and Toronto
LEWIS STREET

FACTORIES—London, Eng.; Toronto, New York and St. Louis.

Steam or Gas Tractors

Equipped with



PICKERING "THE GOVERNOR WITHOUT JOINTS"

give greatest efficiency

FITTED TO EVERY BUILD OF ENGINE

Patent Ball Ranger Speed Changer Supplied on all Genuine Pickering Governors.

Will increase speed 50% or more.

THE PICKERING GOVERNOR CO.

PORTLAND

CONN, U.S.A.



1918, The Year of Decision!

Friend and foe alike are seized with the belief that 1918 will decide once for all whether the cause of Democracy or the claims of the Hun shall prevail. An early spring, a big acreage and the promise of a heavy crop also point to a *decision* among farmers as to what is strong and what is weak in certain much advertised details of their farm equipment. We have made an unqualified claim for our goods, and in 1918 we are out to *finally prove* that the



LION BRAND
Rubber Belt
 and the
YELLOW FELLOW
ENDLESS THRESHER BELT



are still unbeaten in the field of thresher belting.

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.

Gutta Percha and Rubber Limited

WINNIPEG FORT WILLIAM REGINA SASKATOON CALGARY LETHBRIDGE EDMONTON

TO THE WOOL GROWERS OF CANADA

One of the most important meetings on sheep raising in Canada was held in Ottawa before the War Trade Board Wednesday, April 17th. It comprised a conference called by the War Trade Board of a Committee of Wool Growers appointed at the national convention of sheep raisers in Canada in February, with a committee of the manufacturers, wool dealers and wool pullers.

The manufacturers feared they may not have sufficient Australian and New Zealand wool allotted to them by the British Government to serve their purposes and consequently might require American and Canadian wool to meet their needs. At present American wool cannot be exported to Canada except for the purpose of manufacture of American Government orders and they claim Canadian wool was most frequently shipped out of the country either on consignment or direct sales, without themselves being given an opportunity to bid upon it.

The growers were eager to assist the manufacturers in any reasonable fashion that at the same time would insure Canadian wool being sold at a price equal to the American market for this

product, and drew their attention strongly to the likelihood of an exodus of sheep from Canada to the United States should Canadian prices fall below the level of those in that country. They, therefore, pressed the desirability of an unrestricted market for Canadian wool and the advantages which would accrue to the Canadian sheep raiser if Canadian wool went into the United States without the present restrictions imposed by the latter country, whereby the government exercises an option upon all imported wool at July 30th, 1917, prices less 5 per cent.

The result of the conference is expressed in the following resolution:

"That the Canadian War Trade Board request that the U.S. War Trade Board continue to allow the free export of Canadian grown wools both fleece and pulled to the U.S.A. on the basis that grading is permitted in the same without exercising government import options, and further, to encourage the import of foreign free wools that the Canadian Government remove the embargo at present in effect which prohibits the re-export from Canada to the U.S.A. of foreign free wool now held or in future imported into Canada, the export of this to be under license.

"\$10,000,000"
 worth of **"Z"** engines
 bought by **150,000**
 Farmers

J.M.P.
\$150
 6 H.P. 2267
 2000 with
 Throttling
 Governor
 1 1/2 H.P.
 (Gasoline)
\$94 on order
 4.2% Discount
 for Cash

F.O.B. Winnipeg

YOU will certainly take satisfaction in seeing a famous **"Z"** Farm Engine in action at your local dealer's if you'll stop in next time you are in town.

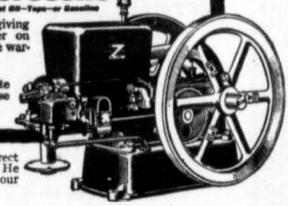
This is the famous engine—all sizes with more than rated power—that over 150,000 farmers have backed with \$10,000,000—to do their work best. No farm engine ever before has made such a record.

- See these **"Z"** Features
- 1—Fairbanks-Morse QUALITY.
 - 2—Economical in fuel and fuel cost and low up-keep.
 - 3—Simplicity and Staunch Durability.
 - 4—Lightweight and Substantial.
 - 5—Gun Barrel Cylinder Bore.
 - 6—Leak-proof Compression.

2 1/2 H.P. Use Kerosene

Cuts fuel costs in two—giving more than rated power on kerosene at half gasoline wartime prices.

Simplicity is the keynote of each Fairbanks-Morse Type "Z" Engine.

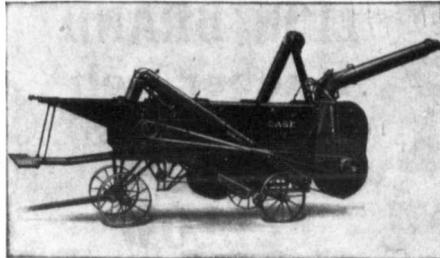


DEALER SERVICE: Your local dealer is a direct representative of the manufacturers. He shares their responsibility. He's at your service to see that you are satisfied.

The Canadian Fairbanks-Morse Co.
 Limited
 Winnipeg Saskatoon Calgary

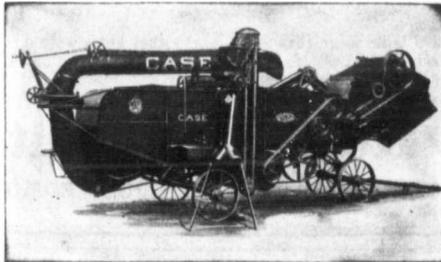
CASE Threshers -- The Popular Choice for Nearly Four Generations

J. I. Case built his first threshing machine way back in 1842 - just 76 years ago. Since that time thousands of Case threshing machines have found their way to every corner of the globe. This is a wonderful tribute to the popularity of Case machines. This business could not have been built up if these machines were not built right to perform properly and satisfy the user.



Case 20x28 (9 bar cyl.) Thresher

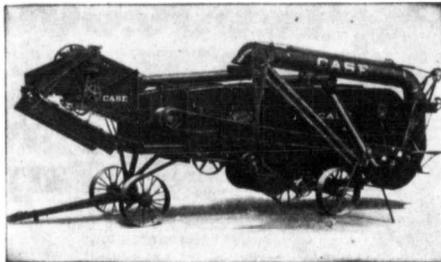
Case Threshers are built in seven sizes, 20 x 28; 20 x 36; 26 x 46; 28 x 50; 32 x 54; 36 x 58 and 40 x 62. A size for any run. Case threshing machines have many points of superiority, a few of which are pointed out on the opposite page. Read them over carefully and write for descriptive catalog which is furnished free upon request.



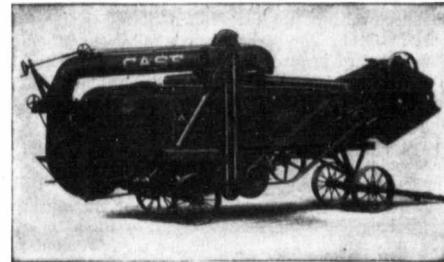
Case 20x36 (12 bar cyl.) Thresher



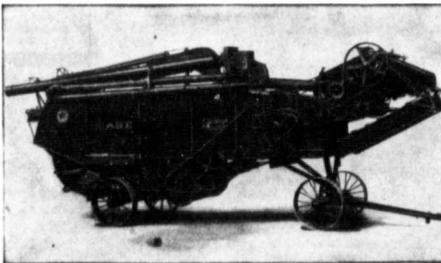
Case 26x46 (12 bar cyl.) Thresher



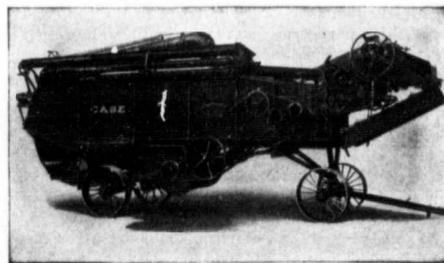
Case 28x50 (20 bar cyl.) Thresher



Case 32x54 (20 bar cyl.) Thresher



Case 36x58 (20 bar cyl.) Thresher



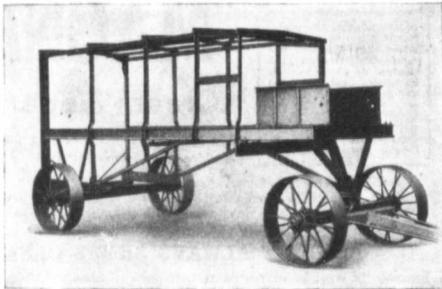
Case 40x62 (20 bar cyl.) Thresher

J.I. Case Threshing Machine Co. Racine, Wis. U.S.A.

908 LIBERTY ST.

CASE Threshers -- Real Grain Savers. Built for Years of Hard Service

Now more than ever before must we save grain. It is worth big money. No one can afford to waste it. The basic point at which to commence the conservation of grain is in the threshing operation. The grain saving ability is one of the strongest points in favor of Case machines. To guard against waste on account of faulty adjustments, careless pitching, irregular speed, etc. We regularly equip windstacker machines with the special Case Grain Saving Device at the blower to assure every farmer a clean job of threshing.



Case Steel Frame. It will not sag, warp or rot

capacity, thro separation and uniform speed. With a cylinder of this diameter large pulleys are used which provides liberal hugging surface for belts and protection to pulley lagging by lessening belt slippage. Large cylinder shaft, big bearings, the ribbed end head, and adjustable housing for the split ball and socket boxes are all noteworthy features which experienced threshermen will appreciate.



Case Cylinder and Concave teeth - interchangeable

All Case separators are equipped with interchangeable cylinder and concave teeth. These are made of special steel rolled to our own formula, annealed and tempered after being formed. Much strength is put in at the shank to prevent breakage.

Ample straw room is provided for in all Case threshers. The straw rack and pan are balanced and carried by two rocker shafts with bearings bolted to sills where they can be readily lubricated from the outside while machine is in motion. When the straw rack moves forwards the grain pan moves backwards and vice-versa. The straw rack also has a rising and falling motion as well as the back and forth movement. The construction and operation of these oscillating parts is such that they require the minimum attention and assuring freedom from vibration.

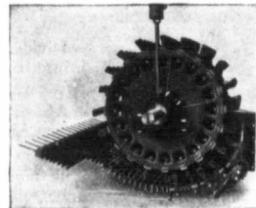
We can supply Case Self Feeders, Hand Feeds, Mounted Feeder Extensions, Spokane Feeders, Slat or Swinging Stackers, Grain Saving Windstackers and various types of grain handlers for all sizes of Case threshers. These attachments are all made especially for Case threshers, in Case factories by Case men and must measure up to the same high standard of quality as the machine itself.

We can also supply the necessary parts to change a regular grain thresher into a Pea and Bean, Peanut or Rice thresher. We can also supply different sizes of pulleys to meet the speed of your engine. Side gears can be supplied for the 3 smaller if you intend to drive your separator by sweep power.

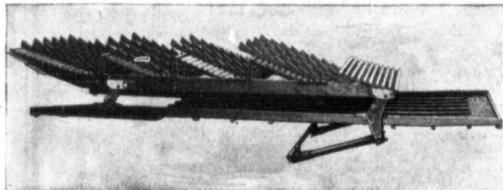
Learn more about a Case Thresher. We especially invite comparison with other makes. We know that the more thoroly you compare a Case with any other thresher the quicker you will purchase a Case. Write today for our free literature describing our full line of modern power farming machinery.

All Case threshing machines are constructed of steel where in lies their great strength and durability. This all steel construction makes it impossible for frame to warp or get out of line. It protects owners against total loss by fire. There are no wood sills to become ruined by dry rot. The weight and pull from heavy main drive belts does not cause sagging of sills with bad effects upon bearings. The front part that carries the cylinder is constructed of pressed boiler plate to give additional strength with reduced weight.

The practically indestructable cylinder is another feature that makes Case threshers so popular. The 20-bar cylinder shown in the illustration has a diameter of 32 inches, which is responsible for increased



Case 20 Bar Cylinder



The Case Straw Rack - Separates all grain from the straw

J.I. Case Threshing Machine Co. Racine, Wis. U.S.A.

908 LIBERTY ST.



THE MILKING MACHINE

Will Take the Place of That Extra Hired Man, and Unlike the Hired Man is Always Ready for Work

THE object of this notice is to put before the dairy farmer the value of the mechanical milker under the present conditions of labor on the farm.

There has been in the minds of many dairy farmers a great deal of prejudice against the use of a mechanical milker, but the present is no time to let prejudice stand in the way of increased production.

Every dairy farmer with a herd of 12 or more cows should consider seriously the installation of a milking machine.

The experience of an ever-increasing number of practical farmers, coupled with that of a number of our experimental farms and stations, goes to prove that these machines are decidedly advantageous.

Cost of Installation

The average cost of installation, taking into consideration the five most popular machines on the market, would be about \$500 for an outfit to milk four cows at once.

Such an outfit would be large enough for a 25 to 35-cow herd.

For a 20-cow herd a 3-cow outfit would be sufficient. For a 12 to 15-cow herd a 2-cow outfit would be sufficient.

For each reduction of one unit in the installation there will be a reduction of approximately \$100 in the cost price.

This brings the average cost price to \$16.60 per cow for the large herd; \$20 per cow for the medium-sized herd; and \$25 per cow for the small herd.

This in turn goes to show that while the cheapest installation for work done is with the large herd, nevertheless the first cost is not excessive in the case of a small herd.

Cost of Operation

The annual cost of operation for a 25 to 35-cow outfit, including repairs, power, labor in caring for engine and washing machines, interest on investment, and ten per cent depreciation on machine, would amount to approximately \$225.

The above is approximately one-third of what the farmer is at present paying his hired man, where board is not taken into account.

Divided between 30 cows, this brings the running expenses to two cents per cow per day.

Above Cost Compared With Cost of Hand-Milking

The average hired man will not milk more than seven cows per hour, which, at 25 cents per hour, costs 7.2 cents per cow per day for hand-milking.

One man with a milking machine can milk 20 to 25 cows per hour, which brings the total cost of machine-milking, including the above-mentioned daily running expenses, to 4.5 cents per cow per day.

This is a saving of considerably over one-third and in a large herd would enable the farmer to dispense with at least one, if not two, men, or it would liberate



EXEMPTION IS NOT ASKED

for any dairyman, or his assistant who has been running a "Magnet" Cream Separator for the simple reason that any child from school can take his place. Where the day's work is unusually heavy, any young "Soldier of the Soil" without experience can do the separating and secure the last ounce of butter fat the herd will yield if the dairy is provided with 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 chieft that winna ding, and canna be disputed."

The Petrie Mfg. Co. Ltd.

Head Office and Factory: Hamilton, Ont.
WINNIPEG, CALGARY, REGINA, VANCOUVER, MONTREAL,
ST. JOHN, EDMONTON, LETHBRIDGE



For rough work wear
**OVERALLS
SHIRTS and
JUMPERS**
made of

STIFEL'S INDIGO CLOTH

Standard for over 75 years.

Better than you expect—a cloth that's built to stand wear and tear and weather. Three generations of wearers have found it the most-for-the-money cloth.

Be sure your overalls, shirts and jumpers are made of Stifel's—it hasn't an equal anywhere for all-round satisfaction. Look for the label on the back of the cloth inside the garments when you buy. Insist upon STIFEL'S and you'll never be disappointed in service. Remember, it's the CLOTH in your overalls that gives the wear!

Cloth Manufactured by

J. L. STIFEL & SONS

Indigo Dyers and Printers

WHEELING, W. VA.

- | | | | |
|-----------------|----------------------------|-----------|----------------------------------|
| New York | 260-262 Church St. | Baltimore | Coca-Cola Bldg. |
| Philadelphia | 324 Market St. | St. Louis | 928 Victoria Bldg. |
| Boston | 31 Bedford St. | St. Paul | 338 Endicott Bldg. |
| Chicago | 223 W. Jackson Blvd. | Toronto | 14 Manchester Bldg. |
| San Francisco | Postal Tel. Bldg. | Winnipeg | 400 Hammond Bldg. |
| St. Joseph, Mo. | Saxton Bank Bldg. | Montreal | Room 500, 439 St. Paul St. |



Steward. "You can't be sick here, Sir!" Distressed Passenger. "Can't I?" (Is.)

these men for other important lines of increased production.

It also enables one man to milk many more cows than it is physically possible for him to milk by hand.

Uniformity in Milking

Not only does a machine decrease the cost of milking, but it gives uniformity in milking.

All cows are milked in the same manner every day, and every good dairy farmer knows this is important and that it is hard to obtain with the general run of farm hands.

Reliability of Service

A machine when properly installed and equipped with a reliable source of power is always there ready for work.

Breakdowns are comparatively rare and usually easily remedied.

Wear and tear is not excessive, considering the nature of the machine, and provided the latter is given proper attention.

Effect on Cows

A machine that is properly adjusted and handled will not injure the cow's teats or udder any more than the average farm hand.

Three years' experience of mechanical milkers on the Central Experimental Farm does not show that the cows dry off any more quickly than when milked by hand.

There is no more, if as much, objection to the milking machine on the part of the cows than there is to hand-milking.

Old cows used to hand-milking object most, and may not let down their milk readily, but heifers take to machine milking like ducks to water and require hardly any stripping.

Stripping by hand after taking the machine off is advocated by all users, as well as makers, as a precautionary and economical measure.

Effect on Quality of Milk

If the machines are properly handled in the barn, and likewise properly washed in the dairy, the milk produced will be as good, or better, than that produced by hand-milking.

Where extra pains are taken with the machines and the care of the milk a very high grade of milk can be produced.

Careless handling results in bad milk and ultimate failure of the machine.

Importance of Efficiency in Operation

Last, and of far more importance than the cost price or make of the machine, comes the question of the efficiency of the operator.

Handling the machine is a job for the farmer, his son, or some hired man who has an interest in the success of the machine and the cows.

For best results the operator

must be quick and quiet, with an eye for details.

Know the machine and the cows, and adapt the one to suit the other, giving each their proper share of attention at the proper time.

Makers of Machines

Any of the more prominent makes of milking machines upon the market will do good work provided they are properly handled.

The addresses of the dealers or manufacturers of the various machines can be procured from the farm journals, or upon application to the Animal Husbandry Division, Experimental Farm, Ottawa.

FEEDING WHEAT OR FLOUR TO LIVE-STOCK OR POULTRY NOW ILLEGAL

REGULATIONS of the Canada Food Board now make it illegal to feed milling wheat or wheat flour to live stock or poultry. Dealers are forbidden to offer milling wheat, or any product of milling wheat except bran and shorts, for sale for the feeding of live stock or poultry, and it is against the law for any person to grind milling wheat or a mixture containing milling wheat for such feeding purposes. A single exception is made in the case of grains grown together, when the percentage of milling wheat is not more than twenty-five and when the wheat cannot be extracted from the combination except at undue cost. Such mixed grains, under these conditions, may be sold or purchased for feeding to poultry.

Heavy Penalties are Provided

The penalty for violation of the regulations is a fine which may be as high as \$1,000, and must not be less than \$100, or imprisonment for three months or both fine and imprisonment.

The Food Board's regulations limiting the amounts of flour which may lawfully be held apply to people in the rural districts as well as to those living in cities or towns. Persons residing within two miles of a licensed dealer are forbidden to have in their possession or under their control more flour than is sufficient for their ordinary requirements for 15 days. If they live more than two miles and less than five miles from a licensed dealer they may have up to 30 days' supply. Those living between five and ten miles from a dealer are limited to 60 days' supply, while persons living at a greater distance than ten miles may have up to 120 days' supply.

Disposition of Excess Quantities

Quantities held in excess of these amounts must be returned forthwith to the dealer or miller



Empire Users Say

What better arguments could be offered than the practical experience of other farmers and dairymen who have had to solve the same problems as those now confronting you?

The labor shortage is increasing and the demands for greater production of farm products are more insistent than ever. Prices are

high, and opportunities for increasing your income have never been better than those afforded at the present moment. Cows mean money in dairy products, and are also a source of rapid increase in the productive qualities of your land.

Don't sell your cows because you can't get labor to milk them. Profit by the experience of men who have solved the milking problem. Mr. W. F. Huff of the Jasper Dairy, Edmonton, says about the



I wish to advise you that the Empire Milking Machine, purchased through our Mr. W. N. Robinson, is most satisfactory in every way. We have had absolutely no trouble, and are highly pleased with results obtained. The machine was installed in September last, and we have milked over 80 cows night and morning with three double units, taking not more than one and a half hours. As to cost of operation, we milk for six days night and morning this herd using only 5 gallons of kerosene and 1/2 gallon gasoline. This, we consider most reasonable as we operate a No. 4 Pump. The average production per cow has been the best this winter we have ever had since dairying in Western Canada. Have had absolutely no udder or teat trouble. The milk is more sanitary than by hand milking. The Dairy Inspector told me our milk is among the best and cleanest in the city. We are only too pleased to recommend your machine.

Write us for booklets containing letters from other farmers; these will be sent on request without cost or obligation to you. Ask for Catalogue C.T.

The Empire Cream Separator Co. of Canada, Limited.

MONTREAL, 89W TORONTO.



THE THIRD LINE OF DEFENCE

The Grain Fields of Western Canada.



You are the "supplying line" for the "firing line"—the World depends on you for food. On you rests the responsibility for greater production. You protect the World from famine—

We Will Protect You From Loss By Hail

It is important that you insure against hail with a company who will make fair adjustments and settle losses in full. Don't wait till the damage is done to find that you only get a percentage of your loss. Make sure NOW—insure your crop against hail in this time proven Company.

Ask for particulars of our policy. Write us today or see our Local Agent.

British America Assurance AD-1853 Company

HAIL DEPT. WINNIPEG and MOOSE JAW.

from whom purchased, and arrangements have been made for its acceptance at the purchase price or the market price on April 20, 1918, whichever be the lower. **Any surplus not returned by May 15th may be seized and forfeited, while the person who has failed to comply with the law is also liable to the heavy penalties of fine and imprisonment.**

Wholesale and retail dealers in flour are required to report to the Millers' Committee, 178 Queen St., Ottawa, their holdings in excess of sixty days' requirements, and the miller or millers from whom they purchased such flour will be obliged to repurchase it at the market price on April 20, 1918, or at the price paid by the dealer (both prices on a basis F.O.B. dealer's station). In this way any loss which is incurred falls upon the millers.

No Flour for Hogs

In future there will be no possible excuse for the feeding of flour to hogs or other livestock, and the practice should be reported at once to the nearest police authorities. In case no action is taken by them, the circumstances, giving full details, should be reported to the Canada Food Board, Ottawa. The Board is prepared to see that offenders are severely dealt with.

Every pound of flour that can be spared in Canada is needed overseas to feed our soldiers and Allies, and any flour that is used for purposes other than necessary human consumption means increased peril to the food supply of the Allies. The Food Board is confident that the farmers of Canada will avail themselves of the arrangements now made to dispose of any holdings of flour in excess of their current requirements, as limited by the new regulations.

Prices of Bran and Shorts

The only feedstuffs which mills are now permitted to manufacture from wheat are bran and shorts, and the quality of the former must not be lowered by the re-grinding and mixing of bran into the shorts. The manufacture of heavier feeds such as feed flour, red dog flour, or middlings is prohibited.

It is illegal for a miller, manufacturer or wholesaler to require or demand that a retail dealer purchase flour or any mill product in excess of his normal requirements in order to secure shorts or bran, or any mill product that he may desire to purchase. Similarly, it is illegal for a retail dealer to make a demand of this kind of a customer.

The following are the maximum prices at which millers may sell shorts and bran:

Shorts, \$29.50 per ton of 2,000 lbs.; bran, \$24.50 per ton of 2,000

lbs., in bulk on track at Fort William and Port Arthur. To these prices may be added the cost of bags and freight from Fort William and Port Arthur to point of destination east of Fort William and Port Arthur. At points west of Fort William and Port Arthur, the maximum price of bran and shorts in bulk shall be, the price at Fort William and Port Arthur, less the difference between the freight charges to such points and the freight charges for delivery at Fort William and Port Arthur.

All invoices governing sales made east of Fort William and Port Arthur must give the following information:

- (a) The maximum price at Fort William and Port Arthur.
- (b) The freight charges to point of destination.
- (c) The cost of bags.
- (d) Any rebate or other deductions that may be made.

All invoices for shipment west of Fort William and Port Arthur must give the following information:

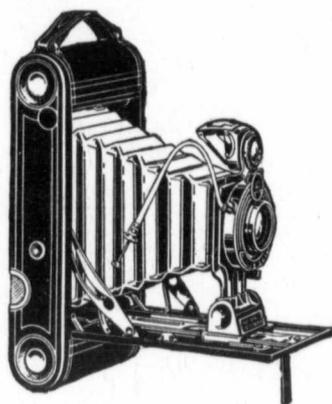
- (a) The maximum price freight paid at Fort William and Port Arthur.
- (b) The freight charges for delivery of bran or shorts at Fort William and Port Arthur, and the freight charges on such bran or shorts to the point of destination.
- (c) The cost of bags.
- (d) Any rebate or other deductions that may be made.

When the miller sells at the mill direct to the consumer in less than 10 ton lots he must not add more than 5 cents per bag of 100 lbs. to the sacked car load price. When the purchaser brings bags to the mill to be filled, not more than \$2 per ton may be added to the bulk price. Dealers selling to the consumer direct from the car for cash are not permitted to add more than 5 cents per bag of 100 lbs. to the cost at the dealer's railway station. Dealers selling from a store or warehouse for cash are limited to an addition of 10 cents per bag of 100 lbs. to the cost at the railway station where the dealer takes delivery.

The regulations fixing these prices and margins of profit are part of the law of Canada and will be enforced the same as any other law. Cases of violation should be reported at once to the nearest police authorities, and in case no action is taken, full details should be sent to the Food Board at Ottawa.

Growing of Buckwheat

The Food Board has recently had numerous enquiries relative to the growing of buckwheat, and the matter has been taken up with several of the Provincial Departments of Agriculture. Mr. C. F. Bailey, Deputy Minister of Agriculture for Ontario, states that



Price
\$15.50
Pictures
2 1/2 x 4 1/4

2^c Kodak Jr.

The pictures are of the pleasing panel shape, giving the high, narrow proportions that are so well suited to portraits—and when the camera is held horizontally, for landscapes and the like, it gives a long, narrow picture that is almost panoramic in effect.

And this long, narrow picture makes possible a thin, slim camera that fits the pocket—a detail that is often important, and always convenient.

The 2^c Jr. loads for ten exposures, is fully equipped for hand or tripod work. For snap-shots the shutter has speeds of 1-25, 1-50 and 1-100 of a second, and it has, of course, the usual "time exposure" releases. Well made and well finished in every detail—autographic, of course. All folding Kodaks now provide for autographically dating and titling each negative at the time of exposure.

The lenses are the best of their respective types, are adapted to this particular camera and each one is *individually tested*.

THE PRICE

No. 2 ^c Autographic Kodak, Jr., with meniscus achromatic lens	\$15.50
Do., with Rapid Rectilinear lens	17.50
Do., with Kodak Anastigmat, f.7.7 lens	23.50

At Your Dealer's

CANADIAN KODAK CO., Limited

TORONTO, CANADA



KNOW IT BY THIS BAND →

TUCKETTS
Club Special
10 CENTS EVERYWHERE CIGAR

the Ontario Department is encouraging the growing of buckwheat, as it can be grown late in the season and will give the farmers an opportunity to put a larger acreage under cultivation. The Ontario Government is now preparing land for flax, but if it be found impossible to get all the land ready in time for this crop, the balance will be devoted to buckwheat.

In answer to recent correspondence, the Food Board has emphasized the advantages of growing roots for hog feeding. Brood sows can be carried through the winter months at a very low cost when a considerable portion of their ration consists of roots.

PRINCIPAL REYNOLDS ADVISES AS TO MILITARY SERVICE

Manitoba Agricultural College, May 15, 1918.

MANY farmers are making special trips to Winnipeg, from all parts of the province, in the hope of securing further leave of absence for their sons, or for hired help, who have been called up under the new draft orders.

It would in many instances save time and expense for them if they knew the terms of the new orders.

There are two classes of draftees:

1. Those who were over 20 years of age and under 23 at the time they made application for exemption. All exemptions granted by the tribunals in this class are cancelled by Order-in-Council of April 20th.

Men in this class are receiving notice from the Registrar for Military Service to report at a specified time and place.

When they report leave of absence may be applied for on only two grounds.

(a) Medical Grounds.—If it appears that the man concerned, whether he is in medical category "A2" or not, he is the only remaining son of military age, and that one or more members of the family are on active service in any theatre of actual war (not including the high seas, Great Britain, or Ireland), he may then make application for leave to the Officer Commanding the District.

I am informed over the telephone to-day by the Officer Commanding the District that the compassionate grounds have been modified, instead of "service by other members of the family in a theatre of actual war," it is sufficient now that other members of the family be in khaki provided that the applicant for leave is the only remaining son of military age.

2. Those who were over 22 years of age at the time they

Maud Muller—Past and Present

"Maud Muller, on a Summer's Day, Raked the Meadow, sweet with Hay."



WHEN Whittier wrote these familiar words, the picture called to mind was that of the girl in the upper picture, with rake in hand, busily engaged in raking the hay.

At that time Horse Hay Rakes were hardly known, and the few in use were clumsy affairs and the handling of one was a job for a big husky man.

Time has made great changes, however, and a modern Maud Muller is very much at home on a

Massey-Harris Steel Rake

accomplishing infinitely more with much less exertion than the original Maud.

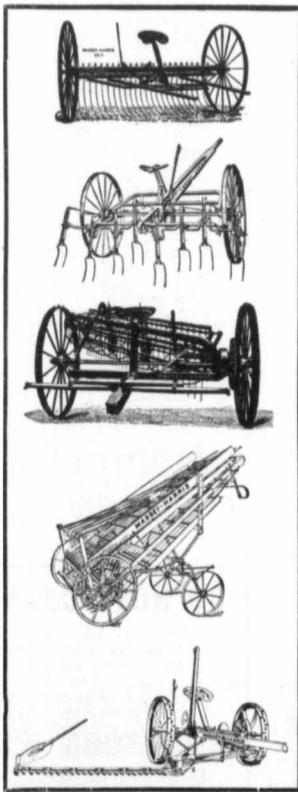
Raking is a pleasure with one of these Rakes, as a slight pressure of the foot dumps the hay in a neat, easily-handled windrow, and is noted for its clean raking. Your girl or boy can do the raking just as well as you could do it, thus giving you time for other work.

And not only the raking, but all the operations from cutting to loading can be most satisfactorily carried on by means of Massey-Harris Hay-Making Machinery—Mowers, Tedders, Rakes, Combined Side Rake and Tedders, Loaders, etc.

They are all described in a folder "Modern Helps for Hay-Making," which is free for the asking from any Massey-Harris Agent or by writing nearest Branch.

Massey-Harris Co., Limited

Branches at
 Montreal, Moncton, Winnipeg, Regina, Yorkton, Saskatoon, Swift Current, Calgary, Edmonton, Vancouver, Kamloops.
 Head Offices Toronto. Agencies Everywhere



made application for exemption. Some in this class find their exemptions expiring, or their exemptions are being cancelled by the Appeal Judges.

Men in this class may make claim for leave on the same grounds as before mentioned, namely "medical" and "compassionate."

A man of this class in medical category lower than "A2" may, if he is an efficient farm laborer, whose services are urgently re-

quired on the land, make application on that ground to the Officer Commanding the Unit to which he is ordered to report, and that application is referred to the agricultural representative. If the leave is recommended by the agricultural representative, the applicant will be given leave on the authority of the Officer Commanding the District until July 15th.

For men in medical category "A2" no application for leave can

be considered, except on "compassionate grounds," as already defined.

His Task

A little boy only six years old was boasting that he worked in a blacksmith shop.

"What do you do there?" he was asked. "Do you shoe horses?"

"No, sir!" he answered promptly, "I shoo flies."

**PROGRAM FARM BOYS'
CAMP, REGINA
EXHIBITION**

THE "Farm Boys' Camp," which for the last three years has formed one of the outstanding educational features of the provincial exhibition at Regina is being planned again for this year. The university is entrusted with providing the program and accordingly this initial draft of the program is submitted that the societies may have some knowledge of the nature of the instruction the boys will receive.

The programme will include:

1. Agricultural Instruction

(a) Addresses and judging competition on heavy horses.

(b) Addresses and judging competition on cattle.

(c) Addresses and judging competition on swine.

(d) Addresses and identification competition on weeds.

(e) Addresses and demonstrations on poultry.

(f) Addresses on field crops and live stock subjects.

2. Special Efficiency Course

(a) Practical demonstrations of first aid methods.

(b) Talks on personal hygiene and kindred subjects.

(c) Talks on leadership.

3. Organized Recreation

(a) Physical drill.

(b) Organized ball games, singing, etc.

4. Sight Seeing

(a) Attending exhibition and viewing exhibits.

(b) Visiting points of interest in the city, including the annual visit to Parliament Buildings.

5. Other incidental items, such as assisting with the live stock parade.

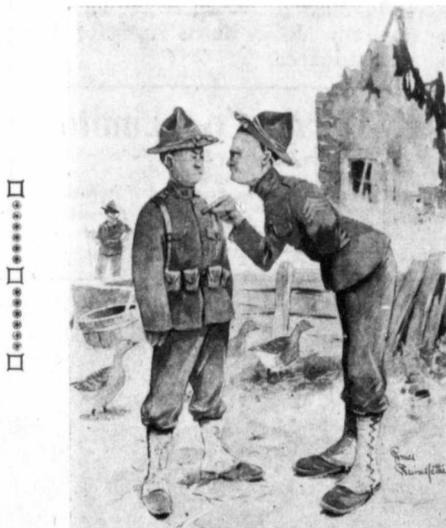
6. Special course of lectures

for the supervisors including talks on boy leadership.

In choosing the teams this year the societies are asked to select those boys who have won prizes in stock judging competitions, calf and colt competitions, etc., providing this was understood as being part of the purpose of such competitions. This request is made because it is felt that unless the boys have in some way qualified for a place on the team they will not appreciate the advantages and hence will not receive the benefit from the outing that they might. The camp will provide one of the finest outings in the life of any boy and he should be made to understand that a place on the team is something that must be earned that he will be chosen because of proof he has shown of his ability to represent his district at the camp.

It is proposed as soon as the entries for the camp are received to visit all the societies sending teams and put on a preparatory course for the boys. If the societies have already chosen their boys then these and others who wish to attend the course could gather at some convenient point and be given instruction in stock judging, but if the teams have not yet been chosen this would be a splendid opportunity to gather all the boys of the proper age and put on the course taking up the subjects covered at the camp. This work could be summed up by an examination and the five boys winning highest marks be chosen to compose the team. Some societies have already chosen their teams in this way. Our aim is that no boys shall attend the camp unless they have demonstrated satisfactorily that they are worthy of its advantages.

"IMPERIAL Service" is interested in supplying not only the best tractor fuels to power farmers—but in making these fuels quickly and easily available during the busy seasons. This policy has directed the construction of our tank stations at more than 500 points through the prairies. It is responsible for the early appearance of our tankage when any new farming section is opened up. **ROYALITE COAL OIL, SILVER STAR KEROSENE and PREMIER GASOLINE** are the tractor fuels in stock at these stations. **IMPERIAL OIL LIMITED, Branches Throughout Canada.**



"I know we're fightin' for Democracy, but next time the Colonel comes around, salute, you—son of a gun!"

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We make them equal to new at low price. Cylinders, Engine Bases, Gear Wheels, Steam Boilers, in fact any broken or cracked parts, welded and guaranteed by us. Scored or worn cylinders re-bored. Please write for our circular and estimates. We were the first to operate the OXY-ACETYLENE WELDING PROCESS in the West. Established since 1911.

MANITOBA WELDING & MFG. CO.
56 and 58 Princess Street, WINNIPEG, Manitoba

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., \$6.25.

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The Tungeland Creamery Co. Brandon, Man.

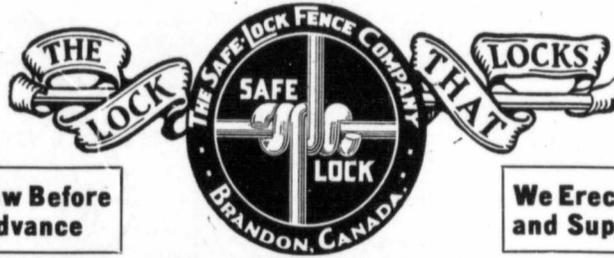
As soon as possible after the entries are received an instructor will visit each point to put on the course outlined.

Some such qualifications as outlined will in future form part of the requirements for admittance to the camp. That is, boys will be required to qualify for a place on the team by excelling in boys' club work or other competitions, and provided some suitable plan can be devised, an attempt will be made to enlist the boys, after attendance at the camp in some junior work in their community which will maintain their interest in the things they have learned through attendance at the camp. Only in this way can the camp justify itself and be of greatest service to the boys of the province.

One point which must be given careful attention is the choosing of the men who are to have charge of the teams. It is almost a waste of effort to coach the boys and endeavor to get them to realize their opportunities only to place them in the hands of a supervisor who has no interest in the camp, or its objects, or in the boys themselves. Hence the earnest request is made that only those be chosen for supervisors who will take an interest in the boys and in their work, and assist in every way to make the outing one of real worth. This request cannot be too strongly urged. An addition is being made to the program in the form of a course of lectures, especially for the supervisors on "Boy Leadership." This is being given with a view to equipping these men to be leaders of the organized activities of the young people of the community. The supervisors will also be expected to attend all lectures with the boys. This program will further emphasize the need for careful selection of the supervisors.

Practically the entire program, other than the agricultural portion, will be in the hands of the Y.M.C.A. Competent boys' workers will utilize the spare hours for profitable and healthful recreation. Instruction will be given in personal hygiene and practical demonstrations of first aid methods will be staged. The discipline of the entire camp will be under the direct and continual control of the Y.M.C.A.

The camp is planned in an endeavor to give the boys an outing that will increase their interest in the creative opportunities of farm life; to give them a better understanding of, and a reverence for the well rounded mental, moral and physical life; and it is hoped that the training they receive will equip them to return to their respective communities capable of becoming lead-



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4	33	24	11, 11, 11	No. 9 Wire—Price per rod - - \$.35
5	40	24	8, 9½, 11, 11	No. 9 Wire—Price per rod - - .46
6	38	24	6, 7, 8, 8, 9	No. 9 Wire—Price per rod - - .51
7	43	24	5, 6, 7, 8, 8, 9	No. 9 Wire—Price per rod - - .60
9	51	24	4, 4, 5, 6, 7, 8, 8, 9	No. 9 Wire—Price per rod - - .75
7	26	8	3, 3½, 4, 4½, 5, 5½	No. 9 & No. 12 Wires—Price per rod .40
8	32	12	3, 3½, 4, 4½, 5, 5½, 6½	No. 9 & No. 12 Wires—Price per rod .48
10	47	12	3, 3½, 4, 4½, 5, 5½, 6, 7, 8	No. 9 & No. 12 Wires—Price per rod .60
20	60	8	1½-in. Bottom Space 6-in. Top Space	No. 9 & No. 13 Wires—Price per rod .80
Barb Wire, 80-rod spools - - - - -				Price per Spool - - - - - 5.50
Staples, 25-lb. box - - - - -				Price per Box - - - - - 1.75
Brace Wire, 25-lb. rolls - - - - -				Price per Roll - - - - - 1.65
Drive Gate, single - - - - -				48 in. x 10 ft.—Price each - - 6.00
Drive Gate, single - - - - -				48 in. x 14 ft.—Price each - - 7.25
Drive Gate, single - - - - -				48 in. x 16 ft.—Price each - - 8.00
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Lott Stretchers - - - - -				Strong and Powerful—Price each 7.50

We Guarantee SAFE-LOCK FENCE

to be made of All Hard Steel Wire, with the Best Galvanizing and the Strongest Lock manufactured in Canada.

IF YOU ARE NOT SATISFIED

with the quality on arrival of order, return goods to us and we will refund your money

See reduction on Design No. 726 Hog Wire.

TERMS: All small orders for stations where there is no agent must be accompanied by cash, carload orders to stations where there is an agent to be accompanied by \$100 cash and balance subject to sight draft attached to bill of lading. Orders subject to us having stock on hand at time of ordering. Purchase in good time. Buy the BEST. Our Fencing is made of Full Government Gauge Wire. Secure your order while we have plenty of stock on hand.

THE SAFE-LOCK FENCE COMPANY, BRANDON CANADA



Now is the time you appreciate

CANADA CORN STARCH

You can use it for dozens of dainty desserts—serve it with your own homemade Preserves and jellies—add it to the "war flour" to make lighter biscuits, bread and muffins.

"CANADA" CORN STARCH is an old favorite with the older generation—they know its every-day use and economy.

Your grocer has it in 1 lb. packages.

Manufactured by THE CANADA STARCH CO. LIMITED - MONTREAL



ers among the activities of the young people.

You will note as per the circular from Mr. D. T. Elderkin, manager provincial exhibition, that entries must be in by May 15. This is in order that there may be time to carry out the short course program outlined above. Make your application early.

ARCOLA'S PUBLIC- SPIRITED MOVE IN GREATER PRODUCTION

THE Arcola Agricultural Society has distributed 500 copies of the following circular in their territory.

For the maximum production of foodstuffs, of which there is a great need to assist our Allies, and for the successful prosecution of the war, the Arcola Agricultural Society is devoting most of its energies in an endeavor to stimulate interest in the different phases of agricultural pursuits among the boys and girls by giving special inducements, as follows to be competed for at our summer fair to be held on August 5-6, 1918.

1st Special—Boys' Calf Competition—W. F. Youngblud has given \$15.00 and the Arcola Agricultural Society is giving another \$35.00 to be competed for among boys not over 14 years of age. 1st prize, \$14.00; 2nd, \$11.00; 3rd, \$8.00; 4th, \$5.00, and six prizes of \$2.00 each. The calf must be born in 1917 raised, pail fed, halter broke, and shown by the boy.

2nd Special—M. J. Olson will give \$5.00 as a special herdsman's prize in the Boys' Calf Competition.

3rd Special—Mr. and Mrs. P. Taylor and J. Bryce are giving \$20.00 to be competed for by boys and girls under 16 years of age, in a milking competition. 1st prize, \$8.00; 2nd, \$6.00; 3rd, \$4.00; 4th, \$2.00. Each competitor must provide his or her own cow, stool and pail.

4th Special—Mr. H. McNeil will give \$10.00 to be competed for by boys under 18 years of age in a cattle judging competition. 1st prize, \$8.00; 2nd, \$3.00; 3rd, \$2.00; 4th, \$1.00.

5th Special—Prizes will be given in a competition between

boys and girls for the best collection of vegetables of not less than six varieties, not less than three in each variety, and if potatoes are shown, not less than six. 1st prize, \$4.00; 2nd, \$2.00; and 4 prizes of \$1.00 each.

Penmanship—Grades One and Two; Grades Three and Four.

Drawing—Grades Three and Four; Grades Five and Six.

Essays—On Tree Culture, Destructive Worms, Horses and Cattle, School Gardening.

The Union Bank and Merchants' Bank of Arcola are offering a special of \$30.00 for boys and girls.

Mr. P. B. Thompson will give a special prize of \$10.00, open to boys and girls 14 years and under, for the best pair of pigs, male and female, farrowed in 1918. 1st prize, \$5.00; 2nd, \$3.00; 3rd, \$2.00.

Members of the Red Cross are offering a prize of \$15.00 for the best essay on "The Red Cross, its Origin and Work" for boys and girls 16 years and under. 1st prize, \$5.00; 2nd, \$4.00; 3rd, \$3.00; 4th, \$2.00, and 5th, \$1.00.

GOPHER CAMPAIGN, 1918

ALTHOUGH all the reports are not yet in for the children's "spring drive" against the gopher, sufficient reports are in to show that the total will be in six figures. Over 100,000 gopher tails are already reported from 124 rural schools and 40 village and consolidated schools.

The Winkler Village School, four rooms, John R. Wolkof, principal, wins the Columbia Grafonola and School Outfit, with a grand total of 3,352 gopher tails.

The Elgin Consolidated School wins the Pathephone, with a grand total of 3,362 tails.

The Coultrivale School wins the Two-room Manual Training Bench.

All the other schools, 150 or more, get the bonus on gopher tails given by the Department of Agriculture, which, this year, will amount to over \$2,000. This is an annual gopher campaign carried on by the school children of Manitoba, with the generous assistance of the Department of Agriculture. In this way, it is estimated that the school children get about 10 per cent of the gophers that winter through, and this goes a long way towards the holding of this pest in check and the saving of much of the wheat crop of Manitoba.

Left Out

Poolle—Wonder what time it is? I'm invited to dinner at 7, and my watch isn't going.

Foole—Why? Wasn't your watch invited?



Bob Long says:

"My overalls and shirts are the best made, because— they are roomy and comfortable. I designed them with the idea that you might want to stretch your arms and legs occasionally."

Insist on "Bob Long" brand. Ask your dealer for Big 11—the big grey overalls—the cloth with the test.

R. G. LONG & CO., LIMITED
TORONTO • CANADA 07

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, 162 Branches in Ontario and 32 Branches in Quebec serves Rural Canada most effectively.
WRITE OR CALL AT NEAREST BRANCH

Teach the Children to Save

Habits are acquired early in life. Children, who are taught the value of money and the habit of saving, grow up into good business men and capable women.

The easiest way to teach children to save, is to start a Savings Account for each child (\$1.00 each is sufficient). After a child has saved another dollar to make an additional deposit, he or she will have a better appreciation of just what a dollar stands for, and how much work and self-denial it represents.

FOR SALE

1 22-H.P. Gaar-Scott Rear-mounted Steam Engine
1 33 x 52 Gaar-Scott Separator (Fully Equipped)
1 Drive Belt 150 x 8 x 5 and 1 Water Tank

This outfit is as good as new, always stood under cover. Price \$2800, little or no cash, payments extended to three falls.

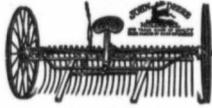
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JOHN DEERE PLOW COMPANY LIMITED



JOHN DEERE RAKE

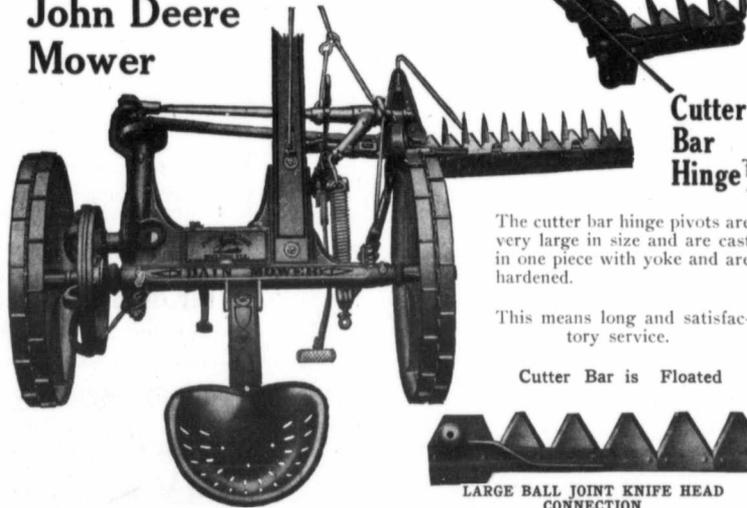
**Wide Frame
High Grade
Bearings
Adjustable Clutch**

Clutch has 21 engaging points to insure quick action with knife when machine is thrown into gear.

This means it will cut prairie wool and a summer shower finds it still on the job.

Long Wood Pitman
Adjustable Draft Hitch

**John Deere
Mower**



Cutter Bar Hinge

The cutter bar hinge pivots are very large in size and are cast in one piece with yoke and are hardened.

This means long and satisfactory service.

Cutter Bar is Floated

LARGE BALL JOINT KNIFE HEAD CONNECTION

If you really want a good mower—a mower that will cut hay—it will pay you to study the John Deere.

Agents at All Principal Points, or Write Us Direct

JOHN DEERE PLOW CO. LIMITED

Winnipeg Regina Lethbridge
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THE SILO AN ECONOMIC NECESSITY

(Experimental Farms Note)

THE cheapest and best ration for live stock must contain a reasonable amount of succulent feed. An abundance of suitable pasture is unexcelled, and a substitute for this feed in winter or during a drought in summer is essential for greatest production and profits.

In view of the scarcity and high prices of grains and meals, the silo takes on an increased value. For example: 100 pounds total digestible nutrients in corn silage has a net cost of 54c., in bran \$2.31, corn \$4.02, oats \$4.29, etc., when silage costs \$3.00 per ton to raise and store and other feeds are valued at present wholesale market prices. Even in these times of expensive labor, seed, horse labor and machinery, corn may be placed in the silo at the above cost. Surely this is sufficient reason why every live stock farmer should consider the increase in silage production.

The adaptability of the silo to various parts of Canada, depends on the location, varieties of crops which may be grown, and, to a lesser extent, on the class of live stock maintained. No farmer with two or three cows should think of building a silo, but for a

herd containing ten cows or more, or the equivalent, a silo may advantageously be erected. Silage is feed pre-eminently suited to the feeding of dairy cattle. It, however, is a very excellent and cheap feed for beef cattle, sheep and horses. In the majority of the best live stock districts in Ontario and Western Quebec, silos should be on every stock farm. In the Maritime provinces, Eastern Quebec and British Columbia, all large stock farms, particularly of dairy cattle, can use a silo to excellent advantage. If any particular district is not suited to corn growing, peas and oats, peas, oats and vetches, clover, alfalfa, etc., may be substituted for that crop. In the Maritime provinces, silos on many farms, particularly on large stock farms, are operated satisfactorily.

Silos for Winter Use

Silage at \$3.50 per ton is cheaper cattle feed than mixed hay at \$12 per ton. Corn silage is 30 per cent better than shocked corn from field. The same holds equally true of unthreshed oats or oats and peas saved for winter feed. Silage from peas and oats produced milk 20 per cent cheaper than oat sheaves, 30 per cent cheaper than straw and turnips and 40 per cent cheaper than hay. At the same cost per ton, silage is better feed than roots for beef or

PACE HARRISON Ltd.
WINNIPEG. General Agents
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LIVE STOCK DEPARTMENT
SPECIAL FARMERS' ACCIDENT POLICY
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We are Wanting Hides
WRITE FOR PRICES, IT WILL PAY YOU
THE WHEAT CITY TANNERY
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The Famous K. W. & SWISS
HIGH TENSION MAGNETOS IN STOCK
We Repair all makes Magnetos and Coils.
Work Guaranteed. Factory Service.
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Acme Magneto Works, 278 FORT ST., WINNIPEG

dairy cattle. Moreover, considering present labor conditions as well as cost of harvesting, keeping qualities and cost of storage, silage, where grown successfully, is more economical than roots. Silage needs no pulping or other preparation for feeding. Silage for winter use is in itself the cheapest feed, and it also makes all other roughages and grains more palatable, wholesome and profitable.

Silos for Summer Use

Good pasture, if available, is the cheapest summer feed. Where permanent pastures fail, an annually sown pasture of rye or oats and barley may, under present labor conditions, be the cheapest substitute. However, the use of soiling crops or summer silage may be the only available means of providing succulents. As a rule, silage is more profitable and more cheaply grown than are soiling crops, and is more cheaply harvested and fed during the busy season. Milk produced on corn silage and green cut alfalfa cost in feed 66 per cent per cwt.; produced on corn silage and mixed hay may cost 70c. per cwt.; produced on soiling crop (peas and oats) cost \$1.04 per cwt. With all lots, the heavy milkers received some grain. Where suitable pastures are not available, the summer silo provides the cheapest feed and greatest profits.

Finally, the farmer with a silo need never fear losing a crop of clover, alfalfa or late-sown grain. Silage making does not depend on the dryness of the weather. The silo is the cheapest storage building on the farm in proportion to the tonnage capacity. The silo allows the carrying of more stock per acre on the farm and is a labor-saver, a money-maker and a soil enricher.

This is the season of the year to build more and better silos.

METHODS OF WEANING LITTLE PIGS

(Experimental Farms Note)

WEANING time is the most critical period of the hog's life. The approved practice is to wean at about six weeks. Teach the litter to eat three weeks before weaning, using a crib or creep, which excludes the sow, or a separate pen. Feed, in a trough, preferably, middlings with skim-milk. With middlings at present unobtainable, finely ground sifted oats is best. Feed only small quantities at first and avoid having decomposed or stale food left over. After weaning, add shorts gradually up to equal parts and from the second to the third month add barley or corn as one-third the total meal ration. First and last, avoid over-feeding with its consequent train of evils.

Within the last year at the Central Experimental Farm, experiment and subsequent practice has indicated a system whereby weaning is simplified, and the bad results of careless feeding practically eliminated. Instead of "hand-weaning" or feeding the weaning pigs milk and meal in a trough, a small self-feeder is substituted in the creep, skim-milk being fed in a separate trough. Finely ground oats and shorts, and later ground elevator screenings with a small proportion of ground corn, if available, are placed in the feeder. Thus, the little pig feeds himself when and as much as he sees fit, is able to eliminate from the meal eaten much fibrous material which he must consume willy-nilly where fed a slop, and incidentally accustoms himself gradually to skim-milk. Except in cases of early litters, the little pigs are given access to outdoor runs at all times from two to three weeks of age. Excellent growth is shown, the pigs developing clean, long, and thrifty, with no evidence of thickness, pudginess or lack of energy. Absolutely no evidence of indigestion or scouring has been seen, and in one instance where a dozen litters were so fed at a central feeder, the percentage of "culls" was remarkably low. When finally removed from the sow, pigs so weaned, particularly where they are to be self-fed subsequently, give minimum evidence of the check in growth, usually incidental to weaning in a greater or lesser degree. In short, while the experienced hog-man can hand-wean his pigs with maximum results, the farmer lacking experience or depending upon ever changing attendants, is likely to run into difficulties. The method described, besides reducing labor, apparently removes the danger of irregular and over-feeding. Both method and results might be described as automatic. In the foregoing method, skim-milk plays an important part. Where this or other milk product is unobtainable, experimental evidence would show that good pigs may be raised by following this method and supplying tankage, blood meal, fish meal or some similar animal product in a separate compartment of the feeder, not mixed with the regular meal. Pigs, so fed, have shown only slightly inferior in quality to skim-milk fed lots, but the cost to produce would seem to be considerably increased.

"Only the fool wastes his hours and his powers; the wise man long ago learned that 'getting there' is merely a matter of making the most of minutes."

It Does Make a Difference

which Company you insure in.

If making an investment in Real Estate or anything else care is—or should always be—taken to secure property that has a reasonable chance of increasing in value, and giving a good return for the investment.

This same care should be taken in placing Life Insurance to see that the premiums are invested in such a manner that they give the best possible return to the insured.

IT DOES MAKE A DIFFERENCE WHICH COMPANY YOU INSURE IN

Enquire for information and rates at your own age.

The Great-West Life Assurance Company

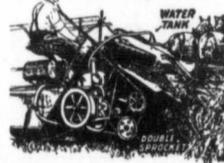
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Head Office - - WINNIPEG

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 catches, 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 runs.

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.

CUSHMAN MOTOR WORKS OF CANADA, LIMITED

Dept. A, Whyte Avenue and Vine Street, WINNIPEG

Builders of Light Weight Engines for Farm and Binder use.

Distributors of Reliable Power Driven Machines, such as Fanning Mills, Grinders, Saws, Power Washing Machines, etc. Also Barn Door Hangers and Shinn Flat Lightning Conductor

Paint Preserves Your Property

Use paint this year with a three-fold intention—to Preserve, to Protect and to Beautify your home. The present is peculiarly a time when resources must be conserved and for that reason it would be very bad business to allow your property to decay for lack of "a brush full of paint."

Stephens' HOUSE PAINT

is the ideal property-preservative; properly applied it will protect your house and make it good to look at—for many seasons.

See your hardware dealer for colors and suggestions

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Paint and Varnish Makers
WINNIPEG & CANADA



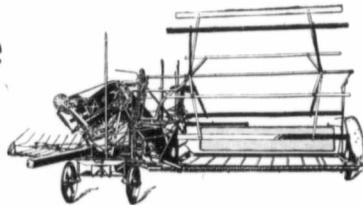
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Invest in Whole-Crop Insurance

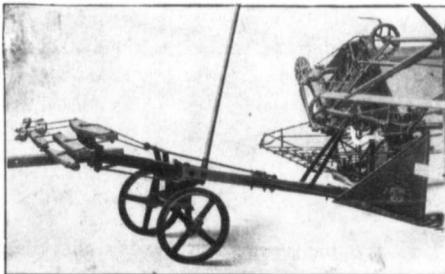
THERE is one kind of insurance you may not know about, which requires no premiums, on which you realize every year, and which this year is fully as important as any other insurance you carry. **When your crops are ready for cutting, McCormick binders and twine insure the harvesting of the whole crop.** 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



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!



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.

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.

BROODING METHODS

(Experimental Farms Note.)

IF less than 100 chicks are to be brooded the old natural means will answer; if more, the artificial means are to be preferred.

Free from lice.—Treat the mother hen for lice several times before the chicks hatch and make sure there are no mites.

Double up.—Have the chicks come out several broods at a time and double up the chicks giving 15 to 18 to each hen.

Cooping.—Small "A" coops to

Move the coop frequently. Don't let the hen out when the chicks are small and especially early in the morning.

Artificial Brooding

Of artificial brooders there is quite a variety both good and bad. Any brooder should provide a temperature of 90 to 100 degrees under the hover. It should have good ventilation, no draughts, and it should be easily cleaned.

Individual brooders.—So-called outdoor brooders are not always satisfactory, being too small and lacking ventilation. Indoor brooders are better as the house accommodation can be made to suit conditions. When there is too much wind for the lamp outside, try it inside the coop. The indoor electric hover gives the best of satisfaction. Cold brooders are satisfactory if not used too early and the number of chicks is limited.

Emergency brooders.—There are times when even the best managed plant is short of brooder space and emergency quarters have to be arranged. Sometimes the services of several broody hens can be utilized at such a time. This, however, cannot always be depended upon and a lantern or a hot water bottle placed in a box and covered over with sacking will sometimes help one over a hard place. Small coal oil



A Real Good Mother

Natural Brooding

Some hens never make good mothers. If the sitting hen is not suitable, transfer some of the eggs before hatching to one that is, if you have her.

accommodate one family are good. Where hens agree, larger coops or colony houses may serve the purpose for several hens and their broods. Keep the broods away from the general flock.

THE COSTLY WAY

SALESMAN

BROKER **BUY YOUR** RETAILER

LUMBER DIRECT

FROM MILL TO CONSUMER

MILL CONSUMER

THE **F.M.T.C.** WAY

BETTER LUMBER FOR LESS MONEY

Build Now and Save Money

We save you one-third the cost of lumber, shingles, doors, windows, bath, etc., for your new house, barn, or outbuilding.

You Can Afford to Build

You can afford to build with farm produce yielding a good price and buying on our plan which cuts out all profits, expenses and bad debts of the middlemen.

C. Stewart, Pandora, Alta.: "I saved enough on my lumber to pay my carpenter. Everybody says my lumber is best seen in this country."

J. Foulston, Eyebrow, Sask.: "Am well pleased with my lumber. Consider I saved \$300 on the car by buying from you."

Write Today for Price List

giving prices, freight included, to your nearest station. Don't throw money away by buying before getting it.

A small house or barn usually makes a minimum carload. If you don't need that much, club with your neighbors. Save them money, too. Send us your lumber bill or list. We'll quote on it by return mail.

F.M.T.C. LUMBER CO.

Standard Bank Building

VANCOUVER, B.C.

stoves and electric heaters may also be used for this purpose or one can resort to the cold brooder.

Room or stove brooders.—One of the best brooders for large quantities of chicks and especially when the chicks are all the same age is the room or stove brooder. This is a small stove which burns coal and is automatically regulated.

For brooding on a fairly large scale, not too early in the year, these brooder stoves are very satisfactory. They can be placed in an ordinary colony house that is used for other purposes during the rest of the year.

There are also stoves of this description which burn oil instead of coal. We have tried both kinds. The oil is quite satisfactory, except for the extra cost of fuel.

Pipe brooders.—For larger plants and earlier hatching the pipe brooder is probably the most satisfactory. It is more expensive to install, but the heat can be so regulated that the best of conditions are available. There are a number of systems of pipe brooders on the market most of which are satisfactory providing the bottom heat is not too great.

Cleanliness Above All Things

In brooding, whether natural or artificial, absolute cleanliness must be observed. Brooding quarters cannot be kept too clean and there is nothing that will kill off a bunch of young chicks more quickly than lack of cleanliness.

Healthy chicks, put into clean brooders, fed judiciously, should live. This year, more than ever, care should be taken that the chicks which are hatched should be given every chance. Provide them with suitable brooding quarters, feed sparingly on dry feeds and keep everything scrupulously clean.

MAKE EVERY CHICKEN COUNT

THE aim this year should be to make everything count. Make every hen lay her best, make every chick mature early enough and thereby make every pound of feed give the maximum returns.

Hatch Early

Make every effort to get your chicks out this spring before the first of June. As a rule, the heavier breeds hatched later than that date were not satisfactory. At least, 90 per cent of the pullets in Canada were not laying during November and December of the past winter, because they were hatched too late.

A Little Sand or Grit First

When the chicks are removed to their brooding quarters there should be some coarse sand or fine chick grit scattered where they can have free access to it.

They should be left until they show signs of hunger, which would be between the second and third days after hatching. They may then be given some bread crumbs that have been very slightly moistened with milk, this may be scattered on clean sand or chick grit. If being brooded by a hen she will see that no food is allowed to lie around, but if in a brooder, that part of the food that the chicks do not pick up in a few minutes should be removed, as nothing in feeding causes so much trouble as leaving food of that nature around until it is sour.

Feed for the First Ten or Twelve Days

The following daily ration of five feeds given about two hours and a half apart and continued from the time the chicks are two to three days out of the shell until ten or twelve days of age may be altered or adopted to suit conditions:—

First feed.—Dry bread crumbs slightly moistened with milk.

Second feed.—Finely cracked mixed grains or commercial chick feed.

Third feed.—Rolled oats.

Fourth feed.—Dry bread crumbs moistened with milk.

Fifth feed.—Finely cracked mixed grains.

In addition to the above, give the chicks a little green food, such as grass, lettuce, sprouted oats, etc. Do not have the moistened bread sloppy, but in a crumbly state, and during this period let the chicks on to fresh soil or grass every day if possible.

HOW TO GROW POTATOES

When three hundred and thirty-two years ago, Sir Walter Raleigh introduced the potato from this country into Ireland, nobody could have foreseen or imagined the immense part that it would come to play in feeding the world. It was nearly eighty years before the Royal Society of England took up the cultivation of the potato as a cheap food in case of famine. In another eighty years, famine in Scotland brought the potato into extensive notice as a cheap article of food. Another thirty years saw France taking notice of its value. Mr. W. T. Macoun, the Dominion Horticulturist, briefly explains all this in a hundred-page bulletin recently issued by the Department of Agriculture, Ottawa, in which is also given complete and comprehensive information as to the cultivation of the potato. Mr. Macoun goes fully into his subject, dealing with the preparation of the soil, of the varieties of seedlings, of the manner and method of planting, of protection against insect pests and

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.

diseases, of the time to plant, of the districts best suited to the different varieties of the care that should be taken during growth, and of garnering, storing and shipping. Particulars are also given of the results of experiments and tests made at the Experimental Farms and Stations throughout the Dominion. In short, pretty well everything in the shape of information that is of value to potato growers with many exact and interesting illustrations, is to be found in this bulletin that can be had free on addressing the Publications Branch, Ottawa.

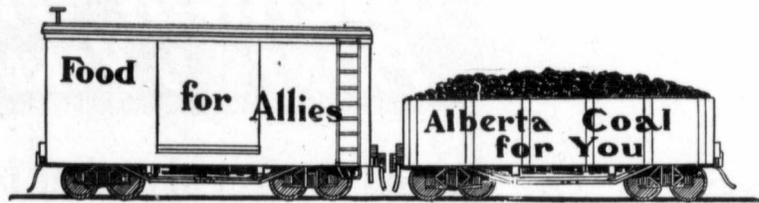
MARS NO LONGER FIGHTS WITH BEARD

Modern Warrior Less Ferocious
But More Efficient in
Consequence

When the Indian braves of old met foemen unquestionably worthy of their tomahawks, they arrayed themselves fantastically as possible, and emitting the most blood-curling war-whoop in their repertoire, raced into the fray. Their strategy was based on the assumption that strength of arm would have to be supplemented by superiority of will, if victory was to be their portion. They reasoned that if they could frighten their opponents before their opponents had frightened them they would win the day.

Then came the bearded warriors of the Crimea and the American Civil War. These were not bearded from choice, but from stern necessity, since the double-edged 100 per cent efficient blade of the modern safety razor was undreamed of. The old flat-bed razor in vogue at the time, could always be depended upon to be dull. There was nothing left to do but to popularize the beard and popularized it was. And the basis upon which the beard was popularized was that the warrior affected it because it imparted that ferocity which is the concomitant of victory, and not because he was at a loss to do anything else.

That the psychological offensive is still regarded as a necessary preliminary to the physical offensive is well illustrated by the methods of the German propagandists in the present struggle. But the beard has gone by the board since it has been amply demonstrated that the ferocity which it imparts to the soldier fails to compensate for the many disadvantages which its adoption entails. If the world had stood still, if the safety razor had never been invented, and never been mechanically perfected, beards would undoubtedly be popular today. They are still popular in Russia.



One of These Cars Must Wait Unless YOU Act At Once!

THE farmers of Manitoba, Saskatchewan and Alberta are strongly advised to get their coal in before harvest. As soon as the new grain can be moved it will have the preference over other freight and those who do not lay in the larger part of their requirements of Alberta coal before August 15th can have no guarantee of receiving it at all later.

This warning is especially addressed to farmers who have usually waited to haul their coal until taking their grain to the railroad. **Do not wait this year.**

HAUL YOUR COAL EARLY!

Every car of Alberta Coal is Government inspected



Government of the Province of Alberta

JOHN T. STIRLING, Fuel Administrator for Alberta.

SAVING EVERY KERNEL

LAST month we gave some details of a campaign the United States Government is conducting as part of its food conservation policy, in which it is sought to get threshermen and farmers to co-operate in saving the enormous quantity of grain which is annually wasted through poor or defective threshing equipment.

Since then we continue to receive bulletins and personal letters from which it can be seen that not only is the government persevering in this praiseworthy purpose, but voluntarily and cheerfully the farming citizenship of the great republic is getting behind the government and making it a matter of conscience.

Here is just where the success of any effort of the kind is wrapped up. Legal enactments can go all the way in an easily policed territory, but how shall any government injunction reach its objective with such a widely dispersed population as we have if the people elect to buck the ordinance, or even to treat it coolly?

We come back to our original war platform as set out in an editorial in the January issue of this year entitled, "In Honor Bound." The fellow who wrote that editorial touched the proudest moment of his life when his only son, the best pal of a lifetime, told him when Germany struck Belgium in 1914, that he was off to fight. He put in six months continuous grilling in the trenches before Lens, went six times "over the top," was knocked out at Paschendale, made a speedy recovery and is again at it.

Now, that decent lad, that faithful friend, that indomitable and unwavering pal and his comrades—the very soul of Canadian and American manhood, have got to be backed up. And amid the flare and circumstance of banners and bands, we've sworn to back them to the limit of our resources.

We may not (they won't let us) go and fight side by side with them, but we can do something in the grand scheme that they cannot do. We can assist Nature to produce food, and by the merest care and self-denial we can save what we produce to an extent that the most abstemious person never dreamt of in times of peace.

Taking advantage of the incontrovertible fact that we all have been accustomed to eat too much and (like the hogs) to trample so much of our food underfoot, the United States government urges the people of America to put a brake on their appetites, and to plug up every leak through which a single grain of wheat or corn can be lost.

SHERWIN-WILLIAMS PAINTS & VARNISHES



Get the Varnish that is made to do what you want it to do.



MAR-NOT

For Floors

Made for floors—to be walked on and danced on, to have water spilled on it, and furniture dragged over it. MAR-NOT is tough, durable, absolutely waterproof. Dries in 8 hours; will rub and take a high wax finish; pale in color; particularly desirable for fine hardwood floors.

The Sherwin-Williams agent in your neighborhood has the right varnish for your purpose. Ask him.

Color schemes and suggestions for any part of your building furnished by expert decorator, free upon application and without any obligation.

Send for book—"The A. B. C. of Home Painting"—written by a practical painter, and telling how to paint, varnish stain or enamel every surface in and around the house. Mailed free anywhere.

THE SHERWIN-WILLIAMS CO., OF CANADA, LIMITED,
897, Centre St., Montreal, Que. 110 Sutherland Ave., Winnipeg, Man.
PAINT, VARNISH AND COLOR MAKERS. LINSEED OIL CRUSHERS.

SCAR-NOT

For Furniture and
Woodwork

has been the means of converting thousands of women to the idea of protection in the home. They use SCAR-NOT to make their furniture, etc., fresh and pleasing,—even boiling water will not affect it.

REXPAR

For Outside Work

Made to protect outside doors, boat decks, spars, store fronts, etc., against every kind of Canadian weather. It is absolutely waterproof and will not turn white, no matter how long exposed.



Of course, it would be fine if the Canadian government could institute a similar campaign in Canada but, honestly, we feel the Canadian government has got its hands too full of no less urgent employment to do otherwise than stamp its O.K. on the idea, and commend it to the serious attention of all true Canadians as something they might well carry out habitually, cheerfully and with the utmost care, having always the grand end in view.

We never presume to tell any man what he ought to do. That is his business. We simply state the case and repeat what we have said in effect so often that, in the face of these our tremendous responsibilities any man who can and who will not; either through indolence, "dourness," or for any other such reason—do his very

best to comply, is a yellow dog of the meanest and mangiest streak that is permitted to cultivate the land to-day.

Here are a few suggestions from recent literature issued by the "Grain Threshing Division of the United States Food Administration," from which, no doubt, many of our readers will be able to gather the drift of the matter and pick on some definite detail which will apply to their own case.

Direction

"Adequate preparation for a businesslike economical management at time of threshing and mechanical assurance that the threshing equipment is in condition to do its best work, and that suitable and necessary amounts of fuel, labor, supplies and repairs are on hand with which to do the

work well within the short period of time allowed by Nature."

Prior to Harvest

"Inspection of thresher equipment to see that separator is in such excellent repair that good work can be expected and that the engine, the pulleys and the belts are capable of delivering sufficient power, with a safe margin of excess, to keep the separator up to required speed, under average operating conditions, and that necessary extra supplies and repair parts are on hand and locally available."

During Harvest

"Where the following wasteful practices prevail, they shall be reduced to a minimum by having everything in readiness for the operation:—

"(1) Threshing when grain is 'tough' (damp or unripe).



"(2) Reduce loss from shattering in bundle wagons.

"(3) Carelessness in keeping thresher cylinder up to speed and in adjustment of blower, etc., etc. Dull and bent teeth.

"(4) Carelessness in feeding bundles or headed grain into the machine.

"(5) Carelessness in allowing grain to leak on the ground around and under the machine and haste in cleaning up unavoidable leakages, at the close of operations.

"(6) Careless scooping of grain and bad order wagon boxes.

"(7) Carelessness in not raking field and shock rows.

"(8) Improper adjustment of concaves and other parts of the separator.

"The effort should be directed with the primary object of getting the grains into the channels of trade and not permit so great a percentage to be distributed upon the ground or into the straw pile to be fed later to the animals on the farm. The practice of overlooking these leakages with the excuse that the stock will get the benefit when they are turned in, should be discouraged this year, when no wheat should be fed to animals. Many reports have come in to the grain threshing division, of straw piles appearing green with sprouted grain. Kansas reports that in some sections, threshing outfits made it a profitable practice last year to follow other threshing outfits, purchase the straw pile and re-thresh. Instances of from 3 per cent to 7 per cent saving of wheat has resulted by re-threshing."

With the foregoing, we feel sure that enough has been said. The point of the whole thing is abundantly clear, and now, Mr. Farmer, you are "In Honor Bound," if this happens to meet your particular case. This is no mere mercenary scheme (and still it means big money to you). Best of all, it is an affair of the heart.

Just laws are no restraint upon the freedom of the good, for the good man desires nothing which a just law will interfere with. Every man is free to grow all the grain he likes, but not one man is at liberty to waste an ounce of it.

Ben Franklin said that the way to wealth was as plain as the way to market. It depends on two words—Industry and Frugality. They must be working partners, however, because if frugality goes to sleep industry can waste more than would sustain her.

COAL *Get in Your Winter's Supply—NOW!*

Prices Will Be Much Higher in the FALL and Then---You May Not Get It At Any Price.

It is officially announced that only OPEN CARS, and a limited number at that, will be available for movement of COAL September, and we can state definitely that unless 60% of your supply is on hand by the 30th of September it will be almost impossible for you to obtain your full requirements later in the year.

Take this grave warning, and do not be disappointed.

BUY YOUR REQUIREMENTS NOW!!! FROM

The Saskatchewan Grain Growers' Association, Limited
FARMERS' BUILDING, REGINA



For Thirsty Ones!

Bury your lips in the rich, creamy foam, and taste the brisk—joyous flavor of this sparkling Malt beverage. It conjures the palate with its softness of satin—it increases your faith by its distinction and quality, and it cheers the body with the golden glow of health. Drink—

MALTUM
(Registered)
(Non-Intoxicating)

Good grocers and druggists sell it by the case. Also at confectioners, clubs, restaurants, soda fountains, etc.
Put up in quarts, pints, half pints, or in casks.
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E. L. DREWRY, Limited, Winnipeg, Man.

KEEPING THE BOY ON THE FARM

Thos. M. Olson, Wisconsin

IN the past quarter of a century there has been a marked agitation on "Back to the Farm." Writers and speakers seem to think that it is essential



A Young Tractor Enthusiast
FRED. ERHARDT, Duval, Sask.

to the success of farming that this movement of people from the urban to the rural districts be brought about. In the light of my experience and personal knowledge of rural conditions, I hold that it is vastly more important that we direct our energies to keeping these boys and girls on the farm rather than trying to get them back after spending the formative period of their lives in the urban districts. Rural life is, and must necessarily be, different from city life and living in either place does not equip one for living in the other. Therefore the need of keeping the boys and girls on the farm.

In my work as county agent in the rural school, I asked in two schools these questions: "Do you live on the farm? Are you going back to the farm? Why aren't you going back?"

In the first school, thirteen out of twenty-five said they lived on farms. To the second question, "Are you going back to the farm?" thirteen answered "No." And to the last question, "Why aren't you going back?" they gave these answers: "City schools are better;" "Too much work on the farm;" "Get work that is easier in the city;" "Farming does not pay;" "Higher wages in the

city;" "Too lonesome on the farm."

In the second school ten of the pupils lived on farms and only one of the ten was going back to the farm. The reasons given for leaving the farm were: "Farm life is too dead;" "Have to work too hard;" "Farming does not pay."

These little folks have told us why the boys and girls are leaving the farms and it is up to us, up to this generation of educational, social, and religious leaders to suggest a remedy. The change cannot be effected in one generation, but we need to take a more drastic step in the right direction.

I would not for an instant maintain that every boy and girl born and raised on the farm should stay there. Many are by nature better fitted and more adapted to follow some other vocation. But my plea is for the boys and girls who leave the farm because of forces over which they have no control. I believe that every boy and girl sooner or later pursues the vocation for which their environment, early training, and education have fitted them. If this environment and training have been such as to stimulate an interest in farming they will become farmers. On the other hand, if their training and environment have centered their attention and interest on urban life, naturally the children will seek the life and environ-



Another who is doing wonders
GOTTFRIED YUOCK, Duval, Sask.

ment for which their training has fitted them. The child's first impressions are gotten at home and from

Palmer's Summer Packs



GIVE real foot comfort to tired, aching feet. They are made from oil-tanned Skowhegan water-proof leather. These summer packs or plow shoes are light, strong, durable—made with water-proofed leather sole and heel and solid leather insoles are laced, have large eyelets and bellows tongues. The ideal shoe for working on the land.

They are also specially suitable for ranchers, trackmen, laborers, sportsmen and all others requiring extra strong yet comfortable footwear.

The style shown—No. 109, is nine inches high. Ask your dealer for Palmer's famous "Moose Head Brand" footwear—many styles and sizes to choose from.

JOHN PALMER CO., Limited
Fredericton, N. B., Canada. 30



**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.

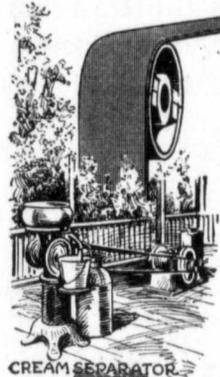
The Sunshine Furnace when installed the McClary way is sold with the absolute guarantee that you will get those results.

Engineering Service Free.

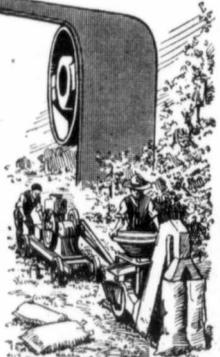
McClary's own heating engineers are at your service when you buy a Sunshine Furnace, to give you free expert advice on your home-heating requirements. Write to the nearest McClary Branch, and ask for particulars about this service. A booklet, "Comfort in the Home," makes clear all the things you want to know about furnaces and it is sent free on request.

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CREAM SEPARATOR



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After the exit of the flail came the thresher. Then Dunlop specialized on Thresher Belting to meet unusual needs in an unusual way. Thus, with the introduction of the power-driven saw, churn, fanning mill, silo filler, cream separator, pump, hay baler, grain crusher, and other modern farm conveniences and labor savers, it was only to be expected that "Dunlop" again would have ready time-tested, specially designed Beltings highly suitable for all these general purposes.

Such proved to be the case, and what is more, Dunlop General Purpose Agricultural Belting, like Dunlop Thresher Belts, is now the popular choice of discriminating users throughout every agricultural community—of men accustomed to making their purchases on the basis of true merit.

FOR THRESHERS

"Gibraltar RedSpecial," Frictioned-Surface

You will find this belt the master creation of Dunlop manufacturing efficiency. It is undoubtedly in a class by itself for thresher use. Having a frictioned surface of the toughest red rubber, it is noted for its ready pulley grip and powerful resistance to the elements and atmospheric changes. The seam is sealed as with iron. The plies are of the highest grade of long-fibred, unbreakable duck. The friction is the long-fingered, tough, yet resilient kind. Thus no slipping and its consequent burning; no stretching and the necessity for constant adjustment; no opening of the seam; no breaking of the fabric; no separation of the plies.

"Gibraltar RedSpecial" stands ready to meet the most exacting demands which thresher use may impose upon it. Throughout it will give that unvarying service which means larger output and lower upkeep cost to the thresherman; also increased satisfaction to his customers. This, then, is the belt you need if the initial cost is not the deciding factor.

"Prairie" and "Reliance," Rubber-Covered and Stitched

If your preference is for an absolutely dependable rubber-covered belt, then either "Prairie" or "Reliance" will meet your needs. Both are high-grade, stitched and endless thresher belts. They lack nothing of the same infinite care exercised in the making of "Gibraltar RedSpecial." For this reason, and because the duck is strong, the friction high-grade, the face durable, adhesive and immune to cold, heat and wet, and the stitching positive, you will find they will render satisfying service throughout many seasons. Their recommendation lies in the fact that their use is large and rapidly increasing in every farming community.

FOR GENERAL PURPOSES

For general purpose belting you can depend upon "Reliance," either stitched or unstitched, and in any length. Or, if you desire a less expensive grade, "Banner" should satisfy you, at least on the smaller machines.

Just here we do not want to overlook the highly desirable qualities of Dunlop Canvas Belts, which strongly recommend them for thresher and general use.

HOSE FOR YOUR EVERY NEED

Agricultural Hose is a very important consideration. Whether it is Suction, Injector or Discharge Hose you will find the Dunlop kind has special features which appeal to the good buying judgment of men who know what's what.

DO NOT FORGET, THEN!

When overhauling your threshing outfit or farm machinery, and making notes of your requirements, that we have one of the finest-equipped factories devoted to the manufacture of Belting and Hose in Canada. These factories are capable of turning out large or small orders at great speed, and this, combined with the fact that our branches are situated at convenient points, is an assurance of prompt and efficient service.

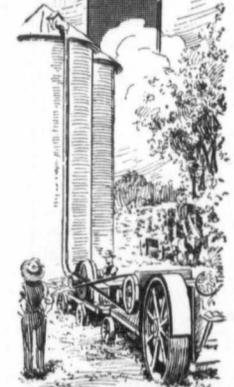
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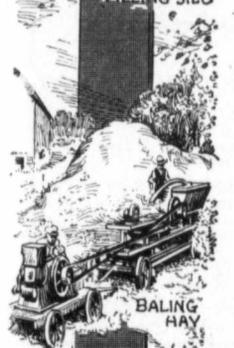
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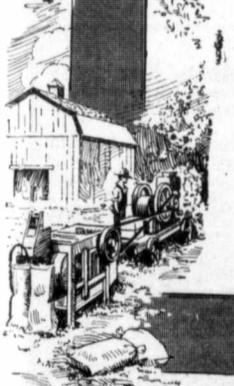
Makers of Tires and Tubes for all purposes; Mechanical Rubber Products of all kinds and General Rubber Specialities



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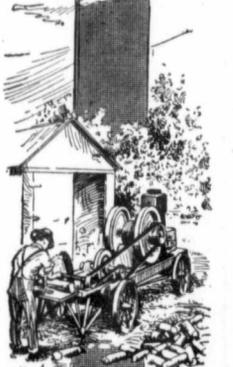
BALING HAY



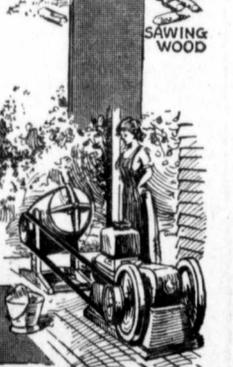
FANNING GRAIN



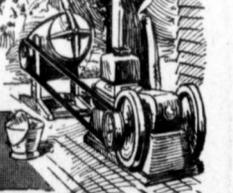
THRESHING



PUMPING



SAWING WOOD



CHURNING

HAYMAKING

Continued from page 29

fork-like carrier arrangement fastened to long wooden or steel arms. The bed of the carrier is now made solid, so that there is little likelihood of losing leaves from alfalfa, clover, and other legume hays.

The hay loader, under ordinary conditions, will increase the capacity of a crew about 30 per cent over that of the same crew pitching the load on by hand forks. The loader is a valuable implement, and its saving in labor cost will be considerable, especially on farms where labor is scarce and expensive.

System No. 3—Push Rakes and Stackers Are Used

Push rakes and stackers came into general use a number of years ago in the region from about the 90th meridian to the irrigated sections of the west.

A large percentage of the hay in this part of the country is

stacked; and the comparatively large acreage grown, plentifulness of horses, scarcity of farm labor, and desire to make hay with the least amount of hand labor, were incentives to the use of these two machines.

Push rakes, also known as "bull rakes," "go devils," "slip-arounds," consist of wheel-less, two, three, and four-wheel types. They are capable of handling from 600 pounds to a ton of hay, depending upon the type, the skill of the driver, and the team.

There are several kinds of stackers, the overshot and swing-around being the most common. Home-made stackers are of various kinds, such as "gin poles," derrick stackers of different kinds, and inclines for handling hay from the large one-ton push rakes.

The push rake and stacker make an admirable combination, since nearly all of the work of getting the hay from the field to the stack is done by horse-power. The push rake takes the hay from the windrow or bunch to the stack, where it is dropped on the stacker and elevated on to the stack by horses. The only hand labor necessary is that of placing the hay after it is dropped on the stack. These implements can be used with small crews, consisting of two men, up to crews of twelve or more men.

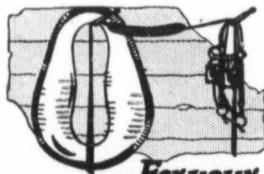
System No. 4—Hay is Baled in the Field Using Push Rakes and Horse or Power Press

The practice of baling in the field from the windrow began in the semi-arid middle west, where there is but little danger of rain interfering. It has long been believed that hay is not in condition to be baled until it has gone through the "sweat" in the barn or stack. This process is usually finished from three to six weeks from the time the hay is made.

In the west, growers of prairie and alfalfa hay for the market realized that if it were possible to bale hay from the windrow a considerable saving of time and labor could be made. This saving would consist of a large part of the cost of putting the hay into the stack. They also began to doubt the necessity of allowing the hay to go through the "sweat" before it could be safely baled. Repeated trials and careful study have shown that a good quality of hay can be made when baled from the windrow under certain conditions. At the present time hay is being baled from the cock in parts of the south.

Conditions Should be Right

Hay baled from the windrow often spoils so badly that it becomes unfit for feeding. This trouble is sometimes experienced by beginners and more especially when alfalfa or other legume hay is baled. There are three causes



For your HARNESS SAKE

Overcome the worst enemies of leather—water and dirt—by using

EUREKA HARNESS OIL
"Lengthens leather life"

Softens old harness, leaves it pliable and waterproof, prevents cracking and breaking of stitches, doubles the life of new harness.

MICA AXLE GREASE
"Use half as much as any other"

Gives the effect of roller bearings. The mica flakes work into the pores and crevices of the axle and the grease holds them there. Mica Grease prevents hot boxes, locked wheels and screeching axles. Saves wear and tear on horses, harness and wagons. "Best thing on Wheels."

Sold in standard sized packages by live dealers everywhere.

IMPERIAL OIL LIMITED

BRANCHES IN ALL CITIES





Beware of the Dangers of Labor Shortage, use a

MAX PORTABLE CORRUGATED GRANARY

Twelve years' satisfactory service in Western Canada fields prove its claim of highest merit. Write to-day for full particulars.

Winnipeg Ceiling and Roofing Co. Limited
P.O. Box 3006, C.T. 5 WINNIPEG, Man.

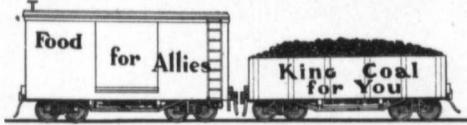
Saskatoon Exhibition

July 16, 17, 18, 19, 20

GREAT MACHINERY EXHIBIT

INCLUDING ALL THE LATEST TRACTORS
High-Class Attractions. Daylight Fireworks.
New Midway. DAILY BALLOON ASCENSIONS.
\$30,000 OFFERED IN PRIZES AND PURSES.
PRIZE LIST ON APPLICATION TO

R. W. CASWELL, President. **C. D. FISHER,** Manager
58, York Building.



One of These Cars Must Wait

Railroads cannot haul both at once. Don't let this situation happen. It is unnecessary. If the farmers who have usually waited till after Harvest before hauling their coal do so this summer they will go cold this winter. This is the authoritative statement of all railroads.

EXTRA 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 sizes—delivered to your Station. King Coal does not clinker.

THE CARDIFF COLLIERIES, LIMITED

EDMONTON, ALTA.
Mining capacity (with car supply) 2000 Tons daily

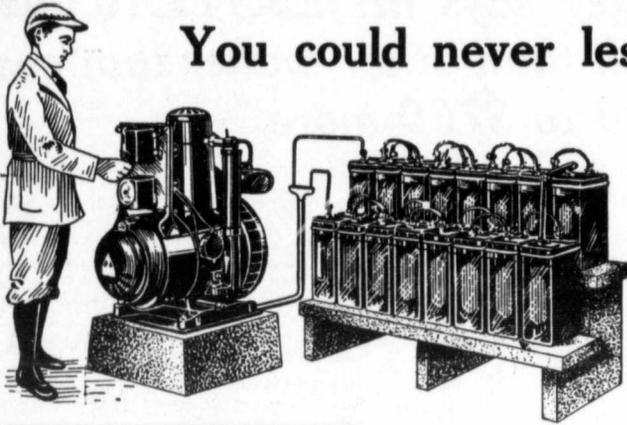
Help the Red Cross

Manitoba and Saskatchewan Campaign
Dates: June 17-22, 1918
This advertisement contributed to the Red Cross by THE UNION BANK OF CANADA



You Could Never Better Afford It

You could never less afford to be without it—than NOW



Delco-Light brings to the farm the final aim of years of work—electricity in an efficient, economical form. Because of its low-cost and money-saving it is within the reach of every progressive farmer. It puts the farm on an equal basis with the city. It gives you city efficiency right on your own farm. Every farm should have a Delco-Light plant.

Wheat in 1914
90c bushel

Wheat in 1918
\$2.20 bushel

Delco-Light in 1914
would have cost
417 bushels

Delco-Light in 1918
costs you only
246 bushels

These figures show without shadow of doubt that NOW is the time for the farmer to improve his equipment, to make his farm more efficient, to make life more pleasant and happy. Never before would farm produce buy so much. Not for a number of years, will machinery that you need right now, cost so little as it does to-day.

Now, when labor is scarce and every extra bushel of farm produce means big profit to you, get a Delco-Light plant. It will pay for itself over again in actual profits, besides giving you all the pleasure and health of electricity on the farm. Ask our nearest distributor to send you fully illustrated literature. It is free.

DELCO-LIGHT

Electricity put within the reach of every farm home

SIMPLE

One of the beauties of Delco-Light is its sturdy simplicity. So easy to operate—a child can do it. Needs very little attention or adjustment. Nothing to get out of order. Does not need a mechanic to look after it. Will last for years.

EFFICIENT

Delco-Light gives you ample electricity for light and power. It does this cheaply. It saves work on the farm in a dozen directions. It does away with hand-work by operating light machinery. It does away with lanterns and lamps. It gives better light for evening work. It saves a lot of hand-cleaning around the house by running a vacuum cleaner and washing machine. It gives you running water.

ECONOMICAL

Delco-Light costs little to operate, and pays for itself in the time and labor it saves. It runs on coal oil (kerosene) and other upkeep costs are negligible.

MONEY-SAVING

You will find a hundred ways in which Delco-Light will save you money. Save you time. Save your family and your hired man time. Keep the boy on the farm. Ask your insurance agent what saving electricity will give you in insurance rates. Delco-Light pays for itself.

WRITE TO-DAY

Complete, illustrated literature explains all about Delco-Light. Write for it to-day to the nearest distributor.

Domestic Engineering Co.
DAYTON, OHIO

Write your nearest distributor

BREEN MOTOR CO. - - - Winnipeg.
BRUCE L. ROBINSON - - - Calgary.

for this. First, the hay will not keep unless it is well cured in the field, it being necessary to cure it out more thoroughly than when it is to be put into the stack. Second, hay that is baled when partly wet with dew or rain is very liable to spoil. Third, hay is liable to spoil when the bales are improperly stored by being packed away close together. In many cases, if the bales are placed on edge with an air space of an inch or two between, and the next layer placed crosswise with spaces there will be much less danger of heating and spoiling.

Size and Management of Crews

On many farms haymaking is carried on in a more or less haphazard manner, resulting in a loss of time, as now and then a part of the crew is idle. With small crews there is usually less loss of time than with larger crews, where some are mowing and raking, loading and hauling, and others working at the barn all of the time. A discussion of crew management will explain some of these points.

When Loading is Done by Hand or With Loader—Small Crews

The smallest economical crew for bringing hay from the field and putting it into the barn, is the three-man and two-horse crew. In the east, the common practice is to load the wagon with hand forks and unload with the horse fork or sling. This arrangement allows two men to pitch on the load and one man to build the load on the wagon and drive the team. When the load is on, all three men go to the barn to unload. At the barn one man works in the mow, one sticks the hay fork on the wagon, and the third man drives the team on the rope. No time is lost, except that lost by the two pitchers in travelling between the barn and the field. In the east the average distance between these points is a quarter of a mile or less.

On most average-sized farms in the east the general custom is to haul hay in the afternoon only. In the forenoon, one man mows enough hay in about four hours, starting after the dew is almost gone, for half a day's hauling. Three to five acres, yielding 1.5 tons to the acre, is about all the ordinary three-man crew can handle.

The second man rakes every morning, at the beginning of the haying season, the hay that was mowed the day before. In the forenoon the third man does not work at haying at all, but is free to do other farm work, such as plowing corn, etc.

Let us see what the effect will be on the size of the crew if the hay is not cut until well past "full bloom," the stage of maturity at

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 as large straw piles last fall with my Lister as the largest machine made can build without a man pitching one forkfull of straw."

This is only what one farmer writes us. We could go through our correspondences, and give you similar quotations all telling the same story.

Lister Ideal Threshers are built in two sizes, 22 x 36 in. and 26 x 42 in., and are operated by Lister or Manitoa Engines.

Ask for illustrated catalog. Refer to Dept. "D."

Note the 6 wheel (patented) truck which positively eliminates vibration.



Other Lister Lines:

"Lister" and "Canuck" Gasoline Engines—Grain Grinders and Crushers—Milking Machines—Cream Separators—Churns—Ensilage Cutters—Silos—Sawing Outfits—Pumps—Power-jacks—Power Pumping Outfits.

Write for full information and prices to Dept. "D"

R. A. LISTER & CO. (Canada) LIMITED

TORONTO

WINNIPEG

MONTREAL

which hay (timothy, for example) must be cut if choice or "tea green" hay is to be secured.

Hay cut when past full bloom cures quite rapidly if the weather is favorable, and hay mowed in the forenoon can be put into the barn in the afternoon. This arrangement requires an extra man and two extra horses to rake the hay. To facilitate matters, the side-delivery rake should be used, so that loading can be started as soon as the rake has made one round. The fourth man will usually finish raking by 3 or 4 o'clock in the afternoon, and can help load during the remainder of the day. However, three men pitching onto one wagon is not ordinarily a very economical arrangement.

Now let us suppose that it is decided to do the mowing in the

afternoon as well as the raking, and see how this arrangement affects the size of the crew. Such a method requires another additional man and team, making the crew of five men working in the hay field in the afternoon only. There will be one man mowing, one raking the hay mowed the day before, and three men bringing hay from the field and putting it into the barn. Two more horses will also be required with this method, making a total of six, yet this larger crew will handle no more hay per day than the three-man crew above described.

The amount of hay that can be handled per year under these conditions will be from 40 to 60 acres, depending upon the yield. If the hay loader is used, more hay can be handled per day. The two pitchers work on the wagon

building the load, and the third man drives the team.

His Business Instinct

A little boy went to Sunday School for the first time. His mother gave him a nickel to put in the collection box. When he returned he had a sack of candy.

"Where did you get the candy," asked his mother.

"From the stand around the corner."

"But what did you buy it with?"

"With the nickel you gave me."

"But that was for Sunday School."

"Well," replied the boy, "I didn't need it. The minister met me at the door and got me in free."

A HORSEMAN'S TESTIMONY
(Continued from Page 7)

hours and the "non-stop" forenoons and afternoons which tell the tale at the end of a week's work.

One should perhaps also recollect that such an implement is not built to perform the impossible and is just as liable to be ruined as is a good team of horses when forced beyond the natural capacity for work. The amateur should also obey all instructions regarding the outfit implicitly, especially as regards the particular oil recommended, where to put so much and how often, and so on.

The old adage of oil being cheaper than machinery is written in gold, so far as tractors are concerned. I might say, in conclusion, that much as I favor the use of gas-power I would prefer always to have at least one four-horse outfit prepared to "carry on" if anything very untoward should happen this rather "foreign-power" on the farm.—Yours truly,

Alex J. Scrimgeour.

EDMONTON'S BIG SHOW

A short interview with Manager W. J. Stark of the Edmonton Exhibition has elicited the fact that there will this year be more exhibits of farm machinery and equipment on the grounds than ever before, during the week of the Exhibition, July 8th to 13th. A number of firms will be represented which have never before been attracted to this exhibition as providing a splendid opportunity to meet the "man of the hour—the Canadian farmer." The Edmonton Exhibition has adopted as its slogan this year "Where City and Country Meet." Present prospects are that this will be particularly apt this year.



Bosun—"Charlie! Come on! A blinkin' 'bout."
Charlie—"Watcher mean, bargin' in like that—ye nearly made me cut myself."

More farmers attended the 1917 Edmonton Exhibition than any previous event conducted by this enterprising association, and prospects are for record-breaking attendance from outside points this year.

SASKATOON OFFERS \$30,000 IN PRIZES

The prize list of the Saskatoon Industrial Exhibition is one of the most imposing offerings the year has sent out in the way of encouraging the breeding of first-class live stock, grain growing, horticulture, arts and crafts, etc. \$30,000 will be distributed in purses and prizes, and the individual amounts of the leading prize

features are of a character to kindle the interest of the most indifferent to the great idea of coming out with his goods.

The attractions are really "attractive," have been carefully selected and are of peculiarly interesting type both as to novelty and quality, and the most complete arrangements have been made by the directorate for the comfort and security of exhibitors and visitors. A strong body of leading citizens and agriculturists of the province make up the list of "standing committees," and grant decent weather this event promises to be one of the most successful undertakings the city of Saskatoon and Saskatchewan province have to their credit.

THE MERCHANTS BANK OF CANADA

Statement of Liabilities and Assets at 30th April, 1918.

LIABILITIES	
1. To the Shareholders	
Capital Stock paid in	\$ 7,000,000.00
Rest or Reserve Fund	7,000,000.00
Dividends declared and unpaid	176,900.00
Balance of Profits as per Profit and Loss Account submitted herewith	437,973.92
	<hr/>
	\$14,614,873.92
2. To the Public	
Notes of the Bank in Circulation	12,327,168.00
Deposits not bearing interest	34,886,747.83
Deposits bearing interest (including interest accrued to date of statement)	75,946,985.48
Balances due to other Banks in Canada	1,400,941.75
Balances due to Banks and banking correspondents in the United Kingdom and foreign countries	1,161,976.79
Bills payable	
Acceptances under letters of credit	598,851.20
Liabilities not included in the foregoing	
	<hr/>
	\$140,937,544.97
ASSETS	
Current Coin	\$ 4,890,061.36
Deposits in the Central Gold Reserves	6,000,000.00
Dominion Notes	5,912,092.50
Notes of other Banks	893,076.00
Cheques on other Banks	5,311,786.12
Balances due by other Banks in Canada	4,704.37
Balances due by Banks and banking correspondents in the United Kingdom	82,589.53
Balances due by Banks and banking correspondents elsewhere than in Canada and the United Kingdom	1,357,843.03
Dominion and Provincial Government securities, not exceeding market value	5,435,494.96
Railway and other Bonds, Debentures and Stocks, not exceeding market value	4,060,204.70
Canadian Municipal securities, and British, Foreign and Colonial public securities other than Canadian	14,589,065.54
Call Loans in Canada on Bonds, Debentures and Stocks	5,223,953.88
Call Loans elsewhere than in Canada	3,906,648.93
	<hr/>
	\$57,667,481.62
Current Loans and Discounts in Canada (less Rebate of Interest)	76,194,016.15
Current Loans and Discounts elsewhere than in Canada (less Rebate of Interest)	339,987.29
Liabilities of customers under letters of credit as per contra	598,851.20
Real Estate other than bank premises	312,928.11
Overdue debts, estimated loss provided for	272,226.60
Bank Premises, at not more than cost, less amounts written off	4,880,438.98
Deposit with the Minister for the purposes of the Circulation Fund	355,000.00
Other Assets not included in the foregoing	310,615.02
	<hr/>
	\$140,937,544.97

K. W. BLACKWELL, Vice-President. E. F. HEBDEN, Managing Director. D. C. MACAROW, General Manager.

Report of the Auditors to the Shareholders of The Merchants Bank of Canada

In accordance with the provisions of sub-Sections 19 and 20 of Section 56 of the Bank Act, we report to the Shareholders as follows:—
We have examined the above Balance Sheet with the Books of Account and other records at the Chief Office of the Bank and with the signed returns from the Branches and Agencies and have checked the cash and verified the securities of the Bank at the Chief Office against the entries in regard thereto in the books of the Bank at 30th April, 1918, and at a different time during the year and found them to agree with such entries. We also attended at some of the Branches during the year and checked the cash and verified the securities held at the dates of our attendances and found them to agree with the entries in regard thereto in the books of the Bank.
We have obtained all the information and explanations we have required. In our opinion the transactions of the Bank which have come under our notice have been within the powers of the Bank, and the above balance sheet is properly drawn up so as to exhibit a true and correct view of the state of the Bank's affairs, according to the best of our information and the explanations given to us, and as shown by the books of the Bank.

VIVIAN HARCOURT, 1 Auditors.
GORDON TANSLEY,
(of the firm of Deloitte, Plender, Griffiths & Co.)

Montreal, 23rd May, 1918.

FOR SALE—25-49 Avery Gas Tractor, equipped with extension rims and in best condition. Also six-furrow Cockshutt Plow. A. L. Bates, 486 Telfer St., Winnipeg.

PATENTS: CANADIAN, FOREIGN—Egerton E. Case, Patent Solicitor, Temple Building, Toronto. Valuable booklets free.

Every 10c Packet of
WILSON'S FLY PADS
WILL KILL MORE FLIES THAN \$8⁰⁰ WORTH OF ANY STICKY FLY CATCHER

Clean to handle. Sold by all Drug-gists, Grocers and General Stores.

Merchants Bank Makes a Brilliant Report of Strength and Progress

Twenty Millions Added to Assets—Current Loans and Discounts in Canada Increased Thirteen and a Half Million Dollars—Deposits Advanced 21 per cent—Balance-sheet Shows Bank in Strong Position.

AN increase in total assets amounting to almost twenty million dollars was the outstanding feature of the very gratifying report submitted at the annual meeting of the Merchants Bank of Canada on the 5th of June. This increase, which brings the assets of the bank up to the notable figure of \$140,937,544, was produced by an all-round increase in all branches of the bank's liabilities to the public, note circulation advanced nearly three millions, and non-interest deposits advanced seven and three-quarter millions, and interest-bearing deposits eleven millions, while balances due to banks and correspondents abroad were the only items to show a decrease. The general expansion was at the exceptional rate of 16.1-3 per cent for the year. Deposits grew at the rate of over 21 per cent.

Another important feature of the report consists in the extent to which the bank was successful in enlarging its current loans and discounts in Canada. Thirteen and a half million dollars approximately was added to this class of assets in the twelve months ending April 30, and in the speeches at the annual meeting it was made clear that this expansion was in the main a direct result of the increased valuation of the commodities on which such loans are based. The assets have been rigorously scrutinized, and the sum of \$400,000 was appropriated out of profits for the Contingent Fund for the making good of any depreciation.

In spite of the expansion in current loans, the proportion of liquid assets to liabilities is still high enough for the most conservative requirements. The cash and readily realizable assets now total \$57,667,481 against public liabilities amounting to \$126,322,671, or in the proportion of 45.6 per cent. About 34 millions of these liquid assets is in the form of cash, bank balances and call loans, and the remainder consists largely of government securities of the Dominion, the Provinces and Great Britain. It will be seen that both by its assistance to the current trade and industry of the Dominion and by its support of the government finances of Canada and the Allies, the Merchants Bank is performing important services towards the winning of the war.

Notwithstanding the greatly increased volume of assets, profits

continue to be on a very moderate scale considering the real size of the shareholders' investment. The earnings for the year were \$1,236,680, being 17.66 per cent on the capital of \$7,000,000, but the real investment includes \$7,000,000 of rest or reserve fund, to say nothing of the undistributed profit balance, and the actual rate of earnings is therefore less than 8.6 per cent. Not all of this is available for the shareholders, since, as already mentioned, an appropriation of \$400,000 was made for contingencies, and war taxes and the Officers' Pension Fund took between them another \$120,000. After the payment of the 10 per cent dividend there was left a balance of \$16,681 to add to the balance carried forward.

Since the 1914 statement the total assets of the Merchants Bank have increased from \$83,120,741 to \$140,937,544, and this without any increase either in capital stock or reserve fund. For the time being, owing to the large sums carried in liquid assets at low earning power, and also to the constant re-valuation of securities, the profits are not proportionately enhanced, but it is evident that with the return of more normal conditions this expanded business should be very beneficial to the shareholders.

Extravagance

Visitor—"Well, Robert, how do you like your new little sister?"

Robert—"Oh, she's all right, I guess; but there are lots of things we needed worse."

Dying For Nothing

By Walt Mason

I HATE to die—and so do you—it's such a foolish thing to do. We feel, when we are cashing in, that dissolution is a sin. It's such a waste of hair and bones, and all the flesh a mortal owns. We lead our safe and sheltered lives; we rear our kids and feed our wives; we've lived in fat commercial times, resolving everything to dimes. Our frugal instincts show that waste is sin by which we are disgraced, and so it causes us distress to lose the number of our mess; for death is waste, the thing we dread; there is no rakeoff for the dead. The war some consolation brings; it's showing us a lot of things; it's teaching us how men may die and make a noble gain thereby. "How sleep the brave who sink to rest, by all their country's wishes blest!" The soldier out in yonder strife who gives his warm and ardent life, that tyrants and their plots may fail, that freedom shall again prevail, is wasting nothing when he dies, but drawing down a golden prize, and men will see that lilies bloom about the portals of his tomb. "And Freedom shall awhile repair, to dwell, a weeping hermit there." And so we spoke in maudlin haste when we declared that death is waste.

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 you and issued direct to you by a large Bonding Company. The C. 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

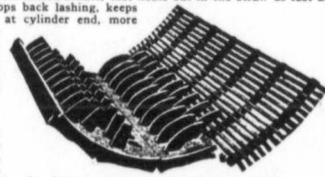
Any Lightning Conductor is dangerous unless properly installed. Shinn-Flat Conductors are installed by one of our representatives, who has been thoroughly instructed and whose work we are willing to bond. Shinn-Flat Conductors may be applied to any building at reasonable expense. Write for Book on Lightning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

CUSHMAN MOTOR WORKS OF CANADA, LIMITED
Dept. A, Whyte Avenue and Vine Street, Winnipeg

Builders of Light-weight Engines for Farm and Grinder Use. Distributors of Reliable Power Driven Machines, such as Fanning Mills, Grinders, Saws, Power Washing Machines, etc. Also Barn Door Hangers and Shinn Flat Lightning Conductors.

THE UP-2-DATE CONCAVES

THRESHERMEN: Would you like to get concaves with teeth that won't get loose or break off, and find them solid in place when you quit threshing? With Straw Riser teeth in rear concave almost indestructible, that floats out in the straw as fast as it enters the machine, that stops back lashing, keeps suction open, cares for grain at cylinder end, more



than 100 per cent rubbing surface, increases capacity, reduces draft. The only concaves that get the Marquis and Turkey Red wheat out of the head and flax out of the hull.

SAVE ALL THE \$2.50 WHEAT AND HELP THE ALLIES

We fit out all makes of separators and old style 12 bar machines, such as the Russell, Gaar, Scott, American, Northwest and Case, and make them equal in capacity to latest makes. We make special hangers for Advance, Buffalo Pitts, and 12 bar Russells, so that three of our 24-in. wide Concaves can be used as shown in above cut. We make a Revolving Device to resolve center concave to a blank in less than a minute. Can be used only in the following machines: Case, Minneapolis, Red River Special and Advance.

We have the largest line of Threshermen's Specialties made. SEND FOR CATALOG.

WM. PENN JONES IMPLEMENT WORKS, Minneapolis, Minn.
Office: 1314 WASHINGTON AVE. SO.

"Where City and Country Meet"

Edmonton Exhibition July 8-13, 1918

\$45,000 in Prizes, Purses and Trophies.
SPECIAL CLASSES FOR CHILDREN

ENTRIES CLOSE JUNE 25th

Attracts Big Attendance of Farmers from All Parts of the Country.

More Exhibits of Manufactured Goods and Machinery in 1918 than ever before.

EXCURSION RATES ON ALL RAILWAYS

Edmonton Exhibition Association, Ltd.
J. B. McIntosh, President. W. J. STARK, Manager

EDMONTON EXHIBITION VISITORS

At Your Service—
RAMSEY'S
The Shopping Centre of
the Western Home . . .

JAMES RAMSEY LTD. (All Departments), Edmonton, Alta.

A MAIL ORDER SERVICE THAT'S JUST A LITTLE BETTER

SASKATCHEWAN IMPLEMENT MEN ORGANIZE

An organization to be known as The Northern Saskatchewan Retail Implement and Vehicle Dealers' Association, was inaugurated on May 29th, at Saskatoon, at an enthusiastic meeting of retail implement dealers. The officers elected were: President, Langton J. Williams, of the Tractor Company, Saskatoon; vice-president, William J. Tracey, of Lock & Tracey, implement dealers, Saskatoon. A board of directors was appointed to cover the whole of Northern Saskatchewan, and this trade association has started with a good membership on sound principles, for the protection and betterment of the whole implement trade.

The large amount of correspondence received from dealers who were unable to attend the meeting, stating that they wished to be members from the moment of formation, was very satisfactory. There is no doubt that this association will attain a marked success. This organization is independent of all other trade organizations. It is by the retail implement men and for the retail implement men, for the betterment of general conditions in Saskatchewan.

The facts recognized by the retail dealers of Northern Saskatchewan are: That the manufacturer is paying his labor for manufacturing goods, 75 per cent more than in the spring of 1915. The average increase in price of machinery in Canada since the spring of 1915 is 52 per cent. The average increased profits of the farmers for the same period is 125 per cent. The costs of living in the west has increased 58 per cent, and the increased remuneration for the sale of implements by retail, has not been more than 15 per cent.

The manufacturing companies are informing their stockholders in their annual statements, that the profits on the business done in the last twelve months, are very satisfactory. The increased percentage of their profits is only known to themselves, but it is recognized that the service end, both in the selling organizations themselves and in regard to the retail implement dealer himself, is not more than 15 per cent.

The whole trade situation was reviewed at this meeting. It was recognized there should be a greater degree of organization and mutual helpfulness in all lines of trade, so that Canadian business may be welded into a commercial and industrial whole, and the part of our government should be to co-operate with business men on request, to bring about results which will benefit business and therefore create national welfare.



LADIES WHO DRIVE

—are unanimous in their endorsement of McLaughlin Motor Cars.

The new clutch on the larger McLaughlin models is extremely easy, responding to the gentle touch of the lady's foot.

The starting pedal, accelerator and service brake are readily accessible.

The seats are comfortable and every feature regarding control has been designed for ease and safety.

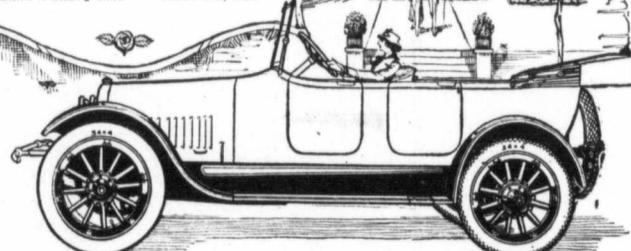
Order now as the demand will be greater than the supply.

THE McLAUGHLIN MOTOR CAR CO.,

LIMITED

OSHAWA, ONT.

Branches in Leading Cities. Dealers Everywhere

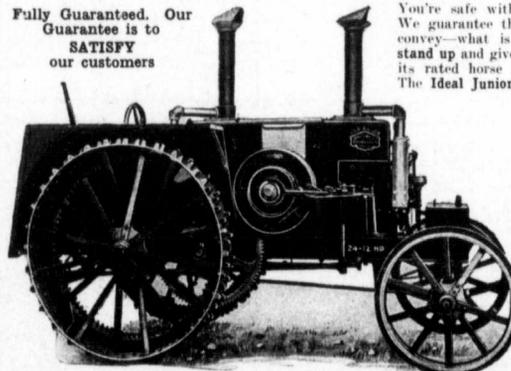


SEE THE McLAUGHLIN LINE AT THE LOCAL SHOW ROOMS

IDEAL JUNIOR—Kerosene Tractor

Fully Guaranteed. Our Guarantee is to **SATISFY** our customers

You're safe with the **Ideal Junior** or any of our tractors. We guarantee them fully: this is the first fact we wish to convey—what is more you get a handy tractor that will stand up and give continued satisfaction, one that will develop its rated horse power and more on Kerosene. The **Ideal Junior** is simple (not complicated in any respect) anyone can operate it.



Ideal Junior 12-24 H.P.

Two-Cylinder Tractor. Weight 6,000 lbs. Light, yet powerful, burns Kerosene perfectly, equipped with our specially designed Kerosene Carburetor; Our patented Water Valve Moisture Regulator; Our Double-opposed Cylinder; horizontal type, large, slow motor, high-tension trip magnet; Internal Road Gears driven from both sides, large wheels, special channel frame, roomy fuel tank, etc., are all features built in simple lasting design. Our Tractors are far past the experimental stage. They have "made good" for over 10 years and every power user in the West can profit by knowing more about our line.

The **IDEAL JUNIOR** pulls three plows 2 1/4 to 2 1/2 miles an hour and ably handles a 24-inch Threshing Machine with all attachments.

The **Ideal 15-30** is a stronger tractor than the **Ideal Junior**. The **Ideal** pulls five plows; weighs 13,000 lbs.

We also manufacture the **BEAVER 12-24** Four-Cylinder Tractor and a full line of **GAS, GASOLINE and KEROSENE ENGINES, WINDMILLS, GRAIN GRINDERS, PUMPS, TANKS, STEEL SAW FRAMES, Etc.** WRITE FOR CATALOGUE No. 46.

Goold, Shapley & Muir Co. Ltd.
Brantford, Portage La Prairie, Regina, Calgary

The only form of organization to obtain these benefits, is the trade organization, especially a specialized line of business such as the retail implement dealers. It was recognized by the implement men, that the associations of manufacturers, the associations of farmers, the associations of merchants and the associations of advertisers were all doing good work for their own particular line of business.

In Saskatchewan, the implement dealer feels that his customers practically control the government of this province. Laws have been passed directly in favor of his customers and in opposition to his trade. The implement dealer now recognized that this is owing to his having no organization to lay his case before the government.

Never in the history of the implement business has the necessity of standing together, counseling with one another, been so vital as it is at this time. Courage, energy, foresight and unselfish endeavor are needed to succeed, and as this organization is based upon high principles, they feel that they are assured of success from the beginning.

The association is to be congratulated upon the officers that they have chosen, as being sound, successful, business dealers with a full knowledge of the needs and intricacies of the trade. The president, in addressing the meeting, pointed out the object lesson of the apparent harmony among all manufacturers in the matter of business returns, advantages, contracts, etc., pointing out that if it were necessary for the manufacturers to be organized, it is far more vital for the dealer.

It was the unanimous opinion of the members of the organization that organizations of the same kind should be commenced in southern Saskatchewan, headquarters at Regina; in southern Alberta, headquarters at Calgary; in northern Alberta, headquarters at Edmonton; each association standing on its own feet and managed by itself. All of these associations to be affiliated with a central.

If these ambitions are realized, there will be a new, strong, influence for the betterment of the implement trade.

Saskatchewan Summer Fairs, 1918

Southey	July 19
Imperial	" 23
Lanigan	" 24
Elstow	" 25
Hanley	" 26
Vonda	" 30
Radisson	" 31
Langham	Aug. 1
Asquith	" 2
North Battleford	" 5-7
Lashburn	" 8
Lloydminster	" 9
Watson	" 15
Saskatoon	July 16-20
Churchbridge	" 23

The Gray Tractor

WITH THE

Wide Drive Drum



The Right Size for General Purpose Work. 18 H.P. Draw Bar, 36 H.P. Belt

QUALITY SPECIFICATIONS

Waukesha four-cylinder motor, 4 3/4 x 6 3/4; Hyatt heavy duty roller bearings; K.W. ignition, no batteries, coils or switches; Bennett carburetor and air cleaner; no differential; no bevel gears; copper cored radiator with wide water channels. Every feature thoroughly high grade and made to endure, not to meet a low price.

EXCLUSIVE FEATURES AT PLOWING

The Wide Drive Drum is the big feature of interest to farmers. It provides the greatest traction surface, in proportion to rating, of any tractor. It crushes weeds and trash in front of the plows so that the furrows cover it completely and make use of it for fertilizer. By use of the drum, the frame becomes the drawbar and the power is delivered in a straight line from the rear axle. A liberal size running board on the rear enables the operator to handle or get at the plows or implements conveniently.

NEW LOW RECORD FOR REPAIRS

By the elimination of differential and bevel gears in transmission and through use of the finest materials and construction the Gray has decreased the usual tractor repair requirements to a wonderful degree. This not only decreases operating cost but assures the owner that he will get his work done on time.

EXCLUSIVE FEATURES AT SEED BED PREPARATION

Here the Wide Drive Drum shines again. Since the weight of the Gray is distributed over the 70 inches of soil, it travels over newly plowed land without packing it. It crushes clods and furrows and leaves the soil mellow. Then the side arms, an exclusive Gray feature, enable the hitching of packers or discs on each side. This equipment with a 26-foot drag on the rear, will prepare 60 acres of seed bed in a 10-hour day. At seeding the Gray handles drills without ridging the land or leaving wheel ruts.

LOOK FOR OUR EXHIBIT AT THE PROVINCIAL EXHIBITION, BRANDON, JULY 23rd to 25th, 1918.

SEND FOR OUR ILLUSTRATED BOOKLET TO-DAY

Gray Tractor Company of Canada
307 Electric Railway Chambers WINNIPEG

Foam Lake	" 24	Unity	" 25-26	Melfort	" 14-1
Elfos	" 25	Cut Knife	" 30	Birch Hills	" 11
Wynyard	" 26	Wilkie	July 31-Aug. 1	Kiniwino	" 17
Togo	" 30	Macklin	Aug. 2	Gravelbourg	July 30
Canora	" 31	Luseland	" 6	Mazenod	" 31
Invermay	Aug. 1	Plenty	" 7	Mossbank	Aug. 1
Yorkton	" 5-7	Kerrobert	" 8	Expanse	" 2
Melville	" 8	Alsask	" 13	Carlyle	" 5-6
Watrous	" 9	Hawarden	" 14-15	Estevan	" 7
Assiniboia	" 13-14	Kindersley	" 14-15	Estevan	" 8-10
		Kelfield	" 16	Maymont	Sept. 27
Balcarres	July 24	Lampman	July 19	Brownlee	July 23
Stockholm	" 26	Rouleau	" 23-24	Central Butte	" 24
Bladworth	" 30	Milestone	" 25-26	Rossduff	" 26
Craik	" 31	Gainsboro	" 30	Bounty	" 30
Davidson	Aug. 6	Carnduff	" 31	Brook	" 31
Elbow	" 7	Oxbow	Aug. 1	Zealandia	Aug. 1
Mair	" 8	Alameda	" 2	Outlook	" 2
Redvers	" 9	Weyburn	" 5-7	Nokomis	" 6
Francis	" 13	Stoughton	" 8	Tantallon	" 7
S. Qu'Appelle	" 14	Creelman	" 9	Punniely	" 8
Sintaluta	" 15	Yellow Grass	" 13-14	Kelther	" 9
Moose Jaw	July 10-12	Bengough	July 23	Lumsden	" 13
Swift Current	" 15-17	Colgate	" 24	Rosthern	" 14-15
Herbert	" 18-19	Middle	" 25-26	Govan	July 25-26
Uren	" 23	Regina	July 29-Aug. 2	Salteaux	" 30
Gull Lake	" 24	Marcelin	Aug. 6	Atwater	" 31
Cabri	" 25	Shellbrook	" 7	Maryfield	Aug. 2
Lumsford	" 26	Prince Albert	" 8-10	Lipton	" 6
Duck Lake	Sept. 25	Tisdale	" 13		
Naseby	July 2-3				
Perdue	" 24				

Strassburg	"	7
Ft. Qu'Appelle	"	8
Dubuc	"	9
Humboldt	"	13
Quill Lake	"	14
Preeceville	"	15
Wadena	"	16
Summerville	July	23
Aneroid	"	24
Cadillac	"	25
Reedlyn	"	26
Vanguard	"	30
Kincaid	"	31
Shaunavon	Aug.	1
Woodrow	"	3
Big Stick	"	6
Maple Creek	"	7-8
Mortlach	"	9
Windthorst	Aug.	3
Grenfell	"	8
Wapella	"	9
Whitewood	"	13
Fairmeade	"	14
Mosomin	"	15
Kennedy	"	16
Dahinda	Oct.	4

SCHEDULE OF MANITOBA FAIR DATES, 1918

- July 1—Carman, Glenboro
- July 2—Carman, Glenboro.
- July 3—Morden, Neepawa.
- July 4—Neepawa.
- July 5—Miami, Morris.
- July 9—St. Jean, Roland, Wawanesa, Sanford.
- July 10—Cypress, Emerson, Melita, Elgin, Warren.
- July 11—Cypress, St. Pierre, Springfield.
- July 12—Stonewall, Hartney.
- July 13—Stonewall.
- July 16—Elkhorn, Souris.
- July 17—McAuley, Souris, Holland.
- July 18—Carberry, Virden, Cartwright.
- July 19—Carberry, Virden, Cartwright
- July 23-26—Brandon.
- July 30—Miniota, Minnedosa, Waskada, Crystal City, Rivers.
- July 31—Harding, Shoal Lake, Deloraine, Swan Lake, Reston.
- August 1—Rapid City, Birtle, Boissevain, Manitou, Treherne.
- August 2—Hamiota, Rosburn, Pilot Mound, Treherne.
- August 6—Shellmouth, Binscarth, Roblin, Oak Lake.
- August 7—Strathclair, McGregor, Gilbert Plains, McCreary.
- August 8—Russell, Glenella.
- August 9—Russell, Oak River, Swan River, Dauphin.
- August 31—Weston.
- August 30-31—Headingley.
- August 20-22—St. Vital.
- September 4-5—Kildonan.
- September 25—Woodslands.
- September 27—Groulx.
- September 27-28—Selkirk.
- October 3—Plumas.
- October 4—St. Rose, Langruth.
- October 8—Kelwood.

VALUE OF DANDELIONS

Sir:—I quite agree with Mr. Astley that dandelions should be more appreciated by the public. This much-despised weed is a most delicious vegetable either in salad or prepared as spinach. The flowers make excellent wine, which is a very effective blood purifier.

As soon as the snow and frost are over this weed is the first kind to begin to grow. I have been every day gathering some and prepared it as an ordinary salad (adding a few hard boiled eggs). Then when it has become too hard and bitter I boil it down and prepare it exactly as spinach, and thus enjoyed green vegetables all the spring for nothing to spend but a few minutes of labor; just now I am making the wine for next year's use. We are now drinking last year's brew. I can assure you that this is a boon to my hubby as Winnipeg has gone dry.

Many of our friends to whom I spoke of dandelions have followed my example and have saved many cents and have had the pleasure to enjoy this excellent dish. A. G.



For Summer Fallowing

THE Nilson is the only five-wheel tractor with big traction minus a lot of dead weight for which to buy fuel. The Lever Hitch eliminates the necessity for dead weight. It obtains traction by converting the pull of the plows into downward pressure through the drive wheels. That is the reason it can cultivate your summer fallow even better than horses.

Never has superior tractor merit been so instantly recognized by the farmers of Canada as in the Nilson. Every man who sees its big traction, light weight, fuel economy and speed in all soils, wet

or dry, and in all weather, wants the Nilson.

The Nilson comes in two models, the Junior and the Senior. The Junior as shown below is a three or four plow tractor depending on conditions. The Nilson Junior has plowed 1,200 acres without stopping except for fuel and oil.

See the Nilson at the Light Tractor Plowing Demonstration at Brandon, July 23rd to 25th. There is but one Lever Hitch Tractor—the Nilson. Nilson Tractors and repairs may be had through the following distributors. Get in touch with them now and let the Nilson furnish power for your summer fallowing.

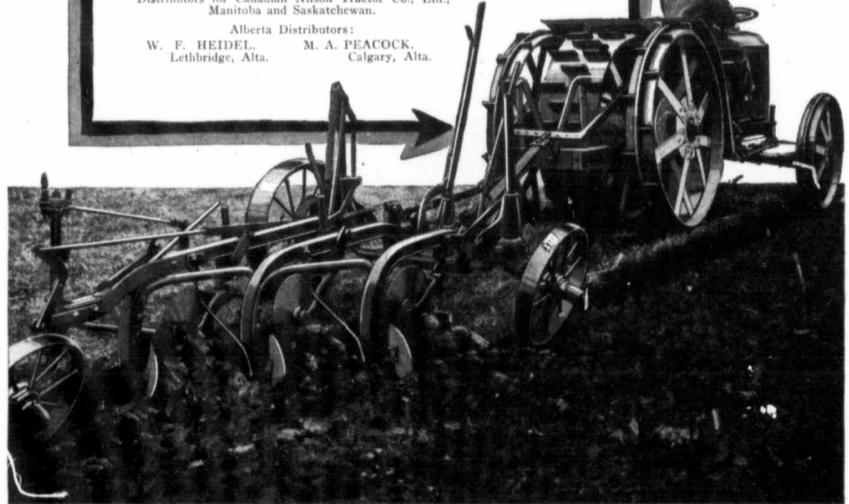
Happy Farmer Company Limited

225 CURRY BUILDING, WINNIPEG, Man.

Distributors for Canadian Nilson Tractor Co., Ltd., Manitoba and Saskatchewan.

Alberta Distributors:

W. F. HEIDEL, Lethbridge, Alta. M. A. PEACOCK, Calgary, Alta.



The A. STANLEY JONES BLOWER CO.,

LIMITED

NORTH BATTLEFORD, SASK.

MANUFACTURERS of **SMALL WIND STACKERS** for small threshing machines. We make a speciality of **Blowers** for the "Call of the West" Threshing **Outfits** but will make for any other also. Owners of Threshing Machines with Straw Carriers should write us now and place an order for one to be prepared for the shortage of labour. Immediate delivery. Same price as last year. *Full illustrated price list on request.*

Do you need **HELP?**

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

BRITANNIA! THERE SHE STANDS!

(From "The New York Tribune")

ONCE again the British army feels the utmost force of the mightiest artillery power ever gathered in this or any other war. In the fiercest, bloodiest, most desperate fighting of any war, the British lion stands with its back against the wall, defending the coast ports, defending Great Britain, defending civilization, against the savage attacks of a nation that has made war its one business for two generations.

Outnumbered, battered, heroic, tireless, indomitable, the British defenders of democracy daily and hourly do the work of heroes, achieve the impossible in courage and endurance. While America hastens to the rescue, the stalwarts of England, Scotland, Ireland, Wales, Canada, New Zealand and Australia battle with the desperate Huns. There is now no room to yield, as there was in Picardy. Cost what it may, the Hun is determined to smash the British army and win the coast and the war. Cost what it may the Briton is determined to stand his ground, buoyed by the hope that America will come to the rescue before it is too late.

Haig, the silent, grim indomitable man upon whom to-day rests the fate of a world, speaks the iron heart of the British people when he says to his men:

"Every position must be held to the last man. There must be no retirement. With our backs to the wall, and believing in the justice of our cause, each one of us must fight to the end. The safety of our homes and the freedom of mankind depend alike upon the conduct of each one of us at this critical moment."

Words these, destined to shine in glory legends. Deeds, these, destined to fill some of the noblest pages of British history.

Britannia, like the rest of us, has sinned in the past. In this bath of blood and heroism she has wiped out every stain upon her name. She stands forth today clean, shining, glorious, champion of all that mankind holds precious, defender of the faith of democracy, upholding the hope of humanity. It is an honor and a glory to fight by her side, to share her high cause.

Fifty-Fifty

In Cornwall there was a case involving the ownership of an eight-day clock. After listening to the parties, the Judge said to the plaintiff:

"You get the clock."

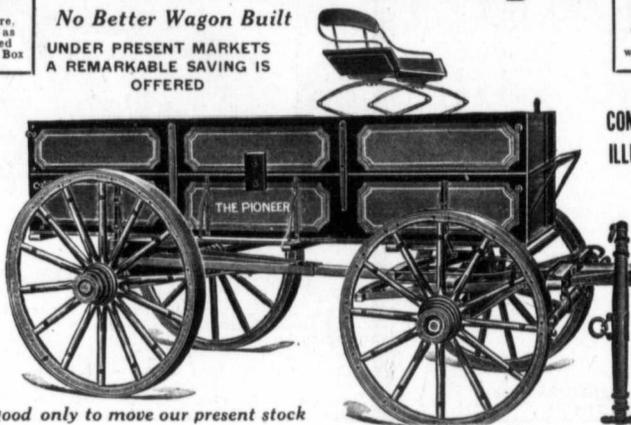
"What do I get?" complained the defendant.

"You get the eight days."

\$9500
3 1/2 in. Tire.
Complete as
illustrated
with 28 in. Box

SPECIAL PRICE ON Pioneer Farm Wagons
No Better Wagon Built
UNDER PRESENT MARKETS
A REMARKABLE SAVING IS
OFFERED

\$9650
3 in. Tire
Complete as
illustrated
with 28 in. Box



QUALITY THE BEST

COMPLETE AS ILLUSTRATED

Buy Now
—This price is good only to move our present stock

Extra Heavy Teaming Gear Only, 5 Ton Capacity, 3 1/2 x 12 inch Skein, 3 inch Tires, \$75.00

**SEND YOUR ORDER TO-DAY—
TO-MORROW MAY BE TOO LATE**

C. S. JUDSON CO. LTD., Winnipeg, Man.

A TREMENDOUS SAVING IN MAN POWER

HAVING made a dead set on the last available man who can fight to take his place on the battle-front, can there be anything of secondary importance at this moment and in the interval before harvest than the business of arranging for the harvesting of the crop?

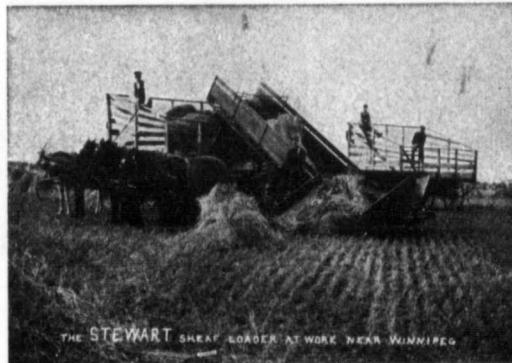
The acreage is increased, and everything in sight points to the fact that the crop will be an exceptionally heavy one. Most parts

harvest fields of 1918 and doing work which in point both of quantity and quality will compare with the very best product of the "sterner sex."

The key to success in this labor problem will always be the machine that is a proved mechanical success, and one of the most successful of all labor-saving harvesting successes in Canada is undoubtedly the "Stewart Sheaf Loader" which picks up the sheaves or stooks or loose grain from the field in a way that hu-

man and will express more than we can do with twice the space of descriptive "dope." "Yes we used one of the 'Stewart Sheaf Loaders,' and found that we saved the price of three teams and four men. This would mean that we saved about \$21.50 per day. We also claim that we saved the farmer about \$1.00 per acre by taking it up cleaner than can be done by hand forking; also the board of three teams."

We earnestly invite the reader's careful thought in this matter, and would direct him to the manufacturers of the loader.



of Western Canada have had abundant moisture; a few say they need more, but it is early June, and no one says "we are badly in need of rain." In fact, from more than one source we are assured that the soil has already received enough to carry the crop to harvest.

Men—except old men—will be scarce, and it is not every woman's job, although there will be many hundreds of those wonderful Western women seen in the

man labor could never handle it.

We have written quite a lot about this wonderful machine since its introduction some years ago, but at no time could the very strongest things we have said in its behalf have greater weight than in face of conditions such as we find them to-day and which are perfectly familiar to everyone.

The following testimony is one of many given to us by men who have handled the "Stewart Sheaf

"Innocent" Germany
(By Walt Mason)

THROUGH years of peace she dreamed of war, and talked of war when waking; it's what she has been planning for, and all her engines making. "The Day" has been the German toast, for that day she's been praying, when she might tread the British coast, destroying, burning, slaying. And now the day of war is here, and all the German legions are fighting for their faith—and beer—in haunted, corpse-strewn regions. "The Day" is come, the day of ire, the toast of every German, and on the page of blood and fire he reads a ghastly sermon. The hate of all the world he's won, the scorn of every nation; his way of "getting in the sun" brought woe and tribulation. And now, the war dogs raging loose, his loud voice has a quaver; he offers every lame excuse to gain the nation's favor. His cry is "Murder!" and "Police!" from out the struggle fatal; and all he ever wished was peace, and he thought warfare hateful. He fought for peace, year after year, and only waved his banner for God and home and lager beer, in quite a seemly manner. His learned professors sign a scroll, of many allegations: "Our Fatherland is in the hole, so hear our explanations!" Explain, professors, plead and swear—we do not care a button! You can't produce a grizzly bear and prove that it's a mutton!

FOR SALE—Complete Threshing and Plowing Outfit; 45 hp. Flour City Gas Tractor, in prime condition; also Yellow Fellow Avery separator, 23-24, complete with all attachments. Outfit cost originally \$7,000. Will sacrifice, as I have sold farm. What offers? Cash or terms. X., care of E. H. Heath Co., Box 2161, Winnipeg.

A PHILANTHROPIC OLD RAILROAD MAN

IN the above picture, L. W. Hutton, mining man and capitalist, is seen as a tiller of the soil. Mr. Hutton expects to do extensive farming on the acreage around the site of the new children's home he is building near Spokane, and purchased the Case tractor he is operating in the above picture from the J. I. Case T.M. Company.

Mr. Hutton looks back with pride to the time when he was a locomotive engineer and admits that it gave him a certain amount of pleasure to set this machine in motion. While the home which Mr. Hutton is building for the children will not be ready for another year, the land will be worked this year and the products stored for the home. Mr. Hutton insisted that his dog, Whiskers, pose with him. Whiskers himself has rather an interesting history. He is an Airedale, and when lost one time Mr. Hutton had the police scouring the city for him. They failed to find him, but Whiskers actually walked into the station one day and gave himself up to the police, according to the story Mr. Hutton tells.

The site, 120 acres, is one of the choicest in the Spokane valley. Mr. Hutton expects the farm to supply the home with vegetables and feed for the stock. He expects to raise 100 tons of hay this year, to have on hand for their cows next year; will put in several hundred pounds of potatoes and 30 acres of wheat.



The tractor is equipped with some of the latest features in conveniences. There is a new air washer, especially needed in tractors, since they pick up so much dust in farm work, and the gears are enclosed making them dust-proof. The engine is the four-cylinder type, valve-in-head, made in the Case factory. The tractor runs with either distillate or kerosene. The tractor is one of the lighter types, weighing when ready for the field 3,600 pounds.



A Universal Appeal

THE Appeal of the Red Cross at this time for funds should strike a responsive chord in the heart of every citizen.

Why?

Because the present decisive struggle is exacting a heavier toll in death and suffering than any previous battle of the Great War.

Because the Red Cross is the only organization equipped to handle the stupendous task of caring for the sick and wounded.

Because the Red Cross, in its ministrations, makes no distinctions of caste or creed. The same humane treatment is accorded to every suffering soldier.

Because the need is NOW, while the life and death struggle is progressing.

Because our contributions will go directly to help care for our own boys in the most economical, efficient and sympathetic manner possible.

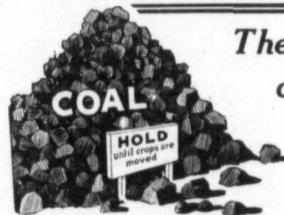
THIS ADVERTISEMENT CONTRIBUTED TO THE RED CROSS CAMPAIGN,
MANITOBA AND SASKATCHEWAN, DATES JUNE 17-22, BY

COCKSHUTT PLOW CO. LIMITED

WINNIPEG REGINA CALGARY SASKATOON

A NEW TRACTOR ENTERS THE CANADIAN FIELD

On another page of this issue will be found the advertisement of the Gray Tractor of Canada. While this is rather a new type of tractor in the Canadian West, the



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 COLLIERIES LTD., Edmonton, Alberta
Mining capacity (with car supply) 2,000 tons daily

type, which makes it particularly adapted to wet soils. This drum being wide, it is claimed by the makers that all the soil is packed the same for every soil, thus leaving every portion of the field in the same condition when plowed.

It is claimed that all vegetation is crushed on the ground, so that the plows when farrowing turn up to the bottom without the use of weed hooks or chains.

The Gray tractor is particularly well constructed, being built of the best material throughout, having a four cylinder motor, and light in weight. In effect, this design is a quality machine.

The Gray tractor will be on demonstration at Brandon, July 23,

24 and 25 at the big plowing demonstration to be held at that time.

A Narrow Escape

A Kentucky colonel of the old school had made a proud boast that he hadn't drunk a glass of water in twenty years. One day as he was riding in Nashville on the old L. & N., the train was wrecked while crossing a bridge and plunged into the river. They pulled the colonel out with a boat-hook, and when they got him on shore one of his friends rushed up, crying: "Colonel! Are you hurt?"

"No!" he snorted. "Never swallowed a damn drop!"

OUR WOMEN FOLK

CONDUCTED BY
PEARL RICHMOND HAMILTON

What God Hath Promised

GOD hath not promised
Skies always blue,
Flower-strewn pathways,
All our lives through;
God hath not promised
Sun without rain,
Joy without sorrow,
Peace without pain.

But God hath promised
Strength for the day,
Rest for the labor,
Light for the way,
Grace for the trials,
Help from above,
Unfailing sympathy,
Undying love.

—Annie Johnson Flint, in *Christian Endeavor World*.

The Better Thing

It is better to lose with a conscience clean

Than win by a trick unfair;
It is better to fall and to know you've been,

Whatever the prize was, square,
Then to claim the joy of a far-off goal
And the cheers of the standers-by,
And to know down deep in your inmost soul

A cheat you must live and die.

Who wins by trick may take the prize,
And at first he may think it sweet,
But many a day in the future lies

When he'll wish he had met defeat,
For the man who lost shall be glad at heart
And walk with his head up high,
While his conqueror knows he must play the part

Of a cheat and a living lie.

The prize seems fair when the fight is on,

But save it is truly won
You will hate the thing when the crowds are gone,

For it stands for a false deed done,
And it's better you never should reach your goal

Than ever excess to buy
At the price of knowing down in your soul

That your glory is all a lie.

—Exchange.

A Psalm a Month

Wouldn't you like to learn a few Psalms by heart, perhaps one a month? Here are twelve suggested by the United Society of Christian Endeavor:

1. The Tree Psalm, Psalm 1, with its picture of a tree like which we may be if we will.

2. A Star Psalm, Psalm 8, showing how much God loves us.

3. What the Heavens are Telling, Psalm 19, a message everyone needs.

4. The Shepherd Psalm—you know that already.

5. The Earth is the Lord's, Psalm 24, with its word to those of clean hands and pure heart.

6. A Missionary Psalm, Psalm 67, which makes us wonder whether we have done as much for missions as we might.

7. The Safety Psalm, Psalm 91, for whoever is afraid.

8. A Song of Gladness, Psalm 100, a Psalm which tells why we should be glad.

9. A Thanksgiving Psalm, Psalm 103, by a man who had so many reasons for gratitude, and a grateful heart, too.

10. A Nature's Psalm, Psalm 104: 1-24, telling some of God's wonderful works in the world about us.

11. The Bible Psalm, Psalm 119: 1-11, showing what it means when we obey God's law.

12. The Traveler's Psalm, Psalm 121. As you travel on into the year, isn't this a wonderful Psalm to take with you?

Mother's Corner

"And a Little Child shall lead them"

Mother's Prayer Guiding Star of Her Soldier Boy

Rev. John Neil, D.D., who recently returned from the front, addressed a Sunday school meeting in St. Paul's Church in Winnipeg recently. Speaking upon "Our Sunday School Boys in France," the speaker received hearty applause as he told of some of the heroic deeds of the Canadian soldiers. He said "The boys in khaki never forget the home influence and the influence of their mother's prayer is often the influence that anchors their souls."

"Our Sunday school boys and the young men from the Bible classes are standing the test of the new conditions in France," he said, "and are keeping both body and soul clean."

Dear, we must share if we would keep
All blessings from above;
Ceasing to give we cease to have—
Such is the law of love.

If you honor and love mighty Liberty's cause,
If you're worthy the country that bore you,
You won't waste your time shouting what you will do.

But will quietly do what's before you.

Dear Readers:—We are pleased to receive such splendid letters as are coming in response to our prize offers.

Besides the prize of two dollars offered every month for the best letter from

a mother on the care of children we are offering the following prizes in the Baby Contest. The Baby Contest continues until the first of October.

Twenty-five dollars is offered for the photo of the most perfect baby with a description from the mother on the care of her child. The second prize is ten dollars and the third is five dollars. We shall have for judges three disinterested women, women who understand babies. The age limit of the child is four years.

Our object is to make this department helpful to mothers of children. The experience of other mothers will be very splendid help to inexperienced mothers, and we want to save the lives of our little children.

War conditions make it necessary to redouble our efforts in behalf of little children.

We want photos of a hundred babies for our contest. We intend to make our Mother's Corner beautiful with their sweet faces. Let us have the picture of two of your baby.

We are pleased to note the optimistic tone in the letters received for this contest.

If any district in Manitoba would like to have demonstrations in home-nursing, write to the Agricultural College, as there is an excellent nurse on their extension staff who is anxious to get in touch with districts needing her. She is a woman well experienced and thoroughly familiar with conditions in the country.

With aching hearts over the world tragedy, mothers cannot be idle. They must work and they are working tirelessly to bear their part in the great army of all the people who must each fill a niche in carrying the war to victory.

Mothers who live to-day are learning great lessons, which are opening their eyes to many conditions they never knew before. Mothers are thinking deeply and broadly. They are studying as never before the causes which have brought this tragic war.

They are thinking to-day not only in national but international terms. They are studying great social and economic problems, learning the seeds which must be planted to make a stronger, better

world. They see a new generation, pure and with open hearts, and they know the seeds planted in children's hearts shape the life.

They see the relation of father and mother in every home to world life and to a nation's ideals.

The education which made this war possible has been purposefully and definitely given in Germany during the life of an entire generation. It is an example of what unity of purpose and a definite plan may achieve.

Spiritual degradation of a nation has been the result.

Every Divine law of life has been superseded by the teachings that "might makes right," that power gives one the right to trample under foot the rights of others and to get whatever one wishes regardless of others.

Last, but not least, is the propaganda that the clergy should remove the moral scruples of the women against the breeding of children outside the pale of Christian marriage, these children to be raised by the state to recruit the man power and the military power of Germany.

Nothing the Hohenzollern gang has done will have so great an influence as that to unite the motherhood of the world against the propaganda which degrades motherhood, fatherhood and childhood.

Nothing has revealed more clearly the fact that this war is a war to sustain the great spiritual principles which must govern individuals and nations, that it is in truth a battle against the powers of evil.

In protection of the Christian home mothers can and will form an army no less needed than the military army, and in every nation enlist mothers for constructive work.

Reasoning from cause to effect they see the influence of home and school training to great world questions.

It concerns a nation to know what ideals and habits are being given in every home. It concerns every mother to know, for united motherhood with a vision can make the nation's ideal what it will.

Thinking men and women will not fail to see or disregard the lesson learned from Germany. First, that a systematic scheme of education forced on a nation for a generation makes the character of the citizens. Second, good men and women must give more thought to organizing a systematic scheme of education, reaching parents and teachers, which will create high, true ideals of justice. Not intellect nor manual efficiency can make an individual or a nation great, unless the spirit which is the directing power of every life draws its inspiration from God, and recognizes that from Him come truth and power.

In millions of homes on this continent parents are giving the ideals, good or bad, weak or strong, which will animate the men and women of to-morrow.

Can our country do better than to give such practical, definite universal propaganda to parents and teachers as will enable them more efficiently to educate the rising generation?

If German children had been taught the Golden Rule as applied to life, there would have been no war. Respect for the rights of others by the units of a nation induces respect for the rights of other nations by the nation. That one lesson brought into the life in our own country would reduce crime more than half.

A nation's safety depends on the education of its children, not in book know-



A GENIUS FOR SYMMETRY

"There's something wrong here, my lass! Haven't ye put the old mare's leg outside the trace?"

"Ah, yes! But Bertha's doing it just the same the other side to match. She thinks it looks nicer!"

ledge alone, but in right principles and in duty to others.

Compare the money spent on education in our national government with that spent on every other department. Compare the money spent on education throughout the country with the money spent in prosecution of crime and see how much more is given to the latter rather than the former.

The Department of Education is more important to the future safety of the nation than any other department. It should be the inspiration from the government reaching out and shedding light in every home, school and community—not abstract but related to everyday life.

From Child-Welfare Magazine.

**BABY CONTEST
Prize Letter**

I AM sending photo of my son, Roland, born October 10th, 1915. I cannot give weight at the time photo was taken when he was 18 months old, but



**BABY ROLAND HOOKÉ,
2 1/2 Year Old**

at the present time, age 2 1/2 years, he weighs 40 lbs., height 37 inches, chest 24 inches.



**DOROTHY LILIAN DUNCAN,
Aged 12 Months**

THE RED CROSS



T

he one clean, pure, tender impulse in war.
Give to the RED CROSS!

Manitoba and Saskatchewan Campaign, June 17th-22nd

This Advertisement contributed to Red Cross by—
WESTERN CANADA FLOUR MILLS COMPANY, LIMITED
Winnipeg Goderich Brandon Calgary Edmonton

The care of my baby started some months before his birth, for I lived outdoors practically all day with my two elder children.

We had no hired man in the fall, 1915, and our wheat crop was very heavy, my husband out during the day and stooked most of the night, so the children and I spent a lot of time in the fields trying to help a little with the stooking. I don't know that we did much good for the farmer, but we certainly benefited, for our appetites were enormous and our sleep dreamless, awaking in the morning strong and fresh.

I never worried as to the sex of the newcomer, and when on October 10th, I awakened at 5 a.m., and called my husband, and presented him with an 11 lb. son in less than half an hour. My confinement was painless, due, I am sure, to the life I led during the preceding months.

The boy is a healthy happy child, fed on the breast for 8 months. When he got too big for me to handle he walked by himself at 9 months. I can't say when his teeth came, for they came so quietly.

I do not give my children any special care. They drink nothing but milk, eat lots of bread and butter and eggs, go barefooted all the summer, live practically out of doors, think life a great joy and never have an ache or pain, which is fortunate, as we have no doctor nearer than 16 miles. Yours very truly,

Mrs. W. J. Hook,
Wiwa Hill Post Office, Sask.

Hay Creek, Alta., May 19th, 1918.

I AM enclosing a photograph of my baby, age 12 months and 10 days. Her name is "Dorothy Lilian Duncan," and at birth she weighed 7 lbs., and at 12 months she weighed 21 lbs., and measures 30 inches. She has been a very healthy baby, not having had the least thing wrong with her.

From the day she was born I nursed her every three hours, and she used to sleep practically the whole day. I would give her bath between 9 a.m. and 10 a.m., and she would be nursed and then put in her carriage outside, weather permitting, where she would sleep until

next feeding. Often I would pick her up asleep and nurse her and then put her back, and she would never wake up at all.

For about half an hour every day I would let her lie on the bed with just her little hand on and kick.

She gained steadily, and has a lovely healthy color.

I gave her nothing but the breast until she was 7 months, and then she had a little Robinson's Patent Groat. At 10 a.m. and about 2 p.m. she would have an Allensbury's Biscuit, with a little boiling water poured over it to soften it and then a little milk.

As she grew older she had small quantities of broth free from grease, coddled egg, the outside of a mealy potato and any light food that she would digest. At 6 months she had two teeth, and then two teeth every 2 months after, and now she has eight.

She is my first baby, and I must say very good, not a bit of trouble. I would nurse her at 10 p.m., and she would sleep until 4 or 5 a.m. I never walked the floor with her at night once she slept in her crib beside my bed, and

we always had the window open all night.

I did not allow her to sit up until she was 9 months, and she just crawled a little at 10 months before she walked. Her legs are beautifully straight, and she is strong. Thanking you for your interest. I remain, yours truly,

(Mrs.) J. H. Duncan.

AGRICULTURAL EXTENSION

Extension Service

Mr. Newton, of the Manitoba Agricultural College Extension Department, has arranged a series of 300 institute meetings to be held throughout Manitoba during June and July. He has selected twenty women to lecture throughout the province with the hope of making it possible to organize all of the women of the province in such a way that they may be reached from time to time with important information if necessary.

The idea is most praiseworthy and will no doubt be met with sympathetic support from the women of Manitoba.

The following is an outline of the extension service as planned by Mr. Newton:

Organization Institute Meetings

National necessity has made imperative more effective organization, and the purpose of the 300 institute meetings which are being held throughout Manitoba during June and July by the Agricultural Extension Service is to perfect an organization by means of which it will be possible to communicate with all of the women of the province within 48 hours if necessary.

It is hoped that no emergency calling for such rapid action will arise, yet it will enable the women of Manitoba to keep in closer touch with the needs of our soldiers overseas. Our armies would get nowhere were it not for their splendid organization and their ability to take concerted action, and Manitoba housewives in their fight to conserve food, and send forward the most needed supplies must be able to get definite first-hand information as quickly as possible.

This plan has been adopted in Indiana, where they are not nearly so well organized as in Manitoba. Here we have already 130 active Home Economics Societies, and a large number of W.A.G.G.A. so that the plan herein outlined means simply a broadening out of our present splendid organization.

Plan of Organization

1. To have a provincial executive representing all the Home Economics Societies and Women Grain Growers' Auxiliaries in the province, elected by delegates sent to Winnipeg in February, for the purpose of discussing the whole field of women's work.

2. To have local organizations and societies at all of the principal marketing centres, each with a membership of from 25 to 200, led by a board of directors elected by the society. The chief executive officers being a president and a secretary.

3. Branch units of these local organizations located in a township or school district, or living along a one party telephone line, with a membership of from 7 to 10, and having a chairman, or captain, in charge. In dividing the society into companies it is recommended that only six or seven be included, and the captain be given instructions to recruit her company to full strength (10).

What the Branches Can Do

These branches are not formed simply for the purpose of electing officers, and then waiting for something to turn up. They must have some real patriotic work to do, and here are some of the things that each unit or squad can do:

1. Co-operate in ordering fish, fruit and other perishable foods. Each branch member will report to her captain, who in turn reports to the secretary of the society. The order can then be placed with the butcher or grocer, thus enabling him to order a maximum amount without running any danger of getting too much, and allowing some food to go to waste.

2. Co-operate with the Agricultural Extension Service in arranging for short courses in dressmaking, millinery, home-nursing and demonstrations in cooking, canning, etc.

3. See that every woman in the districts is invited to attend either the meetings of the branch club, or the regular monthly meetings of the society.

4. Distribute leaflets, pamphlets, recipes, cook books, pledge cards and other printed material from the Canada Food Board.

5. Distribute bulletins and other literature prepared by the Provincial and Federal Governments.

6. Act as a community recipe exchange.

7. Investigate and report to the Food Controller cases of hoarding waste, obnoxious and unpatriotic utterances and actions.

8. Act as a bureau for the registration of complaints. Investigate them, and report to the proper authority.

9. Find out the labor needs and assist in securing and distributing labor.

10. Arrange for marketing perishable farm crops grown in the district, so that there will be no waste.

11. Arrange for members to give demonstrations of household methods which they have found to be particularly effective.

12. Plan for the conservation of health.

13. Co-operate in providing for clean sport for the young people of the district.



"A great net of mercy drawn through an ocean of unspeakable pain"

THERE is only one way to give to the Red Cross—give till your heart says stop. A little contribution is only a salve to pride.

This is not to say that contributions of only one dollar, or even of the children's pennies, are not desired—and **needed**.

For you to give \$5 when you can give \$25—for you to give \$25 when you can give \$100, or to give \$100 when you can give \$500—is to dodge the heaviest obligation that this war has laid upon you.

For remember, this is **not** a charity—this is a **duty**.

This is not a time to give because others give. This is a time to give because **others need**.

No man can tell you how much you ought to give. Except this; that "Over There" the **need** is so great that only by cutting to the quick, only by giving all that you think you can give and then **more**—only by giving not a little of our excess but much of it—only by taking from your own children and from your wife and from yourself, can the **needs** of the men who are fighting for you and the **needs** of the children of the men who died for you be met.

Ask your own soul how much it should be!

THIS ADVERTISEMENT CONTRIBUTED TO THE
RED CROSS CAMPAIGN BY

THE JOHN DEERE PLOW CO. LTD.

— OF —

WINNIPEG, Manitoba.

REGINA, Saskatchewan

Special Information

Arrangements have been made by the Extension Service to get first hand information from Ottawa and Washington, as well as from several individual states, and the local Food Control Office. This information will be printed and sent out on the first of each month to all captains for distribution.

When information is received which should reach its destination still quicker it will be mimeographed and sent to the secretary who will immediately get in touch with all of the captains by telephone. When it is found necessary to call an emergency meeting the secretary will telephone each captain, and will telephone or see or otherwise notify the other members of her company.

A SUFFICIENT REASON

"Oh, George, George!" exclaimed a fond mother when she saw her small boy considerably battered up and dirty. "You have been fighting again! How often have I told you that you shouldn't fight!"

"Well," said he, "what are you going to do when a fellow hits you?"

"Why, keep out of his way," said the mother.

"I'll bet," said the youngster, "he'll keep out of mine after this."

Home Economics

Mrs. Dayton, president of the H.E.S., wishes me to make this announcement: "I wrote to Mr. McSerny regarding the domestic help question and am in receipt of a letter from his office saying he is in Ottawa and is taking up the question of obtaining family help from Quebec."

Kenton H.E.S.

The successful plan of the Kenton H.E.S. in their conservation of beef is most praiseworthy. I am sure other H.E.S. will be greatly interested in their success.

Kenton, May 3rd.

Since sending in this report our conservation committee has had the following results in creating a market for fish, which I am giving for the encouragement of other local societies, who like ourselves shrink from criticism, and fear to oppose custom or to make overtures to dealers. We believe that if the women of any community will co-operate to change the trade of any dealer to conform with conservation of food, that dealer will be found most willing to

make any change that will help the cause along.

Our committee met Friday night, April 19th. The following Tuesday solicited orders for 100 lbs. of fish were sent in to our dealer, the following Friday the fish arrived and by noon of next day were all gone, the supply not being equal to the demand. We have hopes that in this way we may be able to save four or five thousand pounds of beef or pork for the Allies during the next six months.

We also greatly appreciate the War Time Recipes, which we received upon application to the Prov. Com. on Conservation, and which are compiled by the local council of Winnipeg.

E.F.

A Correction.—In February we were asked to serve refreshments at a carnival. We served a light war-lunch and realized \$17.60.

Dauphin

The Dauphin Society is greatly interested in Food Conservation. Contributed generously to Y.M.C.A.

Dauphin, May 10th, 1918.

Dear Madam:—I submit the following report of H.E.S. meeting for publication in "The Canadian Thresherman and Farmer".

A well-attended, and representative meeting of the Valley River H.E.S. was held at the home of Mrs. Robt. Hayes on May 8th. The meeting was opened by the singing of a hymn and responsive roll call.

After some discussion the society decided to donate to the Y.M.C.A. Fund, instead of sending individual boxes as had been thought of previously, and twenty dollars was voted for that purpose.

Arrangements were made for a course in sewing and for the entertainment of the sewing demonstrator, Miss Smith.

Mrs. McIntyre then gave a most interesting and instructive address on "Conservation of Food," emphasizing the great shortage of foods that are needed, the urgent demand and the consequent need of conserving foodstuffs or of finding substitutes. She also gave a list of substitutes and war-time recipes.

Mrs. McIntyre was asked to give a demonstration in canning to the Boys' and Girls' Club.

A vote of thanks was extended to Mrs. Kelly for her hospitality to the society in April.

A hearty vote of thanks was also given Mrs. McIntyre.

The Red Cross collection amounted to four dollars and eighty cents. Yours truly,

Miss A. M. McQuay.

Oak Lake

Hostess of Oak Lake Society provided all members with wool to knit for Special Sock Day.

Bulletins on cooking and canning were greatly appreciated. The Editor has written for the paper on "The Rights of a Child" for publication in our next issue.

Home Economic Society

The regular monthly meeting of September was held on Saturday 15th. It was announced that Miss Smith of the agricultural college, would give a demonstration in dressmaking and millinery during the week beginning Nov. 12th—which will be a splendid opportunity for many.

Bulletins on cookery recipes and canning and preserving were distributed and greatly appreciated by everyone. An excellent address on "The Rights of a Child," was given by Mr. Churchill, this was followed by a song very sweetly rendered by Mrs. Thompson. The meeting was closed by the National Anthem after which tea was served by Mesdames Andrew and Smith.

Oak Lake

The regular monthly meeting was held on Saturday, Oct. 20th. The president opened the meeting in the usual way with prayer, after which the minutes were read and adopted. A patriotic spirit prevailed. The hostesses provided all the members present with wool to knit for the special sock day in Winnipeg and the needles were kept busy all the



But grandfather's razor, or one like it, is still jogging along in a good many homes, doing its bit—making "self" shaving a burden.

The Gillette Safety Razor outclasses the "old style" as completely as the implements you are using outclass those with which your grandfather had to worry along. It will shave you in half the time or less—make a cleaner, smoother job of it—and leave a comfortable smile instead of a smarting grouch.

The reason is clear. The thin Gillette blades of finest steel take a perfect edge and temper. The Gillette holder, adjusted by a turn of the screw handle, grips the blade close to the cutting edge, guards it, and at the same time holds it absolutely rigid, giving a smoothness of cut that no other razor can equal.

Give your face the same advantages that you give your fields! The next time you are in a hardware, drug or jewelry store, invest five dollars in a Gillette Safety Razor and begin at once to shave in comfort.

GILLETTE SAFETY RAZOR CO. OF CANADA, LIMITED,

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

332

afternoon, and we hope to add substantially to the bale when that day comes. A silver tea was held at the close of the afternoon to help defray the wool by Mesdames Burns and McFarlane. Mr. Bannister read a letter from Nurse Leitch, giving a most graphic description of her trip across the channel to France, also extracts from the diary of Lorne Story, one of our boys at the front. A solo followed, "Soon our Lads will be Coming Home," by Mrs. Wallace.

Minnedosa

Minnedosa society presents retiring president with a gold brooch and leather strap purse. Furnishes ward in hospital. Donated a crate of fresh eggs for Secours National.

Minnedosa, May 29, 1918

Dear Mrs. Hamilton:—The April meeting of the H.E.S. was held at the residence of Mrs. (Dr.) Andrew in honor of our retiring president, Mrs. Cooper, who was presented with an address and presentation of a gold brooch and leather strap purse.

Mrs. Andrew who is a member of the Town Hospital Aid, brought up the question of our society undertaking to refurbish the ward in the hospital, formerly under the care of the Knights of Pythias. Telling how it needed new linen, curtains, sheeting, tray cloths, painting of walls and a glass top table, which was thought to amount to about \$35.

To some this seemed impossible, at

present, under such strenuous times to undertake this task, but a committee was appointed to look into it and make arrangements. We chose one member from each of the surrounding districts four in all, together with the president, Mrs. Rorke and secretary of Hospital Aid, Miss Williamson.

Mrs. Gugin for the west; Mrs. R. Woodcock, the north; Mrs. J. Beddome, the east, and Mrs. C. Meadows for the south district. These ladies were successful in gaining the sum of \$85.15, which far exceeded our expectations, and which after making an outlay for the present expenditures of \$49.65, we will have a balance of \$35.50, to be deposited in the bank for further use when it is needed.

Are Your Men Folk Drafted?

There has never come a crisis in the battle for human liberty in which the man or the machine did not come forward to vanquish the most crushing difficulty. Your brave fighting men have been released for seeding, but there is practically no hope of their services being available for harvest.

THEIR PLACE CAN BE FILLED BY THE

Stewart Sheaf Loader

1918 Crop
Promises to be one of the heaviest-to-handle on
Record!



READ WHAT THESE MEN SAY OF THIS GREAT LA BOR-SAVER

"I threshed 55,316 bushels of wheat and 1,000 bushels of oats in twenty-seven days, making an average of 2,398 bushels per day. Your STEWART SHEAF LOADER gave entire satisfaction."—Wm. P. McLachlan, Eskbank, Sask.
"We can save \$12.00 a day and 25 bushels of grain a day with the Loader."—Klotz Bros., Denzil, Sask.

"We have used one of your Loaders in 1915 and we find that we saved the price of three teams and four men. This would mean that we saved about \$21.50 per day. We also claim that we saved the farmer about \$1.00 per acre by taking it up cleaner than can be done by hand forking; also the board of the three teams."—Geo. W. Weese & Son, Kelfield, Sask.

"I run a 40 x 64 Gaar-Scott and fourteen stook teams always until this year, but with the Loader six teams kept her flooded. In regard to the draft, four horses will pull it and gain. The pick-up is wonderful. This is my seventh outfit and the Loader is the best labor-saver I ever had."—E. Maxwell, Portreeve, Sask.

To the farmer who has the wisdom and foresight to secure one, the STEWART SHEAF LOADER will put his harvesting on a new basis. He can load his grain on the wagon ready to haul to shipping point in a fraction of the time under old conditions because it DOES AWAY WITH ALL FIELD PITCHERS AND HALF THE BUNDLE TEAMS.

WRITE FOR FULL PARTICULARS TO THE

Stewart Sheaf Loader Co., Limited

WINNIPEG, Man.

It was decided to call the ward the "Country Women's" under the auspices of the H.E.S., as so many who were not members had contributed. The linen is to be stamped C.W.

At this meeting twelve members promised a dozen fresh eggs to fill the crate for the Secours National, Winnipeg. The eggs when sold brought \$4.20.

An effort is being made to have more Pacific fish brought into the town and have it sold at more reasonable prices in order to save the meat, so that if we can accomplish anything for the good of our community at such times as these it will encourage us to go on with the work of the H.E.S.

By the way I think the name that we have could not be more suitable than it is at present for an organization and the societies should not think of changing it until the war is over and perhaps not then.—Yours sincerely,
Mrs. J. R. Borthistle, Sec.-Treas., H.E.S.

Swat the Fly

THE best means of fly control is through preventing them from breeding. It requires ten days for the fly to develop from egg to adult, so if all barnyard manure and other filth in which it can develop is cleaned up every five or eight days, the flies' supply will be cut off. If it is impossible to remove the filth far enough so that the flies which breed in it cannot reach the house or barns, it may be treated with powdered borax sprinkled over the manure pile or other filth at the rate of about an ounce for each cubic foot to be treated. After it has been sprinkled on, it should be washed through the pile with water. Half a pound of Heleboro which has been allowed to stand in ten gallons of water from ten to twenty-four hours may be sprinkled at the rate of a gallon to the cubic foot on the filth to be treated.

In either barns or houses fly-traps help a little and a great deal of relief may be obtained by mixing half a pint of milk, half a pint of water, and two tablespoonsful of formalin (40 per cent formaldehyde). Stronger mixtures have no such formalin

in them that the flies do not drink it. A slice of bread may be placed in the plate in which the mixture is exposed.

Cows may be protected by means of commercial or home-made repellants. Pyrethrum powder is good and the commercial repellants are generally preferable if they do not cost too much. Home-made mixtures of either one part of crude carbolic acid or pine tar with nine parts of cotton seed oil give very good results if applied lightly, but if applied too heavily they will injure the skin and hair and do more damage than the flies will.

They Were Unfamiliar

"Biggins' small boy says a great many bright things."

"He uttered his masterpiece the other evening in the presence of a large company."

"What was it?"
"He said, 'Father, where do you get all the funny things you tell people I say?'"

Seed Growing a Profitable Side-line How to Raise Onion Seed

THERE are three reasons for raising your own seed. First, you cannot always depend on the seed houses to furnish reliable seed. Second, onion seed costs from \$1.25 to \$2.50 per pound. It could be saved with a very little trouble. Third, one has a chance to cultivate a variety of his own and establish a reputation as a seed producer, which, in the years to come, may bring more cash than the onions he raises. The grower will patronize a home seed concern that he knows is reliable before he will a foreign house.

Selecting the Mother Onions

At screening time in the fall, pick out the most solid, globe-shaped, deeply colored onions of whatever varieties you want for your next crop. Large, or medium-sized ones are best. Estimate the seed required to sow your crop. It takes

4½ to five pounds to the acre and one bushel onions will produce three pounds of seed on an average. Always sow a few more for safety.

Keep these in open crates in the cellar till early spring. Set them out on a sandy loam or around the edge of a muck field. Set them close enough to touch each other in the rows and the rows three feet apart. Plow them two or three times as potatoes. Have them clean when they begin to seed, then do not bother them until harvest time when the heads begin to turn brown. They usually mature by the first of August.

Cut off the ends with sheep shears and spread out to dry. When perfectly dry run them over a piece of coarse wire screening or a common washboard. If you have a large crop there is a device you can buy to insert in a clover huller that will soon thresh them out.

Before putting the seed away test them in water, skimming off all culls that rise to the top. Dry, sack and hang in a cool dry place. Test the seed before planting by sowing 100, 200 or 300 seeds in a box of earth. Count every seed before sowing and the number of plants that come up and set your seed drill accordingly.

Identifying Him

Ordinary concerts have grown rather stale in Middleton, where everybody sings, or thinks he can.

So a novelty was arranged, in which each performer was to appear in a fancy dress and sing a suitable song. The first items went off very well, although when Miss Antike came on in a simple, girlish gown and sang "For Ever and For Ever" the audience got nervous and thought she meant to do so.

Then the village crier appeared in a sailor rig and declaimed "Asleep on the Deep" in a voice high-pitched and cracked.

"Who is he?" "What character does he represent?" were the questions the listeners asked each other wildly.

Then came the usual voice from the rear of the hall, saying:

"Why, 'e's Sing-Bad the Sailor."



A COMPLETE ANSWER

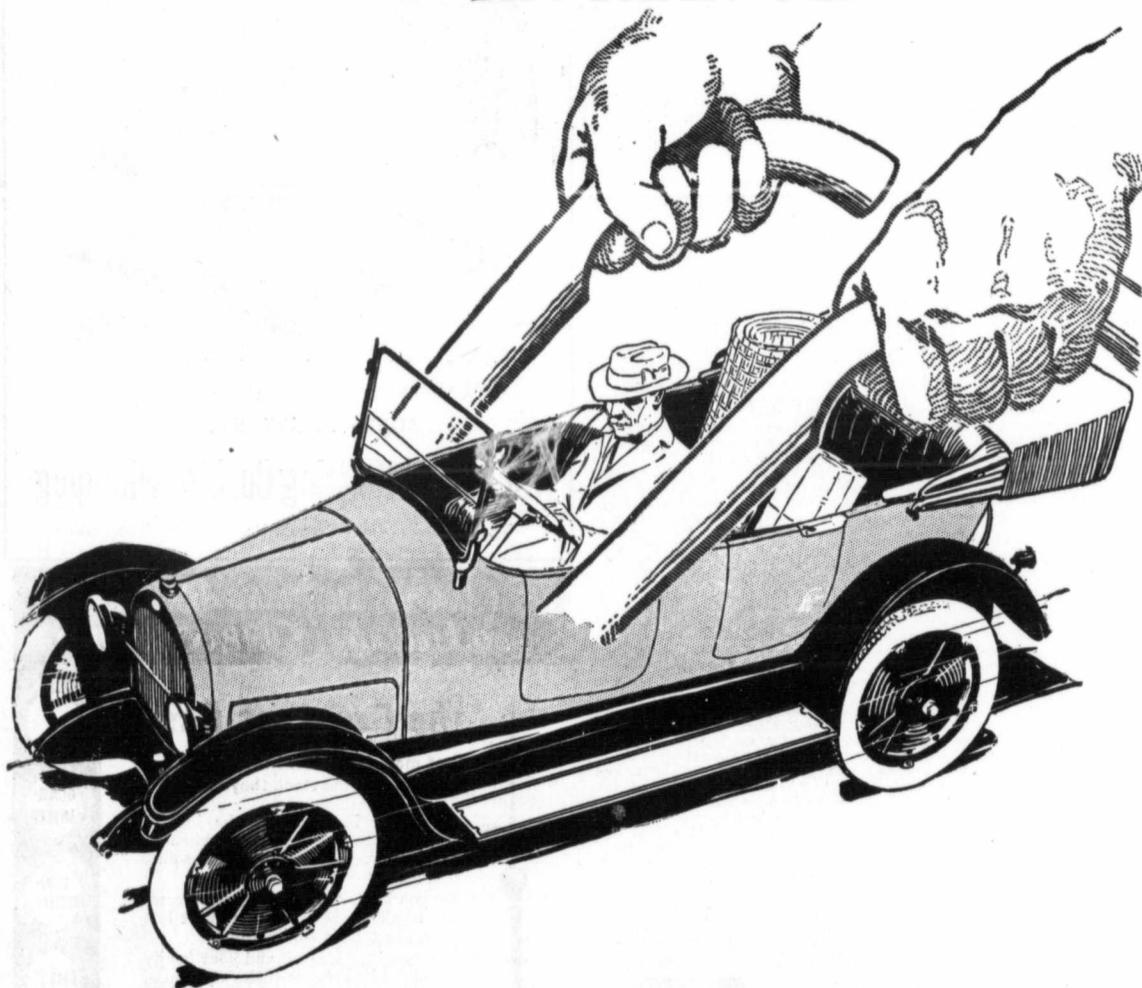
Fair Hostess (entertaining wounded soldier)—"And so one Jack Johnson buried you, and the next dug you up again and landed you on the top of a barn! Now, what were your feelings?"

Tommy—"If you'll believe me, ma'am, I was never more surprised in all my life."

Overland

TRADE MARK REG

The Thrift Car



Necessary As The Plow

Successful farmers everywhere demonstrate the *necessity* of motor cars for their work. They save time and money—do more in less time with less fatigue.

That the Overland is *completely satisfactory* for farmers is proved by the fact—

That *more than half* of all Overland cars built are taken by farmers.

It is not necessary to pay more than the Overland price—and complete satisfaction cannot be bought for less.

At a low first cost and for economical maintenance, Model 90 gives an abundance of power from its perfected, frugal-with-fuel motor.

It is simple to handle, has narrow turning radius, and easily operating clutch.

It is beautiful and comfortable, with spacious interior, wide seats, deep upholstery, rear cantilever springs, 106-inch wheel base, and large tires, non-skid rear.

It has electric Auto-Lite starting and lighting and vacuum fuel system.

To pay less is to risk the loss of efficiency, comfort, modernized improvements, beauty of design or long-lived service.

Order your Model 90 now.

Five Points of Overland Superiority?

Appearance, Performance, Comfort, Service and Price

Light Four Model 90

Willys-Overland, Limited
 Willys-Knight and Overland Motor Cars and Light Commercial Wagons
 Head Office and Works, West Toronto, Ontario
 Branches: Montreal, Que., Winnipeg, Man., Regina, Sask.
 Catalog on request—Address Dept. 1215

Touring Car.

Our Young Folks

Ferns

Abbie Farwell Brown
The ferns have tiny fingers
That beckon eagerly;
They'll lead you into Fairyland,
If there you wish to be.

They point to magic fern-seed
That lucky ones may find
To make themselves invisible
And wander with the wind.

Along the quiet wood-way
They stand a-tiptoe high;
Did you not feel a soft, cool touch
As you were swinging by?

Did you not catch a fragrance
Not from this world of ours,—
A delicate delicious
More sweet than breath of flowers?

Did you not hear a whisper
That shivered through the green?
When you become invisible
You'll know what Fern-Folk mean!
From the Mothers' Magazine.

Dear Boys and Girls:—We are delighted with the letters that are coming in to our department. A prize of two dollars is awarded each month to the boy who writes the best letter and also to the girl who writes the best letter. Write about your work, your recreation your garden, the community in which you live, your ambition in life—in fact anything that will interest other boys and girls. Send us pictures you take with your kodak.

Let us hear from those splendid boys' and girls' clubs. Make this department shine with interesting material.—Sincerely,

Cousin Doris.

Send all letters to Pearl Richmond Hamilton, 983 Grosvenor Ave., Winnipeg.

Girls' Prize Letter My Apple Tree

It was the 20th of June, 1916. I was eating an apple—my father had bought it at the store. The apple was solid and rosy. Sometimes I eat the seeds, but this time I noticed one seed different from the rest, I took the funny seed and seen it was sprouting.

I got a tomato can and planted this seed, soon I saw something green coming through the earth; it was my seed growing. The skin came up with the two kernels like a bean. I kept it watered and watched it grow. It soon grew to be a little tree. It pleased me very much. Fall came and I measured it, it had grown seven inches, I kept it in the cellar all winter.

Last spring I took it up in May, and transplanted it to a big tea can, I did that so its roots would have more room to spread. It grew good, I still watched it and gave it water when it was needed. In the fall again I measured it and found it had grown nine inches, so it is sixteen inches now. I kept it in the cellar all winter too.

This spring I took it up again and transplanted it to a bigger wooden box. It is two years old in June and I am going to plant it in the ground then.

Then last summer I planted more seeds out of apples. Now I have ten little apple trees, counting my big one. I find some apple seeds grow different. I like to experiment with seeds.

Marion K. McEwen, R.R. No. 2, Pilot Mound, Manitoba.

Delia, Alberta, May 27, 1918.

My dear Cousin Doris:—We are putting in a big crop this year. If grain will help win the war I think we are doing our share.

We have gardens at our school, the size of them being about 7 x 3 feet. I planted radishes, lettuce and mignonette. They are coming up now. Everyone wishes for rain as the soil is very dry here this spring.

I have four brothers and one sister. My oldest brothers can do nearly as much as grown men. My father runs the engine while they use the horses. My mother can drive the engine a little, because one afternoon she steered it all around the field a few times.

We have about fourteen little calves and two little colts and will soon have another colt. I wish we had some sheep, they are such tame animals generally.

Little Fish Creek runs through our place and terminates at Little Fish Lake. This lake was visited by hundreds of people in search of fish. We didn't have time to go this spring. Last spring mamma and us six children went fishing, but daddy stayed home and drilled. We had a great time. We arrived at about 2 o'clock, the best time. Having fished until 3 o'clock we stopped, washed some fish, fried them and had a dinner of bread and butter and fish. It was the best picnic ever yet. Then we fished until about half-past five. We got home at 8 p.m. with two hundred and eight fish and had left at 10 a.m.

The year before last, we children caught six hundred little stickleback fish. They are from one and a half inches to 3 inches long, and we put them in a cement tank about 2½ x 4 x 16 feet. When the tank was full it held a lot of water. Us children used to swim or sort of wade in the tank and had a great time, while a certain person came in at



The Captain—"Private Jones, ye're detailed to capture one o' Mrs. Perkins' pies, an' if ye don't return your mother'll be notified o' your valor in th' path o' duty."



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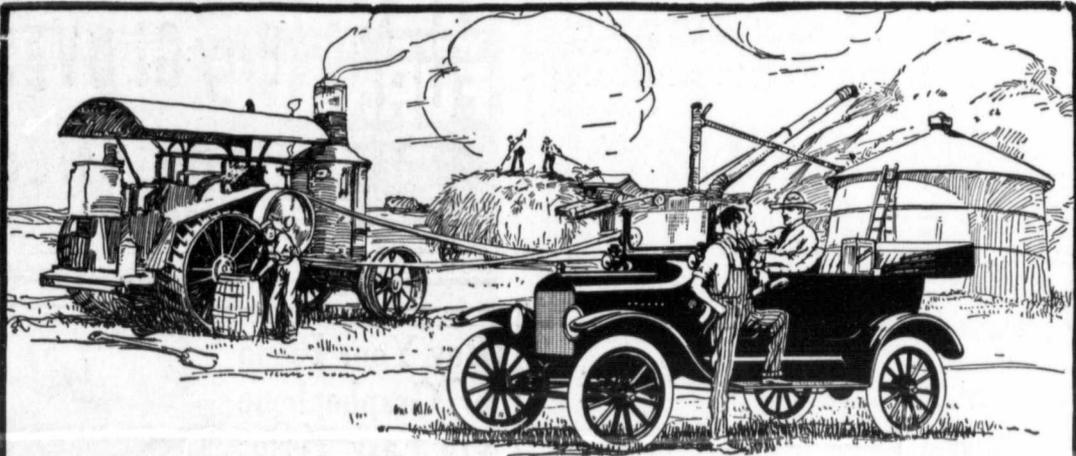
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the gate we ran for the house. He laughed at us awful. We don't swim in it any more; on the contrary we swim in a pool in the pre-emption. People got to coming from town to it, so mamma and I didn't have many more swims. Mamma can swim like a fish.

My sister, Ruth, and I keep pigeons. She has the dark ones and I the light ones. They are funny to watch when feeding their squabs. One squab puts its bill in at one side of the old one's mouth, and his nest mate puts his bill in the other side. One winter we had some caged up in the house. They raised three squabs—one was white.

My nine-year-old brother and I am house-keepers. I can do most everything mamma can do except sew and knit. Once mamma was knitting and I took three careful beautiful stitches—backwards. I can sew plain things like aprons and the boys' shirts, but fancy things go to mamma.

Well, now I have chattered long enough, so good-bye.—From your cousin, Grace Peterson.

Myrtle, Man., May 1st, 1918.

Dear Cousin Doris:—I am a reader of the Children's Corner in the Canadian Thresherman and Farmer, and I find the letters very interesting. I am twelve years old and I am in Grade 6.

During the last few days we have had a lovely rain, but everything is getting dry again.

Last summer I had a garden of my own at home, and I also had one at school.

In the garden at home I planted potatoes, peas, beans, carrots, turnips and cabbage. In my school garden I had potatoes, beets, lettuce, radish and onions. The vegetables were very good considering the amount of rain we had, as the summer weather was very dry.

This year I also intend to have a garden, but a much larger one.

How many of the girls like cooking? I do for one. I am enclosing a recipe for cream cake: 1 cup sugar, 2 eggs beaten, 1 cup sweet cream, 2 cups flour, 2 teaspoons baking powder, 1 teaspoon flavoring, pinch salt. Bake in moderate oven.

As I am very fond of cooking I would be pleased to exchange recipes with any of the members. If they would please write first.

Well, as my letter is getting kind of long, I guess I will close for this time.

Wishing the club every success, and hoping to see my letter in print.

Alice Neiles, Box 37.

Clanwilliam, Man., May 18, 1918.

Dear Cousin Doris:—As I was reading in the Canadian Thresherman and Farmer I happened to see that the one who wrote the best letter would get two dollars, so I will try and see what kind of luck I get.

It has just been raining, and lightning and thundering, it has been raining several times this year.

On the 11th of May there was much snowing and an awful wind in the afternoon with the snow.

On the 10th of May we took our gopher tails to school, and got 2 cents apiece for them. One of the boys, a neighbour of our's, caught 58 gophers and he had the most in the school.

Last year the same boy got one dollar for his gopher tails.

I belong to the Pathfinders' Club too, but have not written to it for a long time.

We had a calf lost for a while, and as I was coming home from school one night I found it on the road and brought it home.

We have a lake near our place where we skate in the winter and have lots of fun. In the summer we have a picnic by the lake which is on our farm and on our neighbors, but they have the picnic on our side.

I live on a farm where I have lived since I was born, and like it very much. I have a sister married, and who lives on a farm too with her husband and two children, she used to live in Winnipeg, where she liked it fine. I go and stay with my sister in the summer and have a lot of fun sometimes. They have a lake near their house where they water the cattle and horses. I got first prize

for sewing once from my school teacher, I have got the press at yet which was a story book.

We had a concert for the Red Cross this winter. The concert was so good that they were going to show it again but a sickness came. They showed it at the city instead. My letter is getting long so I will close. Hoping to be a lucky winner.—Yours truly,
Martine Neilson.

Hope Hill, Sask., May 10th, 1918.

Dear Cousin Doris:—I have often seen the letters in the paper that the boys and girls have written. So I thought I would write and see if I could win the reward of \$2.00 you are giving away to a boy or girl. I am not very good at writing letters, but I will do my best. I am a farmer's daughter, and have lived on a farm all my life, so I know quite a bit about the farm.

I will tell you how I planted and worked my garden last year. I had a flower garden at home and one at the school.

A man came and plowed the garden and then we took rakes and shovels and made the ground fine. We then made small plots for each pupil and then each worked his or her own.

The boys had vegetables and the girls had flowers, but neither were very good.

I go to school every day. I have two miles and a half to go, but we drive a horse now. I am in the eighth grade and am going to try my entrance in June.

How many of you girls like horse-back riding. I think it is fine fun. In summer when the men are all busy I go for the cattle. We milk 12 cows in the summer and we have about 40 head.

We have 20 horses and had one little colt but it died after it was nearly a year old. We called it "Nellie."

I have only one sister besides myself, and she is 6 years old, but I have eight brothers, of which two are at the war. One is in France and the other is in Regina yet.

Well my letter is growing long. I will close now, hoping to have good luck. I remain, your loving friend,
Frances Stevenson.

Louheed, Alberta, May 26th, 1918.

Dear Cousin Doris:—Every month I read the letters of our corner and I have at last made up my mind to write to you.

I was working on the land for eight days this spring. We have a 13-30 Rumely Oil Pull outfit, and Daddy plowed with it while I packed and harrowed.

I am twelve years old and in grade eight at school. We had no school up to the sixth of May, so I won't be able to try my examinations this June.

We have four horses, twenty-three head of cattle and no pigs. We have three little calves. Their names are Boadicea, Tony and General Joffre. Boadicea is aunt to the other two.

I have no brothers and my only sister is seventeen.

We are having very nasty weather here this spring. We have had three snowstorms in the last week. We have had very few fine warm days and a great deal of wind.

We have all our garden in but the potatoes. Nothing is up yet. We had some very hard frosts this last week. All the trees are frozen. We school children planted a flower garden at school, but it is not up yet. We need rain badly. Our school is called Goose Creek, after the creek just below it. I have about half a mile to walk.

I belong to "The Pathfinders' Club" in "The Winnipeg Free Press." I have had over six letters printed and got two correspondents. I am very fond of writing and reading. My favorite authors are "Gene Stratton Porter," "L. M. Montgomery," and "Jack London."

My sister took a calf to Calgary Baby Beef Show last winter, and got third prize. I took one to the Edmonton Calf Feeding Contest, but got nothing. There were fifteen prizes offered and I came sixteenth.

We have several hens sitting. Some of them ought to hatch to-morrow. We will have some little ducks this year if all the eggs aren't added. I look after the brooding hens now and when they

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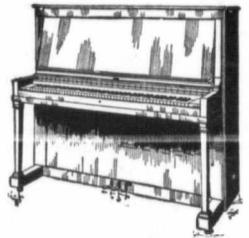
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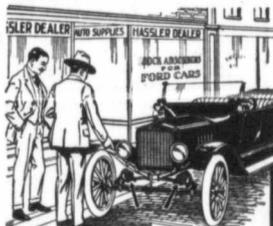
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hatch out, the chickens. I saw two wild baby ducks on a slough this afternoon. We have a boat on one of our sloughs. We go bathing in the sloughs as well.

Well, I must close now and get away to bed. It is after nine now, and I must go to school to-morrow. Your loving friend,
Fanny E. Mundy (12), Lougheed, Alta.

Clanwilliam, Man.,

May 28th, 1918.

Dear Cousin Doris:—I am another reader of your most interesting club. Now that I have written to this club I hope to have good luck. I sent a letter to this club before but I found out I had given the wrong address, and I don't know if you will get it or not. The weather was fine to-day, and I hope that it will keep on like this for a while. One day we had a heavy rain and hail, which made an awful mess.

I am going to tell you I have a garden at school and at home. My father plowed the garden at home and at school. Not so very long ago we raked and planted some potatoes. Grade eight was out to-day planting most of the garden. At home my brothers and I have a garden each and in my garden I planted some flowers, corn, carrots, peas, turnips and radish. I am very interested in this kind of job, which, I think, most people are. I will send a recipe and hope you will be pleased with it, as I am trying to do my best for you.

I live on a farm, which I have lived on since I was born. My father has fourteen cattle and nine horses and three pigs. I have got so much to say that I can hardly stop.

Well, I must close, with best wishes, from your loving cousin,

Martine Neilson.

Cream Cake.—1 cup of white sugar, 3/4 cup sweet milk, 1 egg, butter the size of an egg, 2 cups of flour, 2 teaspoons baking powder, flavor with lemon.

Bradwell, Sask.,

May 30th, 1918.

Dear Cousin Doris:—I am also a reader of The Canadian Thresherman and Farmer, and I am taking the privilege of writing to your page.

I love to read the boys' and girls' letters. I live on the farm with my grandma and grandpa and two uncles, and like farm life pretty good. We have nine horses and two colts. I have a pony and his name is Boby, but I can't drive him yet, but my uncles can. We had a colt on the 25th of May and we are going to call her May.

We have seven head of cattle and will have some more baby calves pretty soon. We have seven pigs, some are white and some black. One pig will lay down for you when you ask her. I have got a garden this year, and think it fun to look after it. I have planted in it parsnips, turnips, lettuce, peas, potatoes, cabbage, cauliflower and squash, and I hope I have good luck with them. I will have to work hard to get the weeds out. I go to school and have two and a half miles to go. We have a nice teacher, her name is Miss J. Driscoll. How many of the girls have got gardens pretty near, all, I guess. Well, I don't suppose I will get the prize, as I cannot write good enough, and besides, grandma is sick and I have all the work to do for five of us.

Well, I must be closing now. Bye-bye, your loving friend,

Queenie Woice (age 13).

Loverna, Sask.,

May 15th, 1918.

Dear Cousin Doris:—We do not get The Canadian Thresherman regularly, but get it quite often from a friend. I was very much interested by the letters in "Our Young Folks Column," and thought I would write and tell you about some chickens I raised one year. I first bought some White Leghorn setting eggs (because I like them the best) and hunted in our flock of hens until I found four big, quiet, fluffy ones that I thought would make good mothers. I found some packing boxes that came from town (they were about a foot and a half square), and I filled the bottom up with straw and the top with hay. After fastening them up high in the barn (we had no chicken houses), I set each hen



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with fourteen eggs, and in three weeks out peeped fifty-one little chicks. Five of the eggs were no good. I put each hen with her chickens into a coop made of slats with an oilcloth cover. The cover was pulled down only at night and when it rained. The chicks did fine, as I fed them chop when they were small and wheat when they got bigger, and watered them three times a day. But one day my little brother came running in saying the kitten had a chicken. And sure enough when I got out it had the chicken killed. I didn't let the kitten have it, though, and when I counted the chickens I found it had already eaten one. I lost no more chickens until the fall, but then a coyote stole four one night, and I only had forty-five left. I sold them for fifty cents a piece, and so I had \$22.50. Dad said I could have some more hens the next spring, so I saved out enough money to buy setting eggs and used the rest to buy Christmas presents. I bought useful ones and I feel very happy when I see they are some good.

Well, Cousin Doris, my name is Doris, too, only I'd rather you'd only print my pen name, although it doesn't matter if it is against the rules. I wish you and the "Young Folks" best wishes and will sign myself,

"Mazel Dundee."

Fiske, Sask., May 6th, 1918.

Dear Cousin Doris:—As I am a reader of Our Young Folks' department, I thought I would write and tell you that I like it very much. As we always have a garden at home I help my mother with it. First, papa plowed the soil and then harrowed it. After that we planted the corn. We have had corn ever since I can remember, but last year as it was dry we did not have a very good crop.

About the middle of April we planted the corn in a box and kept it in the house until about the 19th of May. The corn was kept in a warm place and as I watered it often, it grew very fast. I then helped to transplant the corn outside. First, I dug a hole and then I put water in it. Then we put three plants in the water and then filled the hole up with dirt, so it would not check the growth of the plant. Every week I raked the soil, so as to hold the moisture and not let it dry out. In this way we always have had early corn. I am eleven years old, and in the seventh grade at school. I can also do everything along the cooking line but to make bread.

As my letter is getting long, I think I will close, wishing the Club every success.

Agnes M. Dushabik.

Camrose, Alta., R.R. 1, box 15,

May 23rd, 1918.

Dear Cousin Doris:—Well, I am not a member of your interesting club, but I read in your book that \$2.00 was given for the best letter issued by a boy or girl, so I thought I would try my luck. I love to read the letters in the Children's Corner very much.

I am a farmer's daughter, and I have lived on the same farm in all my life. We live eight miles east of town. We have a 10-20 Mogul tractor and a Ford car. We are pretty near done with all the seeding. My brother has done all the plowing and he is going out breaking this summer.

We have seven horses and about twenty-two head of cattle. We milk eight cows. We have one ram, two ewes and three lambs. The ram always follows the cattle. We have lots of fun riding on him. My school chums like to come over and have a ride on him. We have about thirty hens, two ducks, three geese and three turkeys. We have two incubators setting. We have eighty-four chickens and six small ducks.

My youngest sister and I have a cow and a calf together. We call the cow Dolly and her calf Lilly. My sister has a trotter colt about a year old. She calls her Nancy. She isn't much of a trotter now because she was caught in a wire fence and got one of her front feet and one of her hind feet badly cut. I have a little pig named Patsy. Dad gave all of us children one each. We have twenty-three little pigs.

We planted all our garden this year. I only planted marigolds and zinnias this year. Last year I had quite a big garden. I planted sweet peas, nasturtiums, candytufts, alyssum and peas, turnips and mangolds. I think it's lots of fun to have a garden. We have also planted a little garden at school. I go to school and I am in grade six. We have about two miles to go to school. I have two sisters and one brother. There are fourteen children going to our school. There are seven girls and seven boys. Our teacher's name is Mr. Hardy.

How many girls like to crochet? I think it is a lot of fun.

Well, my letter is getting too long, so I must quit, hoping the Club every success, from

Edith Nyback.

BOYS' PRIZE LETTER

(Send us some pictures, Jack)

McGee, Sask.

May 27th, 1918.

Dear Cousin Doris:—I was very glad to see the Young People's Corner back again in The Canadian Thresherman and Farmer and to see the offer of \$2.00 in it, so I am going to try for it.

I live on a farm and ride a bicycle to school, which is two and one-half miles away.

My father said this spring I could sow all our garden this year, so I selected a lot of seeds early and when the snow melted I tilled the garden until it was soft and level. Then I sowed the seeds as directed on the packets. First, I sowed peas, lettuce, turnips, early beets, carrots and parsnips and radishes. Then, after danger of frost was over, I planted a second sowing of above and corn, beans, cabbage, etc., etc.

I covered onions, lettuce, carrots, radishes, parsley, etc., about a half inch deep and covered beans, peas, corn, etc., about two inches.

Some seeds came up ahead of others and when they came up I hoed them and kept them free from weeds and from gophers, hens and cattle.

I sowed every kind of seeds that grow well in the West and I think if the weather is nice we will have a good garden. I also sowed a big bed of assorted flowers. I sowed sweet peas, carnations, asters, marigold, poppy, mignonette and forget-me-nots.

If I have a good garden I will send some vegetables and flowers to the school fair at Rosetown this year.

Last fall at the school fair at Rosetown, McGee carried away nearly all the prizes in sports, competing against fifty-two other towns.

I have a nice pony but this spring my father was driving him to town and my mother and sister were in the buggy too when the pony got frightened and ran away, and he sure ran fast. My father couldn't pull him up and after two or three narrow escapes from upsetting the buggy, my father pulled the horse into a soft piece of summerfallow where he slowed up and finally stopped and started kicking, but mamma jumped out and held the horse by the head until he got quiet.

I have not driven him since, but I ride him.

We had a poor crop last year, but hope to have a good one this year. I helped in harvesting and threshing last year, and I also made some money hauling grain for other people. I am going to stay home from school this fall and help all I can in harvesting and threshing as I have signed an S.O.S. card. I think every boy should help do something to win the war, and if the war lasts that long to go ourselves to the front.

We came out to Canada from Ireland eight years ago, and after spending a while in Winnipeg, moved West to our farm here. I have two uncles at the front—one had his fingers shot off and the other is OK yet.

Our dog eats eggs and the only cure for it is to take the eggs away from him. I tried heating an egg and leaving it for him but he wouldn't touch it and I beat him, but he would still eat them.

My brother has a camera and has taken quite a lot of pictures but is out of them now. Maybe, he will have some developed when I write again and I will enclose a couple.

I will now make room for someone else, hoping I may be lucky. Your loving friend, Jack Large.

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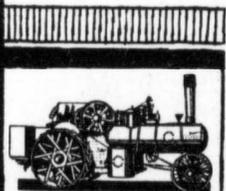
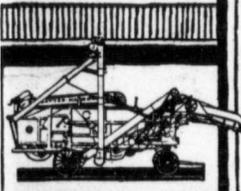
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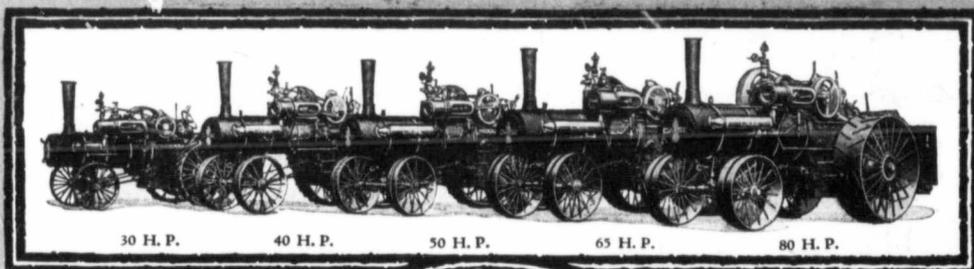
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