

MANITOBA PROVINCE  
LIBRARY  
108

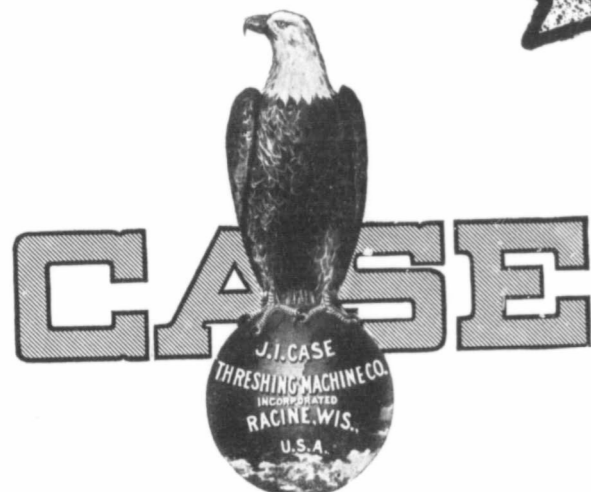
# The CANADIAN THRESHERMAN AND FARMER

WINNIPEG CANADA  
AUGUST  
NINETEEN SIXTEEN

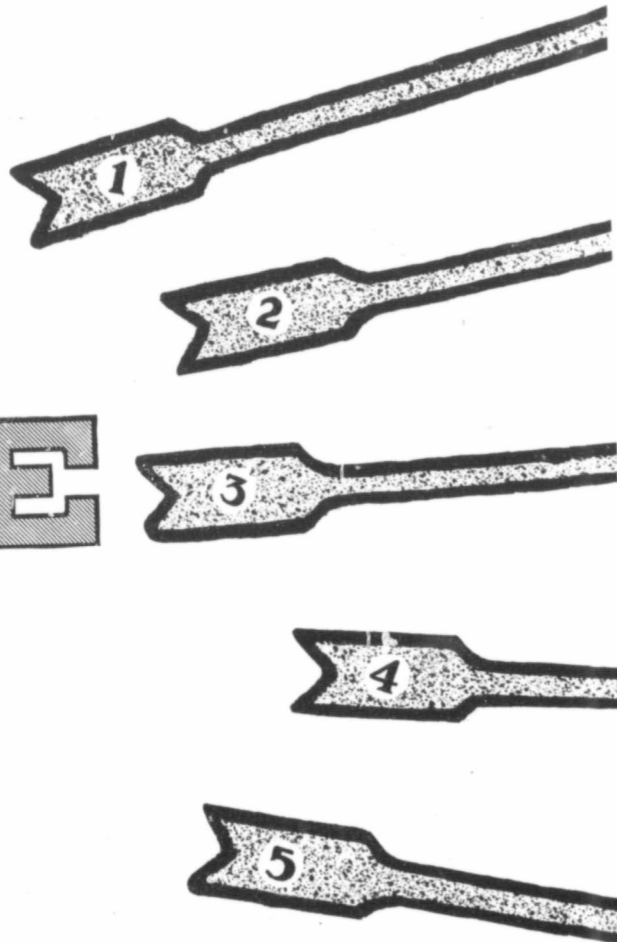


*Published Monthly by E. H. HEATH CO. LIMITED — Our Fourteenth Year*

## Five Big Things to Remember in buying a Tractor



The Sign of  
Mechanical Excellence  
the World Over



EVERY THRESHERMAN WILL FIND IT WORTH WHILE TO SEND FOR THE CASE CATALOG, A BOOK OF 96 PAGES ILLUSTRATED IN COLORS, AND FULL OF INFORMATION THAT POWER USERS SHOULD HAVE. SEND FOR YOUR COPY.

J. I. Case T. M. Company, Inc. 726 Liberty St. Racine, Wis.  
Canadian Branches: Winnipeg, Toronto, Calgary, Regina and Saskatoon

## Five Big Things to Remember in buying a Tractor

### WORK AND ENDURANCE (NOT PRICE) DETERMINE VALUE:

The design of the tractor, the materials of which it is built, and the company building it determine the work it will do, and how long it will last.

### CASE HAS BUILT FOR THE FARMER SINCE 1842:

Next year we celebrate our Seventy-fifth Birthday. Three-quarters of a Century - Think of it! We have lived and prospered only because we have made machinery that has made good with its users.

### CASE BUILDS 97% OF ALL PARTS USED IN CASE TRACTORS:

As a chain is no stronger than its weakest link, so a tractor is no stronger than its weakest part. With 97% Case-made and the other 3% subject to Case Laboratory tests, you can rely absolutely on the genuineness of every part of Case Tractors.

### STANDING OF THE CONCERN WHOSE TRACTOR YOU BUY:

You cannot take your tractor down, piece by piece, and see every part. For most of it you have to take some one's word. Let the reputation of the company be your guide to those things which you cannot see.

### WHICH TRACTORS WILL BECOME ORPHANS?

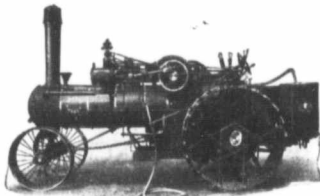
A leading agricultural paper one year ago said—"The good tractors can be counted on the fingers of one hand." There were then more than one hundred different makes. Now there are even more. With any Case machine you can always be sure of service. Remember our thirty-seven big branch houses throughout the country. "Better be Safe than Sorry!"

J. I. Case T. M. Company, Inc. 726 Liberty St. Racine, Wis.  
Canadian Branches: Winnipeg, Toronto, Calgary, Regina and Saskatoon



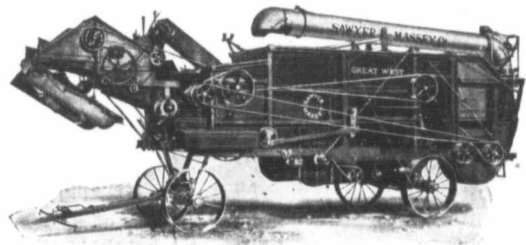
# SEVERAL THOUSAND

Of Western Canada's best farmers have threshed their crops in the past with Sawyer-Massey Outfits. Many have come back for their second and third rigs. Year in and year out they have stood up to the varying Western conditions. Why not give yourself the assurance of getting all the grain in your 1916 crop by purchasing a Sawyer-Massey outfit. Made in a wide range of sizes to suit your requirements—either gas or steam.



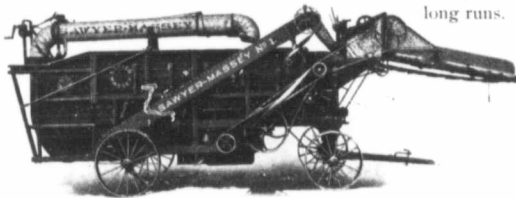
**STEAM TRACTORS**  
(High Pressure Boilers)

- |      |          |         |
|------|----------|---------|
| C. 3 | Draw Bar | 22 H.P. |
| C. 5 | Draw Bar | 25 H.P. |



**GREAT WEST SEPARATORS**  
32 inch Cylinder x 56 inch Body  
36 inch Cylinder x 60 inch Body  
40 inch Cylinder x 64 inch Body

A big, strong thresher, just the machine for heavy work and long runs. Fast, powerful and economical of power.



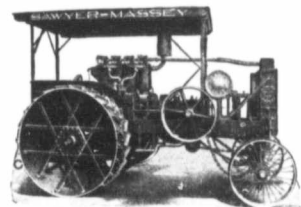
**SAWYER-MASSEY SEPARATORS**

Two sizes, 20 inch Cylinder x 36 inch Body, and 28 inch Cylinder x 44 inch Body.

This is a separator we have only recently put on the market, but it has been fully tested and proven in actual work. It is full Sawyer-Massey quality in every respect.

After several years of successful work on the part of our 27-54 Gas Tractor, which convinced us that the design and principle was right we have brought out a smaller size in our 16-32. Those who saw it at the Brandon Plowing Demonstration July 18, 19, 20 were greatly pleased with its work. It is built small enough to fit your farm yet big enough to drive a good size thresher. It is a real tractor and not a toy.

Write for our illustrated Thresher Catalogue describing these machines fully. Catalogues of Sawyer-Massey Steam and Gas Tractors sent on request.



**4-CYLINDER GAS TRACTORS**  
27-54 H.P. and 16-32 H.P.

## SAWYER-MASSEY COMPANY, Limited

*Builders and Makers of Steam and Gas Tractors, Threshers and Road-making Machinery*

Head Office and Factory: HAMILTON, CANADA

Branch Offices and Warehouses: WINNIPEG, Manitoba; REGINA, Saskatchewan;  
CALGARY, Alberta; Agency, BUENOS AIRES, Argentina

# SAWYER-MASSEY

Vol  
SOM  
to  
im  
farmer's  
tractor.  
his idea  
the pow  
absolute  
if the av  
erised  
mate th  
his selec  
the wor  
thousan  
Sp  
Canadian A  
Canadian B  
J.I. Case T. J  
Emerson Bra  
J. D. Adlson  
Hart, Parr C  
International  
Minneapolis S  
Marshall Son  
Good Shapley  
Gasoline Eng  
Sawyer Massey  
Grain Grower's  
large share  
now prevail  
adian West.  
Had our  
title of the  
in selecting  
assuming a  
Western Car  
would have I



Vol. XXI

WINNIPEG, CANADA, AUGUST, 1916

No. 8

SOMEONE has said that next to taking a wife, the most important step in the modern farmer's career is choosing a farm tractor. Either will revolutionize his ideas and habits. Either has the power to make or break him if absolutely depended upon. And if the average farmer has ever exercised the care in choosing his mate that he is now bestowing on his selection of a tractor, we have the women in several hundred thousand homes to thank for a

### Western Canada's First Light Tractor Plowing Demonstration

By E. W. HAMILTON

To Western Canada belongs the credit of introducing the internal combustion tractor for from the data secured at the various Winnipeg motor contests did the several engineers build their ma-

The writer attempted to interest the Exhibition Association at Brandon in a tractor demonstration in the spring of 1914, but nothing definite was accomplished. At one time Brandon attempted to

on something new. In the spring of 1916, however, the writer again took up the matter of a tractor demonstration, particularly as applied to light tractors, and it required only one moment with the Fair Board to get them to take the proposition on in connection with their Midsummer Fair.

The writer had followed the tractor plowing demonstrations in the States for some considerable time, and felt that there was no better way in which to acquaint

## Specifications of Tractors that were entered in the Brandon Plowing Demonstration

NAME OF COMPANY	Nominal Rating	Broke Horse Power	Draw-Bar Horse Power	No. Cylinders	Arrangement of Cylinders	Size of Cylinders	Tractor Road Speed	Cooling System	Size of Wheels		Flue length Inches	Total Width	Full Tank Capacity
									Rear	Front			
Canadian Avery Co.	12-25	25	12	2	Opposed	6½ x 7	1½-2½	Water	56x20	30x 8	164	80	21
	18-36	36	18	4	Opposed	5½ x 6	2-3	Water	65x20	35x 8	152	84	33
	25-50	50	25	4	Opposed	6½ x 7	2-3	Water	69x20	38x10	176	90½	33
Canadian Bull Tractor Co.	7-20	20	7	2	Opposed	5½ x 7	2½-3	Water	60	36x 4½	173	75½	18
J.I. Case T. M. Co.	10-20	25	12	4	Vertical	4½ x 6	2½ x 2½	Water	52x22	30x 8	150	67	20
	12-25	40	20	2	Opposed	7 x 7	2-3	Water	56x18	38x 8	148½	73	17
Emerson Brantingham	8-16	16	8	4	Vertical	4½ x 5	1½-2½	Water	60x24	48x10	180	96	25
J. D. Ad-lead Co. (Happy Farmer, Peoria)	8-16	16	8	2	Opposed	5 x 5	2½	Water	56x10	—	156	78	15
	8-20	20	8	4	Vertical	3½ x 5	3	Water	60x18	—	172	78	12
Hart, Parr Co.	22	22	15	2	Horizontal	5½ x 7	3½-2½	Oil	64x26	—	153	95½	23½
	27	27	17	1	Vertical	8½ x10	1½-2½	Oil	74x12½	—	107½	72	30
International Harvester Co.	8-16	16	8	1	Horizontal	8 x12	2	Water	54x10	36 x6	135	56	19
	10-20	20	10	2	Horizontal	6½ x 8	1½-2½	Water	54x10	36x 6	147	60	16
Minneapolis Steel & Machinery Co.	15-30	30	15	4	Vertical	4½ x 7	2½-1½	Water	60x14	36x 8	178	65	30
Marshall Son & Co. (Canada) Ltd.	16-35	35	16	2	Vertical	7 x 7	1-9	Water	78x18	—	—	109½	30
Goold Shapley and Muir.	15-25	25	15	2	Opposed	8 x10	2½	Water	74x24	44x10	162	97	—
Gasoline Engine Supply Co.	12-24	24	12	2	Horizontal	6 x 7	2½	Water	52x10	28x 5	240	96	20
Sawyer Massey.	16-32	32	16	4	Vertical	5½ x 7	2½-3½	Water	62x20	38x 8	175	80½	30
Grain Grower's Grain Co.	10-20	20	10	2	Opposed	6 x 8	2½-3½	Water	63x20	36x 7	189	91	21

large share of the prosperity that now prevails in our rural Canadian West.

Had our farmers exercised a title of the care a few years ago in selecting tractors that they are assuming at the present time, Western Canada's tractor history would have been far different.

chines. The motor contest served its purpose and served it well, eventually dying a natural death. In its stead there sprang up the demonstration and to the provincial exhibition at Brandon belongs the credit of staging the first tractor demonstration held in the Canadian West.

hold a motor contest with such disastrous results that they did not feel like attempting another tractor show. The matter was again brought up in 1915, but the uncertain conditions brought about by the war did not leave the exhibition board in a frame of mind where they were keen upon taking

the farmers of the Canadian West of just what the light tractor meant to them than by having a demonstration

The old motor competition was little more than a horse race. It was neck and neck to the quarter post, and then it was anything to beat your competitor on the home

stretch. With a demonstration there is nothing of the competition in its make up. It is merely a place for the tractor manufacturer to bring his machine to plow in order that he may show the farmer just what he can do, and not only show him, but to explain in so far as possible the working of his particular product.

When it was finally decided to put on the 1916 demonstration at Brandon, an attempt was made whereby it could be included in the regular Tractor Demonstration Circuit. The Tractor Manufacturers' Association, however, decided that in so far as the 1916 schedule on the United States side of the line had been completely made up, it was impossible to include the Brandon demonstration this year. Owing to the fact that the farmers of Western Canada are widely scattered, it would not be possible to get a sufficient crowd together where the demonstration held by itself. There must be something else to draw the crowd. It, therefore, was necessary to fix the date

joyous boom together. By common consent, 1913 was the last of the Winnipeg Motor Contest. They were no longer logical,

manufacturers have learned to use testing apparatus in factories that for decades have turned out engines with never an idea as to the

sold, Western Canada will immediately become the largest tractor consuming country. A raising season must of necessity be a field for those who make mechanical power for the farmer.

The 1916 tractor demonstration at Brandon was designed to furnish the best possible opportunity whereby the manufacturer makes tractors and the man who buys tractors could meet.

A nice plot of ground was secured a short distance from the Brandon fair grounds. This plot of ground was carefully surveyed and after all the entries were in the land was allotted to each machine in proportion to the number of plows it pulled. In all, 19 machines were entered by thirty different firms. These 19 engines pulled in total sixty-eight 14-hp bottoms. It was found in measuring the land that about 2 feet of headland or 11.6 acres was the proper amount of land to allow to each plow. A tractor that pulled three plows was therefore given 87 feet of headland, and the



7-20 Canadian Bull Tractor Pulling a 2-furrow Powerlift "Enicar" made by J. I. Carr Plow Works, Racine, Wis.

Canada knew the tractor. Widespread publicity of the score sheets had done much to convince the farmers everywhere that the tractor had made wonderful

exact horse power or thermal efficiency."

For this reason, if for no other, the tractor manufacturers who are responsible for putting on the



The Case 12-25 Tractor Pulling a 4-furrow Case Sattley Plow

of the demonstration at the time that the Brandon Exhibition was held, and as these dates interfered with the dates that had already been arranged for the demonstration at Dallas, Texas, it was not possible to work Brandon in on the big circuit. It is hoped, however, that in 1917 Brandon may be included. Tractor manufacturers everywhere must know that Western Canada built the internal combustion tractor.

L. W. Ellis, who has done more to make tractor history through the medium of well-spread newspaper publicity, writing in a recent issue of "Power Farming," says: "The six years of the Winnipeg Motor Contest were stirring days in tractor history. Kerosene loomed up as a rival of gasoline as tractor fuel, and subsided for a moment as gas became cheaper again. Western Canada and the big tractor went on a

strides towards efficiency. The mass of technical data accumulated was a God-send to designers, teachers, etc., for pioneer trac-



"Twin City" 15-30 Kerosene Tractor Pulling a 3-furrow John Deere No. 3 Pony Tractor Plow Equipped with Deere Detachable Shares and a Powerlift

large tractor demonstrations should not scorn the Canadian West.

Even if there did not exist the

wise a tractor that pulled five plows was given 216 feet of headland.

The sidelines were carefully



The Canadian Avery String Avery Self-Lift Plows were pulled in each case. See specification tables for sizes

tor design was largely by rule of thumb, and last but not least

all important reason, namely, regardless of where tractors are

staked out at each end and the cards were printed showing the

10 o'clock, in and 19 of the field. The tier of machine one field in it was a magn who have carefully sa things that the future of agriculture plows had beforehand a sandy loam a sod to mal stubble bott piece of work displayed striking out some of the furrows wer plumb line. As this wa to be held in there was no farmer would fact that over

plots that occupied each particular piece of land. A number of stakes were provided each entrant, who was required to stake out his land with the centre of the plot—thus marking each land plowed in the centre a back furrow. Most of the tractors staked out their land on Monday, the 17th, but owing to the fact that the Brandon yards were very much congested on account of the large number of exhibits coming from the Edmonton fair, some of the concerns did not get their tractors unloaded until the evening of Tuesday, the 18th. A heavy rain fell on Monday night and it was therefore decided that no demonstration would be given on Tuesday but that each firm should stake out and strike out its land and be all ready for business on Wednesday morning.

Wednesday, the 19th of July, dawned bright and clear with a nice breeze blowing. All watches were set in accordance with the superintendent's watch and instructions were given to have all motors started at 10 minutes to 10 in the morning. Promptly at

the grounds on the first day and nearly 5,000 farmers were on the ground the second day, displayed beyond peradventure of a doubt

the Sawyer Massey Co. with a 16-30 pulling 5 plows; the Grain Growers' Grain Co. with a 15-30 pulling 3 plows; Gould, Shapley &

and an 8-16 pulling 2 plows; J. I. Case Threshing Machine Co. with a 12-25 pulling 3 plows and a 20-40 pulling 4 plows; Marshall Sons & Co., of Canada, Ltd., with a 16-35 pulling 5 plows.

Practically every light tractor doing business in the Canadian West was on the field and if the other concerns had been able to secure machines, the entire Canadian light agricultural tractor list would have been represented.

The demonstration itself was unhampered as much as possible as regards rules. Only such rules were laid down as would insure it working smoothly. These rules were as follows:

1. The demonstration shall take place on July 18, 19, 20, 1916, and will be held from 10:00 a.m. to 12:00 o'clock noon on each day.

2. Each entrant must be ready to start at 10:00 a.m., otherwise he will not be allowed to demonstrate on that particular day.

3. No tractor can be entered that pulls more than five plows, and any make of plow can be pulled. Shares can be either 12



Emerson Brantingham 12-20 Model "L" Tractor, pulling an Emerson 3-furrow No. 2 Self-Lift Plow, with quick detachable Shares

the interest that is being taken in the light agricultural tractor. The following firms were entered: Emerson Brantingham Implement Co. with a 12-20 pulling 2

Muir Co., Ltd., with a 15-25 pulling 5 plows; International Harvester Co. with an 8-16 pulling 3 plows and a 10-20 pulling 3 plows; Bill Tractor Co. of Can-



I. H. C. 8-16 Kerosene Tractor pulling a 3-furrow Oliver Plow



I. H. C. 10-20 Kerosene Tractor pulling a 3-furrow P. & O. Plow

10 o'clock, clutches were thrown in and 19 tractors started down the field. This is the largest number of machines to start in any one field in Canada at one time. It was a magnificent sight and those who have studied the situation carefully saw in it one of the things that will enter largely into the future economic development of agricultural Canada. All the plows had been carefully scoured beforehand and as the land was a sandy loam with just sufficient of a sod to make it turn nicely, the stubble bottoms did an excellent piece of work. The engine drivers displayed considerable skill in striking out their first lands and some of the plows on the back furrows were as straight as a plumb line.

As this was the first of its kind to be held in the Canadian West, there was no idea just how the farmer would take it. But the fact that over 3700 farmers visited

plots; Minneapolis Steel Machinery Co. with a 15-30 pulling 3 plows; Waterloo Gasoline Engine Co. with a 12-24 pulling 3 plows;

ada, Ltd., with a 7-20 pulling 2 plows; Canadian Avery Co. with a 25-50 pulling 5 plows and 18-36 pulling 4 plows and a 12-25

inch or 14-inch stubble mold-boards must be used on all plows. All plowing must be done at a uniform depth of five inches.



Hart-Parr 22 H. P. "Little Devil" Tractor pulling a 3-furrow Cockshutt Special Light Tractor Fiv

Hart-Parr Co. with a 22, pulling 3 plows, also a 27 pulling 4 plows;

J. D. Adshhead Co. with an 8-20 pulling 2 plows

4. Any concern may enter as many tractors as it desires, pro-

viding they are of different types or sizes, and providing they conform to Rule No. 3.

5. The tractors may travel at any speed they desire, and during the demonstration may make as many stops as they see fit, providing that at least one round be plowed by each tractor during the two hour demonstration period.

6. All entries must be in the hands of the Secretary of the Provincial Exhibition of Manitoba, Brandon, accompanied by the entrance fees, not later than July 1st, 1916, as no entries will be accepted after that date.

7. Each entrant must supply his own plows, fuel, lubricating oils, and the necessary help to operate his tractor sufficiently. Water will be supplied on the demonstration field by the Fair Association.

8. A plot of the demonstration field will be allotted each tractor of a size proportionate to the size of the machine, and any part of this plot that remains unplowed at the close of the demonstration



The Grain Growers Special 12-24 Light Tractor pulling a 4-bottom, Lacrosse Self-Lift Plow

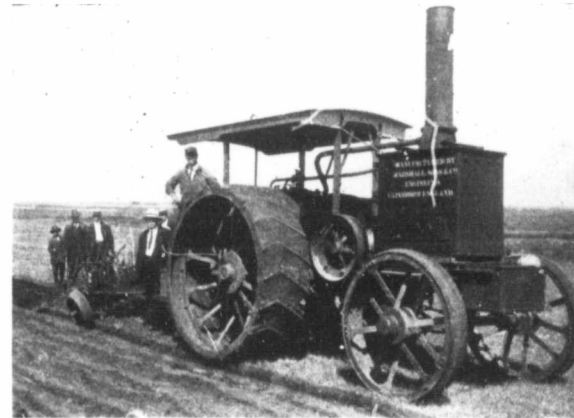
in cases where more than one tractor is entered by the same firm, in which case \$10.00 will be charged for the first tractor and medals of any kind whatever will be given.

11. The demonstration will be in charge of a field man who will

from any of these rules can be made without his consent.

12. Each entrant should provide himself with a half dozen pointed stakes, about six feet long for marking out his first furrow, and he must see to it that all such stakes, as well as any other material that he may have brought to the demonstration field, be removed at the close of the demonstration.

The apparent success of the light tractor demonstration which was held at Brandon almost ensures the permanency of this proposition in the Canadian West from year to year for some time to come. The Brandon Fair Board, who at first were only slightly interested in the proposition, are now very keen on it and arrangements are already under way for a much larger tract of land for 1917. They appreciate the fact that it contains a great deal that is of interest to the farmers and that it is furthermore an opportunity for the farmers to become better acquainted with the



The Marshall "Dreadnaught" Kerosene Tractor, 16-35 H. P., handling a 5-furrow Cockshutt Engine Gang

must be plowed by the firm entering it before removing the machine from the demonstration field.

\$5.00 per tractor for all others entered by the same firm.

10. The demonstration will be conducted wholly and solely as



Sawyer-Massey 16-32 Kerosene burning Tractor, pulling a 5-bottom 14-inch Powerlift Cockshutt Engine Plow

have full control of the plowing field. He will be on the demonstration field at all times during the demonstration days, and will

the light agricultural tractor will do or will not do for them.

At one time there was more or less antagonistic feeling on the



Gold, Shapley & Muir 15-25 "Ideal" Kerosene Tractor, pulling a 6-bottom Cockshutt Powerlift Engine Gang

9. An entrance fee of \$10.00 per tractor will be charged, except

such and will in no way be in the nature of a contest. No awards or



Hart-Parr 27 H.P. "Hopmaker" Tractor burning Kerosene and pulling a 4-bottom Powerlift Hart-Parr Engine Gang

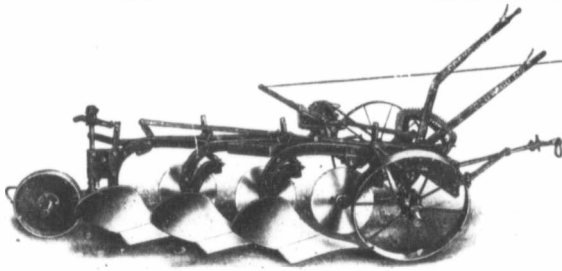
have full power to handle the entire demonstration. No deviation

part of the horse breeders towards the tractor. Some of these breed-

Cock  
On  
Ec  
W  
use wi  
the late  
Th  
the fra  
to comp  
plows e  
the wor  
Wr  
Co  
One  
Ecc  
For 1  
tractor ha  
wages. 1  
plow.  
These  
Write  
Co  
WINNIPE

# COCKSHUTT LIGHT TRACTOR PLOWS

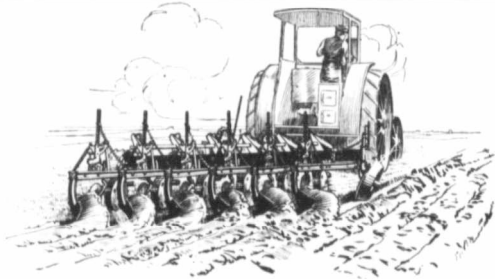
Cockshutt engine gangs, through sheer force of merit, made a world-wide reputation. The new Cockshutt Light Tractor and Power Lift Plows embody improvements that will readily maintain the reputation of their predecessors.

<p><b>Cockshutt Bottoms</b></p> <p><b>Good Plowing</b></p> <p>—</p> <p><b>One Man Power Lift</b></p> <p><b>Economical Plowing</b></p>	<p>2 and 3 Furrow Sizes</p>  <p>14 inch. Bottoms</p> <p><b>THREE FURROW LIGHT TRACTOR FLOW</b></p>	<p><b>Undulating Frame</b></p> <p><b>Uniform Plowing</b></p> <p>—</p> <p><b>Glass Hard Boards</b></p> <p><b>Steady Plowing</b></p>
---	---	--

We have thoroughly tested out, and are now manufacturing and placing on the market a new three-furrow plow that is ideal for use with small, one man traction outfits. It turns the well known Cockshutt furrow, making an excellent job of plowing and has the latest "up-to-date" conveniences, undulating high lift frame, extra clearance, automatic power lift, universal hitch, etc., etc.

The driver of the tractor operates the plow by means of a trip cord. A pull on it causes a sprocket to revolve half way, lowering the frame, front end first, so that the plows draw into the ground in rotation. Another pull on the trip cord causes the sprocket to complete the revolution, raising the frame, front end first, so that the plows come out in rotation, leaving a square headland. The plows enter the ground quickly, and come out quickly. You can plow close up to the headlands and make a fine, clean even job of the work.

Write us for special leaflet, with fuller information, or see our agent.

<p><b>Cockshutt Bottoms</b></p> <p><b>Good Plowing</b></p> <p>—</p> <p><b>One Man Power Lift</b></p> <p><b>Economical Plowing</b></p>	 <p><b>SIX FURROW POWER LIFT PLOW</b></p>	<p><b>Glass Hard Boards</b></p> <p><b>Steady Plowing</b></p> <p>—</p> <p><b>Independent Bottoms</b></p> <p><b>Uniform Plowing</b></p>
---	--	---

For heavier work and more power, our FIVE furrow POWER LIFT ENGINE GANG is in strong demand. The driver of the tractor has full control of the operation of the plow from his seat on the tractor, no extra man is required, thus saving board and wages. The bottoms are independent. One bottom can be raised up or taken off altogether, thus converting it into a four furrow plow.

These plows are the result of forty years of plow building experience and show it by their good work in the field.

Write for special leaflets on Light Tractor or Power Lift Plows, with full description, or see our agent.

## Cockshutt Plow Company Limited

WINNIPEG

REGINA

SASKATOON

CALGARY



ers felt that the tractor would supplant the horse and would thus interfere with their particular business. Those breeders who have looked into the proposition are now convinced that the tractor will not in any way interfere with the future of the horse. As one prominent breeder stated at the plowing field: "We breeders thought when the street railways were electrified that the price of horses would go down, but the fact of the matter was that the price of horses went up. We also thought when the motor car came into existence it would seriously interfere with our business, but the facts of the matter are that the price of horses has gone up year after year. The same thing is true of the tractor. We believe that it will eventually find its place and if it can supplant the horse entirely, which we do not believe it will, there is nothing for us to do but to bow to the inevitable. You cannot force tractors upon the farmers if these same tractors will not do their work profitably, and we are firmly convinced that the horse has his place and will always keep it."

will make it pay only through the merest chance, but the man who buys a tractor and who is keenly alive to what it will do and what it will not do, will make it pay. It is for this reason that demonstra-

the Brandon Fair Board in general and to Secretary Smale in particular for having had sufficient foresight to take hold of this proposition and in future years the farmers of the Canadian West will



The "Happy Farmer" 8-16 Light Tractor exhibiting itself to the crowds on the plowing field

tions such as was held at Brandon are of considerable benefit to the farmers. He not only sees what the light tractor will do, but he also has an opportunity of making a comparison between the various machines that are upon the market. In the demonstrations which

look upon the Brandon Fair Board as a benefactor in this respect. Credit must also be given to Mr. Brosnahan, manager of the International Harvester Co. at Brandon for the interest that he took in the demonstration and

forming you that we have no complaint to make, nor have we at the present time any suggestions to offer in regard to the demonstration at the Brandon Exhibition. So far as we are concerned, this demonstration was a complete success and some of our head people from Brandon who were there report as being entirely satisfied. We can assure you that another year if a demonstration is put on, this company will be pleased to assist in every way possible to make the demonstration "successful."—Goold, Shapley & Muir.

"It gives us great pleasure to express our opinion frankly regarding the plowing demonstration held at Brandon. We think that it is one of the best means possible for getting the farmer in actual touch with tractor conditions and as far as our company is concerned, we are greatly pleased with the result, both from an advertising point of view and from actual business closed. If you are interested in getting up any further demonstrations of the kind, you can rest assured that our company will do everything men-

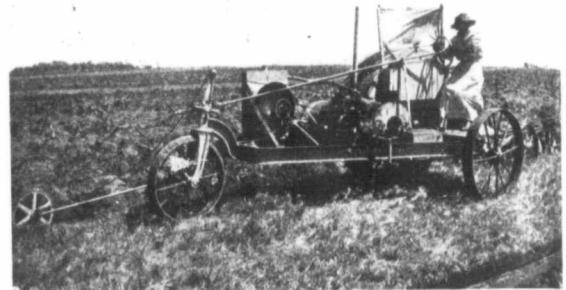


"Waterloo Boy" 12-24 Light Tractor burning Kerosene and pulling a John Deere No. 3 Pony 3-furrow Engine Gang

It isn't within the limits of our present vision to see that the tractor will supplant the horse, for such cannot be the case. The horse has his place upon the farm and it is the farmer who affects a working combination between both tractor and horse that makes a success of both. As a matter of fact, the light agricultural tractor will bring about a better class of horses upon the farm. It will lead towards the pure bred, thus enlarging the field of the breeder of pedigreed stock.

The great trouble with the light agricultural tractor at the present time is that the farmer has not studied it closely enough. He has not determined in his own mind just exactly what it will do and then applied it to his farm. There are undoubtedly many kinds of work on the farm that the horse will do cheaper and better than the tractor, but on the other hand there are any number of farm operations for which the tractor is peculiarly fitted. The man who buys a tractor with his eyes shut

are being held on the United States side of the line this season, exhibitions are given of seeding, disk, harrowing, harvesting, etc. It is quite possible that an-



The Peoria 8-20 burning Kerosene, pulling a 2-furrow John Deere No. 3 Pony Engine Fur

the aid which he rendered in making it a success.

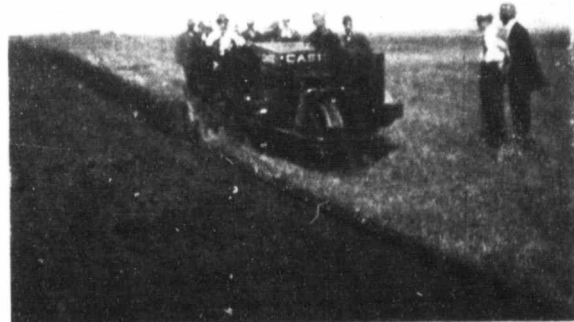
As to just how the manufacturers themselves felt about the matter, extracts from some of the

power to assist you."—The Ball Tractor Co. of Canada, Ltd.

"In regard to the tractor demonstration, we wish to say that in our estimation it was the most demonstration ever held in Western Canada and comments which we have received from our friends all over the territory, reaching far into Saskatchewan, are of the very best. We were well pleased with the interest which was shown by the farmers and it certainly shows that the power-farming proposition is receiving the attention of all the farmers in Western Canada."—International Harvester Co.

"As far as we are concerned, the whole affair was a great success and it no doubt resulted in our getting a great many orders which we would not have been able to secure ordinarily. This business reminds one and compares very well with the old days of 1911 and 1912. We saw more good acceptable orders, both for cash and

Continued on page 55



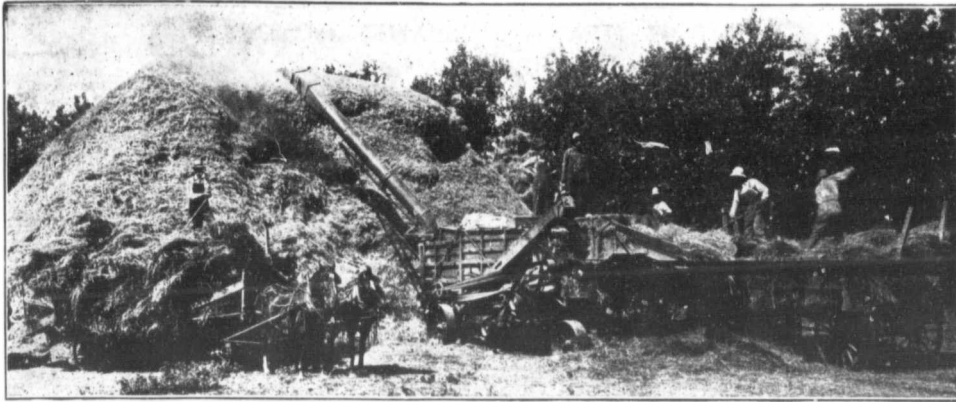
The Case 10-20 Gasoline Tractor pulling a 3-furrow Case "Sattley" Powerlift Plow

other year such exhibitions may be put on in Canada.

A great deal of credit is due to

letters received are the best evidence. They are as follows:

"We have much pleasure in-



## PREPARED FOR IMMEDIATE ACTION AT YOUR CALL

There are good stocks of Avery Threshers on hand at Winnipeg and Regina, ready for immediate shipment.

There are good stocks of Avery repairs on hand at each of these points ready to be shipped on the first train to take care of any breakages.

There are Avery Service Men at each of these points ready to deliver, start and give any necessary instructions as to operation.

The Canadian Avery Company is well prepared to meet every threshing need.

### The Job Takers and Grain Savers

Although Avery Threshers have the most up-to-date features and complete equipment of any machines, they are sold at low prices.

They are the Champion Grain Savers—proved to be by tests threshing on canvas. Elevator men say Avery Threshers send them the cleanest grain they get. Regularly equipped with the famous Jumbo Tool Steel Cylinder Teeth, guaranteed for life against breakage.

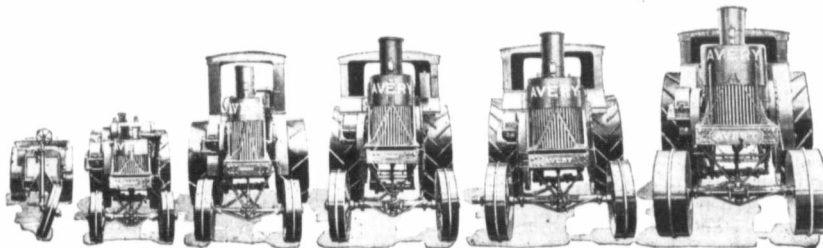
### There is a Size Avery Thresher for Every Size Run

Two sizes "Yellow-Kids" for individual farmers, farmer companies and threshermen with small runs, and five sizes. "Yellow-Fellows" for medium and larger size runs.

It will pay a Farmer best to have his grain threshed with an Avery "Yellow-Fellow"—it will pay a Thresherman best to have an Avery "Yellow Fellow" to thresh with.

Write now or call at our nearest house and get **ALL** The Facts about the Avery Job Taker and Grain Saver Threshers.

**EVERY COMPANY** Canadian Avery Co. Ltd.  
675 Iowa St., Peoria, Ill. **WINNIPEG, REGINA**  
Western Canadian Distributors



#### The Avery Tractor Line-Up

6 Sizes—from 5-10 to 40-80 H.P. For pulling from 2 to 10 Plows and from 19 x 30 to 42 x 70 inch Threshers.

# EVERY

# THE CANADIAN THRESHERMAN AND FARMER

CANADA'S LEADING AGRICULTURAL MAGAZINE

E. H. HEATH,  
PRESIDENT

E. W. HAMILTON,  
MANAGING DIRECTOR

F. C. BRAY, TREASURER

PUBLISHED MONTHLY BY



E. H. HEATH COMPANY, Limited,  
WINNIPEG, CANADA



J. D. DUTHIE,  
EDITOR

U.S. Representative—  
JAS. A. SUCHANAN  
1313 MARQUETTE BLDG.  
CHICAGO, ILL.

(MEMBER WESTERN CANADA PRESS ASSOCIATION)

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

Aug.

1916

## SCREENINGS

### OUR GUARANTEE

No advertisement is allowed in our Columns until we are satisfied that the advertiser is absolutely reliable and that any subscriber can safely do business with him. If any subscriber is defrauded E. H. Heath Co., Ltd., will make good the loss resulting therefrom. If the event takes place within 30 days of date advertisement appeared, and complaint be made to us in writing with proofs, not later than ten days after its occurrence, 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."

WITH all her material progress as an agricultural country, Canada has not yet done anything noteworthy in the conservation and employment of her by-products. Quite a number of these might well engage the serious attention of economists and no time was ever more timely than the present. One of them at this hour calls for special notice—the matter of grain screenings. Is the loss of over half a million dollars from the practice of shipping uncleaned grain (not to speak of the feeding value of those screenings had they been used on the farms) worth the notice of Western farmers? This estimate was made by the Dominion Seed Commissioner on a crop that probably showed a much smaller percentage of dockage (for weed seeds at all events) than will be laid on the 1916 crop.

Weeds are desperately on the increase. Notwithstanding the heroic efforts of the Agricultural Schools and the various governments, it cannot be said that the noxious weed menace is retreating—

rather it is making rapid advances on all fronts, and men who are in a position to know declare that this year beats all records in wild mustard, sow and Canada thistles and wild oats. It is not needful to reproduce details which are in every interested person's possession of the extent to which a very large proportion of our western threshed grain is loaded with weed seeds. For the year ending 31st August, 1913, the dockage set on the wheat, oats, barley and flax received at the Fort William and Port Arthur terminal elevators amounted to over 100,000 tons. The transport charges alone on this quantity of material from the grain fields of the West to the lake front are estimated at \$650,000.

Up to the present date, most of the screenings from our terminal elevators have been exported to the United States, where they have been re-cleaned and used in various forms in feeding live stock. And fortunes are being made on these bags of offal from the "hospital" elevators. While travelling with the Dominion Grain Commission in the fall of 1906, the writer spent some time in the company of a Minneapolis gentleman whose one business in life is the purchase, manipulation and re-selling of grain screenings. The meeting took place in the cleaning elevator of the late Mr. King, of Port Arthur. The reputed wealth of the screenings merchant was remarkable and the gentleman's own story of the subsequent history of this Canadian by-product at his hands was little short of astounding.

Practically all grain is received at the terminal elevators uncleaned; that is, just as it comes from the threshing machine. Relatively few of the interior elevators, except

those operated by farmers' co-operative organizations, have cleaning machinery, and even where such facilities are available, the cleaning of grain hauled direct from the machine is impossible during the rush season owing to the necessity of changing sieves for each different kind and lot of grain received. Where wheat, oats, barley and flax are being hauled to an elevator at the same time by several farmers it is quite impracticable to change the sieves in the cleaner for each load. Farmers who can store their grain until after the busy season can usually arrange to have a cleaner fitted up specially for their grain and then haul all they have and clean and load it before it is necessary to change or rearrange the sieves.

That threshing machines as at present operated do not clean grain satisfactorily is shown by the fact that nearly every carload received at the terminals must be cleaned. If the grain could be cleaned by the thresher it would effect an enormous saving. About 60 per cent of the screenings could be used to advantage on the farm or sold for the feeding of live stock. Even if they were not used for feeding but were burned on the farm it would pay the producer to do this rather than be put to the expense of handling and freighting them.

After careful investigation by the Seed Commissioner and his staff, it is believed that a cleaner of simple design and comparatively small cost of construction and operation could and should be used on every threshing machine. Such a cleaner could be placed on top of the machine and the grain passed through it after being weighed and elevated. That it pays to clean at threshing time has been proved wherever it has been seriously carried out and we are glad to hear from the Commissioner that this year at least two big threshing machine houses report having sold cleaners with a number of machines going into Saskatchewan. The thresherman is entitled to payment for every bushel he threshes whether it is grain or weed seeds, and by the above arrangement he would get credit for every pound of material threshed.

No doubt the lead given by the thresher companies will go far towards the objective. If left to the farmers entirely it will never be reached. Next month we will print in detail the experiences of a large Alberta Grain Grower who found that the installation of an efficient fanning mill paid him handsomely. The farmers do not need "coaching." Every man of them knows what he should do—at least while the country is face to face with a constantly increasing weed crop.

### SUBSCRIPTION RATES

Postage prepaid, Canada and Great Britain,  
\$1.00 Per Year.  
Single copies 15 cents.  
Postage prepaid, United States and Foreign Countries,  
\$1.50 Per Year.

Failing to receive paper, you should notify the office at once, when mistake, if any, will be corrected immediately.  
All Subscriptions must be paid for in advance and no subscription will be accepted for a shorter period than six months.

Advertising copy in order to secure good position should be in our hands not later than the 15th of the month preceding date of issue.

Advertising rates furnished on application.

ADVANCE  
1881

RUMELY  
1853

GAAR-SCOTT  
1836

# ADVANCE-RUMELY Threshing Machinery

Built on years of experience and standard the world over.

A size to fit your needs and Advance-Rumely service back of every machine.

Our branch houses are handy and always carry a complete stock of repairs and supplies for *immediate* shipment.

**ADVANCE-RUMELY THRESHER CO., Inc.**

**La Porte**

**Indiana**

Aberdeen, S. D.  
Battle Creek, Mich.  
Billings, Mont.

Dallas, Texas  
Des Moines, Iowa  
Fargo, N. D.

Kansas City, Mo.  
Lincoln, Nebr.  
Madison, Wis.

Nashville, Tenn.  
New Orleans, La.  
Peoria, Ill.  
Minneapolis, Minn.

San Francisco, Cal.  
Spokane, Wash.  
Wichita, Kans.

Columbus, Ohio  
Indianapolis, Ind.  
Portland, Ore.

**Calgary, Alta.**

**Saskatoon, Sask.**

**Regina, Sask.**

**Winnipeg, Man.**

R  
LDG  
O. ILL.  
6  
PTION  
IS  
repaid,  
Great  
Year.  
16 cents  
epaid,  
es and  
intries,  
Year.  
receive  
should  
fire at  
mistakes,  
be com-  
pletely  
riptions  
for is  
no sub-  
11 be  
shorter  
than six  
copy in  
e good  
l be in  
t later  
of the  
g date  
rates  
pplica-  
r the  
eding  
er to  
and  
ioner  
and  
ould  
Such  
the  
ited.  
oved  
glad  
two  
ners  
The  
he  
ove  
rial  
will  
rely  
tail  
and  
aim  
ery  
the  
sed



E. E. LYDAY, Manager of Maytag Co. Ltd. of Canada

**THE MAYTAG COMPANY LIMITED**

ing machine companies and its effect on a season's threshing cannot be better set out than by describing it in the words of the warranty given over the company's signature with every machine sold:

"Such faith have we in the Maytag Ruth Feeder, that we guarantee every Ruth Feeder to feed any make or size of separator to its full capacity, with any kind of grain in any condition whatsoever, bound, loose, straight, tangled, stack burned, wet or dry, piled on the carrier any way you please, without slugging the separator cylinder or loosening a spike, and to do a faster, cleaner and better job of feeding than any feeder manufactured by any other company in the world."

The Maytag Company also supplies sheet packing, "Red and Black" for gas engines, asbestos packing for piston rods, tank pump leathers, babbitt metal, water gauge glasses, gauge glass cutters, gauge glass rings, pulley lagging, oil cups, grease cups, flue cleaners—in fact anything that a thresher uses, except threshing machines and traction engines.

But if the Maytag Company has

proved itself such a boon and a "universal provider" to the threshermen of Western Canada, it has rendered incalculable service to the women of the farm homes with its famous "Pastime" washer and still more celebrated and labor saving "Multi-Motor" washing machine.

Details of this wonderful laundry outfit will be found on page 62 of this issue. Of its real service we quote one testimony out of a large number of letters of appreciation we have seen. This is from Mrs. James, a young American housewife, who thus expresses her feelings:

"No, I wasn't an easy person to convince, because in the years that I've been married I guess I've tried about every contraption that could be called a washing machine—and I always went back to the tub. It was more bother watching one of those machines—or working it—than it was to scrub out the clothes on a washboard.

"I'll tell you how that clerk in the store convinced me that there must be something to this Maytag Washer—he offered to put it in my home for thirty days, and, if it didn't give me the completest

satisfaction—if I didn't think it was worth more to me than the price he asked for it—I could return it without obligating myself in the slightest.

"Well, I told myself that I couldn't lose on that sort of a deal and I took him up—and here I sit this minute watching that machine of mine doing every bit of the washing I used to scrub out by hand—and it will wring the clothes out in a few minutes, too. All I have to do is feed them in—and there isn't a washday that I'm not through at 9.30. No more wash-day drudgery for me—I let the electric current do it at less than two cents an hour."

On such a testimony as this, no wonder that the Maytag Company are in a position to claim that they sell more washing machines between Winnipeg and Vancouver than are represented in the aggregate sales of all other wholesale houses in that territory. They are numbered in the West literally by tens of thousands.

Oils and greases bulk largely in this company's business. The Maytag Multi-Motor Special is a lubricating specialty which was originally prepared for the "Multi-Motor" washing machine, but is a perfect oil for any engine running at an unusually high speed.

The Maytag Company also handle the Myers Century Low Down double-acting force tank pump—a most effective device of its kind, which is sent out complete at a very low price with 20 feet of 2-in. wire lined canvas covered suction hose.

The Barth lifting jack; automatic belt guides; the "Morris" improved beading tool; the "Boss" cylinder wrench for tightening or replacing cylinder teeth that may have become loosened or broken; the "Pope" improved adjustable inside file cutter, the "Gullick" spark arrester; the "Glare" acetylene gas headlight all find a prominent place in the list of supplies and can be delivered on the instant from the Winnipeg house.

The Mexican boiler graphite—a guaranteed scale remedy—is now finding a big sale in Western Canada and the Maytag Company are responsible for much of the success it has met with as they introduced it into the Canadian market. Some details of the boiler specific will be found on another page. It is introduced into the boiler regularly through the injector, and it is positively guaranteed to soften old hard scale of long standing so that it either breaks down of its own weight or may be easily removed—and to prevent further hard formation.

It does this by mechanical—mechanical—action, working equally well in any water and under any and all conditions.

THE real history of a country is not the record of its battles and political feuds. It will be found in the story of its industrial progress and in the peaceful ranks of its commercial rivalries.

It is a far cry from the self-feeder on a threshing outfit to a power washing machine, and there's lots of things in between, but the whole gamut has been covered and is being played on from daybreak till sundown every lawful day all the year round by one firm that was not known in Canada less than ten years ago—the Maytag Company, of Newton, Iowa, now one of Canada's most widely known incorporated companies.

This business had its inception in Canada in the Parsons Hawkeye Company, who sent its representative (Mr. E. E. Lyday) to Canada in January of 1908 to see what he could do in finding a market in the Western provinces for its self-feeders for threshing machines. Mr. Lyday reported progress from the first and from that point the demand consistently grew until in March, 1911, the Maytag Company absorbed the interests of the Parsons Hawkeye house and at that date became a full fledged Canadian incorporation.

From the date on which it received its charter, this Maytag Company has enjoyed a wonderful career. Its success has been made entirely by the character of its wares. They have advertised themselves in every corner of the West till "Maytag" is recognized as the self-feeder business of Western Canada and is the only concern selling a complete line of threshing machine supplies.

Of the Maytag Company's staple line, the "Ruth" feeder, very little need be said as it is probably familiar to every reader of this magazine. It is recognized and used by all the leading thresh-

**SAVE YOUR MONEY**

FOR THE

**DOMINION WAR LOAN**

TO BE ISSUED IN SEPTEMBER.

By purchasing a bond you will help to WIN THE WAR and obtain for yourself an investment of the highest class yielding a most attractive rate of interest.

DEPARTMENT OF FINANCE  
OTTAWA.

R  
FE  
EX

STYL  
M

This  
perature  
to that  
their en  
will not  
adaptabl  
as a lub

Wri  
corner) c

THE M.  
M:

Also sent

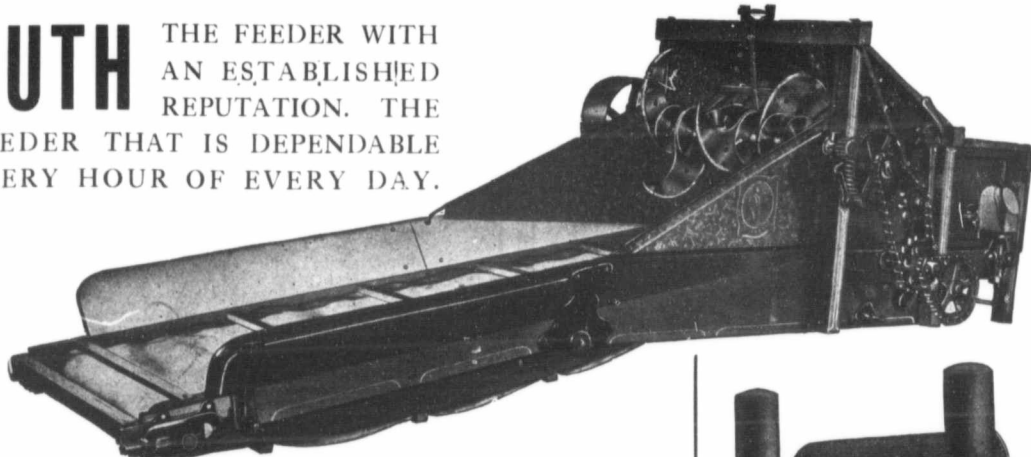
T. & F.



# MAYTAG Co. LTD



**RUTH** THE FEEDER WITH AN ESTABLISHED REPUTATION. THE FEEDER THAT IS DEPENDABLE EVERY HOUR OF EVERY DAY.



STYLE "B" FORCE FEED Madison-Kipp Oil Pump



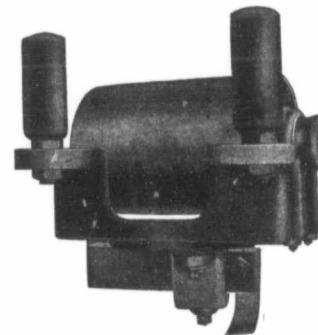
This Lubricator will work in any temperature and is especially recommended to that class of trade who wish to use their engines in temperature where oils will not remain in liquid state; also adaptable where hard grease or oil is used as a lubricant.

## A WORD ABOUT OILS

We sold more than twice as much oil in 1914 than we did in 1913 and four times as much in 1915 as in 1914. Why is this so? The answer is, that practically all of those sold last year bought again and in larger quantities, and also told their neighbors how well they were satisfied.

By buying in larger quantities and taking advantage of all cash discounts we buy cheaper than most others. Next, we are satisfied with a small margin of profit. We do not have to depend on our oil profits to run the business.

You will find our prices the lowest, quality considered. A trial order will prove this to be true. Try us once, and you will be a steady customer.



**The Automatic Belt Guide**  
IT IS ENTIRELY AUTOMATIC—SAVES TIME, TROUBLE, MONEY, AND YOUR BELT

The main pulley of the Belt Guide, with its two small perpendicular rollers, is mounted on a pivot directly in front of the separator cylinder pulley.

The lower half of the belt runs over the main pulley of the Belt Guide, and when the edge of the belt travels against either of the small upright rollers, it throws the large pulley in a slightly diagonal position with reference to the cylinder pulley, causing the belt to travel squarely over the cylinder pulley.

It is very sensitive, and the wear on the drive belt is not perceptible. The engine may be several feet out of line or the wind blow the belt, which would ordinarily throw it off, but with the Success Belt Guide the trouble and annoyance are entirely overcome. Sold under a positive guarantee.

Write at once for our large illustrated, colored Ruth Feeder Catalogue and also for our Catalogue (using the coupon in left hand corner) describing and pricing a most complete line of Threshers' Supplies, such as Oils, Greases, Drive Belts, Belting of all kinds, Belt Guides, Cylinder Wrenches, Spark Arresters, and in fact everything needed except Separators and Traction Engines. You will find the prices right and we are here to give you satisfaction in every respect. As we are paying the War Tax, prices are practically same as last year.

THE MAYTAG COMPANY, LTD., Winnipeg:  
Mail me to-day full information about your Ruth Feeder.

Also send me .....  
Insert here "General Book" or names of any of

..... our products you are interested in.

Name .....

Post Office .....

T.&F. Province .....

# The MAYTAG Co. Ltd.

WINNIPEG, MAN.

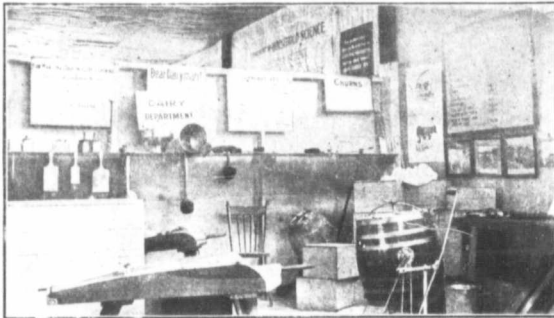
### The Educational End of Brandon Fair

Whatever measure of future success Brandon Fair may experience, its 1916 record will always remain a pleasant memory. It marks a bright spot in Brandon's history and the high water mark up till that date of a series of regular progress in the affairs of what is very properly regarded as Manitoba's Provincial Exhibition.

There is "no getting away from it," Brandon is geographically and agriculturally the bull's-eye of

and still life that has anything whatever to do with an agricultural country. In this connection and without the slightest risk of bordering on the fulsome, it can be said with absolute truth that its business manager, W. J. Smale, has earned the biggest halo which has yet descended upon his already much glorified pate.

Did space permit, there are lots of things we would like to dwell upon—all outstanding and admirable features of this fine week in



The Dairy Department of Manitoba Agricultural College exhibited at the Brandon Fair various styles of Dairy utensils.

Manitoba and on top of this there is an element in its manhood (or that portion of it at least who have been charged with the direction of its fair) that guarantees success. Foresight, business instinct, energy, painstaking care and a uniform courtesy will always do the trick if the skies do not drop too much of their fatness during that precious week.

Brandon, but there is one which appealed to us with unusual force; that was the wonderful display made by the Agricultural College staff.

At any time, but particularly in these times, if there is one thing that appeals to us more strongly than another, it is something that has its objective in the care and upbuilding of our young people.



Display of the Manitoba Agricultural College Engineering Section, showing many fine exhibits of Students' forge work.

Committees and directorate boards are "a' very weel in their way" but if there isn't one man somewhere who is the natural pivot and referee for every expected and unexpected contingency, there will be a collapse sometime and somewhere—possibly more than one. There were no collapses nor even temporary hitches in this record show of positively everything in live stock

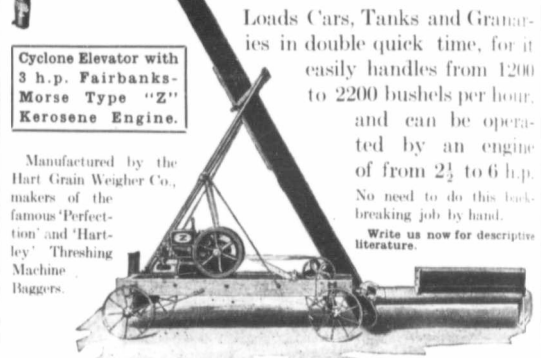
The wholesome influence that Manitoba Agricultural College has exercised since its inception and its solid results in capable men and women it is not needful to speak of.

In these pages, reference has been made again and again to the splendid moral "stiffening" this one institution has meant, not only to the province but much farther afield. Its effect is felt all

## This Machine Makes Short Work of Your Grain Loading

Never has there been a grain elevator so strong, so easy to handle, or so capacious, as the

### Fairbanks-Morse Cyclone Portable Grain Elevator



Cyclone Elevator with 3 h.p. Fairbanks-Morse Type "Z" Kerosene Engine.

Manufactured by the Hart Grain Weigher Co., makers of the famous 'Perfection' and 'Hartley' Threshing Machine Roggers.

Loads Cars, Tanks and Granaries in double quick time, for it easily handles from 1200 to 2200 bushels per hour, and can be operated by an engine of from 2 1/2 to 6 h.p. No need to do this back-breaking job by hand.

Write us now for descriptive literature.

The Canadian Fairbanks-Morse Company, Limited  
Saskatoon WINNIPEG Calgary



### Weather Proof Vermin Proof

Here is absolute protection for your grain—so strongly built that it can't bulge—and yet easily set up and taken down. The Johnston Granary has a big outside door with inside sliding sections to hold the grain at any height. As a granary or as ordinary storage, it is a firm, water, wind and weather proof building.

## Johnston's Granary

**Ready to Erect**      **Tight at Every Point**

All framework needed is sent from our factories cut to fit and ready to nail together. The galvanized sheets lock together. They are further strengthened with wide iron hoops drawn tight with tension bolts, a large 14-inch metal ventilator is supplied—a top man hole for loading and an iron fireproof door.

Rain or snow cannot drive in at any joint in the whole structure. The Johnston Granary gives sure protection from the elements because every seam in roof and walls is locked tight. There is no opening for vermin to get in. No exposed part for fire to catch. Coupon will bring full information.

### DINNEN GRAIN UNLOADER

A portable elevator that can be used anywhere on the farm. May be fitted to the Johnston Granary. Mail the coupon for literature and prices.

The Metal Shingle & Siding Co., Limited, Winnipeg, Man.

Write me fully about Granary and Unloader.

### Family Group Photos a Specialty

AT  
**STEELE & CO., Limited**  
MAIN ST. and BANNERMAN AVE.      WINNIPEG

over hardly the br clean condit live st moty lege, n princip housch ing a g life the every d and dis

The C in the " grounds rangeme and but of educ very big men and ly resp light cr



corner

and that i anything c in the w would not ling charac and would "drawing c

Hortic

The first the horticu in charge o Attention li most exclus The farmer his insect c many cas c prescription cides for the the respecti or twelve were shown nicotine sul as aphid; ars cium arsenat home-made which the e-ressfully exp lings; keros poisoned she worms. Thi had in Mani Neilson clair them as thi single square charts enume ties of trees, and vegetable

over the country, and there is hardly a farm home we visit but the bright faces of its inmates, the clean summerfallow, the class and condition of the field crops and live stock all bear eloquent testimony to the success of the College, not only in teaching sound principles of agriculture and household science but in imparting a glamour of interest to farm life that will carry the pupil over every discouragement of drudgery and disappointment.

The College exhibit was housed in the "Crystal Palace" of the fair grounds, but the space and arrangement of light, good as it was, and but partial justice to the mass of educational detail shown. The very highest praise is due to the men and women who were directly responsible for it. Only one slight criticism might be ventured

**Plants, Birds and Rodents**

Next neighbor to Mr. Neilson was Mr. J. H. Kitley, in charge of the botany and biology section. This is the section of the college that concerns itself with plants, birds and rodents. "If you care, you may tell the farmers to bring along all weeds for identification," said Mr. Kitley. One case of birds beneficial to agriculture showed the too little appreciated owls and hawks, that do such good work in the way of killing mice and gophers. (A circular being distributed on "Our Friends the Birds," contains exceedingly interesting statements about the value of the birds. Every farmer should ask for a free copy of this circular.) Various gophers and other rodents were also shown. One exhibit that no doubt surprised even old farmers was



Corner in the Horticultural and Botany Section of the Agricultural College at Brandon Fair

and that is that when displaying anything of the kind, a little more in the way of embellishment would not detract from the sterling character of the real exhibits and would add wonderfully as a "drawing card" to all eyes.

**Horticultural Department**

The first section furnished by the horticultural department, was in charge of J. A. Neilson, B.S.A. Attention here has been given almost exclusively to insect control. The farmer who wishes to study his insect enemies could inspect many cases of these together with prescriptions for the best insecticides for their control and vials of the respective preparations. Ten or twelve of these insecticides were shown, most notable being nicotine sulphate, for such insects as aphids; arsenate of lead and calcium arsenate, the latter a cheap, home-made preparation with which the college has been successfully experimenting on potato bugs; kerosene emulsion; and poisoned shorts mixture for cutworms. This latter pest has been had in Manitoba this year, Mr. Neilson claiming to have found them as thick as seventy to a single square foot of soil. Wall charts enumerated the best varieties of trees, shrubs, bush fruits and vegetables for Manitoba.

simply the root system of a few common plants, the earth in each instance having been carefully washed away. It seems like a fairy tale to learn that a simple strong wheat plant has as much as 600 feet of roots, yet that statement is made by the botany department. There was just enough shown to suggest how interesting these studies are.

**The Farmer an Engineer**

The up-to-date farmer to-day is one-half engineer, and the Agricultural engineering section, in charge of Prof. L. J. Smith, showed the kind of mechanical training the boys get when they visit the college, either to take the regular course or one of the popular short courses in engineering. A case of iron work done by first and second year students showed the practical character of the teaching. The case contained such articles as clevises, punches, chisels, tongs, chains and other small farm equipment. Many of the exhibits related to gasoline engineering, tools for flue work in farm engines, farm soldering outfit, babbitting exhibit, and some models of that exceedingly convenient thing, a portable hog fence. The visitor was able to examine large models of portable hog coots, barn ventilation flues,

**We know that you are interested in Light Tractors**  
**Did you see the BIG BULL**  
**"put through its paces"?**



The BIG BULL at Brandon Fair, showing its splendid self-steering powers

There were thousands of farmers who came to Brandon Fair to see the work of the different tractors. Some already knew a great deal about them from experience, some were getting ready to buy a tractor for the first time, some were still sceptical of the economy of a tractor on a small farm. They all knew that more power was needed on their farms and they wanted to see and judge the "points" of the different tractors, just as they would size up the points of a horse. They all saw the various tractors being "put through their paces." They all went away impressed with the work of the BIG BULL.

The BIG BULL Won exceptional praise for its efficiency and economy, for its easy handling and general simplicity. The speed of the BIG BULL and the way it travelled the furrow, when unattended and steering automatically, evoked special enthusiasm. Its splendid reserves of power, its particularly good work in plowing—all these "points" were brought out clearly to the thorough satisfaction of the watchers. The BIG BULL at Brandon demonstrated to thousands of farmers what it can do and is doing daily on hundreds of western farms.

**RUNS A 22-40 HUBER SEPARATOR**  
 We have thoroughly tested out the BIG BULL in threshing operations. It will run successfully a 22-40 Huber Separator fully equipped with blower, feeder, high lugger and weigher. Write to us for information about the Huber.

**HERE IS SOME GOOD "SERVICE" NEWS**

For the sake of more rapid production and delivery, to be nearer our markets, to give better direct service in repairs, etc., and to avoid a growing congestion at our Port Arthur Plant, we are installing a new auxiliary plant in Winnipeg. The company has expended a large amount of capital in the purchase and reconstruction of the plant of the Doty Engine Works. New machinery is being rapidly installed and the new plant will be devoted solely to the outfitting of tractors.

**PRICES OF THE BIG BULL ARE:**  
 With Kerosene Equipment  
 F.O.B. Winnipeg \$850 \$850  
 F.O.B. Regina and Saskatoon 850 875  
 F.O.B. Calgary and Edmonton 875 900  
 There is a place for a light tractor on your farm and the BIG BULL can fill it best. Mail the Coupon to-day.

**BIG BULL PLOWS**  
 "Just what you have been looking for." Built especially for use with the BIG BULL Tractor, they possess all the necessary features of a successful power lift gang. Light draft, strength and ease of operation. BIG BULL Plows are light running, yet strong enough to stand the severest kind of work.

Prices, F.O.B. Winnipeg, Man.  
 Two-Bottom Plow \$125.00  
 Three-Bottom Plow 155.00

**IF YOU ARE IN THE MARKET FOR A LIGHT TRACTOR**

You should be familiar with every detail of the BIG BULL, should know what it can accomplish, what are the special features. Write to us for folders and full particulars of what we guarantee the BIG BULL to do. Let us tell you all about the Kerosene Carburetor attachment, which enables the BIG BULL to operate successfully with either Gasoline or Kerosene. Let us send you copies of testimonials such as the following

R.R. No. 1, Gilbert Plains, Man.,  
 June 11th, 1916

The Bull Tractor Co., of Canada,  
 Winnipeg, Man.

Dear Sirs:—After an extended trial of the "Big Bull," we are more than satisfied with the results both as regards efficiency and economy.

We have used a 3-14 inch furrow engine gang in stubble plowing and find the engine has lots of power, the throttle valve remaining nearly closed, and even after a solid five-hour run have been able to wash our hands in the water from the engine radiator. This clearly indicates the engine is not being overworked.

We have also used the "Big Bull" pulling a 12 ft. packer with four sets of harrows behind—a good 7-horse load—and find that the tractor, by its constant speed and quick turning, accomplishes what 10 horses could do in the same time.

Its speed and self-steering qualities place it ahead of any other light tractor we have seen, and the accessibility to all moving parts is another valuable feature.

You will see by the enclosed photos that the plowing leaves nothing to be desired, and we find that 9 yards is a sufficient headland for the tractor and plow to make clean ins and outs, in striking contrast to 5 rods or so necessary for large tractors.

Consumption of gasoline works out at 1 1/2 gallons per acre for spring stubble plowing.

Yours faithfully, (Signed) HILL BROS.

**Bull Tractor Co. of Canada Ltd.**

333 Main Street WINNIPEG, Man.

**BULL TRACTOR CO., OF CANADA, LTD.**  
 333 Main Street, Winnipeg, Man.

Gentlemen:—Please forward me folders, literature and all particulars concerning the BIG BULL Tractor.

Name .....  
 Address ..... T-8-16



# FARMERS and THRESHERMEN ATTENTION!!

Have you purchased your Season's Supply of Oils and Greases? If not, you should immediately get in touch with us on our special proposition. We are a Winnipeg house selling direct to the consumer, thereby saving to you all dealer's profits.

We do not handle job lot oils. All our oils and greases are strictly high grade lubricants put up specially under the name of

## "Sunbeam"

We positively guarantee every oil and grease we sell. Your money back, as well as carrying charges, if you are not thoroughly satisfied. Our line consists of—

- Steam Cylinder Oil
- Gas Engine Cylinder Oil
- Harvester Oils
- Cooling Oils, Machine Oils
- Graphite, Cup Grease
- Transmission Grease
- Axle Grease and Gear Grease
- Belt Dressing and Suction Hose

Do not delay ordering until you absolutely need Oils and Greases, but fill in the Coupon to-day and allow us to show you just how much we can save you on your season's requirements.

### Phillips & Windrum Limited WINNIPEG - MANITOBA

Phillips & Windrum, Ltd., Winnipeg

Please send me your special oil proposition. I will require about \_\_\_\_\_ gallons of oil and \_\_\_\_\_ pounds of grease. I shall also want \_\_\_\_\_ feet of suction hose.

Name \_\_\_\_\_

Town \_\_\_\_\_

Prov. \_\_\_\_\_ C.T.F. \_\_\_\_\_

and displays of students' work in building construction. An improved road drag, full size, was shown that cost \$15 to \$20, and the claim is made that road dragging, well done, will reduce the draft of loads from twenty to thirty per cent.

#### Animal Husbandry

The animal husbandry exhibit was in charge of Assistant Professor G. W. Wood. Considerable attention here had been paid to statistics of the live stock trade. One chart showed the hog receipts at Winnipeg stock yards during the first half of this year and the first half of last year. This year's figures were 149,833 head, as compared with 356,789 head for the same period one year ago, or a shrinkage of forty-two per cent. Figures that deal with hog production in Manitoba, Saskatchewan and Alberta show that in pig raising this province must speed up if it is to hold its own. Several simple veterinary appliances for farm use claimed the interest of every farmer, while other exhibits related to the economical phases of feeding animals.

#### Dairy Exhibit

The dairy exhibit was in charge of Professor Mitchell and Mr. Farrell. There was a good display in this booth of various types of farm churns, butter workers, cream cooling tank and dairy utensils of good and of bad types. Between the attention they gave to this exhibit and their supervision of the buttermaking contests and dairy judging, Messrs. Mitchell and Farrell had probably one of the hardest week's work of any men on the grounds.

#### For the Ladies

Right in the center of the college display were two booths relating to the teaching that the college gives to the girls. Miss Eadie, professor of household science, was in charge of one booth and Miss Kennedy, professor of household art, of the other.

Race betterment was the general theme of a set of charts on the walls of the household science section. Any woman could profitably spend an hour in the study of these. In addition, many household conveniences were shown. One stand presented several formulas of home-made polishes for kitchen use. A set of good books on household topics was also shown.

The household art booth is devoted mostly to instruction on fabrics, how made and how used. A very interesting set of exhibits shows the various steps in the development by modern manufacture of cotton, linen, wool and silk yarn. This shows, for instance, cotton in the boll and in all stages of the process onward; similar exhibits illustrate the

Continued on page 54

# "ALFALFA" THE GREEN BELT

Cheaper than the Cheapest Rubber. Stronger than the Best Leather. Absolutely Waterproof. Try some You will be surprised

AGENTS :

The General Supply Company of Canada  
WINNIPEG LIMITED MANITOBA

## CHEAPER GASOLINE THROUGH MORE POWER PER GALLON BY USING WONDER OIL

Wonder Oil is a lubricant and being of such a nature that it mixes readily with gasoline, it is easily taken into the combustion chamber. There, combustion separates the oil from the gasoline, and the explosion sprays the oil on the surrounding parts.

Briefly, Wonder Oil does the following:—

1. Produces Perfect Lubrication.
2. Prevents Carbon Trouble.
3. Prolongs the Life of the Engine.
4. Saves Gasoline.

It has been shown that Wonder Oil effects a saving of at least 25 per cent in gasoline consumption, which at present gasoline prices means a great deal to every farm engine user.

Just figure up the number of gallons of gasoline your tractor uses per day, and then figure on a saving of one-fourth, and you can see just one of the things that Wonder Oil will do for you. Apart, however, from the saving that is effected in fuel, it will greatly prolong the life of your engine by lubricating every vital part, which cannot now be reached by mechanical means provided with the engine itself.

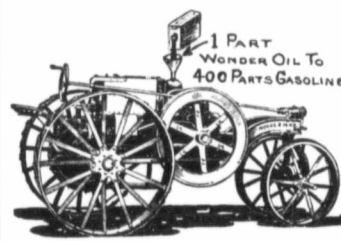
Wonder Oil will also prevent the formation of carbon, thus saving you a great deal of unnecessary trouble and delay.

Wonder Oil is perfectly harmless. As a matter of fact you can drink it with perfect safety, consequently if it will not harm the delicate membranes of your stomach it will not hurt the metal parts of your motor.

Only a small amount of Wonder Oil is required, about one to two ounces to five gallons of fuel oil. It mixes readily with the gasoline, without stirring, and remains in suspension until combustion takes place in the cylinder.

For further particulars apply to the

**Wonder Oil Co.**  
506 McArthur Bdg.  
WINNIPEG



Aug  
3  
W  
Ne  
Li  
CAN  
Enc  
Send  
NAM  
P.O.  
Th  
THE  
whic  
wort  
well." No  
could be f  
la Prairie, M  
adian Oil  
have recent  
new distribu  
The plant  
Canadian N  
about half a

# GET THIS OIL CAN FREE!

Frankly, we believe one way to keep people reminded of "NATIONAL" Petroleum Products, is to have something as a reminder on every farm. We therefore offer you as a gift, this new handy all-around oiler. We merely ask you to fill in the coupon below and enclose a 2c stamp, to help pay the postage.

## 34 Years of Square Dealing

has earned for us the reputation of being the real farmers oil company. You have heard about our products—why not ask for prices?

**White Rose Motor Gasoline**  
**National Carbonless Motor Oil**  
**Lily White Engine Kerosene**

**National Gas Engine Oil**  
**National Light Oil**  
**Black Beauty Axle Grease**



### Canadian Oil Companies Limited

WINNIPEG  
 PORTAGE LA PRAIRIE  
 BRANDON  
 REGINA

WEYBURN  
 SASKATOON  
 CALGARY  
 EDMONTON

FERNIE  
 NELSON  
 GLEICHEN  
 MOOSE JAW, Etc., Etc.

FILL IN THE COUPON BELOW AND MAIL TO-DAY



CANADIAN OIL COMPANIES Limited  
 ADVERTISING DEPARTMENT, TORONTO, ONT.

Enclosed find 2c stamp to partially cover cost of postage.  
 Send me a handy oil can free.

NAME .....

P.O. Address ..... R.R. Station .....

BE SURE AND FILL THIS OUT

Quote me prices on the following:

..... Gallons, White Rose Motor Gasoline

..... Gallons, Lily White Engine Kerosene

..... Gallons, National Carbonless Motor Oil

..... Gallons, National Gas Engine Oil

## The New Oil Depot on The Portage Plains

THERE is an old adage which says "Anything worth doing is worth doing well." No better example of this could be found than at Portage

city. The property owned by the company is bounded on the south by Trenton Avenue East, on the west by Baker Street and on the east by Jeff Street.

the convenience of filling farmers tank wagons. At a glance you can see exactly how much oil or gasoline you are getting.

The Canadian Oil Companies,

petroleum, the company operate their own paint factory at Toronto, Ontario.

Their well known products, White Rose Gasoline and



THE NEW PLANT OF THE CANADIAN OIL COMPANIES LIMITED, AT PORTAGE LA PRAIRIE

La Prairie, Man., where the Canadian Oil Companies, Limited, have recently completed their new distributing plant.

The plant is situated on the Canadian Northern Railway, about half a mile due east of the

The warehouse and stables are built of solid brick; the warehouse alone containing over 5,000 square feet of floor space. All pumping is done by means of electric rotary pumps. Four graduated filling tanks have been erected for

Limited, own and operate a modern refinery at Petrolia, Ontario, Canada. The Portage la Prairie plant is a typical example of the warehouses owned by the company throughout the Dominion. In addition to the refining of

National Carbonless Motor Oil are known all over America. It has taken the company 34 years to perfect these articles and to bring them into a class by themselves.

# GAS ENGINE DETAILS

## COOLING THE CYLINDER

From  
"FARM ENGINEERING"

ON account of the great amount of heat generated in the cylinders of gas engines as a result of the frequent explosions of the fuel, provision must be made to cool the cylinders. In some cases cooling is accomplished by casting "fins" or web-like projections on the exterior of the cylinder to increase surface area, and depending upon radiation of heat from these fins to keep the cylinder cool. This method is sometimes supplemented by fans which force air against the surface and thus assist radiation. By far the most common practice at present, however, is to cast a water jacket on and as a part of the cylinder. Then this jacket is filled with water or water is kept circulating through it and around the cylinders. It goes without saying that if there is a vent in this water jacket the temperature of the outside surface of the cylinder can never rise above the boiling point of water (212 degrees Fahrenheit). Sometimes water jackets that are not an actual part of the cylinder are used. Which type is the best depends largely upon personal preference and the kind of water that is used for cooling; that is, if the water has considerable free chemical in it water jackets that are cast with the cylinder have some disadvantage in that they cannot be readily freed of chemical deposit that will accumulate in them. Water jackets for some engines are made of sheet metal so that they will fit over the cylinder and can be attached by bolts as provided in the design of the engine. Water jackets of this class can be removed from the cylinder when it becomes necessary to clean them or when repairs to the engine make it desirable.

If the water used to cool the cylinder of a gas engine contains lime or other chemical salts, the constant evaporation of the water in the jacket will cause these substances to be deposited on the walls of the cooling chamber in the form of a crust. These deposits will soon clog any narrow spaces in the jacket and prevent free circulation of water with consequent overheating of the cylinder, rapid wear of valves and general impairment of efficiency of the engine.

There are various scale dissolving compounds offered as a means for cleaning water jackets of such deposits. Probably one of the simplest remedies is to use a solution of hydrochloric (common muriatic) acid, made as fol-

lows: Dilute one part of the acid with nineteen parts of water and after having drawn off all of the water from the jacket pour in some of this solution until the entire water space has been filled. This mixture may be left in place for from ten to twelve hours, after which it should be drawn off and the water jacket washed out thoroughly with several changes of clean water. If the acid solution is allowed to remain in the jacket longer than the time stated it is likely that the metal may be attacked by the action of the acid. Usually a treatment of this kind once every two weeks is all that will be required to keep the jacket free from scale deposits. Where pure water is used, that is, water which would be commonly referred to as soft water, the de-



Hon. Valentine Winkler, Minister of Agriculture (Manitoba) and Hon. S. E. Clement, M.P.P., Brandon City, Watching the Tractor Plowing Demonstration, Brandon.

posits formed will be slight and the necessity for cleaning out the jacket much less frequent.

Some provision must be made in the form of a frame or bed to support the main bearing and cylinder, or cylinders, of every gasoline engine. Usually engines of the four-cycle type are attached to a frame of open construction unless a splash system of lubrication is used. Then, the reciprocating parts of the engine will be wholly or at least in part enclosed by what is known as the crank case. This name is somewhat confusing, however, in connection with a four-cycle engine as it is more strictly applied to the closed base of engines of the two-cycle type, which is made airtight, of course, so that the gases can be compressed before admission to the combustion chamber. Such an arrangement in the four-cycle engine is objectionable because if the hot gases should leak past the piston rings into the crank case there would be a tendency for the bearings to over-

heat and thus burn the lubricating oil and as a result cause rapid wear in the engine. The open frame prevents such a possibility as the connections and bearings may readily be inspected and wear can be taken up before damage can progress very far. Nevertheless, some designers favor the enclosed crank case. Such an arrangement is more cleanly than the open frame. Plates or removable panels are provided in the crank case of the four-cycle type of engine, if an enclosed case is used, so that parts may be easily reached, also to enable the hot gases to escape.

In certain types of two-cycle engines the cylinder and crank case are cast in one piece, with separate end plate bearings attached to the crank case to pro-

vide support for the crank shaft. Others have crank cases that are so cast that they will separate in line with the centre of the crank shaft. Regardless of which method is used the centre line of the cylinder must be exactly at right angles to the centre line of the crank shaft. In two cylinder, two-cycle engines it is very important that neither crank case should leak into the other, otherwise there would be no compression of the fuel. In order that compression may be high, the volume of the space below the piston of a two-cycle engine when at the end of the expansion stroke should be as small as possible.

In practically all gas engines the pistons are made hollow so as to receive one end of the connecting rod, this rod being connected to a cross head inside the piston. Such pistons are referred to as of the "trunk type," and are constructed in this manner to make unnecessary the use of a crosshead and guides such as are common upon steam engines, this construction making a more compact engine.

The piston is really a hollow cylindrical iron casting which is machined very carefully by turning down in a lathe so that it will have a snug, yet free, working fit in the cylinder. Usually there are three or more grooves at the head end of the piston to receive the piston rings. These make an airtight joint between piston and cylinder wall. Piston ring grooves should be made of uniform width, and square; that is at right angles with the piston face so that the rings will not stick in the grooves when necessary to remove them. In addition to the grooves provided for the piston rings there are frequently smaller grooves intended to assist in distributing lubricating oils between the piston surface and the cylinder wall. This oil also makes the piston fit more snugly so as to keep pressure from going past the piston.

In engines of the two-cycle type it is very important that the top of the piston have a certain shape, particularly when the transfer port is in the side of the cylinder. The part of the piston that projects upward and that deflects the incoming charge of gas so that it clears the cylinder of burned gases is called the deflector or baffle plate. In some designs the piston is so shaped as to deflect the gases in the same manner.

In a two-cycle engine the piston should be somewhat longer than the stroke, otherwise the exhaust port will not remain entirely closed during the compression stroke and the gas in the crank case would escape to the air. Also the piston must cover the oil hole of the cylinder lubricator sufficiently to prevent the oil from being blown back through the oil passage and splattered on the gauge glass. In order to secure proper lubrication and to keep the exhaust port covered, except when this valve or port is performing its function of exhausting, the piston should be about 25 per cent longer than the stroke of the engine.

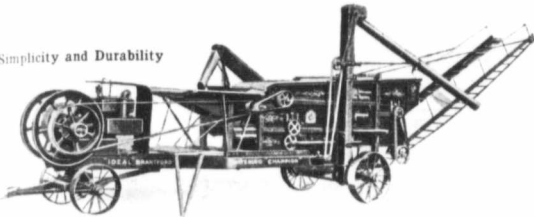
In machining practice it is generally considered that there should be a difference of .001 inch between the diameter of the piston and that of the cylinder.

Perhaps the greatest or most frequent cause of engine trouble is faulty lubrication, and this makes itself known first in the cylinder. The statement has been made and never successfully refuted that probably 75 per cent of all gas engine troubles are due

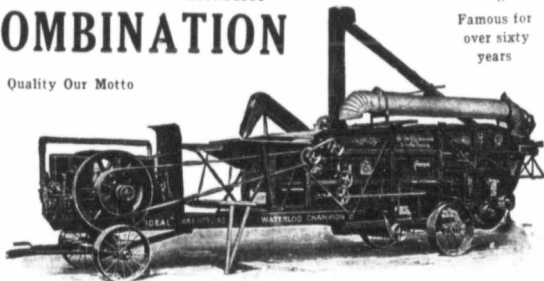
# ONLY LIVING COMPLETE COMBINATION

Famous for  
over sixty  
years

Simplicity and Durability



Quality Our Motto



## "IDEAL" CHAMPION COMBINATION OUTFITS ARE BUILT IN FOLLOWING SIZES ONLY:

- 24x36 "Champion" Separator, Hand-Feed, 18-ft. Straw Carriers, 14-ft. Wagon Loader, and 12 h.p. "Ideal" Gasoline and Oil Engine.
- 24x36 "Champion" Separator, Hand-Feed, Wind Stack, 14-ft. Wagon Loader, and 18 h.p. "Ideal" Gasoline and Oil Engine.
- 24x36 "Champion" Separator, Self-Feeder, Wind Stack, 14-ft. Wagon Loader, and 22 h.p. "Ideal" Gasoline and Oil Engine.
- 28x42 "Champion" Separator, Hand-Feed, 18-ft. Straw Carriers, 14-ft. Wagon Loader, and 18 h.p. "Ideal" Gasoline and Oil Engine.
- 28x42 "Champion" Separator, Hand-Feed, Wind Stack, 14-ft. Wagon Loader, and 22 h.p. "Ideal" Gasoline and Oil Engine.

Made in Canada

### THE PRIDE OF THE WEST

An Outfit for every Farm

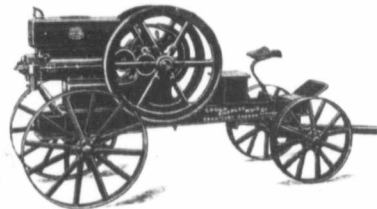


Rigid Construction  
Easily Moved  
8-inch Channel Steel Frame  
The Best Individual Thresher Sold.  
Ask for Prices and Particulars

The "Ideal-Champion" Combination Outfit is positively guaranteed to be practically without vibration when in operation. Absolutely no special brace for lifting jack required to steady the machinery while operating the outfit.

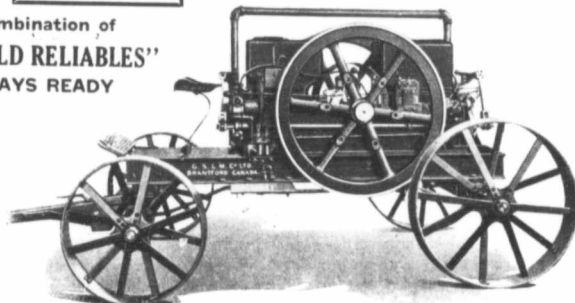
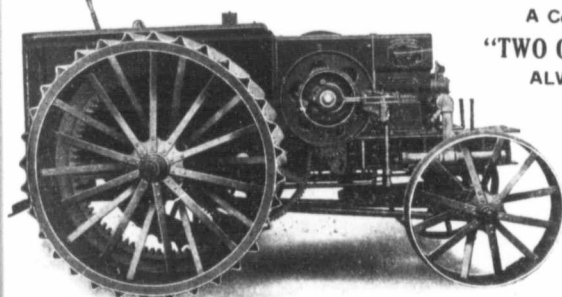
ASK THE MAN WHO OWNS ONE

Every outfit bears our name—we are proud to have it on each machine



Single Cylinder Engines manufactured in sizes 3 1/2, 4 1/2, 6, 8, 10, 12, 16, 18 and 25 h.p. Portable Engines are mounted on steel Trucks and steel Frame.

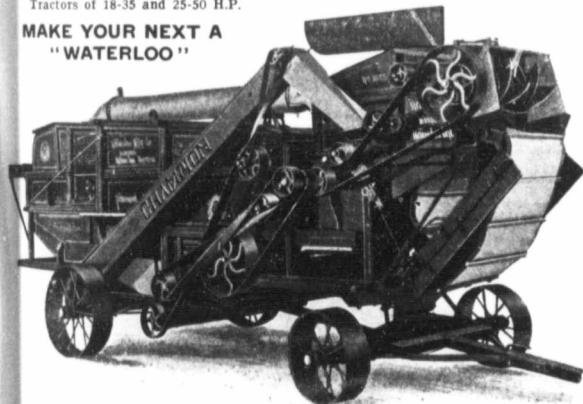
### A Combination of "TWO OLD RELIABLES" ALWAYS READY



Before buying investigate the New "IDEAL" Light Weight 15-25 H.P. Opposed Cylinder, Hopper Cooled Oil Tractor. See pages 5, etc., of this issue for record of this engine in plowing demonstration at Brandon Fair. We also manufacture Oil Tractors of 18-35 and 25-50 H.P.

"OPPOSED" CYLINDER ENGINES Manufactured in sizes 18, 20, 22, 30, 35, 45 and 60 h.p. All engines supplied with Friction Clutch pulleys, and Equipped with High Tension Magneto. No batteries required for starting. Write for free Catalogue.

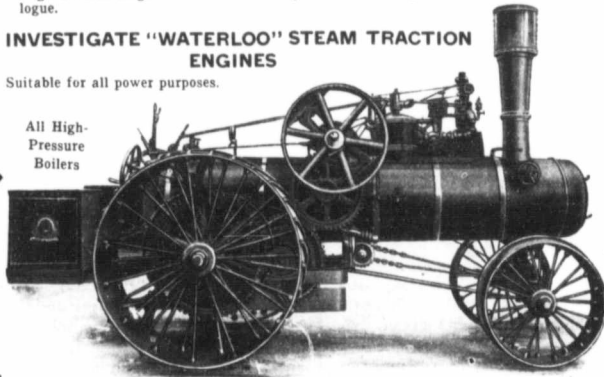
### MAKE YOUR NEXT A "WATERLOO"



### INVESTIGATE "WATERLOO" STEAM TRACTION ENGINES

Suitable for all power purposes.

All High-Pressure Boilers



"WATERLOO CHAMPION" (A successful competitor against all rivals—vide Webster). Waterloo Champion Separators are built in sizes to suit the requirements of the Farmers and Threshers of Western Canada, 24x36, 28x42, 33x52, 36x56, and 40x62. Catalogue giving full information will be mailed free to any address on request.

"WATERLOO" Threshing and Farm Power Machinery, the standard of value and quality, economy in operation, economy in maintenance and economy in purchase price. "Waterloo" machinery is always dollar for dollar value. A "Waterloo" steam tractor can be depended upon for satisfactory service at all times. ASK THE MAN WHO OWNS ONE. Portable engines built in 16 h.p. size only. Waterloo tractors in sizes of 16, 18, 22 and 25 h.p. A special size to suit every requirement.

ADDRESS ALL CORRESPONDENCE TO  
**THE WATERLOO MANUFACTURING CO. LIMITED** OR **THE GOOLD, SHAPLEY & MUIR CO. LIMITED**  
 Regina, Sask. Portage la Prairie, Man. Winnipeg, Man. Regina, Sask. Calgary, Alta.

to faulty, incorrect, or insufficient lubrication. On account of the very high heat generated in the gas-engine cylinder one should realize that only oils having certain characteristics are satisfactory for gas-engine cylinder lubrication; that is, the oils that are adapted to and may be best for steam engine cylinder lubrication would not in any way whatever be suited to lubricating the cylinder of a gas engine. The most common of errors in gas engine lubrication is using oil that is too thin—one that has too little "body." This probably results from the common belief that an oil must be light or readily fluid to reach all working parts.

It is not generally known that the body of an oil at temperature of the air is quite different from that at which the lubricant passes through the bearings. The heat of the explosion in the gas engine cylinder may range from 2,000 to 3,000 degrees Fahrenheit. Piston heads as a result may be heated to a temperature ranging from 300 to 1,000 degrees. Piston wall and crank pin temperatures will vary from 200 to 400 degrees, and in spite of the best cooling system possible cylinder walls will vary in temperature from 180 to 350 degrees.

It can be seen that on account of these high temperatures the oil must possess certain qualities, the most important of which are a proper flashing (burning) point and viscosity (body). The flashing point of an oil is the temperature at which the vapors given out by heating will ignite themselves or by a naked flame. Viscosity is measured by the number of seconds required for a certain amount of oil to pass through a certain aperture at constant temperature. Gasoline is highly non-viscous, while syrup, for instance, is highly viscous.

Color does not by any means indicate the quality or suitability of an oil for gas-engine lubrication. Neither does the cold test show the lubricating or heat resisting qualities of a lubricant. As the firing of an oil is always above its flash point its value is of minor importance.

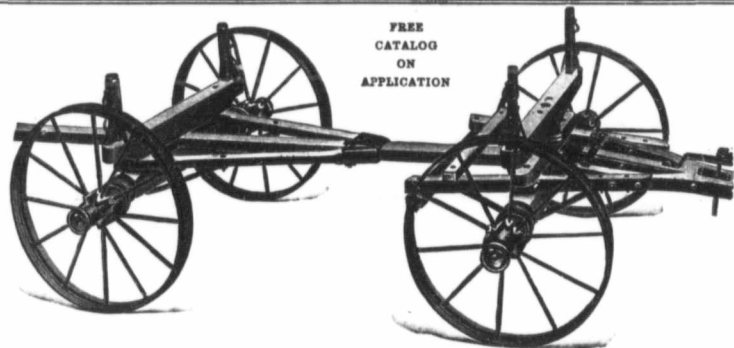
A lubricating oil cannot be produced that will not leave some carbon when it is exposed to the high temperature of an explosion varying from 2,000 to 3,000 degrees—considerably above the flashing point of any oil. Therefore, the claims of some manufacturers that their product is non-carbon are misleading.

To properly lubricate the pistons, rings and cylinder walls these surfaces must be coated with a film of oil. When the piston is driven downward by the explosion the film is subjected to intense heat and as a result part of the oil is flashed off, escaping

with the exhaust gases. On the upward movement of the piston a quantity of the partly burned oil is carried into the combustion chamber, where it covers the walls and is entirely consumed by the heat. It is obvious, therefore, that some carbon must be deposited from any lubricating oil, regardless of how high quality it may be.

Among the motor troubles that are common from improper lubrication are those which result from using an oil too long. Because a gauge may indicate there is a sufficient supply in the reservoir, many gas engine operators take it for granted that the working parts will be properly lubricated. This is not necessarily true. The oil will undergo some kind of a change and should be drained from the crank case or sump of the motor occasionally, and the system rinsed out thoroughly with kerosene before renewing the supply. It is poor economy to add a pint or two of oil so as to bring the old supply to the proper level.

There are several systems of motor lubrication and some of these do not require cleaning as frequently as others. There is the "all-loss system," in which the supply of oil is renewed at an adjustable rate and corresponding to the consumption. Other types, such as the "circulating," in which the oil is used over and over again, require cleansing more frequently, because fresh lubricant is not added from time to time from a reserve supply. The first system is one in which the oil is supplied from an auxiliary source and is entirely consumed. These include what is termed the separate force feed, in which the oil is fed in proportion to the motor speed to the crank case or working parts by a pump or by the pressure of the exhaust. With



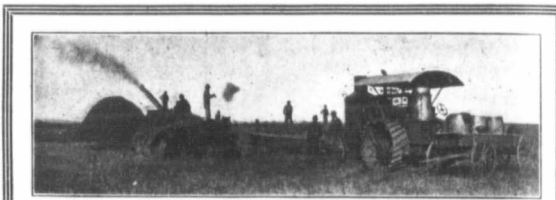
FREE CATALOG ON APPLICATION

**John Deere Moline Wagons**  
**Port Arthur Wagons**

No. 27 NORTHERN CHIEF TRUCK WITH GROOVED TIRES (built like a wagon)  
No. 13 COOK TRUCKS  
No. 15 FARM TRUCKS  
UNIVERSAL FARM GEARS  
No. 22 FARM TRUCKS  
No. 35 FARM TRUCKS  
COMMON SENSE TRUCKS

**JOHN DEERE PLOW COMPANY, LIMITED**

WINNIPEG REGINA SASKATOON CALGARY



This Man Threshed His Grain on Kerosene

## Not a Moment to Lose!

### These Facts Face Every Thresherman and Farmer:

Gasoline is an expensive fuel—Kerosene is Cheap!  
Rapid advances in raw material are boosting prices!  
Shortage of labor in Canada demands concentrated power.

### Our Answer is—

Hart-Parr Tractors Burn Kerosene!  
Hart-Parr Prices on Threshing outfits are still most reasonable!  
The Time to take advantage of them is right now. Don't delay.  
Hart-Parr Tractors are built in six sizes; take the place of several hired men and from 8 to 25 horses.

### Save Your Money.

If you burn 4,000 gallons of fuel in a season's run—	
Gasoline at 30 cents .....	\$1,200.00
Kerosene at 8 cents .....	320.00
Saving from Kerosene .....	\$ 880.00

A Hart-Parr Tractor will put that money in *Your Pocket*. We write it in our contract that Hart-Parr Tractors burn Kerosene—get just as much power on it—use no more gallons of it. See that it is written in your contract.

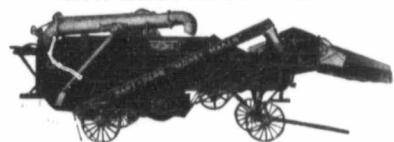
And besides, remember that Hart-Parr Tractors are backed by the oldest, biggest and most reliable firm building tractors exclusively in the world.

### \$192.00 in Extra Separator Features—

We give you \$192.00 worth of extra features in the Money Maker separator without a cent of extra expense. A post card brings full information.

At Every Demonstration Hart-Parr invites all threshermen and farmers to make themselves at home at Hart-Parr Headquarters during any of the big national demonstrations. Let us know which one you will attend. Write us to-day.

### FAMOUS MONEY MAKER SEPARATOR



Only Separator double leather belted—double eccentric driven

## HART-PARR CO.

PORTAGE LA PRAIRIE REGINA SASKATOON  
Home Office: Charles City, Ia.  
Founders of the Tractor Industry—Builders of Tractors That Last

Twelve Months of this Magazine for \$1.00

such a sy  
renew, fro  
ply in the  
which it  
of the wc  
splash or  
splash and  
to the wo  
tems do r  
often as t  
fresh oil i  
pump. Th  
system is  
tem. Oil  
the crank c  
is reached,  
volves, dip  
the connect  
ricant, feed  
the rods to  
and part of  
cup-like re  
bearings,  
splashed u  
cylinders, t  
and rings, a  
ed into the  
ping onto th

And Ge  
The milit  
Irish regim  
or two thing  
"Strategy  
whin ye don  
cover that th  
out, but just 1



"When I don't work I don't eat"  
BURNS KEROSENE. ONE MAN CAN OPERATE IT

**EXCLUSIVE FEATURES OF THE "PEORIA" TRACTOR**

- 1.—The draw bar pull without the weight.
- 2.—Larger frame than any light weight tractor of equal power.
- 3.—More simple than any tractor—only 102 parts exclusive of motor. Can you beat this for simplicity?
- 4.—Easiest machine to get at. Just look it over again, and this point will prove itself to you.
- 5.—Floating draw bar that will automatically adjust itself to all conditions.
- 6.—No side draft—a direct pull right behind the driver.
- 7.—A tractor so well balanced that same can be operated on most any land where horses can be worked to advantage.
- 8.—Larger driver (18 inch) 60 inches high—larger master gear (31 inch face) and steel pinion; cut steel transmission gearing enclosed and running in oil, all straight spur gear driven.
- 9.—Special designed hatchet shaped lugs—4 1/2 inch high (can't be beat for working in soft and sandy ground).
- 10.—A power plant of the four cylinder vertical type, most compact and accessible—a power plant of the foremost development for farm power, with all equipment of the very highest class.
- 11.—The power of the Peoria Tractor is transmitted from the motor to the draw bar by direct line drive through straight spur gearing. No beveled gears used in the Peoria, thereby decreasing wear and tear and increasing general efficiency.

**THE MOTOR.** Big 4 cylinder, 4 cycle, vertical, heavy duty, slow speed motor rated 20 H.P. on the belt pulley. Designed especially for Peoria Tractor needs—strong and substantial.

- 1.—BURNS KEROSENE the only cheap fuel.
- 2.—Weight only 3,900 pounds.
- 3.—One man (inexperienced) can operate.
- 4.—Extreme simplicity.
- 5.—The Peoria Tractor is absolutely self-steering when plowing. Steering attachment standard equipment—no extra charge.
- 6.—Enclosed type of Radiator of the most improved and substantial construction. Air being forced through radiator by a 21-inch fan. Dust Proof.
- 7.—Cut steel transmission gears entirely enclosed and operating in a bath of oil.
- 8.—Sliding type of transmission gear change.
- 9.—Underslung frame, insuring perfect balance of tractor.
- 10.—Operator's view unobstructed when guiding the tractor; furrow can easily be seen from operator's seat.
- 11.—Steel front fork and pedestal.
- 12.—Change gear shifting lever and quadrant of standard design, with marked quadrant. Shifting lever has ball at the end to fit the hand for easy shifting.
- 13.—Direct pull on floating type of draw bar, self-adjusting when tractor is operated over uneven soil conditions. Absolutely no side draft.
- 14.—Has speed of from 2 to 3 miles per hour.
- 15.—Can be most successfully operated for harvesting and threshing.

Demonstrations at Brandon proved conclusively that the Peoria tractor accomplished easily all that we have claimed for it

**THE NEW 1916 PEORIA TRACTOR \$1050.00**  
F. O. B. WINNIPEG

burns KEROSENE at all loads. Kerosene costs less than one-half the price of gasoline—the cash you save on fuel is substantial. The "Peoria" gives you an ever-ready farm power—never gets tired nor sick—eats only when it works and gives you more profitable work with less expense. Read what actual **USERS** say about it. Fill in the coupon and mail to-day. Make it a special point to do this—the information you will receive will be to your advantage.

ALL ORDERS CAN BE FILLED IMMEDIATELY

**J. D. ADSHEAD COMPANY**

Canadian Representatives

WINNIPEG, MAN.

FILL IN AND MAIL NOW

J. D. Adshead Co., Ltd.  
Winnipeg

Send full particulars of Peoria Tractor at once.

Name \_\_\_\_\_

Province \_\_\_\_\_

such a system it is necessary to renew, from time to time, the supply in the tank or reservoir from which it comes. The lubrication of the working parts may be by splash or by a combination of splash and ducts or pipes leading to the working parts. These systems do not require cleaning as often as the circulating type, as fresh oil is being supplied by the pump. The simplest lubricating system is the straight splash system. Oil is poured directly into the crank case until a certain level is reached. As the crank-shaft revolves, dippers in the large end of the connecting rod strike the lubricant, feeding it through holes in the rods to the crank-pin bearings and part of the oil is splashed into cup-like recesses over the main bearings. Some of the oil is splashed upon the walls of the cylinders, thus lubricating pistons and rings, and still more is splashed into the hollow pistons, dropping onto the wrist pin.

**And Get Bullseyes Too**

The military instructor of an Irish regiment was explaining one or two things to the class.

"Strategy in war," he said, "is when ye don't let the enemy discover that the ammunition is run out, but just kape on firing."

**New System of Tractor Ratings Needed**

There is some agitation in the tractor world for a new and more satisfactory system for rating tractors. And, to say the least, it appears to us to be a very sensible thing to agitate. As conditions are at present there is very little uniformity in rating tractors, and often two machines of different make, yet the same size, will be found to have widely different ratings.

The present system is really not a system at all, except that the same terms are used by practically all manufacturers. Every manufacturer can decide for himself whether he will rate his machine conservatively or not and then arbitrarily say that it is of a certain horsepower and will pull a certain number of plows.

Rating a tractor by its horsepower is definite enough, but it is misleading to some people because they think the tractor should replace the number of horses represented by its rating. It will not do this, because the tractor does not have the reserve power of a horse. One horse can, for short periods of time, exert three or four times the power it could give continuously for eight

or ten hours, but a tractor can be depended on for its maximum power continuously, so it is rated at or very close to this maximum figure.

The term horsepower was decided upon by experiment when Watt was perfecting the steam engine. It represented the average power of the large number of horses that were used in the experiments, but as these were large draft horses they were considerably stronger than the average horse one finds on the farm. So a "horsepower" would in the course of a day represent more work than a horse would do.

Rating a tractor by the number of plows it will pull is the most unsatisfactory way of all. Such a rating is not a rating at all. Anyone knows that plows pull two or three times as hard in some soils as in others, and even in the same field the plows will require more power some days than others because of the conditions of the soil. Such a rating also does not take into account the increased resistance due to hills. There seems to be a growing tendency to discontinue rating tractors for any definite num-

ber of plows and substitute for it the pounds of pull they will exert at the draw bar under ordinary favorable conditions and the normal speed at which it will travel.

There is much need and considerable agitation for some standardization among tractors, and to our mind the matter of ratings should be one of the first considered. The farmer who buys a tractor that is definitely and conservatively rated will prove a much better satisfied purchaser than the man who buys a tractor that has been rated high in order to make it sell easy, even though the latter is a good machine.

**Well Drills**

For Drilling WELLS or BLAST-HOLES

Built to stand up under heavy work. Most economical and rapid drillers made. Styles and sizes for all purposes, with or without power.

Write for Circular WILLIAMS BROS. 428 West State Street, Ithaca, N.Y.

**Strite Variable Speed Governor**

Is the best by every test for running cream separators, washing machines, faning mills, or any light machinery. More cream separators driven by Strite Governor Pulleys than all others combined. THERE'S A REASON—ASK US.

6181/2 GOVERNOR PULLEY CO. S. 8RD ST., MINNEAPOLIS



# PRACTICAL TALKS TO THRESHERMEN

**CXV.**  
**G**AS tractors now occupy the center of the stage. The spot light is on them and some of the old steam traction engine companies have practically dropped steam entirely. One very successful steam engine manufacturer made the statement a few weeks ago that his company had discontinued one model and after next year would probably never build another steam traction engine. This company, by the way, is one of the old threshing machine companies and makes hundreds of grain separators every year. Evidently he believes that the threshing power of the future will be gas engines since he has no intention of abandoning the manufacture of threshing machines. Other threshing machine manufacturers are thinking along the same lines and it looks as though the tractor might displace the steam tractor in its principal stronghold. And yet there are a few indications that they may be all wrong. Let us analyze the steam situation.

The steam engine is just about one hundred and fifty years old. There were very few steam engines made at an earlier date but they were awkward and wasteful. Improvements in steam engines were very slow. For years low pressure steam was used. It was not until steel boiler plate became common that high pressure boilers were possible and high pressure boiler was developed. Starting in with steam at from five to ten pounds pressure we gradually worked up to pressures of twenty-five and thirty pounds. Then came condensing engines, later on Corliss engines, compound engines and triple expansion engines. Then only a very few years ago the steam turbine was perfected. That has occurred within the past twenty-five years.

The early steam engines were very inefficient. They required from fifty to one hundred pounds of water to develop one horse power for one hour. High pressure steam and better workmanship cut this down to thirty or forty pounds. The condenser increased this economy by a considerable amount. Then came the Corliss engine with its efficient valve gear which reduced the water consumption to twenty

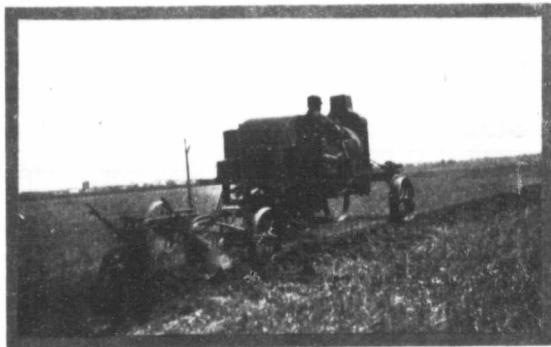
pounds per horse power hour. A condenser reduced this consumption another twenty per cent. Finally the triple expansion engine was developed in large size that brought the water consumption down to twelve pounds and it seemed that perfection had been reached.

But progress always continues. The steam turbine was developed and even in small units it was made almost as efficient as the great triple expansion engines. People said: "The reciprocating engine is a thing of the past; it is out classed; the turbine will take its place"; and for some kinds of service this prophecy has come

power hour. A few have gone below this figure but most of them are above. They are heavy, awkward machines—they require much fuel and water and constant attendance and naturally they have been or are being superseded. But the question always remains, Is this necessary? Is it not possible to design a better steam tractor than any one has yet thought of? Can not some of the later discoveries in the stationary field be modified to suit tractor requirements and if so is there not as good a fighting chance for the light weight, efficient steam tractor as for any gas tractor? One thing is certain, the possibilities have not been exhausted.

Moreover, there are some who believe in the renaissance of the steam tractor and one concern at least has faith enough to try what can be done. This concern contemplates using a high pressure tubular boiler of improved design and a uniflow engine of the Stumpf or some similar type. In connection with the engine and boiler it is planned to use a condenser which will not only increase the efficiency of the engine but will enable the water to be used over and over again. The tractor will be spring mounted throughout, cut steel gearing will be used, and an efficiency of from twelve to fifteen pounds of water per horse power hour is promised. It is expected that this machine with an engine capacity of 40-horse power will not weigh to exceed eleven thousand pounds and may drop below ten thousand. The cost of manufacture will probably run rather high and this may prevent its rapid introduction for farm use. However, if it has the flexibility and reliability expected of it, and if its economy is as high as promised, such a tractor ought to find an increasing market from year to year. It will be interesting at least to see modern steam engineering methods applied to the tractor, for this field of investigation has been neglected for many years.

One thing is clear to me; the no indulgence of passion destroys the spiritual nature so much a respectable selfishness." — George Macdonald.



Alone: but not Companionless

true but not entirely. The success of the turbine stirred up other inventors with the result that there are reciprocating engines now on the market that produce a horse power hour for as low as nine pounds of water an hour.

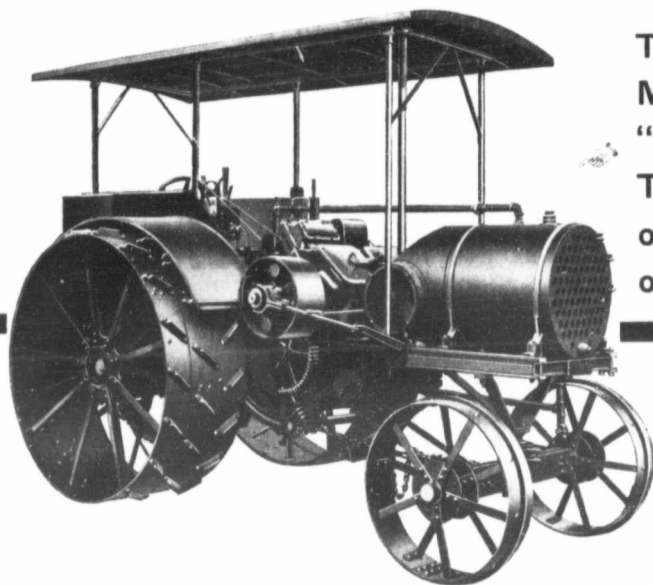
Coincident with the improvement in engines there has been a corresponding improvement in boilers. There must have been, otherwise there could not have been such progress, for the efficiency of the steam engine is in reality the combined efficiency of the boiler and the engine. The boiler must evaporate the water with the minimum amount of heat and then the engine must turn the greatest possible amount of this heat into useful work. The best boilers are now capable of evaporating between nine and ten pounds of water per pound of good steam coal. Or, if such a boiler is used with the most efficient type of steam engine, less than one pound of good steam

anywhere at from six to eight dollars or at from fifteen-hundredths to four-tenths of a cent a gallon. Gasoline at twenty cents a gallon costs from seven to seventeen times as much and in the best engines it has very little more efficiency than the best steam engines. It would seem, therefore, that the last word has not yet been said in favor of steam. And if gasoline goes up in price we may sometime see a revival of the steam traction engine for farm use.

It is a fact that steam traction engines have not shown any very marked improvement in design for half a century. There has been a little better workmanship, higher steam pressures have been carried and minor improvements have been made but the same old type of engine and boiler still exists. The water consumption of these engines is where the steam engine was two generations ago—around thirty pounds of water per horse

power hour. A few have gone below this figure but most of them are above. They are heavy, awkward machines—they require much fuel and water and constant attendance and naturally they have been or are being superseded. But the question always remains, Is this necessary? Is it not possible to design a better steam tractor than any one has yet thought of? Can not some of the later discoveries in the stationary field be modified to suit tractor requirements and if so is there not as good a fighting chance for the light weight, efficient steam tractor as for any gas tractor? One thing is certain, the possibilities have not been exhausted.

One thing is clear to me; the no indulgence of passion destroys the spiritual nature so much a respectable selfishness." — George Macdonald.



**That Mighty Valve-in-Head Motor puts the "Snap" and "Power" in Aultman-Taylor Tractors--It's your guarantee of more work on fewer gallons of Gasoline or Kerosene.**

**Valve-in-Head Motor and Straight Spur Gear Transmission means most power per unit of fuel either at belt, pulley or draw bar.**

In some respects you demand of a tractor what you would expect of an automobile—a quick, snappy engine—an engine with great energy with some reserve to help out in emergency cases. You would rather have an engine under-rated than over-rated. In other words, were you to buy a tractor rated at, say 25-50 h.p., you would expect it to develop its maximum rating and more—not for an hour, but for days and weeks if necessary. Then believe us when we say you'll not appreciate what engine responsiveness means—what real engine "pep" is until you have pulled the throttle on an Aultman-Taylor Tractor. You'll be startled, but just for a minute—then you'll understand—a glance tells you that it's our own specially designed horizontal, valve-in-head motor. This motor differs from ordinary motors in this respect. The valve which feeds the gas to the spark is located right in the head and has a large sweeping opening which offers no resistance to the flow of gases. At every firing every particle of gas is instantly converted into power that smashes straight and hard against the piston head. No part of this power is expended in turning short corners as is the case with other types of motors. This motor will develop 15 per cent more power on the same amount of fuel than any other type of motor of equal size. Think what this means to you in fuel consumption. It's your guarantee of more work on fewer gallons of gasoline or kerosene. Certainly you'll not overlook this point just at this time when fuel prices are soaring. You had better look into this motor feature, as well as numerous other noteworthy features, which place A. & T. Tractors in a class by themselves.

## **Aultman-Taylor Tractors are not Ordinary Tractors**

If experience counts for anything, and it certainly does, we have every reason to say that A. & T. Tractors are not ordinary tractors. This farm power business is not new to us. We have been at it since '66." This old organization of farm power engineers have not been sitting around all these years with a deaf ear turned towards the farmer and his power needs. We have studied power farming from every angle. We have sought the very latest authoritative information on agricultural conditions from every corner of the globe. With this information before us, we designed and built the first Aultman-Taylor Tractor. It is needless to say it met with instantaneous success. In the 1912 Winnipeg contest it proved it was without an equal. Then we followed with the two smaller sizes. You know they have been equally successful. To-day Aultman-Taylor Tractors are built in three sizes—18-36, 25-50 and 30-60 h.p.—a size to fit your farm.

## **Buy Your Tractor from a Reliable Firm**

We know that you are shrewd enough to profit by the costly experience of many a brother farmer who was led to believe that a light, cheap tractor was what he needed, only to wake up later to the fact that he had bought something more annoying and about as worthless as a balky horse. You want a good tractor and you cannot get it for a song. Now why not buy a tractor with a reputation for doing things back of it—a tractor backed by a firm that is absolutely responsible and makes good on every claim—every promise? Why not buy an Aultman-Taylor Tractor and eliminate all the elements of chance? Aultman-Taylor Tractors are real, everyday tractors—honestly and carefully built by one of the oldest and most responsible concerns in the business to-day. Aultman-Taylor Tractors are built to "MAKE GOOD" and we see to it that they do it.

**SIT DOWN RIGHT NOW AND DROP US A POST CARD, ASKING US TO GIVE YOU FULL INFORMATION ABOUT OUR TRACTORS. IT WILL COST YOU BUT A PENNY AND WE SHALL BE GLAD TO FORWARD YOU THE DESIRED INFORMATION WITHOUT ONE CENT COST TO YOU. WRITE US TO-DAY, PLEASE**

**The AULTMAN & TAYLOR MACHINERY COMPANY**  
**LOCK BOX 64, MANSFIELD, OHIO**

**Branches: MINNEAPOLIS, Minn.; GREAT FALLS, Mont.; REGINA, Sask.; CALGARY, Alta., Canada**



# THE FAMOUS CASWELL ADJUSTABLE BELT GUIDE

IS FOR SALE IN CANADA BY

The Garden City Feeder Co. of Regina, Sask.

Write for Prices

**T**HERE are three general sources of fuel, which it is possible to use in an internal combustion engine. These are mineral, vegetable and animal. The principal products are oils and their derivatives, and another vegetable product, alcohol. Of the oils, those of animal origin are of rather small promise on account of their high cost. From vegetable sources, our fuel of greatest promise is alcohol, although practically all of the vegetable oils may be burned directly in high compression engines. Liquid fuels of mineral origin may be derived from one of four principal sources. The chief among these at present is petroleum, or what we might call "free oil."

Our second source is oil shale. Our third, coal, and our fourth, peat. Our principal liquid fuel, and the one of the greatest importance at the present time, is gasoline. Many of our stationary and marine engines, however, are using heavier petroleum derivatives, beginning with the distillates, such as are employed in California, and running down the scale, even to the heavy fuel oils, which have a gravity under 20 deg. Baume. In general it may be said that gasoline, particularly in small engines, is the most convenient of all our fuels. Not only because of the ease with which it can be handled in a large variety of engines, but also on account of its almost universal distribution, which makes it readily obtainable at the smallest cross-roads store.

Next in line in the way of liquid fuels is kerosene, a fuel which the gasoline of to-day is approaching very rapidly. Kerosene is possibly more widely distributed than gasoline, and can be obtained quite as readily as the latter fuel. On the Pacific coast we have the intermediary fuel, distillate. All these fuels can be burned in the ordinary engine.

After we leave kerosene we begin to go into another class of engines quite generally called oil engines, of both the medium and the high-compression types. In the medium compression type, we have the semi-Diesel engine, ranging in compressor from 80 to 300 lbs. per square inch, and capable of using almost any fuel, from kerosene down to the low grade fuel oils. In the Diesel, and its twin brother, the Brons, each with a compression pressure of 450 lbs. per square inch, we have a type of engine that will handle about the same range of fuels as the semi-

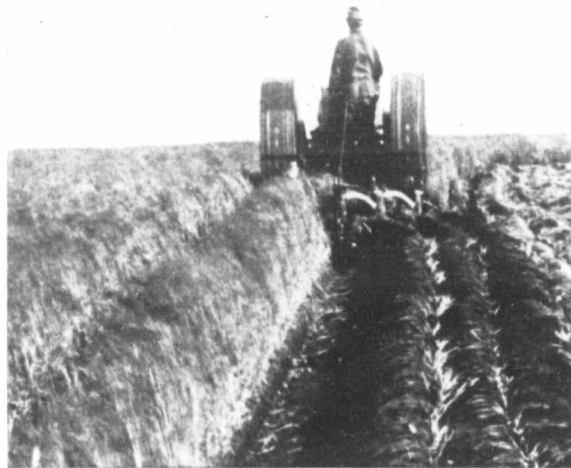
## Liquid Fuels---Present and Future

By E. W. ROBERTS, Managing Editor The Gas Engine, Cincinnati, Ohio

Diesel. In fact, both the medium and the high compression type of engine appear to operate with less trouble on oils heavier than kerosene itself. We have, therefore, practically the whole range of petroleum derivatives available as fuels, for internal combustion engines. For engines of the high compression type, we have available, vegetable oils, such as cotton seed oil, olive oil, coconut oil and mustard seed oil. It may be news

sufficient for about only 25 years to come.

When this source of supply has been exhausted where shall we turn for our liquid fuels? Our first source of supply will undoubtedly be our shales, of which we have a great abundance. It is undoubtedly known to most of you that the oil shale industry of Scotland has been in active operation for over 60 years with shales having an average yield of about



The Galloway Efficiency Farmobile, doing successful work in a low, wet, trashy field. It is pulling 3 14-inch Plows, 8 inches deep.

to the readers of this magazine that engines were operated on coconut and mustard seed oils nearly twenty years ago. This is in India, where these oils are cheap.

In this country, for some time to come, we will undoubtedly depend on our petroleum resources, that is, our free oils for liquid fuels, to be used in internal combustion engines. At present, the deposits of oil "in sight" in known oil lands, is estimated at anywhere from 25 to 40 years' supply at the present rate of consumption. This does not consider oil lands not yet discovered, and therefore we might estimate that at the present rate of consumption, our supply of petroleum is sufficient for the next 50 years. But it must be considered that our consumption of petroleum is increasing rapidly, and therefore the possibilities are that our resources at present are

30 gallons per ton. An investigation of our largest known shale deposits, those of the White River district of Colorado and Utah, shows that they are nearly equal in yield to those in Scotland. There is this difference, however, between the White River shales and those of Scotland, in that the White River shales contain more or less free oil, while the oil of the Scottish shale is obtainable by destructive distillation only.

Another source of liquid fuel is coal. The liquid fuel from coal may be obtained in three different ways: First, by destructive distillation of the coal itself, such as was used for some time in Scotland, where bog-head coal was the source of petroleum, before the beginning of the oil shale industry. Another source is from by-product coke ovens, and still a third, from our gas tars. It is well recognized that our coal re-

sources are so enormous that we may be said to have taken off only a corner from this enormous block of fuel.

So far as our oil shales are concerned, our use of this source of supply will depend entirely on the market price of petroleum, as compared to the cost of the crude as derived from the shale. By operating refineries in the neighborhood of shale deposits, thus reducing the cost of transportation, it is probable that the oil may be derived from the shale at the cost ranging from \$3 to \$4 per barrel. It will, therefore, be profitable to use our shales as a source of supply, when the price of oil exceeds this figure. The investigations made by the Bureau of Mines has been principally in relation to the shale deposits of Colorado, Utah and Wyoming, but information from various sources appears to show that there are large deposits of shale in other states. The writer recalls an expression of a government expert to the effect that there is enough oil in the shales lying above the Trenton, under the states of Ohio and Indiana, to fill Lake Huron.

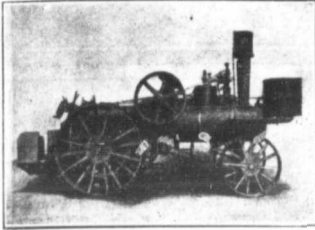
The oil derived from these shales is very similar to that obtained from our wells. Under ordinary refining methods it yields 10 per cent gasoline and 35 per cent kerosene. There is an indication, however, that the oil contains by-products not found in petroleum from wells, that will make a source of revenue additional to that obtained from the ordinary petroleum derivatives.

The liquid fuel question that seems to be attracting more attention than any other, to-day, is the question of gasoline supply and price. All of you are undoubtedly aware that by recently invented processes gasoline can be derived from the heavy petroleum residuums by what are known as cracking processes. In other words, after the crude has gone through the ordinary refining processes, and the gasoline content running anywhere from 1 to 25 per cent has been taken off by fractional distillation, we can take the lower scale derivatives and by special treatment transform them into gasoline.

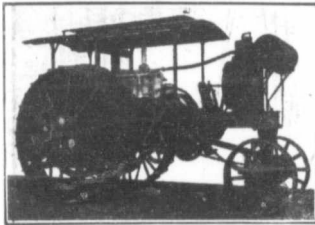
Continued in September issue

"I can take a hundred words a minute," said the stenographer.  
"I often take more than that," said the prospective employer.  
"But then, I have to, I'm married!"

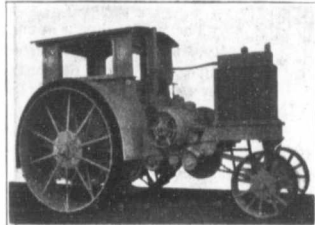
# "The Great Minneapolis Line"



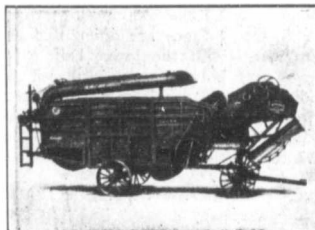
**B**eautiful in Appearance



**E**conomical to Operate



**S**atisfactory Service



**T**hreshes Fast

**POWER** Your power problem will be solved in a most satisfactory and profitable manner if you make your selection from

## "The Great Minneapolis Line" of Gas or Steam Engines

They are built in a most pains-taking manner, of the best materials the market affords and under the direct supervision of past masters in the art of mechanical construction.

You'll be **safe** with Minneapolis **Power**  
You'll be **satisfied** with Minneapolis **Service**  
**Ask any Owner**

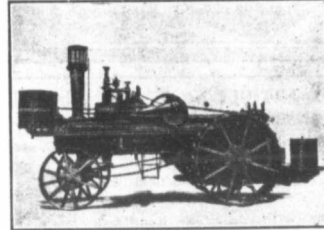
## Threshers

You should take the time and go to the trouble of examining a Minneapolis Separator carefully and thoroughly. You will then realize why they are so popular, why our large increased output of last year fell so far short of supplying the demand and why that demand is constantly increasing.

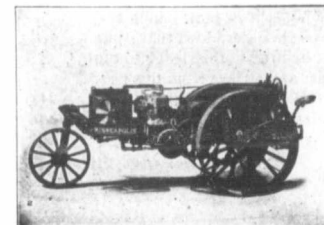
- While inspecting note particularly
- The Strong Rigid Frame**
- The Big Cylinder with Self-Oiling Cylinder Boxes**
- The Concaves, their adjustability and reinforcements**
- The Great Separating Grate**
- The Big Keystone Tool Steel Teeth (patented)**
- The Motion of Straw Racks**
- The Innumerable Conveniences for Saving Time and Trouble**
- Makes Money for both Thresherman and Farmer because it threshes a maximum amount of grain at a minimum expense and**

**"It Saves the Farmer's Grain"**

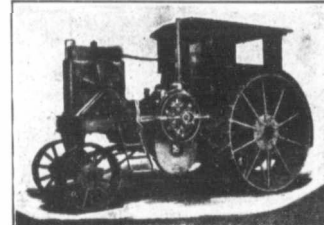
Get a Catalog and Testimonial Booklet



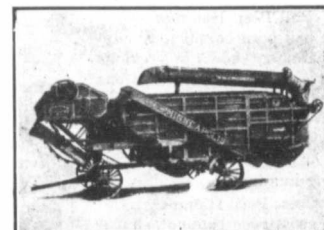
**E**xcellent Construction



**V**ery Reliable



**E**xceptionally Durable



**R**uns Steady

# The Minneapolis Threshing Machine Co.

HOPKINS (West Minneapolis) MINNESOTA

REGINA

WINNIPEG

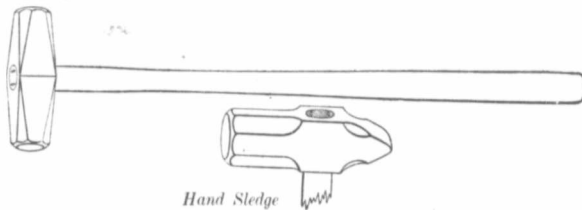
CALGARY

EDMONTON



**ARTICLE No. 6  
ANVIL AND TOOLS**

A hand sledge, shown in cut, is larger than the hand hammer. It weighs from 5 to 8 pounds and is used by the helper, who holds it with both hands. The handle is from 26 to 34 inches long, and not so slender in proportion as the handle of the hand hammer. In striking with the hand sledge, the helper holds it in both hands and strikes a shoulder blow, that is, he raises the head of the sledge to the shoulder and strikes from this position. Both large hammers and hand sledges are frequently called flogging hammers.



Hand Sledge

**Swing Sledge**

The swing sledge, one form of which is shown in cut, weighs from 8 to 20 pounds, or more. The handle is about 3 feet long. In using the swing sledge, the helper grasps the handle near the end with both hands, and strikes a full armswing blow. This sledge is used for striking a heavy blow. The swing sledge is also made of the form shown as hand sledge.

**Ball Peen Hammer**

The ball peen hammer, or clipping hammer, shown in previous cut, is a hand hammer that has the peen in the shape of a ball. The peen is used in riveting, or where it is required to stretch the metal in length and width, or for working in a hollow.

**Cross Peen Hammer**

The cross peen hammer, shown in previous cut, is used when it is required to stretch the metal lengthwise, but not crosswise. The cross peen hand hammer is also used for riveting.

**Long or Straight Peen Hammer**

The long peen or straight peen hammer, shown in previous cut, is used when the metal is to be spread sidewise. These hammers are made of different weights, and are selected to suit the work and the strength of the smith. A good set of hand hammers consists of a 1 pound ball peen, a 1½

pound straight peen, and a 2-pound cross peen hammer.

**Materials Used for Hammers**

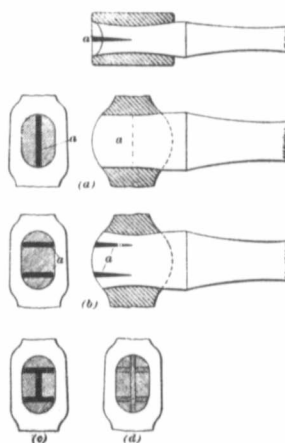
Hammers were formerly made of wrought iron or mild steel and faced with tool steel. If the whole head is made of tool steel, it is liable to chip and crack, but with a soft backing this is avoided to a great extent. Hammers made of a special cast steel, called hammer steel, are much used at present and give entire satisfaction.

**Hammer Handles**

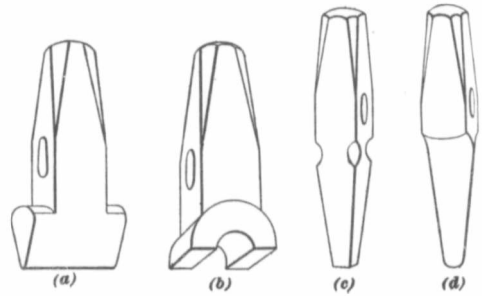
Hammer handles should be made of the best quality of white, straight-grained, second growth

hickory that has been well seasoned.

The handle should be carefully fitted to the eye in the hammer head so that it fills the eye as nearly as possible. The handle must also be at right angles to the hammer head, so that when striking a blow the head will face squarely and not on the edge.



the head. The eye is widened sidewise, or lengthwise, and often in both directions from the middle of the head towards the outside. If the widening is sidewise only, but one wedge is used, as shown at (a) cut a. If widened at the



top and bottom, and not at the sides, two wedges are driven crosswise, as shown at (a) cut b. If the widening is in both directions, three iron wedges are used, as shown in cut (c) or three wooden wedges as shown in cut (d).

**FORMING AND CUTTING TOOLS**

**Set Hammers**

When a piece of work is of such shape that it cannot be reached so as to do the work properly with a hammer, a set hammer is used. The face of the set hammer is placed on the part of the work where the blow is desired, and the other end receives the hammer or sledge blow. Sometimes a set hammer is used to prevent marring the work, or to give some part of the work a definite form not readily obtained with the hammer. The faces of set hammers are formed into special shapes to



suit the requirements of the various classes of work. The square set, shown in cut (a) is used to produce a flat surface, or make a square shoulder or offset.

**Flatter**

The flatter, shown in cut (b), is

used for the same class of work as the square set hammer, the distinction between the two being that the flatter has a larger face. For this reason, the flatter is used to flatten down a surface in finishing, while the square set hammer

is preferable when a square shoulder is to be made and the iron well driven down.

**Fuller**

The fuller, shown in cut (a), is used in spreading the iron. Owing to its shape, it concentrates the force of the sledge blow on a small surface and therefore makes it more effective at that place. The fuller spreads the iron at right angles to the working edges. Its action is the same as that of the cross peen or long peen hammer. It is also used for hollowing out work.

**Swage**

One form of swage, also called a collar tool, is shown in cut (b). Swages are often used in pairs, with the lower half, called the bottom swage, placed on the anvil with its square shank in the hardie hole. The swage is usually a grooved tool and is used principally for forming and shaping

bar iron or rods into circular or hexagonal sections. It is also used for forming flanges or collars on rods. Each swage is made for a section of a certain size.

An assortment of four or more swages is generally kept at hand.

# WHAT'S YOUR NOTION OF GOOD THRESHING? THIS IS OURS! The RED RIVER SPECIAL

— WITH —

## THE BIG CYLINDER

Power, weight and momentum. The strongest and largest design that is used.

## THE MAN BEHIND THE GUN

Our patented device that separates the most of the grain right at the Big Cylinder.

## THE BEATING SHAKERS

That BEAT the straw from the under side and knock out every kernel of grain that is in it. Because they BEAT out the grain and **SAVE THE FARMERS' THRESH BILL**

## THE ADJUSTABLE CHAFFER

That cleans the grain as it should be cleaned, ready for market.

## THE N. & S. WIND STACKER

That gets rid of all of the straw but none of the grain. This is a special feature peculiar to the make.

---

Many of your own neighbors have written to tell us their opinion of the Red River Special and the work that it has done for them. The Home Edition of our threshing paper contains their letters. Send for a copy. Ask for the Big Catalog as well when you write. We'll be glad to send you one.

---

## NICHOLS & SHEPARD CO.

(In Continuous Business Since 1848)

Builders Exclusively of

## THRESHING MACHINERY

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

BATTLE CREEK, MICH.

BRANCH HOUSES (With Full Stock of Repairs) At

WINNIPEG, MANITOBA

REGINA, SASKATCHEWAN

H. P. NORTON COMPANY, CALGARY, ALBERTA

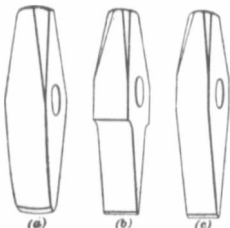
hexagonal swages being used on bolt heads having six sides.

**Punches**

Cut (c) shows a square punch and cut (d) shows a round punch. The punch is tapered, being small at the point and increasing in size toward the handle. The hole is made by driving the punch into the iron, and is then stretched by driving the punch through the work until the desired size is obtained.

**Cutters**

A cold cutter, to be used with a wooden handle, is shown in cut (a) and a hot cutter cut (b).



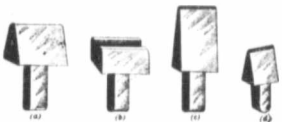
The cutting edge of the cold cutter is slightly convex and is ground so that it is more blunt than the edge of the hot cutter. The hot cutter is drawn out thinner than the cold cutter, and its edge is sharper. It is used for cutting hot metal. When properly tempered and ground, the cold cutter should hold its edge when cutting cold iron or steel. When used for this purpose it is frequently called a flogging chisel. The cold cutter cuts, or nicks, and at the same time wedges the edges of the cut apart, while the hot cutter makes the cut as narrow as possible so as not to batter the cut ends.

The cold cutter is used to nick the metal all around so that it can be broken. The cutting edge should be lubricated frequently by pressing it into a piece of oiled waste or by dipping it into water.

For cutting off rivet heads, a cold cutter similar to the punch shown in previous cut (d) is used. The end of the tool is formed at a slight angle from the flat, varying from 20 to 30 degrees, and the center of the face is slightly hollowed. For cutting down a straight surface, the side cutter shown in cut (c) is frequently used. These side cutters are made either right or left.

**Anvil Tools**

There are a number of tools, made to fit into the hardie hole,



that correspond in shape to the set hammers.

The results obtained with them are similar to the results obtained with the corresponding set ham-

mers. Cut (a) shows a bottom fuller, which, like the top fuller, is intended to spread or stretch the iron. The shank of the fuller fits into the hardie hole of the anvil. Cut (b) shows a bottom swage with a single groove. It is similar to the top swage and they are ordinarily used together. Bottom swages are frequently made with two or three grooves of different sizes in the same block.

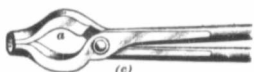
The hot hardie is shown in cut (c) and the cold hardie in cut (d). They correspond in shape to the hot and cold cutters. The hot hardie being slender and ground to a thin edge, is suitable for making a sharp, clean cut; the cold hardie is thicker and its edge is ground more blunt, so that it may have proper strength to cut cold iron or steel.



The heading tool, shown in cut, is used in forming heads on the ends of rods, bars, bolts and similar work. The hole through the head is usually circular or square. There should be an assortment of these heading tools on hand to fit the various sizes of iron bars. The hole should be from 1-32 to 1-16 inch larger than the iron; 1-32 inch in the case of 1/2 inch diameter, increasing to 1-16 inch on 1 1/4 inch and larger diameter.

**Tongs**

Tongs are used for handling pieces of hot iron of various forms. A few of the most common kinds are mentioned below. Special tongs are made to fit special forms and it is frequently necessary to make a new pair or to alter a pair to fit some oddly shaped piece of iron. The parts of the tongs, cut



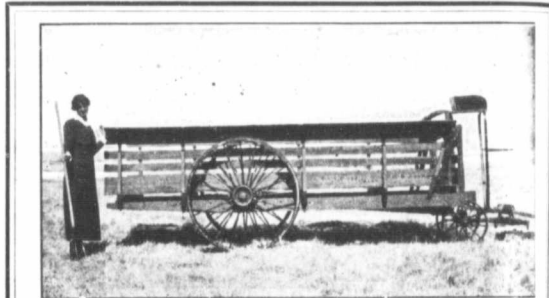
(a), are: the jaws (a), and the handles (b), sometimes called the reins. An oval ring (a), cut (d), called the coupler, is frequently

Buy Gasoline under the

Premier "Red Ball" Sign

**"MIXED" or "blended"** gasolines make trouble in starting the tractor because they separate in the tank, the light parts going off first and leaving a heavy residue which is hard to ignite. Premier Gasoline is not a "mixture" It is a straight-distilled, homogeneous gasoline, uniform in power and quick-starting qualities, from the top of the tank to the bottom. Buy it direct from our stations.

**THE IMPERIAL OIL COMPANY**  
Limited  
BRANCHES THROUGHOUT CANADA



Miss Dorothy Bell says she can take the place of a soldier if she has a Saska Combination Low Down Wagon.

**"The Saska Combination Low Down Wagon"**

Not only affords the most practical and economical means for getting the sheaves from the field to the machine in Stook Threshing, but is also the greatest labor saving wagon for general farm purposes.

The front truck is low and narrow; the wheels are 20 inches in diameter with 4 inch face. The rear wheels which carry 4-5ths of the load are 48 inches in diameter, 5 inch face and 6 feet 6 inches apart giving a bottom 6 feet wide and 15 feet long 26 inches from the ground and when the sides are removed it is the handiest wagon in the world for hauling heavy articles of any kind; when the sides and shelvings are on it is the most efficient hay or stook wagon to be found and when the stook sides are put on this wagon is without an equal for conveying stock. When making your plans to harvest the crop of 1916 don't forget **The Jackson Combination Sheaf Loader and Carrier**, one of the greatest labor and grain saving farm implements in use now. In 1914 and 1915 we did the talking, but now our customers are talking for us. Come and see our 1916 model at the Brandon, Regina, and Saskatoon fairs.

MANUFACTURED AND SOLD BY  
**"SASKA" MANUFACTURING COY. Ltd.**  
SASKATOON, CANADA

slipped over the work the hand part of the The ton thing on a hand to pr laid. The j in the fire i when they bend apart before they besides the water. Rep ping make spoils it. Cut (a) tongs used When clos should alw have full-fa of iron being Cut (b) s up tongs u pieces of ir small pieces. The jaws ar spring and t venient for h Cut (c) sl tongs. They round iron at for the head t tongs, shown for holding fl pieces that h end. The foll a form of ton

# AN UNWIELDY CROP IN 1916

Is going to break the back of every reputed Thresher Belt that is not built of the very best material by the best of human skill. Every field NOW is loaded with the heaviest Straw Crop known in many seasons, and whatever the grain yield may be, it is certain that the **Process of threshing** will be one of the toughest on record. **DON'T MONKEY** with old belting or anything that is not guaranteed beyond a peradventure. Save every possible risk and



GET EITHER THE  
**LION BRAND**

RUBBER BELT

OR THE

**Yellow Fellow**

ENDLESS THRESHER BELT



You can get them from any thresher company doing business in Canada. They cost a little more than other fabrics that are a big risk from the day they are used in any power transmission, but we guarantee our goods against all disappointments from slippage or breaking. They are the "guards" that will never betray their trust under any pressure—at threshing or at any time.

**Gutta Percha and Rubber Limited,** Not in Any Trust or Combine  
Winnipeg Fort William Regina Saskatoon and Calgary

slipped over the handles to hold the work tight, and thus relieve the hand from the more severe part of the holding strain.

The tongs should always be hung on a rack placed near at hand to prevent their being mislaid. The jaws should not be left in the fire if it can be avoided, for when they become hot they will bend apart and must be bent back before they can be used again, and besides they must be dipped into water. Repeated heating and dipping makes the iron brittle and spoils it.

Cut (a) shows a pair of flat tongs used for holding flat iron. When closed tightly, the jaws should always be parallel and have full-face bearing on the piece of iron being held.

Cut (b) shows a pair of pick-up tongs used for picking up pieces of iron, also for holding small pieces while tempering, etc. The jaws are bent to give them spring and the front bend is convenient for holding round iron.

Cut (c) shows a pair of bolt tongs. They are made for holding round iron and have a pocket (a) for the head of the bolt. The god tongs, shown in cut (d), are used for holding flat or wedged-shaped pieces that have a head or large end. The following cut illustrates a form of tongs that has the lower

jaw divided into two prongs. While the upper jaw is V-shaped,



the pressure of the upper jaw on the work being held comes between the prongs of the lower jaw. These tongs will hold round, octagon, square and flat pieces of work with a firm grip when proper-sized tongs are used.

## TOWN OF FORD GROWING RAPIDLY

For a town that has had its charter of incorporation just one year, the town of Ford, Ontario, shows remarkable progress. The annual report of Joseph Reaume, Assessment Commissioner of Ford, shows that property values have almost doubled during the past year.

The phenomenal growth and prosperity of the town is due to the vast and important industries which have been established here during the past few years. The Ford Motor Company really gave the town its first big start in life, and it was this mammoth industry that attracted other manufacturing concerns to select Ford as the most suitable place for their plants.

Ford has been called the Manchester of Canada, and while it will have to grow some to equal the only original Manchester, yet this is not beyond the impossible nor improbable, when one considers that during the past year alone, immense additions to the Ford factory have been erected, and further extensions are under way. The Dominion Forge & Stamping Company just recently completed the erection of an immense factory and now employs several hundred men. The Fisher Body Company, The Canadian Lamp and Stamping Company, The McGregor Banwell Fence Company, and numerous other concerns also have their factories in Ford and employ a very large number of men.

All the concerns are very busy, and in many cases are working day

and night, in the effort to keep pace with the demand for their products.

And the town of Ford is not the only place that largely depends upon the Ford Motor Company for its growth and success. Ford is only one of the border municipalities that is directly affected by this big motor industry. Walkerville, Windsor and Sandwich, all benefit by the success of the Ford Company. In fact it has been estimated that out of the thirty thousand people who live in the four border towns, nearly one half are dependent in one way or another for their livelihood upon the Ford Motor Company of Canada, Limited.

"The great lack of the age is conscientiousness in trifles." — R. J. Campbell.

## Breakages <sup>WELDED BY</sup> Oxy-Acetylene

impart a strength to the machine greater than it ever possessed, while the job is the most finished bit of work ever attained in repairing a fracture.

**WE ARE THE PIONEERS OF THE PROCESS**  
ARE EXPERTS IN EVERY DETAIL OF OXY-ACETYLENE

If anything breaks or is worn out on your threshing machine or traction engine, have it welded by the Oxy-Acetylene process.

**YOUR BLACKSMITH OR REPAIR EXPERT CAN DO THIS WORK FOR YOU**  
See him now about your broken castings. If he has not a welding plant write us, giving his name, and we will supply him with full particulars. It will save you time and money.

**L'Air Liquide Society** 328 WILLIAM AVENUE,  
WINNIPEG, MAN.  
Largest Manufacturers of Oxygen and Welding Plants.

# THE FARMER'S BUNGALOW

By  
W. E. FRUDDEN

THE bungalow which originated among the warring tribes of Europe was a one-storey affair perched high above ground on poles. This was the seed from which has grown the modern bungalow. This particular type of house has found its greatest development here in America. There are thousands of them in every state in the Union.

They may be but mere shacks or they may be well designed, well built, dignified houses. The cost ranges from three hundred to thirty thousand dollars. Some are one-storey, others one and a half, and still others are full two storeys in height. It is the expression in the design that stamps them as true bungalows.

Such a type of house is particularly well adapted to the farm and there is to-day no one type of house of which so many are being built throughout the country. It



South Elevation of a Farmer's Bungalow

vides for more convenience, comfort, and apparent spaciousness of interior effect than any other possible plan of similar dimensions. The front entrance off from the wide porch and paved terrace opens directly into the generous sized living and dining room, the main room of the house. The wide brick fireplace, the family gathering spot opposite the doorway, an abundance of sunlight from the five large windows and the plate glass door will make this room most homelike and cheerful for the farmer's family.

The sun porch on the southeast corner off from the main room is size 10 by 14 feet. This addition will no doubt be used for more purposes than any other room in the house. It might make a very delightful summer dining room.

The real good features of this 36 by 26 foot farmer's bungalow are still to be described. It is the arrangement of the back part of the house, the kitchen, the rear entry room, the stairways, and the closet. This part of the farm

closet off from the rear entry or wash room which is a part of an addition to the house. The workmen here do not have to tramp through the busy kitchen at meal time in order to reach the dining room, since a small hallway has

The sink and drain board is under a group of high windows on the south side where it belongs and as most domestic experts agree. The drain boards are removable for cleaning and airing and afford no fixed crevices for bugs and cockroaches. Under them are cases containing additional drawer and cupboard space.

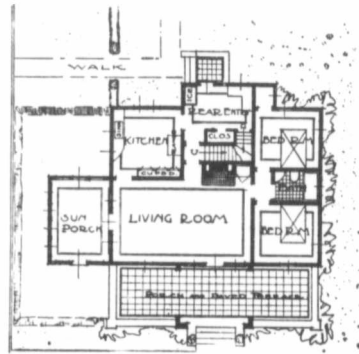
The refrigerator built in as a part of the rear entry is another accepted modern idea. It has an outside door for ventilation in cold weather and for icing in summer.

Entrance to the basement is from the rear entry room. There is room for a very comfortable stairway directly under the second floor stair. The basement



Front Elevation of Bungalow

seems to imply coziness, roominess, and a genuine home with easy administration and economy in the construction. But farm houses are not built as a luxury alone. They usually are designed and built that they may be depended upon as an asset; as a valuable improvement to the farm; something which for a long period will have a market value



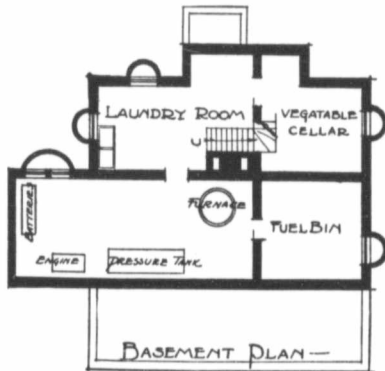
FIRST FLOOR PLAN

been planned to overcome this disagreeable feature of so many present-day farm homes.

The kitchen in the corner of the house is light and airy and there will be plenty of cross draft through the windows that will carry off the gases that arise from the cook stove. The kitchen is compactly planned. It is fitted with every convenience necessary for the saving of labor and the shortening of steps for the hard working farmer's wife whose work is never done.

The built-in cupboard is a complete kitchen cabinet minus a few of the frills of the manufactured ones but really more practical and convenient in most respects than any portable type. The counter is two feet wide with one narrow shelf above for spices, baking powder, etc., in jars, and several wide shelves above it. The case below the counter contains deep bin drawers on extension slides and are fitted with removable tin linings for flour and sugar. The rest of the space is occupied by drawers, cupboards, etc.

is modern but at the same time there is nothing found here that is impractical for every corn belt farmer's home. Concrete areas around the high cellar windows make this part of the house well lighted, dry, and well ventilated at all times. The laundry room is fitted with wall tubs and running water and other laundry

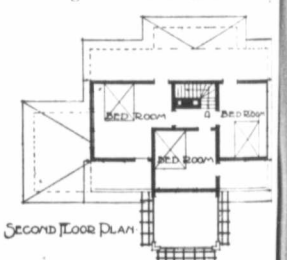


BASEMENT PLAN

commensurate with its original cost.

The farm home design here reproduced is a storey and a half structure that contains eight rooms. It is a modest farm bungalow embodying an arrangement for the first floor that pro-

home needs to be planned right as it is here that most of the daily activities are centered. As the men enter the house from the fields they have a chance here to scrub up and will find ample space for the hanging of their wraps and heavy clothing in the



SECOND FLOOR PLAN

machinery, while in the furnace room is found a gasoline engine supplying power for electric lighting, the current being generated by a small dynamo and storage battery, and connected to the line shafting system is the water pump and the air com-

Continued on page 43

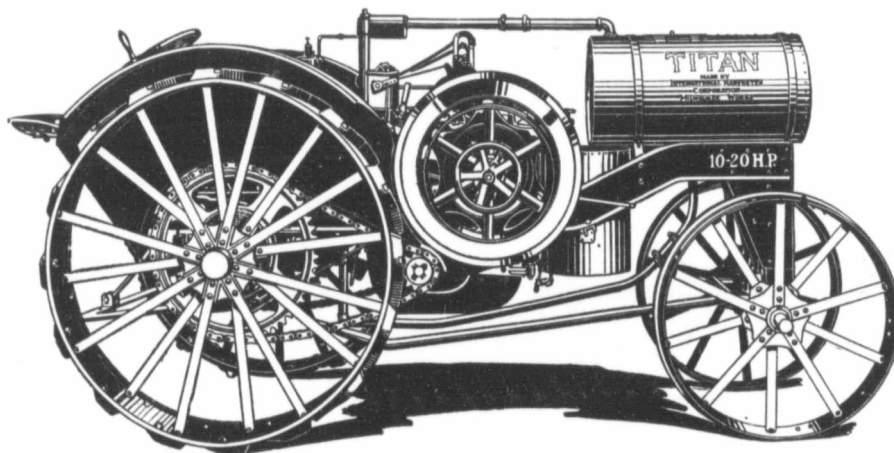
# BUY A KEROSENE TRACTOR For Threshing Power

Have you decided yet on the power you will use at threshing time? If not, consider a tractor that works successfully on kerosene. It means two worth-while savings.

By "working successfully" we mean a tractor that works on kerosene and that uses little or no more fuel than the best gasoline tractors.

**In that class Mogul and Titan tractors Stand Supreme.**

The first saving is in the price of fuel. **Kerosene costs about half as much as gasoline.**



The second saving is in time. Travelling the road as quickly as a steam engine, the kerosene tractor, because of its lighter weight, passes safely over bridges and obstructions where the steam outfit could not go. The Mogul or Titan tractor can be set quickly and conveniently. Throwing no sparks, it can be set without thought of the direction of the wind. One setting completes the job.

You can buy steady power in any desired quantity for threshing, in sizes from 8-16 to 30-60 H.P., in the Mogul or Titan lines, and buy it at a price that will satisfy you. Drop us a line at the market branch house so that we can send you full descriptions of our line of REAL KEROSENE TRACTORS.

**International Harvester Company of Canada, Ltd.**

**BRANCH HOUSES:**

**At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton.**



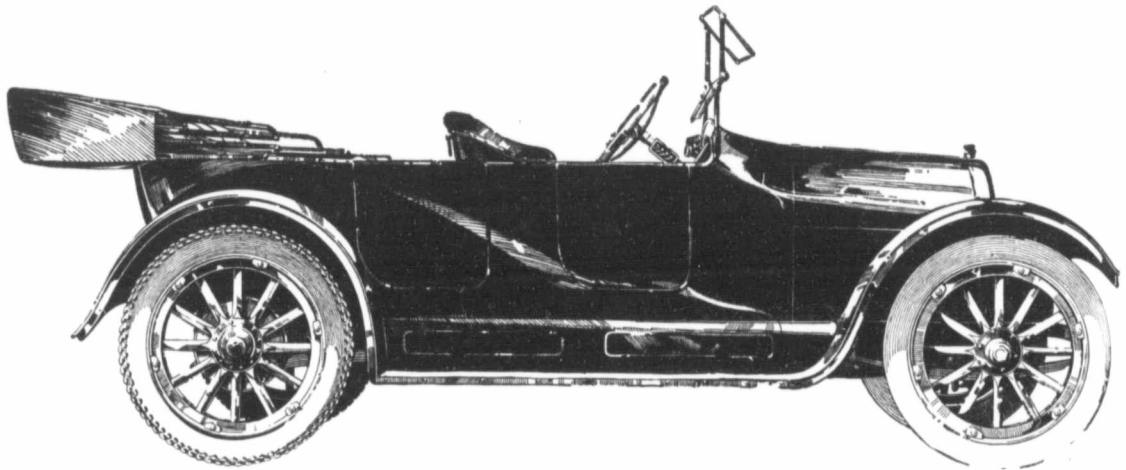
# Announcing New Series Model 75-B

*Overland*  
TRADE MARK REG.

\$890

Roadster \$870

f. o. b. Toronto



This newest Overland is the world's most powerful low-priced car.

It has a 31½ horsepower en bloc motor that is a perfect marvel for speed, power and endurance.

By increasing the bore of the motor from 3½" to 3¾" we are able to offer a power plant which at 1950 R. P. M. develops full 31½ horsepower.

Tests under every condition in all parts of the country demonstrate that it easily develops better than 50 miles an hour on the road.

Speed of course varies under different conditions, but in practically every instance it has been getting fifty miles an hour and with ease.

We have scores of telegrams showing that twenty to twenty-five miles per gallon of gasoline is not unusual.

The performance of this car is almost beyond belief.

Take any other low priced car on the market. Pit it against this new Overland. Compare them for sheer speed, for abundance of

power, for riding comfort and economy, and you'll find this car will back anything else clean off the boards.

That's a strong statement, but a fact nevertheless.

Try it yourself and see.

Here are more important facts.

It has four-inch tires which are more than generous for a car of this size.

Not only has it a large and roomy body, but it has an attractive, up-to-date streamline body.

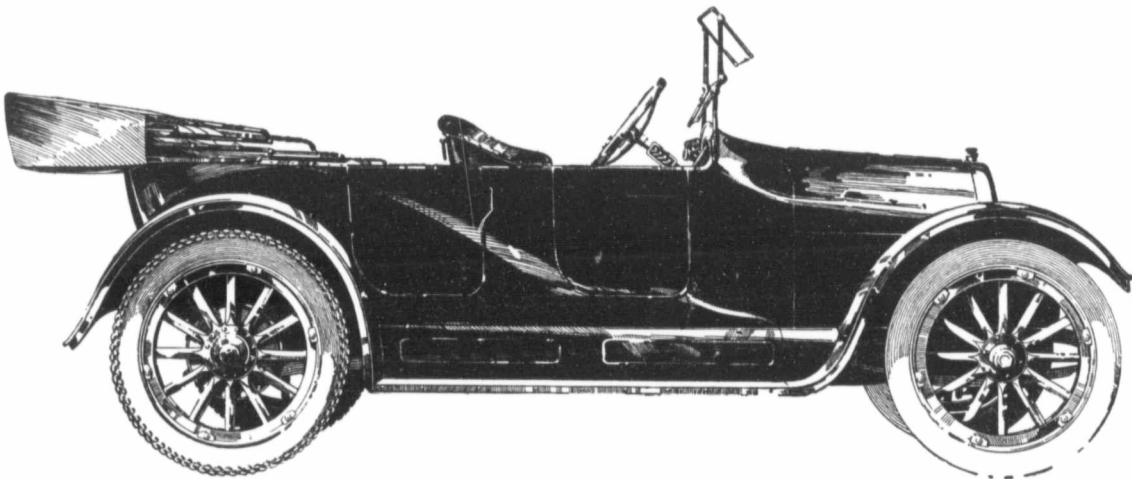
Catalogue on request. Please address Dept. 662

Willys-Overland, Limited, Head Office and Works West Toronto, Canada

# The World's Most Powerful Low Priced Car

*Overland*  
TRADE MARK REG.

**31½**  
Horsepower



It has the latest and most improved system of ignition.

It has the cantilever springs—the easiest riding springs in the world.

What's more, it's complete. Not a thing to buy. You get the finest Auto-Lite electric starting and lighting system, magnetic speedometer, one-man top, demountable rims and practically every accessory found on the highest priced cars.

From a driving standpoint, the

new car is ideal. It's light, easy to handle and anyone can drive it.

Take one look and be convinced. And mark these words—the car is destined to be regarded and referred to as one of the really great achievements of the great automobile industry.

Yet it only goes to prove how big production can cut cost and save you money.

First come, first served. See the nearest Overland dealer and place your order now.

#### Specifications

4 cylinder en bloc motor  
3½" bore x 5" stroke  
104-inch wheelbase  
4-inch tires  
Cantilever rear springs  
Streamline body  
Electric starter  
Electric lights  
Magnetic speedometer  
Complete equipment  
5-passenger touring \$890  
Roadster \$870

Catalogue on request. Please address Dept. 662

**Willys-Overland, Limited,** Head Office and Works **West Toronto, Canada**



**Fresh Meat For The Family**

Let us Return to the Ways of Our Fathers and Cure Our Own Meat

THE first, middle, and last legitimate business of every farmer is to provide a good living for himself and family. This good living means ample and comfortable shelter, proper clothing for all occasions, and an abundance of a variety of the best foods that can be produced directly and indirectly from the soil—vegetables, fruits, milk, cream, butter, cheese, perhaps honey, and eggs and meats.

The above list of foods can and should be produced on every farm in this country. Even cheese and honey are easily within the list of good things to eat that can be produced by every family living in the country. Until a few years ago no honey or cheese was produced on our farm, but now we have bees for honey and we make the very best of cheese with an ordinary lard press as a cheese press.

There is no end of good things to eat that can be grown in every garden on the farm, to be used in season and to be stored and canned for out-of-season use. The farm family that does not have from a dozen to a score or more of the best vegetables and fruits for home use is not half living up to the highest possibilities of country life. There is no valid excuse for any farm family going without or running short of milk, cream, butter, lard, eggs and meats of a variety.

It is the observation of the writer that almost every farmer who grows all of his own foods is prosperous and independent. The reason is evident; he keeps most of the cash earnings of the farm at home to meet necessary expenses for clothing, house furnishings, incidentals, and for improvements. He nearly always has some cash on hand because he is not continually spending for daily food.

Many farmers hold the mistaken notion that they can grow some field crop for cash to purchase meats and other foods. This mistake has forced hundreds of farmers to the wall and has kept thousands poor when they might have lived independent and comfortable. Buying any food that

has been produced on the farm and passed through half a dozen other hands is poor business policy, to say the least. Why not produce these foods at home and save the profits that merchants and other dealers rake off in big measure? Why sell hogs at seven cents and buy back lard at 14 cents and bacon at 20 cents, perhaps from the same hogs you sold six months before? Why make rich men presents of about one-half your earnings? But farmers are generous, that's all.

Farmers, of all people, need an abundance and a variety of rich and wholesome foods, as they work hard with both hands and brain. All persons who are active in the open air must have plenty of nourishment to be efficient workers, and to remain resistant and healthy. Food to the human body is like fuel to the engine, but it is more than this. It not only supplies energy for human action, but it supplies materials to rebuild bodily waste and to sustain growth, as with children. Farm children are invariably hearty eaters, and if they are supplied with an abundance and a variety of wholesome foods they will grow to be large, strong, manly and handsome men and women. With poor food and short rations they cannot possibly develop into ideal adults. By instinct the child knows when its bread is buttered, and the big and beautiful men and women of our country have not been strangers to meat and fresh eggs. They have known generous feeding.

We, like heavy-producing and prize-winning animals, must have a balanced ration for ideal growth and production. Meat and other animal products, except fats, furnish the protein in our ration, the food compound that makes rich blood, strong muscles and vital organs, and which makes us strong and resistant to disease. We can work best, accomplish the most in every line, and be healthiest and happiest with meat, butter, milk and eggs on our tables daily, and plenty of them. It is an essential part of our business to keep a variety of domestic animals and to have

**Dairyman's Year**



is 1916. The fields are loaded with luscious, milk-making feed in every corner of Western Canada. There never was such an abundance of all manner of hay and root crops. Ideal conditions point to a record production both in summer and winter feed for cattle and with ordinary management, every dairyman may "Come into his own." His chief concern NOW is the SEPARATOR he uses and the

**"MAGNET" Cream Separator**

will fill the bill on every point of economy, efficiency and simplicity.

**THE MAGNET**

**The Clean SKIMMER**

is not the lowest priced machine made but it is the best value in any Cream Separator known. Quality, Character and the highest possible efficiency is first guaranteed by the severest tests, then a modest profit to the manufacturer is added over bare cost of material and construction.

The "MAGNET" is made in Canada by Canadian engineers who have first of all gained their experience on Canadian dairy farms in all essentials to a separating machine that fits in perfectly and economically to every requirement. The result is the "MAGNET"—a separator that more than fulfils the last promise made in its name.

We will easily prove what we say by showing you the "MAGNET" in your own dairy. The design and construction of the machine is what has compelled us to double the output of our factory this year.

**The Petrie Mfg. Co. Ltd.**

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

**YOUR TRACTOR WILL NOT QUIT**

no matter how much work you require of it—if it is properly lubricated. For your tractor you want



the oil that works well in any temperature—and leaves no waste to harm the engine.

Polarine oils and greases will lubricate properly every running part. Twenty-four hours becomes your tractor's working day. Polarine flows freely at zero—stands up under most intensive cylinder heat.

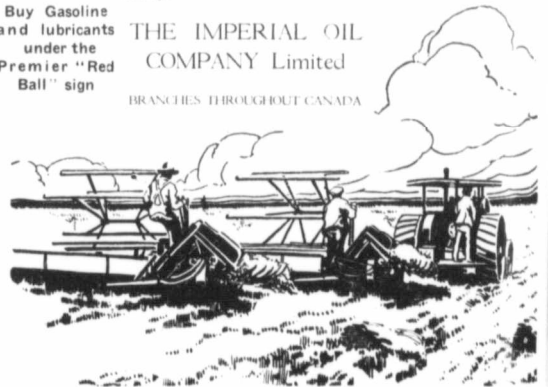
Buy it direct from our stations in steel barrels and sawmancy.



Buy Gasoline and lubricants under the Premier "Red Ball" sign

**THE IMPERIAL OIL COMPANY Limited**

BRANCHES THROUGHOUT CANADA



Aug  
these  
use.  
The  
ily ke  
and a  
to sup  
use at  
jority.  
The h  
at hot  
fresh  
The c  
batter  
to ma  
east  
furnis  
which  
season  
than f  
easily  
juice  
every  
in man  
sized fi  
From t  
for casl  
a few  
for hor  
year fo  
meat s  
makes  
meat to  
silo-fill  
of extra  
On c  
about 2  
time, 10  
a dozen  
sized flo  
years go  
ashamed  
raise tu  
ily enou  
home-pr  
complete  
keep fur  
mal foot  
year, wit  
to amou  
\$1,000.  
the farm  
acres, wi  
and wo  
ploved,  
farm pro  
For th  
on the ay  
best ani  
hold diff  
size and  
butcherin  
and fat l  
smaller a

these animal foods for daily home use.

The diversified farmer can easily keep a few hogs, a few cows, and a good-sized flock of poultry to supply animal foods for home use and some for sale. The majority of good farmers do this. The hogs fattened and butchered at home will furnish a variety of fresh and cured pork and lard. The cows will furnish milk, cream, butter and cheese if you learn how to make it, which is extremely easy. The flock of poultry will furnish both meat and eggs, which can be used fresh at all seasons. And, if you keep more than four or five cows you can easily arrange to have a young, juicy beef to butcher at home every winter. Also, it is possible in many cases to keep a medium-sized flock of sheep on the farm. From this flock, wool may be sold for cash, some lambs for cash, and a few lambs and sheep retained for home butchering during the year for a greater variety in the meat supply. A lamb or sheep makes excellent and economical meat to feed the threshers, the silo-filling crew, or any big bunch of extra hands on any occasion.

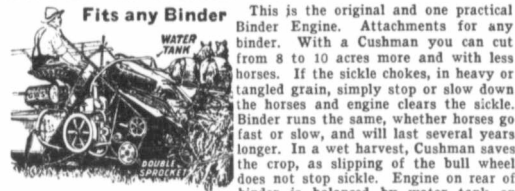
On our own farm we keep about 20 head of hogs all the time, 10 head of cows and calves, a dozen to 25 sheep, and a good-sized flock of chickens, with some years geese and ducks. We are ashamed to say that we do not raise turkeys—for we could easily enough—to make the list of home-produced animal foods more complete. The animals we do keep furnish us with all the animal foods we can use during the year, with enough surplus to sell to amount in cash to around \$1,000. The cultivated portion of the farm amount to about 50 acres, with about as much in hill and woodland that cannot be plowed. Animals are economical farm property.

For the main daily meat supply on the average farm hogs are the best animals. Different farmers hold different notions as to the size and age of hogs for home butchering. Some want very large and fat hogs, while others want smaller and thinner kinds. In our

case we butcher some small and some large ones every year. The first butchering in the fall when the weather is cool enough is a pig weighing around 60 to 80 pounds. By the time this is used up a larger one is killed, which will keep longer with the cooler weather. For mid-winter butchering when any meat can be handled safely in quantity we butcher three or four large, fat hogs for the year's lard supply. To make much lard the hog must be large and quite fat. Not much lard can be depended upon from pigs or small hogs, although the latter make excellent meat. One large hog will make more lard, if real fat, than half a dozen small hogs. And, since lard comes high when purchased, it is always well to have at least a couple of heavy fat hogs to butcher to furnish lard to last all the year.

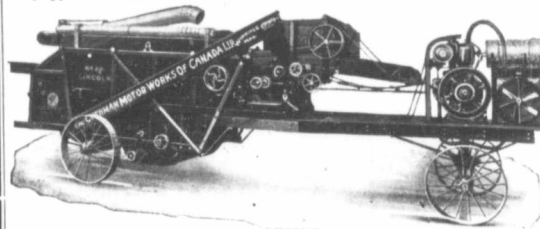
Some farmers like to do all their butchering at one time, and have the job over with for the year. We, however, do not find the work irksome or difficult and make three butchering a year, one in the fall, one in mid-winter, and one in late winter. Usually one or two small hogs or pigs are killed in late winter or in very early spring while the weather is yet cold. This system gives a supply of fresh meat for a long season and the "bone meat" is more acceptable and can be used up more economically with less danger of any of it spoiling. In most cases a part of the first hog butchered in the fall is traded to a neighbor, or several neighbors, and they in turn pay back the same weight of meat and of the same kind when they butcher. This system of neighbors co-operating in butchering and exchanging of fresh meat is excellent in a neighborhood. It is convenient and economical all around, and it is a means of having more fresh meat on farm tables for longer seasons. This neighborhood system of fresh meat exchange is to be highly commended where several neighbors keep cattle and sheep for home butchering. Any local farmer's club could easily arrange a home weekly butchering system whereby every home

## 4 H.P. CUSHMAN SAVES A TEAM ON THE BINDER



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

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 COMBINATION THRESHER

8 h.p., with Straw Carrier and Hand Feed; 20 h.p. with Wind Stacker and Self Feed; 15 h.p., with Wind Stacker and Hand Feed. Equipped with the famous Cushman 2-Cylinder Engines.

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

**Cushman Motor Works of Canada, Ltd.**  
286 Princess Street  
Winnipeg, Man.

Builders of Light Weight Engines for Farm and Binder use. Distributors of Reliable Power-Driven Machines, such as Fanning Mills, Grinders, Saws, Cream Separators, Power-Washing Machines, etc. Also Barn Door Hangers and Mountaineer Neck Yoke Centres.

## Galloway's Big New Catalog NOW READY

**Galloway Goods are Sold at Unusually Low Prices!**—hundreds of farmers know this already. The new big catalog contains hundreds of prices that will be of interest in every home in Western Canada. There is a copy of the catalog for you—clip this advertisement, mark an X opposite the items in which you are interested and mail it, with your name and address, to-day—catalog will be sent you as soon as it is off the press. Besides saving you money, our goods will give you every satisfaction—read our liberal guarantee.

### Machinery

Engines  
Accessories  
Grinders  
Separators  
Spreaders  
Tractors  
Pumps and Pump Jacks  
Harness  
Wagons, Wagon Hardware and Sleds  
Oils, Greases and Paints  
Cookers, Forges and Sundry Farm Requirements  
Roofing and Building Paper

### For Men

Braces, Suspenders  
Men's Coats  
Clothing and Overalls  
Boys' Clothing  
Underwear  
Shirts, Hats and Caps  
Boots and Shoes  
Sweaters

### Our Guarantee

Unconditional satisfaction, or money and freight both ways promptly refunded.

Signed,  
**Wm. Galloway**



### For Women

Women's Coats  
Suits and Skirts  
Dresses  
Sweaters  
House Dresses  
White Wear  
Aprons  
Women's and Children's Underwear  
Corsets  
Boots and Shoes  
Hosiery  
Gloves and Mittens

### For the Home

Soup  
Books  
Watches, Clocks and Silverware  
Trunks and Suit Cases  
Leather Bags  
Sewing Machines  
Stoves, Ranges and Heaters  
Washing Machines

### International Stock Food

**Wm. Galloway Co. of Canada**

Limited

Dept. 17

Winnipeg



A Lonely Surveyor

represented in the club could be supplied with fresh meat practically all of the year, with a great saving in the cost of the meat to all concerned. Such is now being carried on in many farming communities. It is one of the best kinds of farm organization.


As the cream separator is a good machine with dairy cows, so are the sausage grinder and lard press for economically working up butchered hogs. The lard press also has the sausage-stuffing attachment. Butchering hogs without making sausage would be like a picnic without refreshments. From a hog that dresses a hundred pounds a gallon or more of pork sausage can be made, and no pork meat is as good as prime farm-made sausage with sage and a little of the tenderloin mixed in! When the main butchering is done we trim the pieces closely and use all the tenderloin in the sausage, making a tubful of it, stuffing in prepared casings, to be used immediately and to be fried down and canned for summer use. It can be kept canned a full year, improving with age.

There are several good ways of preserving bacon and hams. Sugar curing is one of the best processes when done right. Perhaps one of the safest and best ways of keeping a part at least of the side meat for summer use is the old-fashioned brine in a clean barrel or stone jar. Good pickled pork is very wholesome and appetizing if it is soaked in fresh

water and cooked properly when it is taken from the brine and prepared, cooked and served. Care should be given to cleanliness and sanitation. The man who cuts up the carcass and handles the pieces of meat should be scrupulously clean; all knives, whetstones, vessels, etc., should be clean.

Both for flavor and good keeping qualities, hams, shoulders, and sides, after being cured for from six to eight weeks, should be promptly and well smoked. The smoking should be done thoroughly, for the smoke dries the outside of the meat, coats it with a creosote disinfectant and preservative, besides improving the flavor. After the meat has been properly smoked the pieces should be separately wrapped with several thicknesses of strong paper and sewed up in tight cloth covering to keep out dust and insects. The package should be kept in a rather dark, dry, and even temperature atmosphere.

A big iron kettle holding a barrel or more is one of the best cooking vessels to be used in connection with butchering hogs. The kettle is used out in the open air to keep steam and offensive odors out of the dwelling. In this big iron kettle water is heated in the morning for scalding the hogs. During the afternoon the kettle is cleaned and used for rendering out the lard, which may easily be completed before evening.—Farm and Ranch.



**"KODAK on the Farm."**

Is the title of a beautifully illustrated and interesting little book that your dealer will give you or that we will send free upon request.

CANADIAN KODAK CO. Limited, 606 King Street W., TORONTO

# UNION BANK OF CANADA

**BANK BY MAIL AND SAVE LONG DRIVES**

If none of our 200 Western Branches is near your home, mail us the cheques or cash you receive, with your Passbook, and we will return it with the Deposit credited. Then you can pay your bills by cheques, which we will honor, or if you want the cash yourself send us a cheque in your own favor and we will forward the money by return mail.

**BRANCHES IN SASKATCHEWAN**

Abbey, Adanac, Alseak, Arcola, Asquith, Assiniboia, Bounty, Bushman, Bruno, Calvi, Canora, Carlyle, Craik, Cupar, Cut Knife, Dunsmore, Dunsmuir, East End, Esterhazy, Estevan, Eyebrow, Filmon, Gravelbourg, Guernsey, Gull Lake, Herbert, Houghton, Humboldt, Indian Head, Jansen, Kelliefield, Kerrobert, Kindersley, Landis, Lang, Langham, Lawson, Leamberg, Lovrina, Lundan, Lusland, Macklin, Major, Maple Creek, Maryfield, Macrorie, Mellort, Milestone, Moose Jaw, Mossomin, Morse, Netherhill, Neudorf, Ogema, Outlook, Oxbow, Peace, Perdue, Pipnot, Plenty, Prince Albert, Qui Appelle, Regina, Robsart, Rocanville, Rosetown, Saskatoon, Scott, Seepre, Shaunavon, Simpson, Sintaluta, Southey, Strassburg, Swift Current, Tassar, Theodore, Togo, Tompkins, Vanguard, Viceroy, Ardara, Wapella, Wawota, Watrous, Webb, Weyburn, Wilkie, Windthorst, Wolseley, Yorkton, Zealandia.

Head Office: Winnipeg  
Total Assets over \$90,000,000  
Deposits over \$72,000,000

## Improving the Farm

By John Martin

The twentieth century is the century of efficiency. "Improve until Perfect," is the keynote. Every realm of life has been invaded by this great idea, and all around us we see improvements on every hand. Particularly at least to me does it seem that no greater improvements are to be seen than those brought about on Canadian farms, and I mention Canadian farms purposely for the one reason that they stand far above all others in respect to mak-

ing improvements with a view to greater efficiency.

Our farmers are more proficient in the subject of Agriculture and we have not been slow in the promotion of institutions and colleges to further instruction along this line. Our implements are the finest and most efficient in the world, and outsiders marvel at them. Our buildings and equipment are also of the latest and most up-to-date type and many of the ordinary farms now look



## STOP Paying Threshing Bills!

Get an Outfit of Your Own Save Your Grain  
Get a Better Price for Your Grain Keep Your Land Clean

Complete Outfit - 8 H.P. Engine, 28 in. Separator and Truck, cash, - \$695.00  
24 inch Separator and Blower, all fittings, cash, \$475.00


Freight Prepaid to Your Station  
Write for Free Catalog and Time Terms



**FRANCOEUR BROS. CAMROSE, ALBERTA**  
General Alberta Agents for La Cie Desjardins, Ltee.

## College of Saint Thomas

UNDER THE CONTROL & DIRECTION OF ARCHBISHOP IRLAND  
**SAINT PAUL MINNESOTA**



**A CATHOLIC MILITARY COLLEGE**  
RANKED AS AN HONOR SCHOOL BY THE WAR DEPARTMENT  
Collegiate Commercial Academic Preparatory  
Careful Mental, Moral and Religious Training  
Seven Hundred and Fifty Students From Twenty Four States Last Year

FOR ILLUSTRATED CATALOGUE ADDRESS  
Very Rev. H. Moynihan, D.D. President

like what we once termed "Model Farms."

However, in respect to farm buildings, while the most progressive farmers have attended to this and have had their buildings erected in accordance with the latest scientific knowledge, yet there are many who have not yet done so. This fact is revealed by the many reports of barns being burned and crops lost.

This is the particular side of the question which I wish to deal with in this article as it is the most important, and any hesitancy on the part of a farmer to improve along this line must be due to the fact that he is not aware that there is a better building material than he is now using, or perhaps to some prejudice regarding these materials. Some are prejudiced against improvements and new ideas but when the more progressive men put them to the test and prove them successful the others soon begin to favor them.

Owing to the fact that the early settlers found it in abundance and of such a nature as to lend itself readily to building purposes the first kind of building material naturally was wood. However, during the last quarter of a century wood has been largely supplanted by brick, concrete and steel but there is still room for great improvements along these lines.

In our cities wood structures are a thing of the past, in fact legislation prohibits its use, not only to get a better appearance but to prevent fires. The farm will soon be the only place where wooden structures are to be seen and this should not be so. If wooden buildings are a detriment in the city they are more so on the farm, as a fire on a farm where the buildings are of wood almost inevitably means the total loss of everything.

In the selecting of a suitable building material for farm buildings, while permanency and fire-proof qualities are the most important features to be considered, yet the cost of the material must be such as to bring it within reach of all. Steel, it will be readily seen, is the one material most adaptable for this purpose, owing to the fact that it can be rolled into sheets.

The first objection to these sheets was that they were liable to rust through. This drawback has been completely overcome by the process of galvanizing which process consists of immersing iron or steel sheets in a bath of molten zinc at a certain temperature and a coating of this zinc adheres to the sheet, and as zinc is a non-rusting material it preserves the sheets entirely from the danger of rust or corrosion.

This form of material—galvan-

ized metal—is the very best that can be recommended for farm buildings. It will not only give a permanent form of building material which will last in good condition, as estimated by some authorities, for forty or fifty years at least, but will also give the farmer thorough fire and lightning protection. Experience has taught all of us who have had anything to do with farms, that in considering our buildings the question of

fire and lightning protection are two very important items.

The fact that Canada's fire losses each year total about one hundred million dollars is appalling and proves the necessity of protection against fire. There is always the danger of fire on the farm which may be caused by flying sparks from grass or bush fires or from adjacent buildings and threshing engines. If all farm buildings were covered with metal

they would then be protected against the great danger of fire from these causes. Fire protection by have fire-proof buildings is of more consequence to the farming community than to any other, as the chances are they have no means of fighting large fires.

The danger from lightning is, however, more serious, as with considerable care one might be able to protect his building against fire, but no matter how

There are many good reasons why the use of

## DUNLOP THRESHER BELTING

is quite general throughout every threshing community.

Threshermen are beginning to realize that Rubber Belting surpasses any other kind of Belting for the work they have to do, and

That Dunlop Thresher Rubber Belting embodies all the good qualities of an Ideal Rubber Belt.

Dunlop Thresher Belting is made in the finest, the largest, and the best equipped Rubber Factory in all Canada.

By Expert Workmen  
In a Uniform Way  
From the Best Materials

Wherein lies the secret of  
**Service, Quality and Satisfaction**

Ask our nearest Branch for a sample of the Belt.

**Dunlop Tire & Rubber Goods Co., Limited**  
Head Office and Factories: Toronto  
BRANCHES:—Victoria, Vancouver, Edmonton, Calgary, Saskatoon, Regina, Winnipeg, London, Hamilton, Toronto, Ottawa, Montreal, St. John, N.B., Halifax.

16  
your  
ited  
will  
equie  
7 re-  
back  
Dun-  
nor  
sold-  
and  
back-  
true  
look  
with  
prie-  
rent  
lora  
orst.  
S!  
rain  
Clean  
5.00  
5.00  
SE  
FA

careful one may be his buildings are at the mercy of the wild lightning flashes, and the only safe method is to have your buildings constructed in accordance with the laws of electricity or lightning, as have now been revealed by the latest scientific investigation.

The principle is simple; it is based on the fact that lightning follows the line of least resistance until its power is absorbed by the earth. This is why it chooses your building, and if it is constructed of wood it of course leaves it in flames.

The idea is to have your buildings constructed of a conducting material which will carry the electrical currents to the earth, where they will lose their power. This has been accomplished in a small way by the use of lightning rods, but the ideal way, now that we can use galvanized metal, which is a conducting material, is to have our buildings completely covered with it, and well grounded by means of galvanized wire.

It would pay the farmer to cover his wooden barn with metal if it was only for the protection it affords against fire and lightning.

As to the cost of galvanized metal it is sold in various forms and at a moderate price. While it only costs a little more in the first outlay over that of wood, yet in the long run, it will prove far cheaper, as the cost of repairs will be almost nothing, and it will last a greater length of time. It will also reduce your insurance premium as all insurance companies give reduced rates for metal-clad buildings. Metal-covered buildings are insurance in themselves against fire and lightning, and will save you an immense amount of worry.

As stated above galvanized metal can be had in various forms, viz.: metal shingles, tiles, corrugated roofing, etc. The corrugated sheet has been extensively used because of its strength and for its ease and cheapness in erection. The corrugations stiffen the sheet to the highest possible degree and this makes it possible, not only to apply over inexpensive sheeting, which makes a cheap substantial fire-proof building, but can also be applied directly to the building without first sheeting it, which plan is known as "the open-frame construction."

For roofing, the metal shingle is now very popular with the Canadian farmer. There are various makes of these shingles on the market but most of them are based on the same principle, the main feature being that when laid all nail heads are covered and they are made in such a way as to allow for contraction and expansion, which makes them a more

satisfactory metal roofing material than the corrugated sheets. In fact they are now the best form of roofing on the market. They also have the advantage of giving a handsome and attractive appearance to the building.

There are several designs of brick and stone pattern made in galvanized sheets as well as the corrugated sheets which can be used for the sides.

The demand for sheet metal building material has become so great that although only 35 years ago the business was but in its infancy. It has now grown to such a volume that there are several large concerns in Canada making a specialty of this kind of building material.

I sincerely hope that my efforts in this little article may be successful in bringing about improvements in this department of the farm compatible with all other departments, and that we may soon see on every farm efficient buildings giving the desired protection from weather, fire and lightning to the valuable crops and cattle which they contain.

**NEW BULLETIN ON THE SOW THISTLE**

What is the worst weed in Manitoba to-day? Opinions of farmers might vary a little between wild oats, Canada thistle and perennial sow thistle, but it is pretty safe to say that at least 75 per cent of the hands would go up at the words "sow thistle."

The sow thistle is fairly true to name, or at least there is a good deal of the hog nature about it, for, when permitted to do so, it will crowd out and rob almost everything else that tries to be neighbor to it, even to the Canada thistle, wild oats or other weeds.

T. J. Harrison, Field Husbandry Professor at Manitoba Agricultural College, has written the most exhaustive bulletin on the "Control of the Sow Thistle" that has yet been put into print in Canada, or possibly in any country. This bulletin is well illustrated, not only with photographs of the weed, but also with pictures showing the agencies by which it is spread, implements to be employed in eradication, and crops that should be grown on infested lands.

The author deals in detail with the best methods of fighting the pest in districts where it is just making its first appearance and also in those parts of the country where it is as thick as the proverbial "hair on a dog's back."

Every farmer should write a post card request to the Publication Branch, Department of Agriculture, Winnipeg, and ask for a free copy of Extension Bulletin No. 4.

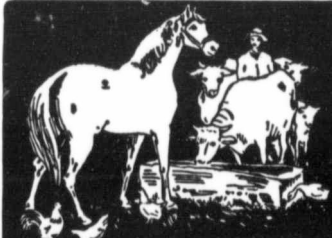
**T**HE tractor fuel for 1916 is kerosene. Shortage of gasoline makes its price almost prohibitive for tractor use. Nearly every tractor engine, with proper attachments furnished by the manufacturer, will run successfully on kerosene, if you make sure to use a high-grade, reliable product. SILVER STAR KEROSENE and ROYAL-LITE GOAL OIL are the products. Powerful, uniform, scientifically refined. Buy from any of our 700 tank stations and save money.

**THE IMPERIAL OIL COMPANY**  
Limited  
BRANCHES THROUGHOUT CANADA

**Donald Morrison & Co.**  
ESTABLISHED 1904  
GRAIN COMMISSION  
GRAIN EXCHANGE  
WINNIPEG

WE handle Wheat, Oats, Flax and Barley on Commission, obtaining best possible grades and prices. Our work is prompt, accurate and reliable. Let us handle YOUR shipments this season. Daily or weekly market letter on application.

References: Bank of Toronto, Northern Crown Bank and Commercial Agencies.



**Dr. Thomas' Eclectric Oil**  
Relieves all Pain in Man or Beast  
25 Cent Bottles at all Dealers

ADV  
II  
The  
Adv  
cult  
Bras  
Publ  
A. J.  
Lato  
Morr  
W. E.  
T. N.  
Agric  
It  
ments  
all bo  
societ  
In c  
of soc  
gested  
prepar  
and pr  
agricul  
It w  
nual co  
cieties  
prograt  
dresses  
secreta  
It w  
govern  
should  
ness re  
Societ  
with ac  
annual  
The p  
product  
vised, a  
prizes  
Bulletin  
ed for a  
The b  
incial g  
been pai  
arranger  
four yea  
ciation  
Agricult  
paid on  
—Memb  
for doll  
members  
per cent  
per cent  
and 25 p  
over \$500  
arrangem  
agreed th  
cities. Ac  
as to prov  
erimenta  
way the r  
resolution  
the Depar  
paying th  
the agree  
that the  
next legis  
The del  
fact that  
adoption  
classes at  
en off gra  
expressed  
this phase  
should  
emphasis

**ADVISORY BOARD OF MANITOBA AGRICULTURAL SOCIETIES MEETS**

The midsummer meeting of the Advisory Board of Manitoba Agricultural Societies was held at Brandon on Wednesday, July 19th. There were present Messrs. A. D. McConnell, Hamiota; S. Larcombe, Birtle; S. J. Holland, Morris; H. M. Dayton, Virden; W. E. Crawford, Elkhorn, and S. T. Newton, Superintendent of Agricultural Societies, Winnipeg.

It was agreed that arrangements be made for the auditing of all books of the local agricultural societies by a provincial auditor.

In connection with the keeping of society accounts it was suggested that the superintendent prepare a uniform set of simple and practical books for the use of agricultural society secretaries.

It was decided that at the annual convention of agricultural societies next winter a feature of the programme should be special addresses for the benefit of society secretaries.

It was decided to request the government that hereafter there should be printed the annual business report of the Agricultural Societies Association, together with addresses delivered at the annual convention.

The prize list of the winter soil products exhibitions was then revised, and the sliding scale of prizes (as outlined in Extension Bulletin No. 3) was recommended for adoption.

The basis upon which the provincial government grants have been paid was discussed. By an arrangement made about three or four years ago between the Association and the Department of Agriculture grants have been paid on the following basis:—Membership grant of dollar for dollar for the first 150 members; above that up to per cent of the amount raised; 50 per cent to match the next \$150, and 25 per cent of all amounts over \$500. At the time when this arrangement was made it was agreed that the Agricultural Societies Act should be amended so as to provide for this basis of governmental support, but in some way the revision was neglected. A resolution was passed thanking the Department of Agriculture for paying the grants on the basis of the agreement and recommending that the Act be amended at the next legislative session.

The delegates took note of the fact that owing to the widespread adoption of autos the light horse classes at the exhibitions had fallen off greatly, and the feeling was expressed that the decadence of this phase of agricultural enterprise should be made up by a new emphasis at some other point,

probably by giving more encouragement to contests in soil products to be shown at the winter exhibitions.

**HOW MUCH WOOL DID YOUR SHEEP CLIP?**

It is many a year since it made so much difference as to just how much wool one can get from a sheep's back as right now. The war, together with certain other conditions in the world's wool market, have sent wool prices sky-rocketing, and so an added interest attaches to reliable data regarding wool production.

How much wool, in pounds and ounces, will a good farm sheep produce in a year? Ask your neighbors who do not keep sheep, and see how many of them can tell you with an assurance that they are right alongside the mark.

Well, here it is. The Manitoba Agricultural College has a flock composed of three breeds, Oxfords, Shropshires and Leicesters, all well known and popular farm breeds in our western provinces. There are 49 sheep in the flock, almost all of them pure bred, although that does not necessarily affect the weight of fleece, for a good grade flock might be made to yield as much wool, though perhaps not so uniform in quality or in weight per sheep. The shearing this year, owing to the coolness of the weather during late May and early June, was delayed until about two weeks later than usual, being done on June 8th, 9th and 10th.

The total weight of wool from 49 sheep was 479 lbs., or an average of 9.77 lbs. per fleece. The three breeds averaged fairly close to the same weight per fleece, the Oxfords producing the largest weight per fleece and the Shropshires the smallest. An interesting fact is that in all the breeds the shearlings gave heavier fleeces than the mature sheep. Here are the results more in detail:

Oxfords:—10 mature pure bred Oxford ewes gave 9.5 lbs. each; 5 shearlings averaged 10.3 lbs. each; 1 ram, 16 lbs.; 1 grade Oxford, 11 lbs. Average of Oxford flock, 10.3 lbs. each.

Leicesters:—9 mature ewes, 9 lbs. each; 5 shearlings, 10.2 lbs.; 1 ram, 12 lbs. Average of flock, 9.66 lbs.

Shropshires:—14 mature ewes, 8.92 lbs. each; 2 shearlings, 9 lbs.; 1 ram, 16 lbs. Average for flock, 9.35 lbs.

An interesting fact in connection with the Leicester flock is that one of the best records among the mature sheep was made by an ewe nine years of age. This is an age to which it is not usually deemed profitable to keep sheep.

**"DOG DAYS" the best time to buy a DE LAVAL SEPARATOR**

THERE was never before as good a time to buy a De Laval Cream Separator as **right now.**

The "Dog Days" are at hand when dairying is most difficult without a separator and when the increase in quantity and improvement in quality of cream and butter are greatest through the use of a good separator.

Then there is the great saving of time and labor, which counts for more in summer than at any other season and often alone saves the cost of the separator, aside from all its other advantages.

This is likewise the season when De Laval superiority counts for most over other separators,—in closer skimming, larger capacity, easier running, easier handling, easier cleaning and absolute sanitation.

A De Laval Cream Separator bought now will easily save its cost before the end of the year, and it may be bought for cash or on such liberal terms as to actually pay for itself.

**De Laval Dairy Supply Co., Ltd.**

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole distributors in Canada of the famous De Laval Cream Separators and Alpha Gas Engines. Manufacturers of Ideal Green Feed Silos. Catalogues of any of our lines mailed upon request.

Montreal, Peterboro, Winnipeg, Vancouver 50,000 Branches and Local Agencies the World over.



**CONTINENTAL GASOLINE**

We are refiners and manufacturers of Gasoline, Coal Oil, Distillate, and all Petroleum Products.

Let us quote you on any quantity from a can to a tank car

**OILS**

Continental Oil Company WINNIPEG Limited  
Branches: Brandon, Regina, Saskatoon, Swift Current, Calgary, Lethbridge

**PATENTS TRADE MARKS AND DESIGNS**  
Write for booklet, circulars, terms, etc.  
**FETHERSTONHAUGH & CO.**  
FRED. B. FETHERSTONHAUGH, E. C. M. E.  
GERALD S. ROXBURGH, E. A. Sc.  
36-37 Canada Life Bldg. WINNIPEG

**FROST KING** BEST ANTI-FRICTION **BABBITS** 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. .... 75c per lb.	Less than 30 lbs. .... 40c per lb.
28 lb. box ..... 70c per lb.	30 lb. box ..... 37c per lb.
56 lb. box ..... 65c per lb.	60 lb. box ..... 35c per lb.

Delivered to your nearest express or post office station.

**Hoyt Metal Co.** Eastern Ave. and Lewis St. TORONTO  
FACTORIES—London, Eng.; Toronto, New York and St. Louis.

**Steam or Gas Tractors**

Equipped with

**"THE PICKERING GOVERNOR"**

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.





# HERE IS WHERE YOU SAVE MONEY ON THRESHERS' SUPPLIES

ORDER EARLY

Order direct from this advertisement or write for catalog of information. High quality. Satisfaction guaranteed. The quality of every article we sell is of a character to make it a worthy value at the price. Our prices are strictly wholesale, and the lowest—when quality is considered. To get the best for what you pay is what you want. We give you the best at the lowest known prices. We can save you money by saving you supplies which will prove their value by the lasting qualities and the good service they give.

## Endless Canvas Drive Belts

Our "Reliable" Belts are the heaviest and most durable offered. They are made of full weight 32-oz duck. Every belt is guaranteed.

20 ft., 6 in. x 4-ply	\$ 6.50	120 ft., 8 in. x 4-ply	\$40.00
20 ft., 6 in. x 4-ply	6.55	120 ft., 8 in. x 5-ply	46.25
40 ft., 7 in. x 4-ply	12.50	160 ft., 7 in. x 5-ply	52.00
60 ft., 6 in. x 4-ply	15.75	150 ft., 8 in. x 4-ply	48.50
100 ft., 7 in. x 4-ply	28.50	150 ft., 8 in. x 5-ply	58.25
100 ft., 7 in. x 5-ply	35.00	150 ft., 8 in. x 6-ply	68.50
100 ft., 8 in. x 4-ply	34.50	160 ft., 8 in. x 5-ply	64.75
120 ft., 8 in. x 5-ply	40.00	160 ft., 8 in. x 6-ply	72.50
120 ft., 7 in. x 4-ply	34.00	160 ft., 9 in. x 6-ply	85.00
120 ft., 7 in. x 5-ply	41.00		



EVERY BELT GUARANTEED

## Endless Rubber Drive Belts

We offer this Belt to the Thresherman on its merits, as there is no better endless rubber belt made. The kind of a belt mostly sold with new threshing outfits. Our price saves you at least one-third. They are made of the best of materials and workmanship. We guarantee these Belts to give good service, and to stand up under a load as long as any endless rubber Threshers' Belt manufactured.

100 ft., 7 in. x 5-ply	\$47.50	150 ft., 7 in. x 5-ply	\$39.50
120 ft., 7 in. x 5-ply	55.00	150 ft., 8 in. x 4-ply	65.00
120 ft., 8 in. x 5-ply	64.50	150 ft., 8 in. x 5-ply	79.50
120 ft., 9 in. x 5-ply	89.50		

Telegraph Us  
When in a  
Hurry  
We Will Ship  
Next Train

## Leather Belting in Cut Lengths

AGRICULTURAL STANDARD LEATHER BELTING

Width, inches	12	14	16	18	24	30	35	42
Price per foot	1.25	1.35	1.45	1.55	1.85	2.15	2.45	2.75

EXTRA LEATHER BELTING

No. 5186—Falls equal to the grades offered by other concerns at higher prices.

Width, inches	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6
Price per foot	20c	30c	32c	38c	42c	50c	55c	65c	75c

## Rubber Belting in Cut Lengths

STANDARD BRAND RUBBER BELTING

All 2 and 3-inch is 3-ply, other sizes are 4-ply.

Width, inches	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6
Price per foot	17c	26c	28c	34c	38c	42c	50c	55c	65c

PREMIER BRAND RUBBER BELTING

No. 5188—All sizes 4-ply.

Width, inches	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6
Price per foot	12c	15c	18c	22c	25c	28c	30c	35c	42c

## Stitched Canvas Belting, Cut Lengths

No. 5183—Four-ply Stitched Canvas Belting

Width, inches	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6
Price per foot	8c	12c	15c	18c	20c	22c	25c	28c	35c

No. 5184—Five-ply Stitched Canvas Belting

Width, inches	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6
Price per foot	22c	25c	28c	30c	35c	40c	45c		

## Extra Heavy Steel Barrels

Will stand all kinds of rough handling in shipping and in general use on the farm. Guaranteed as per Railway specifications.

Weight, 83 pounds

Price each \$6.25

Castor Machine Oil Per gal. 28c  
Harvester Oil Per gal. 37c  
Steam Cylinder Oil Per gal. 37c  
Gasoline Engine Oil Per gal. 37c

(These prices apply only when shipment is made in steel drums.)



## Hi-Power Friction Surface Rubber Belting

It is especially adapted for wind stackers and feeder belts, or where a good friction surface is desired.

No. 5180—Four-ply Friction Surface Rubber Belting.

Width, inches	18	24	28	32	36	42	47	55
Price per foot	18c	24c	28c	32c	36c	42c	47c	55c

No. 5181—Five-ply Friction Surface Rubber Belting.

Width, inches	18	24	28	32	36	42	47	55
Price per foot	35c	40c	45c	50c	58c	65c	75c	85c

## Raw Hide Lace Leather Cut or in Sides

Cut 1/2, 3/4 or 1 1/2-inch in sides. Per lb. \$1.20

25-foot length. Per lb. \$1.05

## EXTRA QUALITY THREE-TINE HAY FORKS.

The fork you want for getting Three 12-inch tines. Strapped and riveted; pivoted through tang and forged steel handles. 4 or 4 1/2-foot long. Price each \$0.65

Price per dozen 7.00

## "Elgin" Double Team Harness

The greatest value ever offered at the price. Brass and laminated trimming. Heavy bridle, heavy tack, pads and belly bands; 1 1/2-inch leather straps and martingales. 1-inch full length lines, back-wrap and straps complete. Complete \$32.50

Special value—heavy brass trimmed breeching harness with 1 1/2-inch three-ply traces, complete less collar. 48.50

1-inch team lines, full 20-feet in length. 4.75

with snaps, slides and spreaders. No collars. Price per set



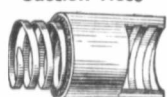
## Low Down Tank Pump

The old reliable, never fail pump. The one to give you real service. Shipped complete with arrester, wrench. Price each \$6.25

## Suction Hose

Genuine Red Jacket wire-fitted hose. Heavy and lasting. 2 1/2-inch diameter. 20-foot length. Price \$ 8.00

25-foot length. Price \$ 10.00



C. S. JUDSON CO. LIMITED FROM FACTORY TO FARM Winnipeg, Canada

## Condition of Grain and Hay Crops

The reports show that the prospects for grain crops are excellent throughout the West, but owing to the lateness of the season there will be a greater risk of damage from early frosts than last year. For all Canada the condition of the principal grain crops, expressed in percentage of the standard, ranges from 82 for peas to 91 for rye; but in the northwest provinces the condition is well over 90, and for Manitoba and Saskatchewan it is even higher than at the same date last year, when the high promise at the end of June was so abundantly fulfilled. Converting the figures in per cent of a standard of 100 to the scale in which 100 represents the average condition on June 30 of the past eight years, 1908-1915, the condition becomes for wheat, rye, barley and oats as follows: Fall wheat 99.2, spring wheat 100.2, all wheat 100.2, rye 103.6, barley 98.5, oats 96. That is to say, if conditions between June 30 and the date of harvest are not abnormal, the anticipated yield per acre is about equal to the average for wheat, 3.6 per cent above average for rye, about 2 per cent below average for barley and 4 per cent below average for oats.

## Estimated Numbers of Farm Live Stock

It is estimated from the reports of correspondents that the numbers of farm live stock in Canada on June 30 were as follows: Horses 2,990,635; milch cows 2,893,345; other cattle 3,826,519; sheep 1,985,101; swine 2,814,672. As compared with 1915 these figures represent decreases of horses by 5,646; of milch cows by 63,501; of sheep by 73,561 and of swine by 297,228; but an increase of "other cattle" by 427,364. The decreases apply principally to Eastern Canada; in the West all descriptions show increases over last year, except swine in all three provinces, and "other cattle" in Manitoba.

## THE FARMER'S BUNGALOW

Continued from page 32

pressor and the laundry machinery. The hot air furnace, located directly under the centre of the house and near the chimney, provides for both heat and ventilation and the entire first floor could be warmed with but three or four pipes. All the plumbing is confined to the first floor rooms and the basement, and the sewage is disposed of by means of an effective home-made septic tank of concrete.

In planning farm homes provision must be made for the housing of the farm help and to give the farmer's family privacy and eliminate the intimate contact with the help. This plan solves the problem exceptionally well and does so in a most practical manner. There are two bedrooms conveniently arranged with the bathroom on the first floor which will be used by the farmer's family. The upstairs' rooms are for the farm hands and they can reach their rooms from the stairway which goes up from the rear entry room of the house and is accessible in a like manner from the living room.

The second floor rooms are all full height and are approximately 12 by 14 feet in size and each room is well windowed, having

three large sized windows. There is an abundance of closet room off from these bedrooms and all are of an extra large size so that they may be used as storage rooms which are so necessary in the farmer's home. The small attic is left unfinished, having a floor of matched fencing only. It is reached by a drop ladder in connection with a scuttle in the ceiling making it available for storage purposes.

The bathroom on the first floor is 5 by 7 feet in size, but still is large enough. The tub is of enamelled iron of the latest half-built-in-type, resting solidly on the floor without legs, leaving no open space beneath to accumulate dust, collar buttons, etc. The other fixtures are of substantial make and of modern design throughout.

The family bedrooms are amply windowed on both side walls for cross draft so as to insure warm weather comfort without a sleeping porch. Closets are of the improved wardrobe type with the floor slightly raised to keep out the dust and a cross rod for garment hangers with shelves above.

This storey and a half real farmer's bungalow is size 36 by 26 plus the 10 by 14 foot sun porch and the 4-foot addition for

the rear entry or washroom. It is a stud frame construction with an extra covering of fine, rough-cast, ivory white stucco on galvanized metal lath, relieved by stained, undressed boards suggesting the charm of English half timber work. The shingled hip roof is stained a dark color.

This house has a 7 1/2-foot basement, with concrete and tile walls and a concrete floor. The walls of the house are covered with a sand finished and tinted plaster, and the finish wood for the main rooms is birch and for the others is yellow pine. The total estimate of cost is \$3,500, which is based on a charge of 14 cents per cubic foot for the 25,000 cubic feet contained in the house.

**WE PAY THE FREIGHT**

32x28 ft., \$15.40    7x2 ft., \$20.00

**Send To-day for Catalog**

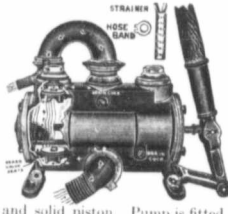
12 Barrels **\$38.50**  
16 Barrels **\$46.20**  
Pits Bolster

**Freeland Steel Tank Co.**  
HALBRITTE, SASK.  
Manufacturers of all kinds of Steel Tanks

Twelve Months of this Magazine for \$1.00

# USE "IMPERIAL" THRESHERS' SUPPLIES AND HAVE A GOOD RUN THIS FALL

Get them at Eaton prices, covered by the Eaton Guarantee of first rate quality; you will save money and get thorough satisfaction. Eaton Service ensures you, too, of receiving your goods in the shortest possible time.



### A RELIABLE DOUBLE-ACTION TANK PUMP

A strongly constructed powerful pump, weight 95 lbs., cylinder 5 ins. in diameter, stroke 5 ins. and solid piston. Pump is fitted with brass valve seats, 2 inch suction and 2 inch discharge, water can be drawn a long distance if pump is not more than 25 feet vertically from the water.

97X1244—Tank pump as shown, weight, 95 lbs. Price ..... \$5.75

### HIGH GRADE WIRE-LINED SUCTION HOSE



Made from the very best material and will stand the racket of hard wear. The canvas is two-ply—the flat wire inside the hose is moulded in (see cut) not pressed in, as is the case with various kinds that may look as well.

Length	Size	Weight, about	Price
98X1254, 20 ft.	2 in. wire lined	35 lbs.	\$ 4.35
98X1255, 25 ft.	2 in. wire lined	44 lbs.	8.15
98X1256, 20 ft.	2 in. canvas covered	40 lbs.	5.25
98X1257, 25 ft.	2 in. canvas covered	45 lbs.	10.25
Per length..... \$1.75			
98X1258.—1-inch wire-lined injection hose—sold only in 124 feet lengths..... 14c			
98X1259.—1-in. 3-ply discharge hose in 50 ft. lengths or less..... 14c			
Per foot.....			

### FOUR-TOP-VALVE, DOUBLE-ACTION TANK PUMP



This is an exceptionally well constructed tank pump, weighs 110 lbs., will throw a large quantity of water a long distance without much effort, cylinder is 5 ins. in diameter bored perfectly true, fitted with four valves, all placed on top of the pump and can be reached with ease by unscrewing the caps of the valves; 2 inch suction, 2 inch discharge, fitted with suction strainer.

97X1249—Tank pump as shown, without hose weight 110 lbs. Price ..... \$7.45

### THRESHERS' Imperial Packing Belt Dressing, Threshers' Cable, Threshers' Tanks, Etc., are all ready for your order at EATONS.

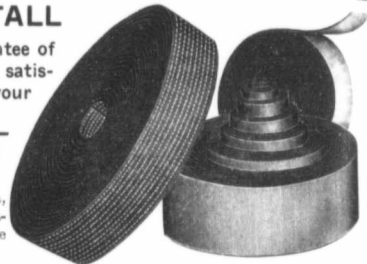
**HIGH-GRADE OAK TANNED LACE LEATHER**  
Cut from best quality oak tan leather. Sizes 1, 4 and 1-inch. Sold in 1-lb. packages.  
41X876.—Price, per pound ..... \$1.30  
State Width Required  
**LACE LEATHER CUTTERS**  
41X878.—Lace Leather Cutters, for cutting leather in strips. Adjustable to various width. Weight, 4 ozs. Each..... 50c

SHIPPED FROM WINNIPEG

**THE T. EATON CO. LIMITED CANADA**

### "IMPERIAL" HIGH GRADE BELTING

Leather, Rubber, Balata, and Stitched Canvas belting. Every foot will give satisfaction.



#### LEATHER BELTING

Width	Price per ft.
98X816, 2 in.	.35
98X817, 3 in.	.37
98X818, 4 in.	.49
98X819, 5 in.	.62
98X820, 6 in.	.78

#### RUBBER BELTING

Width	Thickness	Price per ft.
98X801, 2 in.	3-ply	.09
98X802, 3 in.	3-ply	.14
98X803, 4 in.	4-ply	.22
98X804, 5 in.	4-ply	.37
98X805, 6 in.	4-ply	.51

#### BALATA BELTING

Width	Thickness	Price per ft.
98X806, 2 in.	3-ply	.12
98X807, 3 in.	3-ply	.16
98X808, 4 in.	4-ply	.33
98X809, 5 in.	4-ply	.48
98X810, 6 in.	4-ply	.68

#### STITCHED CANVAS BELTING

Width	Thickness	Price per ft.
98X811, 2 in.	3-ply	.11
98X812, 3 in.	3-ply	.15
98X813, 4 in.	4-ply	.19
98X814, 5 in.	4-ply	.23
98X815, 6 in.	4-ply	.35

#### ENDLESS RUBBER THRESHER BELTS

Length	Width	Thickness	Price
97X821, 100 ft.	7 in.	4-ply	\$ 40.25
97X822, 120 ft.	7 in.	5-ply	59.55
97X823, 150 ft.	7 in.	5-ply	78.25
97X824, 120 ft.	8 in.	5-ply	55.55
97X825, 150 ft.	8 in.	5-ply	78.95
97X826, 160 ft.	8 in.	6-ply	105.95

#### ENDLESS CANVAS THRESHER BELTS

Length	Width	Thickness	Price
97X894, 100 ft.	7 in.	4-ply	\$41.45
97X895, 120 ft.	7 in.	5-ply	47.55
97X896, 150 ft.	7 in.	5-ply	57.25

Length	Width	Thickness	Price
97X897, 120 ft.	8 in.	5-ply	\$53.55
97X898, 150 ft.	8 in.	5-ply	63.25
97X899, 150 ft.	8 in.	6-ply	79.95
97X900, 160 ft.	8 in.	6-ply	86.25

## Stacking the Grain

STACKING grain is a practice which seems to be losing rather than gaining ground. Stacking grain may require a little more time, but there is no question but that, one year with another, it is in many cases a profitable method of handling grain where it can be done. The first consideration in stacking grain is the selection of a well drained conveniently situated site, as nearly level as possible. Stacks built on a side hill will almost invariably settle to one side, they are difficult to haul to, to pitch to, and require much time for the setting of the machine. Ordinarily, the stack is started on the ground without any preparation, but where it is possible, it is advisable to make the stack bottom of rails or plough the ground. Ploughing loosens the soil and breaks the capillarity from below, thus preventing the rise of moisture into the lower bundles.

The stack should be started in the same manner as a shock of grain. The bundles should be kept as nearly straight in the centre as possible, and each successive tier as it is laid down, a little more sloping than the last. If the outside tier is too steep, there is danger of slipping; if the bundles are laid too flat, part of the heads will lie upon the

ground. The object in setting the bundles rather straight is to keep the heads of the grain off the ground, and where this can be properly done, even though the butts of the lower bundles become somewhat moldy, the heads will keep in fine shape. Ordinarily, a stack bottom fourteen feet in diameter is large enough. When properly built, such a stack should hold eight or nine good sized loads of oats or six or seven loads of wheat. Stacks larger than this are more apt to mold if the grain is damp; they are difficult to handle at the machine, make more work for the pitcher in stacking and require more time in building. Round stacks are easiest to build and have less surface exposed.

### To Level the Stack

After the first tier of bundles has been laid, the stack should be levelled up. This is where the inexperienced stacker sometimes fails, because he builds his stack with the slope of the hill. To level the stack, lay the second course on the outside, the butts even with the butts of the bundles

below, and as straight on the outside as possible. These rows extend but a part of the way around the stack, and as each incomplete row is laid, the corresponding portion of the inside row should be laid in order to bind the bundles already placed and also to keep the centre full. Another method of levelling up, is that of laying a double row on the lower side, or of laying the bundles edgewise and closely together. This can be done where there is not too much slope to begin with. After the stack has been levelled, begin laying the outside tier as before, but complete each course. As each bundle in the outside course is laid, lay another directly over it with the butt to the point of the bundle in the first course. Step on each bundle in the second row as it is laid, but keep off the first or outside tier. After the two outside courses are thus completed, lay the inside rows, one at a time, stepping on each bundle. This keeps the centre solid and full. More bundles should be laid in the inside rows if it is desired to increase the height in the centre of the stack,

or the bundles can be lapped out further over those on which they are laid. A stack built in this manner will be solid in the centre and loose on the outside, hence will have plenty of pitch when it settles. Lone bundles and woody grain require more pitch than smooth dry or short straw, and oats will require more pitch than wheat.

In stacking oats, keep the side straight for three or four feet before bulging the stack. Half of this height will be sufficient in building a stack of wheat. Avoid bulging the stack too fast. Two or three inches in each course will be sufficient. After building a bulge of sufficient height and keeping the stack slightly rounded in the middle while building this, it is well to fill the middle full. Remember that it is much more difficult to keep the centre of a stack full in "drawing-in". In fact, it will be found that to lay the bundles in their regular order will not be sufficient. Extra bundles must be laid in, or perhaps, extra courses laid. The success of stacking depends upon two factors—a stack that is level and that is high enough in the middle to shed water.

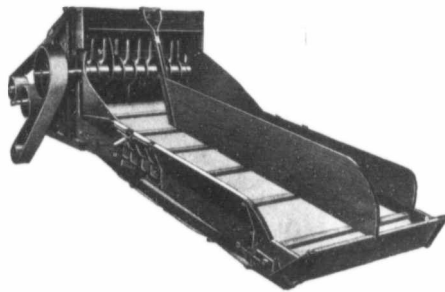
When drawing the stack in, the distance that the bundles are set in should be increased as the

stack reaches times it just how should be only by should be Toward t not a goo outside ti keep as n ble, thus, and a loc enables th of the str; always af pitched of ground an When lay two h top. Driv as nearly stack as p few short bundles ne hangers. venient an

# All Experts Agree

That the Principle of the

# "Langdon" is Best



The Langdon Feeder to eventually supersede all other types

### OPINION OF AN EXPERT

A noted authority on threshing machinery recently said: "It is only a question of time until Feeders built on the principle of the LANGDON will supersede all other types. Unquestionably this Feeder is built on scientifically correct principles. It governs so as to prevent slugging and checking of the power, instead of waiting until such check is made before governing the machine, as has been the case with other types of feeders. The LANGDON system of governing is the first real improvement that has been made in feeders for more than twenty years, and is destined to revolutionize the whole Feeder practice."

### UNCONDITIONALLY GUARANTEED

THE PRINCIPLES OF THE LANGDON FEEDER ENABLE THE MANUFACTURERS TO GUARANTEE THE LANGDON TO DO MORE AND BETTER WORK WITH LESS POWER, AND LAST LONGER THAN ANY OTHER FEEDING DEVICE KNOWN.

### WHY PUT IT OFF?

It is only a question of time until you will use a LANGDON FEEDER. Why not get one on your rig now at the beginning of the season, and be that much ahead of your less fortunate brother thresherman who overlooks the chance of putting on this feeding device now. The LANGDON FEEDER attached to your rig now will save you the price of a Feeder long before you need pay for it. You need this Feeder to bring your rig up to date. Quoting the words of a nation-wide advertiser, this is the Feeder you are going to buy "Eventually; why not now?"

If you did not see and examine the Langdon Feeder at the Fair, drop a card to us and let us explain why this Feeder is so much better than others; why it will do so much more; why it will do it with such economy of power; why it is the Feeder that you should buy. For prices, terms and special proposition write at once to

## CUSHMAN MOTOR WORKS OF CANADA, Limited WINNIPEG

HART GRAIN WEIGHER COMPANY  
PEORIA, ILLINOIS, U. S. A.  
MANUFACTURERS

DISTRIBUTORS  
FOR  
CANADA

FEEDERS CARRIED IN STOCK BY CUSHMAN MOTOR WORKS OF CANADA, WINNIPEG. REPAIRS AT ALL HOUSES CUSHMAN MOTOR WORKS AND H. A. KNIGHT, REGINA.

### Pasture Grasses for Farm and Range Sheep

stack reaches completion. Sometimes it is difficult to determine just how far or what this distance should be, but it can be learned only by experience. Bundles should be laid with short side up. Toward the top of the stack it is not a good plan to walk on the outside tier. In fact, it is best to keep as near the centre as possible, thus insuring a solid centre and a loose outside. This also enables the stacker to see all parts of the stack. It is a good plan always after each load has been pitched off to get down on the ground and look over the stack.

When the stack is complete, lay two long bundles across the top. Drive a stake through them as nearly in the centre of the stack as possible. Then put in a few short sticks in the side bundles near the top or put on hangers. Sticks are more convenient and just as satisfactory.

THE increasing interest in sheep husbandry that is now spreading so rapidly over the western farming and range country demands planning and building up of the permanent feed resources. It is imperative that the sheep owner, in order to obtain the highest degree of success in this venture, avail himself of all the advantages to be had in pastures and feeds suited to the growth and health of the flock.

Since the foundation of the world, probably, there has been in use an old adage, "A change of pasture is good for sheep." At all events there has been observed by shepherds from olden times,

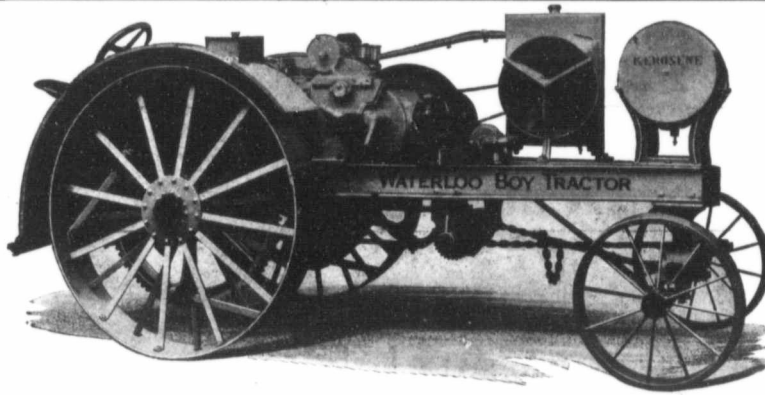
down to the present, a distinct inclination among sheep to crave something new, a desire for mixed feed, especially in pasturage; therefore, the sort of scavenger instinct that the novice in sheep husbandry discovers with his first experience in handling the flock. The disposition of the sheep when turned into a new pasture is to take a bite of this and a bite of that, not missing anything as they travel over the field; the rag weed, sourdock, sunflower, clover bloom, blue grass, brome grass, etc., each are recognized and honored in their turn by a taste, if nothing more than one mouthful.

This natural tendency of the sheep to variety of herbage in its

pasturing is a distinguishing feature. Thus the recommendation of mixed pasture grasses for the sheep farm, when the grazing conditions for the flock are being considered by experienced flock owners. Sheep are also best served when on short grass pastures. They are close croppers, prefer to get close to the root of the pasture grasses; only the tall herbage, such as weeds and volunteer growths, the lower and under foliage of forage crops—corn, sorghum, etc.—are preferred in their pasturing inclinations.

#### Native Grasses Good for Sheep

In the country west of the Missouri river, where more than 100 varieties of native or wild grasses of various degrees of pasturage value are found on the uncultivated lands, sheep have succeeded remarkably well, where given sufficient acreage to maintain a



**GASOLINE IS GOING UP!**  
 THAT IS WHY YOU SHOULD BE INTERESTED IN  
 THE  
**"WATERLOO BOY"**  
 Kerosene One-Man Tractor

Weight only 4,800 lbs.  
 Brake Test, 24 h.p.; Draw Bar, 12 h.p.  
 It is a Kerosene Tractor, built especially to operate on the heavier fuel.  
 It has twin cylinders, cast en bloc.  
 Ignition—High Tension Dixie Magneto with Impulse Starter.  
 It has a Cooling System of the most approved type. When plowing, is Self-Steering, and will turn in a 28-ft. radius.  
 Easy to operate—Economical on fuel.  
 All working parts are very accessible and easily kept in perfect adjustment.  
 Transmission—Sliding Gear, with Shifts for one speed forward and one reverse.

Gasoline at the end of January, 1916, was 31½¢ per gallon. The price of gas is soaring all the time. It is highly probable that it will touch the 50¢ per gallon mark before the end of the year, and at a time when you will want it most. When you buy a tractor you need to figure out the cost of operation. Fuel should be one of the chief determining factors. The initial cost of the tractor will be but a minor consideration. With the positive advance of gasoline, farmers will naturally turn to a low-grade oil as a substitute. The Waterloo Boy One-Man Tractor which is specially constructed to operate on low-grade oil, will give gallon for gallon equal and even greater efficiency at a consequent lower cost per acre. It should not be overlooked that The Waterloo Boy is a Kerosene One-Man Tractor, and we guarantee it to fulfil every requirement we claim for it.

The Waterloo Boy will pull a light engine gang with three 14-inch plows in stubble any depth you wish. It will pull two 14-inch plows in any prairie breaking. On your summer fallow it will handle a disc with harrows behind at from 2½ to 3 miles per hour. It will drive a 24-46 thrasher with all attachments at a capacity of 700 bushels of wheat to about 1,400 bushels of oats per day. The Waterloo Boy performs this work with efficiency, economy and durability. All in all it is Special Value. Under the circumstances it will pay you to obtain information, price, etc. Mailed free. Write us today. We also handle Gas Engines, Grain Grinders, Cordwood and Pole Saws, Electric Lighting Machinery, Hand and Power Washing Machines, Grain Elevators, Pump Jacks, Small Threshing Machinery, Belting and Threshers' Supplies. Live Dealers wanted in Territory where we are not represented.

**The Gasoline Engine and Supply Co. Limited**

**104 Princess Street, Winnipeg**

full feed without too much traveling. The buffalo and gramma grasses—in fact, all varieties of short wild grasses—are readily consumed by the flock, and the best of pasturage results obtained.

The coarser and tall grasses, such as the little bluestem, big bluestem, redbud, Indian grass, switch grass, wheat grass, tall oat grass, wild rye and many other varieties found in the sandhills in the valleys, draws and on the moist bottom lands, furnish grazing, but are more especially suited for hay purposes and comprise the greater portion of the prepared winter feed for the flocks and herds of the range country. It is this combination of pasture and hay grasses, this multitude of varieties, that has made Western Nebraska famous the country over for its great all-year feed supply for the grazing and hay-eating animals. What is true of Nebraska in its wild or native vegetation is in a measure true of other western states and live stock-producing districts, varying more or less in varieties. The range sheep industry is confined to the short grass country mainly. This is due to the adaptability of the sheep to the grass and the grass to the sheep. The short grass is a sod-former, having root stocks by which it spreads through an extensively creeping underground system, forming a continuous sod; the buffalo grass, gramma grass, blue grass and many others of the short grass varieties are representatives of this class or group of pasture grasses. The sheep is so constituted in its ability to nip or bite that it can feed much closer to the ground or grass roots than other kind of grazing animals. It not only prefers the short grasses, but

is able to get a living where cattle would starve, due to their inability to close grazing. Where tall grasses prevail there is a tendency to needle and burr-carrying weeds, which in their season are gathered by the sheep into their fleece and become the source of great danger and loss to the wool crop.

Numerous sheep enterprises have been introduced into the sandhills district of northwestern Nebraska, but were later forced to abandon their location mainly owing to the lack of suitable pasture grasses and the annoyance of the fleece-damaging weeds. On the hard-soiled lands where the short grass abounds some flocks are reporting good results. The sandhills of the West are not well understood except by those familiar with that portion of the land. Some of the finest, hard-soil table lands to be found anywhere are surrounded by towering sandhills. These smooth hay valleys and adjacent hard-soil table lands afford excellent sheep ranch prospects and will sooner or later be the home of the shepherd and his flock.

**Farms Must Have Pasture**

The farm sheep industry is where the greatest development is anticipated and where the opportunities for profit are governed more by system in the feed and care of the flock. It is imperative that there be sheep pastures on all farms where sheep are kept. The herding of the little flock is not practical and results in damage and loss ninety-nine times out of a hundred. The sheep pasture is the only solution. It need not be expensive, but must be a dog-proof enclosure and abundantly supplied with a suitable pasture feed to keep the

farm flock satisfied, healthy and growing.

What constitutes a satisfactory sheep pasture on the farm? This question can be satisfactorily and intelligently answered by the sheep handler of many years who has not only studied the needs of his flock, but experimented for results in the mutton and the production of wool, two factors entering into the profitable production of sheep that must be carefully measured from the standpoint of investment. The sheep on the farm must be freed from all annoyance; they must become a source of revenue and profitable investment, a feature of satisfaction in ownership, a matter of fancy and pride on the farm. This is the true spirit of the successful live stock owner and breeder.

The feed resources and means of maintaining and developing the flock successfully center mainly in the all-year abundance and quality of the feed. The greatest factor in feed supply is the sheep pasture. The sheep pasture is a matter of opinion, and too frequently not liberal enough to represent the inclinations and tastes of the animal. It has been observed that the sheep is passionately fond of blue grass and white clover pasture. It has shown no disposition to discriminate between these, possibly because they comprise sheep pastures generally, and they incline to grow together. It has never been definitely discovered that one has the advantage of the other in its ability to crowd out and take possession. They may safely be put at the foundation of the permanent sheep pasture.

Then come red clover and timothy, two grasses that have been

linked together inseparably for more than a century because of their tendency to harmonize in pasture and hay growth. These



Not a single awkward beam in the way. Clear, open space from wall to wall, and floor to roof in the

**PEDLAR'S**  
 STEEL BRACE "WARDLE PATENT"  
**BARNs**

More freedom in the mows, more freedom at the ridge and hips, more freedom along the walls. Every bit of space is conveniently usable. The hayfork is easily operated in either hip, or in the ridge. Easier at threshing time, and less work every day. Full details and estimate of cost on request. Write!

**THE PEDLAR PEOPLE LIMITED**  
 (Established 1861)

80 Lombard St.  
**WINNIPEG**  
 Man.  
 Branches:  
 Regina, Moose Jaw,  
 Calgary, Edmonton  
 Vancouver  
 Executive Offices  
 and Factories:  
 Oshawa, Ont.



Write for Free Plans & Blue Prints.

two usually clover and grass crops, and encroach the latter t crowding in the pasture s Mixture M A good con pasture is grass, timoth grass, mead clover and alf each kind of toned to the

UP!  
TED IN  
Y"  
ctor  
perate  
h Im-  
type  
i in a  
r kept  
r one  
ar, and  
itself  
trained  
'08 ene  
handle  
attends  
ite as  
washing  
peg  
bly for  
cause of  
nize in  
These  
ater  
we  
let



# New Prices August 1, 1916

The following prices for Ford cars will be effective on and after August 1st, 1916

Chassis . . . . .	\$450 <u>00</u>
Runabout . . . . .	475 <u>00</u>
Touring Car . . . . .	495 <u>00</u>
Coupelet . . . . .	695 <u>00</u>
Town Car . . . . .	780 <u>00</u>
Sedan . . . . .	890 <u>00</u>

f. o. b. Ford, Ontario

These prices are positively guaranteed against any reduction before August 1st, 1917, but there is no guarantee against an advance in price at any time.

## Ford Motor Company of Canada Limited Ford, Ontario

two usually precede the white clover and blue grass as sowed grass crops, but the persistency and encroaching tendencies of the latter two soon find them crowding in and thickening up the pasture sod.

### Mixture Makes Best Pasture

A good combination for a sheep pasture is white clover, blue grass, timothy, red clover, brome grass, meadow fescue, alsike clover and alfalfa. The amount of each kind of seed sown is apportioned to the following scale for

one-fifth of an acre: Alfalfa, one pound; red clover, one-half pound; white clover, one-quarter pound; blue grass, one-half pound; alsike, one-half pound; brome grass, one-half pound; timothy, one pound, and meadow fescue, one-half pound. The time of seeding is a matter of opinion with experimenters, varying from the first of May to September. The spring seeding seems to receive most favor, and ground fall-plowed, spring-disked, lightly harrowed as a covering, is the

general system used in the planting of the seed. It is not usual that the grass seeding will show much for the first year, but eventually it makes a satisfactory growth. Stock should be kept off this ground and all weed growth mowed before seed ripens.

The urgency is to get short pasture grasses started. This can be very effectually accomplished by sowing seed on the sod or in meadow and hay lands, either bottom or high lands. White

clover and blue grass are never lost by being sprinkled about the pastures or enclosures that are to be plowed, but are to remain for pasture. The important thing in starting in sheep-raising is to grow plenty of the pasture grass, and especially the clovers. Red clover and alfalfa alone have a tendency to bloat cattle and sheep when not mixed in with other grasses, but when in the minority as above proportioned there is no danger of bloat.

## Poultry House Building

There have been marked changes and rapid developments in the perfection of poultry houses. It was formerly considered necessary to have a perfectly tight house, double boarded, with single or double glass sash in the front. This type of house served as a shelter for the birds, and theoretically would keep them warm; yet in practice it has been found that the closed, glass-front house was easily affected by changes of outside temperature and moisture, unless some adequate system of ventilation was provided. Such a house could not supply to the birds the abundance of fresh air which they need without causing a draft to blow directly upon them.

It has been found that a house constructed on a plan entirely opposite to the one just described is more efficient. All up-to-date poultry houses provide an abundance of fresh air during the night, to keep the birds in the best physical condition. This is being done almost entirely by the use of muslin fronts. This feature is regarded as essential and is prevalent throughout the entire United States, from Oregon to Maine.

Supplying poultry with suitable environment is one of the most essential features of poultry management. A suitable environment means the right kind of house properly located. Many types of poultry houses are in use throughout the country, representing a great variety of ideas and theories. This diversity is largely due to the fact that amateurs start out in business with ideas of their own, and incorporate these in their houses, whether they have been tested and found desirable or not. There are a few simple rules or principles which

should be followed in the construction of the house, and there are a number of different types which furnish these requirements. There is no one best type, suitable under all conditions and for all sections of the country.

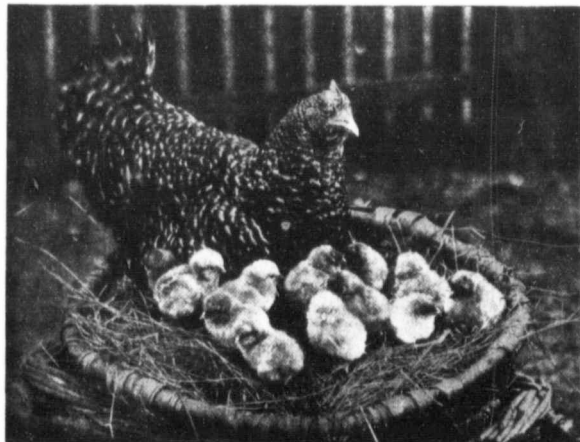
A poultry house, in order to furnish a suitable environment for the birds, should embody at least one essential—comfort. Comfort of the birds means happiness and happiness spells success.

In constructing a poultry house, two other factors are worthy of consideration. Along with comfort of the birds should be considered convenience of arrangement and cost.

Experience has clearly indicated that poultry, in all parts of the country, in order to be comfortable, should be supplied with an abundance of fresh air, in such a way that the birds are never subject to a draft. Sunshine is also a very important factor as it not only furnishes light and comfort to the birds but removes all dampness, purifies the air and helps to keep the birds in the best possible condition.

Since sunshine and pure air are essential in the construction of poultry houses to furnish suitable environment, it can be said that any plan which embodies these essentials will prove satisfactory in practice. It is on account of these principles being embodied in their construction that the Maine, Talman, Woods-Corning and other systems of poultry housing are meeting with such success in all parts of the country.

As sunshine and pure air are essential, it seems to me that that system which supplies these two factors to best advantage under all conditions will come the nearest to meeting the ideal



The Perfect Incubator

## Warning to the Farmers from McBean Bros.

**L**AST year the farmers of the three Western Provinces sold freely of their grain at the beginning of the shipping season at unnecessarily low prices, for October delivery, resulting in very heavy losses to some farmers owing to weather conditions interfering with the delivery in time to fill their contracts. We want to warn the farmers in contracting ahead this year, and especially at this early date as this crop is not yet assured, but even if we do grow as big a crop as last year the conditions governing the grain crops all over the world warrant higher prices to-day than at any time since the war began.

We estimate the devastation in the countries at war will be a great deal more than the countries at peace can possibly make up, and combine this with three hundred million bushels less grown in the United States than last year, will make a very bullish situation. Figure as we will we cannot see how prices can be any lower for this crop season, and could easily go very much higher, and any deterioration in our crop between now and harvest would make the situation stronger than ever and we would urge all farmers who have grain to sell this year to sit down and wait till their crop is harvested and not to be in any hurry in selling. Just take your time in shipping your grain forward and do not rush it to market and accept any price that may be offered, as last year

large quantities of our wheat was sold below 90c, Fort William, and from this point never stopped advancing until it reached over \$1.25. We will have rapid fluctuations from 5c to 10c per bushel, but our calculations are that even a bushel of wheat that we can grow in these three Western Provinces this year no matter if the crop pans out as big as last year, should be worth at least \$1.25 per bushel for basis No. 1 Northern and 50c basis No. 2 C.W. Oats in case Fort William, and if when you deliver your grain these prices or about are not obtainable ship your grain to Port Arthur or Fort William, and if you require money get your advances from your agent and hold until you can get your proper price.

You have the situation in hand this advantage of it this year and every year—get into the habit of shipping your own grain and get everything that is in it, less the one cent commission on wheat, barley and flax, and five-eighths of a cent on oats. Don't sell a bushel of grain on track, wait until you get your returns back from Fort William or Port Arthur.

If the advice we have been giving you during the past year has been any benefit to you we would like you to recompense by shipping to us a share of your grain. We make big advances on each car load of grain if you require it and look carefully after the grading.

### McBEAN BROS.

July 24, 1916

Grain Exchange, WINNIPEG

## Canadian Northern Railway System



### NEW ROUTE TO PACIFIC COAST



## AND EASTERN CANADA

Through Jasper and Mount Robson Parks by the Yellowhead Pass. Through the Lowest Pass! Past the Highest Mountains! The straightest line with the lowest grades, the newest equipment and latest compartment observation cars. Most courteous attendants—all anxious to make your trip worth while.

### Pacific Coast Excursions

Tickets on sale daily until Sept. 30. Good to return until Oct. 31st. Good to stop over at all points.

Routes—Good to go and return Canadian Northern or good to go Canadian Northern and return another line or good to go another line and return Canadian Northern.

There are other lower return fares on certain days during June and July. Ask the Ticket Agent

### Eastern Canada Excursions

All Rail or via Great Lakes

Tickets on sale daily until Sept. 30. Good for 60 days. Stop over at all points.

Routes—Good going or returning or both ways via the Lakes.

Rail Route—Via Canadian Northern new route to Toronto and the east, via Nepigon Lake and through miles and miles of wonder lake land. Just as cool and refreshing as via the Lakes, and the fare is lower.

New Compartment Library Observation Cars.

Ask ticket agent for all information and pamphlets about the mountains and service or write R. Creelman, Gen. Pass. Agent, Canadian Northern Railway, Winnipeg.

## CAST IRON WELDING

WE can weld your broken Tractor parts, whether a small lever or the largest cylinder or crankcase, and make them as good as new at low price. All metals welded. Welds guaranteed.

### Manitoba Welding & Mfg. Co.

58 Princess St.

WINNIPEG

Phone Garry 2678

Established in 1911

demand by the birds, and it is for this reason that I like to use a combination of glass and muslin curtain in the construction of poultry houses in the northern states. The combination works hand in hand and to the advantage of each other.

In cold localities there is no doubt but what there is such a thing as having too much muslin curtain. In such a house the birds find it difficult to keep warm during the day as well as at night and so become uncomfortable; such a condition is as serious as too little or no curtain. On the other hand, a judicious combination of curtain and glass will overcome this and other disadvantages.

There should be in each pen an opening of sufficient size to properly ventilate the pens. To my notion this opening should be three feet above the floor so as to prevent the cold fresh air striking direct on the birds' backs.

In small pens an ordinary twelve-light 10x12 glass storm window should be placed at one end of the opening. In large pens a window at each end of the opening is desirable. Being longer than the width of the curtain covered opening, the glass admits the sunlight into the pen close to the floor, thereby increasing the amount of sunlight and at the same time protecting the birds from the extreme outside temperature.

Another advantage derived is that on severe stormy days when it becomes necessary to close the curtains, the windows admit sufficient light to enable the birds to keep working and scratching.

Sunlight is necessary to the fowls, but too much glass makes the house cold at night and too warm in the daytime. An excessive amount of glass makes the house too expensive. A good rule for houses using muslin openings is to allow one square foot of glass to every sixteen square feet of floor space, or one square foot for every four birds. The amount of muslin can be determined by allowing double the number of square feet that there is glass, or one square foot of muslin to every eight square feet of floor space.

The windows should be placed high up in front and run vertically rather than horizontally. In this way the sun's rays will have a chance to sweep across the entire floor at some time of the day, drying and purifying the entire area.

The curtains should be placed on frames hinged at the top so that they can be opened each day after the outside air has warmed up a bit and they should be left open until the sun gets low in the afternoon and it commences to get cold. The only exception to this rule should be on severe, cold,



Made in Canada  
for  
Canadian Use

Qualities Guaranteed  
by the  
Canadian Rubber Co.  
of Montreal, Ltd.

## THRESHER BELTS AND BELTING

**C**ANADIAN-MADE BELTS and Belting that have stood the test in Western Canada, and have given regular users the best of satisfaction. Our belts are made to withstand the climatic changes and conditions of the West and are equal to the hardest usage. Materials of the highest standard; workmanship of the very best, with every detail of construction carefully considered by expert workmen.



The following lines are warranted to give satisfactory service, and will do the work required of them perfectly:—

### Red Wing Thresher Belts

made of heavy cotton duck; several layers stitched together, and thoroughly impregnated with oil. Toughness and strength are the outstanding features of the Red Wing Belts, while the stitching adds materially to the life. For economy and durability, the **Red Wing** easily leads the market.

### Endless Thresher Belts,

made of the highest quality of rubber material guaranteed to be uniform in quality—running true in all cases. For general satisfaction and service, insist on either the **STAR** or **LUMBER-KING** Brand.

Whatever your needs in Belts or Belting may be, write to our nearest branch, who will give you prompt attention and service.

**OUR AIM IS TO SERVE AND PLEASE YOU.**

## Canadian Consolidated Rubber Co. Limited

**Head Office: MONTREAL, P.Q.**

**Branches at Winnipeg, Regina, Saskatoon, Edmonton, Calgary and Brandon**

stormy days when it is well to leave the curtains down.

In order to obtain the best results, the birds should not be overcrowded. In places where it is necessary to confine all birds to the houses for several weeks at a time, four square feet floor space should be allowed for each bird.

The dropping boards which are placed in the back of the house should be built tight and the walls back of them made tight so that the birds are never in a draft during the night.

In the construction of a poultry house it is always an advantage to so arrange the structure that the work can be done easily and quickly; by so doing there is greater liability that the work will be properly done while if the work is made hard, there is a ten-

dency to shirk it and as a result, conditions soon become unbearable for the birds.

The cost of the poultry building should be kept as low as possible and still have the above mentioned ideal conditions. Some of the most expensive poultry houses I have seen have been the most unsatisfactory and on the other hand, some cheaply constructed houses furnish ideal conditions.

In summarizing it can be said that that house which furnishes the birds with comfortable quarters, full of sunlight, freely ventilated, so planned that the birds are never subjected to a draft, a house which is conveniently arranged so that the work can be done easily, and one that is thoroughly built, but constructed without unnecessary expenses will

offer ideal conditions for poultry, and will be conducive to the best returns in egg production.

#### INSIDE COMFORTS

The interior of the poultry house should be arranged so as to give the hens all the floor space possible. In a well arranged poultry house nothing is permitted to take up floor space but the hens themselves. The nest-boxes are arranged above the floor, either against the wall, under the dropping-boards or else outside the house. In my opinion the best place for the nests is outside the house. Such nests are easily made by building a long box (divided into compartments), to the outside wall of the house, the hens gaining access to the nests through holes cut in the wall. The nests should be covered with roofing-paper and the



tops hinged to the wall of the house. The advantages of this style of nests are that the nests are dark, floor space is not utilized, and the eggs can be gathered without entering the house.

The food troughs, drinking vessels and hoppers should also be raised above the floor. This is easily done by building a platform eighteen inches or two feet above the floor and placing the vessel and hoppers on this.

Some poultrymen cover the entire floor with scratching material. I do not think this a wise plan. I leave about one-fourth the floor space of my houses bare, holding the litter to its area with a twelve-inch board. On this bare space, I feed the last grain feed of the day. Were the grain scattered in deep litter, the hens, or at least some of them, would not be able to fill their crops by dark.

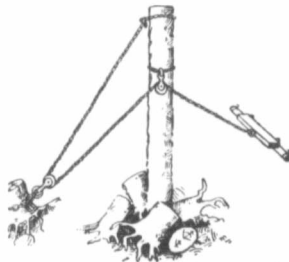
Some poultry authorities still recommend the use of roosting closets. My houses carried roosting closets for several years and my experience is that the hens will keep in a much better state of health when not compelled to spend their nights in a tight, stuffy, foul smelling enclosure. My observation is that the fowls contract colds, catarrh and roup much more readily in these closets than they do when out in the open. The roosting closet does what is expected of it—it keeps the fowls warm, but the effect of a small current of air entering the enclosure is often serious, if not fatal. A roosting closet cannot be built that is free of draughts, and yet well ventilated.

**Getting Rid of the Stumps**

To the Farmer: With the new settler the first problem in the cut-over timber lands is to get rid of the brush and small rubbish that has been left on the top of the ground. This task seems appalling to those who do not know how to do it. It can be done on the worst piece I ever saw for \$15 per acre, and there are plenty of men to do it at that price. On the average it will not cost over \$6. The next task is to get out the stumps, and to the beginner this looks even worse than clearing up the brush and rubbish. It is not near as bad a job as it looks if it is handled rightly. Stumps must be left alone until they are entirely dead and the fibrous roots have rotted. Seeding down to timothy has a tendency to hasten rotting, much more so than seeding to clover, yet the difference is not enough to warrant excluding clover entirely on account of the better feed the mixture of clover and timothy gives. If the stumps are hardwood they will take care of themselves in from four to seven years. They soon rot, and as they do so

they may be set on fire during dry spells and will all burn out.

The rotting and burning does the ground much good and I would far prefer to engage in some kind of stock raising while they are rotting to getting them out sooner by mechanical means and cultivating the ground. If the stumps are pine they should also be left in the ground seven to ten years, when they may be easily and cheaply gotten out with dynamite and stump pullers. After the stumps are out the task of getting rid of them seems even more appalling than that of getting them out of the ground. They may be piled and burned, but if there is a steep bank or waste



place near by where they may be rolled down out of the way it will pay to go to some trouble to put them there. Fuel is getting scarce and high in price, and these old pine stumps make the finest kind of fuel for the big heater stove. We burned stumps the past winter that we took out seventeen years ago and that the timber was cut from more than forty years ago. We still have enough of them to last us many years. They are readily saleable here now at a dollar a load.

It makes the farm look much better to go on and clear up square fields as they come, thick or thin, but it is better for the settler to clear up the easy places first and let the rest go and do it when there is time and when the expense will not be so great.

Some people think it is necessary to have an expensive steam outfit to clear up land. As a matter of fact it can be done cheaper with a very common outfit. A steam crane and hoisting outfit may be all well enough where expense is no consideration, but we have made use of a simple outfit that works fully as well. We have a large stump boat seven feet wide and eight feet long. This is made of three runners of hardwood with cross planks of two-inch stuff. A team may be hitched to the larger stumps to pull them onto the boat and then it is an easy matter to haul them to the pile.

For piling we set a good stout post where we want the center of the pile and brace it solidly by putting some of larger stumps around it. A rope and two blocks

Continued on page 54



TRADE **SAWYER** MARK Registered

**ENDLESS STITCHED CANVAS BELTS**

**FOLDING**

Straight and even folding by machine insures true running on the pulleys.

**PAINTING**

Nothing but the famous Sawyer Red Elastic Belt Paint is ever used in painting these belts.

**STITCHING**

Stitched in close parallel rows one-quarter inch apart, with an extra row of stitching on the edges.

**CALENDERING**

The heavy rolls of the Calendering Machine make the belts smooth and even.

**WATERPROOFING**

Extreme care is exercised in the choice of oils used in the waterproofing compound.

**STRETCHING**

Thoroughly stretched before leaving the factory. This means no stretching on your pulleys.

TRADE **SAWYER** MARK Registered

**BELTING COMPANY**

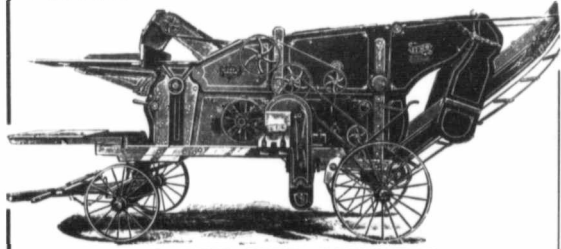
THE E. B. PLEWES CO., Distributors, WINNIPEG

**We Need The Money**

and to get it quickly and honestly we propose sacrificing all profit and a big slice of original cost on the following lines of

**Farm Power Machinery**

<b>GADE AIR COOLED GAS ENGINES</b>	<b>BADGER ENGINE GAS STANDARD</b>
6 H. P. (new) ..... \$150.00	14 H. P. (rebuilt) good order ..... \$150.00
6 H. P. (rebuilt) ..... 115.00	<b>GASOLINE TRACTORS</b>
<b>OHIO ENGINES</b>	45 H. P. 4 cylinder Tractor (rebuilt) ..... \$1,200.00
15 H. P. Standard (new) ..... \$325.75	45 H. P. 4 cylinder Tractor (new) ..... 1,750.00
13 H. P. Standard (new) ..... 306.50	Manitoba Universal (rebuilt) ..... 600.00
11 H. P. Special Hopper cooled (new) ..... 189.00	<b>GEISER SEPARATORS</b>
13 H. P. Standard (rebuilt) ..... 200.00	AA Sep., 40x60, complete (rebuilt) ..... \$1,000.00
8 H. P. Standard (rebuilt) ..... 175.00	4 Sep., 24x32, Straw Car (new) ..... 400.00
<b>INGECO KEROSENE ENGINES</b>	4 Sep., 24x32, with Blower (rebuilt) ..... 550.00
10 H. P. Farm Engine Hopper cooled (new) ..... 256.35	
21 H. P. Farm Engine, Hopper cooled (new) ..... 55.00	
	<b>TRACTORS, STEAM</b>
	35 H. P. Double Cylinder (rebuilt) ..... \$2,500.00
	25 H. P. Northwest (rebuilt) ..... 1,000.00
	<b>PORTABLE ENGINES</b>
	22 H. P. single cylinder, portable, Geiser (new) ..... \$500.00
	22 H. P. single cylinder, portable, Geiser (rebuilt) ..... 600.00
	20 H. P. single cylinder, portable, Geiser (rebuilt) ..... 500.00
	Also have a couple of 20 to 22 H. P. portables which will rebuild and sell at about \$350.00 each.

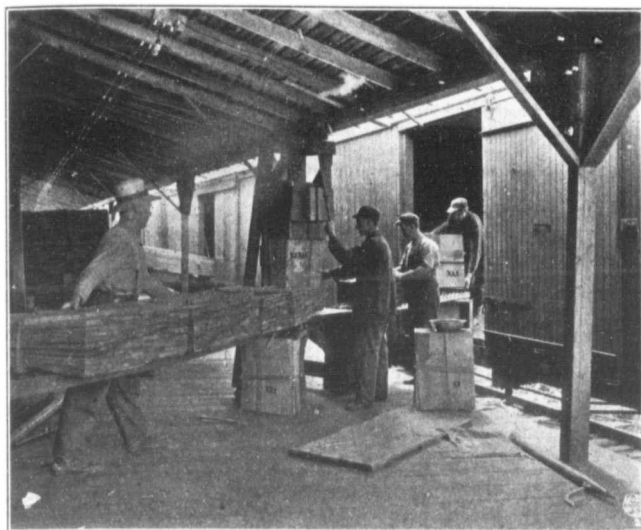


**A FEW FEED GRINDERS**

6-inch Superior Grinder, \$18.00

Cash Prices, but Reasonable Terms, can be arranged in the case of Large Tractors. Write for any details you want, and merely state what you need. **R. S. EWING, 200 Union Trust Building, WINNIPEG**

# Not Your Son, but Your Grandson



May have to repair the roof you properly cover to-day with

## British Columbia Red Cedar Shingles

They wear out in time, but  
**THEY DON'T ROT**

Your Stock will benefit by a Red Cedar Shingle Roof  
::: It is Cool in Summer and Warm in Winter :::

### British Columbia Red Cedar Shingles

Do not rot, rust, crack or blister. They are proof against rain, hail and wind, sun and frost. They will wear out by the mechanical action of the weather before they will decay. Properly laid, they will last forty to fifty years; in many cases they have lasted longer. A shingle roof is comparatively noiseless during a rain or hail storm; it does not rattle in the wind. They have a pleasing natural colour and readily take any kind of stain or paint.

The following is an extract from an unsolicited letter, written April 18th, 1916, by James S. Houston, a contractor and builder of Atchison, Kansas:

"I have been building houses in Kansas for 35 years, and I may also add that the best shingles I ever used came from British Columbia, so there is no doubt about their wearing qualities; in fact, they wear too well for us contractors, for when we put on one roof we never get to put on another in the same place; they never seem to wear out.

"From yours respectfully,

"JAMES S. HOUSTON."

**British Columbia  
Mills are in a  
position to give  
you service**



**That is what  
counts**

### British Columbia Red Cedar Shingles

MAKE THE  
Most Attractive Covering  
FOR THE  
Roof and Walls of a Building  
AND  
Attractive Buildings  
WILL

Add 10 per cent. to the value of your  
Farm or Ranch



Ask your dealer for a copy of the booklet on British Columbia Red Cedar Shingles.

For full information on **British Columbia Red Cedar Shingles** and other forest products, apply to **British Columbia Lumber Commissioners**, Excelsior Life Building, Toronto, Ont., or Dominion Building, Regina, Sask.

THE invention of the steam engine produced a power, but the invention and perfection of the internal combustion engine produced the power in so far as farm work is concerned. This is not in any way derogatory to steam, as it still has its place and fills it. But when it comes to the multitudinous farm operations where farm power is required, it requires the flexibility of the gas engine to meet the requirements.

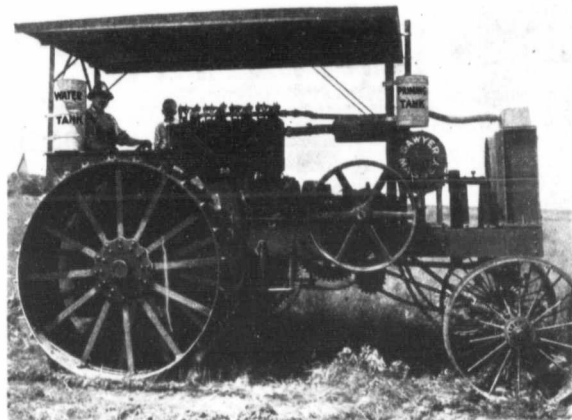
### Cutting The Price of Gasoline by Mechanical Means

up to 45c. and showed signs of going higher, the motor car owner became alarmed, but of course kept right on buying. Likewise the motor car builder finds the price of gas a bad talking point in

ideas turned in the direction of finding some means of increasing the efficiency of the internal combustion motor despite the ever-increasing price of fuel. The problem that suggested itself to him was—can I make one gallon of gas do the work of two or three. If you cannot cut the price of the fuel burned, there is only one way left and that is to cut the consumption. Another problem that occurred to him was—how can I make kerosene as efficient as gasoline—for by equalizing the consumption of the two, I can do a great deal towards keeping the price down. Mr. Crouch had several theories with regard to the solution of these problems, but, being of a practical turn of mind, he began to put his ideas into shape by experimenting in his own little machine shop. This machine shop was crude. He had

at it. His theory was that it was necessary to break up the fuel into the smallest particles possible in order that the ignition system of the engine might get in its work to the best advantage. This was particularly true of kerosene on account of its being a heavy fuel and the great problem being vaporization. After considerable work and a great many discouragements and failures, Mr. Crouch finally brought out his invention, which is known as the Crouch Vaporizer. By actual tests this invention cuts out the expense column somewhat after this fashion. Gasoline costs 45c. a gallon, kerosene costs about one-half as much. The Crouch Vaporizer converts instantaneously any gas engine into a kerosene burning engine and increases the efficiency of either fuel used from 10 per cent up.

The construction of the vaporizer is such that it can be used on any internal combustion motor from the delicate, high-strung power plant used in the modern motor car to the big heavy duty type of motor that is used on our



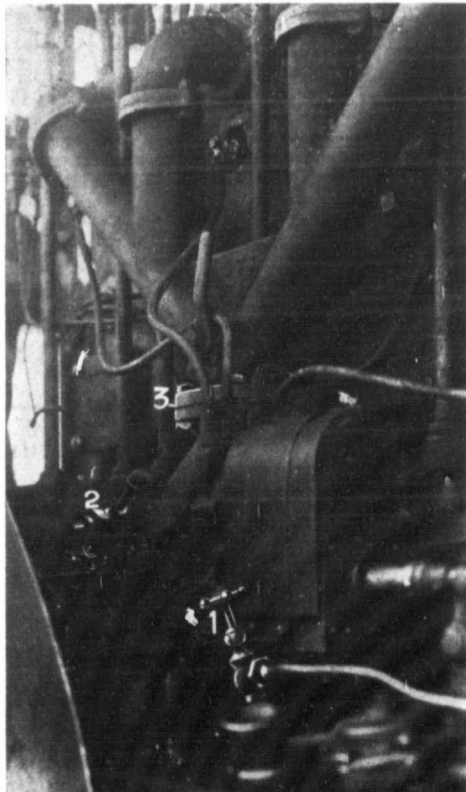
Sawyer-Massey 25-40 H.P. Gasoline Tractor equipped with the Crouch Vaporizer running on Kerosene. The two tanks marked "Priming" and "Water" are part of our connection.

When the internal combustion motor was first introduced to the public, it was by no means an efficient engine. In those days had it been possible to operate on a pint of fuel per h.p. hour, both farmer and manufacturer would have felt that almost perpetual motion had been realized in so far as cost was concerned. In those days gasoline was a by-product and could be had almost for the cost of transportation, but things have changed in the past few years. The thousands and hundreds of thousands of internal combustion motors now used have led to an enormous consumption of gasoline, with the result that the price has gone up every year. Just at present, owing to the increased demand, coupled with the fact that everything is going higher on account of the war, the burning of gasoline in the internal combustion motor is a serious problem, despite the fact that such motors are very efficient and the gasoline consumption is very low in proportion to what it was formerly.

1916 saw an unusual jump in the price of gasoline so that the problem became one of how little fuel could be burned in the internal combustion motor. This problem brought about many attempted solutions—good, bad and indifferent—and dozens of fuel saving appliances have found their way upon the market. The necessity of saving gasoline set many heads thinking. When the price soared

disposing of his output and he wanted something to economize on in fuel, which of course is the life of the motor car. The result of it all has been the birth of many gas economizers. The first thing that came upon the market was the Vapor Plug. In principle, the Vapor Plug is nothing more than an apparatus to increase the efficiency of the gasoline by mixing air with it, vaporizing it to a higher state before ignition. The inventor of this little device reduced the price of gasoline in varying per cents, but experience has proven that they are only workable on small gas motors—their specialty being motor car engines. When it came to heavy duty engines such as are employed upon the farm, it was not so much a question of burning gasoline economically as it was a question of being able to burn kerosene, for the difference in the price of the two fuels was such as to make the one profitable and the other not.

A few years ago a gentleman by the name of Thomas Crouch took up a wild and unbroken homestead near Metiskow, Alberta. Mechanics were his hobby. In keeping with the spirit of the times, he naturally became interested in the internal combustion motor. He did all his farm work with mechanical power and as he found the price of fuel going up year by year until the superiority of mechanical power over horse became very questionable, his



Close view of the Crouch equipment. No. 1 shows needle valve connection from the priming tank. No. 2 the water attachment, knuckle and needle valve running to the intake manifold pipe above Carburetor. No. 3 indicates where the vaporizer is connected. This fits in and acts at the same time as a gasket.

very few tools to work with and it was not until after three years of hard and persistent work that his first vaporizer was turned out. This vaporizer was merely a crude idea, but he kept right on working

big traction plowing engines. In the case of the motor car using gasoline, the duty of the vaporizer is largely to break up the fuel into a finer spray. When it comes

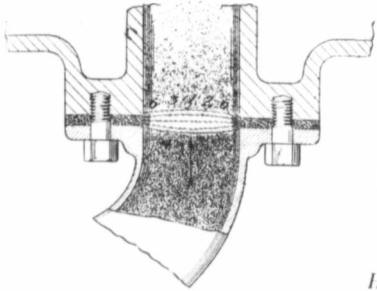
Continued on page 54

1.  
2.  
3.  
RE  
ON  
For  
PRO  
1.  
Car  
solon  
1.  
Eato  
perio  
2.  
1914,  
of hi  
engin  
power  
3.  
on m  
sults.  
had  
era  
on  
men  
an  
the  
it I  
4-in  
1.  
the  
crea  
te  
dier  
is  
only  
vapo  
hera  
And  
scien  
that  
made  
Evide  
Decla  
of Can  
to, the  
A. D.  
W  
Ti  
se  
ow  
W  
MA

# Burn Kerosene Instead of Gasoline

In Your Gas Tractor or Stationary Engine by Using a

## CROUCH VAPORIZER



Here are a few of the things it will do for you:

1. It will reduce your fuel bill 60%.
2. It will convert your gasoline engine into a kerosene engine.
3. It will develop more power in your motor.
4. It will free your engine from carbon deposits.
5. It will make your motor run smoother.
6. It will eliminate ignition troubles to a great extent.

Read these convincing proofs of what this wonderful invention will do.

### READ THIS AFFIDAVIT OF ONE WHO HAS TRIED THE CROUCH VAPORIZER WITH KEROSENE

Form No. 369—STATUTORY DECLARATION—111-14

CANADA PROVINCE OF ALBERTA In the matter of To Wit:

1. CHARLES HOUCHEUR, of the Town of Car, in the Province of Alberta, farmer, do solemnly declare:

1. That I have owned and operated a T. Eaton 4-horsepower gasoline engine for a period of 4 years.

2. That on or about the month of May, 1914, I purchased from Thomas Crouch one of his Vaporizers for an internal combustion engine and had it placed on my said 4-horsepower T. Eaton gasoline engine.

3. That after placing the said vaporizer on my said engine I noted the following results:

(a) That whereas the engine formerly had scarcely sufficient power to operate a crusher with a 4-inch plate, after putting on the vaporizer the power was so much increased that I purchased a crusher with an 8-inch plate, and the engine now operates the crusher with the 8-inch plate better than it formerly operated the crusher with the 4-inch plate.

(b) That I also noted that in sawing wood the power of the engine was very much increased.

(c) That there also was a substantial reduction in the amount of fuel consumed.

(d) That whereas I could formerly use only gasoline in the said engine, with the vaporizer on it operates equally well if not better with kerosene or other low grade oils. And I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of "The Canada Evidence Act."

Declared before me at the Town of Car in the Province of Alberta, this 29th day of February, A. D. 1915. "C. HOUCHEUR"

W. A. GILCHRIST, A Notary Public

### DEALERS WANTED

The Crouch Vaporizer will sell to every car and engine owner. Write for full particulars.

### HERE'S WHAT THE MARVELLOUS CROUCH VAPORIZER WILL SAVE THE OWNER OF 20-40 H. P. GASOLINE TRACTOR

#### WITHOUT THE VAPORIZER

The engine uses 40 gallons of gasoline daily at 45 cents a gallon. It costs \$18 a day for fuel. Thirty days' running costs \$540.

#### WITH THE VAPORIZER

The engine uses kerosene. It consumes 15 per cent. less gallons daily than with gasoline, or 33.6 gallons at 20 cents per gallon. The cost per day is only \$6.72. For 30 days the cost is \$201.60.

**YOUR SAVING IN 30 DAYS USING THE CROUCH VAPORIZER IS \$338.40.**

### Tried. Tested and Endorsed

BY

A. R. GREIG, PROFESSOR OF AGRICULTURAL ENGINEERING, UNIVERSITY OF SASKATCHEWAN, SASKATOON, AND OTHER EXPERTS

## The CROUCH VAPORIZER Will Save Its Cost Many Times Over The First Month You Have It

For Automobiles	For Gasoline Engines (Stationary)	For Kerosene Engine
	1 to 8 H. P. \$10	as Economizer,
	8 to 15 H. P. \$25	\$15.00 Complete
	More than 15 H. P. \$50	Guaranteed 15 Per Cent. Saving
Complete	With Complete Kerosene Attachment	

Guaranteed for Life of Engine. Money Back if Not Satisfactory after 20 Days' Trial

### HERE IS ANOTHER SATISFIED CUSTOMER. READ THE FACTS

CANADA PROVINCE OF SASKATCHEWAN To Wit:

1. JOHN LONG, of the Town of Car, in the Province of Alberta, do solemnly declare that:

1. That I have owned and operated an I.H.C. 8 H.P. gasoline engine for a period of 4 years.

2. That on or about the month of June, I purchased from Thomas Crouch one of his Vaporizers for an internal combustion engine and had it placed on my said International Harvester gasoline engine.

3. That after placing the said vaporizer on my said engine I noted the following results:

(a) That in grinding the power of the engine was very much increased.

(b) That there also was a substantial reduction in the amount of fuel consumed.

(c) That whereas I could formerly use any gasoline in the said engine, with the vaporizer on, it operates equally well if not better with kerosene or other low grade oils. And I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of "The Canada Evidence Act."

DECLARED before me in the Province of Alberta, this eleventh day of March, A. D. 1915. JOHN LONG.

W. A. GILCHRIST, A Notary Public

### WARRANTY CERTIFICATE

The Crouch Vaporizer is hereby sold to you under a guarantee to perform the functions for which it has been attached to your engine, for the life of the engine. It will be replaced with a new one at anytime, free of charge, by our duly authorized Agent upon request and upon surrender of same to our Agent for return to factory.

If any time within twenty days after this Crouch Vaporizer has been installed on your engine you are not satisfied, you may return same to us with Warranty Certificate and we will return you your purchase price immediately.

The Saskatchewan Distributing Co. Sole Agents and Manufacturers Regina, Sask

### Cut This Out—Mail To-day

Saskatchewan Distributing Co. Masonic Temple Building. Regina, Saskatchewan.

Enclosed find \$ in full payment for one Crouch Vaporizer with the understanding that you guarantee it for life of engine, and will refund my full deposit if I return your Vaporizer to you collect within twenty days.

I use a \_\_\_\_\_ size carburetor. Name of engine or car \_\_\_\_\_ model \_\_\_\_\_ year \_\_\_\_\_ Name \_\_\_\_\_ Address \_\_\_\_\_

I recommend as a good dealer \_\_\_\_\_ of \_\_\_\_\_

## Saskatchewan Distributing Company

Sole Agents and Manufacturers

MASONIC TEMPLE BLDG., CORNWALL STREET REGINA, SASKATCHEWAN

**Cutting the Price of Gasoline**

Continued from page 52  
to the big traction engine burning kerosene, it is not only the duty of the vaporizer to aid vaporization but also to mix the fuel with a certain quantity of water, which adds to the efficiency of the mixture.

Mr. Crouch's apparatus is very simple. Its construction is such that no complicated parts enter into its make-up. It is easily attached to any make of motor without any extra machine shop work and if future results bear out past tests, this little invention promises to do all it is claimed for it and more.

Until some substitute is found for the fuel that is now used in our internal combustion engines, it is fair to assume that the price will not go lower—at least not appreciably. The law of supply and demand must of necessity be the controlling factor regardless of the criticisms that are daily being hurled at our large oil companies.

Motor cars are coming upon the market at the rate of over a million a year. A recent statement credited to the Ford Motor Co. states that their production for 1917 will be in the neighborhood of 750,000 cars. When we take into consideration that the supply of motor cars has not yet caught up with the demand, it is fair to assume that the consumption of fuel oils in internal combustion motors will go on increasing year after year with the result that the heavy demand for these fuel oils must of necessity increase the price. The question becomes a serious one unless it is possible to keep on increasing the efficiency of these motors so that twice the work can be done with the same amount of fuel. In this way we cut the price of the fuel in two and this is the object of such inventions as the Crouch Vaporizer. This vaporizer is at present being placed upon the market by the Saskatchewan Distributing Co., of Regina, who are the sole agents and manufacturers.

**Getting Rid of the Stumps**

Continued from page 50  
are attached as seen in the illustration. The larger stumps are hauled up and rolled to the center post with the top end in and the roots outside. Small stuff is thrown in the middle and all open places so as to make a good snug pile, and some of the medium-sized stumps are easily pulled up on top. It is time well spent to chop off some of the roots and snags so that the stumps will pile better. With this simple and inexpensive outfit two good men will do as much work as an outfit costing several hundred dollars.

The piles will not be as large, but they will be put up in better shape for burning and the cost of re-piling will be almost nothing

as the piles burn up clean if a little care is used in removing the dirt. There is but little hard work for the men if it is handled right, and the new settler should save his back all he can, as he will find it more profitable to let the horses do most of the heavy work and save his spinal column for the farm work that is to come later. Time, brains, horsework, dynamite and fire are the agents, along with patience, to make a profitable farm in the cut-over country.—R. E. Dimick.

**THE MARTIN DITCHER AND GRADER**

On page 55 of this issue will be found the announcement of the Preston Car and Coach Co., Ltd., of Preston, Ont., who are making some of the most effective weapons on the market for the reduction of our difficult roadbeds, swamp lands and for irrigation schemes where necessary.

The Martin Ditcher is on the face of it a smart idea in road engineering and coming in as it does at an extremely moderate price, it should have a wide distribution in Western Canada. Moreover, its labor-saving features are alone considerable. It makes the old-fashioned drudgery with pick and shovel which made old men of farmers at forty as "obsolete as plug hats and dickies." It will naturally do more work, better work and cheaper work and its price certainly is no barrier to any farmer having anything whatever of a drainage problem on his hands.

We strongly recommend our readers to write to these friends for illustrated booklet of their ditcher and grader combination.

**The Educational End of Brandon Fair**

Continued from page 18  
manufacture of linen, woolen goods and silk. Special displays are made of floor coverings and textile goods.

**Chicken Fattening**

A point especially emphasized in the poultry section was the chicken and turkey fattening work to be done at the college this fall. Last year the college fattened 1,567 farm chickens which sold for \$1,559, or just under \$1 apiece. The cost of feed and labor to do this was ten cents per chicken, plucking five cents, cartage one cent. Professor Herner, who was in charge here, showed portable colony houses, poultry houses, trap nests, and other poultry equipment. The big candling stall was a great centre of attraction, showing as it did how the various kinds of eggs appear when the electric light shines through them.

**Field Crops**

Perhaps the most important department of farming is the grow-



**Your Grain is Safer When Stored in a Max Portable Corrugated Granary**

which has been giving satisfactory service to Western Canadian farmers for over 12 years. Men who have had the experience of several years' use of this Granary are sending repeat orders to provide additional accommodation. They know from experience that this Granary is a good investment, and invite you to profit by the result of their "Service in the Field" test.

**WRITE TO-DAY FOR FULL PARTICULARS**

**WINNIPEG CEILING & ROOFING CO. LIMITED**  
P.O. BOX 3006 C.T.F. WINNIPEG, MANITOBA

**"Stayput" ALL-STEEL PORTABLE Granary**

**CAPACITY 1000 BUSHELS**  
**WEIGHT 1200 POUNDS**  
Diameter 13ft. 8in. Wall 8ft. high

The only upright portable granary built consisting of sixteen sections and a like number in the roof. It is easily erected. The only tool required is a wrench. We guarantee that one man can set it up in less than an hour. Very few bolts are required and these are placed in the angle iron frame (NOT ONE IN THE STEEL). The cupola on top of the "Stayput" granary may be raised or lowered to get the necessary amount of air for ventilation.

**FOURTEEN SPECIAL FEATURES**

Portable—All steel, fireproof—All steel frame—Reinforced interior construction—Reinforced roof—Interchangeable sections—Easily erected and taken down—Interlocking joints on interior—Flax tight—Exclusive bunker board system—Roof bolted solid—Bolted to platform—Cannot blow away—Lasts a lifetime.

Price only \$110.00 f.o.b. Winnipeg. We are manufacturing a limited number this year. Place your order early. The "Stayput" is built by a reliable firm you can depend on to render good service. Write for further particulars and circular "G" to-day.

**BIGGEST \$110.00 VALUE IN THE WEST**

**The Western Steel & Iron Co. Limited - Winnipeg**



## Threshers' Supplies

**FARMERS' LOW DOWN HANDY TRUCK**

Farmers' low down Handy Truck. Every truck guaranteed. Just the thing for threshing. 28 and 30 inch wheels, capacity 4,000 lbs. **\$29.00**



**The Engine You Really Need**

Uses less fuel, develops more horsepower than others of same rating. A splendid engine for elevating grain. Price with Webster Magneto **\$68.00**  
1 1/2 H.P. for Pumping **\$8.50**



**THRESHER BELTS**  
Stover Guaranteed Endless Belts.

100-7-4	.....	\$29.00
130-7-4	.....	35.00
130-8-4	.....	40.50
150-8-5	.....	50.50
150-8-4	.....	50.50
150-8-5	.....	60.00

**Guaranteed Plow Shares**

Prices subject to change without notice.

12 in. Each	.....	\$2.10
13 in. Each	.....	2.40
14 in. Each	.....	2.40
15 in. Each	.....	2.70
16 in. Each	.....	2.70
18 in. Each	.....	3.00

Give numbers and letters stamped on share and name of plow.

Write us about these supplies or any others you need.

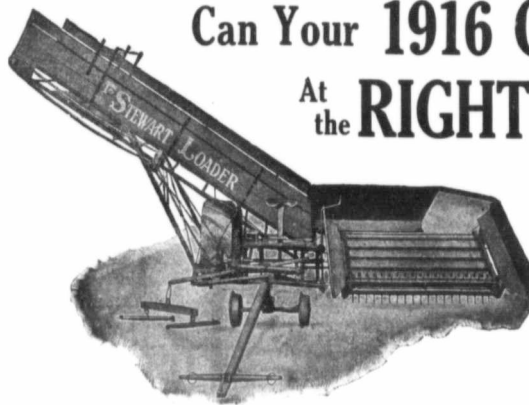
**THE CANADIAN STOVER GASOLINE ENGINE CO., LTD.**  
BRANDON - - - MAN.

ing of fuel who was handry s tructive of the farmers. focused and the glass bott cards gav ment. V the variou were sho province. To Carr. To carry lege to th

**EVER MART**  
PRICE ONLY \$47.50

Do your dr when you n Send to-day full particu

CA Preston 101 Dover



# Can Your 1916 CROP be HARVESTED At the RIGHT TIME and LESS COST?

We Guarantee this result to any farmer if, instead of hiring and feeding the crowd of men he has hitherto employed to stook and pitch, he uses a

## Stewart Sheaf Loader

**NOTE:** Everybody knows that on top of the fact that this crop will be the heaviest and the toughest that has been handled in many years, the labor supply, after taking every step that can be taken short of "conscription," will never meet the demand by many thousands.

### WHAT ARE YOU GOING TO DO?

If you will write us, we will show you how you can positively overcome every labor difficulty and make more money than you ever made from any grain crop handled in the old way. The Stewart Loader will do the work of the pitchers and some of the bundle teams. You can get more grain off your field and have the satisfaction of your work being well done. We can make immediate shipment and in order to make sure of a machine it would be well to order soon.

# The Stewart Sheaf Loader Co., Ltd.

WINNIPEG . . . MANITOBA

ing of field crops, and Mr. Judson, who was in charge of the field husbandry section, had a most instructive booth, crowded most of the time by interested farmers. Attention was largely focused on grain varieties, and these were shown in glass bottles, while accompanying cards gave descriptions and comment. Varieties best adapted for the various districts of Manitoba were shown on a map of the province.

#### To Carry College Teaching to People

To carry the teaching of the college to the people is the special

function of the extension service. Here F. F. Parkinson, B.S.A., was in charge. Charts showed the remarkable growth of the Home Economics Society and Boys' and Girls' Clubs.

#### Western Canada's First Light Tractor Plowing Demonstration

Continued from page 10

short-time payments, in the four days of the Brandon Fair than we have seen for some time previous and that is saying a great deal because our business this year has been very gratifying. In fact far better than anything we have had during the past three years.—J. I. Case Threshing Machine Co.

"The plowing demonstration as a whole was certainly something that all tractor manufacturers should be very interested in at this time as there are so many very small tractors being made and offered to the farmers. The farmer, of course, is only seeking the one that best suits his purpose and we believe that a more extended plowing exhibition another year should be arranged, extending the time over to the afternoon so that the farmers who come in on the excursions will have the

privilege of seeing it. We were well satisfied with the demonstration itself."—Hart-Parr Company.

#### A NEW TRACTOR PLOW FOR WESTERN CANADA

An interesting feature of the Brandon Plowing Demonstration which was held on the 18th, 19th and 20th July, was the new Cockshutt Light Tractor Plow. This plow was the first of its kind ever seen in the Canadian West. It was pulled behind a Hart-Parr Little Devil Tractor, and a crowd followed it constantly during the demonstration hours.

In construction, it is simplicity personified. One feature of this plow is that it has either two or three bottoms. The three-furrow can be converted into the two-furrow by the removal of the third beam and bottom. This can be accomplished in a very few minutes. On the other hand if a man has a two-furrow plow and wants to convert it into a three-furrow plow, the necessary parts can be obtained and can be placed very easily. Oftentimes a farmer has a tractor that will pull three plows in stubble, but only two

plows in breaking. With the new Cockshutt it is not necessary to pull the extra beam. He simply converts his plow into a four-furrow breaker. On account of its simplicity and few parts it is lighter than the average tractor plow, thus reducing the dead load as much as possible.

## THRESHERMEN !!!

### Help Save the LABOR PROBLEM

It is a proved fact that by using Dump Racks and Extension Feeders you can Save from Three to Five Men and Teams on each rig. Now, then, if you all put on Dump Racks and Feeders, it would effectively meet the labor shortage.

Write the T. N. B. MFG. CO., LTD., of WATROUS, SASK.

The only Dump Rack Manufacturing Co. in the West

William E. Knowles J. Franklin Hare  
A. Benson, B.A.  
**KNOWLES, HARE & BENSON**  
BARRISTERS, SOLICITORS, Etc.  
Solicitors for  
Imperial Bank of Canada  
Canadian Mortgage Association  
Western Canada Mortgage Company  
Offices: Walter Scott Building  
Suite 409  
MOOSE JAW, SASK., CANADA

EVERY FARMER HAVE A SHOULD  
**MARTINDITCHER**  
PRICE ONLY \$47.50 AND ROAD GRADER  
Own your own Ditching Machine  
Do your draining when you need it.  
Send to-day for full particulars of this machine. 1854  
CATALOGUE FREE  
Preston Car & Coach Co. Limited  
101 Dover St., Preston, Ontario

# OUR YOUNG FOLK CONDUCTED BY Cousin Doris.

### OUR HEROES

Here's a hand to the boy who has courage  
To do what he knows to be right;  
When he falls in the way of temptation  
He has a hard battle to fight.

Who strives against self and his comrades

Will find a most powerful foe;  
All honor to him if he conquers,  
A cheer for the boy who says "No!"

There's many a battle fought daily  
The world knows nothing about;  
There's many a brave little soldier  
Whose strength puts a legion to rout.

And he who fights sin single-handed  
Is more of a hero, I say,  
Than he who leads soldiers to battle  
And conquers by arms in the fray.

Be steadfast, my boy, when you're tempted.

To do what you know to be right!  
Stand firm by the colors of manhood,  
And you will overcome in the fight.

"The right," he your battle cry ever  
In waging the warfare of life;  
And God, who knows who are the heroes  
Will give you the strength for the strife.  
—Phoebe Cary.

### THE DUKE AND THE SCOUTS

During his recent visit, His Royal Highness the Duke of Comaught, Governor-General of the Dominion of Canada and Chief Scout, in addressing the Scouts and their officers at Winnipeg, said: "Boys, your character is your greatest possession, and I know of no organization doing more than the Boy Scout Movement, for the building up of a strong, virile manhood, and I hope that the older members of the community will aid and encourage this movement in every possible way.

"I am shortly leaving the Dominion, and one of my greatest regrets is that I cannot continue to be your Chief Scout. But I go back to my old position as President of the Boy Scout Organization, and I assure you that my interest in the movement will ever be continued. I hope that my successor will be as much interested in the movement as I, and there is no movement that I am more interested in than this."

At Brandon, the Chief Scout said: "I understand that some of the municipalities are contributing towards the Boy Scouts Organization, and I hope that all public bodies will take an ever increasing interest in the Boy Scout Movement."

### THE CANADIAN SOLDIER BOY AND THE LETTER-WEIGHT

By H. Geoffrey Elwes (Editor), 3 High Street, Colechester.

I would like to tell the story of my letter-weight. It holds down a pile of Scout letters waiting to be answered. It is the head of a German shell. It was brought me a few days ago by a young Canadian soldier, wounded in France. I knew him a good many years as a boy. He was deserted by a drunken father and left all alone. And I can remember how he looked up at me with clear brown eyes and said: "I am not going into the workhouse, sir. I am going to keep myself. And he took a little room and cooked his own food a little room and week. Then he emigrated and was doing well in Canada when the call came to serve the Old Country, and he threw up his trade and sold his little house and came back to England; and now, after six months of war, he stood with this piece of shell in his hand which he had brought home to me as a souvenir, and looked straight at me with the same

clear brown eyes, and this is the story he told:

"We were all through the battle of Ypres, and for five days we seemed to be fighting all the time, and hardly slept. Then one part of our platoon got cut off somehow, until we were a mile from the rest of the regiment. Man after man was shot down and I was left alone. There was a great stretch of country between me and the rest of our men. It looked like a great turnip field. The Germans were firing right across it, and it seemed clear impossible to get over alive. I felt quite certain I had got to die, so I just knelt down and said a bit of a prayer, and asked God to forgive me, and then I started across that field. I took what cover I could, and fired whenever I saw a chance. Bullets seemed to fly past on every side, and a big shell plumped right in the field, but nothing touched me and I got back all right."

And as I accepted the shell and held the hand of my plucky Canadian boy, the final lines in the poem of our October Gazette, "Christ in Flanders," seemed to fit his case. Perhaps they may help some of us just at this time. "And so we ask for courage, strength, and pardon— and pardon— Especially I think we ask for pardon— And that you'll stand beside us to the last."

### LORD KITCHENER AND THE BOY SCOUTS

The glorious death of Lord Kitchener has come as a shock to the whole Empire, for there was scarcely a part of it which he had not visited; and to the Boy Scouts especially it has been a hard blow, because he was a member of our council and always showed such a special interest in the doings of the Scouts.

Often he has had talks with me about them and has many a time given me friendly and valuable advice for them.

He always wanted our nation to be made of better, bigger-minded men to do the work that lies before it.

To get such men it is first necessary to help the boys to be efficient and patriotic. That was why he thought a lot of the Scouts and their training.

He himself was the best example of the sort of man that is wanted. He was self-reliant; that is, he knew his job and thought out his own way of doing it; no matter what difficulties cropped up, he tackled them with the full determination of walking over them, and always succeeded in consequence.

He never wanted anybody's help; he preferred to do the job himself. He did not do anything in order to get glory or fame, he did not care a scrap for praise or blame—he just went straight ahead doing his work because it was his duty.

Duty before all, might well have been his motto. It was certainly what he carried out, even to the extent of meeting his death in doing it.

### DO IT YOURSELF

It is a splendid line for every Scout to take; make yourself efficient so that you can depend on yourself; plan out your way of making your career or of doing any job that comes to you.

Don't bother about getting other people's help—do it yourself.

Don't worry about getting praise for what you do; if you are doing the right thing you will get plenty of satisfaction out of it—it will bring its own reward, "Do Your Best" and do your duty, that is all you have to worry about.

But men are what the country needs most of all, fellows with manliness and character who can be prepared to take on any job with keenness and determination, whether it be soldiering or sailing, or the work of citizens.

### "ONCE A SCOUT ALWAYS A SCOUT"

Lord Kitchener it was who warned the Scouts "Once you are a Scout you should always remain a Scout," by which he meant you should get into the habit of "Scouting" at all times; that is, of making yourself efficient—good at doing things.

Doing your best—you may not be brilliant at it, but stick to it and do your best.

Helping other people whenever you get a chance.

Serving your country by working hard whatever may be your job.

### E. H. HEATH CO., LIMITED, WINNIPEG.

Please find enclosed \$1.50 for two year's subscription for the Canadian Thresherman and Farmer to be sent to

Name *Frank B. Snyder*

Address *5218 13th St. W. Winnipeg, Man.*

My estimates are of the number of people kernels in 3 1/2 bushels of that are:

4800 1/2 bushels of No. 1 Yellow Dent 4981

I enclose the required for names and estimates for a 1/2 bushel sheet enclosed in this coupon.

52,183 -  
47,038 -  
60,154 -  
43,924 -

See page 67 for full details of this wonderful contest and of another of still greater interest now in progress.

Photographic reproduction of Coupon sent in by Frank B. Snyder—winner of the Chevrolet Car.

The same grateful goodness that urged Col. Otter to praise

### ADAMS' TUTTI FRUTTI GUM

so highly during the South African War makes it today the favored choice of our boys "somewhere in France." But now our boys have the added advantage of a more convenient package. Each of the five sticks wrapped in wax paper and tinfoil. Any of five mellow flavors to choose from. Your dealer has Tutti Frutti in the new package.

ORIGINATORS Adams & Sons Co.

"But," he said, "Don't merely do it while you are still a boy; learn it at that time and make it a habit so that when you are a grown-up man you still keep on doing it, you still remain a Scout by doing good turns, by doing your best, by doing your duty before all other things, by doing your duty even to the death."

And this is what Lord Kitchener had done himself, and in doing it he had thereby shown you the way. Follow his lead.

BADEN-POWELL

### NOT HURT SERIOUSLY

A cart containing a number of fish hands was being drawn by a mule. The driver, a dandy of about 20, was endeavoring to induce the mule to increase his speed, when suddenly the animal let fly with its heels and dealt the driver such a kick that he was stretched on the ground in a twinkling. He lay rubbing his woolly pate where the mule had kicked him.

"Is he hurt?" asked a stranger anxiously of an old negro who had jumped from the conveyance and was standing over the prostrate driver.

"No, boss," was the reassuring reply. "dat mule will probably walk kind of tender for a day or two, but he ain't hurt."

### GAS TRACTOR BARGAIN

Rebuilt Pioneer "30"

GOOD AS NEW

Address P.T. Box 3161 WINNIPEG, CANADA

# EATON'S FALL AND WINTER CATALOGUE

## IS NOW BEING DISTRIBUTED

### Have You Got Your Copy?

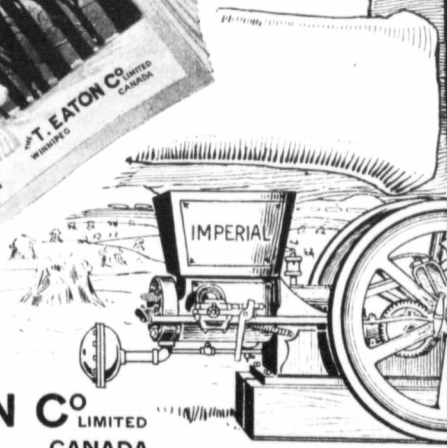
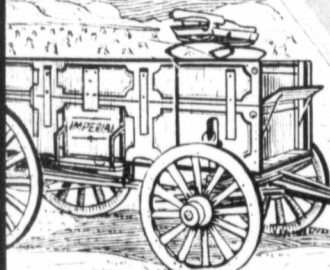
If not, you know what this book means to you in the way of money to be saved, you know what the big **EATON** stores and warehouses mean in the way of quick service and, above all, you know what the quality of **EATON** goods means to you in the way of satisfaction. You know that the whole **EATON** system is placed at your service the moment your post-card or letter reaches us asking for a copy of our latest Fall and Winter Book.

Buy **EATON** quality Goods at **EATON** prices, with an **EATON** Guarantee

### Send for this Book Now

And be sure of making the most of your buying opportunities this Fall; take fullest advantage of the wonderful purchases we have been able to make because of our immense store and warehouse capacity and our tremendous cash purchasing power; become to the limit of your ability a shareholder in the profits of prosperity that **EATON** merchandising produces.

Your name and address, with your request for the catalogue, clearly written on a card or letter paper is all that you need to send us to receive this big 520-page book; the sooner you do it the longer you will have to enjoy the benefits of money saved and satisfaction gained.



THE **T. EATON CO.** LIMITED  
WINNIPEG - CANADA



# Our Women Folk

CONDUCTED BY  
PEARL RICHMOND HAMILTON

### THE WOODSMAN

By Remington Schuyler  
 My neighbors and my kinsfolk say:  
 "Ain't you afeared to go that way?"  
 "Into the woods alone each day?"  
 "And you a man so old and grey—"  
 "Nigh unto four-score years," they say.

"Ain't you afeared a fallin' limb,  
 "Will ketch you like it kitched Old  
 "Jim?"  
 "Why, bless you, no!" I always say,  
 "I can't be skeered to hew away

"And fell the big trees every day;  
 "My hiesed God is nigh alway,  
 "He never seems real far away;  
 "He is my staff and strength each day;  
 "I trust in Him!"

### Home Economics and Home Makers' Clubs

We are late in publishing some of the reports. Owing to the excellent papers the societies sent in, we left the reports out to make room for the papers. We are grateful for both the papers and reports and urge our readers to pardon us if we delay a little the publication of the reports.—P.R.H.

### BIRD'S HILL

A Home Economic Society was organized at Bird's Hill on March 11, 1916, by Miss Gowsell, of the M.A.C., with the following officers: Mrs. Chudleigh, president; Mrs. A. Giffen, vice-president; Mrs. R. P. Andrews, convener of the programme committee; Mrs. W. Gorham, convener of social committee, and Mrs. F. E. Garven, secretary-treasurer.

Although the society is but two months old we have now forty four members, and have rented a club room. At the first regular meeting eighteen ladies were present, even with very unfavorable weather conditions. A paper was read by Mrs. Garven on "The Organization and object of our society." This paper was by request repeated at a meeting of the local Farmers' Institute.

Many members have taken advantage of the special prices of plants supplied by the Agricultural College.

The week of May the first, Miss Scovior was with us to demonstrate home dressmaking. Everyone was delighted with the course of lessons, and we feel sure that more accommodation must be provided for the next class.

Through a joint committee of the H.E.S. and Farmers' Institute a Boys' and Girls' Club has been organized, and already there is promise of a good children's fair in the fall.

A course in sewing is to be held for the girls during the summer.

The H.E.S. is also catering for the annual Bird's Hill plowing match to be held on June 14.

### HARTNEY

The Hartney Home Economic Society, Grain Growers Association and Agricultural Society held a union picnic on Friday afternoon, June 16th, in Mr. Geo. Bennett's grove near the river at Hartney. The Hartney district was well represented at this picnic held in a beautiful, picturesque spot.

Mrs. Dayton, of Virden, on behalf of the Home Economic Society, gave a very interesting address on H.E.S. work, laying stress on woman's place in the world at present compared with her place a few years ago. Until within the last

few years women could petition the government and ask for certain rights and privileges, only to be told "they did not know what they were asking." The day has come when men in position and authority are ready to listen to the requests of the women, and ready to weigh the matter laid before them, and grant the requests with the same deference as they would deal with requests from men.

The H.E.S. is a society which brings all denominations, creeds and classes together, welding them into one harmonious whole. The society broadens the mind by giving it something to think about outside the daily round of life on the prairie which has been so narrow.

The welfare of a nation depends upon its mothers. It is necessary that the mother should not be overworked. Every effort should be made for the conservation of the mother's health and strength. All labor-saving devices should be procured where possible. The home should be as attractive as possible, then the young people would not wish to leave it. Encourage the boys to take interest in the farm by giving them something of their own young stock to take care of and have for their own, or when they are old enough give them a share in the farm.

Medical inspection of school has been secured in some districts through the intercession of the women who have been represented on the school board by one of their number. Through their influence prizes have been given at school fairs for sewing and cooking. It is not enough to be interested in the home life of the young people. The mothers (and fathers, too) must follow the children into the school and community.

The suffrage gives women larger privileges and with these privileges larger responsibilities. Let us rise to them and put away narrowness.

Professor Reynolds, of the Agricultural College, on behalf of the Agricultural Society, gave a short, impressive address on amusements. The professor said that people can be fairly judged by the way they spend their leisure hours. Young peoples' characters can to a large extent be moulded by directing and supervising their sports. Proper amusements should be encouraged under proper supervision and control. The spirit of co-operation can be taught at a young age. At their play the majority must prevail just as among older people the majority carries when a vote is taken.

It is important that there should be a time of relaxation. The relaxation

period should have supervision by the capable of supervising.

The West is a large free country, and we wish it to be a livable, congenial country.

Mr. Henders, president of the Grain Growers Association, then addressed the people, bringing forward the work of the grain growers. Is man living up to the responsibility laid upon him? Every organization is judged by the work accomplished by it. What has the Grain Growers Association done? It has removed prejudices among people and brought rural life into connection with the community. Many grievances have been adjusted by it. Different instances were mentioned where the Grain Growers Association had secured redress to the individual when wronged by a company. In one instance the Grain Growers Association secured some thousands of dollars damages from a railway company to a farmer who had sustained loss.

The time has come when the Grain Growers Association advice is asked by bankers before bringing certain matters to notice of the government. For it is no use going to the government, if not supported by the Grain Growers.

The society has worked for the betterment of city life, country life and community life.

The society has placed a man in the city market to look after the interests of those who have live stock to ship to this market. Thus the rural shopper can get a square deal.

Mention was made of the Insurance Bill and Co-operative Act.

The Grain Growers had helped very much financially, but that was only a small part. The moral and educational influence of the society had been a far broader range. Men had come to express their thoughts in public and express them in an economic way.

We are looking for far reaching results. The representation in parliament is small. When the representation is fair then we can look for better legislation for the farmer. Prohibition has been secured; now it is necessary to find suitable employment and accommodation for the change effected. Some regulation is needed that will bring economic justice.

Tables were spread for tea and after the company of about six hundred enjoyed the picnic supper. Those interested in sports retired to the grounds where the entertainment committee had arranged for sports. After enjoying games for a couple of hours the company dispersed, pleased and benefited by the day's proceedings.

### WHITE HEATHER HOMEMAKERS CLUB

An unusually successful meeting of the club was held in the Sunday school the afternoon of Wednesday, March 1. There were 50 present, 16 being the members, all of whom were pleased at the return of the president and other members who had been east for the winter. During the afternoon an interesting programme of songs and recitations was given by the school children, after which Mrs. W. R. Fansher read an excellent paper on "What Constitutes a Modern Good Mother." This paper mentioned many things which a good mother of this modern age will do for her children. It emphasized the importance of mothers making companions of the children, playing with them, and working for them, but also allowing them the privilege of doing appointed tasks, taking time to settle disputes, and questions and not be afraid to teach

## Valuable First Aid

—can be rendered gift-worried folk through the Dingwall catalogue, and the Dingwall Mail Order Service. You are perhaps thinking to-day of some September Bride and the gift you must soon choose for her.

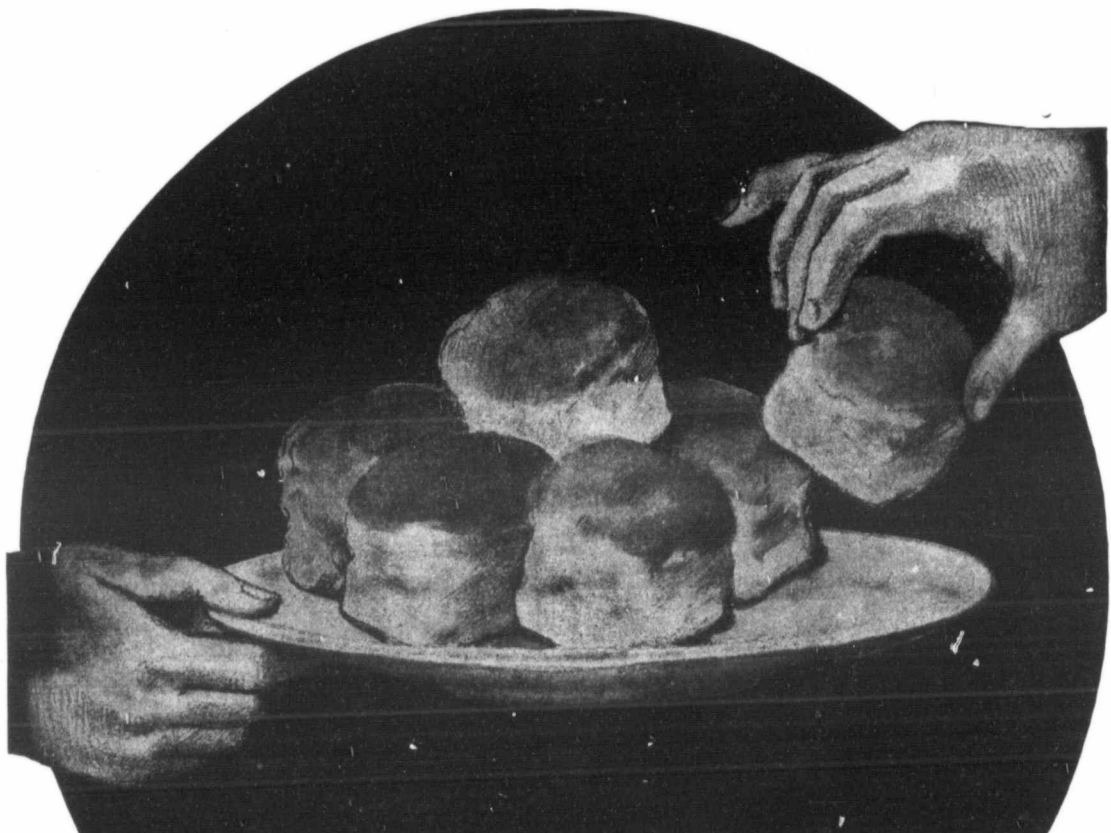
Just send for our catalogue, and you will find dozens of solutions for this, as well as for any other gift problem. The catalogue will go forward postpaid, and later in the fall our new catalogue will also be sent you. Just send us your name.

## The D. R. Dingwall LIMITED

DIAMOND MERCHANTS & JEWELLERS  
WINNIPEG

girls and  
and her g  
sacrifice th  
love for th  
rest and r  
The club  
10 flannel  
finished, w  
the society  
more mater  
ing was arr  
wall school  
24th, with  
At close of  
lunch was  
the girls of  
Latta at th  
ing on April  
Range Farm  
The subject  
estic science  
school lunch  
Isabel C

The High  
city held it  
in the Orange  
28th, at 3 p  
present. The  
rison, presid



# PURITY FLOUR

"More bread and better bread"

**MAKERS**

ing of the school in March being closed and other interesting news for those who are interested in the school. A Model Mother's meeting was held on the 28th of the month. The meeting was held in the school hall, on Wednesday, June 28th, at 3 p.m., with over forty ladies present. The president, Mrs. G. F. Morrison, presided over the meeting. The

girls and the boys, too, about nature and her great plan. Mothers must not sacrifice themselves, however, in their love for the children but take time for rest and recreation.

The club's Red Cross work showed 10 flannel shirts and 4 pairs of socks finished, which were to be sent through the society in Govan. To secure funds for more material for work, a social evening was arranged to be held in the Sunday school on Friday evening, March 24th, with programme and refreshments. At close of business session a dainty lunch was served by Mrs. Phillips and the girls of the school with Miss Elsie Latta at the tea-table. The next meeting on April 5th will be held at Willow Range Farm, Mrs. C. A. Puffer's home. The subject for discussion will be domestic science in school, the roll call, and school lunches.

Isabel Currie, Sec. Treas., Govan.

**HIGH BLUFF**

The High Bluff Home Economic Society held its regular monthly meeting in the strange Hall, on Wednesday, June 28th, at 3 p.m., with over forty ladies present. The president, Mrs. G. F. Morrison, presided over the meeting. The

meeting was opened by singing the National Hymn, followed by a splendid paper on "Hot Weather Menus," by Mrs. R. W. Lytle. The least cooking done as possible, was her motto.

All arrangements were made for a demonstration in dressmaking and millinery the first week in July, with Miss Smith as demonstrator.

Mrs. A. Riddell favored the society with a solo entitled "My Ain Folk," which was appreciated by all.

The ladies have collected \$228.50 towards the calendar scheme which will be devoted to Red Cross and other needy purposes. Besides sending 1 quilt, 1 dressing gown, 1 dressing jacket, 2 shirts, 2 pairs pyjamas and 3 dozen handkerchiefs, also 25 boxes to boys at the front.

After all the business was transacted a demonstration on ice cream making was given by Mrs. W. Metcalfe assisted by Mrs. G. F. Morrison. The ice cream was most delicious.

The meeting was closed by the usual ten cent tea catered to by Mrs. J. Crookshanks, Mrs. J. Owens and Mrs. R. Wilkins. The proceeds which amounted to \$6.00 will be given to Red Cross work.

Mrs. A. Green, Corr. Sec.  
High Bluff, Man.

**WHITE HEATHER HOMEMAKERS' CLUB**

The club met on Wednesday, May 3rd, at Sunnyside, the home of Mrs. A. J. Currie. Though the weather was unfavorable, there were 22 ladies present and 2 names were added to the membership roll. Mrs. W. Greentree and Mrs. G. J. Bent were appointed delegates to attend the annual convention at Saskatoon in June. An enjoyable programme was given. Solos by Mrs. P. Crearer, piano solo by Mrs. W. R. Fansher and a reading by Mrs. H. Maber were followed by an excellent paper on "The Necessity for Recreation," by Mrs. (Rev.) C. H. Cross.

The next meeting will be held on June 7th, at Westhall Farm, the home of Mrs. H. Maber. Mrs. J. Bradley will give a demonstration of salad making and the roll call will be a favorite salade recipe.

Isabel Currie, sec. Govan.

**VALLEY RIVER**

Our society met at the home of Mrs. Parker in April. After the usual preliminaries, Mrs. J. W. McQuay reported the answer she had received from the postal authorities, concerning the rural mail delivery in this district, to the effect

that it would be established as soon as the necessary arrangements could be made with regard to the boxes.

The possibility of having a few practical demonstrations on home nursing from a trained nurse was discussed, with the result: Miss Grant proposed, and Mrs. Hayes seconded, that the matter be left in the hands of the secretary. An interesting paper on "Spring Diet" was read by Mrs. Watson, which was followed by an article on "Dishwashing," by Mrs. Parker. After the business meeting had adjourned, we exchanged ideas in an informal way, and partook of the "cup that cheers," which was supplied by our kind hostess.

Our May meeting was held at the home of Mrs. Hawkins.

It had been arranged to have a lecture and demonstration on home nursing, but this being a busy time of year, the executive agreed that, in all probability, the attendance might be small, and, therefore, it was thought advisable to cancel the arrangement for this month. We are hoping to have the plan carried out at our June meeting.

One of our members had visited another H.E.S. near Portage, where a charge of ten cents was made to everyone

present at the meeting for her tea, she proceeds to go towards the Red Cross Society. We adopted a similar method, by unanimous consent.

Mrs. McDonald gave an account of what she had seen and heard at the H.E.S. convention, mentioning particularly some especially fine butter exhibits, and the large display of very beautiful needlework from different places. Lunch was served by Miss Hawkins and her two friends, Miss Hayes, and Miss Waite, all of whom we hope, are prospective members of our society.

Mrs. W. Jones, Sec. Treas.

**SUPERVISED PLAYGROUNDS**

By Mrs. H. A. McKinnon, Deloraine.

One of the times when a mother is particularly anxious about her child, is when he first starts to school. Not that she does not care to have him associate with other children, but on account of the existing evils in most public schools. But to the child, it is the most eventful time of his life, and he so quickly falls into line, and imitates everything he sees and hears, especially from the older boys and what, is sometimes the results? Why he comes home, using the most profane language and vile expressions, that are meaningless to him for a time, and when his mother, so painfully shocked, chastises him, he says, why mother, what is wrong? That is what the boys say at school. I did not know that was wrong. This is one of the many evils that confronts the child at school.

Play is educative, and when properly supervised tends to overcome these wrongs. Every school should be well equipped with indoor and outdoor games, the former resorted to, only on wet or extremely cold days. The children in the lower grades can easily be interested in hide and seek, ring games, or in a good sand pile, but for the higher grades, there should be basket ball, baseball, swings, horizontal bars, and a sheet of ice for winter sports.

Supervision greatly increases the pleasure of play, rather than decrease.

So often a great deal of harm comes from little groups gathering in the cloak room, halls, or playgrounds, gossiping or planning mischief, but when the

teacher comes along and says: "Hurrah, boys" or "come along, girls," how quickly they will disperse and respond to the call and very soon they will need no invitation for they enjoy the games so much because the teacher plays.

We all know that the closet problem is the most serious one the teachers have to deal with. It is hardly possible for a good, pure boy or girl to go to one of these places, and remain pure, on account of the vile writings all through the building on account of those who linger around just for the purpose of making others as bad as themselves. But on supervised playgrounds, they go only when necessary, and return as speedily as possible, so as not to miss any of the fun.

It is absolutely necessary to have some one in charge during the noon hour. That difficulty might be overcome by engaging the janitor as overseer, in the absence of the teachers, but have the teachers return in time for at least fifteen minutes' play. They are required to be at school a quarter of an hour before the time of opening. If that time, with the fifteen minutes at noon, and the two recesses, was devoted to play, that would mean an hour each day, with teachers and pupils on the playground, which would inspire each one to do his best in the school room.

Play should develop the athletic side. Physical activity tends to stimulate greater mental activity, and to counteract sensuality, which is most prominent in people of luxurious and inactive habits. The girls who fall are seldom those of the athletic type, rather those who are to be seen idle and strolling about.

It was at a woman's meeting that Mrs. John Dick was inspired with a thought of supervised playgrounds, and through her influence the first public playgrounds in Winnipeg opened on the grounds of one of the public schools, as an experiment, during the summer vacation. The good results were so marvellous that every year the number has been increased until at this time there are over twenty such playgrounds in the city.

Our boys and girls should be encouraged to play, and besides having supervised play at school, if during the long summer evenings and summer vacation, we could provide for them playgrounds with qualified supervisors, the money would be well invested, and the results for good, quite as great as in the cities.

**PILOT MOUND  
BIG PATRIOTIC RALLY  
AT UNVEILING HONOR ROLL**

Ladies of Home Economics Society Arranging Fitting Celebration for this Interesting Event—Seek How to Turn Waste Paper into Money

The members of the Home Economics Society met on Saturday to dispose of certain matters of business also to hear an address by Miss Sara Simmonds on "Infant Welfare." After the usual preliminaries a short report was given of the annual convention in February. The meetings had proved interesting, especially when discussion arose over rest rooms, medical inspection in schools and other matters of educational and social importance. The competitions had not proved so successful, though in the case of bread the judges had made no mistake in awarding the first prize to our Mrs. W. A. Elliott. It was not the judging, however, but the arrangement that was so poor. The authorities had been deluged with exhibits—one society alone having sent articles of all sorts, from rugs to onion pickles, and paid \$50 to get it packed and taken to the M.A.C. Another sent in quantities of home-made wines, cured meats and all possible varieties of baking. No wonder that the authorities were bewildered and that some of the exhibits did not get displayed, including the Pilot Mound exhibit of Red Cross work. This competition in Red Cross work was the one urged by the advisory board in December last as providing an incentive to a high standard of excellence in that line. The president announced that the Dominion Conservation Commission had appealed for the saving of waste paper which was valu-

Paint particularly manufactured to withstand time and weather—in a word "climate-proof" is none too good for your out-buildings.

**Stephens'**  
BARN AND ELEVATOR PAINTS

Strong, solid paints—made honestly that cover well, give long protection and come in colors most suited to the various jobs. Your hardware dealer has them.

**G. F. Stephens & Co., Ltd.**  
Paint and Varnish Makers  
Winnipeg Canada

**MONEY**

or property left for the family should imply that the principal will be invested to yield an income. But is it invested to yield an income? More often it is lost in some foolish venture. This cannot happen to a guaranteed regular monthly income.

A large sum, when placed in the hands of an inexperienced person, is a temptation rather than a blessing.

Ask for particulars of the **MONTHLY INCOME POLICY** issued by

**The Great-West Life Assurance Co.**  
DEPT. "X"  
Head Office : Winnipeg

**Perfect Sight—  
Headache Gone**

Defective sight kills all enjoyment of work or one's creative hours. We have the very best optical skill and equipment and guarantee perfect success and satisfaction in the most difficult cases. Country business a speciality.

**COMFORT AND CLASS DISTINGUISHES OUR WORK.**  
**R. J. PATTON,** OPTOMETRIST AND OPTICIAN  
Formerly in charge of Eaton's Optical Dept.  
211 Enderton Building, Portage and Hargrave, WINNIPEG

**Ring-Bone**

There is no cure so old or bad that we will not guarantee

**Fleming's Spavin and Ringbone Paste**

to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on hickies and bone spavin. Before ordering or buying any kind of a remedy for any kind of a lameness, write for a free copy of

**Fleming's Vest Pocket Veterinary Adviser**

Ninety-six pages of veterinary information, with special attention to the treatment of lamenesses. Durable bound, indexed and illustrated. Make a right beginning by sending for this book.

**FLEMING BROS., Chemists**  
53 Church St. Toronto, Ont.

**Pace, Harrison,  
Limited  
Winnipeg**

**INSURANCE**

**LIVE STOCK  
Fire  
Accident  
Sickness  
Automobile  
Plate Glass  
Liability  
Bonds  
Tornado**

**WRITE FOR AGENCY  
Pace, Harrison, Limited  
General Agents, Winnipeg**

able as material for new paper. The Winnipeg Local Council of Women, with whom the Pilot Mound Home Economics Society was affiliated had undertaken to find out:

(a) Who was to receive the waste paper, if saved?

(b) What was its worth?

It had been discovered that certain mills would buy the waste paper at the rate of \$5.00 per ton for newspapers, and \$12.00 for heavier paper, such as the Ladies' Home Journal. Mr. Hicks had estimated that a carload of paper, packed solid in bran sacks, would weigh about 30,000 lbs. or 15 tons.

He had offered storage room in his loft and was enquiring the terms on which the C.P.R. would forward the carload for the benefit of the Red Cross Fund

Aug  
It was d  
of paper  
of each  
were cho  
Stuart, I  
J. J. El  
no. J. G  
Loney, A  
The Be  
ed to be  
settings  
Attention  
on page  
vegetable  
and an o  
Red Cr  
June 7th  
nomics S  
be made  
rally, at  
trict Roll  
wards the  
\$5.00 was  
Society.  
At the  
monds go  
and food  
her excell  
cause it i  
ence of el  
in Minnea  
ed the na  
tality, an  
hood, to  
Every chi  
have heal  
fed. Miss  
classes re  
mies Socie  
demonstra  
milk and  
is hoped t  
by the you  
as it is ap  
mies Socie  
Copies o  
be a long  
sale at 25  
benefit of  
ciation.

Sol  
T  
ma  
pr  
ba

WID  
TRADE  
MARK  
UNEQUALLED

A  
Bo

The Gol

It was decided to organize the collecting of paper by a committee representative of each school district. The following were chosen: Mesdames E. Grassick, Jas. Stuart, R. J. Blackburn, P. M. Robinson, J. J. Eisey, R. T. Robertson, Jas. Cardno, J. Gemmill, E. J. Hicks, and Misses Loney, Masson and Tait.

The Boys' and Girls' Club was reported to be in good shape: Upwards of 80 settings of eggs had been distributed. Attention was drawn to a method, given on page 46 of the Bulletin, of canning vegetables and meat in ordinary soakers and an ordinary wash-boiler, or steamer. Red Cross sewing will be resumed on June 7th until the 10th, the Home Economics Society meeting day. This will be made the occasion for a patriotic rally, at which the Pilot Mound and District Roll of Honor will be unveiled. Towards the expense of the Roll of Honor \$5.00 was voted by the Home Economics Society.

At the close of the business Miss Simmonds gave her address on the "Care and Feeding of Infants." The value of her excellent advice is all the greater because it is derived from a wide experience of children in Infant Welfare work in Minneapolis. Miss Simmonds attributed the nation's high rate of infant mortality, and other minor evils of babyhood, to mistaken methods of feeding. Every child has the right, not only to have healthy parents, but to be sensibly fed. Miss Simmonds has offered to hold classes regularly, on the Home Economics Society meeting days, and to give demonstrations on the way to modify milk and to prepare food for babies. It is hoped that this offer will be accepted by the young mothers an enthusiastically as it is appreciated by the Home Economics Society.

Copies of the new patriotic song "I'll be a long long way from home" were on sale at 25c., and were all sold for the benefit of the Returned Soldiers' Association.

**UNVEIL HONOR ROLL**

At a meeting of the Executive of the Home Economics Society last Saturday it was decided to unveil the Honor Roll at 3:30 p.m. on June 10th in C.O.F. Hall. Rev. J. L. Brown and Mayor J. C. Stuart have been asked to make short addresses suitable to the occasion and the secretary-treasurer of the War Relief Association will give an account of his stewardship. It is not intended to make a long affair but the occasion should prove interesting to the Home Economics Society and to those who have subscribed to the Honor Roll which has been painted by Mr. L. L. Fitzgerald of Winnipeg formerly of Snowflake. The fund is not closed yet especially as it is understood that any surplus will be devoted to the Patriotic Funds. Picture post cards of the Honor Roll will be available as will be announced next week. After the Honor Roll is unveiled the Home Economics Society will be at home to those who have subscribed to the Honor Roll with refreshments in the basement.

**ROLAND**

By Marion Phillips, Secretary-Treasurer, Mrs. P. R. Hamilton.

I am enclosing a report of the June meeting of the Roland H.E.S., also a list of the members. Although this is the first report of our society, I do not expect it will be our last, as our society is getting stronger and more interest is taken.

Roland, June 3, 1916.

The regular monthly meeting of the H.E.S. was held in the Commercial parlor and was well attended. During the demonstration classes held by Miss Smith from the M.A.C. our membership was largely increased. This month our society has decided to commence doing Red Cross work. To raise more funds it was decided that the members would serve lunch on the grounds at the ploughing match on June 15th. Mrs. Parkinson read an interesting paper on "Saving our Strength" from which much benefit could be derived if we followed the advice given.

**WAWANESA**

May 30th, 1916.

My Dear Mrs. Hamilton—During the month of May we had a short course in dressmaking conducted by Miss Senior and her assistant, Mrs. Abel, which was indeed very successful. Over thirty dresses were made, also some separate blouses and skirts. Ten members were added to our list while the course was on. We are arranging for a garden party on June 23rd, also a picnic later in June in co-operation with Grain Growers, at which we expect speakers from the college to address us. At our May meeting the secretary was instructed to write the school board and enter a protest against the room in the basement being used as class room.

Our meeting is to be at Mrs. J. B. Leachman's about two miles out in the country. We are looking forward to a good meeting.

Mabel McPhail.

**Mother's Corner**

**THE BOY WITH BROWN EYES**

By Claribel W. Avery.

You want me to tell a story,  
You want me to sing a song;  
But day is short, O dear little son,  
And a mother's tasks are long!  
You are rich in toys and a world of joys  
And a heart that is tuned for play;  
While dreams I knew ere I yet knew  
you,  
Are unfulfilled, to-day.

Yet dreams are naught but the ghosts  
of thought,  
They may fade and cease to be;  
And you are real, O dear little son,  
An the all-of-life to me!  
Let the fresh ink dry on the pen laid by,  
And the wreath of fame grow pale  
When your brown eyes pray for a merry  
lay  
Or a wonderful old folk tale.

Send for new "Money Saver" Booklet

**Barrett Money Savers for Farmers**  
Made in Canada

**BARRETT Money Savers** will solve many of your problems, and save your time and money. Good dealers almost everywhere carry them in stock.

**EVERLASTIC ROOFING**

**EVERLASTIC** is a splendid "rubber roofing". It is just what you need. Tough, durable, weather-proof and inexpensive. No better "rubber roofing" could be made at the price. Very easily laid. It will solve your roofing troubles. Made in one, two and three ply weights. Be sure to ask for it the next time you go to your dealer's.



**EVERJET ELASTIC PAINT**

**THEN** there is Everjet Elastic Paint—the best carbon paint ever made. Everjet has saved many a dollar by keeping "ready roofings" in first class condition. It is elastic and expands or contracts to meet temperature changes. It never peels, scales or cracks. And as a roof paint Everjet stands alone. It has great covering capacity—therefore, it is not expensive to use. Absolutely waterproof—therefore, protects against leaks and weather. You should never be without Everjet.



**AMATITE ROOFING**

**AMATITE** Roofing is distinctive for two reasons—its bright, attractive, sparkling appearance and its great durability. It has wide fame, too, as the roofing that needs no paint. Its mineral surface is waterproof and fire-resisting. Amatite is made in rolls, each roll containing enough to cover 100 square feet with a 3 inch lap.



**CARBONOL**

**THE** most necessary thing you could have around the house is a bottle of Carbonol. It is the best disinfectant, healer and cleanser ever made. Removes grease, germs and odors. Therefore, put some in the water with which you clean house. Heals cuts and wounds; prevents blood poisoning. Wonderful in the sick room because it prevents contagion. It will keep your stable or hen house clean and drive flies away from garbage pails or cattle pens. The best thing you could have for a hundred different uses. Get a bottle today.

**CREONOID, LICE DESTROYER AND COW SPRAY**

**CREONOID** is the most effective lice destroyer and cow spray ever made. Spray your live stock with Creonoid and they will be happy and healthy. Creonoid makes care-free horses—cows that give a generous yield of milk—and clean, good-laying hens. A little Creonoid sprayed in the piggery helps make profitable porkers. Follow directions carefully.



**GRADE-ONE CREOSOTE OIL**

**NOW** those fence posts of yours would not have rotted if you had used Grade-One Creosote Oil. It has been proved that this wonderful wood preservative will keep fence posts and timbers rot-proof for twenty years. Don't think of putting wood into the ground without treating it with Grade-One Creosote Oil. It penetrates farther into the wood than any other preservative. It also lasts longer. And it is so easily applied. Use it wherever wood is exposed to dampness, earth or weather. It saves you money.



**ELASTIGUM WATERPROOF CEMENT**

**MANY** a leak in your purse is caused by neglecting the little everyday repairs or else by paying too much to make them. Play safe. Have Elastigum—the wonderful, waterproof cement. It makes those little necessary repairs easy and cheap. And they are permanent too. It's just what you want for joining and relining gutters of metal or wood. It seals leaks and joints. The best thing you can use for chimney flashings. Elastigum is waterproof so that any joint sealed with it stays sealed.



Send for illustrated booklet describing Barrett Money Savers in detail. Address nearest office.

**THE PATERSON MANUFACTURING COMPANY, LIMITED**  
MONTREAL TORONTO WINNIPEG VANCOUVER  
**THE CARRITTE-PATERSON MANUFACTURING CO., LIMITED**  
ST. JOHN, N. B. HALIFAX, N. S. SYDNEY, N. S.

**DIRECTIONS FOR FEEDING YOUR BABY AFTER THE FIRST YEAR**

From The Farmers' Wife.  
This is a period of great danger in the feeding of children. Many little ones who have been successfully nursed or wisely bottle-fed are permitted, when they are a year old, to eat food utterly unsuited to their powers of digestion.

A mother must not be any less careful of the food her child eats when he is old enough to sit in a high-chair at the table than she was when he lay back on his pillow with his bottle. It is, of course, a good deal of trouble for a busy farm woman to plan and prepare the special diet of young children; but after

all, everything which is big and important and worth while is a trouble. Surely, to establish the health of our children is a matter of importance, a duty which will bring a rich reward as we see them march on into sturdy manhood and womanhood. It will make the periods of nursing, much less frequent, too, for most of the ailments of children are due to indigestion. And when the contagious diseases visit the well-fed children, they and their after-affects are much less severe.

**When Baby Is a Year Old**

When a baby is a year old he is ready to be weaned from his mother's breast; or if he has been bottle-fed he is almost

**Sold Standard BAKING POWDER**

THE "something" that makes people praise your baking.

**UNRIVALLED FOR PURITY AND STRENGTH**

A big 110-page Cook Book sent free upon request.

**The Gold Standard Mfg. Co. WINNIPEG**

ply an ne? re, dar rds ion -Y O. ton's EG rs, and the La ed est-pa cked about his left which ar-load Punks

**Get a Farm of Your Own**


**TAKE 20 YEARS TO PAY**

The land will support you and pay for itself. An immense area of the most fertile land in Western Canada for sale at low prices and easy terms, ranging from \$11 to \$30 for farm lands with ample rainfall—irrigated lands from \$35. Terms—One-twentieth down, balance within twenty years. In irrigation districts, loan for farm buildings, etc., up to \$2,000, also repayable in twenty years—interest only 6 per cent. Privilege of paying in full at any time. Here is your opportunity to increase your farm holdings by getting adjoining land, or secure your friends as neighbors. For literature and particulars apply to

**ALLAN CAMERON, General Supt. of Lands, Desk 17, Dept. of Natural Resources, C.P.R., CALGARY, ALTA.**

**REFINED** MADE IN CANADA  
ALL THE NEATNESS AND STYLE OF THE FINEST LINEN MAY BE YOURS IN  
**CHALLENGE COLLARS**  
—THE MOST DESIRABLE WATERPROOF COLLARS ON THE MARKET—  
AT YOUR DEALER'S, OR DIRECT —  
**25c**  
THE ARLINGTON CO. OF CANADA, 54-56 FRASER ST. TORONTO

**EQUITY THRESHER BELTING**



**Endless Canvas Belts**  
Prices, F.O.B. Winnipeg:

Length	Width	Price
120 x 7 x 5		\$39.75
120 x 8 x 4		36.25
120 x 8 x 5		44.85
150 x 8 x 5		55.65
150 x 8 x 6		66.50

All our Belts are made by a thoroughly reliable firm of manufacturers, and are guaranteed to be perfect in every detail of material and construction. Other sizes will be quoted for on application, also RUBBER or LEATHER BELTS.

**SUCTION HOSE**

Northwest Agricultural, Canvas Covered, Prices, F.O.B. Regina:

20 ft. length	\$6.25
25 ft. length	7.75

J.C. Plain Rubber Agricultural Wire Lined:

20 ft. length	\$7.85
25 ft. length	9.85



**The Saskatchewan Growers' Association**  
Farmers' Building REGINA, Sask.

ready to take whole milk unmodified. (If, however, the milk is from a Jersey cow, it must be diluted one-fourth during the first half of the second year.) At this age he should be gradually trained to drink from a cup. This is important for the child who continues the bottle habit looks very silly and is likely to become fond of sucking, which is most injurious.

By the way, while we are speaking of sucking, let me beg you never to give your babies pacifiers. They cause colic because the child sucks in air, they have a tendency to produce adenoids, they lead to certain vicious habits and they make a child stupid by concentrating his attention on the foolish process of sucking instead of noticing what is going on around him.

The following lists of foods suitable to different ages, are compiled from J. Crozier Griffith's Care of the Baby and Dr. L. Emmett Holt's Diseases of Infancy and Childhood.

It must be remembered, however, that children, like adults differ in what agrees with them, and mothers should use their observation and common sense. Starch is indigestible to many young stomachs, and in such cases cereals, rice, baked potatoes should be given very sparingly or not at all. Others are distressed by eggs and no little child can take meat advantageously more than once every other day.

**Hot Weather Foods**

In hot weather the food quantities should be reduced, and in case of any digestive disturbances feeding should cease until a cathartic has evacuated the bowels and the stomach is entirely settled. Many, many sick children are fed to death. A baked potato urged upon a feverish patient may bring about a fatal ending. Never be afraid to starve a very sick child. The stomach in such a case will not digest the food put into it and it becomes a source of dangerous irritation to the whole digestive tract. Human beings can go a long time without food and the resulting weakness is not dangerous whereas the irritation of stomach and intestines from undigested food is exceedingly dangerous.

When a child in comparatively good health loses his appetite, there is no advantage in urging food upon him. Seek the cause of his lack of appetite and remedy it. Fresh air, exercise and an occasional cathartic will keep the appetite normal.

**From Twelve to Fifteen Months**

Five feedings daily, with intervals of about four hours, are required at this period. To eight ounces of milk may be added two ounces of barley, wheat, arrowroot, farina or other farinaceous food, very thoroughly cooked and then strained so as to form a jelly. The amount for twenty-four hours should be made each day and added warm to the milk just before pasteurization.

At the midday feeding this bottle or cup may be preceded by the beef juice, beginning with one teaspoonful and increasing to two ounces. If the baby

does not like it, the juice may be added cold to the bottle of milk and strained cereal, in which case the flavor will hardly be detected. The milk must not be heated above one hundred degrees, however, or the juice will become indigestible from coagulation.

There are two ways to make beef juice. A slice of lean steak an inch and a half thick may be very slightly broiled and the juice then squeezed out with a meat-press or a lemon-squeezer. One pound of steak will yield two or three ounces. Another method is to chop finely one pound of lean steak (uncooked) and let it stand in eight ounces of water in a covered dish from six to eight hours in a cold place. The meat is then placed in a piece of coarse muslin and twisted till the juice flows out. In either case, salt should be added but no pepper or other seasoning unless it is celery salt. It may be fed cold or slightly heated but it should not be made hot.

From one to two ounces of orange, prune or ripe peach juice should be given twice a day an hour before feeding.

**From Fifteen to Eighteen Months**

A soft-boiled egg with dried bread or unsweetened cracker crumbs broken up in it may take the place of the beef juice twice a week. More than ten ounces of milk and strained cereal may be given at a feeding. The fruit should be continued and the five daily feedings.

**From Eighteen Months to Two Years**

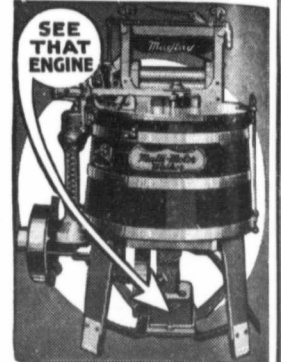
Cereals now may be taken in the form of porridge instead of being strained. Milk may be poured over them but it is better to acustom the child to take them without sugar. The danger of using sugar in a child's diet is that he likes it so well that without it all food becomes unpalatable to him. At the midday feeding from one-half to one-tablespoonful of scraped rare beef or mutton may be given if the teeth are well advanced. Well baked bread which is not too fresh may be thinly spread with butter and given him at each meal. Chicken or mutton broth from which the fat has been thoroughly removed, may be given every other day. The pulp of stewed prunes or baked apples may be substituted occasionally for juices, a tablespoonful at a time. Three meals a day, with a glass of milk between each, may be begun.

**From the Ages of Two Till Six Years**

Milk should continue to be the most important article of food. A child should drink a quart of milk a day. Cream poured on cereals, potatoes baked or mixed in broths is very valuable. Eggs, soft-boiled or poached or scrambled soft, are used two or three times a week. Beef, mutton, lamb (rare) and the white meat of chicken may be used once a day. They should never be fried but broiled or roasted. Potatoes may be fed once a day, baked or mashed, never fried.

Most children dislike green vegetables but they are an important part of a diet. The only desserts allowed should be custards, junksies, rice pudding without raisins, and ice cream which you know to be pure. The coal-tar dyes with which some creams are colored are poisons and

**Here Is The Most Practical Washing Machine Made**  
Exactly What You Have Always Wanted



**Maytag Multi-Motor Washer**

It is equipped with a light, powerful, compact little engine that does all the hard work of washing and wringing, and does a bigger, better and cleaner washing in an hour or two than you can possibly do with a wash board and tub in a day's time.

This washer takes up no more room than an ordinary wash tub and can be used in the kitchen, laundry, dining room, on the porch or out in the yard. It requires no belts, chains or pulleys, no electricity or water power, and no waiting for the man to bring his engine from the barn.

Esides running the washer and wringer, the machine is equipped with pulleys so you can operate other small machinery such as churn, sewing machine, food chopper or anything else that does not require more than one-half horse power.

The MAYTAG MULTI-MOTOR WASHER is splendidly made of the best materials and is guaranteed against defects for a period of THREE YEARS and this warranty covers the washer, wringer and engine. This is not an ordinary washing machine, but something new, with exclusive patented features that no other washer has or can have.

WASH-DAY, and that is WORK-DAY, changed into PLAY-DAY.

Goodbye backache, headache, nerve wreck. No woman need bend over the wash tub as her grandmother did, nor turn the old-styled washer as her mother did, if she has a MAYTAG MULTI-MOTOR.

Nearly FIVE HUNDRED of the wide awake, up-to-date, progressive hardware and implement dealers in Manitoba, Saskatchewan and Alberta are selling this machine. If YOUR dealer is not, drop us a card and we will mail you a copy of THE MAYTAG LAUNDRY MANUEL (48 pages). Even if you do not buy a washer, it will be a great help to you as it contains many valuable formulas and receipts that can be used to advantage in any home. IT IS FREE

ADDRESS  
**The Maytag Company Limited**  
WINNIPEG, MAN.



Physician (having examined hubby)—“What he wants is rest. Here are some opium pills—two of these every night.”  
Better Half—“What's he to take them in?”  
Physician—“He's not to take them. They are for YOU.”

ice cream prod much se home. The fi hidden c old at h Corred liver, bu Fried bers, out matoes. Ten, o Salads serves. J It is a from our and other will give least to ing habit stomachs develop children they have cause it stomachs which is p its not e has never taught so by, somet Partly as some diet ing with dren has Very li means re have their restless be too much

Eightee last: Soft rare beef. Milk. Din tato or br Bread and milk. Sup ble spoonfu Two yea egg or cere steak cut i of milk. D mutton, la does. One or sago pi Supper: B

**HYGIE**  
No one b ing who do chemical e purpose the system. A be hungry I but the qua him. It is food for one but it is ah needs differ climates. I tip of differ best suits

Tommy— here ain't no Sergeant— BAD TO ROT

Most

e Made  
rs Wanted



7  
for

t, power  
t does all  
nd wring-  
tter and  
r or two  
h a wash  
ie.

ore room  
nd can be  
y, dining  
the yard  
r pulleys,  
r, and no  
g his en-

her and  
ped with  
her small  
ving ma-  
hing ele-  
han one.

-MOTOR  
e of the  
aranted  
THREE  
wers the  
This is  
machine,  
exclusive  
o other

WORK  
Y.

e, nerve  
over the  
did, nor  
as her  
AYTAG

of the  
gressive  
alers in  
Alberta  
YOUR  
and we  
THE  
EL (4  
buy a  
to you  
e form  
used to  
FREE

any

ice cream which is refrozen after melting produces ptomaine poisoning, so it is much safer to make the ice cream at home.

The following articles should be for hidden children until they are six years old at least:

Cured beef, dried beef, game, kidney, liver, ham, sausage, stuffing.

Fried vegetables of all kinds. Cucumbers, onions, celery, radishes, lettuce, tomatoes, beets, eggplant, corn, pineapple.

Tea, coffee and all alcoholic drinks.

Salads, cheese, rich cake, pastry, preserves, jams and candies.

It is almost impossible to keep candy from our children because other children and other children's mothers and fathers will give it to them but we may try at least to keep them from the candy-eating habit, which is injurious to their stomachs, their teeth and to their general development and intelligence. My own children never beg for candy although they have, of course, often eaten it because it was given them but their stomachs are satisfied by the daily diet which is provided for them so that they do not crave the sweet, and the habit has never been taught them, as I see it taught so many children by mothers who by something sweet to suck or chew. Partly as a result of having a wholesome diet of digestible foodstuffs and going without candy not one of my children has ever had a cavity in a tooth.

Very light food at the evening meal, means restful sleep. Mothers too often have their rest broken by a child who is restless because he was allowed to eat too much or have food difficult to digest.

**Suggestive Menus**

Eighteen months to two years. Breakfast: Soft-boiled egg or cereal or scragged rare beef. Bread and butter. Glass of milk. Dinner: Boiled rice or baked potato or broth with barley or rice in it. Bread and butter. Custard. Glass of milk. Supper: Bread and milk. A tablespoonful of cooked fruit pulp.

Two years and after. Breakfast: Soft egg or cereal or a small amount of beef steak cut fine. Butter and bread, glass of milk. Dinner: Roasted or boiled beef, mutton, lamb or chicken. Baked potatoes. One green vegetable. Tapioca, rice or sago pudding or cooked fruit-pulp. Supper: Bread and milk.

**HYGIENIC FOOD VALUES**

No one has mastered the art of cooking who does not know something of the chemical elements of foods, and the purpose they serve when taken into the system. A man may eat much and yet be hungry because it is not the quantity but the quality of food that will satisfy him. It is not only true that proper food for one may not be good for another, but it is also true that the same person needs different kinds of foods in different climates. The child requires food made up of different elements from that which best suits the adult, and the diet of

laborer must differ from that of the brain worker.

An adult takes into the system daily through lungs and mouth, eight and a half pounds of food, water and air. The same amount is given off as waste. Life and action use this amount as fuel. Every movement, every breath, every heartbeat and every thought burns up a certain amount of fuel material. The more perfect the food is adapted to the needs of the body, the more vigorous the body and the more perfect the working of the muscles, nerves and brain.

Food has chiefly two offices to perform, the supplying the body with fuel to keep its heat up to 98 degrees and the repairing of muscular waste. The heat of the body is produced by the action of the lungs. It has been proven that the body requires four or five ounces for heat to one for muscle. The carbon needed to keep up the heat comes chiefly from starch.

The great secret in the preparation of food that will prolong life and maintain a high state of health, is to adapt it to all conditions peculiar to those to be fed; age, occupation, climate and season are to be considered. Variety of food is nearly always at hand. Knowledge only is necessary to choose that which is best adapted to the needs. It is particularly important that those who are compelled to practice economy should know just what foods will best supply the real needs of the family and how the most value can be obtained for the money spent. It will be well to consider the values of some of our most common foods. The value of a fruit diet is incalculable. Fruits are easily digested and they brighten the complexion and clear the brain.

Apples are the best spring medicine that can be found. They contain more phosphorus in a digestible form than any other vegetable product. Constantly eaten they promote the action of the liver, cure indigestion, prevent throat troubles and promote sound and healthful sleep.

Oranges are a great aid to digestion. The acid is a tonic and improves the blood. Lemons may be used to benefit a bilious temperament. The juice of a lemon should not be taken without putting it in water as it is very strong and likely to corrode the lining of the stomach. Pineapple juice will cure dyspepsia. It strengthens the digestive powers, drives away malaria and clears the throat in cases of diptheria and often is the means of a cure. Grape fruit is another excellent tonic.

Grapes cover a wide field in the economy of nature. The pulp is nourishing and the juice is laxative. They clear the voice and strengthen the vocal tissues. Rhubarb made up in the old-fashioned sauce is an excellent spring tonic and blood purifier.

Vegetables come next in value. Celery is a cure for nervousness and is also a remarkable remedy for rheumatism. It is said this disease is impossible if celery



**LIKE MOTHER USED TO BAKE**

*But Mother was handicapped in not having*

**ROBIN HOOD FLOUR**

*How she would have appreciated the ease with which she could have baked her bread had she been able to get*  
**ROBIN HOOD!**

**FREE!**

*The Robin Hood Cook Book can be secured free in exchange for coupons found in every sack of*

**ROBIN HOOD FLOUR.**



**BREAKFAST IN A FRONT TRENCH**

Tommy—"The bloomin' dug-out's flooded, the biscuit's wet, the tea's cold and there ain't nothin' to warm it with."

Sergeant—"Oh, chuck it! I dunno what some of you blighters would do if you HAD TO ROUGH IT!"

is cooked and freely eaten. Onions are good blood purifiers and complexion improvers. They are laxative, strengthen the nerves and induce to sleep. An onion eaten before going to bed is good for breaking up colds. Salads containing celery, cabbage, onions, lettuce and apples are quite valuable.

Oatmeal is a heavy diet and not fitted to nervous people. Only laboring people can digest it properly. Cracked wheat well cooked is much better. Honey is an article which has value both as food and medicine. It is good for children and a good cure for throat troubles. Milk contains all the important elements of food. Add to milk, eggs, rich in nitrogen, rice and sugar, rich in carbon, and you have a nutritious dish, easily digested.

Buttermilk is a wholesome drink, particularly in summer, as the nutritive power of the milk is but little reduced by the removal of the butter, while the sourness, due to formation of lactic acid, aids digestion. It eliminates the waste matter, quiets the nerves and induces sleep.

Meat is a stimulating diet because it is force giving and muscle feeding. Wild meats digest more easily than tame. A too free indulgence in animal food is often responsible for heart disease, apoplexy, gout, etc. Soups made from the juices of meat are very wholesome.

N. L.

**A LABOR SAVING DEVICE**

If we are to realize higher perfection of home life upon the farm, it is highly essential to turn our attention to the gas engine and its domestic uses.

It is self-evident that our time is growing in value and that intensity of purpose to which time shall be used must be increased.

With the use of the gas engine, there is not only a saving of time and money, but, with this equipment, the country home may possess the luxuries of the city dwelling, namely, water supply, light and laundry.

The water supply can be made to furnish running hot and cold water for kitchen, bath and laundry, a means of efficient sewage disposal, and fire protection.

The gas-engine-driven electric lighting systems for country use have passed the experimental stage and now rival the efficiency and economy of the home gas lighting systems.

In the laundry, the gas engine makes it possible to reduce the amount of exposure and drudgery of wash day. Beside furnishing water for the washing, the various machines may be conveniently operated by the power of the engine.

Where there is no milkhouse separate from the home, this engine can be made to operate both churn and separator in connection with any one of the above operations.

In choosing an engine for these purposes, nothing less than a two-horse-power engine should be selected. Usually it is more advisable to secure an engine larger than your present needs require.

**A WARNING TO MOTHERS IN SWAT-THE-FLY CAMPAIGNS**

**Don't Let the Children Handle Dead Flies.**

The tendency at this time of the year of the health authorities in various cities of the Middle West to offer a premium of 10c a hundred for dead flies in connection with their municipal clean-up campaigns, brings up for discussion an important question of sanitation and hygiene. If a fly, alive, is a possible bearer of death through the disease germs which it carries on its body, how do children who swat the fly and then carefully preserve the decomposing bodies for the coveted 10c a hundred, escape infection through the same germs? Apparently, through zeal in these wars of extermination, those in authority have overlooked a most dangerous feature of the movement. Swat the fly, of course, but burn him up immediately because he is more filthy dead than he ever could be alive. Decomposition adds to the menace.

To instruct children to "swat flies" and accumulate them until they have enough to bring in and collect 10c a hundred seems nothing short of a crime against

# There is more or less work

Every furnace demands *some* attention. But there is no reason why the twice-a-day job should be anything but pleasant. And to save a *little* time and a little bother every day means a lot in the course of the winter.

**The Sunshine is a furnace any one can look after without spoiling either clothes or temper**

The door is large enough for the biggest coal is being shaken down. None of that light shovel. The grates are strong and turn easily. The ash-pan catches *all the ashes* without the need of shovelling. The water-pan is located so that it can be *filled quickly*.

Ash-dust cannot escape when the Sunshine

is being shaken down. None of that light dust floats about the house or the basement.

The damper and the check draft can be regulated from upstairs—and perfectly too. The close-fitting doors and dampers hold the fire for hours without waste.



## McClary's Sunshine Furnace

Do you know how little it will cost you to enjoy the comforts of a fine Heating System in your home? Send the coupon for a copy of our booklet "Sunshine." And if you wish to have prices of installing a Sunshine Furnace, let our Heating Engineer send you the information. Tell him the kind of a house you have and the number of rooms; give him a rough ground plan of the upstairs and downstairs and he will show you how to plan your heat distribution so as to get the utmost out of it. There is no charge for this service; it is free whether you buy a Sunshine Furnace or not.

**Kindly send me without expense on my part—**

1. Your booklet on the Sunshine Furnace.
2. Also forms for filling out, so that your heating engineers can tell me how to order and install a system that will properly heat my home.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

Local: Toronto Montreal Winnipeg Vancouver  
 St. J. C. N. R. Hamilton Cal. ry Saskatoon Edmonton

819

modern sanitation. It would be a dangerous practice for grown people who took every possible precaution against infection; but for children to carry dead flies with their hands and then perhaps handle food without washing is almost certain to spread every disease that flies are known to carry.

The only possible way, from a sanitary standpoint in which flies could be caught and preserved for the estimating of their number would be on a sheet of sticky fly paper which embalms the flies' bodies with a glue which prevents germs from spreading. This might add to the difficulty of estimating the exact number, but it would be near enough for all practical purposes. And it would protect children from probable infection in the very diseases against which the fly campaign is supposed to protect them and would teach them to regard the fly as the deadly insect he is instead of

encouraging them to regard him as an object of familiarity and indifference.

**GARDEN TOPICS IN AUGUST**

By H. E. Violoux, Charleswood.

Although this is a late season the growth in gardens is most luxuriant as the July rains have been abundant throughout the country. Again cut-worms and aphids have done a deal of damage. The two circulars, issued by the Extension Department M.A.C., last season should be most useful to farmers and gardeners. No. 28 deals with insect poisons, and spray mixtures, and their uses in a garden. No. 29 is a timely bulletin on "Tree Pests and Outworns." Unfortunately, insect pests are increasing yearly in all our western provinces, and the time is coming when a determined war must be waged against them by all gardeners. These bulletins are

free upon application from the Manitoba Agricultural College.

It is a curious thing that extreme cold does not kill the eggs laid by Milk Moths. In the summer from July until a severe frost does not injure the fertility of the eggs in the least. In May and June a large crop of cutworms and other pests hatch out, to gobble up tender green things. "A garden clean up must be our slogan if we are to enjoy the fruits of our labors. In the "cabbaging patch," after all rubbish is gathered together in heaps, set the stalks, etc. alight, and thus destroy their enemy."

Talking of pests, one of the truest experiences encountered in the country this time of year is an outbreak

P  
1  
More  
than  
came  
milk  
to  
the  
Port  
Meth  
of the  
recom  
sion  
Sold  
Meth  
sample  
from  
Winn  
Icy poi  
a body  
fers and  
ravines  
poisoning  
Fortunat  
immune  
cowbane  
remedy  
mon bak  
in boiler  
hands of  
itching,  
times a  
skin will  
part of c  
be planted  
celery pro  
The old ti  
is little u  
demers lik  
ner of pu  
vegetables  
growing co  
most nee  
growing, a  
later in th  
not to seat  
heads of  
the garden  
all farm g  
two. At t  
ful trial w  
to cover c  
as it is rat  
feet we p  
to depend  
our celery  
rate.  
How glo  
year? I h  
my life, e  
rosses in  
white and  
evidence, a  
dark red  
season ver  
finest res  
tivated gar  
The wild  
can be tran  
case, but  
compliat w  
to perfo

## Porter's Food

Is the very best for Baby  
IN THE HOT WEATHER

More babies die in July and August than any other time of the year because of wrong feeding on unsuitable milk.

Porter's Food is a nutritious cereal food, and can be given to the youngest and most delicate infant.

Porter's Food Saves the Babies from Diarrhoea and Summer Complaint

Mothers need not fear to wean baby if they use Porter's Food. Highly recommended by the Medical profession.

Sold in tins, 15c., 35c. and \$1.00 at all Drug Stores

Mothers are invited to send for free sample and booklet about feeding baby, from George Porter, 305 Victor street, Winnipeg.

"Ivy poisoning." The more enthusiastic a body is in securing specimens of flowers and ferns along the river banks and ravines the more certain an attack of poisoning on face or hands, especially. Fortunately a good many persons are immune and can handle poison ivy and cowbane and escape injury. A good home-remedy for this distressing rash is common baking soda. A teaspoon dissolved in boiling milk, bathe the face and hands often to kill the poison and allay itching. Bathe with buttermilk several times a day and within a week the skin will be fair and clean. In the latter part of June and early July, celery can



Another Corner of Dr. Speechly's Garden, Pilot Mound

be planted and will mature for winter celery providing the weather is showery. The old time method of trenching celery is little used nowadays. Famous gardeners like S. Larcombe, of Birke, winner of prizes wherever he shows his vegetables, advocate the level drill in growing celery. Frequent cultivation is most necessary in successful celery growing, and when hilling the rows up later in the season care should be used not to scatter earth into the leaves. Good heads of celery, clean and crisp from the garden is such a delicious vegetable all farm gardens should have a row or two. At Ottawa last season successful trial was made of a pliable material to cover over celery to blanch it, but as it is rather expensive—\$15.00 per 1,000 feet—we people of the west, will have to depend on "Mother Earth" to blanch our celery until after the war at any rate.

How glorious the wild roses are this year! I have never seen finer ones in my life, every thicket is covered with roses in bloom. On the prairies the white and pale pink roses are more in evidence, and in the woods the deep dark red beauties. Several found this season were really semi-double, and the finest roses grew in the edge of a cultivated garden where the soil was rich.

The wild fern is a handsome plant and can be transplanted from the woods with ease, but ferns must have cool feet coupled with rich garden mould to grow to perfection. Therefore, choose a shady

corner under trees, or the north side of a house. When the leaves have fallen in the autumn sweep up a couple of barrow loads and put them over the ferns. They will act as a mulch and gradually decay and fertilize the fern roots.

In five years eight fern roots set on the north side of a home had increased to thirty-six fine ferns, these were then moved to a fresh site and now are flourishing a regular fern plantation, no doubt ferns do better near a river. The virginia creeper, on the other hand, seems to grow anywhere, and is beautiful indeed in summer and in the autumn when touched a lovely tinge of red by Jack Frost. It is so easily transplanted and perfectly hardy; all western homes should have this graceful creeper growing on the walls, or climbing up over the verandah.

The Japanese tea vine is another creeper, which grows well in the west and is very pretty with its little sprays of wax-like flowers. The humming bird has a great fancy for the tea vine and often builds a nest near it.

### RECIPIES

The recipes here given may help you to use, in appetizing ways, the early summer surplus of eggs and milk.

**Corn Puffs**—Blend three-fourths of a cupful of cornmeal with one pint of milk and cook in double boiler one-half hour or more. Add one tablespoonful of butter, a little salt and, when cool, the beaten yolks of three or four eggs, then fold in the stiff whites of the eggs. Bake in muffin pans for thirty to forty-five minutes.

**Pap-overs**—One cupful of flour, one salt-spoonful of salt, one cupful of milk, one egg. Mix together slightly, then beat vigorously with the egg beater. At once put into buttered gem pans or earthen cups. Bake about thirty minutes in a quick oven or until they lift easily from the cups and seem to be dry and light.

**Cream Puffs**—Cook together one cupful of boiling water, one-fourth cupful of butter, one salt-spoonful of salt and one cupful of flour until a smooth ball of paste is formed. When cool, beat in, one by one, three large or four smaller eggs. Shape and bake.

**Cream Filling**—Seal one pint of milk, reserving enough to make a smooth paste with one-fourth cupful of flour, mix that with the hot milk and cook half an hour. Add two beaten eggs or three yolks and cook five minutes longer, adding one-half to one cupful of sugar. Flavor with lemon or vanilla or very strong coffee. One or two table-spoonfuls of cocoa may be mixed with the sugar to give the chocolate flavor.

**Silver and Gold Custard**—Beat slightly the whites of four eggs with one-fourth cupful of sugar, add a speck of salt, a few drops of almond or vanilla flavoring and one pint of scalded milk. Strain into moulds and steam or bake until firm. Scald another pint of milk and add to the beaten yolks of four eggs, cook till it begins to thicken and add one-fourth cupful of sugar and strain; flavor when cold.

**MAGIC BAKING POWDER**

Magic Baking Powder costs no more than the ordinary kinds. For economy, buy the one pound tins.

MADE IN CANADA

EW GILLET COMPANY LIMITED  
WINNIPEG TORONTO QUIT MONTREAL  
REFUSE SUBSTITUTES

The best method of preparing cottage cheese is to pour moderately hot water into the milk, which should be soured so that it is thick. After standing half an hour or less, the water is drained off and more added. After three or four waters, most of the sour flavor will have disappeared. Then drain the curd in

cloth or wire strainer and when no more water can be squeezed out, add salt and melted butter or cream.

Such cheese may be varied by adding, according to taste, savory herbs, chopped chives or green peppers. The cheese is pretty made into balls and served in a nest of lettuce for salad.

## A DAILY DELIGHT

IN THE COLD WEATHER. It isn't the cost of a furnace that counts, it's the satisfaction you get in heating your home comfortably and economically



## HECLA WARM AIR FURNACE

heats any house thoroughly and saves one ton of coal in every seven used

Write for our booklet "Comfort & Health"

## If You Are Interested

in Hot Water or Steam Heating, ask for our Catalogues telling you in detail about our "Adanac" and "Imperial" boilers and Hydro-Thermic (Steel) Radiators.

CLARE BROS. WESTERN LTD.

Dept. K

WINNIPEG, MAN.

Tear off

Coupon CLARE BROS. WESTERN LTD., Dept. K, WINNIPEG, MAN.; "COMFORT AND HEALTH"—Catalogues of "ADANAC" and "IMPERIAL" BOILERS and "HYDRO-THERMIC STEEL RADIATORS." Mark which publication you would like to receive.

Name

Address

**Gold Standard JELLY POWDER**

You need never worry whether your Jellies will "turn out" or not if you use Sold Standard

Ask for Big 110-page Cook Book—FREE.

Gold Standard Mfg. Co.  
WINNIPEG 17



22-inch Switch \$1.98 Special

Switches Hair Goods

Ladies, send us your combings. We make them up into switches at 50c per ounce. We will add new hair as desired to combings at from \$2.00 upwards.

Satisfaction Guaranteed

Elite Hairdressing Parlors 207 Enderton Building WINNIPEG

Learn to Write

SHORT STORIES AND PHOTO-PLAYS AT HOME in Spare Hours.

Our Courses are thorough and practical. You earn while you learn. We market your product.

Ours is an all Canadian School.

Our Instructors are Canadian authors well known to you.

Write for our Preliminary Test Examination, or letter still, send us something you have written, for free criticism.

The Arts & Letters School 1 East Adelaide Street TORONTO Ontario



The Happy Baby

The air of perfect happiness and contentment of babies brought up on Savory & Moore's Food is constantly a subject of remark. This is simply because it is so easily digested, so nourishing and satisfying, in fact an ideal food for babies in every way.

Get a tin of Savory & Moore's Food to try from your Stores, and note how eagerly baby will take it, and what marked improvement and steady progress will follow its use.

MOTHER'S GUIDE FREE

Savory & Moore's little Book "The Baby" is full of useful and reliable information on Infant Management. It is just what a young mother requires, and will prove invaluable in the home. A Free Copy may be obtained on application to Savory & Moore, P.O. Box 1601, Montreal.

SAVORY & MOORE'S FOOD Of all Druggists and Stores



conducted for the benefit of Dealers, Threshermen and Farmers who have anything to sell or exchange. Five cents a word for each insertion.

FOR SALE.

Second hand rebuilt machinery at our Winnipeg Branch, consisting of: Steam engines of all sizes, both traction and portable;

Gas and oil engines, also Second hand rebuilt separators. If you are looking for second hand machinery, it will pay you to get in touch with us. We can save you money. Our machinery is rebuilt in our own shops by competent workmen. We have a bargain for you. For particulars, address: J. I. CASE THRESHING MACHINE CO., Princess and James Streets, Winnipeg, Manitoba.

GEISER SEPARATORS 40-60, 35-50, 30-46, 27-39 and 24-32, new and rebuilt. Must be sold by liquidator this season. Will sacrifice at much less than makers cost. R. S. Ewing, 200 Union Trust Bldg., Winnipeg.

TWO 45 H.P. GASOLINE TRACTORS, one new and one rebuilt, \$2,200 and \$1,700 respectively. These prices are far below what the material would cost at present date. This is a rare opportunity. R. S. Ewing, 200 Union Trust Bldg., Winnipeg.

O.A.C. No. 72 OATS—The great new oats introduced by Ontario Agricultural College. The greatest oats for yield and quality ever introduced into the West. We have the genuine article grown from registered. Price 75c. per bushel. Eureka Pedigreed Seed Farm, Melita, Man.

IMMORTALITY CERTAIN — Swedenborg's great work on "Heaven and Hell" and the life after death, over 400 pages. Only 25c., postpaid. W. N. Law, 486-G, Euclid Ave., Toronto, Ont.

ALL-PURPOSE GASOLINE ENGINES for sale at much less than manufacturers' cost. "Gado" (4 h.p.), air-cooled, rebuilt, \$119; 14 h.p. "Badger," standard stationary, rebuilt, \$150. You cannot buy the quality goods anywhere at anything like the price. R. S. Ewing, 200 Union Trust Bldg., Winnipeg.

GRAIN SHIPPERS Get started right. Consign your first car to us. Personal attention given all cars. Reinspection call when necessary. Money advanced on Shipping Bills. Prompt returns. Daily market letter and sample bags are supplied on application. CENTRAL GRAIN COMPANY, Limited COMMISSION MERCHANTS 723 Grain Exchange Winnipeg Paid Up Capital, \$200,000 Reference: Any Bank or Commercial Agency

Western King Overalls Union Made Overalls "Made in Winnipeg" Made for Wear and Solid Comfort. Every Garment Guaranteed Western King Mfg. Co. LIMITED - WINNIPEG 64

Myers Tank Pumps ARE EASIEST TO OPERATE The Patented Cog Gear Head on Myers Tank Pumps, saves one-third of the operating power. This will be appreciated by threshermen, for using one of the old style pumps is tiresome work. The valves are located under removable, individual caps, where they can be easily reached. Waterways are large, allowing a free passage of the water. Valves are of the poppet pattern with brass seats. Write for Brochure F. E. Myers & Co., Ashland, Ohio. Ashland Pump & Hay Tool Works

BOOK ON DOG DISEASES And How to Feed Mailed free to any address by the Author H. CLAY GLOVER CO., Inc. 118 West 31st Street, New York

\$1 Automatic Hair Cutter 50c PATENT PENDING The Automatic is a wonderful invention. Attaches to any comb in five seconds. Comb your hair any style you wish and the Automatic will cut it smoothly and evenly at the same time. It can comb your own hair you can cut it in five minutes with the Automatic. Saves cost many times in a year. The Automatic Hair Cutter is nicely finished in silver and gun-metal. Will last a life time. For a short time only in order to introduce this wonderful invention, and secure agents, we will send the Automatic Safety Hair Cutter complete with good comb in case ready for instant use for exactly cost price, 50c. The price of Two Hair Cuts. Send 'TODAY'. This offer will not appear again. Agents wanted. Fisher-Ford Mfg. Co., Dept. 21, Barrie, Ont.

RIDER AGENTS WANTED In every locality to ride and exhibit a 1916 Fisher-Horne with latest improvements. 10 DAYS' FREE TRIAL Riders Wanted. Riders to sell will be understanding that if owner is not satisfied after sales period is over the amount returned and money will be promptly refunded. DO NOT BUY a Bicycle, Tricycle or Sporting Goods unless you realize our latest innovation and you will save money. We will send Free Postpaid. TWO CENTS In all 16 cities we are completing a handsome ART Folder showing complete details of our bicycles, tricycles, also catalogue of the Fisher-Horne and Sporting Goods. Do not miss this opportunity. FISHER-FORD BROTHERS, Limited Dept. 21 Toronto, Ontario

SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS. THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. Applicant must appear in person at the Dominion Lands Agency or Sub-Agency in the District. Entry by proxy may be made at any Dominion Lands Agency (not Sub-Agency), on certain conditions. Duties—Six months residence upon the cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required except when residence is performed in the vicinity. In certain districts a homesteader is good standing may pre-empt a quarter-section alongside his homestead. Price \$12.50 per acre. Duties—Six months residence in each of three years after earning homestead patent; also 50 acres extra cultivation. Pre-emption patent may be obtained as soon as homestead patent, on certain conditions. A settler who has exhausted his homestead right may take a purchased homestead in certain districts. Price \$25.00 per acre. Duties—Must reside six months in each of three years, cultivate 50 acres of wheat a house worth \$300. The area of cultivation is subject to reduction in case of rough, scrubby or stony land. Live stock may be substituted for cultivation under certain conditions. W. W. CORY, C.M.G., Deputy of the Minister of the Interior, N.B.—Unauthorized publication of this advertisement will not be paid for.—6411

RESULT OF

# Our Big Automobile Contest

**FRANK B. SNYDER, ELKHORN, MAN., WINS THE HANDSOME CHEVROLET CAR WITH AN ESTIMATE OF 47,038 WHOLE KERNELS.—THE ACTUAL NUMBER OF WHOLE GRAINS IN THE BOTTLE BEING 47,037.**

Our big automobile contest closed at midnight on July 31st. It was a real competition in every sense of the word until the very end, estimates reaching the office in large numbers from all over the West until the very last moment. Frank B. Snyder, of Elkhorn, Manitoba, won the handsome Chevrolet automobile (1916 model) with an estimate of 47,038 whole kernels—the actual number of whole grains in the bottle being 47,037. Mr. Snyder's subscription and estimates did not reach us until the 31st of July the day on which the contest closed, which goes to show that it is never too late to try. An illustration showing the coupon on which the estimates appeared is shown on page 55. We take very great pleasure in congratulating Mr. Snyder upon winning such a splendid car and trust he may be long spared to enjoy it.

This contest attracted a great deal of attention and met with a hearty response from farmers in every part of Manitoba, Saskatchewan and Alberta. They took hold of it in a way that far exceeded our expectations, so that we are more than satisfied with the results so far as we are concerned. In fact, we may state nothing we have ever published in the way of a contest has created so much interest and enthusiasm among our subscribers and new readers.

A Wheat Estimating Contest is a peculiar proposition and we have had a number of enquiries from farmers in the West wanting to know if it was a lottery. It is the farthest from such, in that you are estimating on a definite proposition.

On 1st April, 1916, we procured from the Dominion Grain Inspector, Winnipeg, a quantity of No. 1 Northern wheat. This wheat did not come from any particular locality, but was a mixture of samples of No. 1 Northern wheat from practically all over Western Canada. A bottle was secured and the wheat was taken to the office of the Dominion Inspector of Weights and Measures, Winnipeg, and on scales that set the standard for practically all the scales in Western Canada, this wheat was weighed. The bottle was filled as full of wheat as it would comfortably hold and this wheat was carefully poured out in a vessel. The bottle was then weighed absolutely accurate. The wheat was again put back into the bottle and carefully weighed, thus getting the weight of the bottle and the wheat. The difference between the weight of the bottle and the wheat was found to be exactly 3/4 pounds.

The bottle was then carefully sealed up and stamped with the seal of the Dominion Weights and Measures office. It was then taken to the office of the Union Trust Company and was placed by them in one of their vaults, where it remained until the evening of August 1st, 1916. At that time we gave an order to Mr. D. D. Campbell, Dominion Shipper's Agent, on the Union Trust Company, for this bottle of wheat. Mr. Campbell had his assistants to count the wheat, Mr. J. B. Attridge, Scale Inspector, Dominion Weights and Measures' office and Mr. W. J. Fields, Assistant Inspector of Weights and Measures.

At 4 o'clock p.m. on August 1st, these gentlemen started in to count this wheat, finishing their task about 10 o'clock a.m. Friday, August 4th. It is a tedious task to count 3/4 pounds of

wheat and in order to insure absolute accuracy, the following method was used. A small portion of the wheat was poured out on a table, which had been covered with clean, white paper, and one man with a paper knife would separate

were counted over. One man would count until he became tired and another one would take his place, the first counter assuming watch over the man who was then counting. Careful check was kept of each amount, so that there is not the

47,037 kernels, which was the number in the bottle.

This is by no means any indication that the count was at all wrong. You may take ten bushels of No. 1 Northern wheat and divide it up into as many lots of 3/4 pounds as it will make and it is almost safe to say that when the entire number is counted that no two amounts will be the same. A kernel of wheat is a small thing, and the kernels in even 1/2 lb. will vary to an amazing amount. We simply make the above statements to show our readers that in the particular 3/4 lbs. of wheat upon which they estimated, that the count was absolutely correct.

Now, as to the estimating. Everyone who subscribed for The Canadian Thresherman and Farmer direct to this office with cash accompanying his estimates, was entitled to estimates for every subscription that he sent in and the contest was so arranged that a larger number of subscriptions, or a subscription paid up for a greater number of years than one, entitled the subscriber to a proportionately larger number of estimates. These subscriptions were entered in a large record book, which we had arranged for the purpose. The subscriber's name was entered, the date upon which the subscription was received, the amount of money he sent in and his estimates. This book is a very interesting thing. It contains names from all over Canada and it will be kept by us as long as there is a Canadian Thresherman and Farmer.

On the 4th of August we received the following letter from Mr. D. D. Campbell, who was the chairman of the counting committee.

August 4th, 1916.

To The Canadian Thresherman and Farmer,  
Winnipeg, Man.

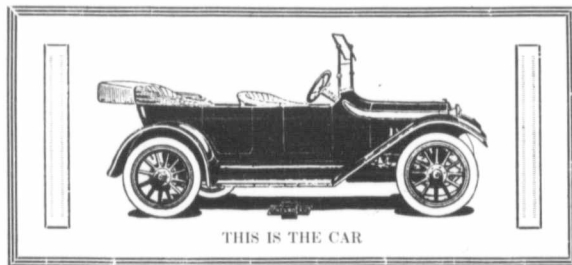
Dear Sirs—We, the undersigned, have completed the counting of the wheat contained in the jar stored in the vault of the Union Trust Company, and we find the actual number of whole grains to be 47,037, forty-seven thousand and thirty-seven grains.

Yours truly,  
(Signed)

*W. J. Fields  
Jas. B. Attridge  
D. D. Campbell*

The above letter is now on file in our office where it may be seen by anyone.

Immediately upon receipt of this letter, these gentlemen and ourselves went to the record book and began a search for the prize winner and you can be assured that it was no small task. We had thousands of estimates to go over carefully and after considerable search, we found that Mr. Frank B. Snyder, of Elkhorn, Man., was the winner of the car. It was, of course, not absolutely necessary for a man to estimate the exact number of kernels, as one condition of the contest was that it was the one who came nearest to estimating the exact number who should win the car.



THIS IS THE CAR

the kernels into groups of five, until fifty kernels had been thus separated out. The other two gentlemen would watch closely in order to see that no mistake had been made, and if in their opinion there was the slightest question of a doubt that a wrong count had been made in this particular fifty kernels, they

slightest possibility of a doubt but that the count was absolutely accurate.

There is one thing regarding this contest that we would like to straighten out in the minds of our readers. A great many have no doubt counted 3/4 lbs. of No. 1 Northern wheat and they have found that their count did not make

## HERE'S GOOD NEWS!

TO EVERY CONTESTANT

ARE YOU IN ?

THREE SPLENDID FORD TOURING CARS, one to each province—Manitoba, Saskatchewan and Alberta—will be put up for competition on September 1st. The contest will be run along the same lines as the one just closed and the same general rules will govern.

This is the most important announcement ever made in any contest carried on by any farm paper in Canada—the first time three automobiles have been offered as grand prizes in any contest of this kind.

With this announcement you have before you an opportunity which may never be offered you again—an opportunity which every reader of The Canadian Thresherman and Farmer should grasp.

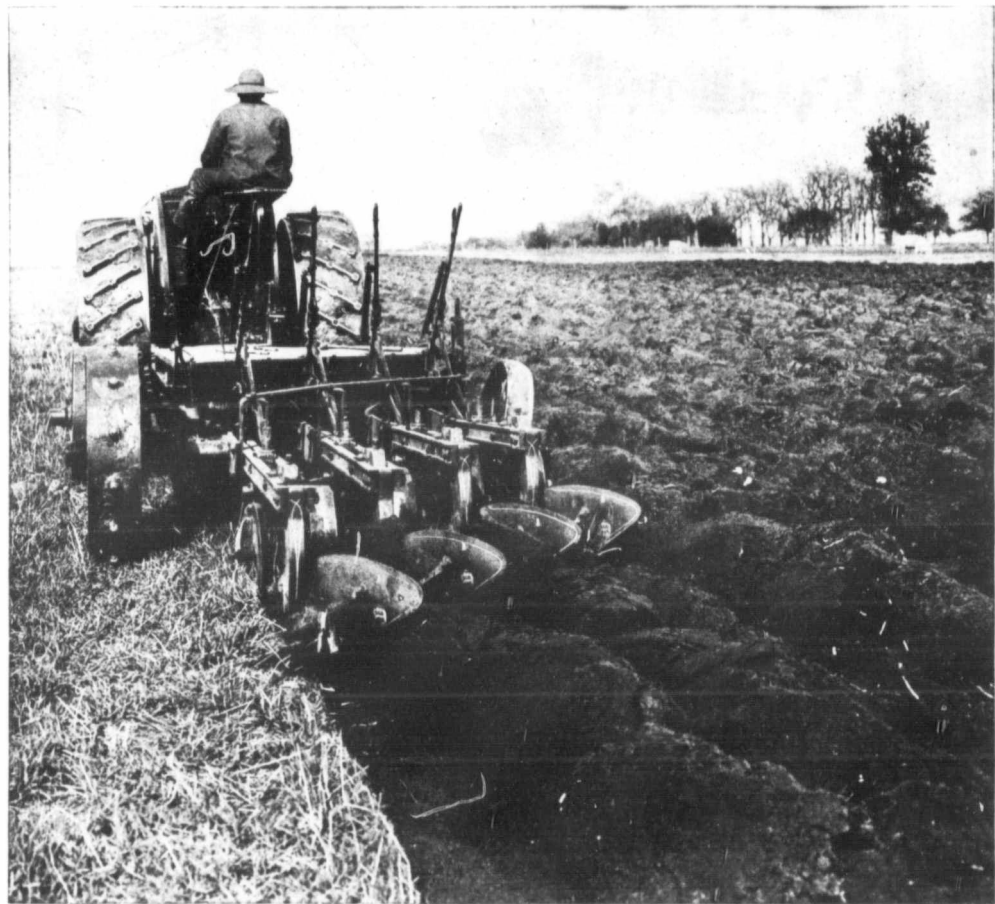
Don't overlook the full page advertisement, which will appear in our September issue, giving full particulars, and don't figure that anyone else has a bit better chance of winning a car than you have.

Nothing we have ever published has created more interest and enthusiasm among our subscribers than the contest just closed. And why not? An automobile free for a little extra work on your part is an unusual offer anyone will admit.

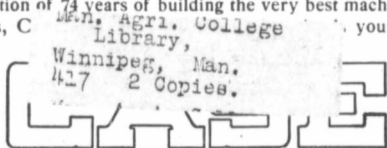
Make up your mind to win one of the cars. Big opportunities are few. This is yours.

THE E. H. HEATH CO., LTD.,

Winnipeg, Man.



The demand for Case Gas tractors this year is far in excess of the supply. Why? Because cautious farmers want reliable machines built by a reliable concern, backed by experience, reputation and service. Our 24 years of gas tractor experience, our reputation of 74 years of building the very best machinery, our organization of 44 branch houses in all parts of United States, Canada, and your guarantee of the very best money can buy.



**WORK AND ENDURANCE NOT PRICE DETERMINE VALUE:**

The design of the tractor, the materials of which it is built, and the company building it determine the work it will do, and how long it will last.

**CASE HAS BUILT FOR THE FARMER SINCE 1842:**

Next year we celebrate our Seventy-fifth Birthday. Three-quarters of a Century—Think of it! We have lived and prospered only because we have made machinery that has made good with its users.

**CASE BUILDS 97% OF ALL PARTS USED IN CASE TRACTORS:**

As a chain is no stronger than its weakest link, so a tractor is no stronger than its weakest part. With 97% Case made and the 3% subject to Case Laboratory tests, you can rely absolutely on



The Sign of Mechanical Excellence the World Over

the genuineness of every detail of a Case Tractor.

**THE STANDING OF THE CONCERN WHOSE TRACTOR YOU BUY:**

You cannot take your tractor down, piece by piece, and see every part. For most of it you have to take some one's word. Let the reputation of the company be your guide to those things which you cannot see.

**WHICH TRACTORS WILL BECOME ORPHANS?**

A leading agricultural paper one year ago said—"The good tractors can be counted on the fingers of one hand." There were then more than one hundred different makes. Now there are even more. With any Case machine you can always be sure of service. Remember our forty-four big branch houses throughout the country. Better be Safe than Sorry.