

THE **CANADIAN** *THRESHERMAN* & **FARMER**

Canada's Farm-Machinery Magazine
WINNIPEG, CANADA.

AUGUST - 1912



Fair Number

E.H. Heath COMPANY Publishers
"OUR TENTH YEAR"

Chicago
1912

Marseilles Tubular Steel Portable Grain Elevator

Handles All Kinds of Grain Satisfactorily
at the rate of 15 to 20 bushels per minute

THE ONLY TUBULAR STEEL ELEVATOR

Furnished with or without horse power. Can be operated by horse power or Gasoline engine. We can supply an engine attachment with the necessary connections to be used when operating with engine power instead of horse power.

Equipped with Adjustable Feed

which is a very valuable feature. When operating with a small engine the quantity of grain elevated can conform to the power of the engine, and whatever quantity desired can be elevated.

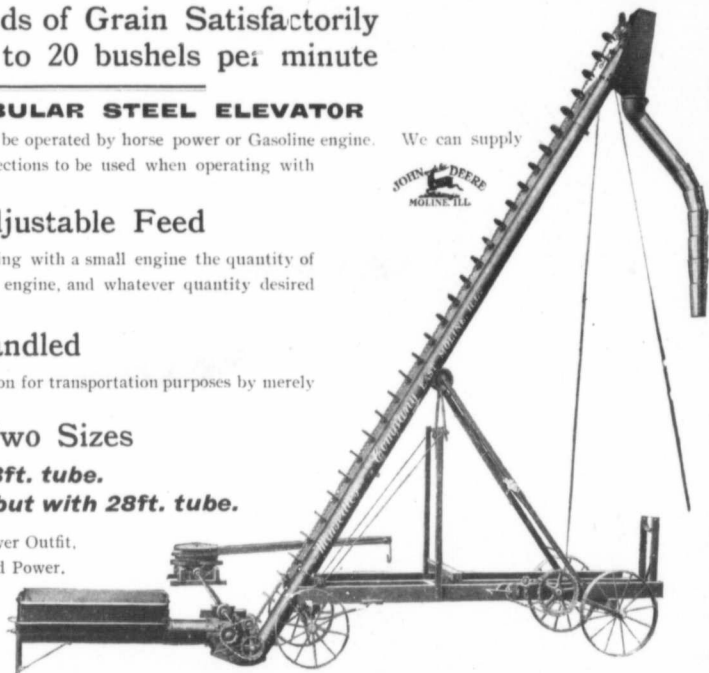
Easily Handled

Elevator can be lowered to horizontal position for transportation purposes by merely turning a hand crank.

Stocked in Two Sizes

- No. 759 is equipped with 23ft. tube.
- No. 760, same as No. 759, but with 28ft. tube.

- No. 724 Engine Attachment for Horse Power Outfit.
- No. 255 Two-Horse Hercules Triple Geared Power.

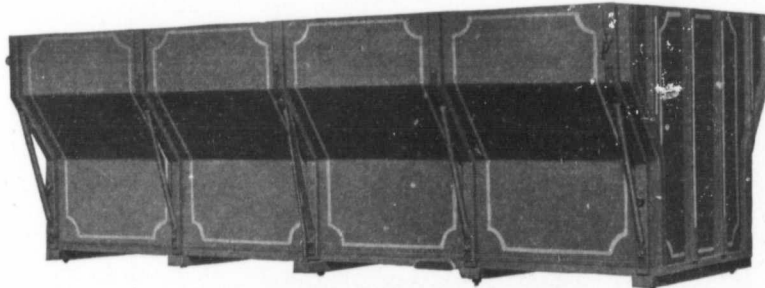


Horse Power Outfit with Flexible Discharge Spout

Write for Special Booklet

The Flax Tight Grain Tank

Flax
Tight
No
Grain
Lost



Exceptionally
Strong
Construction
Well
Finished

ABSOLUTELY GRAIN TIGHT.

Built of well seasoned kiln dried fir matched, tongued and grooved. The joints at the intersection of the upright sections, and the flare at the sides are beveled and the union is formed with tongue and groove. Inserted between the sides and floor on either side is a 1 x 3/4 inch angle iron running full length and securely fastened to the floor. The Construction of this tank makes it absolutely Grain Tight.

REINFORCED THE RIGHT WAY.

Five cleats of 1 1/4 x 2 1/2 inch material support the sides. These cleats are further supported by 1 1/2 x 1 1/2 x 3-16 in. Angle Iron bolted through the cleat and top board, the cleat and flare board, and at the bottom through the cleat,

the floor boards and the floor sill with 3/4 inch angle iron. Sides are held together by 7-16 inch box rods, which are used at top and bottom, at each end and in the centre.

Floor is carried by five hardwood sills fastened to the sides and cleats with 3/4 inch angle bolts.

Floor is constructed of 1 1/4 inch kiln dried stock surfaced, tongued and grooved.

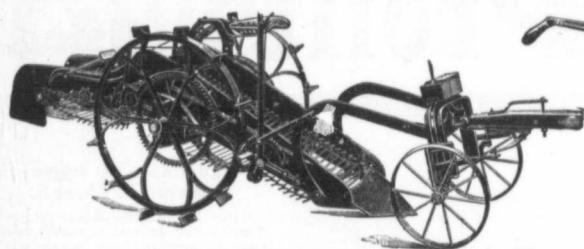
These tanks are painted with two coats of green paint striped and varnished and are well finished in every respect. Satisfaction is assured the owners of these tanks as they are absolutely Grain tight and in Construction perfect.

SOLD BY JOHN DEERE DEALERS

JOHN DEERE PLOW CO. LTD.

Winnipeg Regina Saskatoon Edmonton Calgary Lethbridge

Dowden Potato Harvester



Dowden Potato Digger

THE Digger that works where other diggers fail—the digger that takes every potato out of stiff lands, clay, grass, mud, weeds and stones, as well as clean lands. One enthusiastic owner of a Dowden writes us about its perfect work in grass and weeds four to six feet tall. We have hundreds of such reports on file. Let us show them to you. In some crops the Dowden digger actually pays for itself in the potatoes it saves. Write for the Dowden Book. It will tell you how this machine is made so strong that a break need never be feared, and so simple that a boy can run it. Drop us a postal to-day. The book will come, so will our catalogue prices and full particulars.

Deere Potato Diggers



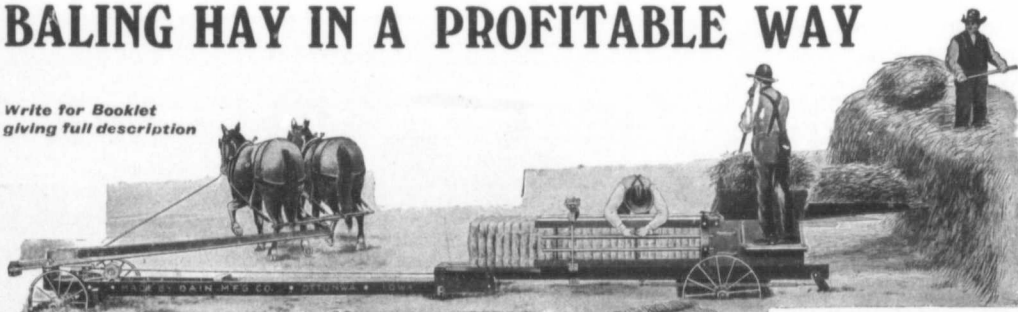
Shaker Digger with Fore Carriage

STEEL beam.—High natural temper steel blade.—Provided with weed fender and gauge wheel.—The shaker Digger has a perfectly flat blade and will not cut the potatoes. The rod grating is hinged at the front and is given an up-and-down shaking motion by the sprocket wheel at the rear. This shakes the dirt off from the tubers and leaves them clean and whole on top of the ground. The weed fender is intended to clear away weeds and vines, preparing the way for the blade. The digger is shipped with gauge wheel and fender unless ordered without.

The Forecarriage, or double gauge wheel which straddles the row, insures steady running of the Digger. The wheels have an up-and-down as well as an in-and-out adjustment.

BALING HAY IN A PROFITABLE WAY

Write for Booklet
giving full description



DAIN Pull Power

Hay Press

Pull Power means that the plunger is drawn towards the horses—not pushed away from them. The step over is low down, which makes it easy for the horses. Capacity is therefore increased. Bales are delivered in front, and do not interfere with placing the Press in the most convenient position near the centre of the stack. Delivery of the bales in front keeps them out of the chaff and dirt and out of the way of the operator. Large Feed Opening makes the DAIN easy to feed. The Automatic Tucker insures neat, smooth, square-ended bales. The DAIN Hay Press being all steel, no difficulty is experienced by warping when exposed to the weather or swelling when in contact with damp hay. Steel Bed Reach connecting the power and press. Plunger Head and Draw Bar are steel. This also means, in addition to the above advantage, that its construction is such as will stand the heavy strain a Hay Press is subject to.

The DAIN Hay Press possesses many advantages by way of Construction, Ease of Operation, Low Cost of Maintenance.

JOHN DEERE PLOW CO. LTD.

Winnipeg Regina Calgary Edmonton Saskatoon Lethbridge

Bigger Profits From Using



Six bottom John Deere Engine Gang with the Sawyer Massey Gas Tractor

Large Capacity Implements are Most Economical.

Because they save expense, that is, because the power and labor used accomplish more, or to put it in another way, less power and labor is required in proportion to the amount of work done.

Not only does it pay from the view-point of saving expense, but better results can be obtained. Often the plowing season is short. Plows of big capacity enable the farmer to have all his plowing done at the right time, getting the soil in the best possible condition, which will result in **BIGGER CROPS and BIGGER PROFITS.**

The advantages that are realized by plowing with engine power are many. The advantages that are realized by plowing with 'John Deere Engine Plows' are so apparent, that any person considering the purchase of an engine plow, and the results that are to be obtained from same, cannot do themselves justice and overlook the many advantages that the owner of a John Deere Engine Gang experiences.

Quality of Work.

A plow must do good work, otherwise it does not pay to own it. John Deere Plows have the most successful field record behind them. Since John Deere invented **THE FIRST STEEL PLOW**, John Deere Plows have been in the lead. They do better work. This is not merely a statement, but it is a fact. A careful examination of the construction of these plows will convince any one that they are built in the most practical way. To see these plows in operation will demonstrate our claim.

Depth of furrow is regulated by a clevis at the ends of the beams. **JUST THE SAME WAY THAT YOU REGULATE THE DEPTH OF YOUR WALKING PLOW AND WHEEL PLOW.** This can be done while the plows are in operation. This one feature in itself is of sufficient importance to give the John Deere Engine Plows preference to any other.



A ten bottom John Deere Engine Gang being pulled by Aultman Taylor Gas Tractor (Gold Medal Winner)

John Deere Plows

JOHN DEERE

BRANCHES:

Winnipeg,
Saskatoon, Edmonton,



Share removed by taking off one nut. Tighten one nut—Share is replaced.

Stubble Bottom with Quick Detachable Share

Handiest feature ever put on a plow. Doesn't take one fifth of the time to remove these shares that it does the ordinary shares. Remove one nut. Kick the share and it falls off.

Bigger Implements

Easiest to Handle.

No difficulty is experienced by clogging. The high arched beams give plenty clearance. Gauge Wheel is located between the beams, and does not interfere with the rolling colter, or the adjustment of same. No time is wasted stopping to clear the trash away from between the colter and gauge wheel.

Bottoms are built in pairs. (SAME PRINCIPLE AS YOUR HORSE GANG PLOW.) This is a great advantage. Each bottom is braced and kept in alignment by its companion bottom. This prevents winging and passing around obstructions instead of over them. Uniform work is thus obtained. One lever raises two bottoms. This means that one man can handle the entire plow. With a lever for each bottom, one man could not do this.

Lift is automatic. When the outfit is in motion, by releasing a lever the traction of the gauge wheels forces it back, raising the bottoms.



(Note the fine work.) A ten bottom John Deere Engine Gang with a Sawyer Massey Steam Engine (Silver Medal Winner)



John Deere eight bottom Plow with Aultman Taylor Gas Tractor (Silver Medal Winner)

Strongest Built.

John Deere Engine Gangs have the strength to stand the racket, but no unnecessary dead weight to use up power.

Frams is built of structural steel, hot riveted, not bolts. No nuts to work loose or bolts to drop out. Built and braced to stand all possible strain. Beams of high carbon steel, and by actual test are 60 per cent stronger than the next strongest.

John Deere Engine Plows can be used with any make of tractor.

Made with 4-6-8-10-12 or 14 bottoms. Can be equipped with stubble, rod or breaker bottoms.

Figure out this Engine Plow proposition from every side, and the John Deere Engine Gang will be the plow you will put behind your engine.

WRITE FOR SPECIAL BOOKLET THAT WILL GIVE FULL DETAILS.

in Operation PLOW CO. Ltd.

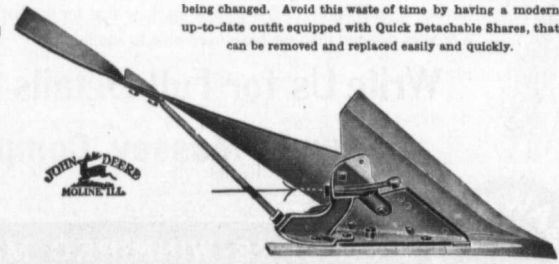
See your nearest -
John Deere Dealer.

Write for - - -
Illustrated Booklet.

Regina,
Calgary, Lethbridge.

Breaker Bottom with Quick Detachable Share

Why have a high priced outfit like an Engine Gang standing idle hours, while shares are being changed. Avoid this waste of time by having a modern up-to-date outfit equipped with Quick Detachable Shares, that can be removed and replaced easily and quickly.



Share removed by taking off one nut. Tighten one nut—Share is replaced.



FARMERS AND THRESHERMEN OF CANADA!
 Make sure you are on the right trail--the trail that leads straight through to
Better Farms, Better Homes and
Permanent Success

**NOT IN A
COMBINE**

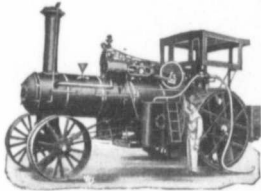
If you are about to buy an engine you are at the *Cross-Road.*

If you do not carefully consider Sawyer-Massey Plowing Engines, you will make a mistake you may regret.

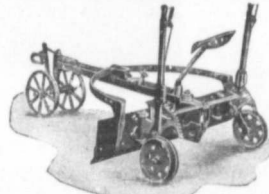
Before you buy, let us show you our Engines—let us submit our case—it will prove interesting and convincing.

Hundreds are buying Sawyer-Massey Engines.

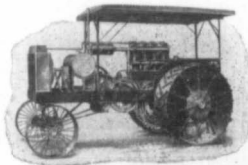
Why Not You?



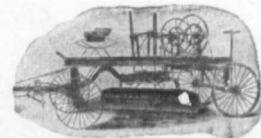
S. M. Rear Mount Engine, 35 H. P.



S. M. Junior Grader and Leveller



S. M. Gas Tractor, 22-45 B. H. P.



S. M. Steel Reversible Road Grader

Speaking of Trails:

Trails are fast becoming roads and streets. You know there are a great many roads in this country that need improving.

You progressive Farmers of Canada know you can increase the value of your land and the entire tone of your whole district by improving your roads.

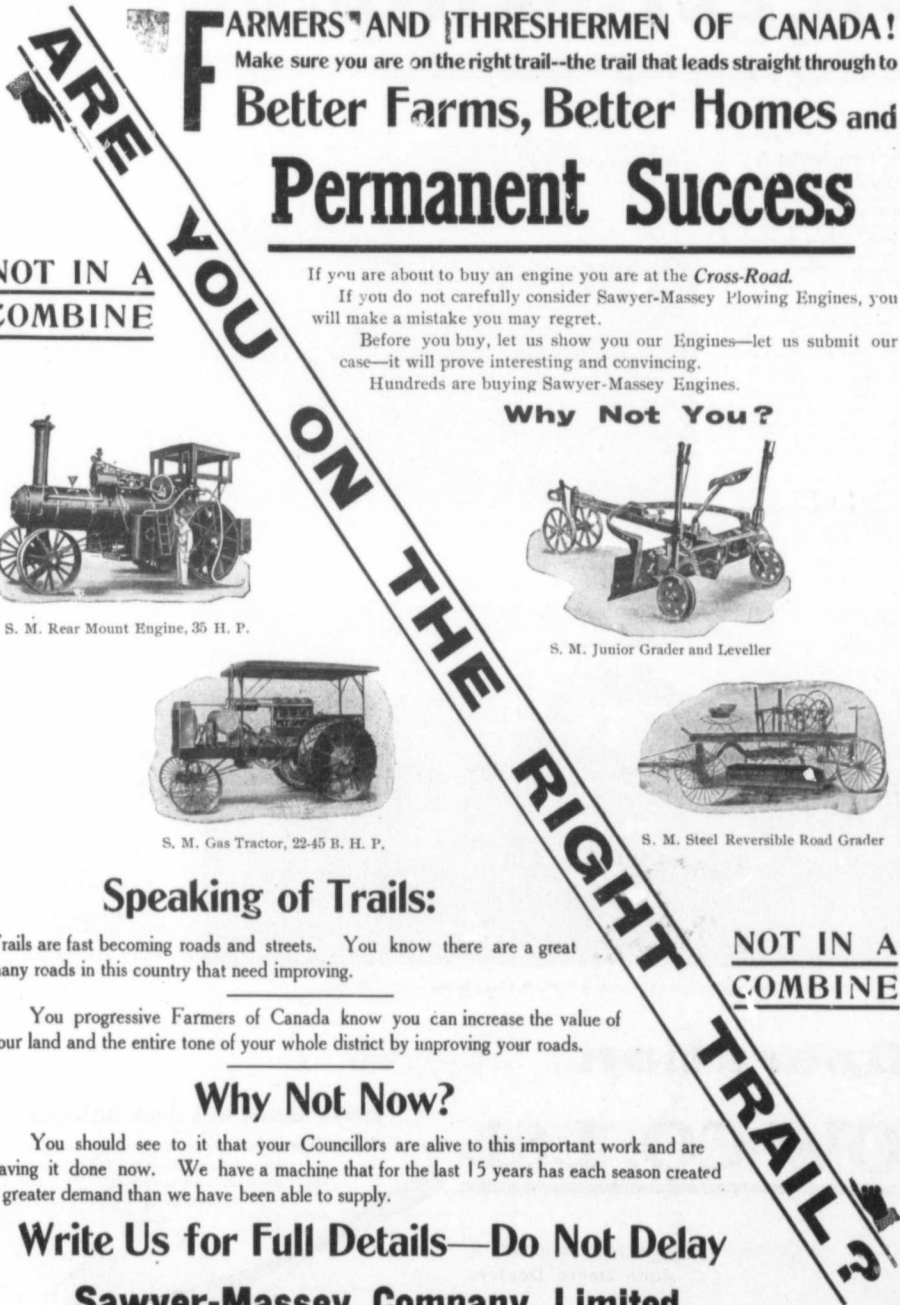
Why Not Now?

You should see to it that your Councillors are alive to this important work and are having it done now. We have a machine that for the last 15 years has each season created a greater demand than we have been able to supply.

Write Us for Full Details—Do Not Delay
Sawyer-Massey Company, Limited

**NOT IN A
COMBINE**

BRANCHES—WINNIPEG MAN. AND REGINA SASK.



A MAGAZINE
FOR

THE FARM
AND HOME



THE CANADIAN THRESHERMAN AND FARMER

Vol. XVII.

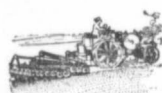
WINNIPEG, CANADA, AUGUST, 1912.

No. 8.



The 1912 Motor Competition

By E. W. HAMILTON



DID it rain? Certainly it did. It always does during the Winnipeg Exhibition, but in 1912, we did not notice it in so far as the Motor Competition was concerned. We have contended ever since this event was staged in Western Canada that it was impossible to pull off a motor competition successfully without suitable equipment, and it seems that in 1912 our suggestions have borne fruit.

In 1911 those who participated in as well as those who witnessed the brake tests were full of murmurings of dissatisfaction due to the fact that every few hours a Manitoba shower would proceed to make things very disagreeable not overhead, but underfoot as well. In 1912 we had several nice little "sprinkles," but the brake tests went merrily on oblivious to weather condition. It looked business-like and the spirit permeated the contestants, the judges, and the spectators.

Some little delay was experienced for the first day or two owing to the fact that the water supply was not properly connected up, and the brakes being new there was a tendency toward warm bearings, but these were soon made right, and it was a case of "line up" and pull your load. With a few finishing

touches the Exhibition should have all that could be desired in a testing plant for brake horse power for any style of engine.

The internal combustion stationary engine business is one that is rapidly assuming large proportions in Western Canada, and as a suggestion why would it not be a good proposition to hold a stationary and portable con-

able to know just how nearly correct these ratings were. The farmer can arrive at the approximate rating of his tractor by the number of plows it pulls, but the loads pulled by the average stationary gas engine are so varied that no reliable estimate can even be guessed at.

A great deal of credit is due the judges and observers in the

that would have saved at least a day at the start.

Mr. Frith was assisted by Prof. A. R. Greig, of the University of Saskatchewan (Prof. Greig has been identified with the motor competition since 1908); Prof. L. W. Chase, professor of Agricultural Engineering, University of Nebraska, Lincoln, Neb.; and Prof. M. L.

King, experimentalist, Iowa Agricultural College, Ames, Iowa. These latter three acted as judges. Assisting were Prof. Gilmore, of Manitoba College; W. Byl, of Toronto; L. S. Shanks, W. H. Taylor, and a number of observers. All worked hard and faithfully, and it must be said in passing that practically no rumours of dissatisfaction have as yet reached our ears.

The first engine in the 1912 contest went on the brake at 11.30 a. m., Thursday, July 4th, and by the following Wednesday evening twenty-two gas tractors and four steam tractors had been diagnosed as to their economical and maximum brake horse powers and the results placed on the cards, which were duly signed by the observers. These cards are so arranged as to facilitate the recording of the data secured and are the result of the experience of the judges of several contests.



The judges in the Heart of the Score Sheets (It required several days of concentrated effort to amass the figures seen elsewhere in this issue.)

test next year while their big tractor brothers are enjoying themselves on the plowing field. The farmer who buys a stationary internal combustion engine is (or should be) just as much interested in its economical horse power as he is in the horse power of the tractor. Just at present there are numerous cheap gas engines being put upon the market at all sorts of rated horse powers and it would be interesting as well as profit-

1912 Motor Competition for the smoothness with which things went in general. Engineer in Charge A. C. Frith is to be specially complimented for his arrangement of the brake testing shed as well as the brakes. Owing to delay on the part of the contractor who erected the shed as well as delay on the part of the iron works who made the brakes, a preliminary "tuning up" was not possible, a thing

For the benefit of the readers of this magazine, we give here-with sample brake cards in order that some idea may be gained of just how the data is secured, that is later used in determining gold medal winners.

The brake itself is what is known as the friction type, and is the same as has been used in all the competitions at Winnipeg since 1909.

The brake tests to the uninitiated are the least spectacular and require the most explanation. If you will but imagine the brake a separator you have solved the problem, the only difference being that an apparatus is provided whereby the exact load of the engine can be measured in horse power. This load is secured by means of a rope friction. The process by which it is determined is very simple. A great many years ago it was decided that one horse power was the power required to raise thirty-three thousand pounds one foot in a minute, and in measuring the horse power on the brakes you have three things to contend with: time, distance and the load. The load is the number of pounds of pull upon the rope caused by the friction upon the rapidly revolving drums. The apparatus is so arranged that the pull is downward and this pull is pressed upon a platform scales. The distance is the circumference of the center of the rope and the time is the number of revolutions per minute. Therefore, the load multiplied by the circumference in feet and the number of revolutions per minute and divided by thirty-three thousand gives the horse power.

It would be possible to apply a similar apparatus to the cylinder pulley of a separator and measure at all times just the horse power that is required to drive the machine.

In handling the brake test, it requires at least two observers, one for the engine and one for the brake. The brake observer's charts when finished would appear something like Nos. 1 and 2. Space does not permit our giving sample engine charts.

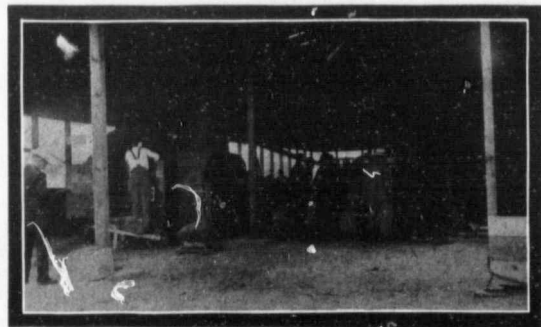
On chart No. 1, under the heading "Time," the spaces are divided into five minute intervals. The next heading carries the readings of the revolution counter as a whole and in the sample chart it can be seen that a start was made with the counter set at 512, and that it registered 39462 at the end of two hours. The brake wheel thus made 38950 revolutions, which divided by 120 minutes (the number in two hours would give an average of 324.6 revolutions per minute.

The next column represents the number of revolutions at five minute intervals, and the



The Judges and observers posing in the Brake Shed.

CHART 1				CHART 2		
Time	Revolution counter readings	Revolutions in 5 minutes	Revolutions per minute	Load		
				Gross	Tare	Net
130	512			324.388	104.284	
135	2232	1720	344	"	"	284
140	3342	1610	322	"	"	284
145	5467	1625	325	"	"	284
150	7082	1625	325	"	"	284
155	8707	1615	323	"	"	284
200	10427	1720	344	"	"	284
205	12147	1720	344	"	"	284
210	13867	1720	344	"	"	284
215	15587	1720	344	"	"	284
220	17197	1610	322	"	"	284
225	18797	1600	320	"	"	284
230	20387	1590	318	"	"	284
235	21967	1580	316	"	"	284
240	23542	1575	315	"	"	284
245	25127	1565	317	"	"	284
250	26712	1600	320	"	"	284
255	28374	1580	324	"	"	284
300	29967	1620	324	"	"	284
305	31577	1610	322	"	"	284
310	33167	1590	318	"	"	284
315	34747	1580	316	"	"	284
320	36317	1570	314	"	"	284
325	37892	1575	315	"	"	284
330	39462	1570	314	"	"	284
Observer John Doe.....				Observer John Doe.....		
(over)				(over)		



A familiar scene in the Brake Shed during several days.

fourth column represents the number of revolutions per minute at five minute intervals.

The gross load is the total load as shown by the scales, and as the weight of the levers, ropes, etc., were 104 pounds, the net pull was 284 pounds. This pull was kept constant at all times, the friction on the brake wheel being so adjusted as to keep it so. The figures in the column headed "net" would, of course, vary with the size of the engine being tested. Now as to arriving at the horse power. If we take the average of the figures in the column headed (Rev. per Min.), we find it to be 324+. The average load was 284 lbs. The average load multiplied by the average revolutions per minute times the distance from the centre of the wheel to the centre of the rope divided by 33000 gives the average horse power developed, which in the case in point would be 33.6 horse power. In a two hours run at this rate, it would mean an equivalent of 67.2 horse power hours, and if it used 98.8 lbs. of fuel it would mean a fuel consumption of 1.47 lbs. per horse power hour.

Charts 3 and 4 are self explanatory. In fact only approximate figures have been given and this has been done simply to show that the results arrived at in a motor competition are not mere pieces of guess work, but real cold hard facts.

Several engines were entered in the 1912 competition that failed to put in an appearance, some for one reason and some for another. Of those that did show up, three were held by the judges as not being eligible for entry on account of their similarity to other engines entered in the same classes by the same contestants. The M. Rumely Co., J. I. Case Threshing Machine Co., and the Canadian Heer Co. were each thus deprived of one entry.

When the final adjustments had been made the engines named below were found to be on hand and eligible for the tests according to the following classification:

- (a) Gasoline engines whose piston displacement is 300 cubic feet per minute and under.
 - (b) Gasoline engines whose piston displacement is over 300 and under 500 cubic feet per minute.
 - (c) Gasoline engines whose piston displacement is 500 cubic feet per minute and over.
 - (d) Kerosene engines whose piston displacement is under 500 cubic feet per minute.
 - (e) Kerosene engines whose piston displacement is 500 cubic feet per minute and over.
- (The piston displacement to be calculated on a basis of a piston

CHART 2
1912
MOTOR COMPETITION

Canadian Industrial Exhibition
Winnipeg

BRAKE TEST

..... Economy

Brake No. 1..... Data.....

Date of Test..... July 5, 1912.....

Entry No..... Make and Size.....

Steam..... Gasoline X Kerosene.....

Fuel at Start..... 324.25 lbs.....

Fuel at Finish..... 225.45 ".....

Fuel Consumed..... 98.8 ".....

Water at Start.....

Water at Finish..... No water used.....

Water Consumed.....

Load 284 lbs.....

Time of Start 1.30 P.M.....

Time of Finish 3.30 P.M.....

Total Time of Test 2 hrs.....

Total Time Lost None.....

Actual Time of Test 2 hours.....

Time Lost

..... to Cause.....

..... to Cause.....

..... to Cause.....

..... to Cause.....

.....

Observer John Doe..... (over)

speed of 700 feet per minute and to be equal to a total piston area in square feet multiplied by 700.)

Steam Engines.

Where A—piston area in sq. ft.; P—boiler pressure and 450 is taken as standard speed.

(f) A x 450 x P, 500, 60 or under.

(g) A x 450 x P, 500, over 60 and under 100.

(h) A x 450 x P, 100 or over.

Prizes in each class shall consist of: First prize, gold medal; second prize, silver medal; third prize, bronze medal.

Class B, Gasoline.—Heer, 20-25 h.p.; Avery, 20-35 h.p.; J. I. Case, 20-40 h.p.; Goold, Shapley & Muir, 22-35 h.p.; I.H.C., 30 h.p.

Class C. Gasoline.—Sawer-Massey, 22-45 h.p.; I. H. C., 45 h.p.; Goold, Shapley & Muir, 30-45 h.p.; Canadian Holt, 60-65 h.p.; Aultman & Taylor, 30-60 h.p.; J. I. Case, 30-60 h.p.; American Gas Tractor, 30-60 h.p.

Class D. Kerosene.—Heer, 20-25 h.p.; Rumely, 15-30 h.p.; I.H.C., 25 h.p.; Avery, 22-35 h.p.

Class E, Kerosene.—I. H. C., 45 h.p.; Aultman & Taylor, 30-60 h.p.; Rumely, 30-60 h.p.; J. I. Case, 30-60 h.p.

Class F, Steam.—J. I. Case, 40 h.p.

Class G, Steam.—J. I. Case, 80 h.p.

Class H, Steam. J. I. Case, 110 h.p.; Sawer-Massey, 32-106 h.p.

One very noticeable thing about the above list of entries is the absence of steam engines and the predominance of the internal combustion type of tractor. It is a very reliable index as to the trend of things and hereby hangs a tale.

Not over five years ago there was not a single manufacturer of threshing machines and steam tractors that was building an internal combustion tractor. In fact the majority of them opposed it bitterly. Today there is scarcely a thresher concern that has not either a gas tractor of its own or is handling one for the trade. This does not mean that steam has been entirely superseded by its gas brother. Far from it. Steam tractors are being sold in large quantities to-



Somebody started a fire on the plowing field. When that \$500.00 fine stared them in the face, they got busy.

day, and it is fair to assume that they will continue to enjoy a good market for some years to come. However, the internal

more and more nearly perfect.

The Plowing Test.

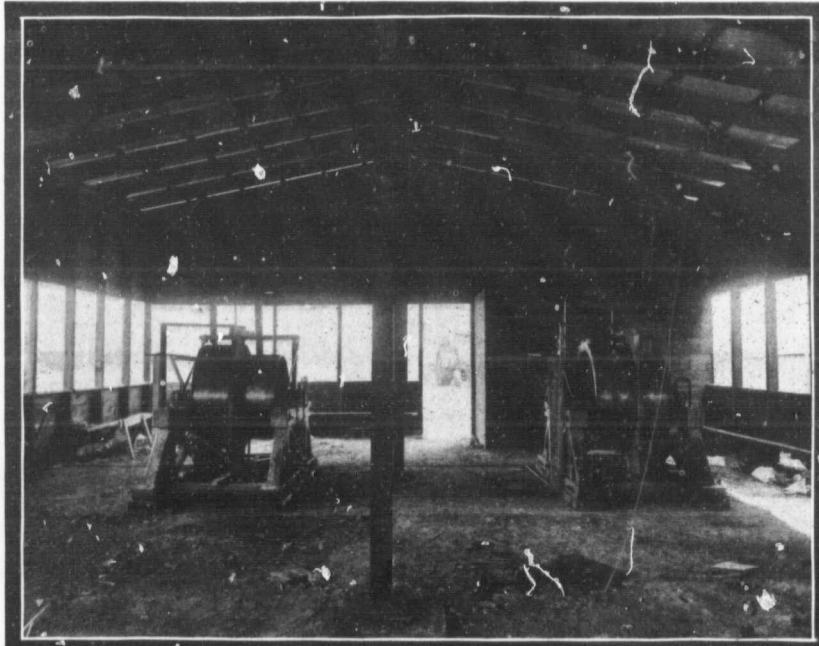
The brake tests were finished by Wednesday, July 10th, but no

Bergen, a station on the main line of the Winnipeg-Brandon line of the C.P.R. It was directly alongside the Oak Point branch of the C.N.R., this line being used to carry the spectators to and from Winnipeg. The plowing field itself was a patch of 240 acres, three-quarters of a mile in length, and the soil was of such a nature as to provide a somewhat different test from those of previous years. Most of it was good heavy gumbo, and it was just dry enough to crumble. The furrow slice did not hang together as it did in the "swamp" of 1911, and as it was full of holes it made the turning of a nice even furrow almost impossible. If the readers

of this magazine will dig up their August, 1911, issue and compare the illustrations with those in this number the differences in the lay of the furrow can at once be seen.

It was 4 p.m. by July 15th, before the first engine made its start, owing to the delay of the oilman in getting on the field, likewise the scales for the weighing of coal and oil. The Aultman & Taylor 30-60 gasoline tractor drew first blood, and as the observer's whistle blew for the start all knew that the deciding feature of the 1912 Motor Contest had begun. Five engines finished their work before nightfall, and all was eager expectancy for the next day. Every-

body looked for big things on Tuesday, but the weather man decreed otherwise. It was about twelve miles by wagon road from Winnipeg to the plowing field, and it was not the least interesting of the side issues of the contest to watch autos, victorias, motor trucks, motorcycles, bicycles and even pedestrians wending their way through some of Manitoba's most affectionate gumbo toward the field only to be disappointed when they arrived there to find that the judges had called the event off for the day. Not a few stayed until well into the afternoon in the hope that a start would be made, seeking shelter from the frequent showers that came down in the numerous tents that dotted the headland.



Interior of the Testing Shed showing the Two Brakes in position. In the farther right hand corner can be seen the judges' room.

combustion tractor is the popular machine today, and its superiority bids fair to grow as the machines themselves become

nove was made toward the plowing field before Monday, July 15th. The field itself was situated about 2 3/4 miles N.W. of



Professor A. R. Greig—one of the Judges was caught by the Camera man just as he was deciding which one of the ninety and nine things he would do first.

About 4 p.m., however, a small deluge dampened all hopes of any plowing being done, and the would be spectators and contestants found their way back to the city as best they could.

Wednesday, July 16th, dawned bright and clear. Everyone was on the ground early and eager for the fray. The engines got away to a flying start about 8 a.m., with the result that twenty different tractors were tried out, thus finishing up the plowing part of the contest.

Everywhere there was hustle and bustle. Everybody wished to see the engineer in charge and the judges. Here was a factory group carefully attempting to make a mathematical forecast of events. Yonder was a trio of plowmen from one of the largest and oldest plow factories on the American continent. Over there was a number of a certain company's advertising staff hastily getting on side of a piece of soggy pie. In this automobile sat the treasurer of one of the largest thresher companies, where he slowly but surely got blissfully blistered by the penetrating rays of a Manitoba sun. Here some of our friends from the south, ignorant of Canada's fire laws, were fighting a fire that they had started. There was a judge lecturing a contestant because everything was not in readiness. Yonder was held a hurried consultation upon an unexpected point that the rules did not cover.

Here went the small gas tractor pulling its five plows with ease. There was its big steam brother making twelve black ribbons three-quarters of a mile long.

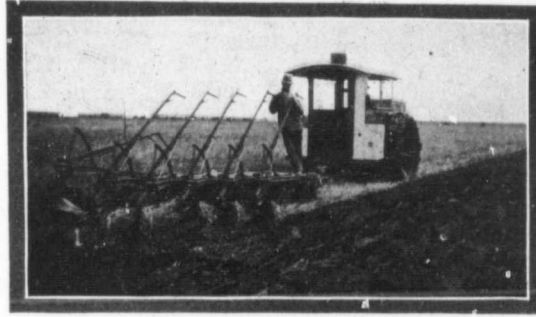
University professors, presidents of mammoth industrial concerns, plow experts, grimy engineers, farmers, photographers, merchants, editors, etc., all jostled each other in their haste to be everywhere at the same time.

You couldn't call it fun. It was a too serious business proposition. History was being made, and the making of history is always a job for the best of men.

Possibly nowhere on the American continent is there such an intensely interested group of

men as those who follow the various tractors on the contest field. Up and down the field they go. Some in buggies, some in autos, and numbers on foot.

looking for new ideas. The college professor wants data for his class room. The engineer is there in a great many cases because he has to be, for his is no



The L. H. C. "30" and Five Oliver Plows.



The Aultman and Taylor Kerosene Tractor pulling seven John Deere Bottoms, (Silver Medal winner Class E.)

One outfit is followed for a quarter of a mile, and is then abandoned for another. The manufacturer is there in order to get pointers on what his competitor is doing. The designer is

Sylvan task. The editor has his eyes and ears open for news and the photographer finds in it a profitable job. The farmer has been told a lot of things by the various salesmen whom he has



The J. I. Case 30-60 Kerosene Tractor pulling eight Case Sattley Bottoms.

come in contact with, and being "from Missouri" he has come to see for himself.

But after all, just how is it done? All of this hurry and hustle cannot be handled without some system. In the first place the engineer in charge gets his staff into line, and judges and observers are each given a definite piece of work to do. The land is surveyed into plots of sizes proportionate to the horse powers of the various tractors, and staked off at both ends of the field. As straightness of furrow counts in the score, each contestant carefully stakes off a straight line. It was interesting in the 1912 contest to note the various kinds of stakes used. Some used only wooden stocks. Others used iron rods with painted disks of iron riveted to the top.

One concern had an ingenious set of poles painted like a barbers pole with a foot step on the side for forcing them into the soil. Still another concern used bamboo sighting rods.

When the land is staked out, the contestant pulls his engine and plows up to the headland and his fuel and water supply is carefully weighed and measured in by a judge. An observer is assigned to the engine, the judge blows the whistle, and the start is made. The observer watches both engine and

plow carefully, in order to see that no "jockeying" is done, and at the same time keep close "tab" on the depth of the furrows. As each engine starts there is generally a big crowd gathered round, which gradually disperses as the engine gets farther and farther away from the headland.

In the 1912 contest each engine made four rounds of one and one half mile in length, and for one round a recording dynamometer was placed between the engine and plows in order to arrive at the average draw-bar pull. When the four rounds were finished, the fuel and water were again carefully weighed and measured and recorded on the observer's score card, which is handed over to the engineer in charge.

It may seem simple in the telling, but if one follows it closely, it can only be characterized by

the expressions, hard work, and close observation.

The interests representing about one half a billion dollars were in evidence on the plowing field, and several vitally interested spectators were men who represented millions in their own rights.

Before leaving this subject a word must be said for the operators of the various tractors. It is upon these men that so much depends. Like a jockey with his horse from the time the contest begins until it ends the operator verily sleeps, eats and drinks with his machine. Grime and dirt are in evidence everywhere upon his person. A week's growth of beard adorns his face, but it matters little to him. His sole time and attention is devoted to "bringing home the bacon" in the shape of a medal.

There was one thing specially noticeable in the 1912 contest, and that was the apparent certainty with which the various internal combustion engines went to their various stunts. There seemed to be a confidence on the part of the operators that the task undertaken would be finished.

When one looks back to 1908 and 1909 and even 1910, the thing is specially noticeable. Light loads were pulled in those days, and the tractors went coughing and spluttering along, while there was always a feeling that a stop was imminent. It simply goes to show that big improvements have been made in design and construction, such things as cooling systems, carburetors, lubricating systems, ignition, governing, etc., etc., have all been tried out and proven, and that in so far as the internal combustion tractor is concerned there have been long strides made toward standardization.

To the manufacturer who enters his engine for the first time in a motor competition, the proposition presents many difficulties. Arriving on the ground with his engine and operator he finds that he is short many things necessary to make the affair run smoothly, and it is with the idea of aiding this class of contestants rather than the old "war horse" that we make this attempt to enumerate a few



The Avery Gasoline Tractor pulling a Five Bottom Avery Self-Lift Plow. (Bronze medal winner Class B.)

of the things necessary.

If the contestant be from out of town, one of the first things to do is to get on the ground

gained by having your engine on hand a day or two ahead of time.

When loading your car however,



The Rumely 30-60 Oil-Pull Tractor pulling an Eight Bottom Engine Gang. (Gold medal winner Class E)

early. It will generally be found that Winnipeg freight yards are not by any means the quickest places from which to get cars spotted, and much time can be

here are a few things that you want to incidentally put on:—

1. One leather belt that has been well stretched, together with a supply of lace leather.



The Gould Shapley and Muir "Ideal" Tractor pulling a four bottom Cockshutt Engine Gang. (Silver medal winner Class B.)

2. One recording dynamometer.

3. One tent (about 12 x 14), to be erected on fair grounds and later on plowing field.

4. One folding cot with a supply of blankets.

5. Some folding chairs.

6. A complete kit of tools for making small repairs and changes.

7. A rain coat for each man connected with the outfit.

8. Good stout shoes that will defy water and mud, for remember it always rains during the Winnipeg Exhibition.

9. Two 10 or 12-foot cable chains.

10. At least a dozen suitable stakes for lining out first furrow. These should be about ten or twelve feet above ground and should be so made that they can be readily seen at a distance.

11. Each engine should have an assistant to the regular operator in addition to the representative in charge.

12. Suitable arrangements should be made for getting to and from the plowing field. An automobile is preferable as it saves time.

13. Don't forget to arrange for lunches for your crew on the plowing field, as judges never get hungry, and by all means take along something to drink (not Scotch!).

14. See that you have definite arrangements regarding the plow which you are to pull, and upon your arrival in Winnipeg either have it sent to the exhibition grounds during the brake tests or see that it surely gets to the plowing field in ample time.

15. If possible arrange for a piece of land near the plowing field in order to try out your plows and gauge the load you wish to pull before the contest begins.

16. Don't think that a motor contest is a place to try out new experiments. The contestant who comes in and knows what his engine can do always stands the best chance of making a creditable showing.

17. Bring along your coolest headed operator. A cool head and good generalship counts for a great deal in a motor competition.

18. Don't tell the judge what the final score sheet will look like either before the contest begins or during its progress. You might possibly be mistaken, and, besides, it's bad form.

19. Don't tell everybody what you might have done if certain things hadn't happened. Nobody will believe you anyway.

20. Don't spend too much time at the end of the hallway at the Royal Alexandra in the evening. It is bad for the next day's results.

21. Don't get the idea that a Motor Competition is a holiday. If you have never been there before you can come with the idea firmly fixed in your mind that you will put in about three of the most strenuous weeks work you have ever done.

The above are only a few of many suggestions that might be offered and are simply given for what they are worth.

The Awards.

The plowing test was finished July 17th, but awards were not given out until the morning of the 22nd. During that time the judges were as busy as bees compiling data and getting it into such shape as would permit of winners being selected. When all was in readiness it was found that in accordance with the following score sheet, the points named below had been gained by the various engineers.

Score Card.

Brake Test (190).

	Internal Combustion Engines	Steam Engines
Horse power hours per unit of fuel used ...	145	140
Horse power hours per unit of water used..	15	35
Steadiness of running, vibration, condition of engine	30	15
	<hr/>	<hr/>
	190	190

Maximum Test (65).

	Internal Combustion Engines	Steam Engines
Economical load compared with maximum	35	35
Evenness of load	20	20
Condition of engine ..	10	10
	<hr/>	<hr/>
	65	65



The Case 20-40 Gasoline Tractor pulling a Five Bottom Case Engine Gang. (Gold medal winner Class B.)

Plowing Test (215)		Condition of engine, etc.	
	Internal Combustion Engines		Steam Engines
Draw-bar h.p. per unit of fuel	140	10	10
Draw-bar h.p. per unit of water ...	15	215	215
Acres plowed per hour per economy brake		Design and Construction (30).	
		Internal Combustion Engines	Steam Engines
		15	15



The Canadian Heer 20-25 Kerosene Tractor pulling a Four Bottom Cookshutt Engine Gang.

horse power	25	25	Protection of working parts	10	10
Quality of plowing ...	15	15	East of manipulation..	5	5
Distance traveled without replenishing fuel	10	5		<hr/>	<hr/>
Distance traveled without replenishing water	5	5		30	30



The Aultman & Taylor 30-60 Gasoline Tractor pulling a Nine Bottom John Deere Engine Gang. (Gold medal winner Class C.)

Awards.

Class B, Gasoline.

	Points
Gold medal, J. I. Case ..	411.07
Silver medal, Goold Shapley & Muir	384.35
Bronze Medal, Avery ...	379.55
Fourth, I. H. C.	366.03
Fifth, Heer	365.35

Class C, Gasoline.

	Points
Gold medal, Aultman & Taylor	447.07
Silver medal, I. H. C. ...	403.75
Bronze medal, Holt	380.06
Fourth, I. H. C.	369.35
Fifth, Sawyer-Massey ...	364.02
Sixth, Case	361.25
Seventh, American	354.04

Class D, Kerosene.

	Points
Gold medal, J. I. Case ...	398.15
Silver medal, Rumely 15-30 h.p.	354.00
Bronze medal, Avery ...	366.95

Class E, Kerosene.

	Points
Gold medal, Rumely 30-60 h.p. ...	449.75
Silver medal, Aultman & Taylor ..	415.45
Bronze medal I.H.C. ...	391.09
Fourth, Case	318.03

Class F, Steam.

	Points
Case (only entry) ...	389.00

Class G, Steam.

	Points
Case (only entry) ...	437.05

Class H, Steam.

	Points
Gold medal, Case 110 h.p.	442.85
Silver medal, Sawyer-Massey	364.15

What does the Motor Contest mean viewed from the standpoint of the farmer? This question has given rise to a great deal of speculation, and the farmer is very apt to say that an engine in the hands of an expert operator is not an engine in the hands of the average farmer. True, A horse on the race track in the hands of a skilled driver will develop speed that he will not develop in the hands of the average man. Yet the speed is in that horse and we recognize his proficiency in what he produces. The engines as they go through the competition are worked for all that there is in them, and standards are made which the average farmer may not reach but which he can always approach. It brings home to him a great many things that he might not otherwise think of. Take for example the matter of fuel economy. The average farmer buys an engine. He pours or

shovels fuel into it regardless of how much he uses. All this fuel costs money, and it is just as essential to save money on this end of the game as it is to save it on the first purchase price of the engine, in fact, more so. It gives him a comparison between steam and oil engines as regards fuel consumption. It shows up the difference between gasoline and kerosene fuel consumption under the same conditions. It gives him an approximate idea of the number of plows that he can reasonably expect to pull and, regardless of what any traction engine salesman may tell you, as a farmer, about the load that his particular engine will draw in the plowing field, just look up the figures of the Winnipeg Motor Competition, and see how many plows they pull.

The 1912 plowing field was an average one and the results as obtained may be taken as fairly accurate in so far as work done and cost of fuel is concerned.

Power farming is a business. It requires the expenditure of a large amount of money in order to secure an equipment, and if the farmer who purchases such equipment is going to make the most out of it, he must of necessity give attention to the smallest detail.

Would it not be a good proposition for you as a power farmer when working your engine to take note of such things as fuel consumption per acre plowed or per one thousand bushels threshed. You know what your gasoline, kerosene or coal costs you, and you know what you are getting out of the work you do. Get into the habit of keeping data sheets. It is not presumed that you will go into the matter to anything like the same extent that the judges go into it, but it will pay you to go into it a little more carefully than you do.

There is one thing from your standpoint, however, that a motor competition does not and never can bring out, which is the durability of the engine. This is a matter that can only be determined by long service in the field. Motor Contest engines have no repair bills because it is not possible to work them long enough so that any appreciable wear and tear is noticed, but you as a far-



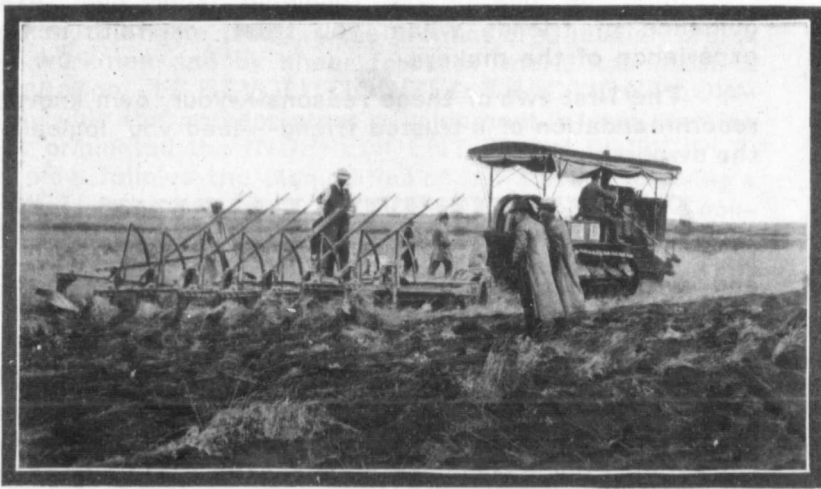
The I. H. C. 45 H.P. Gasoline Tractor pulling an eight bottom Oliver Engine Gang. (Silver medal winner Class C.)

mer can handle these repair bills, and in doing so, can work out data for your own satisfaction that no motor competition can ever work out.

The motor competition, however, does do one thing for you that you musn't lose sight of. A manufacturer puts his engine

sees different designs and it enables him to apply these designs to his own engine in order to better it, for all of which the farmer received the benefit.

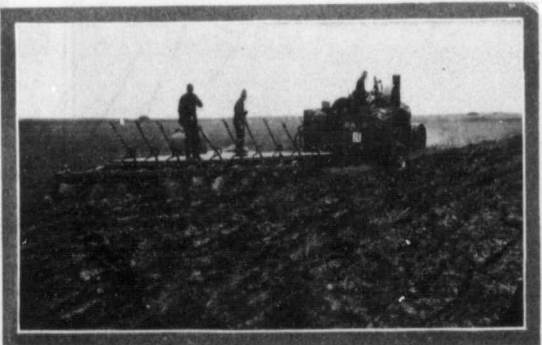
It is the desire and the business of every manufacturer to turn out just as good an engine as is possible and there is nothing



The Canadian Holt "Caterpillar" pulling a seven bottom Cockshutt Engine Gang. (Bronze medal winner Class C.)

into this competition in comparison with all the others that are entered. He is thus enabled in a great many cases to determine the strong and weak points of his engine in comparison with those of his competitors. He

like the motor competition to enable him to strengthen weak parts. As one manufacturer was heard to remark, who has been in the motor competition ever since it has started, "I wish that I did not have any of my



The Case 80 H.P. Steam Tractor pulling a ten bottom Case "Sattley" Engine Gang

1908 engines in the field. If it were possible for me to replace them with my 1911 engines I would feel a great deal better satisfied. I have been enabled to accomplish more in the way of engine construction through what I have learned at the motor competition than from what I have learned through any other source."

It is up to you as a farmer to study the results as given in the judges tables carefully. Practically all of the data with the exception of the points on the design and construction, are worked out from the actual records of the engine. The points on design and construction are, of course the judges' opinions, and these opinions can only be verified by the actual workings of the engines in the field over a considerable period of time.

The motor competition means much to you as a farmer. It means more economical engines. It means engines of a more uniform type which will give you more standard results.

In going over the tables as submitted by the judges, there is doubtless a mass of information that is hard for the average farmer to digest; consequently a little explanation may not be out of place. Let us begin with the Two Hour Economy Brake Test and take the headings in their regular order.

Total Time Running. This means the average time in which the engine was on the test.

Average Horse Power Developed means the average of the different horse powers developed by the engine during the entire time of the test. At certain times it runs above and at other times below a certain mark.

Fuel Used in Pounds means the total amount of fuel used during the entire time of the test. In the case of gasoline to reduce this amount to gallons divide it by seven and in the case of kerosene by seven and nine-tenths.

Percentage of Fuel Capacity Used Per Hour. The fuel capacity in this case means the capacity of the carrying tank of the engine.

Horse power Hours Per Unit of Fuel. The term Horse Power Hours means the amount of horse



1912 MOTOR TRIALS
8 Furrow Cockshutt Plow with Caterpillar Engine.

The Cockshutt Engine Gang

WHEN you buy an Engine Gang you have a REASON for choosing the particular Engine Gang you DO buy. This reason must be one of the following: Your own experience, the guidance of friends whom you trust, or faith in the ability and experience of the makers.

The first two of these reasons---your own knowledge and the recommendation of a trusted friend---lead you logically straight to the ownership of a

COCKSHUTT ENGINE GANG

and, with the third reason, there are many years of an unequalled record in Engine Gang manufacturing and the assurance that in years to come the Cockshutt Engine Gang will LEAD IN POPULARITY for the same good reasons that have made it a LEADER in the past.

For one thought dominates the manufacturers and impresses itself upon every operation that enters into the construction of the Cockshutt Engine Gang: To build for the FUTURE as well as for the sales of the PRESENT---to build so soundly and so well that the



1912 MOTOR TRIALS
Nice Work by Cockshutt Plows.

COCKSHUTT PLOW COMPANY, LIMITED.

Branches:
WINNIPEG, REGINA, CALGARY, SASKATOON.
Distributing Warehouses:
Red Deer, Lethbridge, Edmonton, Brandon, Portage la Prairie.



1912 MOTOR TRIALS
4 Furrow Cockshutt Plow with Heer Engine.

lapse of years will find in the Cockshutt Engine Gang owner a deep and abiding sense of SERVICE RENDERED and VALUE RECEIVED.

The Cockshutt Engine Gang is the product of Canadian brains and Canadian workmen, and by sheer force of merit has made a world-wide reputation. IT REVOLUTIONIZED TRACTION PLOWING, making possible the present great development in large farming operations. It originated the INDEPENDENT PLOW PRINCIPLE, whereby each plow follows the inequalities of the surface, plowing a UNIFORM DEPTH and turning an EVEN FURROW. With a Cockshutt Plow on behind your Engine you will not only be free from vexatious stops and cover the maximum amount of acreage, but THE WORK WILL BE DONE PROPERLY. In breaking, the sod will be turned over FLAT, so that the grass will rot, fertilizing the soil instead of curing into hay to hinder later operations. In stubble, the soil will be turned COMPLETELY OVER and THOROUGHLY PULVERIZED, making a firm seed bed of uniform depth---the best conditions for an even stand of straw with a large head.

Write for special booklet
or call on our nearest Agent



1912 MOTOR TRIALS.
4 Furrow Cockshutt Plow and G.S.M. Engine. Silver Medal Winner.

RECORDS OF MAXIMUM BRAKE TEST AND PLOWING TEST AS PERFORMED BY THE VARIOUS ENGINES IN THE MOTOR COMPETITION, HELD AT WINNIPEG, JULY 3rd TO 20th, 1912, UNDER THE AUSPICES OF THE

Class & Section	Entry Number	Maker's Name	HALF-HOUR MAXIMUM BRAKE TEST										PLOWING TEST								
			Total Time Running Minutes	Time Lost Due to Engines	Average H.P. Developed	R.P.M. of Pulley	R.P.M. of Engine	Fuel used in lbs.	Horse Power—Hours per Unit of Fuel	Water used in Imperial Gal.	H.P. Hours per 100 Gal. Water	Number of Bottoms	Width of Plow Inches	Maker of Plow	Miles travelled (not including turns)	Length of Furrow—Feet	No. of times across Field	Average Width of Plowed Land—Feet	Acres Plowed	Average Depth—Inches	
B.—Gasoline	2	Canadian Heer	30	O	21.26	454.3	454.3	7.25	1.466	O			4	14	Cockshutt	6	3955	8	37.6	3.41	3.5
	3	Avery	"	"	33.93	496.3	496.3	9.25	1.834	2.89	586.0		4 & 5	"	Avery	"	"	"	42.9	3.90	"
	4	J. I. Case	"	"	35.11	462.6	462.6	11.0	1.595	1.50	1170		5	"	Case-Sattley	"	"	"	47.0	4.27	"
	5	Goold, Shapley & Muir	"	"	34.38	393.5	393.5	13.0	1.322	O			4	"	Cockshutt	"	"	"	37.5	3.41	3.7
	6	Inter'nt'l H'vs'tr Co.	"	"	44.05	432.9	432.9	15.0	1.468	16.62	132.6		5	"	Oliver	"	"	"	46.4	4.21	3.5
	C.—Gasoline	7	Sawye-Massey	30	O	40.65	269.4	538.8	14.25	1.426	0.75	270.9		5	"	Deere	"	"	"	46.7	4.24
8		Inter'nt'l H'vs'tr Co.	"	"	62.95	322.0	322.0	19.5	1.614	8.05	391.9		9 & 10	"	P. & O.	"	"	"	88.1	8.00	"
9		"	"	"	60.83	369.6	369.6	22.5	1.352	1.25	243.4		8	"	Oliver	"	"	"	75.8	6.79	"
10		Goold, Shapley & Muir	"	"											Withdrawn						
11		Canadian Holt	30	O	53.25	631.0	631.0	18.5	1.439	O			7 & 8	"	Cockshutt	"	"	"	67.6	6.14	3.25
12		Aultman-Taylor	"	"	73.41	516.8	516.8	21.5	1.707	12.50	293.6		9	"	Deere	"	"	"	81.2	7.38	3.5
13		J. I. Case	"	"	68.43	347.1	347.1	32.0	1.069	10.62	322.1		10	"	Case-Sattley	"	"	"	92.1	8.36	"
15		Diamond Iron W'ks	"	"	57.30	544.0	544.0	28.75	0.996	3.60	796.0		10	"	Deere	"	"	"	90.9	8.25	"
D.—Kerosene	1	Canadian Heer	30	O	21.87	457.0	457.0	17.5	0.625	0.60	1820				Withdrawn						
	16	Rumely	"	"	36.97	395.5	399.5	21.5	0.859	3.06	604.2		5	"	Rumely	"	"	"	45.5	4.13	3.5
	18	Inter'nt'l H'vs'tr Co.	"	"	28.79	379.7	379.7	11.75	1.225	5.07	283.8		4	"	P. & O.	"	"	"	34.7	3.16	"
	19	Avery	"	"	27.32	442.2	442.2	13.75	0.993	1.65	827.9		4	"	Avery	"	"	"	37.3	3.39	"
E.—Kerosene	21	Inter'nt'l H'vs'tr Co.	30	O	57.66	370.6	370.6	20.5	1.496	7.10	406.1		8	"	P. & O.	"	"	"	73.6	6.68	3.61
	22	Aultman-Taylor	"	"	61.20	525.4	525.4	24.0	1.275	11.25	272.0		7	"	Deere	"	"	"	62.9	5.71	3.5
	23	Rumely	"	"	76.51	375.0	375.0	31.5	1.214	5.00	765.1		8 & 9	"	Rumely	"	"	"	77.4	7.03	3.6
	24	J. I. Case	"	"	70.08	374.2	374.2	49.0	0.715	11.87	295.0		8	"	Case-Sattley	"	"	"	76.7	6.96	3.5
F.—Steam	25	J. I. Case	30	O	63.35	267.5	267.5	145	21.84	120	26.39		6	"	Case-Sattley	"	"	"	56.5	5.13	3.4
G.—Steam	26	J. I. Case	30	O	93.08	251.6	251.6	246.75	18.87	169.6	27.44		10	"	Case-Sattley	"	"	"	93.3	8.47	3.5
H.—Steam	27	J. I. Case	30	O	144.22	239.9	239.9	230	31.35	201.8	35.73		12	"	Case Sattley	"	"	"	114.2	10.37	3.5
	29	Sawyer-Massey	30	"	99.14	235.9	235.9	219.5	22.58	143.4	34.56		10	"	Deere	"	"	"	89.4	8.12	"

THE VARIOUS ENGINES IN THE MOTOR COMPETITION, HELD AT WINNIPEG, JULY CANADIAN INDUSTRIAL EXHIBITION ASSOCIATION

PLOWING TEST																											
Total time required Minutes	Time lost due to Plow, etc.—Minutes	Time lost due to Engines—Minutes	Time required turning—Minutes	Actual Time Plowing—Minutes	Acres Plowed per Hour	Miles Travelled per Acre Plowed	Average Draw-Bar Pull—Lbs.	Average Draw-Bar Horse Power	Fuel used, including turns—Lbs.	Draw-Bar Horse Power—Hours per Unit of Fuel	Lbs Fuel used per Acre Plowed	Water used—Lbs.	Lbs. Water used per Acre Plowed	Average Draw-Bar Pull per 14-in. Plow	Draw-Bar Horse Power per Acre per Hour	Possible Miles Travelled without Replenishing Fuel	Possible Miles Travelled without Replenishing Water	Possible Acres Plowed without Replenishing Fuel	Possible Acres Plowed without Replenishing Water	Lbs. Water per Draw-Bar Horse Power—Hours	Cost of Fuel per Acre Plowed—Cents	Entry Number	Draw-Bar Horse Power—Hours				
238.5	14.0	4.5	7.2	212.8	0.96	1.76	3010	13.56	70.5	0.682	20.67	4.5	1.32	752	14.09	14.10	91.6	8.0	16.1	.094	57.6	2	48.1				
186.0	5.5	0	5.7	174.8	1.34	1.54	3135	17.22	65.5	0.765	16.79	91.5	23.46	660	12.85	14.56	13.9	9.5	90.0	1.83	46.8	3	50.1				
188.2	0	0	6.0	182.2	1.41	1.41	4450	23.41	70.25	1.012	16.45	4.25	0.99	890	16.64	32.00	322.0	22.4	22.9	.090	45.8	4	71.1				
184.0	13.0	0	8.0	163.0	1.26	1.76	3680	21.64	58.5	1.005	17.15	10.75	3.15	920	17.24	24.20	67.5	13.8	38.4	.183	47.8	5	58.8				
181.0	4.0	0	7.5	169.5	1.49	1.42	3610	20.42	79.5	0.726	18.88	302.75	71.90	722	13.70	25.1	20.0	17.6	14.0	5.25	52.6	6	57.7				
202.8	4.5	0	8.5	189.8	1.34	1.41	4985	25.20	98.75	0.807	23.29	9.5	2.24	977	18.79	15.7	182.0	11.1	128.5	.119	64.9	7	79.7				
200.0	3.0	0	9.5	187.5	2.56	0.75	6669	34.10	107.0	0.996	13.38	420.0	52.50	684	13.31	20.3	16.5	27.0	22.0	3.94	37.3	8	106.6				
185.4	5.2	0	8.5	171.7	2.37	0.88	6430	35.91	141.0	0.729	20.76	87.75	12.92	804	15.13	13.1	61.8	14.9	70.0	85.4	57.8	9	102.7				
																						10					
177.0	0	0	8.0	169.0	2.18	0.98	6338	35.96	94.0	1.077	15.30	O	O	874	16.51	20.8		21.3			42.6	11	101.3				
153.0	0	0	9.0	144.0	3.08	0.81	7080	47.14	97.5	1.160	13.22	408.0	55.30	787	15.33	22.0	15.9	27.1	19.6	3.61	36.8	12	113.1				
212.0	4.0	3.0	7.0	198.0	2.53	0.72	7700	37.29	155.75	0.789	18.63	488.5	58.43	770	14.72	26.2	13.0	36.6	18.0	3.97	51.9	13	123.0				
211.5	1.5	2.0	9.5	198.5	2.49	0.73	7350	35.50	156.5	0.750	18.96	O	O	735	14.24	12.4		17.0			52.8	15	117.4				
204.0	7.0	0.7	8.0	188.3	1.32	1.45	4400	22.40	124.25	0.566	30.08	176.0	42.60	880	17.02	11.5	8.9	7.9	6.15	2.50	55.2	16	70.3				
193.0	0	0	14.0	179.0	1.06	1.89	3450	18.48	76.5	0.721	24.21	223.5	70.72	863	17.45	25.2	12.7	13.6	6.66	4.05	44.4	18	55.1				
184.0	2.5	2.2	6.8	172.5	1.18	1.77	2900	16.12	G 3.0 K105.0	0.429	31.85	50.0	14.74	725	13.67	8.8	25.5	5.1	14.4	1.08	58.4	19	46.3				
184.0	4.0	0	7.6	172.4	2.32	0.90	6595	36.67	G 1.0 K171.5	0.611	25.82	196.75	29.45	828	15.76	10.7	27.5	12.0	30.6	1.87	47.4	21	105.4				
155.0	0	3	7.3	144.7	2.37	1.05	5716	37.88	G 8.0 K115.0	0.743	21.54	374.5	65.58	817	16.00	17.5	17.3	16.6	16.5	4.10	39.5	22	91.3				
217.7	8.4	0	17.6	191.6	2.20	0.85	6880	34.42	K129.25	0.851	18.38	167.5	23.82	834	15.62	24.7	25.0	29.1	29.0	1.52	33.7	23	109.9				
206.0	3.0	0.5	13.4	189.1	2.21	0.86	6550	33.22	G 0.25 K227.0	0.461	32.65	619.0	88.93	819	15.04	18.0	10.1	20.8	11.8	5.91	59.9	24	104.7				
179.9	7.7	8.6	7.4	156.2	1.97	1.17	5060	31.06	76.5	10.57	149.12	5050	984.4	843	15.75	7.8	1.7	6.7	1.45	62.45	63.4	25	80.9				
171.0	2.2	0	7.0	161.8	3.14	0.71	8050	47.69	26.5	15.56	97.58	6780	800.4	805	15.18	8.8	1.8	12.4	2.5	52.70	41.5	26	128.6				
178.0	7.0	0	7.0	164.0	3.79	0.58	9750	57.00	1030.0	15.13	99.32	9704	935.8	812	15.02	12.6	1.8	21.8	2.3	62.28	42.2	27	155.8				
186.3	7.5	3	11.8	164.0	2.97	0.74	7900	46.17	1266.5	9.97	155.97	7970	981.5	790	15.55	3.7	2.0	16.9	2.7	63.13	66.3	29	126.2				

CASE makes Best in 1912 Wins Gold Medal for Steam Engine



THIS 110 H.P. STEAM ENGINE BREAKS ALL WINNIPEG RECORDS AND NEVER FAILED TO WIN WHEN ENTERED



60 H.P. STEAM ENGINE



40 H.P. STEAM ENGINE

These Steam Engines broke all Winnipeg Records and were awarded diplomas instead of Gold Medals, because no manufacturers dared to compete in these classes against Case.

WE have stated in the past that there could be no close competition between Case Engines and those of other makes. When Case competes, it is only against its own records. The truth of these statements is made doubly apparent by the 1912 contest; the nearest competitor in 1912 used 60% more coal per acre than Case. The best competitor's record in 1911 shows over 90% more coal used per acre than Case used in 1912. These results prove conclusively the dominance of the Case Steam Engine and the wisdom of the Case policy in continuing its progress in perfecting and refining the Steam Engine. Thus it has been proven by every possible test that the Case Steam Engines in competition and in every-day performance stand in a class by themselves. Here are shown the results of the 1910, 1911 and 1912 Winnipeg contests tabulated for easy comparison of the Steam Engines in different classes. The figures are official and speak for themselves.

Summary of Brake and Plowing Tests in 1910, 1911 and 1912 Winnipeg Contests for Steam Engines

Entrant No.	Coal Required to Drive 10 H.P. for 10 Hours		Coal Required to Plow One Acre
	At the Fly-Wheel	At the Draw-Bar	
Entrant No. 13-1910	416 lbs.	906 lbs.	147.2 lbs.
Case 75 H.P. No. 14-1910	359 "	746 "	120.6 "
Entrant No. 15-1910	362 "	832 "	149.5 "
Case 110 H.P. No. 16-1910	304 "	716 "	99.2 "
Entrant No. 17-1910	407 "	817 "	120.8 "
Entrant No. F26-1911	557 "	1193 "	189.2 "
Entrant No. F27-1911	500 "	1093 "	182.1 "
Entrant No. G28-1911	399 "	1490 "	236.1 "
Entrant No. G29-1911	387 "	1900 "	208.0 "
Entrant No. G30-1911	462 "	1165 "	205.6 "
Entrant No. G31-1911	452 "	1165 "	205.6 "
Case 80 H.P. No. 26-1912	379 "	644 "	97.5 "
Case 110 H.P. No. 27-1912	301 "	660 "	99.3 "
Entrant No. 29-1912	423 "	1004 "	155.9 "

14 Steam Engines were exhibited at the Winnipeg Fair-grounds, entered by 8 manufacturers. Why weren't they entered in the contest? Because their makers knew that they would have no chance to even make a creditable showing against the Case Engines.

Send for Catalog on Case Steam Engines for all purposes.

Every Case Sale is backed by Case Service—65 Branch

J.I. CASE THRESHING MACHINE

CANADIAN BRANCHES, TORONTO,

Records at Winnipeg Motor Contest Wins Gold Medal for Gas Tractor



THIS 40 H.P. GAS TRACTOR OUT-CLASSES ALL WINNIPEG COMPETITORS

"CASE" THE ONLY TO GOLD IN STEAM & CLAS ENTRANT TO WIN MEDALS BOTH GASOLINE SES.

The Winnipeg Motor Contest is International, under supervision of the Canadian Government and open to all Manufacturers of Farm Power Machinery

The remarkable performance of the Case 40 H. P. Gas Tractor at the Winnipeg contest is more evidence of the Absolute Protection afforded by the Case Policy.

It has always been the Policy of the Case Company to do their experimenting at their own expense—not at the expense of the customer. Before a machine or improvement is allowed to go on the market under the Case name, it is tried out time and again by the severest tests that can be devised—subjected to strains and conditions far more severe than will ever be encountered in actual every day use—so that when we are finally satisfied to put the name "Case" on anything, you know beyond all question of doubt that you can safely bank on everything we claim for it.

The Case Gas Tractor is the result of 20 years of experimenting in the Case Laboratories and in the Field. It is backed and guaranteed by the 70-year reputation of the Case Company as builders of Reliable Machinery. Therefore, when we placed it on the market, we knew it was "right" down to the smallest detail of its construction.

By winning the Gold Medal in competition with the pick of the world's best makes, the Case Gas Tractor has given a demonstration of Low Fuel Consumption, Power, Ease of Operation and Perfect Work under severe Field Conditions never equalled by a Gas Tractor.

How can any buyer, in the face of such overwhelming evidence of the All-round Superiority of the Case Gas Tractor, figure that he is getting the worth of his money in purchasing any other?

Every Farm Power User and every one considering the purchase of a Gas Tractor either now or in the future, is vitally interested in learning about the many improvements in Gas Tractor building embodied in the Tractor that proved itself best by winning the Gold Medal at Winnipeg. It certainly wouldn't be wise to buy a Gas Tractor without at least investigating the Case.

Every Case 40 Gas Tractor is an exact duplicate of the one that won the Gold Medal at Winnipeg. They are on exhibition at all our Branch houses as well as the Case 60 H. P. Oil Tractor. Call at our nearest branch house and have them explain it to you, or if you can't do that, write us at once and we will mail you complete specifications and other information of vital interest.

Houses and 10,000 Dealers in United States and Canada.

CO. RACINE · WIS · U · S · A · INCORPORATED

WINNIPEG, REGINA & CALGARY

Continued from page 13

power developed per hour and the Unit of Fuel means in every case either seven pounds of gasoline, seven and nine-tenths pounds of kerosene or one hundred pounds of coal.

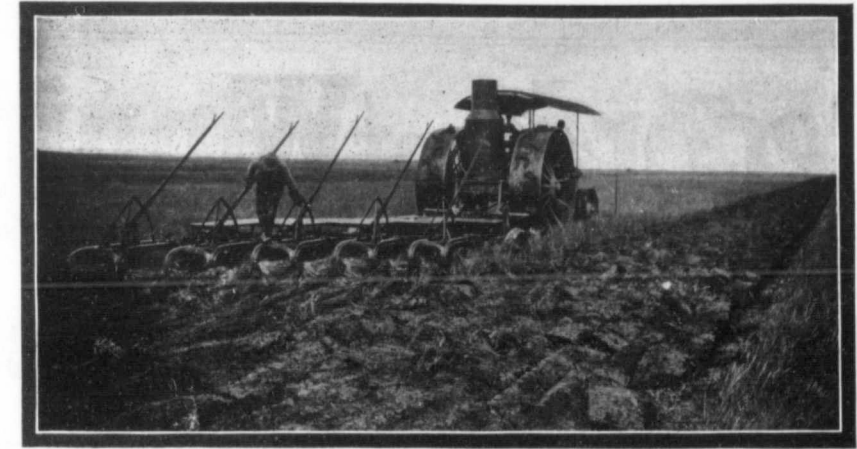
Cost of Fuel Per Horse Power Hour. This simply means taking the number of horse power hours and dividing it into the total cost of fuel.

In the Maximum Test the terms are practically the same.

In the plowing test most of the headings are clear. Some, however, may need explanation.

The Average Draw Bar Pull means the average pull shown on the dynamometer, this being an instrument with a clockwork arrangement for recording the pull at all times upon a suitable chart.

The average Draw Bar Horse Power means the average horse power delivered at the draw bar during the test. At times the horse power delivered may have



The American Gas Tractor and a Ten Bottom John Deere opening up the First Swath.

plowed is determined from the total number of acres plowed and the total amount of fuel used, reckoning gasoline at 19½ cents

the Brake Tests the conditions under which the engines worked were practically the same, the only exception being a case where

tent. The fact that the tests were run on different days under different atmospheric conditions would also make a slight difference in the case of the internal combustion engines.

When it comes to the plowing field however the conditions are bound to vary. One engine may have a piece of land that is comparatively even and with few soft spots. Another engine may run into some soft places that would considerably increase its fuel consumption in proportion to the land plowed. It would be an impossibility to secure a plowing field where conditions were exactly the same from one end to the other.

It will be noticed in the case of the average draw pull per fourteen inch plow that the same make of plows did not have the same draw bar pull with any two engines showing that conditions vary.

An attempt was made to maintain an average depth of three and one-half inches, but this again was impossible on account of the frequent adjustments required.

The average farmer can take a great many of the headings from



The I. H. C. 45 H.P. Gasoline Tractor pulling a nine bottom P. & O. Engine Gang.

run considerable above the horse power as stated. At other times it ran below, but only the average is taken.

Draw Bar Horse Power Hours per Unit of Fuel signifies the amount of horse power delivered at the draw bar per seven pounds of gasoline, seven and nine-tenths pounds of kerosene and one hundred pounds of coal, as the case may be.

The average Draw Bar Pull Per Fourteen Inch Plow means the average draw pull divided by the number of fourteen inch plows pulled.

Possible Miles Travelled Without Replenishing Fuel is determined from the distance travelled in proportion to the fuel carrying capacity of the engine.

Possible Acres Plowed without Replenishing Fuel is determined in the same way.

The Cost of fuel per acre

per gallon, kerosene 14½ cents per gallon and coal \$8.50 per ton.

The tables themselves may in some cases be misleading. In

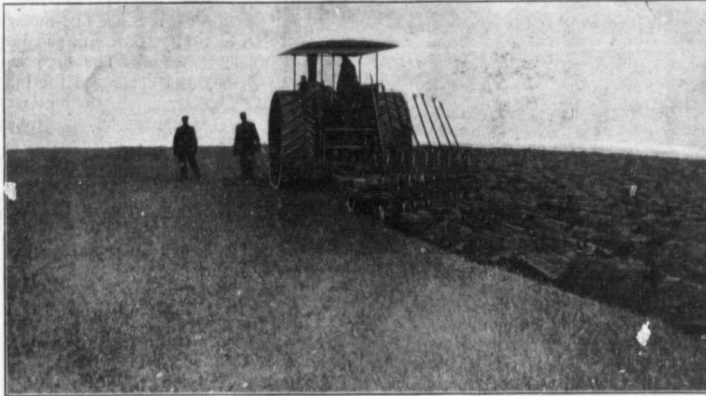
an engine ran with a belt that would not hold, which would naturally tend to reduce the power delivered to a certain ex-



The 40 H.P. Case Steam tractor and a Six Bottom Case-Sattley

You Need the Unfailing Power

Of the Aultman-Taylor "30" to Make Your Farming a Success



It is truly marvelous how the Aultman-Taylor "30" will increase your earnings. It will do your plowing, discing, harrowing, harvesting, seeding, road grading, threshing, etc., at a greater saving than any other available power. Unlike horses, it never tires. It not only enables you to sow and gather your crops quickly and economically, but you can add a snug sum to your bank account by helping out your neighbors. Not until you are an owner of an Aultman-Taylor "30" will you fully realize what you have lost by insufficient, unreliable power. The Aultman-Taylor "30" can be depended upon to give steady, dependable power at the minimum consumption of fuel; can be started promptly when desired and will not be a source of annoyance and expense on account of expensive break-downs.

HERE ARE SOME OF THE FEATURES WHICH HAVE BROUGHT THE AULTMAN-TAYLOR "30" TO THE FRONT WITH A RUSH.

Absolutely straight spur gear drive—no bevel gears—direct belt drive; single lever control, forward, reverse and belt drive operated by one lever; three distinct methods of starting provided; a Powerful Four Cylinder Motor with little or no vibration.

A truss frame construction relatively stronger than that used on a locomotive;

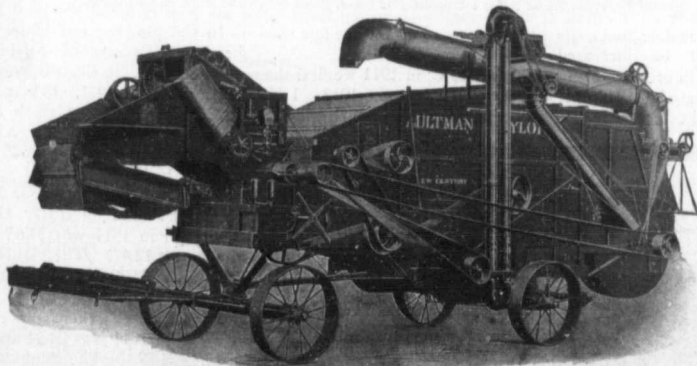
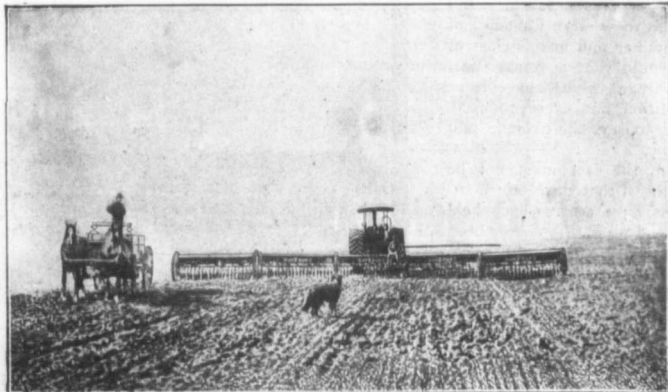
Especially high drivers, (90 inches), giving tremendous purchase in pulling;

Accessibility to all working parts of motor;

Mechanical force feed individual bearing oilers;

Simple and efficient cooling system, easy to inspect and clean—no small passages to become obstructed by alkali and other foreign matter in the water.

If interested, write us for further information.



Each Year Brings Forth a Greater Demand for the Popular "NEW CENTURY" SEPARATORS.

For Fast, Clean and Dependable Work The "NEW CENTURY" is Without an Equal.

THE INTERNATIONAL HARVESTER COMPANY OF AMERICA

CANADIAN SALES AGENTS FOR

"NEW CENTURY" SEPARATOR

The Aultman & Taylor Machinery Company

MANSFIELD, OHIO.

Branches: Minneapolis, Minn., Calgary, Alta., Regina, Sask., CANADA.



The Sawyer-Massey 32 h.p. Steam Tractor pulling 10 John Deere Plows (Silver Medal winner Class B)

the score sheet and work out his own data with his own engine and in this way apply the motor competition to his own farm. The farmer again runs up against conditions that are not met with in the Motor Competition. For example, a great deal of scrub is broken in western Canada and the draw bar pull in this class of work would be a great deal higher than what any Motor Competition has ever produced. That is to say, the average pull per plow.

Again, the fact must not be lost sight of that the Motor Competitions have always been held in sod and no data has ever been worked out for stubble plowing. It would be interesting to see this done and to make a comparison between the two.

Some comparison might be drawn between the results of 1911 and those of 1912 in the matter of horse power developed in as well as the horse power and acre costs in both the economy brake tests and the plowing tests. Allowance must however, be made in that gasoline was figured at 20 cents per gallon in 1911 and 19½ cents in 1912. Kerosene was figured at 12 cents per gallon

in 1911 and 14½ cents in 1912. The kerosene fuel cost in 1912 should therefore, be reduced about 16 per cent in order to place them on the same basis as those of 1911.

In Class B, under horse power hours per unit of fuel we find the average in 1911, 1.40 and in 1912 1.56. The high in 1911 was 1.57 and the low was 1.17. In 1912



The Case 110 h.p. Steam Tractor pulling a Case-Sattley 12 bottom Engine Gang (Gold Medal winner Class B)

In the case of gasoline fuel costs of 1911 should be increased about 4 per cent in order to bring them up to those of 1912. Let us take the brake tests first.

the high was 1.69 and the low was 1.34.

In Class C, in 1911 we find the average 1.49 and in 1912, 1.46. The high in 1911 was 1.76 and the

low 1.19. In 1912 the high was 1.84 the low was 1.13.

In Class E. (kerosene) we find the average in 1911, 1.23 and in 1912' 1.22. The high in 1911 was 1.45 and the low, .84. In 1912 the high was 1.41 and the low .84.

Next let us look at the case of fuel per brake horse power hour.

In Class B, we find the average in 1911 2.08 cents and in 1912, 1.78 cents. The high in 1911 was 2.44 cents and the low 1.82 cents. In 1912 the high was 2.07 cents and the low 1.64 cents.

In Class C, the average in 1911 was 1.94 cents and in 1912, 1.96 cents. The high in 1911 was 2.41 cents and the low was 1.62 cents. The high in 1912 was 2.46 cents and the low 1.3 cents.

In Class E, (kerosene) the average in 1911 was 1.27 cents and in 1912 1.56 cents. The high in 1911, 1.8 cents and the low 1.05 cents. The high in 1912 was 2.6 cents and the low 1.29 cents.

In the plowing test under the heading "Pounds of Fuel per Acre Plowed," in Class B, we find the average in 1911, 18.9 and in 1912, 17.98. The high in 1911 was 22.91 and in 1912, 11.01. The high in 1912 was 20.67 and the low 16.45.

In Class C, the average in 1911 was 17.55 and in 1912, 17.64. The high in 1911 was 34.65 and the lowest 12.47. The highest in 1912 was 23.29 and the lowest 13.22.

In Class E, (kerosene) the average in 1911 was 24.24 and in 1912, 24.59. The highest in 1911 was 30.79 and the lowest 17.24. The highest in 1912 was 32.65 and the lowest 18.38.

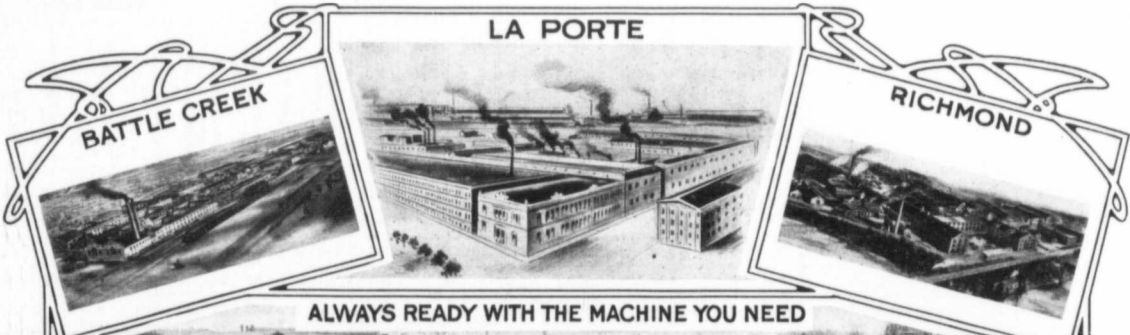
Under the heading Cost of fuel per acre plowed. We find in class B, that the average in 1911 was 53 cents and in 1912, 49 cents. The highest in 1911 was 65 cents and the lowest 31 cents. The



The Sawyer-Massey Gas Tractor pulling 6 John Deere Plows

Continued on page 26

RUMELY MEANS READY



ALWAYS READY WITH THE MACHINE YOU NEED



BUILT BY THE
ACRE



SHIPPED BY THE
TRAINLOAD

Now we are Ready with your Threshing Outfit

NOW we can deliver at a moment's notice from the Rumely branch nearest to you, any kind of a power-farming machinery outfit you want. The big Rumely plants have been working steadily day and night at their fullest capacity to be ready for your needs. Trainload after trainload of Rumely Power-Farming Machinery has gone to our many branches. We are ready to deliver complete threshing outfits or other machinery from some point in your immediate locality, whether you live in the "States" or Canada.

The Threshing Season is Now On.

Get one of our big-capacity, time-saving, money-making threshing, or other power-farming outfits and you will have an outfit worth having. Write or wire our nearest branch, or, better still, visit our branch and see your machine on the floor—take it home with you if you wish.

Any machine in the
Rumely Line, La Porte, Ind. **Gaar-Scott Line, Richmond, Ind.** **Advance Line, Battle Creek, Mich.**

can be delivered to you at a moment's notice.

When you are in immediate need of power-farming machinery, understand that Rumely means "ready"; ready with what you want when you want it. Ask for the Rumely Books about Power-Farming—consult our Power-Farming Expert Free.

RUMLEY PRODUCTS CO., INC., 1984 DUFFERIN AVENUE, WINNIPEG, MAN.

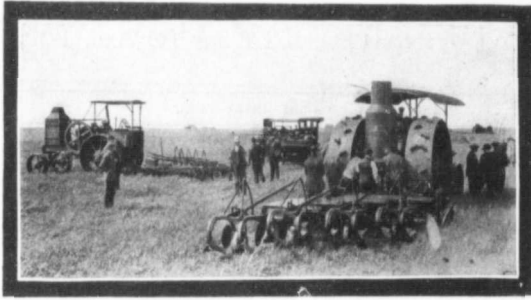


DATA SHEET AND RECORDS OF ECONOMY LOADS AS CARRIED BY THE VARIOUS ENGINES IN THE MOTOR COMPETITION, HELD AT WINNIPEG, JULY 3rd TO 20th, 1912, UNDER THE AUSPICES OF THE CANADIAN INDUSTRIAL EXHIBITION ASSOCIATION.

CLASS 76 Section	Entry Number	Maker's Name	ENGINE DATA																		
			No. Cylinders	Dia. Cylinders—Ins.	Length of Stroke—Ins.	Total Piston Area Square Feet	Piston Speed Ft. per min. At Specified Speed	At Specified Speed	At 1000 Ft. per min. Piston Speed	Horse Power (Steam) P. H. X 400 / 33000	Rated R.P.M. of Engine	Rated R.P.M. of Drive Pulley	Rated H.P.	Maximum Brake H.P.	Dia. Pulley—Ins.	Width Pulley Face—Ins.	Dia. Front Wheel—Ins.	Face Front Wheel—Ins.	Distance Apart (Outside) Front Wheels	Dia. Drivers, Ins. O.	Face Drivers, Ins. I.
B.—Gasoline	2	Canadian Heer	2	7	8	.5346	600	320.8	374.2		450	450	20	25	20	8	50	12	54	50	12
	3	Avery Co.	2	7 1/2	8	.6552	666.7	436.8	458.6		500	500	20	35	22	8 1/2	38	10	60	69	20
	4	J. I. Case	2	7 1/2	8	.6	600	393.1	"		450	450	40-2	4	24	8 1/2	38	8*4	44	66	20
	5	Goold, Shapley, Muir	2	8	10	.6982	633.3	442.2	488.7		380	380	22	35	26	8 1/2	44	10	57	69	24
	6	International Harvester Co.	2	8	10	"	708.3	494.5	"		425	425	"	30	24	10 1/2	38	9	36 1/2	63	22
	C.—Gasoline	7	Sawyer-Massey	4	6 1/2	8	.8524	666.7 to 800	568.3 to 681.9	569.7		500 to 600	250 to 300	22	45	36	10	43	12	66	68
8		International Harvester Co.	2	9	14	.8836	782	690.7	618.5		335	335	"	45	28	10 1/2	44	10	36 1/2	75	24
9		"	2	9 1/2	12	.9844	800	787.5	689.1		400	400	"	45	30	12	40	15	64	73	24
10		Goold, Shapley, Muir																			
11		Canadian Holt	4	7	8	1.069	666.7	712.8	748.4		500	500	60	65	20 1/2	12	36	12	1 wheel	38	16
12		Aultman Taylor	4	7	9	"	750	801.9	"		500	500	30	60	24	10	44	12	55	90	24
13		J. I. Case	2	10	12	1.091	700	763.6	763.6		350	350	30	60	32	12	42	12*6	32	72	24
15		Diamond Iron Works	4	7 1/2	8	1.147	800	917.4	802.8		600	600	40	60	27	10	42	10			
D.—Kerosene		1	Canadian Heer	2	7	8	.5346	600	320.8	374.2		450	450	20	25	20	8	50	12	54	50
	16	Rumely	1	10	12	.5454	750	409.0	381.8		375	375	15	30	30	9 1/2	38	12	51	70	24
	18	International Harvester Co.	1	10	12	"	800	436.3	"		400	400	"	25	30	12	38	15	68	73	24
	19	Avery Co.	2	7 1/2	8	.6552	666.7	436.8	458.6		500	500	20	35	22	8 1/2	38	10	60	69	20
E.—Kerosene	20	International Harvester Co.																			
	21	"	2	9 1/2	12	.9844	800	787.5	689.1		400	400	"	45	30	12	44	15	64	73	24
	22	Aultman-Taylor	4	7	9	1.067	750	801.9	748.4		500	500	30	60	24	10	44	12	55	90	24
	23	Rumely	2	10	12	1.091	750	818.1	763.6		375	375	30	60	36	11	44	16	60	80	30
	24	J. I. Case	2	10	12	"	700	763.6	"		350	350	30	60	32	12	42	12*6	32	72	24
	25	J. I. Case	1	8 1/2	10	.3712	416.7	154.7		51.8	250		40	40	10 1/2	44	10	56	66	18	
	26	J. I. Case	1	11	11	.6900	458.3	302.5		90.8	250		80	40	12	48	16	69	74	24	
	27	J. I. Case	1	12	12	.7854	460.0	361.3		123.7	230		110	43 1/2	16	53	20	55	85	36	
	29	Sawyer-Massey	2	7 1/2 & 12 1/2	11	1.180	421.7	497.5		134.2	230		106	41	12	43	15	43	68	30	

DATA SHEET AND RECORDS OF ECONOMY LOADS AS CARRIED BY THE VARIOUS ENGINES IN THE MOTOR COMPETITION, HELD AT WINNIPEG, JULY 3rd TO 20th, 1912, UNDER THE AUSPICES OF THE CANADIAN INDUSTRIAL EXHIBITION ASSOCIATION.

Distance Apart (Outside) Drivers—Ins.	Total Wt. of Outfit (Excl. Fuel) Pounds	Wt. on Drivers Pounds	Slow Forward Speed (M.P.H. per hour)	Fast Forward Speed (M.P.H. per hour)	Capacity of Fuel Tank Pounds	Capacity of Water Tank Pounds	Total Length Over All — Ft.—Ins.	Greatest Width of Outfit — Ft.—Ins.	Dia. Circle Engine Can Turn In — Ft.—In.	Clearance Under Engine—Ins.	Certified Retail Cash Price, F.O.B. W. Post.	TWO HOUR ECONOMY BRAKE TEST.														
												Total Time Running Minutes	Time Lost Due to Engine	Average Horse Power Developed	R.P.M. of Engine Pulley	R.P.M. of Engine	Fuel Used in Lbs.	Percentage of Fuel Capacity Used Per Hour	Horse Power Hours Per Unit of Fuel	Water Used in Gallons	Average Steam Pressure	Percentage of Water Capacity Used Per Hour	Horse Power, Hours Per 100 Gall. Water	Cost of Fuel Per Horse Power Hour	Entry Number	
54	10000	8000	1.6	4.5	166	69	14-9	6-6	33-0	10	2700.00	120	0	19.58	459.4	459.4	24.5	10.35	1.598	0	0	41.05	586.2	1.763	2	
51	11500	9000	2.2	2.53	159	212	14-8	8-11	51-6	14	2700.00	"	"	25.87	480.9	480.9	32.75	20.59	1.580	8.83	0	4.82	6378	1.709	4	
65	13000	9000	2.25	3.1	241	228	14-9	9-9	46-10	12	2440.00	"	"	35.08	502.1	502.1	43.0	18.49	1.630	1.1	0	0	0	2.071	5	
43	14140	9400	2.25	4	236	121	13-8	9-3	36-1	13	2600.00	"	"	33.62	390.7	390.7	50.0	21.29	1.345	0	0	0	0	2.071	5	
52	16400	12400	2.5	4	326	1010	14-10	9-8	44-9	14	2900.00	"	"	35.07	429.5	429.5	41.5	12.73	1.690	14.35	0	14.21	488.7	1.648	6	
50	17510	12650	2	3	259	287	15-9	11-2	48-6	11	2800.00	120	0	32.36	285.6	571.2	52.0	20.07	1.244	2.4	0	8.34	2697	2.240	7	
58	22000	16300	2.08		362	1156	16-10	10-6	57-8	14	3200.00	"	"	56.00	336.4	336.4	65.5	18.09	1.709	36.25	0	31.34	309	1.630	8	
66	21500	15250	2.26		315	903	17-3	11-6	48-10	14	3200.00	"	"	40.34	369.8	369.8	63.0	20.38	1.566	22.5	0	24.9	439	1.778	9	
																										10
56	18800	16300	2		326	491	18-9	7-8	29-9	6	4725.00	117	3	45.04	637.9	637.9	65.0	19.92	1.385	0	0	0	0	2.011	11	
59	23000	16500	2.2		358	1081	18-0	10-11	44-8	16	3800.00	120	0	58.60	501.4	501.4	63.5	17.70	1.846	48.13	0	44.5	243.5	1.509	12	
58	24760	18000	2		652	1050	16-9	10-10	65-0	11	3440.00	"	"	55.7	364.8	364.8	83.0	12.73	1.329	31.87	0	30.35	346.9	2.096	13	
	18000	15000	1.5	3.5	364	191			51-6		3250.00	"	"	51.90	598.0	598.0	91.75	28.40	1.131	1.30	0	6.83	7984	2.462	15	
54	10000	8000	1.6	4.5	182	69	14-9	6-6	33-0	10	2700.00	120	0	19.96	468.0	468.0	35.75	24.60	1.115	1.1	0	16.00	3629	1.646	1	
49	16275	11310	2.05	2.75	237	262	16-3	8-1	44-0	14	2100.00	"	"	25.45	384.5	384.5	56.50	23.54	0.901	8.44	0	32.20	603	2.037	16	
55	16500	11713	2.06		322	473	15-0	10-8	46-0	12	2700.00	"	"	25.44	379.2	379.2	41.75	12.98	1.219	17.90	0	37.82	284.0	1.506	18	
51	11500	9000	2.2	2.53	179	212	14-8	8-11	51-6	14	2700.00	116	4	27.50	546.7	546.7	41.5	23.13	1.325	3.30	0	15.55	1666	1.386	19	
																										20
66	21500	15250	2.26		350	903	17-3	11-6	48-10	14	3200.00	120	0	48.49	370.16	370.16	75.5	24.08	1.284	23.6	0	26.13	411	1.430	21	
59	23000	16500	2.2		470	1462	17-6	10-11	44-8	16	3800.00	"	"	54.32	522.7	522.7	80.5	17.10	1.349	29.69	0	20.3	365.9	1.361	22	
57	27600	20000	1.9		540	690	19-2	9-9	63-4	14	3400.00	"	"	51.40	373.0	373.0	72.5	13.60	1.418	7.81	0	11.30	1316	1.295	23	
58	24760	18000	2		606	1050	16-9	10-10	65-0	11	3440.00	"	"	52.85	364.7	364.7	124.5	20.79	0.848	43.1	0	41.07	245	2.163	24	
48	19275	14875	2.35		1000	1426	17-3	9-0	36-11	15	1800.00	120	0	41.29	258.2	258.2	34.5	34.55	23.9	271.2	136.5	95.1	30.4	1.778	25	
56	28530	21830	2.39		1210	2012	20-6	10-8	41-10	17	2960.00	120	0	77.23	257.0	257.0	58.5	48.34	26.4	447.2	141.0	111.1	34.54	1.610	26	
59	40460	31560	2.37		2160	2950	22-6	12-11	53-8	20	3840.00	120	0	105.79	235.8	235.8	636.75	34.1	33.2	580.2	160.2	99.75	35.82	1.280	27	
56 1/2	30850	23140	2.17		775	2530	20-9	11-8 1/2	59-11	12	3750.00	"	"	78.72	243.7	243.7	665.0	85.81	2							



A Familiar Scene upon the 1912 Contest Field.

Continued from page 22
highest in 1912 was 57 cents and lowest was 45 cents.

In Class C, the average in 1911 was 53 cents and in 1912, 48 cents. The highest in 1911 was 98 cents and the lowest 35 cents. The highest in 1912 was 64 cents and the lowest 36 cents.

In Class E. (kerosene) the average in 1911 was 36 cents and in 1912, 44 cents. The highest in 1911 was 46 cents and the lowest 28 cents. The highest in 1912 was 59 cents and the lowest 33 cents.

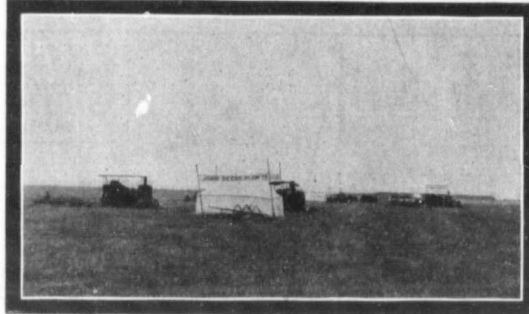
The above figures are only averages but show to some extent the general trend of things..

In the plow test the draw bar pulls were in general heavier per plow in 1912 than in 1911, which would tend to increase the fuel used per acre. On the whole they show that the internal combustion tractor is improving in horse power and in fuel consumed. A great many other interesting comparisons might be drawn, but we simply give the above example of what might be done. Get your pencil and paper and from the data tables make your own comparisons to suit your own needs.

What is the Future of The Motor Competition? Transplanted from British soil it arrived in Canada at a time most favorable for such an event. The internal combustion tractor had just come upon the scene and each and every manufacturer who brought out a tractor, has been anxious to show it up and in a great many cases find out for himself just what it would really do.

During the five years that the contest has been held there have been eight internal combustion tractors that failed to complete their tests. In three cases these tractors came back the following year and went through the performance, in two cases with credit and in one case winning a silver medal.

It is doubtful whether the motor competition would have



The John Deere Headquarters on the Contest Field.

survived its second year without the gas tractor. Rivalry was keener than competition and the establishing of a fuel record and low fuel cost per horse power hour or per acre was a thing eagerly sought after and a thing to work hard for.

It is generally conceded that the motor competition as a whole has been a good thing. It has stimulated an interest in the tractor game. It has brought the manufacturers together in friendly rivalry and by so doing they have come to understand each other better and to play the game on bigger and broader lines.

The Motor Competition has furthermore been the means of establishing standards for both fuel consumption and work done and through the publication of the several contest reports the farmer has come to know what these things mean and to know

how to ask for them when buying an engine. When a smooth tongued salesman representing a new tractor calls upon the farmer who has studied these reports, unless the salesman be thoroughly conversant with all that has taken place in these contest, he is very liable to encounter some snags.

The Motor Competition has also helped to promote the game among the farmers themselves. They have been taught to see the possibilities of these machines and to appreciate their value as a power for tilling the soil.

It is unfortunate that no tests have been provided on plowed

land to work an even in prairie Manitoba seemed out of the question. A Motor Competition is at present being talked of in one of the corn growing States to the South. It is not our desire to throw cold water on the proposition but it would seem that the giving up of a \$200.00 per acre corn patch to a horde of heavy engines to wallow over for a day or two is pretty much of an experiment and should be carefully considered for the lands sake. We would like to see it but we are prone to pay very little attention to the boosting of some of our States journalistic friends a great many of whom have never even taken the trouble to come to Winnipeg to see just what a motor competition consisted of.

These same publishers will find that there is considerable more to a Motor Contest than an opportunity to get a little extra advertising space and as compared with a State Fair or an Implement Show it is a far more serious business viewed from the standpoint of the implement's themselves.

What will be the fate of The Winnipeg Motor Competition? We are going to leave it, in so far as we are concerned, to the farmers and the tractor manufacturers. It is for them that such a contest

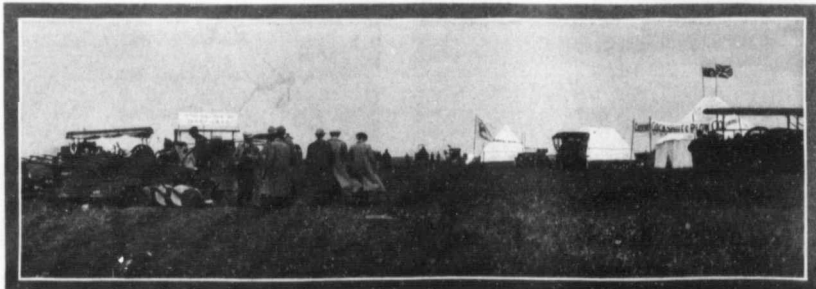
land in the way of discing, seeding harvesting etc., but the task



After seeing that the stakes were set straight, Mr. J. L. Martin of the I. H. C. views with pride the straightness of the furrow.

of getting even sufficient prairie has been so difficult that getting

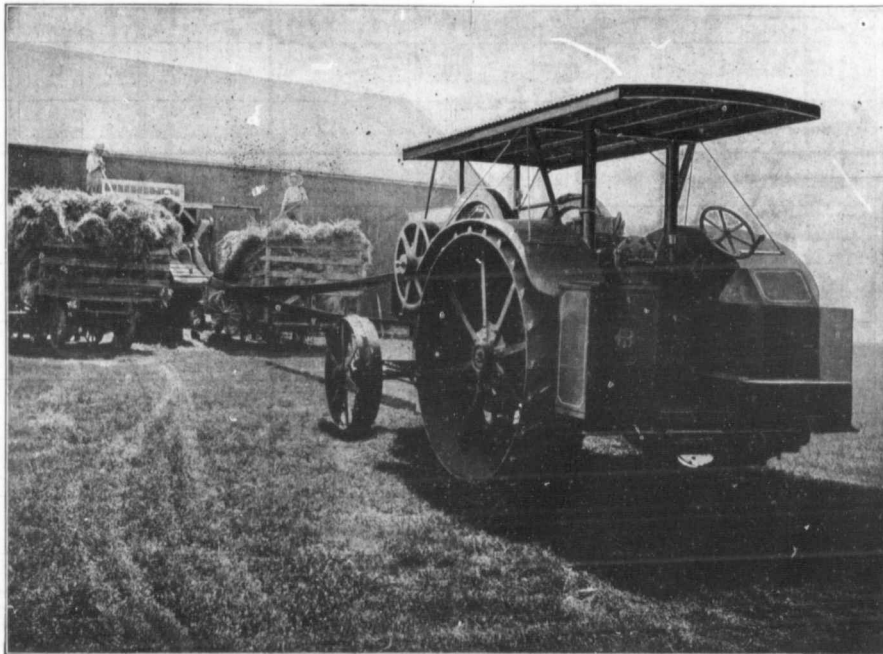
is held and if its something they want it should by all means be provided for them. If they find it of no value then let us stop it. We would like to hear the views of both farmers and manufacturers on the subject. Just what do you think of it anyhow and if it is something you really want, then how can it be made bigger and better? Let us hear from you.



The Cockshutt Headquarters and what the surroundings looked like in the 1912 Contest.

Buy an IHC Outfit and Get Threshing Efficiency.

The cost of running a threshing outfit is perhaps the most important thing to consider in the purchase of a new outfit. Allowing a margin of one size for safety, the smallest outfit that will do your work is the cheapest you can buy. It is easiest to transport, easiest to set and costs least to run.



When you have decided on the size needed, go to the I H C local dealer and order the outfit from him, including an I H C oil tractor or portable engine, if you want to get through the season with the least expense for repairs, fuel and oil costs, and attendance.

I H C tractors and engines are so simple that any man can understand and manage one. That makes them economical because you do not need a high-priced, specially-trained engineer to operate your engine. I H C tractors and engines, carrying their daily run supply of fuel, do not require a coal tender. Since the fuel is automatically supplied to the engine, it does not need constant attendance, an occasional oiling is enough. The engineer starts and stops with the work so there are no standing losses. There are no sparks to set fire to stacks, no smoke or soot to inconvenience your helps. Little time is spent in setting.

With all these advantages it should be easy for you to decide on an I H C outfit. See the I H C local dealer for catalogues and full information or write the nearest branch house.

Western Canadian Branches

International Harvester Co. of America

(Incorporated)

Brandon, Man. Lethbridge, Alta. Regina, Sask. Weyburn, Sask. Calgary, Alta. North Battleford, Sask.
 Saskatoon, Sask. Winnipeg, Man. Edmonton, Alta. Yorkton, Sask.

JUDGES SCORE SHEET AS WORKED OUT BY THE JUDGES IN THE 1912 MOTOR COMBINE INDUSTRIAL EXHIBITION

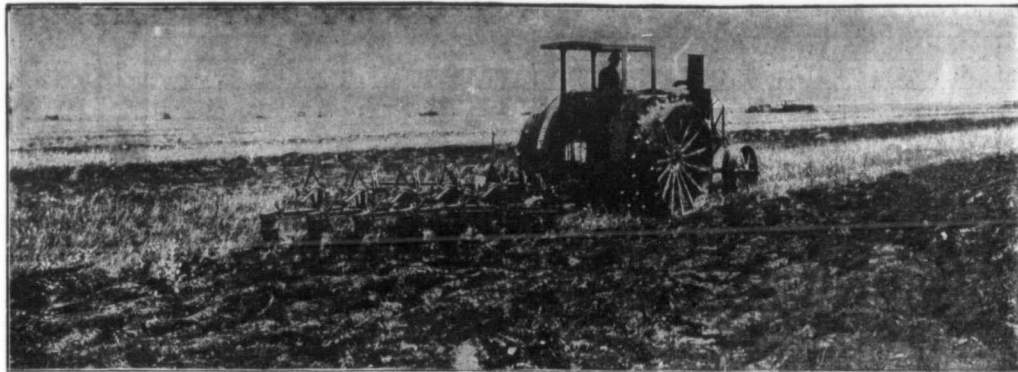
CLASS 76 Section	Entry Number	Highest Possible No. of Points	Intern'l Comb. Steam	ECONOMY BRAKE TEST				MAXIMUM BRAKE TEST				Points for H.P. Economy
				145	15	30	190	35	20	10	65	
				140	35	15	190	35	20	10	65	
Maker's Name		H.P. Hours per unit of Fuel	H.P. Hours per unit of Water	Steadiness Vibration Condition	Total	H.P. Maximum H.P. Economy	Evenness of Load	Condition of Engine	Total	Points for H.P. Economy		
B.—Gasoline	2	Canadian Heer	125.5	15	20.4	160.9	17	14	9	40	8	
	3	Avery	124	7.2	23.6	154.8	25	18	10	53	9	
	4	J. I. Case	128	14.2	23.9	166.1	14	18	10	42	12	
	5	Goold, Shapley & Muir	105.7	15	18.3	138.9	15	17	10	42	12	
	6	International Harvester Co.	132.8	6.8	18.8	158.4	23	15	9	47	8	
C.—Gasoline	7	Sawyer Massey	97.8	14	26.4	138.2	23	18	10	51	9	
	8	International Harvester Co.	134.1	6.1	19.5	159.7	18.5	19	10	47.5	12	
	9	" " "	123	6.6	21.5	151.1	23.5	17	10	50.5	8	
	10	Goold, Shapley & Muir	Withdrawn									10
	11	Canadian Holt	108.8	15	25	148.3	20.5	17	9	46.5	12	
	12	Aultman-Taylor	145	5.9	24.4	175.3	23	18	10	51	14	
	13	J. I. Case	104.3	6.4	22.6	133.3	22.5	19	10	51.5	9	
15	Diamond Iron Works	88.7	14.5	25	128.2	18	17	10	45	9		
D.—Kerosene	1	Canadian Heer	114.2	14.2	20	148.4	17.5	14	9	40.5	9	
	16	Rumely	92.1	7.3	20.3	119.7	29.5	19	10	58.5	9	
	18	International Harvester Co.	124.6	6.1	21.3	152	18.5	19	10	47.5	11	
	19	Avery	135.5	11.2	21	167.7	14	17	8	39	7	
E.—Kerosene	21	International Harvester Co.	131.4	6.5	23	160.9	21	19	10	50	10	
	22	Aultman-Taylor	138	6.4	27.7	172.1	18.5	18	10	46.5	12	
	23	Rumely	145	9.9	20.9	175.8	31	16	10	57	14	
	24	J. I. Case	86.9	5.9	23.9	116.7	25.5	17	9	51.5	7	
F.—Steam	25	J. I. Case	100.3	29.6	13.5	143.9	33	15	10	58	8	
G.—Steam	26	J. I. Case	111.3	33.5	14.1	158.9	21	18	10	49	12	
H.—Steam	27	J. I. Case	140	15	7.45	167.45	27	18	10	55	11	
	29	Sawyer-Massey	99.8	34.8	8.95	143.55	23	11	10	47	7	

Cause of Penalties: No. 11 for withdrawing from brake test to adjust engine. No. 19 for Company's representative talking

EXHIBITION HELD AT WINNIPEG JULY 3-20 UNDER THE AUSPICES OF THE CANADIAN ASSOCIATION.

15	25	15	10	10	215	DESIGN AND CONSTRUCTION				Points Penalised	Total Points	Rank	Entry No.	
						15	10	5	30					
35	25	15	5	5	10	15	10	5	30					
Drawbar H.P. Unit of Water	Area Plowed per hour per Econ. Brake H.P.	Quality of Plowing	Distance travelled without replenishing fuel	Distance travelled without replenishing water	Condition of Engine	Total	Accessibility	Protection of Working Parts	Ease of Manipulation	Total				
14.5	23.4	9	4.4		10	143.7	10.5	6	4.25	20.75	365.35	5	2	
11.5	24.7	10	4.5		10	153	8.25	6.25	4.25	18.75	379.55	3	3	
14.5	19.1	9.75	10		10	185.35	6.75	6.75	4.75	18.25	411.7	1	4	
14.5	17.8	9.5	7.6		10	180.7	12.75	6	4	22.75	384.35	2	5	
5	20.2	8.5	7.8		10	138.9	11	6.75	4.25	22	366.3	4	6	
14.5	19.7	8.5	4.9		10	155	8.75	6.75	4.5	20	364.2	5	7	
7.5	21.8	9.75	6.3		10	175.55	11	5.75	4.25	21	403.75	2	8	
13.5	22.9	7.75	4.1		10	146.25	9.5	7.25	4.75	21.5	369.35	4	9	
15	23	10.25	6.5		10	194.55	11.25	5.25	3.75	20.25	29	389.6	3	11
8	25	9.25	6.9		10	199.15	10.75	7	4.5	22.25	447.7	1	12	
7.5	21.8	10.25	8.2		10	152.95	10.75	8.5	4.25	23.5	361.25	6	13	
15	22.9	9.25	3.9		10	151.45	8.5	8.75	3.5	20.75	345.4	7	15	
Withdrawn							10.5	6	4.25	20.75			1	
10	24.6	10.5	4.6		10	152.8	11.5	7	4.5	23	354	2	16	
7.5	19.8	10.25	10		10	176.15	10.5	7.25	4.75	22.5	398.15	1	18	
13	20.4	9	3.5		10	126.5	8.25	6.25	4.25	18.75	15	336.95	3	19
11.5	22.8	10.5	4.2		10	159.5	9.5	7.25	4.75	21.5	391.9	3	21	
7.2	20.8	7.5	6.9		10	174.6	10.75	7	4.5	22.25	415.45	2	22	
12	20.4	11.25	9.8		10	203.45	10.25	6.75	4.5	21.5	8	449.75	1	23
4.8	19.9	9	7.1		10	126.6	10.75	8.5	4.25	23.5	318.3	4	24	
29.5	22.7	9.5	3.1	4.3	10	160.6	13.5	8	4	26.5	389	1	25	
35	19.6	10.5	3.5	4.5	10	203.1	13.5	8	4	26.5	437.5	1	26	
29.6	17.1	8.5	5	4.5	10	191.4	15	8	5	29	442.85	1	27	
28.5	18	11	1.5	5	10	150.9	14	8	4	27	364.15	2	29	

to operator during the brake test. No. 23 for setting plows deeper when dynamometer readings were being taken.



Avery No-Man "Self-lift" Plow Sweeps the All the Gold Medals. Avery Tractor proves Greatest Combination

THE STORY OF THE WINNIPEG CONTEST AND

Avery No-Man "Self-lift" Plows swept the field in the Winnipeg Plow Contest by winning the Gold Medals in both the large and small sizes.

In draft, which was the feature given much the most points, the Avery 5-bottom Plow made a wonderful showing, having a draft of only 556 pounds per plow which was 207 pounds per plow less than its nearest competitor. The Avery No-Man "Self-lift" Plow pulled the lightest draft of any plow used in either the Plow or the Motor Contests.

The Avery Tractor was entered in both the Gasoline and Kerosene classes. Note this fact carefully. The Winnipeg Contest proved conclusively that the Avery Tractor will burn either Gasoline or Kerosene successfully and economically and is the Greatest All Around Combination Gas and Oil Burning Engine of its size built.

In the gasoline class the Avery Tractor was first in fuel economy by 1.83 as against 1.59 horse power hours per unit of fuel in the maximum horse power test, developed 1.58 horse power hours per unit of fuel or 0.02 better than the average of all engines in its class in the economy horse power test, and used 1½ pounds of fuel per acre less than the average in plowing.

To demonstrate definitely that the Avery Tractor would burn either gasoline or kerosene it was also entered in the kerosene class. In the economy test it developed the highest number of horse power hours per unit of fuel of any tractor in its class, and was second in the maximum test.

These tests demonstrate conclusively that the Avery Tractor is the Greatest All-round Combination Gasoline and Kerosene Burning Engine of its size. With an Avery Tractor you can have your choice of burning whichever fuel is the cheapest in your locality, no matter what the change in prices may be from year to year (a thing that you can never determine in advance) and be able to burn either one successfully and economically.

THE RESULTS OF THE WINNIPEG CONTEST ONLY COVER PART OF THE FACTS

If you are going to understand the real meaning of the Winnipeg Contest and take all the facts into consideration in comparing machines

before you buy, you must see clearly just what the Winnipeg Contest does and does not cover.

The Motor Contest is almost entirely a question of fuel economy. Design, strength of construction, durability, ease of handling, simplicity, weight and other features are practically not considered at all.

The Plow Contest is largely a question of Draft and Quality of work, with no consideration of the expense of using the plow or its strength of construction, and very little of the question of the ease of handling.

You can readily see that the Winnipeg Contest doesn't tell the whole story of which is the best machine. The only way to judge a machine is to consider all the facts—those which the contest covers and those which it does not cover.

OTHER FACTS ABOUT THE AVERY LIGHTWEIGHT TRACTOR AND NO-MAN "SELF-LIFT" PLOW WHICH THE RESULTS OF THE WINNIPEG CONTEST DO NOT COVER.

In the first place, no credit is given for the fact that the Avery Tractor and No-Man Self-lift Plow was the only One-Man Outfit in the Entire Contest. The fact that the Avery Plow saves from 15c to 20c per acre by doing away with the plow man, is not considered in the results. If this were taken into consideration (and every man who buys an outfit has it to consider) the results would show that the Avery One-Man Outfit plowed the cheapest acre of ground in either the small gasoline or kerosene classes, and is therefore the cheapest outfit for any man to own and operate, and will do your plowing cheaper per acre than any other outfit of its size in the world.

That's one of the Great Big Things that the Winnipeg Contest does not cover. Don't overlook this fact.

No credit was given the fact that with the Avery One-Man Outfit you can run the entire outfit alone without having to bother with a

**AVERY COMPANY, 675 IOWA
HAUG BROS. & NELLERMÖE CO., WINNIPEG, REGINA,**



Field in the Winnipeg Plow Contest, winning Gasoline and Kerosene Burning Tractor of its size built.

THE WONDERFUL AVERY ONE-MAN OUTFIT.

hired man, or the fact that the Avery Plow does away with all the hard, back-breaking work of lifting and lowering plows by hand levers.

No credit was given the fact that the Avery Tractor was the lightest weight engine in its class, considering the number of plows which it pulled. It weighed 2885 pounds (or almost a ton and a half) less than the average of the engines against which it competed.

One of the prominent farm papers, in discussing the Contest says this:

"One criticism that might be justly made is that there is no test showing the adaptability of the farm tractor for soft or plowed ground. This is a very important point, and the real value of a farm tractor depends upon this point. There were engines in competition that had a time keeping on top of the prairie sod, and it would be interesting to see what they could do on soft ground."

That's absolutely the fact as everyone is beginning to understand. One of the most important facts for any man who is buying a Tractor to note clearly is that the day of the heavy, complicated Tractor is past and they are out of date. The Avery Tractor marks the change from the heavy, complicated style to a light-weight, simple construction.

The Avery Tractor doesn't pack the ground,—it travels over softer ground without miring down,—it doesn't waste fuel moving useless dead weight,—and you can get into the field earlier in the Spring or after a rain.

All these facts—which mean so much to every farmer—are not considered in the results of the contest.

And there are also other features which you will recognize as meaning a whole lot to you that the Contest either does not cover at all, or, if at all, only to a small degree. Among them is the fact that the Avery is the simplest Tractor built, that it has the least gears

of any engine, no fan, no water pump, no outside lubricator, only one clutch, all of which means that it's easier to keep in order and has fewer parts to break or cause trouble. The question of guarantees was not considered, or the fact that when you buy an Avery Tractor and "Self-lift" Plow you get an outfit that is all made by one Company.

And the big question of durability—keeping going day after day and year after year—is of course not covered by the Contest, as it cannot be determined by any two or three hour test, but on this point we can submit you the experience of hundreds of users of the Avery Tractor and Plow which show that the Avery Outfit stands up in wonderfully fine shape.

ALL SUMMED UP—THE RESULTS OF THE WINNIPEG CONTEST, THE EXPERIENCE OF USERS AND ALL THE FACTS DEMONSTRATE CLEARLY THESE FOUR THINGS:

FIRST—That the Avery Tractor will burn either Gasoline or Kerosene successfully and economically, and is the Greatest Combination Gasoline and Kerosene Burning Tractor of its size built.

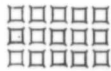
SECOND—That the Avery No-Man "Self-lift" Plow is absolutely in a class by itself in every way, and not only beyond comparison with any hand lift engine gang because of its "Power lift-Self Drop" Device, but is also the lightest draft of any plow.

THIRD—That the day of the heavy, complicated Tractor is past, and the Avery Light-weight, Simple Tractor marks a new stage in Tractor development and leads them all.

FOURTH—That the Avery "One-man" Outfit plows the cheapest per acre of any Outfit of its size built today.

Write or telephone us, or call at our factory or any of our Branch or Jobbing Houses and get all the facts about the Avery Tractor and No-Man "Self-lift" Plow—the Greatest Outfit of its kind in the world. And don't forget the Avery Double Undermounted Steam Engine, Avery Single Cylinder Steam Engine, Avery "Yellow Fellow Grain Saver" Separator and Avery Gas Farm Truck—the most Original and Improved Line of Threshing, Power Farming and Hauling Machinery on the market.

**STREET, PEORIA, ILLINOIS,
CALGARY, WESTERN CANADIAN DISTRIBUTORS**



The Engine Gang Plow Competition



THE world's first engine gang plow competition is now a matter of record. Five years ago, or six at most, it would have been absolutely impossible to hold such an event simply because there were no engine gangs, in the true sense of the word. Today, however, the engine gang plays as big a part in the success of traction cultivation, as the tractor itself, for

regular stock, not being built especially for competition.

Each entry shall be allotted an official number, which shall be displayed during the competition.

Any firm or individual shall not enter more than one plow in each class, unless the plows be radically different in construction.

Should the judges find the en-

One man only, except observers, will be allowed to each plow during the test. No other person to be allowed on or close to the plow except the official judges and observers.

The names of the operators to be furnished the judges at commencement of test.

Each contestant must make vision for an engine to pull his plow or plows. He must also ar-

of one round of the plowing field or longer if deemed necessary by the judges. The contestants may use any kind of engine they wish. The depth of plowing to be uniform, and as directed by the judges. Each plow must cut full width. A recording dynamometer will be placed between the engine and the plow, which will accurately record the pull.

In connection with the plowing test the quality of plowing, which is to be judged by prominent agriculturists, shall have special reference to: Evenness of depth of furrow, uniformity of thickness of the furrow slice, straightness of furrow, finish at the ends. In connection with evenness of the depth of furrow, the exact depth prescribed by the judges must be maintained throughout the test; the number of furrows opened at the commencement must be carried through to the end of the test.

Score.

The following are the points upon which the awards will be made:—

1. Draft 40
2. Evenness of depth of furrow 15
3. Lay of furrow slice..... 10
4. Evenness of cut of inside plow and of thickness of furrow slice 10
5. Ease of adjustment and manipulation of plows 10
6. In and out at ends..... 5



The Avery 20-40 Gasoline Tractor demonstrating the Avery Power Lift Plow on the Contest Field. This plow won Gold Medal in Section A.

without it no such strides could ever have been made in power farming.

Those of our readers who read our April, 1912, issue more or less familiar with the various makes of engine gangs now upon the market, and if the discussions of the various makes were followed closely the score sheet as used in the plow competition at Winnipeg in 1912 should be readily understood.

For the benefit of those who may not have followed the contest rules closely, we will give them here.

The entries shall be classified as follows:

Class 77, Sec. (a)—Engine Plow with six bottoms and under.

Sec. (b)—Engine Plow with over six bottoms.

Prizes in each class shall consist of: First prize, gold medal; second prize, silver medal; third prize, bronze medal.

In all classes where there is no competition a diploma of award only may be given, upon which will be set forth, together with the number of points scored, that it was the only entry in the class.

Entries.

All entries must be accompanied by an affidavit that the information therein is true and that the plow in question is from

regular stock, not being built especially for competition. Each entry shall be allotted an official number, which shall be displayed during the competition. Any firm or individual shall not enter more than one plow in each class, unless the plows be radically different in construction. Should the judges find the en-

range for a recording dynamometer with sufficient charts so that at least one continuous chart can be taken for one full round. All dynamometers and other instruments must be deposited with the judges not later than July 3rd, so that they may be officially calibrated, and shall re-



The Rumely 15-30 Oil-Pull handling a nice patch of Wolf Willow in the Plow Contest. A Rumely Six Bottom Engine Gang is being pulled. This plow won Silver Medal in Class B.

Conditions.

Each contestant must provide a sufficient staff for the care and running of his own entry.

main in their possession until all tests are completed.

Tests.

The plowing test shall consist

7. Straightness of furrow
8. Stops attributed to plow

The "Flour City" Tractor

A Winner in the Field

A Winner of the Highest Honors in All the Contests in Which it has participated

Its Gold Medal Record (4 Gold Medals in 4 Years) AT THE Winnipeg Contests Stands Unequaled

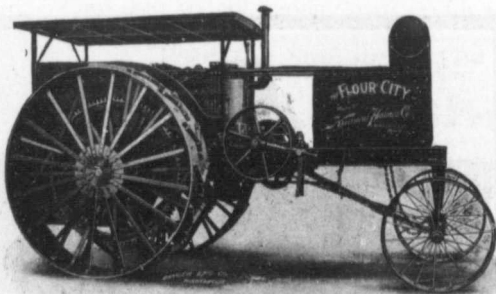


THE shifting from steam to gasoline-kerosene power seems to have become general the country over, resulting in a stampede of various manufacturers and promoters in this direction. Train loads of prematurely developed and hurriedly put together tractors have been shipped here and yon, followed by a retinue of salesmen, and the air is full of rumored big business and combinations.

Through all this turmoil and promotion of new companies, the "FLOUR CITY" has, without any flaunting of banners — the floating of stock — or bonding of indebtedness, modestly plowed its way into the good graces of the farmer. It has been a winner of the highest honors in all the contests in which it has participated, as well as a winner in the field.

The "FLOUR CITY" is not an over-night creation, merely made to sell, but is the ripened result of 14 years' experience devoted exclusively to developing a farm tractor, until it is now universally recognized as the standard of perfection in gasoline traction engineering. As further evidence of the popularity and demand for "FLOUR CITY" Tractors,

We've Had to Enlarge Our Factory and Double Our Capacity Again



Made in Three Sizes, 20, 30 and 40 H.P.

the second time in two years. Before buying a tractor, turn these facts over in your mind, and don't be misled by big talk, or be persuaded into buying a tractor without a record for reliability and dependability like the "FLOUR CITY" possesses.

Write for Catalogue and record of achievements from satisfied users.

Kinnard-Haines Company

828 44th Avenue No., Minneapolis, Minn.



The Hart-Parr 22-45 Kerosene Tractor pulling an Eight Bottom J.I. Case Engine Gang in the Plow Test.

When the entries were all in it was found that nine different plows had been entered as follows:

Emerson - Brantingham Co., Rockford, Ill., one in section A and one in section B.

Avery Co., Peorio, Ill., one in section A and one in section B.

J. I. Case, Plow Works, Racine, Wis., one in section A and one in section B.

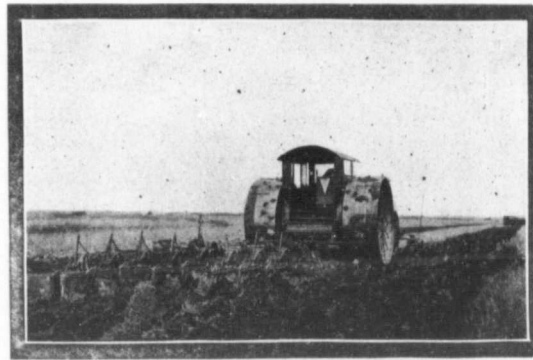
M. Rumely Co., La Porte, Indiana, one in section A and one in section B.

Spaulding Deep Tillage Machine Company, Cleveland, Ohio, one in section A.

The Emerson - Brantingham Co. withdrew, after having entered, owing to the fact that they understood that more than one round was to have been plowed, and when it was found that only one round was allotted, they decided that they could not demonstrate the real merits of their plow, in that one if its particular features was a furrow wheel. This furrow wheel could not, of course, be shown to advantage in simply opening up a back furrow.

The Spaulding Deep Tillage Machine Company were unfortunate in that the railway failed to land their plows in Winnipeg in sufficient time for the contest. Their plow is of the disc type, one disc working behind the other and at a greater depth than the first plow, in this way throwing up the subsoil, yet it does not bring it to the surface.

The Avery Company's entries were of what is known as the power-lift-type, and as they were the only plows of the kind in the test they drew a large crowd of interested spectators. This plow is the result of the inventive genius of Mr. J. B. Bartholomew, president of the Avery Company. The lift is by means of a cam-shaft arrangement driven from the gauge wheel. A clutch is provided which is operated by a rope, extending from the plow on the engine platform.



The Pioneer "30" Gasoline Tractor pulling an Eight Bottom Avery Power Lift Plow in the Plow Contest.



The Judges in the Plow Test comparing their data on the Plowing Field.

On the cam shaft there are a number of cams set firmly, one for each plow. A revolving shaft is made to connect with these cams which carry chains on their limb, whose other ends are attached each to a corresponding plow bottom, lift the plows out of the ground. The plows begin lifting at the right side of the frame, and all leave the ground simultaneously. They are set back into the ground automatically in the same manner, or if desired the hand levers may be used. The whole device is simple, strong and flexible. The rapid growth of the internal combustion tractor is creating a demand for the power lift plow.

Steering devices are being attached to a great many engines, but in order to make the outfit such that one man can run it, it is almost necessary that a power lift arrangement be placed upon the plow in some manner.

The Rumely Engine Gang is the invention of Mr. W. T. M. Brunnemer. Mr. Brunnemer goes back to the ox, for in describing his latest achievement he says:

"In the year 1875 I broke wild sod in Kansas on a homestead 75 miles from a railroad. My team was a yoke of oxen. They and the homestead were all I had. To save my oxen I had to make my plow run light, and to

make a crop I had to make my plow do good work. Since the season of 1887 I have been designing plows, planters, cultivators, and various other farm tools, but when I want to set a plow to run light and do good work, I simply follow the education I gained with the ox team in Kansas."

The Rumely Engine Gang is a triangular frame plow of the independent beam type. The frame is braced and cross braced in such a way as to afford very rigid construction. The two front wheels, which are placed on the outside of the frame, are casters, likewise the rear wheel. A connection is made between the outside land wheel and the rear wheel which travels upon the land in such a way that they can be operated by a lever. This lever is arranged in such a way that the plowman can guide the plow to follow the track of the engine through a gate or in turning. In straight plowing this lever is locked from winging to prevent an accident to the plowman, and to make the plow follow the engine accurately. Each beam is double, but ahead of the gauge wheel they are brought very close together, being separated only by two iron boxes. This arrangement and the standard makes practically a solid beam. An upright cast iron buffer, separate each beam from that of the next bottom, thus keeping them in harmony by allowing them ample vertical play. Cast iron standards are used and the mold board and share are bolted to a cast iron frog. The standard is bolted to this frog, and the former is secured to the steel beams by three large bolts. Two of these three bolts work in slotted holes, allowing the set screw on top of the beam to regulate the suction at the point of the plow. The feature of this engine gang is that it has no land-slide, and the design is such that the plow will follow a perfectly straight furrow, without any tendency on the part of the plows to crowd to the land

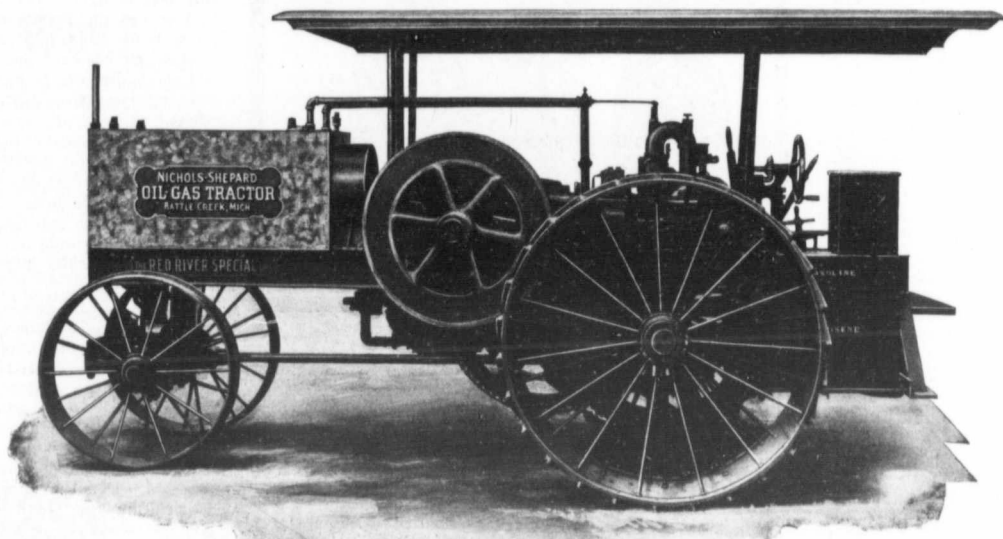


The Hart-Parr 15-30 Kerosene Tractor pulling a Six Bottom J.I. Case Engine Gang in the Plow Test.

NICHOLS-SHEPARD

35-Horse Oil-Gas Tractor

The RED RIVER SPECIAL Line



Burns Kerosene and the cheaper products of Petroleum.

Guaranteed to develop double its rated power on a Friction Brake.

Wonderful Traction Power and lots of power in the belt.

Strong channel-bar frame. Rivets used instead of bolts wherever possible.

Shafting and boxes extra large. Indestructible steel rim drive wheels.

Two cylinder 10½ in. x 14 in. Hit and miss governed.

Equipped with batteries and magneto.

No running idle gears when engine is working in the belt.

Valves, pistons and connecting rods can be easily removed without tearing down any part of the engine.

Cam shaft and all working parts readily accessible.

Working Sample can be seen at all Canadian branches.

Nichols & Shepard Company,

Battle Creek, Michigan

Sole Builders of the Red River Special Threshers, Nichols-Shepard Traction Engines, OIL-GAS Tractors, Gearless Wind Stackers and Universal Self Feeders.

CANADIAN BRANCHES:

Regina, Sask.

Calgary, Alta.

Winnipeg, Man.

through mold board friction. The plows are perfectly straight on the bottom and on the land side, having none of the suction ordinarily found at this point.

The J. I. Case Engine Gang is also of the triangular frame type, and is braced in such a way that a large amount of rigidity is provided. The frame is carried upon three wheels, the two front ones being casters, and all are inside of the frame, in order to facilitate turning. The beams are of the double construction type, and are furthermore a combination of the straight beams and the curve standard. This standard is arranged in such a way between the two beams that when it strikes a stone or other obstruction a brake pin safety device is arranged in such a way that the pin breaks, and thus protects either the beam or the standard or the share. The plow is arranged in such a way that it is either of the single lever type, or of the one lever for two bottom type. The construction is such that two plows may be lifted with one lever, or each plow may be operated by a single lever, this being at the option of the operator. Buffers are placed between the plow beams to prevent side deflection of the plows, and they are placed well backward toward the plow bottoms, which serves to prevent

winging of the beam. The usual gauge wheel in lifting levers is provided, the common gauge wheel being provided for each kind of bottom, while adjustments for suction, winging, etc., are easily effected by means of the long threaded eye bolts where the beam joins the frame shown. The horizontal bolts

joining the tract used by the tractors. The plow test was a new thing and it is needless to say that much more thorough preparations might have been made which would have greatly facilitated the work in hand. In the first place one round is not sufficient to demonstrate the possibilities, the merits or demerits

one round being plowed, the total score was only 90 points.

Draft is an all important thing in an engine gang plow, but 40 per cent. of the total score is too much to be given over to it.

Where several rounds are being plowed it is quite possible for one gang to strike a tougher spot than the others, and be seriously handicapped through so much weight being attached to draft. It is also hardly fair to hold the plow test after the tractor test is over. Tractor tests are serious things, and everyone is so worn out by the time the last engine has been put through its paces that the plow tests do not receive the attention due them.

The arrangements were also bad in 1912 in so far as providing means for the judges to examine the work done was concerned. It is no real fun to walk the length of a mile furrow, and this was what the judges were obliged to do.

It must be said that some real nice plowing was done. As can be seen from the illustrations, the furrows were straight and nicely laid, especially in the case of the Rumely engine gang. The judges were Angus McKay, superintendent of the Indian Head Experimental Marm; S. A. Bedford, Deputy Minister of Agriculture for Manitoba; and

Continued on page 68



The Oliver Trio on the Plow Contest Field

provide for wing adjustment, and the vertical for suction.

It was at first intended to have the plow tests pulled off by finishing up the lands left by the tractors in their tests, but as this was found to be impracticable a stretch of land a mile in length was secured ad-

of any plow. It takes one round to get things working properly so that at least two rounds should be made, and more if possible. The original total score was 100 points, but as that portion which related to "evenness of cut of inside plow," had to be omitted on account of only

ENGINE GANG PLOW COMPETITION.

Canadian Industrial Exhibition, Winnipeg, July 1912.

PLOW DATA

CLASS 77 Section	Entry Number	Maker's Name	No. of Bottoms	Width of Furrow	Style of Coultter	No. of Bottoms per Lever	Plow Standard, Curved or Straight	Gauge Wheels		Wheels under Frame		Weight of Plow Lbs. equipped	Certified retail P.O.B. Winnipeg	
								Diameter	Width	Number	Diameter			Width
A 6 Bottoms or under	02	Avery Co.	5	14"	Fin	Self Lift	Straight	13"	4"	2	23"	5"	3400	\$600.00
	03	J. I. Case Plow Works	5	14"	Rolling	2	Curved	14"	3"	4	20"	6"	4430	540.00
	04	Rumely	6	14"	Rolling	1	Curved	16"	3 1/2"	3	24"	8"	4053	475.00
B Over 6 Bottoms	07	Avery Co.	8	14"	Fin	Self Lift	Straight	13"	4"	4	24"	8"	6875	900.00
	08	J. I. Case Plow Works	8	14"	Rolling	2	Curved	14"	3"	4	3-24" 1-20"	3-8" 1-6"	6276	680.00
	010	Rumely	10	14"	Rolling	1	Curved	16"	3 1/2"	3	24"	8"	6758	825.00

RESULT OF TEST

CLASS 77 Section	Entry Number	Maker's Name	Average Draw-bar Pull	Draw-bar Pull per Plow	Stops due to Plows	HIGHEST POSSIBLE SCORE							Total	Rank		
						Draft	Evenness of Depth	Lay of Furrow Slices	Ease of Adjustment	In and out at ends	Straightness of Furrow	Stops			POINTS SCORED	
															40	15
A 6 Bottoms or under	02	Avery Co.	2780	556	0	40	11	8	9	2.75	4	5	79.75	1		
	03	J. I. Case Plow Works	5800	1160	0	19.1	10	6	6	3	3	5	52.1	3		
	04	Rumely	4580	763	0	30	12	8.25	7	4	4	5	70.25	2		
B Over 6 Bottoms	07	Avery Co.	6590	820	0	27	11	7.5	9	3	4.5	5	67.0	1		
	08	J. I. Case Plow Works	7000	875	0	25.4	11	7	6	3.5	3	5	60.9	3		
	010	Rumely	8750	875	0	25.4	12	8.5	7	3	4	5	64.9	2		

Depth of Plowing 3 1/2 Inches.

Best Ever Foot Lift Sulky and Gang Plows

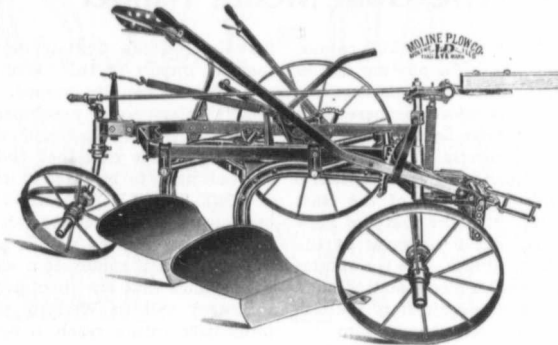
It is of the first importance to every farmer that he should not err in the choice of his plowing implements. The best plow made for plowing is of greater significance to him than the best man made for president. There is no place in economic farming for second class work and material in a tool that has to perform the toughest task in agriculture.

Get the MOLINE make and you'll have the best that up-to-date science and skill can produce

Why?

Because the makers, realising from actual and costly experience in the field that you can't monkey with Canadian Gumbo, have made a plow on a plan that the worst "ex-avating" job on earth cannot overset.

Acme Steel hardened Shares warranted not to break under any condition where plowing for crop is being done.



Why?

Because this plow, while it is of the most attractive design, is constructed in every detail of the highest grade material with a reinforced strength at parts which are ordinarily weak in other makes and court disaster from the beginning.

Acme Steel hardened Shares warranted not to break under any condition where plowing for crop is being done.

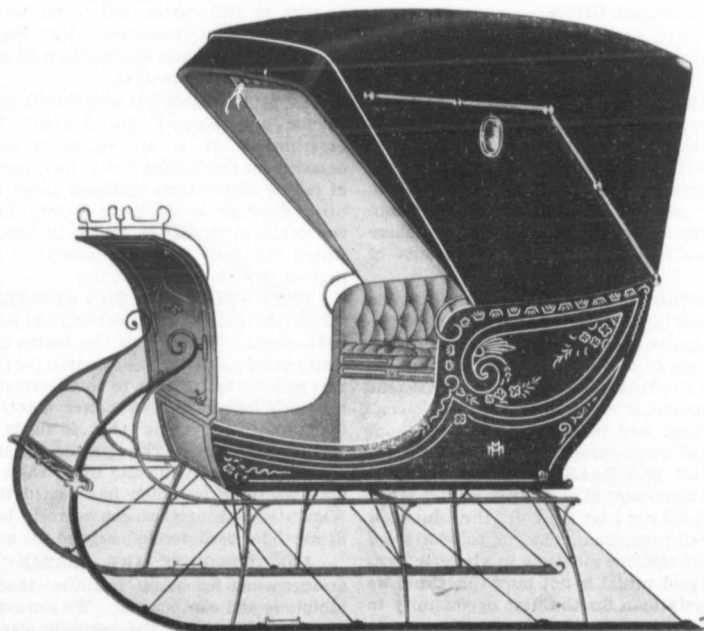
THE MOLINE PLOWS are of the double bail style with direct beam hitch. When raised by the foot, the frame is automatically leveled. This feature has never before been successfully accomplished on a foot lift and is of the utmost convenience to the operator. Write for complete illustrated literature.

Class Comfort Capacity ON THE FROZEN TRAIL

THE Glengarry

meets the last desire for creature comfort, elegance and value in winter travelling on the Prairie trail.

It is the very last word in style, construction, durability and finish. As a top cutter it has made its name of the **Prairie Monarch** by the enthusiastic appreciation of its merits every purchaser has continued to bestow since he first took his seat in it.



THE Glengarry

The "Prairie Monarch" the latest addition to the "Glengarry" line has a closed top with wide extension hood and inside levers.

Can be furnished with storm boards if desired.

Most comfortable vehicle made for winter travelling and it is the most classy article of its kind on the market at anything like the money.

Write us a postal at once for detailed catalog. It will pay you.

Canadian Moline Plow Co., Winnipeg, Man.

Branches: Regina, Calgary, Edmonton



"Everything Begins and Ends with the Soil"

AUG. 1912

THE CANADIAN THRESHERMAN AND FARMER

CANADA'S LEADING AGRICULTURAL MAGAZINE

PUBLISHED MONTHLY BY

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

E. H. HEATH, PRESIDENT

E. W. HAMILTON, MANAGING DIRECTOR

F. C. BRAY, TREASURER

J. D. DUTHIE, EDITOR

(MEMBERS WESTERN CANADA PRESS ASSOCIATION)

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

SUBSCRIPTION RATES

Postage prepaid,
Canada and Great
Britain,
\$1.00 Per Year.

Postage prepaid,
United States and
Foreign Countries,
\$2.00 Per Year.

Failing to receive
paper, you should
notify the office at
once, when mistakes,
if any, will be corrected
immediately.

All Subscriptions
must be paid for in
advance and are positively
discontinued at
date of expiration unless
renewed.

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

The Gold Medal Winner

THE BEST TYKE IN ONE TUSSLE cannot be relied upon to come out top dog in every contest. There is a glorious uncertainty in all human effort as there is in the performances of prize-fighting bull terriers, but it is this universal fickleness that imparts the real piquancy to all competitive functions, and fills the quiver of the least promising marksman with the shafts of hope and expectancy. His futile struggles in the past have never daunted him. He is a sportsman to the last drop of his blood, and as such it will take a life time to drain it in abortive effort so long as hope companions him.

IF GOLD MEDALS WERE PLENTIFUL as golden pippins, there would be an end to the utility purpose of open competitions. It is the fact that there can only be one first that makes the yellow bauble what the laurel wreath was to the Olympic games. There was the incentive of the "cloud of witnesses," of course, in the Grecian sports that is hardly reproduced in the Motor Contest of to-day,

out the "new business" of which the gold medal is productive means far more to the winner than the applause of the multitude in the stadium of ancient Greece.

THE INCIDENT OF 1912 IS OVER and its details are briefly recorded in this issue. It reminded us of two of the three surprises which confronted a celebrated preacher who had a vision of Paradise. The first was to find certain acquaintances there whom he never expected would find their way to the place, and the second was to note the absence of others whom he had every reason to expect would be there. In the Winnipeg Contest we missed with regret friends whom we had hoped to find on the field with their coats off, while we met others whom we did not expect, and had the further gratification of seeing them capture medals in a neck and neck struggle with the giants of other days.

IT IS NO "SCHOOL PICNIC" to the staff of this paper to do what is expected of it in handling an incident of the kind. Were we after an easy job, the discontinuance of this great world contest would lift a great burden of anxiety from our lives, but we don't advocate anything of the kind. We would gladly welcome twice the labor and apprehension if we could by any means contribute to a more widespread and intelligent appreciation of what the great international event means to Western progress.

CONTESTANTS SHOULD NOT BALK or become discouraged if everything at an odd time does not come their way. There never was a contest yet that did not have a fly in the ointment for more than one interested participant. Let us be sportsmen in fact as well as in name and take the medicine in whatever form it is administered. If the gold medal is not ours this time, we have a level chance with every man for the next opportunity to claim it.

THE BEST OF ALL IS that these public contests give the best possible opportunity to every manufacturer to see what the other fellows are doing, to spot his own weaknesses and get right down to an improvement on existing models which may mean "the best yet" by one little adjustment, that had never been thought of but for the fact that it was seen for the

first time on the Contest field. The commercial import of this great international event cannot be fully grasped. The demand for first class power machinery, to put it mildly is tremendous, and the immediate outlook gives the assurance that the supply source is likely to be taxed to its last capacity.

ONE SHOULD PROPHECY with extreme caution under all circumstances, but in these days one assumes no risk in saying that the sale of internal combustion engines and the tillage tools that are their necessary accompaniment will in Western Canada in the immediate future reach a figure altogether unprecedented in the history of farm machinery, and of which even the most sanguine spirits of this day of grace have no conception.

SITTING IN IDLENESS AT HOME, or even with his days and nights crowded with engagements in the conduct of his factory are not the conditions under which a manufacturer will get to the front with his specialty. Unless he travels afield in these days and by actual contact with the market gets to know its voice and the size of it, he will drift behind and his business will stagnate as sure as still water will turn sour in the sun. The most enterprising and imaginative Gas Engine Man in the States cannot form any real appreciation of what is going on in this rapidly expanding market.

HE MUST COME TO WINNIPEG at least once a year to the tractor and plowing tournament. It may seem a costly experiment. It is an expensive business if he makes it an occasion for sky-larking but if he comes with the serious purpose of taking observations and goes home to incorporate them with his programme in the home factory, he will never regret it, and the results in prestige as well as in direct business will more than justify the most elaborate provisions he may make for taking part in the contest.

THAT WINNIPEG IS THE STRATEGIC POINT par excellence for anything of the kind is admitted by all who have taken part in the event. Winnipeg is the centre of Canada, it is the great distributing point for the Western part of the Dominion and that part will, for many years to come, remain the greatest market in the world for all kinds of power machinery, for tillage implements and everything that is made for any purpose whatever in agriculture. The spontaneity of the demand a few years ago startled every body and today the bulk of the business of the kind we speak of which has passed through this point to the West is something that can scarcely be credited till the actual figures have been verified beyond all question.

IMPROVEMENTS ARE ALREADY IN PROGRESS in the arrangements for better facilities than have yet been given to exhibitors and contestants. We sorrowfully admit that the condition and location of the grounds placed at the disposal of our friends this year was far from what it ought to have been. This however is a state of things that will not be perpetuated. It is within our knowledge that when invitations to the fray are issued for 1913, competitors will have a guarantee beyond peradventure that everything they could desire in fair play and perfect facilities will be accorded them at Winnipeg.

OUR GUARANTEE

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

High as the Mountain Peak—
 —Above them All!—
 —It Stands!!

MASSEY-HARRIS AUTOMATIC SELF-LEVELLING ENGINE GANG PLOW

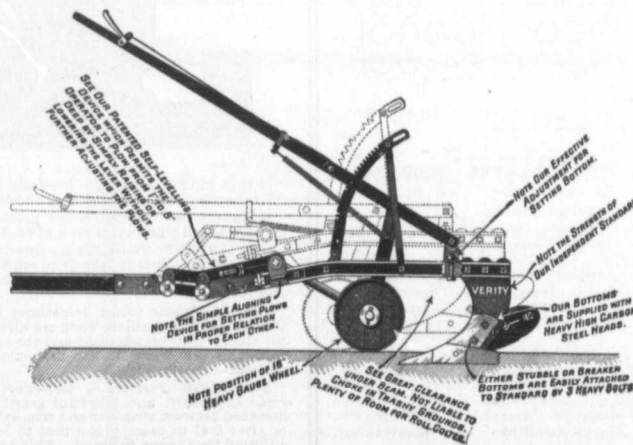
*The Power Plow That's Making
 Them All Hustle---But In Vain*

Josh Billings once said :

“Don't make a fool of yourself and then go around looking for someone to kick you. Get kicked first.”

The man buying an Engine Gang Plow must first make sure that the plow he buys is the RIGHT one The “MASSEY-HARRIS” is the CORRECT one and we invite a most careful inspection.

The only Engine Gang Plow in the world having Self-Levelling Bottoms.



In every way Superior to all other Engine Plows on the Western market

Call upon our Local Agent. He will explain sample and give you all details.

Gauge wheel is in proper place. No tedious adjustments to make. Simplest and most easily handled Engine Plow made. Strongest Power Plow manufactured.

Write for 'Farm Power' and descriptive folder fully explaining Engine Gang Plow.

ER
 JERER
 EE
 sent is
 olunas
 atified
 ser is
 le and
 scriber
 usiness
 y sub-
 rauded
 . Ltd.,
 he loss
 on, if
 place
 f date
 ppear-
 nt be
 riting
 later
 ter its
 pro-
 sub-
 g to
 stated
 oment
 CAN-
 BRAY
 Be
 riting
 sky
 e ad-
 "THE
 SHER-
 EN."
 the
 mate
 most
 fates
 this
 the
 ostly
 t an
 pose
 with
 and
 han
 king
 ance
 part
 reat
 that
 t in
 ple-
 at-
 ears
 the
 the
 ual
 the
 to
 on-
 our
 his
 is
 red
 ure
 ili-

Course in Gas Engineering

Conducted By D. O. BARRETT.

This Course consists of a series of practical talks on the theory and practice of the gas, gasoline and oil engine. They will be simple, illustrated when necessary, and of such a nature that the gas engine owner may easily adapt them to his daily engine work.

LESSON XXI D. O. Barret, M. E. IGNITION.

The subject of ignition has been thoroughly treated before in these columns, and to avoid repetition, we will take it up in a somewhat different manner, showing some of the different connections and their relative advantages.

Referring to fig. 1, the usual method of connecting up four dry cells, such as commonly used for ignition purposes is

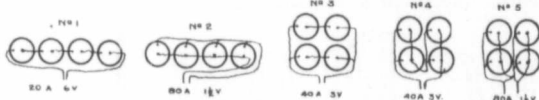


Figure 1.

shown by No. 1. Of course when the smaller cells are used it is customary to employ six, but the connections will be identical. Supposing that each cell gives an amperage of 20 and a voltage of 1.5, from combined cells the flow of current or the number of amperes will still be 20 but the pressure of the current or the number of volts has increased to six. Since the cells are in series, that is, the current from one cell must flow thru all the others, the current pressure of one cell must be added to the others, giving four times the voltage of a single cell, when all the cells are in proper working

cell may readily be determined and it will readily repay its cost in a short time.

In No. 2 the cells are connected in parallel, that is each cell discharges its current directly into the two line wires. In this case the flow of current from the one cell will be added to that of the other, but the current pressure will remain the same as for the one cell.

No. 3 illustrates a method of connecting up both in series and in parallel, increasing both

the amperage and the voltage. No. 4 is practically the same as No. 3, while No. 5 is the same as No. 2. This gives all the possible connections for four cells.

While No. 1 is the simplest method of connecting up a minimum number of cells for ignition purposes, and is the one generally used, it is by no means the most economical.

Fig. 2 shows some results of tests made by the National Carbon Company, to determine the relative value of the different methods. That shown in No. 1, four cells connected in series, gave a continuous action of 20

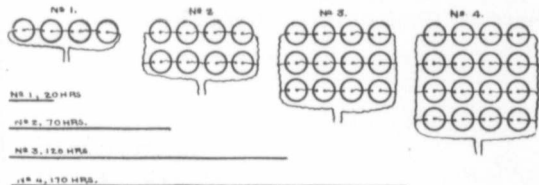


Figure 2.

order. However, dry cells are subjected to deterioration from various causes, and also are not uniform by any means. If one cell in the series is weak it means that a goodly portion of the current from the other cells will be taken up in forcing its way thru the weak cell. This means that one weak cell will often cause a stoppage of the engine, and to properly care for cells of this sort the operator of the engine should provide himself with an ammeter by which he can test each of the cells, determining which has lost its strength, so that he can eliminate the same from the set. The ammeter is an instrument about the size of a watch by which the current strength of a

hours before the engine began to miss fire. That in No. 2, a series-multiple, gave a life of 70 hours, over three times that of No. 1. The increase is graphically shown by the lengths of lines given below the connections. The comparative cost of the different arrangements were

No. 1	25 cents
No. 2	15 cents
No. 3	11 cents
No. 4	8 cents

This shows that everything considered the 16 cells in use cost less than one third that when only four are used.

Fig. 3 shows the connections recommended by the Johns-Manville Company. These are practically the same as that given in Fig. 2 by the National Carbon

HACKNEY AUTO-PLOW

"THE ONE MAN MACHINE"

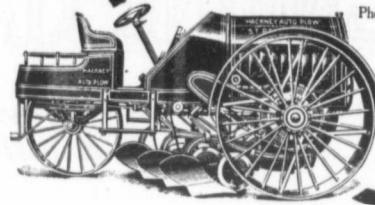
¶ The Hackney Auto-Plow—the One Man Machine—clearly the greatest invention of the age, solves the "labor problem" satisfactorily for the farmer.

¶ It is the *only* "One Man Machine" on the market that can be used for plowing, haying, harvesting, as a stationary engine for power purposes, and as a tractor for hauling loads, etc.

¶ It is perfectly built and a pleasure to run. It does the work of 10 horses and 2 men, and plows from 10 to 12 acres per day.

¶ It is the *only* machine that *worked every day* at the field trials at the Minnesota State Fair.

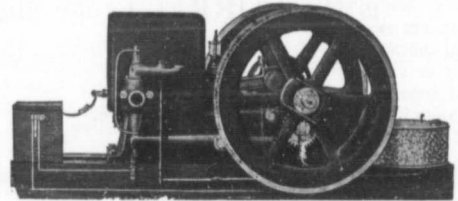
Photos and Catalog on request.



HACKNEY MFG. CO.,
579 Prior Ave.,
ST. PAUL, MINN.

WITTE JUNIOR

The Faultless Engine with the Unequalled Guarantee



Witte Junior, 2, 4, 6, 8 and 11 H.P. Sizes.

If that kind of an engine interests you, we have a booklet which fully describes Witte Junior Gas and Gasoline Engine.

Meantime, we mention a few points which tell how and why we are able to sell this engine on a FIVE-YEAR GUARANTEE.

CYLINDERS—There are no interior cylinder packings, no head to take off, no joints to leak or to require packing. The Cylinder on the Witte Junior is like a bucket at the bottom of a tank of water. (See booklet.)

VALVES—Inside valves sometimes break and slip down inside. This wrecks the engine. They are also liable to wear on the side of the stem. This causes leaks and the engine needs a new head. All valves on the Witte Junior are outside the cylinder, in verticle pockets. (See booklet.)

GOVERNOR—Permits of very close regulation. Works with a rapid movement and powerful gravity leverage. Latch is equally balanced between governor and trip, extremely sensitive, and cuts out or gives fuel in exact proportion to load. Governor can be easily adjusted for change in speed. This connection will last and operate efficiently for a lifetime. (See booklet.)

WORKING PARTS—All made with extra strength. Only 29 principal parts. (See booklet.) The Witte Junior is the result of over 27 years' experience in gasoline engine building. Our booklet gives valuable information to intending purchasers. A post card brings you a copy.

The Empire Cream Separator Co. of Canada Ltd.
H. P. HANSEN, Manager WINNIPEG, Manitoba.

Co. except that 15 cells are here shown. When one cell in this combination loses its strength, it does not materially effect the output of the entire battery, as the current from the other cells is not forced to flow thru it. When dry cells are properly connected, and proper attention and care is given them, there is probably no cheaper form of ignition, when the first cost and life of the ordinary magneto is considered.

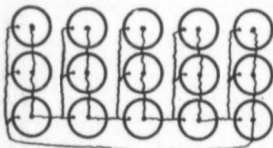


Figure 3.

Of course magnetos are being developed whose life is practically unlimited, and are being so well made and properly proportioned that they are practically free from mechanical defects and in time these will probably supersede the dry cell as a means of engine ignition.

Fig. 4 shows the connections for make-and-break ignition, using six dry cells and coil. The cells are here shown connected in series, and with a single-throw switch, as a means of breaking the connections. This is the system which is usually supplied on the ordinary type of farm engines. This system will be found to give better results if the connections are occasionally reversed, that is, if the direction of flow of the electrical current is reversed thru the

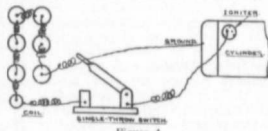
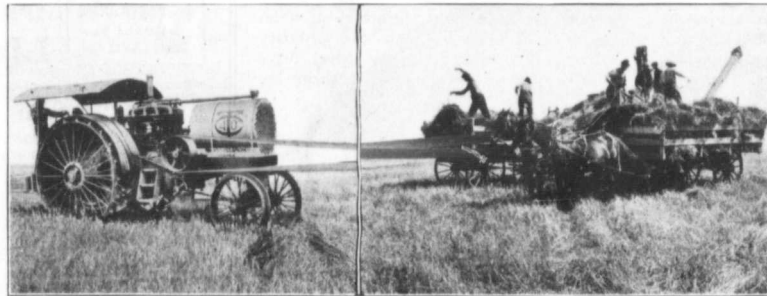


Figure 4.

igniter points. When a spark is produced in the cylinder, that is, when the current jumps from one point to the other a portion of the metal is carried off the point, and the points are worn away, sometimes in such a manner that they give very poor contact when they come together. By reversing the direction of the current, the metal is carried from the opposite point, and the points do not wear away as rapidly, at least, they wear more evenly. To change the connections, the wire which is marked ground, may be fastened to the igniter, and the one running to the igniter may be grounded, or if this is not practicable, the connections at the battery may be changed, the wire from the cell which is grounded should run to the coil, while that which runs to the coil, as shown, should be grounded.



READ THIS FARMER'S LETTER ABOUT The Twin City "40" All-Steel Tractor

"As you know, I am a thresher of 21 years' experience and I bought your engine after having the use of one of them last fall while my steamer was broken down. As it did better work for me than any steamer I had ever had, in regard to keeping a steady motion on the separator, I made up my mind to have one, and now that I have tried it out on plowing, I wish to say, gentlemen, that if I could not get another Twin City "Forty" I would not sell mine for anywhere near what it cost me.

"In the past ten days I have broken and seeded to flax 170 acres and broken 50 acres that I did not seed. In doing this, you will, of course, understand that I have not worked long days as it takes time to get everything arranged to a man's liking, and I have my chores and other farm work to look after.

"Thanking you for the kind treatment received from you and your traveling salesman and the expert who came to start me out, I remain,

Yours very respectfully,
C. J. LARSON,
Argyle, Minnesota "

Why shouldn't a farmer be pleased with a record like this?

"Steadier power than a steam engine for threshing." "220 acres plowed and 170 acres seeded in 10 days besides time for regular work."

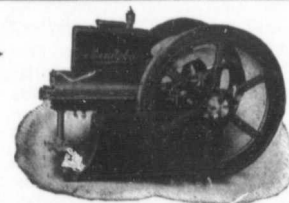
Our new Tractor Book H tells all the details of how the Twin City "40" is made. It will pay you to read it.

See a Twin City "40" Agent. There is one located near you. He's a good man to know—can tell you a whole lot about how to do your farm work most profitably. He'll explain all about the Twin City "40" and "show you." Let us send you his name.

MINNEAPOLIS STEEL & MACHINERY Co. of Canada Ltd.

REGINA SASKATCHEWAN

You get a "Square Deal" after you buy a *Manitoba* Engine



It is a part of our policy to take as great an interest in the purchaser of a MANITOBA Engine, after he has bought and paid for it, as before he made his purchase.

We guarantee our Engines to be free from imperfections in materials and workmanship. Any such defect is made good by us at our factory, within two years of date of purchase.

No dealer is allowed to handle MANITOBA Engines who attempts to avoid the obligations of our straight-forward guarantee. Every official in our Company, and every representative we have anywhere has to stand by our guarantee and carry out our "make-good" policy. We keep MANITOBA Engine buyers thoroughly satisfied.

MANITOBA Engines are so splendidly built that this policy is not much of a burden upon us. We are constantly putting more money into the building of our Engines, and yet the price does not increase, for with a greater output from year to year, we are able to cut down the cost of building.

Let us send you our catalogue. There's a wealth of sound and practicable information in it, and scores of plain facts that every engine user should know. A post card brings it by return mail.

"Made in the West for Western needs."

WE MANUFACTURE Gasoline Engines, 1 1/2 to 25 h.p. Wood and Iron Pumps Pumping and Power Wind-
Grain Grinders, 6 to 12 inch Wood Saws, all sizes mills, 8 to 14 feet.

THE MANITOBA WINDMILL AND PUMP CO., LIMITED,

BRANDON, MAN. CALGARY, ALTA.

In Fig. 5 is shown the connections for both magneto and dry cells the engine being operated upon the magneto, while the dry cells are provided for starting purposes. With the ordinary

magneto are preferable where a magneto is to be used at all. One of the principal troubles experienced with the ordinary magneto is in the bevel drive with which most of them are

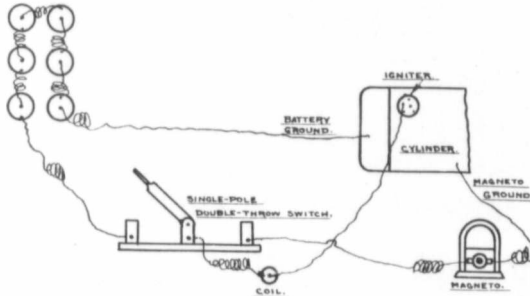


Figure 5.

low tension magneto it is necessary to force the current thru cells. With the single-pole double-throw switch shown, the coil is connected between the the igniter and the central pole, while the other poles take the battery and magneto respectively. The battery and magneto are each grounded altho they may be grounded on the same wire.

equipped. A bevel friction wheel is pressed out against the fly wheel of the engine by means of a spring, and when the proper speed is reached this wheel is pulled back by means of a governor weight, thus keeping the speed within the proper limits. These bevel wheels are continually giving trouble and the magnetos which are gear driven are to be preferred.

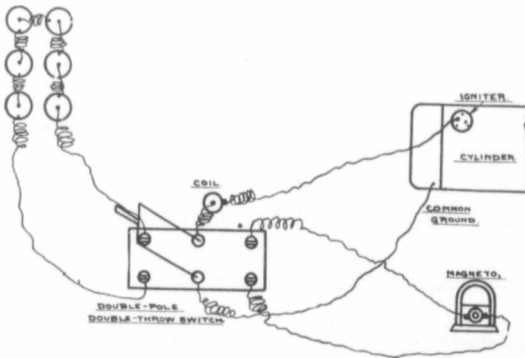


Figure 6.

The system used as shown in Fig. 6 is the same as shown in Fig. 5, with the exception that a double-pole double-throw switch is used; here the two central poles are used for the ground and the igniter, while the connections from the battery and from the magneto go to the poles at each end. Thus when either the magneto or the battery is connected to the engine the other system is entirely cut out, while with that shown in Fig. 5 each has its own ground, and in the case of leakage, which might easily happen, the battery would be drained.

There are several magnetos upon the market at the present time which are suitable for make-and-break ignition, and which do not require the use of batteries in starting, and these

The Man I Like.

"The man I like," says one, "is always ready to lend a hand where he is wanted. If you have a function on and call for his help, he will design and put up the decorations, lay the table, help with the cooking, sing a song, tell a good story, invent a novel game, tide over a gap or awkward contretemps, and altogether be the life and soul of the party. "He is a good conversationalist. He never talks unnecessarily, and he seldom indulges in idle, empty chatter. He does not bore you. But when one of those terrible silences fall upon a dinner-table, it is he who will break it with some trivial remark which sends the conversational ball rolling again in its brightest and happiest vein.

The Kind We Build
is the Kind We
Should Like to Buy

**Rumely
Liquid-Fuel Tank**

will last a life-time and stand the hardest kind of service. It will pay for itself many times over by its saving of oil, time and labor. This big capacity tank will hold a two-week's supply of fuel for a small engine, and enough fuel to last the biggest engine at least a week.

It is indispensable as a part of the equipment for any internal combustion engine.

The capacity of the tank is 510 gallons. It is made from high quality 12-gauge steel, rolled into shape. All seams are closed by our special oxy-acetylene welding process—making a tank that is absolutely leak proof. It can be placed on any ordinary farm truck or wagon. A solid platform is built on top of the tank so that the pump can be rigidly attached. All necessary pipe connections and a heavy brass faucet are furnished free.

The trucks are equipped with steel drawbar reach with loop in rear for hooking on other vehicles when pulled by tractor. Wheels are of steel, 34" front and 44" rear, with 4" tires. Truck has standard 56" tread, and is equipped with a combination extension tongue for use with horses or tractor, and with a comfortable spring wagon seat.

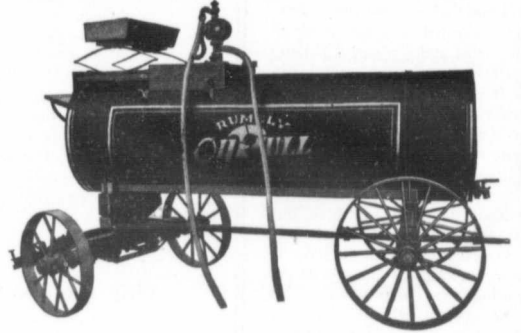
The tank is equipped with *Trohers Rotary Barrel Pump*—the most compact, durable and efficient pump we can buy for the purpose. The suction gears of our pump are of cast iron, milled to gauge, assuring easy operation with high efficiency, and absolutely preventing leakage at joints or connections. Suction and discharge can be alternated by simply reversing motion of crank. This feature makes it possible to empty the hose after using.

A special feature of our 1912 fuel tank equipment is our rot-proof kerosene hose, built to withstand erosion of oil. This hose furnished with every Rumely liquid-fuel tank.

Tanks are sold with or without pump and trucks.

For further information drop a postal card to—

RUMELY PRODUCTS CO. 1972 Dufferin Ave. Winnipeg, Man.

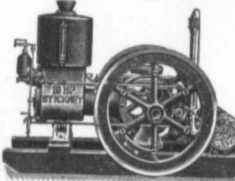


THE CANADIAN AIR MOTOR



When you buy a Canadian Air Motor, you buy SERVICE which MONEY cannot BETTER, for Mother Nature furnishes Power FREE! And thousands of people own a Canadian Air Motor—thousands of people with no disposition or desire to own any other make. Doesn't that present an impressive picture to your mind? From the economy standpoint alone it is GOOD BUSINESS to learn about the Canadian Air Motor. Write for Catalogue to-day.

STICKNEY & CHAPMAN Gasoline Engines



The economy of the Stickney and Chapman Gasoline Engines merely BEGINS with the price you pay for them. FAR GREATER economy than they lie in the CHARACTER and the LENGTH of SERVICE you get from them. They are built and have the unique fitness to do their work better and for a greater length of time at less expense than any other Engine. Chapman Engines, 2 H.P., Stickney Engines, 1 1/2 to 20 H.P.

THE FLOUR CITY TRACTOR



The FLOUR CITY is one of the names that the last generation have written LARGE in the history of Tractor building. The Tractor bearing the Flour City name is not an experiment, but a tried and tested success.

Let that thought guide YOU when you decide to buy a Tractor!

WE ARE HEADQUARTERS FOR:

Well Drilling and Boring Machinery, Grinders, Feed Cutters, Pumps, Tanks, Pitless Scales. Everything in Water Supply Material.

Ontario Wind Engine & Pump Co. Ltd.
Winnipeg Calgary Toronto Montreal

The "IDEAL" Medal Winner

Our "IDEAL" 35-22 Tractor took the silver medal in Class "B" at this year's Winnipeg Motor and Plowing Tests. The improvements which we incorporated in our 1912 model, made possible the splendid showing of our "IDEAL" Tractor and gained for it the highest points awarded in Class "B" for design and construction.

The "IDEAL" has two opposed cylinders, placed horizontally on cast bed pieces. Pistons are operated by a two-throw crank shaft, placed in heavy bearings between the two cylinders. This gives perfect balance and ensures the greatest power at lowest cost.

The engine is governed on the throttling principle, and is fitted with jump-spark ignition. We use the vibrating Bosch system of ignition, which is positive in action, no batteries being required, and works irrespective of weather conditions.

All levers are within easy reach of the operator. Drive wheels are made on our improved 1912 pattern, adopted after many tests. Our wave pattern ground locks prove best for heavy, sticky soil.

The "IDEAL'S" steering device is similar to that in automobiles. Front wheels are attached to axle, permitting short, sharp turns. Our steering device overcomes all "walking" of the front wheels, and enables the operator to run perfectly straight when plowing. This feature is fully protected by patents.

The Cooling System is of the automobile type. It gives perfect results with only a slight evaporation of water. Water jackets of cylinders are so constructed that only a small percentage of water is heated at each explosion.

There are many other points about the "IDEAL" Tractor, that make it best for Western use. Let us send you our catalogue, which describes it fully, and gives letters from users, telling of their experience.

Buyers of the 1912 "IDEAL" 35-22 are already writing in their appreciation of the work it does.

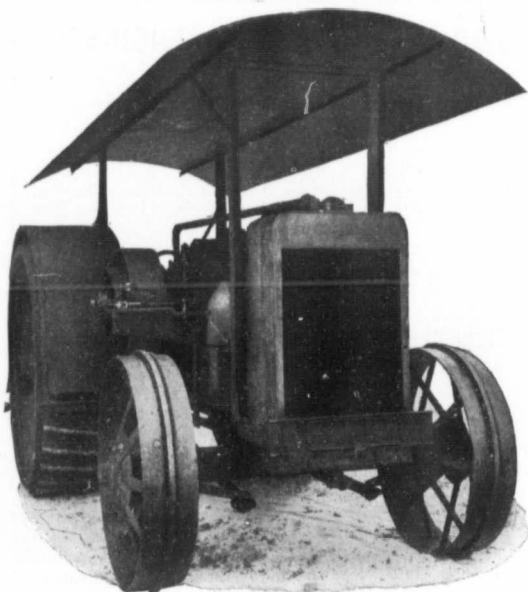
Gold, Shapley & Muir Co. Ltd.,

MANUFACTURERS OF "IDEAL" Gasoline Tractors, "IDEAL" Hopper Cooled Gasoline Engines, "Maple Leaf" Grain Grinders, Windmills and Pumps of every description, Wood Sawing Outfits, etc., etc.

Brantford

WINNIPEG

Calgary



Two Rules for Work.

Every man can be in love with his work if he will always think of how well he can do that work and how easily he can do it. Let every one of us as we go about our daily tasks keep saying to himself every moment—"I am going to do my work so well to-day that to-night I will congratulate myself upon it." That is the way to get others to congratulate you upon it. Win your own intelligent approval in the doing of your work, and you will also

win the honest approval of your fellow-men.

Never say to yourself that your work is too hard; say to yourself instead. "I will do it so well that the very doing of it will make it easy," and never forget that the only real way to do your work easily is to do it well. Never pity yourself. Self-pity begets a sickness of the soul from which few recover.

Never wait for emergencies to call out the might within you. Realize your assets every day. God has made an investment in every one of us. Shall we go to Him when our life is done, giving Him no return upon that investment? When He invested in you, He meant that you should pay him dividends in the betterment of the world and helpfulness to your fellow-men. You can do this only by your best work.

The second practical rule for doing good work yourself is to appreciate and praise the good work of others. Never envy anyone. Jealousy destroys efficiency. The man who spends his strength envying the good work of another man will have little strength left to do good work himself. Get the habit of happiness over other people's success. Practise praising the work of others. It will make your fellow-man happy, but it will make you happier than it makes him.

The Stoke-Hole of a Liner.

Lastly, when I had supposed myself to be at the rock-bottom of the steamer, I had been instructed to descend in earnest, and I went down and down steel ladders, and emerged into an enormous, an incredible cavern, where a hundred and ninety gigantic furnaces were being fed every ten minutes by hundreds of tiny black dolls called firemen. I, too, was a doll as I looked up at the high, white-hot mouth of a furnace, and along the endless vista of mouths. . . . Imagine hell with the addition of electric light, and you have it! . . . And up-stairs, far above on the surface of the water, confectioners were making fancy cakes, and the elevator boy was doing his work! . . . Yes, the inferno was the most thrilling part of the ship; and no other part of the ship could hold a candle to it. And I remained of this conviction even when I sat on the captain's own room, smoking his august cigars and turning over his books. I no longer thought, "Every revolution of the propellers brings me nearer to that shore." I thought "every shoveful flung into those white-hot mouths brings me nearer."—Arnold Bennett, in April "Harpers."

Philosophy.

Boys will be boys, and so will lots of old men.—Abe Martin.

The plea of ignorance will never take away our responsibilities.—Ruskin.

Mean spirits under disappointment, like small beer in a thunderstorm, always turn sour.—Randolph.

WANTED

By September 1st, 1912, several EXPERIENCED COLLECTORS for large implement firm doing business in Western Canada. Reply stating experience to A. G. R., Box 3079, Winnipeg, Canada.

SAVE-THE-HORSE

(Trade Mark Registered.)

SPAVIN REMEDY



"I would not take \$5.00 for your book alone," writes Mr. Lanson Decker, of New Paltz, N. Y., April 25, 1912.

A retail druggist in a "live horse town" within 50 minutes ride from New York City, writes: "I am selling three times more Save-the-Horse than any other one Veterinary remedy; when they want the GOODS that cures they come back for Save-the-Horse."

Put Horse to Work and Cure Him.

WE Originated the Plan of—Treating Horses by Mail—Under Signed Contract to Return Money if Remedy Fails. Our Charges Are Moderate. But first write describing your case, and we will send our BOOK—Sample Contract. Letters from Business Men and Brokers The World Over on Every Kind of Lameness and Advice—ALL FREE to Horse Owners and Managers. Write! AND STOP THE LOSS. TROY CHEMICAL CO., 21 Commerce Ave., Binghamton, N. Y. Druggists everywhere sell Save-the-Horse WITH CONTRACT or sent by us Express Prepaid.



Scotch Bagpipes

Have you longed for the strident notes of the "Pipes"? Instead of being amused by others you can delight them in no time if you learn on one of our

Practising Chanters **\$2.50**
Plain mounted.

Ivory mounted... **\$3.50**

Ours is the largest stock of high grade Bagpipes in America. Prices from \$30 to \$85. All Pipes tested by our own EXPERT piper before they leave the factory. We carry all extra parts and accessories. A completely equipped repair department promptly attends to any repairs—the charges are reasonable, too.

Illustrated Bagpipe and Band Catalogs Free on request. Write for them. 11 C. W. LINDSAY, Ltd., Ottawa, Ont.

Why Brides Wear White.

The majority of brides choose white, when selecting their wedding dress, because it is the conventional color, and many persons are of opinion that it always has been favoured. As a matter of fact, it is of comparatively modern origin, and in most Eastern countries pink is the bridal color.

During the Middle Ages and in the Renaissance period brides wore crimson, to the exclusion of all other colors. Most of the Plantagenet and Tudor queens were married in that vivid hue, which is still popular in parts of Brittany, where the bride is usually dressed in crimson brocade.

It was Mary Stuart who first changed the color of the bridal garments. At her marriage with Francis II. of France, in 1558, which took place not before the altar, but before the great doors of Notre Dame, she was gowned in white brocade, with a train of pale blue Persian velvet, six yards in length.

GASOLINE TRACTION ENGINES

A DEPARTMENT FOR THE USERS

We want every owner of a gas tractor in Western Canada to give us his experience. The owners of gas tractor to-day are in a sense pioneers. They are working out the data and compiling a record of work done that both manufacturer and farmer alike the world over are watching with intense interest. Don't keep what you know under your hat, but let us have a story of your gas tractor work. We will reward every such story with a copy of "Plain Gas Engine Sense," one of the best handbooks we know of on the gasoline engine. Don't neglect this matter but let us have your experience at once.—(Editor.)

Gas Tractor the Real Thing.

In the first place I may say that I consider the gasoline tractor the coming farm motive power. We have been using it two years, but we skip the first year as it was an unusual season. The spring of 1911 we started with a 20 h.p. I. H. C., plowing and discing. About June 1st we got another I. H. C. 25 h.p. With this we had two P. & O. gang plows, five and six bottoms. Such I may say does good work here. In 21 days in June with the two outfits we broke 360 acres of about the hardest plowing. I did this at a cost of about \$1 per acre for gasoline and other oils using about three gallons per acre—the two engines would consume between 20 and 25 gals. per day, and from one to one and half barrels of water per engine; of course, all depending upon number of hours worked. This breaking was from 3½ to 4 inches deep. We always kept three men on each engine, the ground being so hard one man spent most of his time standing on the plows to hold them in the ground. We could not pull more than three or four plows per engine, but we managed to break 17 and 18 acres per day. We averaged about 24 miles daily. One day we made 27. About the end of June it commenced to rain. We had other kinds of trouble, and it did not stop raining until it was cold enough for snow. We were continually pulling one engine out with the other in the road, also in the furrow. Owing to so much rain, we lost a good deal of time, but we managed to break 850 acres.; double disced and dragged 725; summer-fallowed 137; and harvested 500.

We used the 25 h.p. engine and three McCormick binders, and could have pulled more. It gave entire satisfaction, cutting full swaths through grain that I do not believe could have been done with horses. The engine travelled fast enough to give sufficient feed to knife, and the steady pull of the engine is the key to salvation. The cost of oil used discing and dragging would be about 25 or 30 cents per acre. This fall we did our threshing with the 25 h.p. and

32 inch new Racine separator, which, by the way, is a little too large for the engine under usual conditions, although we did fairly well considering the weather. The grain was very tough here the first of the season on account of rain, but often after the frost the straw was brittle and we had no trouble. On the whole, threshing is easier on engine than plowing. In our farming we only use one team, and they hauled water and oil. We have both oil and steam outfits here, about equally divided. I think all gives satisfaction. The greatest drawback to steam is the scarcity of water. We had no more serious breakdowns than two gears and some air valves.

You can use this if of any use to you or consign it to the "w.p."

Yours truly,

George W. Talbot.

Gas Engine Power Most Feasible.

Last year we decided to break up a section and a half of land, which we owned in the Goose Lake country. When we decided on this we were going to do it with the old power, viz., horse power, but finding that horses had raised considerable in price since we had last farmed, we came to the conclusion that we would have to employ other power.

So we purchased a 45 brake 22 traction horse power Hart-Parr engine and a six furrow Cockshutt plow. We repaired to the farm, taking along with us a team of horses and necessary implements and one hired man, which made three of us to handle the outfit.

After having farmed both with horses and by gas power I have no hesitation in saying that engine power is the only feasible power for profitable farming where a man owns twelve or fifteen hundred acres of land. Our expenses for breaking just came to \$1.65 per acre all told.

We purchased our fuel from the Imperial Oil Co., it being their engine kerosene. This cost us 74c. per acre. We used 3½ gallons per acre. The lubricating oils and grease cost 5¼c. per acre.

We drew our water in a ten-barrel tank which lasted both horses and engine for a week. The engine used only a small quantity, it being an oil cooled.

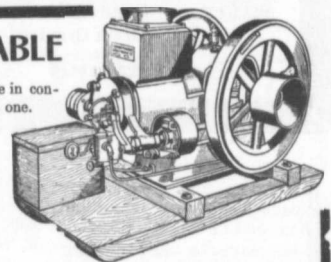


Steam rollers may have their purpose — but excessive weight means discomfort in an automobile — or a man. He alone is sure that the heavy car rides easiest who has never ridden in the light, Vanadium-built Ford. A demonstration is a revelation.

More than 75,000 new Fords into service this season—proof that they must be right. Three passenger Roadster \$775 — five passenger touring car \$850—delivery car \$875—f.o.b. Walkerville, Ont., with all equipment. Catalogue from Ford Motor Company of Canada, Limited, Walkerville, Ont., Canada.

SIMPLE, RELIABLE

Barrie Engines are so simple in construction your boy can safely run one. Little attention required. Reliable and economical.



BARRIE ENGINES

are staunchly built. Cold weather or long hours don't bother them. All ready to run.

No skilled labor required to adjust them. 3 to 100 horse power. Stationary or portable. For gasoline, producer gas, natural gas, and distillate.

Write for catalog. Agents wanted.

The Canada Producer & Gas Engine Co. Limited

Barrie, Ontario, Canada.

Distributors: James Rae, Medicine Hat; Canada Machinery Agency, Montreal; McCusker Imp. Co., Regina; The Tudhope Anderson Co., Ltd., Winnipeg, Calgary, Edmonton, Lethbridge, Saskatoon and Regina.

ASK YOUR DEALER FOR

"Garlock Packings"

Standard for over a quarter of a century, also write for Garlock catalogue showing

"PACKINGS FOR EVERY PURPOSE"

The Garlock Packing Co.

TORONTO

HAMILTON

MONTREAL

Be sure To Renew Your
Subscription Before It's Too Late

We have had no experience in threshing, but my opinion is that threshing would be much easier on an engine than plowing because in threshing the only thing to loosen connections is the vibration of the engine, and the load is always the same or nearly so. Not so in plowing. The weight of the load changes with the soil conditions, and the evenness of the ground, combined with the vibration and straining, which makes the wear and tear of the engine much greater.

Yours truly,
L. Stanley McLellan,
Regina, Sask.

Uses One Gallon of Water per Horse Power per Ten Hours.

I have a 20 horse power gasoline International Harvester Famous engine. I bought it last spring. I did not do enough plowing with engine to give you my experience on the matter. I did not get my plows until the month of July.

I have two Van Slake plows. These were made in Red Deer, Alta. They are a new plow just got out last year, and they are a brush breaker all right. I have not seen anything yet that will lay the sod over nicer.

I think two or three men will be able to run the engine and plows. I have a lot of brush to cut on my quarter, and it takes time to get it out of the way for the engine.

I did not give the size of my plows. They turn from 20 to 24 inches. It will take a team of horses to draw the gasoline. We have to haul it from Penhold as yet.

Plowing is harder on an engine than threshing, especially where there is heavy scrub to jerk it. My engine consumes one gallon per horse power for ten hours. We do not need to use very much water.

I broke three acres of scrub last year and I believe it cost about \$20.00 per acre to cut the brush and break it. About half of my quarter is just as hard to break.

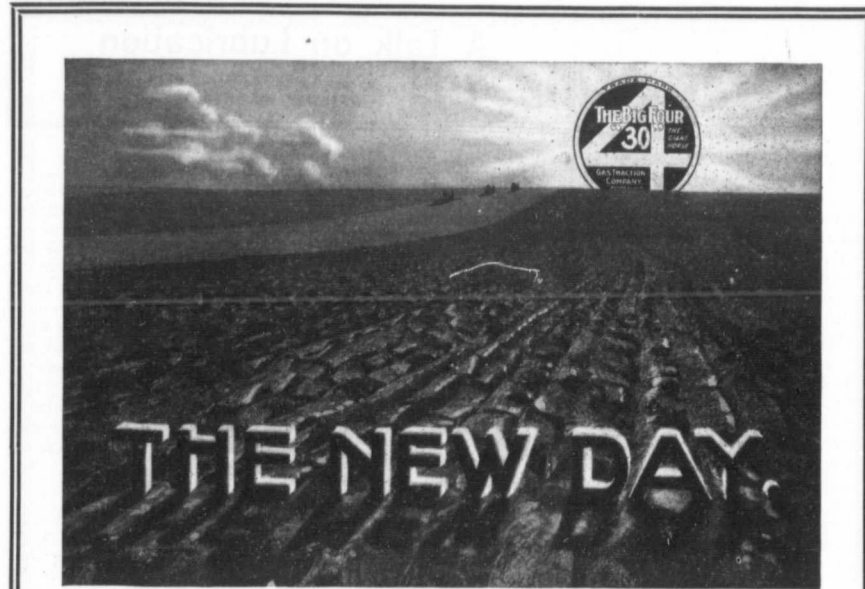
I am sorry I have not more experience to give you, but I hope in a year's time I will have more to tell about these things.

Yours truly,
John Campbell.
Pine Lake, Alta.

Believes it is the Only Way.

I have your favor of January 16th forwarded here to me from Redvers to Arnaud, Man. I will give you my experience in traction plowing at Arnaud, as it has been a little more extensive than at Redvers.

We have three engines of the 30 h.p. "Gas Tractor" type. Two of them were worked at Arnaud



THE BIG FOUR "30" means the dawning of a new day for the farmer, a new era of efficiency, prosperity, success. It means freedom from the expense, trouble and limitations of horse traction and hired help. It means that he can do his work better, quicker and cheaper, and do it when soil and weather conditions are just right. The BIG FOUR "30" almost entirely eliminates the element of chance which until its advent made farming so uncertain. It places agriculture upon a scientific business basis.

To-day, all over the world, the BIG FOUR "30" is revolutionizing agriculture. Its success is built upon a solid foundation of results produced—of good, honest work in the field, well and faithfully done. The BIG FOUR "30" was the first four-cylinder farm tractor built, and it has been first ever since. It has a long record of results behind it, and records of results produced—cold, hard facts and figures—mean more to the farmer than theories of mechanical construction. The farmer is more interested in what other farmers have actually done with a tractor than he is in what anybody thinks it will do. The farmer who invests his money in the BIG FOUR "30" buys a certainty—not a probability.

For instance, reports sent in by fifty-eight enthusiastic BIG FOUR "30" owners, show that during the season of 1911 these fifty-eight BIG FOUR "30's" broke and plowed 82,155 acres—an average of over 1,441 acres for each engine—and disc and drilled 57,233 acres—over 2,201 acres for each engine. Exclusive of harvesting and threshing, these fifty-eight engines did 139,388 acres of farm work—an average of 2,403 acres for each engine. Were the lighter work of harvesting and threshing included, these figures would be practically doubled—and these are only fifty-eight out of the thousands of BIG FOUR "30's" at work all over the world.

Every farmer knows the secret of The BIG FOUR "30's" wonderful success. It is found in The BIG FOUR "30" itself. It is not built to fit a

price. It is made just as good as it is possible to make it, out of the very best materials which it is possible to buy and by the most skillful labor. It is designed and built throughout for the maximum efficiency and that is the secret of its success in North America and throughout the world. Its excellence of design and construction, the superiority of its materials and workmanship, its wonderful economy and efficiency with all fuels, its simplicity of construction and operation and its many valuable exclusive features, are instantly perceived by the farmer, who knows better than anyone else just what a tractor must be able to do for him.

Add to all this mechanical excellence and long records of good work done, the fact that The BIG FOUR "30" is sold absolutely on approval, and you begin to understand why the largest four-cylinder farm tractor factories in the world, working night and day, cannot turn them out fast enough. The farmer does not pay a cent for The BIG FOUR "30" until he has given it a thorough trial on his own farm and satisfied himself that it will do all that is claimed for it. Your signature on an order for The BIG FOUR "30" is merely an expression of your willingness to give it a thorough trial on your farm.

If you are not already familiar with The BIG FOUR "30", write NOW for The BIG FOUR "30" Book—tells you all about it—free. Upon request we will send you a copy of an interesting booklet, which sets forth the reasons why The BIG FOUR "30" did not enter the Winnipeg Motor Competition this year.

Gas Traction Company

First and Largest Builder in the World of Four Cylinder Farm Tractors

156 Princess St., Winnipeg, Man.

Canadian Factory: WINNIPEG

General Offices and Factory: MINNEAPOLIS, U.S.A.

and one at Redvers. My experience is rather limited as we bought our first tractor April 1st, 1911, and began breaking prairie sod about the 1st of May, pulling 6 to 8 fourteen inch Cockshutt plows. I think traction plowing is the only way to plow and plow right. After using our first tractor a short while, so strongly convinced were we that traction plowing was the most satisfactory and economical way of plowing and general farm work that we bought our second tractor of the same make and horse power as the first engine, with 8 P. and O. fourteen inch breaker bottoms.

We use two men with each outfit, consisting of engineer and plowman, while one man can easily operate the engine and plows with the steering device that we have, but we find it more satisfactory to have a man with the plows. We average about 20 acres per day to the outfit using

about 3 gallons of gasoline per acre at a cost of 19 1/4 cts per gallon. Our engine has the water cooling system, we use about 3 gallons of water per day in the hottest weather, and about one gallon per day in the fall or cooler weather. We have about 2,000 acres ready for seeding this spring. We begun discing with one of our engines about the 1st of September, pulling 8-16-16 Deere mansur discs, harrows, averaging 75 acres per day, double disc at a cost of 20 cents per acre, one man operating the entire outfit.

We have not done any seeding with the engine, but expect to this spring. We only had one team of horses on the farm the past season, but expect to have several teams this year, as will require several to do the hauling and lighter work on the farm. I cannot say which is the hardest work on the engine, plowing or thresh-

ing, as I have had very little experience threshing. I do not consider plowing hard on engine, if taken proper care of. The gas tractor is mostly used in this neighborhood.

The following are our expenses per day:—

	Per Day
Engineer, including board	\$4.00
Plowman	\$2.00
Man and team hauling gasoline to each engine	\$2.50
Gasoline 60 gallons at 19 1/4	\$11.55
Lubricating oil at 4 G...	1.60

Total	\$21.65
Allowing for extra	1.35

	\$23.00

An average of \$1.15 per acre figuring 20 acres per day as a basis.

Gould, Burge, McGee,
Villa Ridge.

It is admitted by all that the internal combustion engine as a prime mover has come to stay and that it has already become an important factor in our daily commercial life. Manufacturers, oil producers, and the consumers have viewed this matter from separate points of view and there is no doubt in the writer's mind but that this prime mover has not made the progress in the country that it would have made and that it will make in the future, if the oil producers, distributors and manufacturers had worked closer together.

Get Most of Oils.

In electric lighting business you have, undoubtedly, all heard the term "load factor" used many times. This is, you will appreciate, a term which applies to the condition of the load when averaged throughout twenty-four hours, as compared with their maximum capacity load. All stations are constantly striving to get I. f. as high as possible. The ideal economic condition, so far as oil producing business is concerned, would be to have the demand for various grades of distillates and by-product oils and lubricants in proportion to the supply. In other words, equalize the demand so as to get the most value out of the distillates, and by-product oils; hence we should study, as manufacturers of

the apparatus which consumes your output, to improve the "load factor" of your business.

It is in order that you may realize the existing condition so far as the demands of engines are concerned that I am writing this article. The subject in question you will note, is quite broad, as it covers practically everything the refiner will produce, from highest gravity distillates to the lowest gravity lubricating oils. I wish to touch upon the subject of lubricating oils first and then upon the various grades of distillates and fuel oils, on which we create the demand and you furnish the supply.

In the selection of a proper grade of lubricating oil the conditions of service must always be borne in mind; as for instance, in the selection of an oil for lubricating the cylinder and piston of a large oil engine, it would be desirable to select an oil particularly adapted to the higher temperatures which would be encountered, whereas the corresponding oil would not be the best for the bearings or other parts

A Talk on Lubrication

By S. L. Hadley, Manager of the Gas Engine Department of Fairbanks-Morse & Co.

of the engine which are not subjected to the heat condition which is encountered in the cylinder. Judgment, however, must be exercised in this matter, as the convenience and simplification in the stocking of a single oil for small engines, which oil would be used in the cylinder and on the bearings, oftentimes over-balances the advantages accruing from the selection of two or more grades of oil, according to the conditions encountered, in which case a compromise oil would be of most advantage.

How They Test.

In order to determine the best oil for a given purpose we resort to two methods of testing; one the laboratory and the other the physical test. This testing gives comparative data only, however. It is from the laboratory test that we ascertain the proportion, composition and kinds of hydro-carbons contained. It also reveals any adulteration, and this information is often of considerable practical value as in many cases lubricating oils are adulterated to the harmful extent by adding light

oils, and this adulteration is noticeable by a low flash point and a high burning point. On second thought you will realize that such an oil would be absolutely unsuitable for gas engine cylinder lubrication, although it might possibly answer for the bearings.

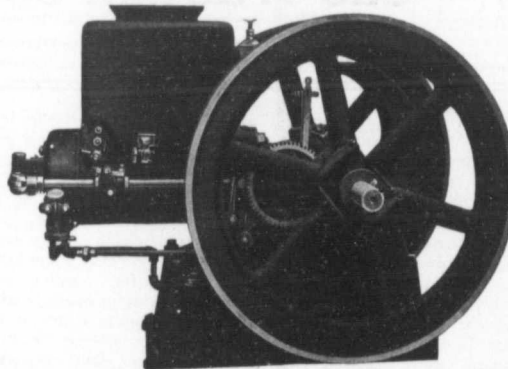
The gravity of the oil should be determined since it indicates whether the oil has body or not. Often we find that a high gravity oil has a low flash point, it being made of more volatiles and lighter hydro-carbons, although there are exceptions to this rule, but the gravity should not be considered too seriously, for it gives but poor criterion in testing certain qualities of the oil. The viscosity of an oil is one of the most important items to be considered when recommending a lubricant for gas engine use. By viscosity, you all realize, we mean the degree of fluidity of the oil, and it is not in proportion to the gravity of the oil, but does stand in direct relation to the co-efficient of friction, which is an important point when considering an oil as a general lubricant for bearings, etc., where not subjected to a temperature over 200 degrees F. The viscosity of an oil varies greatly with changes in temperature, therefore, indicates the value of the oil at these various temperatures and is measured by the time

THE STOVER GASOLINE ENGINE

Stationary, Portable and Traction Engines always in stock.

Don't Buy A Stover

Unless you want the Best Engine on the Market, an Engine that is dependable and will deliver the power with the least consumption of fuel. We have Engines for every purpose at prices before un-heard of



Do You Use

Dry Cells, Crusher Plates, Harness, Oils, Plow Shares, Bag Holders, Scales, Buggies, Harrows, Threshers, Supplies, Belting, Cultivators, Plows, Grain Crushers, Pole Saws, etc.? Write us for prices, they read like a romance.

OUR FULL LINE includes: Fuller & Johnson repairs; repairs for the Wilkinson Plow Line; Shares for all kinds of Plows at reasonable prices, wholesale and retail. Engines for pumping, Churning, Crushing, Grain Cleaning, Sawing, Threshing, and running Washing Machines.

We handle every known Farm Requisite.

Write for our Special Catalogue. When you come to Brandon visit our Mammoth Warerooms and have your mail sent to our care.

Canadian Stover Gasoline Engine Co. Ltd.

EIGHTH AND PACIFIC ANENUE, BRANDON,

The Original Farmers Company.

Agents for Minneapolis line of Threshing Machinery.

COUPON.

Canadian Stover Gasoline Engine Co., Brandon: Please send me Catalogue of your Engines and Sundries, as advertised in the "Canadian Thresherman and Farmer."

Name.....

Post Office.....

in seconds required for a certain standard quantity of oil (100 Cu. cen.) to pass through a standard size capillary tube. To be useful that time is compared to the time for a like quantity of pure water to pass through the same tube. These measurements should all be taken at 70 degrees F., or else corrected from this point. Naturally the lower the viscosity of an oil the greater the lubricating qualities, everything else being equal, but when an oil becomes so thin and fluid that it loses its adhesive action or the tendency to form a film between the two surfaces of the bearing, then low viscosity can no longer be regarded as a beneficial property of the oil, and it is necessary to compare the oil on test to a known useful lubricant having stood up under conditions in practice.

The tendency of an oil to gum is an important factor which must be considered, but the trouble from this source is not frequent, as most gas engine lubricating oils show very little, if any, tendency to gum when subjected to the regular conditions.

Flash Most Important.

Undoubtedly, the most important characteristic of the quality of a gas engine cylinder lubricant is its flash point, which we have hinted before. It is also important to consider the temperature of decomposition, vaporization, burning and solidification of the oil. Again the burning point, which is always higher than the flash point, and which is reached when the oil will flame directly from its surface and continue burning, must be considered, as you will realize that an oil to be useful as a lubricant for hot surfaces such as a gas engine cylinder or piston, must have both a high flashing and burning point. This should be at least 350 degrees F., for if an oil vaporizes it cannot lubricate and must also leave a residue, which will in time cause the piston rings to stick and also increase the friction between the cylinder walls and the piston, which will eventually cause the engine to blow, or in other words, lose compression and consequently, power. Some oils of fair flash tests may be used successfully, but the consumption per B. H. P. per hour will be very high and in all probability the crank end of the cylinder will smoke considerably.

Along with other points noted solidification perhaps demands consideration, but this is important only when the bearing is subjected to low temperatures, as in the case of portable engines standing out of doors in cold weather. An oil should not grow so viscous at the freezing point of

Who Needs a Threshing Outfit ?



A better Threshing Combination than the one we offer Western Farmers does not exist. Take our regular **FAIRBANKS-MORSE OIL TRACTOR** and the **FARQUHAR SEPARATOR** and you have an ideal Threshing Outfit.

THE FAIRBANKS - MORSE OIL TRACTOR is already well known all over Canada, and is doing big work in the fields in every part of the Dominion. It remained to find a suitable Separator, one that would measure up in every way to the standard of the **FAIRBANKS - MORSE OIL TRACTOR**. This was important, even vital, for we must stand back of the Separator chosen.

RUNS ON KEROSENE AND LOW GRADE DISTILLATES OR GASOLINE

Eventually, after many rigid tests, we chose the **FARQUHAR SEPARATOR**, and offer it in conjunction with the **FAIRBANKS-MORSE OIL TRACTOR** as a **GREAT THRESHING OUTFIT**.

IF YOU ARE LOOKING FOR A THRESHING OUTFIT THAT WILL GO THROUGH WITH HARD WORK AND STAND THE RACKET WITH A MINIMUM OF TROUBLE, GET THE

Fairbanks-Morse Oil Tractor :: and Farquhar Separator ::

Both are covered by the **FAIRBANKS-MORSE ABSOLUTE GUARANTEE**, which ensures against defect in materials or workmanship. Let us send you Illustrated Booklets dealing with both machines. Just fill in and mail the coupon to our nearest office, and the Booklets will be sent by return mail.

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

Winnipeg	Saskatoon	Calgary	
Montreal	St. John	Ottawa	Toronto
		Vancouver	Victoria

WE MANUFACTURE

Fairbanks-Morse Oil Tractors, 15-30 and 30-60 H. P.
Gasoline Engines, all types, portable and stationary, 1 to 500 H. P.
Binder Engines, adapted to all makes of Binders.
Marine Engines, 2 and 4 Cycle, 1 to 6 Cylinders
Hand and Power Pumps for every purpose.
Truck and Pitless Wagon Scales.

COUPON C. T. F. 8-12.
(Send it to our nearest office).

The Canadian Fairbanks-Morse Co. Limited
Please send me catalogue describing your 15-30 H. P. Oil Tractor.

Name

Address

water (32 degrees F.) that it will not readily flow..

Another point to consider in an oil is the acid content. This seems but an insignificant item, but it has been shown in practice that an oil rather high in acid content will in time cause considerable damage to the bearing surfaces.

While the laboratory test of an oil indicates considerable of value in the selection of an oil, it is not of great value as a very careful running test, where temperatures, corresponding speeds, power developed and weights per square inch of projected area are all carefully considered. It is on this account that we resort to the double method of testing lubricating oils, checking one method with the other, and from this checking secure results which are approximately correct, notwithstanding

the fact that they are of comparative value only.

Reports on Tests.

I would not consume the space necessary to read through the tabulated results of the tests on eight different samples of lubricating oils offered for tests, and which have been tested in our laboratory, but I have the full reports of the methods and results obtained from both laboratory and physical tests, to which I would refer any of those readers who desire to go into details. I would summarize the results of these tests by saying that some of these oils on the same engine and under the same conditions would lubricate the engine in an entirely satisfactory manner with a consumption of not over .0023 gallons per horse power per hour, whereas in other cases of the eight samples tested the consumption

ran as high as .00651 gallons per horse power per hour. The reports show the amounts of lubricating oil consumed on the various parts of the engine, such as the cylinder main bearings, crank brasses, as well as giving the consumption on the entire engine. All of these tests were made on the same engine operating under the same temperature and load conditions.

The general conclusions drawn from these eight tests are as follows:

All oils tested were of good journal lubricants where the temperature was low. In most cases where an oil is not recommended for heavy duty gas engine use, especially for cylinder lubrication, it is due to a low flash test. The viscosity would be considered fair with low temperatures, but some of the oils showed rather low viscosity at 190

degrees F. and, while the use of these latter oils would be entirely satisfactory in a gasoline engine they would not give entire satisfaction if used in an oil engine where the cylinder temperatures are considerably higher than is usual in engines operating on gasoline and naphtha.

To Cut Down Oil.

All manufacturers of internal combustion engines are striving by use of forced feed lubrication and by reclamation with the aid of filters to reduce their required quantity of lubricants to the smallest possible amount, with the result that we are able in larger Fairbank-Morse engines (50 to 200 horse power) to operate them on low lubricating oil consumption of not over .002 of a gallon per B.P.H. per hour. On first thought it might seem against the interest of the oil producers and distributors that manufacturers work so strenuously in this direction, but on second thought you will realize that the ultimate success of any business depends upon its economic condition. In other words, the greater the service you can give at the lowest cost with a fair margin of profit, the stronger the foundation for your business.

Reverting to fuel oils, the condition which has existed in years gone by is that the internal combustion engines were first brought

out only to operate on high gravity or more volatile fuels, and the enormous increase in the production of engines to operate on gasoline and naphtha has created a demand away out of proportion to the supply of this fuel, there being only a small percentage of the crude oil which distills off into gasoline, whereas a much larger quantity distills off into lower grade oils. As a result of this, vast quantities of low grade oils or distillates have heretofore been a drug on the market and it is with this condition in mind that our company some two years since brought out an oil engine which will work satisfactorily on the lower grades of distillates and on many kinds of fuel oils. While these engines operate on the lower grades of oil, they will also operate with the same degree of economy on the highest grades of distillates, so that the engine may be said to be—in a restricted sense at least—an "all fuel" engine. The exploitation of this engine cannot help but equalize the demand for the various by-product distillates of the refiners.

Competition.

The greatest embarrassment which the customer has experienced in the use of this engine has arisen from the lack of response on the part of the oil distributors. There is no prime mover which is

offered in competition to the oil burning engine in this country which is as economical unless it be hydro-electric current. In many sections where hydro-electric current is becoming so prevalent it is due to the lack of co-operation on the part of the oil distributors and engine manufacturers and, if manufacturers can appreciate what we can do with their output, there is no doubt but that a very large volume of business, which is justly theirs from an economic standpoint, can be reclaimed from the hydro-electric systems.

While great progress has been made in the last few years in the exploitation of the oil engine, there is no doubt in the writer's mind but that we are a decade behind where we should have been if the oil producers and distributors had not been waiting on the engine people to produce an engine and market it, and the engine people had not been waiting for the oil distributors to produce, market and distribute an oil in advance of furnishing an oil engine. Think what it means to each of us in our respective spheres when we realize the requirements and possibilities. The manufacturers' profit on the engine is realized but once. The oil marketers profit not only on fuel, but on lubricating oil as well, is realized monthly and

yearly throughout the life of the engine.

We have one common competitor in the hydro-electric current—considering that steam power has been largely eliminated in all except very large power stations—and as this competitor is very wisely directed it behoves a large percentage of business which is justly ours, and which has been lost through procrastination.

Use Better Oil.

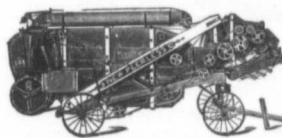
The question might arise in your mind as to whether or not the use of electric motors would create a field for the sale of lubricating oils, and it might be of interest to you to know that our company is producing electric motors of 10 horse power capacity, which requires only ten cents worth of petroleum as a lubricant per year, or in other words, one cent per horse power per year.

We wish to call your attention to a bulletin, which has been distributed over Canada, and which illustrates a point we desire to bring out in an approximate and which would have a bearing upon the future development of the oil business, both as regards fuel and lubricating oils. Since oil engines are now being produced which work entirely satisfactory in an economic way on fuels, as low as 30 degrees

'Geiser' Oil Tractors AND 'Sieveless' Separators

have an honest and substantial appearance which inspires confidence. They appeal to the prospective buyer from the first inspection because they show good quality and best construction.

'Geiser' Sieveless Separators



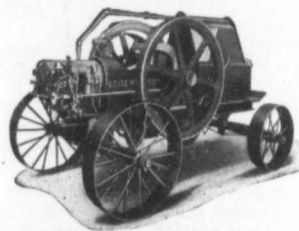
GEISER SIEVELESS SEPARATORS, the modern up-to-date machines, manufactured in the following sizes: 25-29, 27-39, 26-46, 30-46, 33-50, 36-56, 36-60, 40-60. Special sizes for gasoline engine power. Leading features: "Sieveless," the grain plate and roller system and automatic blast.

This new process has revolutionized the whole process of thrashing and cleaning grain. It eliminates the entire nest of sieves or riddles. The simplicity and efficiency of this new process of separating and cleaning all kinds of grain is simply wonderful. The peculiar qualities and advantages which have caused the extraordinary demand for this machine arise from the fact that it has no sieves or riddles, and that it possesses the most perfect cleaning system in the world, and has a very large capacity, and is very light running.

The Geiser Line includes 4-Cylinder Oil Tractors, Single and 4-cylinder Portable Gasoline Threshing Engines. Special Threshing Outfits for Individual Farmers, Saw Mills, Steam Traction Engines, Road Boilers and Hay Presses. Write us today for catalogues and details of many incidental features which are exclusive to the Geiser Line.

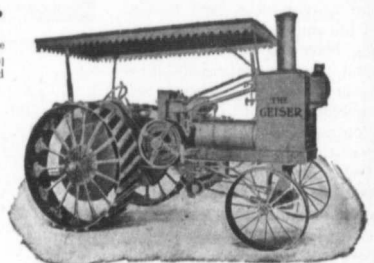
"GEISER" Portable Gasoline Engine.

This Engine is specially built for threshing purposes and is the most modern on the market. LEADING FEATURES—Vertical Valves, Electric Igniter, Centrifugal Fly Ball Governor, and patent Match Starter.



The "GEISER" Traction Gives BEST Satisfaction.

GEISER' 4-Cylinder OIL TRACTOR



If you are interested in the purchase of an Oil Tractor consider these features. Absolutely straight spur gear drive throughout. (Bevel transmission gears, their trouble and loss of power, avoided) All big drive gears are of the very best open heart steel and are entirely enclosed in dust proof cases and run in oil baths.

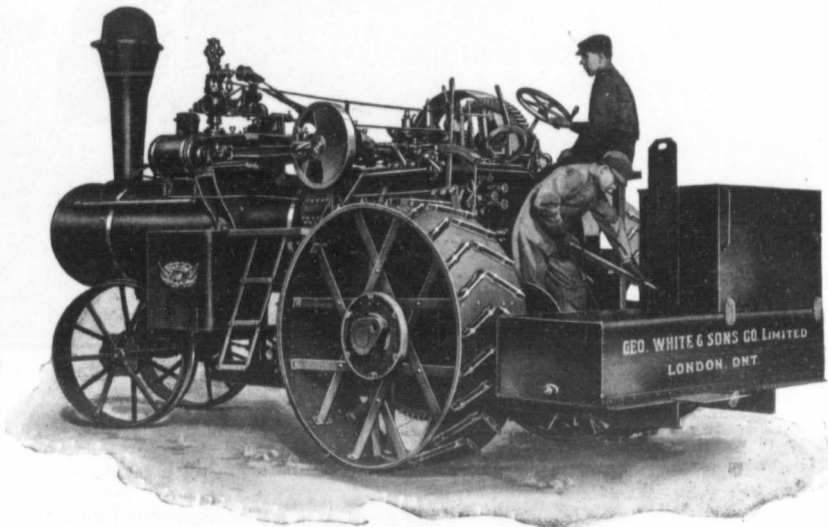
(Compare this with the "crude" cast iron gears and open gear construction of other tractors.) All transmission gears are machine cut from solid steel. Two forward speeds. "Geiser" patented kerosene Carburetor uses low grade kerosene with wonderful economy and efficiency. Improved cooling system only one pail of water used every ten hours.

BURRIDGE COOPER COMPANY, Limited, 303 Owens Street 1840 Dewdney Street
WINNIPEG, MANITOBA REGINA, SASK.
Canadian Agents for the Geiser Manufacturing Company.

The GEO. WHITE SONS CO., Ltd.

LONDON, Ont.; BRANDON, Man.

THE FIRST QUALITY LINE



Showing Water Tank and Coal Bunker fitted for Plowing

THE WHITE 25 h.p.
REAR MOUNT
GENERAL PURPOSE
AND
PLOWING ENGINE

Write to Brandon or see our nearest Agent if you want a Thresher, the challenge machine is "first Quality" four sizes 26 in. to 40 in. cylinder width.

gravity, which includes gas oils and some of the fuel oils, the market for your product is being increased enormously, and this cannot help but ultimately reflect on the lubricating end of the business also. I am in possession of samples of some of these lower grade distillates which have come into such general use in the last year, and the distribution of which will prove of great mutual interest.

Market Changes.

In some sections of the country the distributors are already alive to this situation, with the result that large numbers of internal combustion engines of sizes from 25 to 200 horse power are being installed and are rapidly supplanting all other prime movers. We would cite California for instance. Up to within a year ago the internal combustion engine business in this state was confined almost entirely to that class of engine using fuel of 55 degrees gravity and higher, which fuel was distributed at the average price of 7½ to 8 cents per gallon. Since a few manufacturers have produced an engine which will run on low gravity oils, a very satisfactory low gravity oil is being distributed throughout the state south of San Francisco on the basis of approximately three cents per gallon, with the result that the

number of oil engine installations has increased almost one hundred fold within the year. This is a direct benefit to the refiner, as it opens a wide field for his by-products, which are distributed in tank car quantities, and is also immensely to the advantage of the marketer of lubricating oils.

Helping a Lame Dog

"The man I like," says one, "is he who goes about trying to do all the good he can for other people. He is always helping the lame dogs over stiles. "And his way of doing a good turn is always nice. Instead of making you feel that you are under an obligation to him, he makes it seem as if you are doing him a favour by letting him help you."

His Unfailing Humour

"The sort of man I admire looks on the bright side of things. He cheers you up with a smile when things go wrong, and never says 'I told you so!'"

"Indeed, he has an unfailing sense of humour. He takes everything with a smile but other people's troubles. He makes you feel that your griefs are not nearly so hard to bear as they were before you confided in him. But nevertheless his advice is always serious and good."

Passing Thoughts.

More souls have been lost following a fool's idea than by fighting a good one.

The interest you have in men here indicates the treasure you have in heaven.

Try to have kindly thoughts of people and the kind words will take care of themselves.

A good many sins would stay buried better if we worried less about their tombstones.

They who crawl in the dark think they travel faster than those who walk in the light.

The church that knows nothing of the alley knows nothing of the man who went about doing good.

It takes more than chemistry of soils to grow a crop and more than theology to grow a character.

No amount of anxiety to save the people can make up for unwillingness to save and serve people.

There are too many who want to stand on the zero mark, neither minus nor plus, in the moral scale.

It is a common mistake to suppose that the wealthy people of a community, even multi-millionaires, can at any time furnish unlimited funds.

Judgment and the courage to back up judgment are as the keys that open the doors of opportunity, beyond which lies enormous wealth.

Every man is desirous of securing for himself a competency which will enable him to enjoy the fruits of his labor at as early a period in his life as possible. This is a problem, however, which is becoming more and more complex each year.

Mr. THRESHER YOU NEED THIS ADJUSTABLE SPARK TRAP

99 per cent. of fires around threshing machines are caused by sparks. Every engineer knows that no engine can be steamed with the smoke box full of ashes, yet that is the result when you use the devices now sold to stop sparks. This device will stop the sparks and get rid of them without impairing the draught of the engine. Why pay from 40 to 50 dollars every season for insurance when, for 10 dollars you can get a device that will save five times its price every year and give you a feeling of safety? And it might save you from having your whole investment wiped out by fire. Fill in the coupon beneath and order early.

Self Cleaning

DON'T Be Without It. It Saves Trouble and Money. Invented by a Thresher for the Threshers of the West. It is one of the most important things a thresher needs.

C. W. WILLEY, Box 31, BIRNIE, MAN. Enclosed find \$10. Please send me one of your adjustable Spark Arresters. Diameter of smoke stack is.....at top, and.....one foot from top. Length of Stack..... Make of Engine..... Name..... Address.....

FARM ENGINE SENSATION

GILSON "60 SPEED" GASOLINE ENGINE
Complete with line shaft, belt, pump jack, interchanger and pulleys with 40 speeds. A farmer's power house on wheels. Agents Wanted. Renfrew Machinery Co., Ltd., Edmonton Bldg., Winnipeg, Man.

S he n. OR

ctor of (ed) (eel) 1 in pen. sel. ade ued

A Good One.

I was formerly located at Hanley, Sask., where I ran a blacksmith and machine shop for the last five years, also ran a plowing and threshing outfit as well, and in that time had several makes of steam plowing engines. The last outfit was a Reeves 32 C. C. engine, and a 12 furrow Cockshutt engine gang on skids, which at that time gave very good satisfaction.

About a year ago I invested in land across the river near Alford, P.O., and sold out my blacksmith and machine shop, also my threshing and plowing outfit, as the locality where I was going was too far away from railroad, and water was too unhandy. Having only two head of horses, I could not do very much breaking, and horses being so high priced I made up my mind to try an oil engine, and finally decided to try a Hart-Parr 22-45, and a John Deere 3 furrow frame with 6 bottoms, equipped with quick shift shears, which is the best investment that I have ever made yet.

We started out last spring on the 15th of May with this outfit, and three men and two horses, beside myself. My wife did the cooking, and I did the shear sharpening, and took turn about on the engine. We broke through the breaking season 1,020 acres without a single breakdown. We used about $3\frac{1}{2}$ gallons per acre of low grade kerosene, costing, laid down at Zealandia, $16\frac{1}{2}$ cents per gallon. Out of the 1,020 acres broken 200 acres was broken on my own place, which also was double disced, floated and double harrowed in less than five days.

I consider mechanical power farming the only system where land will permit the use of same. I consider plowing and discing about twice as hard on an engine as threshing, discing especially on account of the gears not properly protected from dust and dirt.

Regarding a drill and disc hitch, will say that I have never done any seeding alone outside of pulling a drill directly behind a packer and a plow, but have had some experience in discing. As a hitch for this purpose I use a draw-bar, the same as an ordinary harrow evener, drawing with a chain from each end, one from the centre hooked directly to the draw-bar of the engine. I hook my disc to this draw-bar from the short pole. At the rear end of the short pole I bolt a piece of timber from disc to disc, which keeps the disc equally apart, and keeps the disc from buckling up in making a turn.



A Tiger Threshing Outfit for Every Job

Tiger Threshing Outfits are time-tried—behind them are generations of experience and the Gaar-Scott reputation.

Gaar-Scott 18 h.p. single and double coal-burning engines are fine threshing engines. They will drive any medium-sized separator with great economy of fuel and labor—and to the entire satisfaction of any man.

The Gaar-Scott 20 and 25 h.p. rear-mounted engines are the ones for the larger separators. All "TIGER" engines furnish steady, reliable power on the belt and any of them will move the outfit easily and quickly on the road.

All of them have Universal boilers; good steamers; burning either coal, wood or straw, whichever happens to be the easiest fuel for you to get.

GAAR-SCOTT TIGER SEPARATORS

No other separators compare with the time-tried Gaar-Scott separators. In the excellence of their cylinders and in the big percentage of grain separation, they stand alone. Their big straw racks and three-way crank mechanism make them "100 per cent. fine."

Ask your Agent—talk to the fellows in your neighborhood who own Gaar-Scott outfits. After you have talked to them about these outfits, you will be one of the next to own a "Tiger."

Glad to send you Catalog by next mail—Ask us for it.



RUMELY PRODUCTS CO., INC.,

1987 DUFFERIN AVE.

WINNIPEG, MAN.

In double discing I use out-throw and inthrow discs, and hook one behind the other and the floats behind the discs, and the double harrow behind the floats, etc. In this way you can make up a load big enough for any engine. I have used this kind of a hitch for two seasons with splendid satisfaction.

I also purchased from Messrs. Duglass Bros., of Zealandia, a Rumely "ideal" 34-56 separator with all attachments, which I found no difficulty in handling it with my engine. I have run

a threshing machine for the last 16 years and have had different makes of machines. The Rumely "Ideal" is the finest, smoothest running machine that I have ever run yet. For good work she can't be beat. I booked last fall \$5,462 in 35 days; my expenses was \$2,379, leaving a net profit of \$3,083. Through the plowing and threshing season I cleaned up a little over \$6,000. Not too bad. I am enclosing herewith some photographs of my plowing and discing outfit. I con-

sider an oil engine away a head of a steam engine, both for plowing and threshing. I would not take the best steam plowing engine to-day for my oil engine, that is if I had to use it. I have had five years' experience with steam plowing engines, but my little Hart-Parr has got them all skinned for a money maker. Oil tractors are most extensively used in our neighborhood.

Yours truly,

Henry Moen,

Alford, P.O., Sask.

Important!

To All Persons Buying and Using Wind Stackers



This Trade-Mark is for your protection as well as ours. See that it is on the Wind Stacker you buy, and then no one can cause you trouble.

The Indiana Manufacturing Company

Indianapolis, Indiana, U.S.A.

head
h for
would
owing
ngine,
have
with
t my
them
aker.
nsive-
d.

ask.

LESSON LX.

The year previous to 1894 were years of experimental and exploitation in the self-feeder business. For nearly forty years men had planned and studied and invented but after all very little had been actually accomplished toward getting the machines established as an essential part of the threshing equipment. It is true that most all of the different elements had been invented and experimented with and at that time about all that was needed was a judicious selection and assembling of these elements in order to make a good feeder. The governor was still rather crude but this matter was speedily remedied by Ruth, Parsons and others. In the year 1894, the Ruth feeder was patented by David C. Ruth of Halstead, Kansas, and in 1895 the Parson patents were allowed. Both were subsequently sold to the Maytag Company, by whom they are now built. The preliminary exploitation work had prepared the market for these machines and during the next few years their sales were very large. By the year 1902 practically every point had been thoroughly covered; they were used universally and the struggles

cutters 25. If the cylinder travels 1200 revolutions per minute, the feeder cylinder will make 885, the band cutter 450 and the grain retarder about twenty-two revolutions per minute. The high

ed to the side of the frame. Spocket wheel 36, cast integral with 35, drives the spocket wheel 31b which is mounted on the hub of the disk carrying rollers 27a and attached thereto with a set screw

the retarding fingers 80, by means of a short bell crank. When too large a mass of straws passes the band cutter these fingers will be raised and rod 93 will engage dog 26a and stop the bundle carrier just as the governor does. Thus we have two systems of governing in this machine, one through slowing down of the threshing cylinder and the other a volume governor at last described which stops the bundle carrier when the mass of grain is too large.

The governor of the original Parsons feeder is shown in figure 121 and is a reproduction from patent specifications No. 549,583 granted to G. W. Parsons, November 12, 1895. The governor, which is of the ordinary Pickering type, is driven by means of a bevel gear C 3 on the end of the band cutter shaft. The same bevel gear also drives the shaft

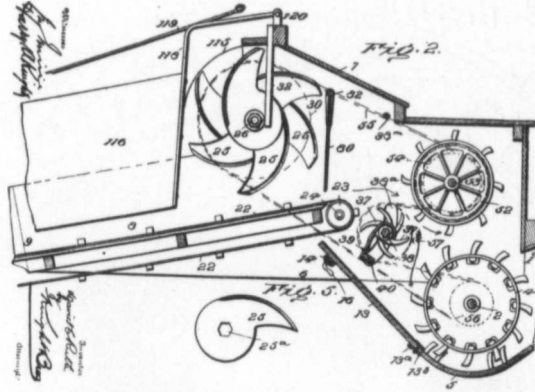


Figure 119

speed of the feeder cylinder combined with the low speed of the retarder causes the straw to be fed from the top of the bundle. The relative speeds of the different cylinders will be maintained since both the feeder cylinder and band cutter shaft are driven from the threshing cylinder through a

This disk runs loose on the bundle carrier shaft. Sprocket wheel 31d is keyed to the retarder shaft 38, while sprocket 31c is keyed on the bundle carrier shaft. Connection between the bundle carrier shaft and the sprocket 31b is effected through the dog 26a which is pivoted at 28b. When this dog is in the position shown in figure 120, power will be transmitted from the band cutter shaft to the bundle carrier and thence

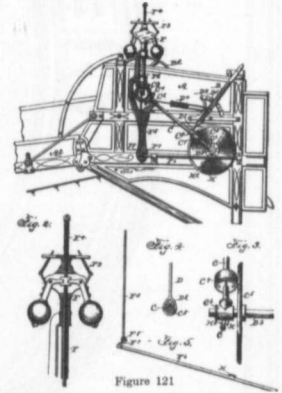


Figure 121

C which carries the small brush wheel C 7 through which motion is transmitted to the bundle carrier by frictional contact with disk C 5.

It is evident that the speed of the bundle carrier will be dependent upon the distance C 7 is from the center of the large disk. This is controlled by means of the hand lever shown. The stopping of the bundle carrier through the action of the governor is accomplished by drawing the small wheel from the large disk through the action of the bell crank lever and cross shaft F 6. The governor is set at such tention that it must attain a certain predetermined speed before the small brush wheel will be forced against the large disk sufficiently to start the bundle carrier. Provision is also made to raise or lower the retarder, thus regulating the distance between it and the feeder cylinder as desired.

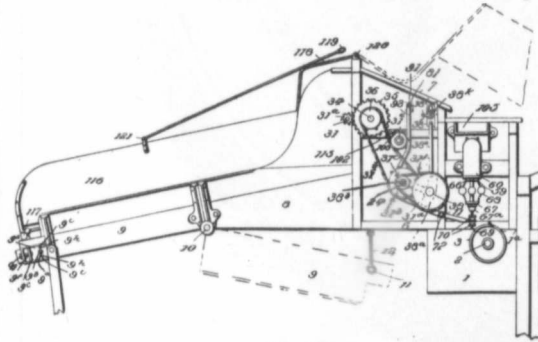


Figure 118

of the self feeder were a thing of the past.

While the different feeders are probably pretty well understood by the majority of our readers, a description of the governing mechanism of the Ruth and Parson feeders as given in the patent specification may prove interesting and instructive to the younger generation.

A reference to figure 118 will show the general appearance of the Ruth feeder and the method of attachment to the separator. Figure 119 shows the threshing cylinder, 56; the feeder cylinder, 52; the retarder, 37; the bundle carrier, 23; and the band

belt, 55, which passes around the idler pulley, 57. The governor, illustrated in figure 120, is driven by means of spur and bevel gears from the feeder cylinder while the retarder and bundle carrier obtain their motion from the band cutter shaft through a system of gears and chains.

As shown in the figures and as constructed, the feeder belt is on the left hand side when you stand at the outer end of the bundle carrier and look towards the machine, while the governor is on the right. A small pinion on the right hand end of the band cutter shaft meshes with gear 35 which is mounted on a stub shaft attach-

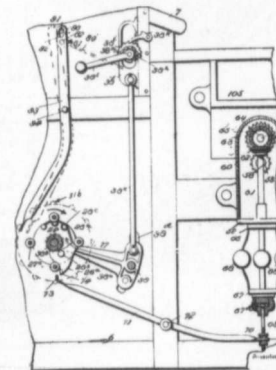


Figure 120

to the retarder. If, however, the speed of the threshing cylinder falls, the point of lever 71 will engage with the point 74 of the aforesaid dog, throwing it out of the path of the rollers, thus causing the bundle carrier to stop until the excess of grain already delivered is disposed of. Another method of stopping the bundle carrier is provided through lever 93. It will be noticed that this lever is connected at the top with

Regardless of the Pitching

Let The Boys Pile The Grain on "Any Old Way"

A Garden City Feeder ATTACHED TO YOUR OLD SEPARATOR WILL MAKE IT DO MORE AND BETTER WORK.

BECAUSE: ITS GOVERNORS ACT BEFORE THE GRAIN GETS TO THE CYLINDER AND DIVIDE ANY OVERLOAD BY HOLDING THE BOTTOM AT A STAND STILL WHILE THE TOP IS FED OFF.

It never slugs nor overloads the cylinder,

BECAUSE: It always feeds evenly.

It never breaks any spikes or concaves,

BECAUSE: It never allows any uncut bundles to get between the concaves and cylinder.

It never lets a bundle go in crossways,

BECAUSE: It has a simple device that turns them.

It never winds on the retarder,

BECAUSE: The retarder does not revolve.

It never overloads the straw racks or chaffer,

BECAUSE: It gives the cylinder just what it should have, No More—No Less.

It never allows the pitchers to plug the cylinder full and watch you dig it out,

BECAUSE: You control the feeding and DON'T HAVE to let the pitchers run it.

It never chokes the band cutter, nor piles up in front of the knives,

BECAUSE: The band cutter is SELF ADJUSTING and climbs on the top of the grain.

It never clogs on the center board,

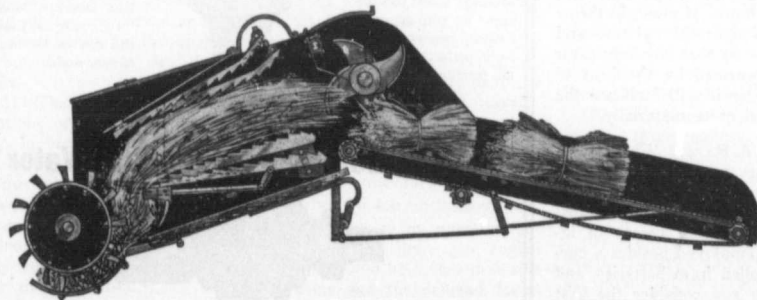
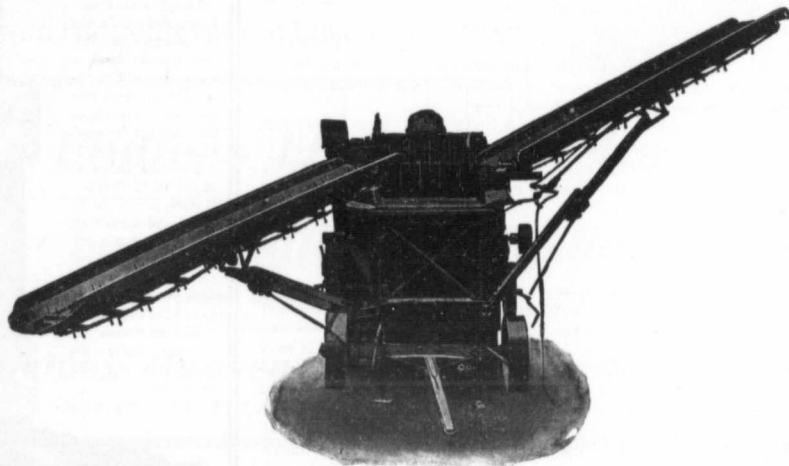
BECAUSE: The carrier is very wide, and the board is seldom used.

It never burns or throws the feeder belt,

BECAUSE: The feeder runs so easily.

It runs easily,

BECAUSE: It is so simple and there are no parts that require high speed.



It is the only perfect self-feeder on the market,

BECAUSE: It is the only feeder made on common sense plans.

Wouldn't you like to try one?

If the feeder fails to "MAKE good" on our claims, the trial will not cost you a cent.

WE KNOW just what the feeder will do! And take **ALL** the RISK.

Write us today and let us tell you some more about this Famous Feeder.

The Garden City Feeder Company, Limited, Regina, Sask.

GENERAL AGENTS

A. E. GARDINER & CO., SASKATOON, SASK.

PALMER CO., CALGARY, ALBERTA

McMAHON & QUINN, LETHBRIDGE, ALBERTA

Questions and Answers For Gas Engine Operators

This is a department for gas engine operators similar to that which we have successfully carried on for the past few years for those interested in steam. We invite your questions and will give them our best attention. Just tell us your troubles or ask us about any point upon which you desire information. We have secured the services of a competent expert who can handle gas engine queries intelligently and to the complete satisfaction of all concerned.

Q. R. R. W. (1) I have a 2½ horse-power gasoline engine, that I use a jump spark igniter on. After the engine has been run long enough to warm it up in good shape I can remove the wires from the engine and it keeps running right along, only that it ignites later so that it has not very much power. I never allow the cylinder to get very hot. Will you please tell me why the engine should run after the wires are disconnected?

(2) How long should a set of three cells of dry battery last if used only a half hour each day?

A. (1) The reason that your engine runs after the wires are disconnected is because there is either a bit of carbon or a projection of metal in the compression space in the cylinder that becomes heated red hot and this ignites the charge when the gas is compressed sufficiently. In the case of your engine this does not occur until the piston reaches almost the end of the stroke. The compression is high enough at this point to heat the part that ignites the charge to the proper temperature of ignition.

(2) The length of time that a dry cell battery will last depends upon a number of things, such as the kind of spark coil used, the condition of the spark coil, the length of time the igniter points are in contact, before each ignition, and the speed of the engine. You see with all of these variables to contend with, none of which are known it is simply impossible to say how long the battery should last. With only three cells you are working your battery pretty hard. It would be better to use four or five.

Q. F.-C. (1) I own and operate a 4-horse-power horizontal engine sawing outfit. I sawed nine or ten jobs and it worked fine, until today, when we were bothered with the gasoline not coming up in the gasoline cup. When I started up, the engine ran all right until I got it to full speed; then the gasoline would go down in the cup and the engine would stop. I came to the conclusion that I did not have it fastened down solid enough and I fastened it down so it hardly jarred, then it ran all right. I also keep the front wheels as high as possible. Why is it that if the engine does not set still or level that it hinders the gasoline from coming up in

the cup? The pump has ball valves and I thought perhaps that jar would have something to do with the seating of the valves. The pump is packed good and the tank full of gasoline.

(2) How would you get kerosene into the piston rings to clean them?

(3) How much cold weather will lubricating oil stand before it will get thick so that it will not run?

A. (1) You have doubtless answered your own question. If the valve shake enough to partly lift from their seat the gasoline could easily run back into the pump, or, a portion of it might be forced into the tank. The pump plunger in the engine you own is lifted by the action of a strong spring and if the plunger is packed too tightly by screwing down the packing nut it may cause the piston to work sluggishly and not rise, especially at high speeds and so stop pumping. We have known this to happen on engines of this make.

(2) You can take off the cylinder lubricator and pour kerosene on the piston through the opening. If the rings are not too dirty this will clean them sufficiently. A better way is to take the piston out and clean the rings by pouring kerosene directly onto the piston and at the same time working the rings around in their grooves.

(3) It depends very much upon the quality of the lubricating oil. Good gas engine oil will stand zero temperature and be fairly fluid. If you will throw a blanket over the cylinder and lubricator so that the lubricator will be warmed by the heat of the cylinder it will facilitate the flow of oil quite materially.

Q. G. A. R. (1) Which transmission is better, the chain or shaft driven? Which of the two is more easily kept in commission? (2) What means of ignition is employed besides a current supplied from batteries, and which do you consider the best and most economical?

(3) What advantage has a double cylinder over a single, a four cylinder over a double, etc?

A. (1) For automobiles it is generally conceded that the shaft drive is the better. Nearly all of the best cars are now so driven. When it comes to slow speed machines the chain drive is still used to some extent. It

The New Desmond Model "U" Injector

Will Double the Life of Your Engine

Fits All Conditions — Fits Any Connection

When the connections are made, the nut is tightened and the injector is ready for work. Will fit any space, can be fixed or adapted to any special condition

and connected with either side of the boiler. Piping and valves can be arranged to suit your special purpose—not merely to fit injector. All tubes screw into the body. They cannot fall out or get damaged when cap is removed.

The New Desmond Model "U" is 'flexible.' It starts low at 20 to 25 lbs. and works high from 175 to 190 lbs. Lifts water 25 feet at 130 degrees and delivers it to the boiler at almost 212 degrees.

Will not "buck" or "break" under the most severe and continued jars.



The real value of the Model "U" is in its construction. It is made with a two-piece body with the parts connected by a union nut.

When loosened, connections can be turned in any direction.

Every injector severely tested and sent out with an unlimited guarantee to work perfectly under all conditions.

If your dealer cannot supply you with a New Desmond Model "U," write us direct and give us the name of your dealer.

Are You Bothered with Hot Water?



If you are having trouble with your Ejector making your water too hot for your Injector to handle easily, it will pay you to try the D.-S. Special Cold Water Ejector No. 77.

Guaranteed to raise more water than any other Ejector and raise the temperature less.

Ask your dealer, or write us.

DESMOND-STEPHAN MFG. CO., Urbana, Ohio
Manufacturers of THE "FLEXIBLE" MODEL U INJECTORS



Good Goods Win

The "Good Goods Win" slogan of this Company is not an idle dream but the very soul of a clearly defined and ruggedly rooted business policy



Lion Rubber Endless Thresher Belts

—and—

Maple Leaf Endless Thresher Belts

Go Hand in Hand as Pre-eminently the Best. Ask the fellow that has one

The Winnipeg Rubber Company Limited

Winnipeg

NOT IN ANY TRUST OR COMBINE

Calgary

is perhaps a little easier to keep in order, that is, it is not so expensive to make repairs in case trouble is experienced. There is, however, more liability of trouble with a chain drive than with a well designed and constructed gear drive. The chain drive costs less in the first place.

(2) In regard to the different types of ignition, we suggest that you read some good work on the subject "Gas Engine Ignition" by E. R. Williams is the best thing we know of. It is rather a big subject and cannot be handled successfully in the space at our disposal in this department.

(3) The advantages of the multiple cylinder engine are, first, in better turning effort on the crank; second, easier cooling of the cylinders considering the power developed; third, a better balanced engine. The four-cylinder engine as now made is very well balanced and runs with very little vibration.

Q. E. B. It is my belief that the one-man tractor, capable of quickly picking up and using any attachments, such as plow gang, sickle bars, rake head, shovel gangs, etc., and capable of working in a fifty-acre field or of plowing a garden, will be in greater demand than any other farm machine has ever been.

With the above ideas in mind, I intend to construct a tractor

about as follows: Drivers, 36x9 single steering wheel to track in front of left hand driver. Wheel base about eighty inches. Tractor to be as light as possible on account of cultivated fields; tractive weight to be added in hauling by carrying front end of loaded trailer on tractor and by "suction" of plow bottoms in break ground, no extra weight needed in mowing, planting, etc. I am anxious to make no mistake in regard to power and I wish to know if you think that a 5x5 double opposed, air cooled engine would be suitable for this kind of work. I understand that a five-inch bore is very near the limit in successful air cooling. Will expect the tractor to work at about four or five miles per hour pulling two or three fourteen-inch plow bottoms, or pulling about a ton on solid road.

A. There is no question but that a small light gas engine tractor would be a very desirable machine and the demand for it would be very great if it were successful. Many attempts have been made in this direction, but none have yet proven entirely successful. Some of the best gas engine designers in the country are now working on the problem and it is possible something good may be evolved.

While we have made no experiments along the power needed, we should be inclined to think that

an engine of the size you suggest might do the amount of work you expect of it. We would not think of making a smaller engine however.

The speed you name for plowing is altogether too fast on account of the tendency to throw the furrows. We would suggest a speed of not to exceed three miles per hour. The large steam plowing outfits are geared to run from two and one-quarter to two and one-half miles per hour.

C. J. C. L. (1) Which type of ignition would you consider best on a 16-horse-power stationary gasoline engine, make and break or jump spark?

(2) If make and break, which of the three named outfits of deriving electrical current would you use and why? Edison V., Edison double R batteries, or a magneto?

(3) Do you consider a scavenger charge very beneficial in an engine of the above named size?

(4) Which type of governor is best, one that governs the fuel or one that retards the spark and why?

A. (1) Both the make and break and the jump spark systems of ignition have points of merit peculiar to themselves and which the other does not possess. The matter of which is best is one that the doctors

themselves have not yet agreed upon, and consequently it is not an easy question for us to answer. Personally, I am inclined to think that for stationary purposes, for an engine in the hands of a person who is not an expert in the handling of machinery that the low tension system, using the make and break spark, is preferable. There are fewer parts about the system to get out of order and less trouble with the insulation than with the high tension system.

(2) As to the style of cells to be used, that is a matter of little account. All the difference is that one type is larger than the other, but made up of the same elements. The larger cells of course will yield a larger output of current. A low tension magneto may be used and it has some points of superiority over batteries. Since you ask a personal opinion as to which we prefer, we must say that we have no particular preference in the matter. Any of the systems of current productions are good and we have used all of them. Take it all in all we have had about as good success with the batteries as with any other system of current production.

(3) A scavenger charge is beneficial for any size of engine.

(4) The governor which governs the fuel is preferable to the

one that retards the spark because it causes the engine to use the fuel in an economical manner, whereas the spark governor does not. A governor that acts on the spark only either governs by causing back pressure on the piston or else it makes ignition so late that part of the charge blows out of the cylinder without being consumed. Either scheme is wasteful.

Q. H. Q., Jr. What is the reason that automobile builders do not build three-cylinder gasoline engines? Can they be made or are they not as good as two or four-cylinder engines? There would not be any center on a three-cylinder as there is on a two or four.

A. When automobile builders take up the three cylinders idea they almost always use six cylinders, using them in pairs. This gives much better balance to the entire engine, and a smoother running machine. It is possible to build three-cylinder engines, and some are built for stationary purposes, but we do not know whether any automobile concern is making an engine of that sort or not.

The four-cylinder engine meets most all requirements on the medium car and if anything better is needed it is best obtained with the use of six cylinders. The Gas Engine Course in the last two numbers of this publication discusses the different kinds of motors at some length and perhaps you will find a more complete answer on those pages.

Q. S. C. S. (1) Is there any way that a jacket on a water-cooled gasoline engine, which has been cracked by freezing, may be repaired? We have a 6-horse-power engine and the jacket is cracked.

(2) What would you advise to keep the water from freezing?

A. (1) Take your engine to the blacksmith shop and have an iron band shrunk on the cylinder. This will draw the edges of the crack together and stop the leak.

(2) There are a number of anti-freezing mixtures, but calcium chloride dissolved in water is the cheapest and will stand very low temperatures. Use about five pounds of the salt to a gallon of rain water.

Q. A. E. I have an engine that the manufacturers will furnish a kerosene carburetor for and I think it would be to my interest to get one if this is correct, namely, that kerosene will furnish nearly twice the horsepower per gallon as gasoline. If there have been any tests made in this matter what were the results?

A. There is no doubt the engine will run on kerosene. Almost any gasoline engine will

do that after it is heated up, but the statement that you can get twice as much power from a gallon of kerosene as from a gallon of gasoline would be very hard for them to substantiate. As a matter of fact there is very little, if any, difference in the amount of power furnished by gasoline and kerosene.

Q. R. M. (1) What is meant by a gage of water? How much water does it represent?

(2) If a person lets the water get so low in the glass that it is unsafe to turn on the injector, would it be necessary to let the steam go down entirely before pumping in more water? Wouldn't it be allright to draw the fire and turn on the pump if the crown sheet was cool as the rest of the boiler?

(3) What is the best way to regulate the amount of water delivered by an independent steam pump, by regulating the speed of the pump or running it at a nominal speed and throttling the water supply?

(4) Why is it that any pump will not lift water theoretically more than thirty-two feet? I have heard many explanations but they make it all the more confusing. It seems to me that if the power was great enough, water could be lifted any distance.

A. (1) A gage of water is not any definite amount. Generally it is about two inches in the glass or the distance between two of the gage cocks.

(2) If the water gets very low in the glass and the engineer feels it is unsafe to turn on the injector, the best thing to do is to cover the fire with moist earth, then if the crown sheet has cooled down to the same temperature as the rest of the boiler it will do no harm to start the pump.

(3) We prefer to regulate the amount of water supply by the speed of the pump.

(4) There are, as you perhaps know, two kinds of pumps, one is what is called a suction pump, and the other a deep well pump. In the suction pump, the plunger works in a cylinder near the top of the ground. In the deep well pump the cylinder is placed at the bottom of the pipe and the plunger works down under the water in the well. The deep well pump is water lift. The plunger gets under a column of water and lifts it. There is almost no limit to the distance water may be pumped by such means. In the case of the suction pump the plunger working in the cylinder at the top of the pump pipe merely pumps the air out of the pipe. This causes the water to rise inside of the pipe on account of the air pressure on the outside. In other words, the ordinary suction pump

This Oil Pump Will Outwear the Engine

The simple construction of the Madison Kipp Model 10 Oil Pump makes it at once the most reliable and the most durable pump that can be placed on an engine. Its strong, rugged design and few working parts are alone a guarantee of its effectiveness and durability but it has other features that stamp it as the PERFECT LUBRICATOR.



Model 10-In any number of feeds from one to ten.

Seriously: don't you think it would pay you to investigate the Madison-Kipp Line? Write for complete literature and DO IT TO-DAY.

THE MAYTAG CO., LIMITED
Sole Agents for Western Canada. WINNIPEG, Man.

The MADISON-KIPP

is the pioneer line in automatic lubrication—the pump illustrated has reached its high state of perfection through years of patient labor.

The Madison-Kipp will pump without adjustment, the extremely thick oil of winter and the thin oil of summer and force the oil against any pressure required.

The Madison-Kipp pump positively will not freeze. It works equally well at 20 deg. below zero and 90 above zero. No valves, no springs or stuffing boxes to wear out.

The Madison-Kipp is more durable, economical and constant than any other device on the market. They easily pay for themselves in one season in oil saved.

Manufactured by the
MADISON-KIPP LUBRICATOR CO.,
Madison, Wis.

Why Don't
Guaranteed



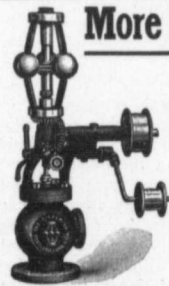
YOU Use
Belt?

Sawyer Canvas Thresher Belts

Are guaranteed to be free from defects. They are always pliable and are both waterproof and weather-proof. For full information write for Booklet L.

SAWYER BELTING CO., Cleveland, Ohio

More Power From Same Engine



Why do two engines identical in build show difference in power? You just notice the governors and see what make is on engine that is doing best work.

PICKERING
"THE GOVERNOR WITHOUT JOINTS"

We fit every build of engine and give our guarantee.

Patent Ball Ranger Speed Changer Supplied on all Genuine Pickering Governors. Will increase speed 50% or more.

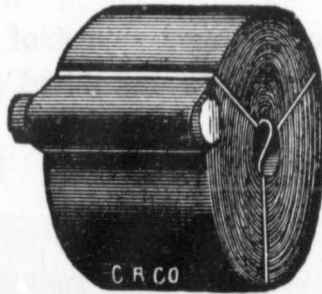
The Pickering Governor Co.

PORTLAND

CONN., U.S.A.



There are Several Kinds of Thresher Belts



Belts that break, belts that slip, belts that get hard and crack in cold weather, belts that stretch so that they cannot be kept tight, etc., and belts that work under any and all conditions, giving a maximum of power between engine and separator. We handle only the latter kind, therefore in ordering be on the SAFE SIDE. ASK ALWAYS for the

“Lumber King” or “Star”

Any Thresher Company Will Supply You if You Insist

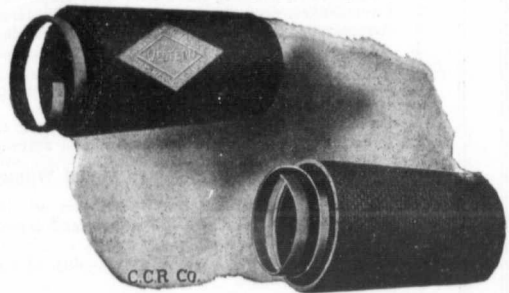
Did You Ever Swear at a Leaky Suction Hose?

There is an excuse for all profanity from any such cause, but why should you carry the cause? It takes the BEST that can be made to withstand the grilling of a threshing outfit. We have made a life-long study of SUCTION and INJECTOR HOSE and can say that we've mastered it. Ask for

“Canadian,” “Dominion,” “Western” or “J. C.”
and you've got the best that money and skill can make.

**CANADIAN CONSOLIDATED
RUBBER COMPANY Ltd.**
WINNIPEG

Calgary Edmonton Saskatoon Regina



does not lift the water at all. The water is forced up by air pressure and the pump enables it to do so by taking the air pressure out of the pump pipe. Now the pressure of the air is approximately 14.7 pounds per square inch. It varies slightly from day to day and the higher up we go above sea level the less it is. The pressure in the cylinder would be the depth of the air above us. If the depth were twice as much as we could lift water with a suction pipe twice as far, but since it isn't and there is no way of increasing the depth, it is plainly evident that you cannot lift water by such means any further than a pressure of 14.7 pounds will balance; a column of water which is theoretically 33.9 feet.

Q. W. D. E. (1) Is there a reasonable chance that a flue sheet that cracked between two tubes would give satisfaction? The tubes are only one-half inch apart and when beaded it almost covers the crack. State any way you think this could be repaired.

(2) If a new flue sheet is necessary, how is it put on, with patch bolts or by taking out the front flue sheet so that a man could get inside of boiler? Could it not be done with ordinary rivets in the same holes, this being an open bottom boiler?

Could this work be done in the

country by a practical boiler maker, provided the sheet was gotten from the factory where the boiler was made all ready to put in?

Would ordinary sheet iron, say galvanized, of the proper thickness give good satisfaction around the ends of the tubes instead of copper burls, it being hard to get the burls of the proper thickness.

A. (1) We do not know of any way in which a flue sheet cracked in that way can be repaired. The best way to do is to put in a sheet.

(2) You can probably get a new flue sheet with rivet holes punched like the old sheet from the manufacturer of your engine. Then you can use the same rivet holes in boiler shell and rivet it in place. If the flange extends toward the outside there will be no trouble in doing the riveting. You had better take the engine to the boiler maker if possible and have the job done. Yes, a boiler maker could do this job in the country.

We would not recommend iron ferrules. If the flue sheet is drilled large so that the copper ferrules are needed you had better send to the engine company for them. Iron ferrules would not do at all.

We suggest when you write to

the company for a new flue sheet that you ask them if they can insure that the rivet holes in the flue sheet will match those in the shell. If not, the boiler maker will be obliged to drill them after fitting the sheet in place. You had better get the rivets from the company too.

Q. H. A. H. (1) Please give me an illustrated problem and an exact rule for finding the heating surface of a locomotive type of boiler.

A. The heating surface of a locomotive type of boiler consists of the fire box above the grates, both tube sheets and the area of all the tubes. From this there must be subtracted the area of all openings such as the doors, flues, etc. The only proper method to pursue is to measure up each kind of surface by the ordinary rules of measurement and add all the results thus obtained together. There is no single rule that will apply. Let us take for example a boiler having the different dimensions:—

Diameter of shell, 33 inches; Height of fire box, 45 inches length 44 inches; width 34 inches; number of tubes, 34; diameter of tubes, 2½ inches; length 102 inches.

We first find the total area of all surfaces exposed to heat, including the openings, then find

the area of all openings, and subtract the sum of the latter from the sum of the former. Proceeding on this plan we have the following figures:—

- 7854x33x33—855.3 sq. inches in front tube sheet.
- 45x44x2—3960.0 sq. inches in sides of fire box.
- 45x34x2—3060.0 sq. inches in ends of fire box.
- 44x34—1496.0 sq. inches in crown sheet.
- 855.3 and 3060 and 3060 and 1496—9371.1 sq. inches, total area of fire box.
- 3.141x2½—7.85 cir. of tube.
- 7.85x102—800.7 sq. inches, heating surface in one tube.
- 800.7x34—27223.8 sq. inches, heating surface in all tubes.
- 27223.8 and 9371.1—36595.1—total gross heating surface.
- 2.5x2, 5x7854—4.90 sq inch area on tube opening.
- 4.90x68—33.2 sq. inch area of all tube openings.
- 10x12—12.0 sq. inch area of fire door.
- 333.2 and 120—453.2 sq. inch area of all openings.
- 36595.1—453.2—36141.9 sq. inches net heating surface.

There are two openings for each tube and thirty-four tubes, therefore there is a total of sixty-eight openings, together with one 10 x 12 fire door.

36,141.9 square inches, divided by 144 gives a total of 251 square feet. We have not in this included the area of the bottom of the fire box nor would we do so even though the boiler were of the water bottom type.



Rumely Sweeps Clean



Four Rumely Power-Plowing Outfits at the Winnipeg "Motor Contest of the World" take Four Gold and Silver Medals besides winning Sweepstakes Honors over all Competitors — Kerosene, Steam, and Gasoline

The Oil Pull Tractor, type E, 30-60 h.p. Gold Medal and Sweepstakes Winner, shows a clean pair of heels to all other engines of every kind, and demonstrates that it is the most economical plowing engine in the world. At actual Winnipeg fuel prices (14½¢. per gallon for kerosene, 23½¢. for gasoline, and \$8.50 a ton for coal) the Oil Pull Tractor's nearest competitor, a steam engine, takes 22 per cent. more fuel to the acre, and the nearest competing gas tractor's fuel cost per acre is 31 per cent. higher.



The Rumely Engine Gang Plow, eight bottom, scores highest in quality of plowing over all competitors in the great tractor contest, and our five-bottom gang scores the next highest points on quality given to any plow drawn by an internal-combustion tractor. Rumely Engine Gang Plows won two silver medals in the first grand engine gang plow competition, open to the world, and, for the fourth time at Winnipeg, demonstrated their all-round superiority.

What the Oil Pull did at Winnipeg Oil Pull Type "E" Gold Medal Winner

1. Sweepstakes on all points, over all classes.
2. Sweepstakes, plowing tests, over all classes.
3. Sweepstakes, economy brake test, over all classes.
4. Sweepstakes, combined brake tests, over all classes.
5. Sweepstakes, horse power hours per unit of fuel, economy brake test, highest possible score in any class.
6. Sweepstakes, horse power hours per unit of fuel in plowing test, highest possible score in any class.
7. Sweepstakes, lowest cost of fuel per acre, all classes.
8. Greatest overload capacity, gasoline and kerosene classes.

Oil Pull Type "F" Silver Medal Winner

1. Sweepstakes, maximum brake test, over all classes.
2. Second only to Oil Pull "E" on overload capacity for internal combustion engines.
3. Second only to Oil Pull "E" on quality of plowing, internal combustion classes.

Both tractors score perfect on condition in every test. This contest proves that THE OIL PULL IS A HEAVY-DUTY ENGINE, ECONOMICAL IN WEAR AS WELL AS IN FUEL COSTS.



What the Rumely Plow Did at Winnipeg

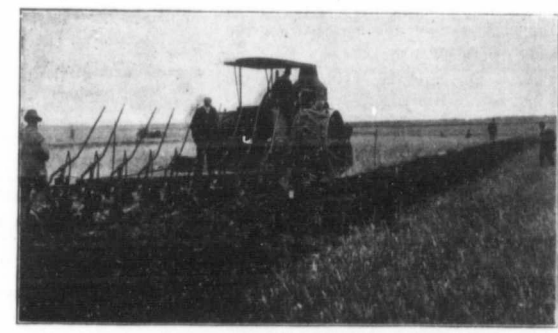
In the Winnipeg Engine Gang Plow Competition, the Rumely Engine gang scored highest over all competitors for evenness of depth, showing the ease with which the Rumely Engine Gang can be handled in uneven ground. This demonstrates that our levelling arrangement is superior to all others.

It also scored highest over all competitors in the lay of the furrow slice, which shows that the Rumely Engine Gang will turn a perfect furrow under any and all conditions.

The Rumely Engine Gang scored highest over all competitors for "in and out of ends," demonstrating that the Rumely Engine Gang has the most convenient lever arrangement.

The Rumely Engine Gang was watched closely by all spectators on the plowing contest field, and its work was a marvel to all who saw it.

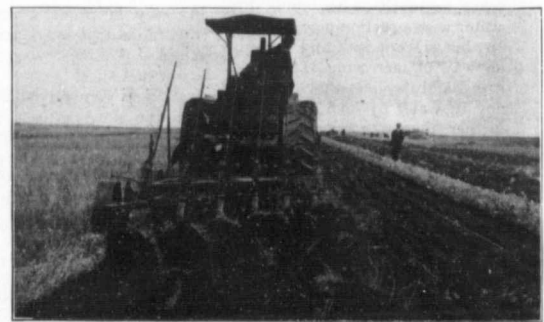
The Only Real Kerosene-Burning Engine



The Rumely 10 bottom Engine Gang just as it finished the Winnipeg Plow Competition

The Gold Medal Tractor and the Silver Medal Plow

You want power and staunch build in an engine—power—economy—lasting qualities and smooth work in a plow. Here is the Rumely Power-Plowing Outfit that fills the bill. This engine developed 51.4 h.p. on the Economy Brake Test, 76.51 h.p. on the Maximum Brake Test, 34.42 draw bar h.p. in the Tractor Plowing Test, and 42 draw bar h.p. in the Engine Gang Plow Competition. This plow with eight bottoms defeated all comers in quality of plowing—just notice the job it was doing—and with ten bottoms on the same frame "brought home the bacon" in the plow competition. **THEY ARE BUILT TO LAST—BOTH OF THEM—REMEMBER IT!**



The Rumely 6 bottom engine gang starting on its last stretch. Note the evenness with which the furrows are being turned



The Rumely 6 bottom engine gang in the Winnipeg Plow Competition. Note the evenness of the back furrow ridge.

The Only Real Kerosene-Burning Engine



The Rumely 10 bottom engine gang in the Winnipeg Plow Competition going through a bunch of wolf willow. Note that there is no clogging, and that the willows are being thoroughly buried.

The Rumely Engine Gang in three Motor Competitions and a Plow Competition has shown publicly what it will do. Hundreds of farmers in Western Canada can tell you that its performance on the farm comes up to its mark at Winnipeg. Get our plow literature now — before you start fall plowing — anyhow, get it before you BUY.

Rumely Oil-Pull Tractors have been winning motor competitions all over Western Canada—this is only a little bigger one than usual—that's all. Drop in at our Branches—see the Oil-Pull at all the Fairs—ask your neighbor about his—or just drop a line to any Branch or Headquarters for catalogs and full information.



Made by M. Rumely Company, La Porte, Ind. Sold by Rumely Products Company, Inc.

- Winnipeg Regina Saskatoon Calgary Yorkton Brandon Toronto Edmonton





Handling Dynamite. By Hudson Maxim.

THE fact that boxes of dynamite were tossed about like chaff in the explosion at Communipaw, N.J., on February 1, and the boxes splintered to pieces, without setting off the explosive inside, is not considered at all strange by the experts. Mr. Hudson Maxim, who probably knows as much about explosives as any man living, tells in an interview some remarkable instances of rough handling of dynamite without the results usually looked for. In the Communipaw explosion it is now believed that 10,000 pounds of black powder did the mischief, and that all or most of the many tons of dynamite in the cars, on the pier, and on the very boats where the powder exploded, remained as quiet as so much putty. Dr. Walter G. Hudson, a chemical expert of the Du Pont de Nemours Powder Company, holds this view, and in his interview reported in the New York Evening Sun, Mr. Maxim says:

"On an occasion like the Communipaw explosion, those who are likely to know what caused it are generally killed. Therefore, any conclusions as to what may have caused it must of necessity be entirely guess work.

"Dynamite, as now made, is quite insensitive, and may be handled and transported with comparative safety—in fact, if properly handled with perfect safety unless there happens to be some external condition, such as a boiler explosion or a railroad collision, to explode the dynamite.

"In gelatin dynamite the nitroglycerin is tightened or gelatinized by dissolving soluble nitrocellulose in it. Then woodmeal and powdered nitrate of sodium and other ingredients are added to make a thick, heavy tenacious paste which is very insensitive to all forms of shock to which it is likely to be subjected. A tier of cases of this explosive may be piled on top of one another and toppled down without much danger of explosion. A wagon-load tipped in the road would not be likely to explode.

"I know of one instance, where, in a train wreck, the whole end of a car contained forcite, which is a form of gelatin dynamite, was smashed in and many cases of the dynamite broken open, with sticks of the explosive scattered about, some of them under the wheels and some even passed over by the wheels of the train without producing an explosion.

"Many dynamite explosions are produced by the shipment of black gunpowder with the dynamite; in such a case by careless handling some free powder may be scattered about, and some careless workman set it off, either with a match or with a cigar or with gravel on his boots, and the explosion of this would explode the dynamite. Dynamite in all forms is much safer than black gunpowder. I had a man working for me once who fell down a shaft forty feet with a case of dynamite going down ahead of him. The dynamite was unhurt, but the man was nearly killed by the fall.

"The care that is now exercised in the manufacture of dynamite is such that no chemical instability may be taken as the remotest possible cause of the Communipaw explosion. Dynamite is now made so pure and stable that there is not any material likelihood of the explosion being produced by chemical decomposition.

"It is a very common fallacy that frozen dynamite is more sensitive than unfrozen dynamite. As a matter of fact, frozen dynamite is very difficult indeed to explode. It has happened that when a stick of dynamite is partly thawed a blow upon the thawed portion, with the frozen portion acting as an anvil, has caused an explosion. There was a man at Lake Hopatcong digging a well, who had one arm blown off, one eye blown out, and who was mutilated in very many respects and particulars by cutting a partially thawed stick of dynamite off with a hatchet.

"In the old days, before Nobel discovered dynamite, that is to say, before Nobel discovered that nitroglycerin absorbed in infusorial earth would lessen its sensitiveness, nitroglycerin used



The Difference Between
"Any Old" SEPARATOR
and the Canadian made

"MAGNET"

is just the difference between
slaving at a LOSS and working
comfortably at

A BIG PROFIT

By over twelve years' daily use in Farm Dairies in Canada, it has been proved beyond the shadow of a doubt that the "MAGNET'S" one-piece skimmer does better skimming than forty Cones. That it is distinguished from all others by (1) The **Extreme Simplicity** of the very small number of its working parts. (2) The **ease** with which it can be operated even by a child. (3) Its great strength and rigidity and (4) best of all, the special character of its **GEAR DRIVE**. In most machines this is the primitive worm gear. The **MAGNET** is provided with **SQUARE GEAR** which means years added to the life of the machine. Further, the **Patent Bowl** of the "Magnet" is supported at **Both Ends**. This means that you will never experience that "wobbling" sensation that wears out both machine and the nerves of the operator.

A More Effective, Cleaner Skimming Machine Cannot Be Constructed and You Can Clean It Thoroughly in Less Than Five Minutes

We will prove every point we claim for the superiority of the "Magnet" on your farm—at our expense.

The Petrie Mfg. Co., Ltd.

Head Office and Factory: HAMILTON, ONT.
Winnipeg, Calgary, Regina, Vancouver, Montreal, St. John, N.B.,
Edmonton, Alta.



Get My New Portable GRANARY

"SEE how handy my new granary is. You place four or five of them around your quarter section. This saves time in harvest hauling to stacks."

"Then my granaries come in to hold your grain from each stack. My granary keeps grain clean, dry and unheated. No musty grain, no losses from rats or vermin. When ready haul direct to the elevator from the granaries."

"I make several sizes of this handy granary. You can get 150, 200, 300, 400, 500, 600 and 1000, full measure guaranteed Imperial Bushel sizes (not small U.S. bushels) and you set up any Pedlar Granary in half a day. Remember you can move it easily any time. My Granaries save big money by cutting down teaming and keeping the grain right."

"See how the man at the left can shovel grain in from the threshing machine, if it has no leg-spout to deliver grain direct through the manhole on the roof.

The other man is bagging grain. Granaries are had with door-section or plain, as desired. My new Granary is just right for saving cost. It pays for itself in a year. It comes in sections—low freight cost. A boy can set up. Write for my descriptive booklet." 700

Write for Booklet No. 88
The Pedlar People Limited, Oshawa, Ont.

WENNIPEG 76 Lombard St.	CALGARY Crown Block 563 3rd St. W.	EDMONTON 1901 Railway St. S.	REGINA 323 Fifth St. S.
SASKATOON Drawer 1645	MOOSE JAW care Whitlock & Marlett.	LETHBRIDGE	

to be frozen for safety's sake, before it was shipped.

"In regard to the employment of greater restrictions for the handling and transport of dynamite, it must be taken into consideration that dynamite is one of the great builders of the modern world. There is so much work depending upon cheap dynamite that anything which would enhance the cost of handling or the cost of production would be very seriously felt by the users of dynamite and would greatly increase the cost of the building of subways and the foundation of buildings.

"The increase of the cost of building a subway by one per cent would pay very many times the damage of many such explosions as have lately occurred. The amount of actual damage of an explosion like that at Commanipaw is very largely apparent. There is probably not a building in New York whose foundations or walls are actually materially damaged. It takes but a slight variation of pressure to break a pane of glass.

A variation of pressure of one-tenth of an ounce to the square inch would make a pound variation in pressure per square foot on a pane of glass, and would be 100 pounds pressure on a pane of glass ten feet square, which would be enough to break it. Such a pressure would not injure the heavy walls of a building, even though the pressure were to be much greater than that.

"Dynamite explosions are generally due to defect in the human factor rather than in the explosives factor. It is impossible to prevent workmen from occasionally producing an explosion.

"I believe that the laws today in regard to the shipment and handling of dynamite are altogether too strict as they are. Certainly they are strict enough. The only suggestion that I would make is that there be close inspection to see that the laws as they exist are enforced, and not to increase the stingency of the laws themselves.

"In regard to the matter of freezing dynamite to make it safer to transport, as has been suggested, it would add to the cost of the dynamite somewhat, and would necessitate thawing. In the winter dynamite necessarily has to be thawed anyway, and if shipped frozen in summer it would have to be thawed as is now done, or thawed by laying it in the sun or some warm place long enough to allow it to thaw. All of these things mean extra handling, and more people have been killed in the thawing of dynamite than from any other

cause connected with the handling of this explosive. It is not always possible to make men take the necessary care in the handling and thawing of dynamite."

Root Diseases: A Reason for Grading Seed Grain. By H. L. Bolley.

(1) Well graded seed grain is free from fowl seed.

(2) Properly graded grain contains only the heaviest weight individual seeds of the kind of grain which one wishes to sow.

(3) It has been proven by many experiments that wheat and other cereal grain which are graded in such a manner as to remove all the grains except those which are of the heaviest specific weight yields best.

(4) It has many times been proven that light weight seeds, no matter what the cause, are of less value for cropping than seeds of the same pedigree which are graded to the heaviest specific weight. It is the specific weight which counts, for it has been proved that the small seeds or grain of heavy specific gravity have a greater producing power than large grains of light specific weight even tho the latter are of greater total individual weight.

This bulletin is intended for the purpose of giving some reasons explaining the above facts, which anyone can understand.

(1) All of the various cereal grains are attacked by certain parasitic fungus diseases.

(2) Wheat and flax are especially attacked by such diseases.

(3) These diseases are transmitted by the seed from crop to crop, sometimes internally and sometimes externally.

(4) These fungus diseases are root destroyers and when once introduced into the land they remain there for a number of years.

(5) These fungus diseases are especially harbored in the soil upon the old roots and stubble.

(6) Each kind of cereal, including flax, are so attacked that the seeds are often invaded internally before the germ which is forming in the seed reaches maturity. Such seeds are unable to develop to normal weight, but they are sure to transmit the root destroying fungi when planted.

(7) The root diseases thus transmitted immediately begin to develop in the young plant, attack the roots and invade the green stems and leaves so that they are able to reach the seed in the heads by internal growth, extending upwards. Such growths are filamentous, mould like forms, and develop rapidly on the exterior by the production of spores which spread the diseases in damp, moist weather.

DE LAVAL CREAM SEPARATORS

SAVE MUCH TIME AND LABOR IN SUMMER

Besides their great increase in quantity and improvement in quality of cream and butter DE LAVAL cream separators save a great deal of time and labor.

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

As compared with any kind of gravity setting the saving of man's time and labor and usually woman's drudgery is simply overwhelming.

As compared with other separators the DE LAVAL saves much time and labor by its great capacity, easier running, easier handling, easier cleaning and freedom from need of adjustment or repair.

These are merely some of the advantages which make a DE LAVAL cream separator the best of all summer farm investments, as every DE LAVAL agent will be glad to explain and demonstrate to anyone at all interested.

See the nearest DE LAVAL agent at once or if you do not know him write us direct for any desired information.

THE DE LAVAL SEPARATOR CO.

14 PRINCESS ST., WINNIPEG

173 WILLIAM ST., MONTREAL



TO THE GRAIN GROWERS OF THE WEST

We beg to inform the Grain Growers of the West that we are fully equipped to handle shipments of Wheat, Oats, Barley and Flax on consignment or purchase same if so instructed. We own and operate an elevator at Montreal, where Government weights are given, so that grain can be shipped direct to the Seaboard from your own Town without being delayed at the Lake Terminals.

We also operate an Office in New York, in charge of our Mr. Robinson, for our EXPORT Trade to Liverpool and Foreign Countries. Our facilities keep us in the closest touch with all markets, and we will ensure our customers the highest prices at all times. The following is our aim: Highest Prices, Liberal Advances on Bills of Lading, Prompt Notification of Inspections and Weights, Prompt Settlements, Claims for Car Shortages.

Make your Bills of Lading read: Care of Gibbs & Robinson, Great West Life Building, Winnipeg, Man., and we will watch the grading of your car.

We are members of The Winnipeg Grain and Produce Exchange, The New York Produce Exchange, The Montreal Corn Exchange, The Calgary Grain Exchange.

WHEAT.—We look for advance in price of old wheat any time. New crop price depends on weather.

OATS.—We believe old crop oats will sell much higher in July and August. Supplies very light in United States and Canada, and European crops backward.

It will pay you to watch this space for future announcements regarding crops and markets.

GIBBS & ROBINSON GRAIN COMMISSION MERCHANTS GREAT WEST LIFE BLDG. WINNIPEG MAN.

Don't Fall to Renew Your Subscription
Before it is Too Late.

(8) Even tho comparatively few plants are attacked in any special crop, these are tied up with the healthy straw in the bundles. If such grain gets wet before thrashing the fungus filaments invade the heads of the grain of the healthy straws and work their way into the dampened or swelled seeds, helping to cause those features known as bleaching, blistering, etc. Such seeds, due to wetting, become of abnormal size and of light specific weight. They carry into the soil with them the filaments of the root destroying fungi.

Seeds of wheat and flax and other grains which are grown upon sick mother plants and containing the fungi of the root diseases on the interior are sure to be shrivelled and even tho they are properly harvested so that no rain comes in contact with the seed, such seeds often show blistering and bleaching, due to the excessive growth of the filaments inside the bran layer; and even tho they do not show any of these features, such diseased seeds transmit the root troubles to the soil.

From the foregoing it should be evident to anyone why bright colored, plump, heavy weight seeds are more likely to produce a good crop than those discolored, bleached or blistered seeds, even tho these may chance to be larger..

Blow out or grade out all the light weight seeds. Never let your grain which you intend to keep for seed get wet. Treat all seed after it has been graded before sowing to kill any spores that may be dusted over the surface of the seeds.

Rotate so that the same kind of crop will not be on the same land more often than once in five or six years, and you will not have so much "wilt," "canker," "tip-burn," "sun-scald," "yellowing," and "blighting," of the plants in your crop. Get your neighbors to do likewise for these diseases are produced by wind blown and water washed parasites.

Form a co-operative Seed Growers' Association in every neighborhood made up of men who can be relied upon to take care of the seed which they are raising for sowing purposes.

Stilton: The King of Cheeses.

WHAT is Stilton cheese, and why is its appearances on the tables of the well-to-do confined to one season of the year? I venture to think that while the average man would fail to answer either question, the majority of those who consume or sell it believe that it is partly made from cream. Yet this is not the case. Whence that creamy texture—or pate, as the

French maker terms the salvy consistence of a well-made cheese—and those veins of blue, which consist of fungi, so well known in the average home as mould? We shall presently see how both are produced, and shall then understand why it is that the palate of the connoisseur is tickled by a *bonne bouche* of Stilton, with its well-known boquet, cut from a perfect cheese.

A large proportion of the Stilton made are spoiled. This fact is equally applicable to Gorgonzola cheese, and if the thousands who call for it in the restaurant or buy it for home consumption had been witnesses of the methods adopted in its production, they would scarcely prefer it to the infinitely more perfect cheese of British make. It is not possible to produce pure cheese from milk which is impure, nor from clean milk if the hands of the maker or the utensils employed are unclean. It is almost entirely owing to uncleanly habits that so large a proportion of the Stilton cheeses made in Leicestershire, England and its vicinity are sold at half the leading Stilton prices. We have no means at our command like the Italian makers of selling our inferior goods. They have found a market in the metropolis of the world, and, speaking from long experience, I have never seen a single specimen of their famous make in England which I—still less their own countrymen—would call first-rate, and I have eaten the best they can produce. We, on the other hand, are a famous trading nation; but go where you will in Europe or America—and I can speak with some knowledge of both Continents—a good Stilton is impossible to find, if it is ever known at all.

England is still the producer of the King of Cheeses: but it makes no effort to develop the industry, although it can be made to pay better than any other form of dairy-work. While England imports Parmesan and Gorgonzola from Italy, Gruyere from Switzerland and France, Gouda and Edam from Holland, Cheddar from Canada and Australia, it makes no attempt whatever to export an article which is superior to all. There are thousands of farmers in England who make butter and who realise no more than 9 cents per gallon for their milk; but with the requisite knowledge and a small outlay for plant, they could, "an they would," change this ridiculous figure into 25 cents. The problem would work out on a good farm where twenty-five good cows were kept as follows (the comparison made is between the butter-making farmer and the producer of first-class Stilton cheese, cows averaging 605 gallons, producing approx-

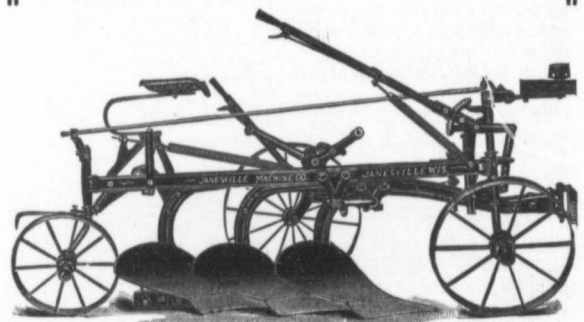
IF YOU DO IT WITH A JANESVILLE Northwestern Gang Plow

Your plowing will become as pleasant as a pastime. This great implement has been designed and constructed with the single purpose of overcoming all the difficulty and worry of handling the heavy gumbo soil peculiar to Western Canada. No ordinary plowshare or combination of plowshares will make headway against these conditions and do satisfactory work. After years of study and racking experience we have successfully met the case with the **JANESVILLE GANG**

ITS CHARACTER

Among other exclusive features, the "JANESVILLE FOOT TRIP" horse lift on this plow gives it an advantage over every other plow made of priceless value to the plowman. You simply trip the lift with the foot while riding or throw the hand wheel lever while walking and the horses will pull the plow bottoms into the ground at the start and out of the furrow at the end.

Made of the very best material in every detail, its **EXTRA HEAVY** beam especially guarantees a strength and resistance quality that will not break under the most grilling test any plowing job is likely to give it.



ITS BUSINESS

Its business is to successfully deal with and overcome the unyielding tenacity of the worst prairie and scrub lands instead of skipping it or breaking at the first real obstacle. In entering the ground, the heel of the plow bottom is held up so that the point **MUST** go down first. In leaving the ground the heel of the bottom is held down so that the point must come out of the ground first. The plow works almost automatically and so easy is it both on the draft horses and the man, the work is done with half the sweat of an ordinary plow in ordinary soil.

DON'T FRET ANY LONGER WITH [BACK-ACHING AND HEART-BREAKING PLOWS. WRITE US FOR THE COMPLETE HISTORY OF THE "JANESVILLE NORTHWESTERN GANG" AND WE WILL PUT YOU ON THE FAIR-WAY TO THE PLOWING THAT PAYS

MANUFACTURED BY

The Janesville Machine Co.

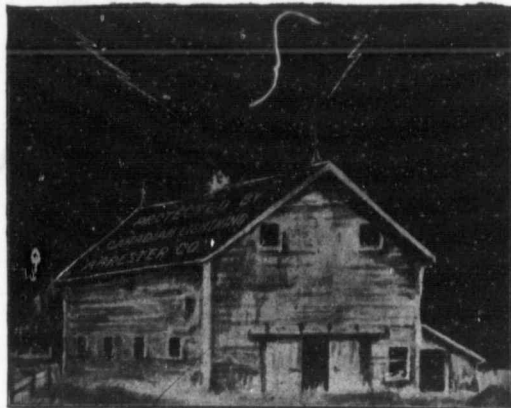
The American Seeding Machine Co.

KING and JAMES STREETS, WINNIPEG
CANADIAN SALES AGENTS

Is Your Property Lightning-Proof?

The "TOWNSLEY" is the only system of Lightning Arresters made in Western Canada and the only system having the endorsement of the Farmers' Mutual Insurance Companies of Canada, and also the Fire Commissioner. Not a single building has ever been damaged by lightning which has been rodded by the TOWNSLEY method. We guarantee perfect immunity from risk and will replace all damage done to a building and its contents that has been struck by lightning if the structure has been rodded by our 99% PURE COPPER CABLE.

The initial cost is trifling and is practically the last expense as there are no "maintenance charges." The Copper Cable is no less valuable at the end of twenty years' exposure as it was on the day it was installed on the building. Don't delay in covering yourself against a risk that is NEVER ABSENT. —Write for our complete literature—



PROTECTED—And Safe for a Lifetime.



UNPROTECTED—Ruined in a Moment.

Canadian Lightning Arrester and Electrical Co., Ltd. 199 Main Street WINNIPEG

ately 1 lb. of butter to each 27½lb. of milk):

25 cows: 236 lb. butter per cow at 25c.	\$ 1475.00
Offal milk at 3c. per gallon (600 gallons cow	\$ 450.00
	<hr/>
	\$ 1925.00

Value of calf omitted. Taking an average of five years, the quantity of milk required to make a Stilton cheese at the British Dairy Institute as I have recorded it in "Elements of Dairy Farming," varied from 12½lbs. in May to 10lbs. —or 1 gallon—in September, or an average of nearly 11 lbs. In my own place the milk being rich in solids, I believe the average quantity was slightly less. We will, however, take 11 lb. as our standard:

14772 lb. cheese at 25c. .	\$ 3693.00
Whey	\$ 125.00
Approximate	<hr/>
	\$ 3818.00

One or two remarks are necessary in order that these figures may not be regarded as exaggerated. I have purposely taken two extremes, with the direct object of showing the superiority of one system of production above the other, and thus inducing many thousands of farm-

ers who make butter, which is sold at low prices, to make a study of the Stilton case. It is, indeed, possible for them to produce butter of higher quality and to realise a higher price, but those who have made their way into a groove usually find it difficult to get out unless they adopt a new line of work.

When milk is used for making Stilton cheese it is warmed to 90 deg. Fahr. at which temperature it would coagulate spontaneously by means of the lactic acid produced by the bacteria within it, if left sufficiently long. This coagulum, however, would not produce a cheese. So far as is known to man, rennet is the only medium, although the active principle which it contains has not been discovered. We may now suppose that the curd is ready for the moulds in which it takes its form, having passed through the various stages of production. The moulds, known in Leicestershire as hoops, are made of metal and pierced with many holes through which the whey escapes. The apartment in which the work is conducted must be maintained at a given temperature, or the cheese will spoil, for the whey is rich in sugar, from which the lactic is produced. If, then, the temperature is too low, the whey flows from the curd too slowly, carbonic acid is produced and the swollen

cheese becomes a failure. If, on the other hand, the temperature is too high, the whey leaves the curd too freely with the result that it becomes too dry, and the normal changes, which are all essential, fail owing to the absence of sufficient moisture.

We will suppose, however, that the work is thus far successful. In making a pressed cheese like Cheddar, the curd is cut into small cubes, and as the whey escapes with great rapidity in the heated vat, it assumes by its shrinkage a coarse appearance and is somewhat tough. The curd of Stilton, on the contrary, is just broken into large pieces and left to "air" until it is distinctly acid and has assumed a mellow consistency. The cheese is left to drain until its firmness is sufficient to permit of the removal of the hoop when it is carefully wrapped up in cotton bandage and tightly pinned, reminding one of a baby in an overall. It is afterwards turned topsy-turvy daily, its coating scraped and again enveloped in a clean frock, and so on from day to day until the well-known coat is formed. Care is taken to preserve the temperature at a point indicated by the open air, and to keep out flies and those tiny mites which work such dire destruction. As the cheese matures by the activity of bacteria—and this is denoted

by the change and mellowness within—the blue mould, which is greedily consumed in cheese, but which becomes a loathsome blot upon the slice of bread, begins to grow. This is one of the phenomena of Nature, solved only in recent years. The spores of the fungi, like many other seeds of unseen life, are in the air; they find their way into the milk and curd, and grow because the conditions favor them. The curd is placed in the mould in pieces, and is not pressed into one homogeneous mass; in consequence, the spaces which remain between them admit of the growth of the fungi which, requiring air for their sustenance, thus obtain it.

In recent years the authorities in most countries have very properly taken steps to prevent the sale of milk containing added water, drugs and dangerous bacteria, with the object of protecting the consumer against diseases and fraud; but I know of no instance in which cheese of a toxic character has been the object of official attention. It is, however, a common practice to sell Stilton which is unfit for food, owing to the presence of toxic flora. I believe that no action would give so great an incentive to the producers of Stilton cheese to make a closer study of their work and to produce a larger quantity of

fine quality than the condemnation of defective samples.

Farmers prefer in so many cases to sell their milk through the medium of butter-making—in which they are eclipsed by other countries—at prices which often realise no more than 9c. the gallon, or to dealers, who pay them but very little more. And why is this? Not the cost of plant nor their incapacity to learn a new system of production, but that lack of enterprise and unwillingness to change and press forward in the line of progress which characterises so large a number of those among our people who in their later days realise "what might have been."

James Long.

Happiness Through Self-Expression.

By W. H. Tennyson.

THIS is an era of promise, of hope, of possibilities. As the philosopher, Herbert Kaufman says, "No matter how pitifully crippled you may be in outlook, in position or in body, every daybreak is a token of encouragement—a promise to some—a fulfilment to many—an inspiration of courage to all. Every day since the founding of the Dominion new resources of revenue have been discovered. But the men who created them were seldom endowed—save with un-failing grit."

Progress is the watchword of the twentieth century. The evolution may be slow. Still, there has been progress and there will be more progress.

Modern business has become a matter of fixed laws—the day of chance is passing.

The sources of revenue must be discovered; the means whereby progress is to be made in this new decade must be found; the promises, the hopes, the possibilities of the new era must be realized. Chance and "luck" will not do it.

Realization can be brought about only by optimistic perseverance—by grit.

The opportunities for this new decade of twentieth century are greater than ever before.

All phases of life are on the upgrade.

Everywhere men are awakening.

The movement for more education, for better health, for nobler ethics in government, in society and in commerce is gathering headway.

Life is good because of its progress and because of its possibilities for growth.

The Lessons Taught by Failure.

No man or woman, however, has ever achieved greatly who

did not survive disappointments and what seemed to be failure. If you feel discouraged look back—away back. Can you remember where you stood ten years ago, when the first decade of this century began? Does the path from there to where you stand now lead upward or is the tendency downward? Of course, you have made mistakes. Take Kaufman's words again:

"You're a man, not a god. Omnipotence is not a human characteristic. We have all failed, and no matter to what heights we mount, we fail and fail again. All life is a try-out. You can keep on starting over, and each time stand the same show."

Yes, as we look back over the work of one year or ten years, we can see where we have made mistakes, whether the path is upward or downward. The general tendency of the path in the great majority of cases, we find, however, has been upward.

For the men and women who realize the axiom that he who profits most both in money and in manhood is he who serves best; who realizes that to-day, more than ever before, meritorious goods and square deal methods are appreciated in business; who believe that the golden rule can be applied practically and with mutual profit in the business world; who, in short, are above all else men and women of reliability, of action and not afraid of work—for such men and women, progress is sure. Are you such a man? Let us frankly ask the question—"Am I such a man?"

Suppose the path of life does lead into valleys occasionally. Some folks (and we all may as well join the happy crew) have the happy faculty of forgetting the knocks and disappointments, and of remembering the bright days and the successful days. It is a good habit to cultivate.

Some one has well said that "you can only build unhappiness with the wreckage of regret." So, if things haven't been just as we wish they had been recently, let's pick out the bright days, the progressive days, the successful days, the happy days—and keep them before us as models for the new decade.

The Joy of Achievement.

There is, however, little real joy in contemplation of what has been accomplished, is there? The real pleasure lies in the accomplishments themselves.

Success and happiness are analogous in some respects. Both like the "Blue Bird," can be achieved indirectly only.

He who strives for Success as such can never attain it.

A RELIABLE PUMP

REPRESENTS A VALUE TO ANY FARMER THAT CANNOT BE MEASURED IN DOLLARS

Trahern Pumps

represent the very last attainment in human skill in devising suction machinery that is at once simple in construction, easily operated and that will give invariable results in

PERFECT SERVICE

THEY WOULD NOT BE REPLACED BY ANYTHING ELSE WHEREVER THEY ARE USED



Fig. 172

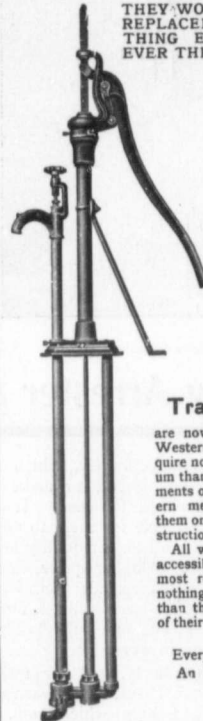


Fig. 27

Trahern Pumps

are now filling a big place in Western Canada and they require no other advertising medium than that of the honest statements of the hundreds of Western men who have installed them on their farms and in construction outfits.

All working parts are easily accessible; valves are of the most reliable type and there is nothing finer in hydrostatics than the constancy and facility of their service.

Every Pump is Sold Under An Unlimited Guarantee.



Fig. 404

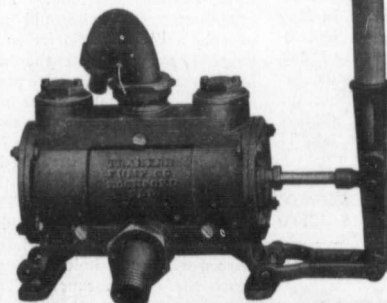


Fig. 200

Crane & Ordway Co.

LOMBARD STREET, WINNIPEG, MAN. WESTERN DISTRIBUTORS

"FOR EVERY FARMER"

An Individual Threshing Machine

The farmer who wants a clean farm will of necessity buy a threshing machine to do his own work and do it when he wishes it done. Time is saved and your land is clean if you own a MOODY THRESHING MACHINE.

Write us for Catalogue.

The Matthew Moody & Sons Co.,

P.O. Box 2083

Winnipeg, Manitoba

To be happy—to be successful—one must get out of one's self, so to speak. We serve ourselves most nobly by serving others to the best of our ability. The man who works for mutual benefit, who aims to give full value for what he himself receives, is pretty certain to attain both success and happiness, provided only that he works, making the idea of social service his motive power.

"I believe in freindship founded on business, not business founded on friendship says a certain master printer, and Elbert Hubbard adds, "Friendship resultant of business is the real thing. Business born of friendship dies aborning."

Friendship founded on business! Yes, that's something worth striving for in the new decade. He who practices the rule of mutual benefit must succeed, if only he remembers that the master key to treasury is Persistence.

Packing the Soil to Outlive Moisture and to Control Root Diseases.

By H. L. Bolley.

I have noticed the apparent fine condition in which the seeding operations have started immediately following the disappearance of the snow.

In looking at the work, one feature impressed me greatly. In very many cases the fall plowed land was plowed just preceding the first heavy frost of winter. It had not time to settle and no packing was done upon it following the plowing.

Much wheat has been seeded while the frost was still in: the fall plowed land, the ice coming near to the surface. The farmers have harrowed this land until it looks like a nice garden patch. The seed has been placed in the ground in apparently fine condition. The ice, however, did not allow the unsettled soil to be packed down by harrowing operation. The harrow only made a nice appearing surface. The seed so placed in close to the moisture, due to the melting ice, will start immediately and give a fine appearance.

However, when the frost goes out, such fall plowed land will be left loose and poorly packed under the seed. Unless heavy rains follow in the spring, the top soil will be poorly connected with the subsoil.

It is my belief that a heavy roller or packer should be run over such fields as soon as the frost is out down to the bottom of the furrow slice. I believe that such packing by the surface packer or clod crusher will result in great good to all early sown grain which is

seeded on fall plowing. If the frost gets out before the grain comes up, this packing should be done at once. The packing can be done after the grain is up, tho it is best to do it before.

This is the year to learn the lesson taught by the experience of the last two years. Spring plowed land should be sub-surface packed at once behind the plow and surface packed immediately behind the sub-surface packer. Following the cold crusher or surface packer, a peg-tooth harrow will do good work ahead of the drill, if properly handled, using the teeth slanting well backward. There should follow after the drill a heavy stone boat, float or packer to pack the loose dirt firmly into the seed.

Only heavy rains and mud should prevent the farmers from carefully carrying out this sort of a process if they wish the biggest possible crops.

After the wheat, barley and oats are up a few inches, use a weeder or a harrow to form a mulch whenever the ground begins to dry out, crack or bake. This can be done until the grain begins to run up to head. Never harrow grain when the surface is muddy or sticky.

In case of flax, conserve the moisture in the ground before the flax is seeded by means of deep surface packing, har-

rowing and by planking or packing after the drill. In the case of this crop too much soil packing cannot be done if the work is done while the ground is in good tilth.

The root-blight of flax and of the cereals love a loose friable soil. They cannot do so much damage in a well compacted seed-bed.

Sage Financial Sayings

Whoever figures on the to-morrow is an investor.

If you want money without working for it the public will have none of you.

The man who succeeds is the man who is never discouraged by failure.

A corporation composed of small stockholders aims to keep up the distribution of wealth.

One investment made with judgment may lift you beyond the necessity of a lifetime of toil.

Learn why your investment was a failure. If you made mistakes, find out what those mistakes were.

Each investment opportunity possesses many points of information that must be furnished if one is to understand and appreciate.

Invest under conditions where you receive the full proportion or quota of what your money actually earns.

Wages never made a man rich, but saving and good investment make a man independent of wages.

If every small investor put his money into new and creative enterprises, where would our financial magnates be?

Jay Gould said, "You must make your money on judgment and foresight and not on demonstrated facts."

No fortune was ever amassed without investment—a combination of the use of money and the use of knowledge.

If a man is wise he will not hide his savings in a stocking. He will invest in productive enterprises.

Farmer Up-to-Date - Farmer Good Intention

Their Farms adjoin. Both of these Farmers live in your neighborhood. You know them and they know you. Are you one of them? If so, we sincerely hope you are the right one.

FARMER UP-TO-DATE

AUGUST
1912

FARMER GOOD INTENTION

HENRY:—Well dad I hope you are satisfied that it paid us to take all that stuff to Winnipeg Fair. I don't know whether it was the fact that three or four of the old stand-bys like Van Horne and Barron did not show this year, or because our beasts were really better than anything we or anyone else had ever shown, but we certainly did not take a back seat at any point of the judging. I figure that after paying expenses we have \$132.00 in prize money. Our Poland China hogs were the only details that did not score. They were not to be despised, however, but candidly they did not have a look in either in point of numbers or class with that fine bunch the Stonewall fellows put up. These chaps seem to have a monopoly of this breed and I thought as I saw them in the pens it would pay us to buy a little bit of their breeding stock. Our Holsteins licked anything in the ring, and the two brood mares with their foals were also winners from the first. The Duke took special notice of "Betsy" and quite a number of visitors had lots to say about her.

FATHER:—We certainly were in luck's way, my boy. I had the belief that we wouldn't come away empty handed but I didn't expect to lift the money we did. I met old man Mackay from Brandon in the train at Portage. He had been to Winnipeg and took special note of our stuff, and wanted me to sell Betsy. He offered me \$650 for her and the foal but I knew you would like to keep her, so I didn't make a deal. If she is worth that to Mackay, she is worth a bit more to ourselves, and if I'm not mistaken, barring accidents, that foal will be worth as much as her mother in a short time. If we hadn't as big a crowd of competitors as we had in former years, we were certainly up against as good exhibits in live stock as I have ever seen outside of the Royal Agricultural Shows in England. Our neighbors are certainly working as hard as we are to keep up the standard and give the animals fair play, so we mustn't "rest on our laurels." I agree with you that we are not up to date with our hogs, and that we should replenish our breeding stock.

MOTHER:—You can hand over my little bit of that prize money as soon as you like. I want another incubator and I think my share of the spoils will just about cover it, and when you boys have done blowing your own horn, I think you might spare a word for my Plymouth Rocks. I tell you I felt as proud of those birds as anything I ever competed with, but I doubt whether I should have come away as happy if Mrs. Cooper had been a rival. There's money in hens but you've got to know how to coin it. It's all a matter of care and management, but the more I handle poultry, the more I am convinced that there are no side lines on a farm that bring a better reward for painstaking care. I begin to doubt the wisdom of showing valuable birds at the summer fairs, and that our neighbor, Mrs. Cooper, is right in this respect. The atmosphere of the building was stifling, and I noticed quite a number of the birds were suffering from the heat and the cramped accommodation. They make too many days of it at some of our fairs, and a lot of the time is wasted in getting ready.

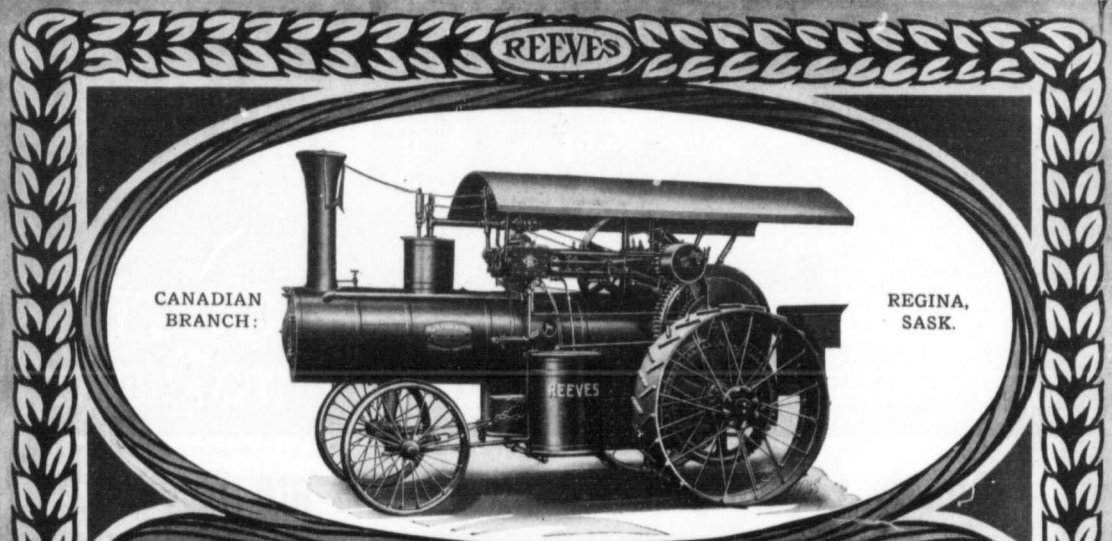
JOHN:—Well I can't congratulate the Winnipeg folks on their fair this year. Of course you fellows would bury yourselves in the stock-barns most of the time, but in taking a bird's eye view of the whole show, I want to say that the only thing about it that justified all the advertising it got was the visit of His Royal Highness the Governor General. I heard nothing but complaints and especially from the machinery men. A man asked me where he could find a wild oat separator that he had some in specially to see and we went on the hunt together. After canvassing the whole of the machinery section (which was a quagmire inches deep most of the time) we gave up the job, but ultimately found it next door to an out-door grocery display on the other side of which a woman phrenologist was running her business. To my mind the failure of Winnipeg Fair to live up to its pretensions is due to "over management." There are far too many cooks at the soup, and the remedy in my opinion is to cut the whole directorate down to the two men who are now acting as president and manager respectively with powers to engage what help they might require.

FATHER:—Just our luck again. Here we are with the first decent crop of wheat we have had for years and I find that binder I bought from Van-Winkle not much better than scrap metal. Of course he had used it for some eight years, he said, before we bought it, but he assured me that with the care he had taken of it and what he spent on repairs before I took it over, it was as good as new. I wonder whether the fact that I left it on the north side of the barn since we used it last fall has anything to do with it. I fully intended to give it a lick of paint, and put it under cover, but there was no room in the old shed and I couldn't get lumber for the new building from Harrison till I had taken up part of that note. I wonder if we could get Watkins to help us out. Charlie, I wish you would put it up to him when you see him at the fair on Wednesday. I haven't the pluck to ask him after all I have borrowed lately, but you might get at him through Jim.

MOTHER:—Now father that's too bad of you to put it up to Charlie. I tell you you've no right to take advantage of the boys' friendship with anything of the kind. It's you all over. You will not face a disagreeable situation if you can by any means get out of it, and I tell you it is not only cowardly but its mean and detestable. I know quite well (although I've never heard an unkind word about you from any of them) that Watkins and all our neighbors blame you for your ill luck. I don't need to point out to you where the weakness lies. You know it better than anybody can tell it, and I beg of you once for all to make a real effort to straighten yourself out. If I know anything I know that the right thing is to find some cash to pay in a straight-forward way for the hire of a binder. It will mean a little bit off the price of the wheat but the grain has got to be taken care of at any cost for we must look to it this year as our mainsay till we can make a bit by some means later on.

CHARLIE:—You're quite right Mother. I'm willing to do anything that mortal can do to pull things out of the mud, but I don't think it is wise or fair to prejudice ourselves any more than we have done by hanging on to the skirts of the neighbors. They have been "bricks" every one of them, but there's a limit to the very best good nature, and the last request I would like to make would be any favor of the kind from Watkins and all people. It makes me sick every time I go into the implement shed and see the number of tools in it that really belong to Watkins; and in that rotten shack they get no more protection there than if they had been left in the open. Mother's idea is correct, and to show you that I'm willing to help in preserving our name, I've asked Bob to sell those two town lots I had hoped to hang on to and make something by when the new station goes up. As it is, I doubt if I'll get any more than the money I paid in, but we can't have money tied up in that way while we are in this plight.

BOB'S WEEKLY LETTER:—"I greatly regret that Mother was unable to fall in with my invitation to spend Fair week in Winnipeg. So far as the real features of the fair were concerned, she didn't miss much. It was a bum show, I can tell you—that is to say for what one is led to expect from Winnipeg. I heard nothing but kicks and not one word of praise for anything but the Duke. But for His Royal Highness, the thing would have been a sorry affair. As it was he drew the crowd all the time, and his free and kindly deportment and the genuine interest he took in everything that was shown him won everybody's heart. The live stock show fell short in the number of exhibits, although there were some stunning representatives in the stuff that was on show. The machinery was excellent although badly provided for. If we are to keep our feet as the "great" business Winnipeg is supposed to represent, something drastic will have to be done before people are asked to attend anything of the kind again. The grounds and buildings have got into a deplorable state and will all have to be regenerated."



CANADIAN
BRANCH:

REGINA,
SASK.

Durability and Good Working Qualities in a Threshing Outfit Assure Profit to the Owner

Profit is what appeals to the buyer of threshing machinery, and when the qualities necessary to the greatest profit can be found in one machine, that is the one you should buy, even though, as is likely to be the case, the price is larger than on other machines. The following letter is right to the point and tells the experience of an operator of Reeves machinery:

Reeves & Co., Columbus, Ind.

Fullerton, N. D., May 29, 1911.

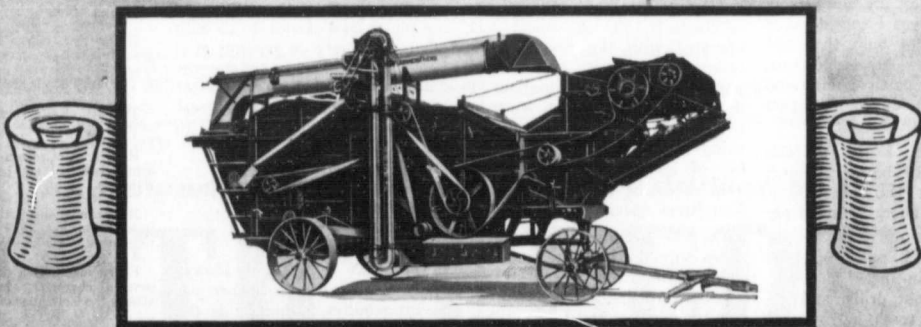
Dear Sirs:—Have you on hand lower pan for 40x60 separator No. 1052 bought in 1900? If you have, let me know and send price. This is the first repairs I have had to buy in eleven falls. I run this separator six falls in Illinois and five falls in Dakota, and it is still in first-class shape excepting this pan, and today, with a new pan, I will put it up along side any new separator and do a better job. I also am using most of the belts that came with it.

Respectfully,

R. F. D. No. 2, Box 25.

Myron McKeague, Fullerton, North Dakota.

The Reeves Double Cylinder Engine and the Reeves Compound Separator make an outfit that will prove profitable to you, satisfactory to your patrons, and with reasonable care, will last a life time.

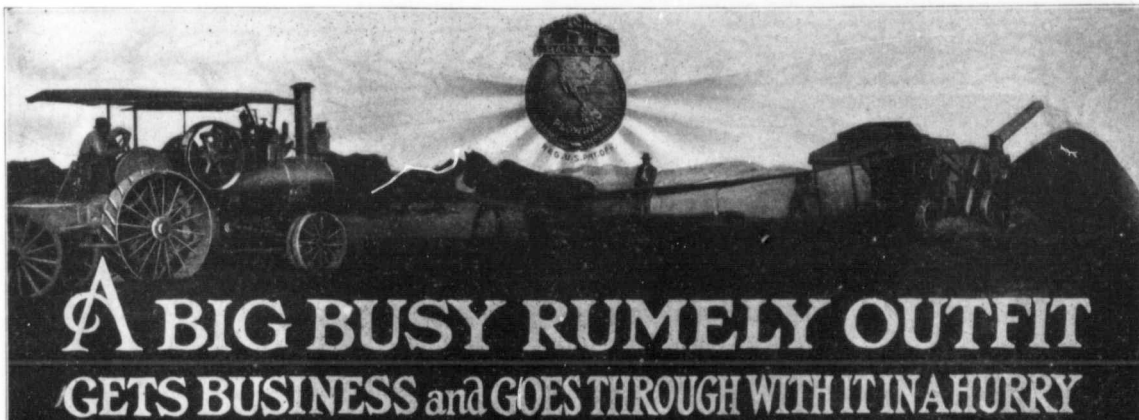


Our catalogs are free — ask for them

EMERSON-BRANTINGHAM COMPANY

REEVES DIVISION, COLUMBUS, IND.

REEVES



A BIG BUSY RUMELY OUTFIT GETS BUSINESS and GOES THROUGH WITH IT IN A HURRY

Rumely Capacity Threshing Outfits are Needed

In seasons like this, when the crop is big and everybody wants to get grain to the market in a hurry, Rumely Capacity Threshing Outfits are the stand-by.

With a Rumely Outfit, you get the most work—make the most money—satisfy the greatest number of customers. You should have a Rumely Ideal Separator with either 34x56, 36x60 or 40x64 cylinders, which are just the sizes to eat up the work.

Rumely Steam Engines

The 25, 30 and 36 h.p. big "boys," furnish ample power to drive these separators to their full capacity every minute during the threshing season. Rumely Engines will also haul the big outfits and do it easily and quickly. You lose no time when with a Rumely Outfit.

If you want a money-making threshing outfit, ask your dealer about Rumely easy-to-run outfits. Big Rumely Book free to you—just your name and address on a post card will do.

RUMELY PRODUCTS CO., Inc., 1982 Dufferin Ave., Winnipeg, Man.

Uses a Caterpillar.

Your favor requesting me to give you the story of my experience in farming with gas power, is at hand and noted, and I will endeavor to comply with your request.

Last year I thoroughly investigated all makes of traction engines, both steam and gasoline, and finally purchased a Holt 45 horse power Caterpillar. The reason for my purchasing this machine was I considered it the only tractor built that was practicable for my conditions, as my land is partly gumbo and was very soft during the past wet season.

In breaking, I use a John Deere plow 10 bottom 14-inch and a 14-foot Dunham packer, and averaged about 25 acres per day.

In seeding I pull six John Deere discs in-throw and out-throw, 2 11-foot drills, and 20-foot of spike tooth harrows. I spent considerable time and effort getting up a satisfactory hitch for this machinery, and finally succeeded in getting one which I consider the best I ever saw. I am enclosing you herewith a sketch which will give you an idea of the way it is built. This outfit was absolutely no load at all on the tractor, but it being all the machinery I had

at the time, and as putting in my crop with an engine was somewhat of an experience, I did not buy any more. However, with this outfit I put in approximately 800 acres, averaging about 50 acres per day.

During the harvest season I pull 4 8-foot McCormick binders, using the Hansman binder hitch. I was a little sceptical at first about using binder behind the traction engine on account of not being able to turn a corner successfully, but the outfit was operated with the best of success, and I am more than pleased with the combination. I did fully twice as much work in a day as I could have done by using horses on the same number of binders.

In threshing I used a 36 x 56 Red River special separator.

On the seeding outfit I require only the engineer and one man on the drills, and the same number in plowing, but due to the type of engine I use I am able to work my land no matter what condition it is in, whether wet or dry. I have maintained but six head of work horses, and, in fact, do not have use for more than two of these.

My tractor uses from 30 to 45 gallons of gasoline per day, according to the nature of the work, and the water consumed is practically nil, probably 10 gallons

a week, and this due to leakage and evaporation.

I consider by using traction power that I have operated my farm for the past year for about one-half the expense that I could have done the same amount of work with horses.

I consider that breaking is the only really hard work the average tractor is put to, more for the reason that the average farmer will load his tractor about up to the limit with breaking plows, and cannot do so with other machinery on account of it being too cumbersome to operate. I have learned to load my tractor moderately and find that a great deal more is accomplished in the end.

Yours truly,

Harry C. Best.

Strathmore, Alta.

"The man I like is always ready to take the lead when occasion requires it, but he is the last person to thrust himself forward when not called upon."

"The man I like is interested in everybody else's affairs, but never bothers anybody with his own."

"The man I like most I like because he doesn't know how much I like him."

NUGGETS

People who marry for a joke must have a misfit sense of humor.

Nothing pleases a woman more than a compliment she doesn't deserve.

Give a woman a pretty lace handkerchief and she can cry over anything.

Are you thinking of buying an aeroplane? It doesn't cost anything to think about it.

It is easy to get anything you want—if it happens to be something that nobody else will have.

Every man comes into the world a great original—most men leave it a poor copy.

The lucky dog is always on the hunt.

The art of life consists in not being overset by trifles.

He who wont reason is a bigot, he who cannot is a fool, and he who dares not is a slave.

If you have any faith—give us a share in it; if you have only doubts keep them to yourself. We have enough of our own.

Every man has a continent of undiscovered character; happy is he who acts as the Columbus of his own soul.

Truth is violated by falsehood, but it may be equally outraged by silence. Hot stufh for shivering souls.

"What God hath joined together, let no man separate—Stick to your job."

They say we've succeeded. Half of that success we own to minding our own business and the other half to a systematic neglect of other people's affairs.

Fools recite proverbs, but wise men live 'em.

"We must all toil or steal."—*Carlyle*.



MAYTAG^{CO} LTD



THE RUTH WARRANTY

The Ruth Feeder is guaranteed 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 without slugging the separator cylinder or loosening a spike, and to do a faster, cleaner and better job of feeding and to wear longer and cost less for repairs than any feeder manufactured by any other Company in the world.

If You Want To Know How You Can
 Make from \$1200.00 to \$2000.00 Extra with your
 threshing outfit this fall, we can tell you. If
 you are interested, drop us a card and
 we will tell you just how it is done.
EASY MONEY.

Do not forget that

Any Threshing Machine Company doing business in Canada can supply you with a RUTH Feeder, and we FURNISH THE ATTACHMENTS TO PUT THEM ON SO THAT THEY FIT PERFECTLY. When we say ANY Thresher Company, we had in mind more especially any of the following, as they have all bought the RUTH of us, and we are not only willing but anxious to fill all orders they may favor us with during the coming season.

Sawyer & Massey Co.
 International Harvester Co.
 Waterloo Manufacturing Co.
 Fairbanks-Morse Co.

American Abell E. & T. Co.
 Haug Bros. & Neillermoe Co.
 Gear, Scott & Co.
 Burrledge Cooper Co.

Buffalo Pitts Co.
 Canadian Port Huron Co.
 The Rumely Co.
 Robert Bell E. & T. Co.

Geo. White Sons & Co.
 Nichols & Shepard Co.
 Reeves & Co.
 J. I. Case Threshing Mach. Co.

John Goodison Thresher Co.
 Aultman & Taylor
 Minneapolis Thr. Machine Co.
 W. S. Cooper Co.

REMEMBER, that should you buy a Separator of ANY COMPANY whose name DOES NOT appear above, that we can and will furnish the proper attachments to equip it with a RUTH FEEDER.

And please do not forget that in addition to the

RUTH FEEDER

We sell practically everything else that a Thresherman uses. If in need of any of the following, drop us a line and you will get a prompt answer giving prices and any other information you may want.

Acetylene Gas Headlight. Headlight Attachment to change oil burning headlight into a gas light. Gas Tail Light for rear of engine. Oil Pumps. Spark Arresters. Tooth Straighteners. Belt Guides. Cylinder Wrenchers. Canvas or Rubber Drive Belts. Leather Belting. Carbide. Tank Pumps. Suction and Discharge Hose. We handle NO SECOND GRADES. Everything the best, and prices are right.

THE MAYTAG COMPANY, LIMITED, WINNIPEG.

THE LUBRICATION OF THRESHING MACHINERY

by JAMES BEAMISH

THE proper lubrication of threshing machinery is a matter of great importance, as on it depends very largely the life of the machine, the number of bushels threshed per day, the amount of profit at the end of the season, the satisfactory (or otherwise) service that you render to your customers, and many other things that go to make up the success or failure of the thresherman. It would be interesting to have a record of the number of hours of time lost and the repair bill occasioned during one season's threshing due to improper lubrication. This would be the more interesting because of the fact that it is not a common misfortune of the Thresherman's to be classed with the wet weather, hailed crop, frozen and shrunken grain and the like, but it is directly chargeable to the carelessness or inefficiency of the operator. It is true that there are at times extenuating circumstances but in most cases it will be found that the trouble was caused through neglect or lack of knowledge.

In all matters pertaining to this important subject the lubricant and its quality is the first thing to be considered. In choosing oil there are many things, such as the time of the year, and the particular part to be lubricated to be thought of.

In choosing either oil or grease it is usually safe to be guided largely by the price, as all reputable oil companies put their oil out under well advertised brands which have a reputation to maintain, and they are usually reliable. Avoid the cheaper grades of oil, as a good oil will wear longer and give better satisfaction. Choose an oil that is fairly heavy and yet will, as far as possible, remain liquid at low temperatures. If you have trouble with either heating or what seems like excessive wear it is often well to do a little experimenting either by changing your oil or grease or by changing from one to the other. Sometimes the bearing that will not run at all with oil will work well with grease and vice versa.

Of late years it has been the practice of most manufacturers to put grease cups on a great many of the bearings on both engine and separator. With a few exceptions this has been found to give good satisfaction, and to save a lot of time as it is much easier and quicker to go around your machine and give each cup

a quarter turn down than to get a can and oil each bearing, and besides you are sure that if the cup turns down the grease goes into the bearing. This is not always true of oil for it may sit on top till the bearing heats or wears out, as in the case of many parts where there is not weight or speed enough to cause heating. Personally I would prefer to have grease cups on every part of a separator where lubrication is required with the single exception of the cylinder bearings (of which I will have more to say later). On any of the smaller bearings a small cup would do and it would not require filling more often than once a week as a 1-6 turn down every 3 to 6 hours would be plenty to give thorough lubrication. In bearings of this class all solid matter from the grease will readily work out and the regular turn down of the grease cup will be all the attention required except to keep boxing properly adjusted to take up wear. The thumping and bumping to be heard around some machines due to loose bearings is very disagreeable to listen to and very harmful to the machine. Though the strain thus caused may not be great enough to break the parts directly affected, it tends to loosen bolts and screws and may in this way cause expensive breakage.

Now to get back to the cylinder. Here we have very different conditions to contend with and different conditions require different treatment. Here we always find that the maker has provided a complete system of grease cup lubrication. This is the one place on a separator where grease cups are not suitable for use. I have tried them for many years, on many kinds of separators, with many kinds of cup grease and in not one case have I had satisfaction. In a cylinder bearing the pressure is great and the speed is high, requiring the most perfect lubrication at all times. The cap must be kept very closely set to the shaft or the shaft will chatter in the bearing and will wear and beat out the babbit. There should be a set of veins cut in the babbit leading from the hole where the grease enters to both ends of the bearing, each vein to have several branches. If these are not in when machine comes from maker they should be cut before starting work. There should be at least a quarter of an inch wide and $\frac{1}{8}$ to 3-16 of an inch in depth. Also see that they have an outlet at

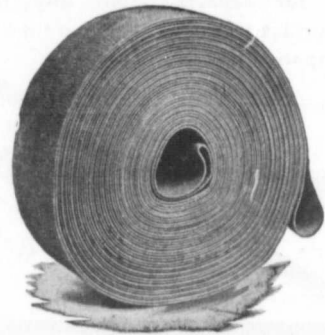
Wall Plaster

Patent Hardwall Plasters (the "Empire" Brands) manufactured from Gypsum will give results not to be obtained by any other plastering material or so called plaster substitutes.

Plaster Board—the fireproof plaster lath and sound deadner

THE MANITOBA GYPSUM COMPANY, LIMITED
WINNIPEG, MAN.

'DREADNOUGHT' SEWN-CANVAS THRESHER BELT



Manufactured in England from the Highest Grade Cotton Duck to specifications called for by the Western Canadian market. Perfect satisfaction guaranteed. We are the sole importers and carry a large stock. All our belts are seasoned with non-freezing oil and therefore will not harden in cold weather.

THRESHERMEN write at once for samples. If your dealer does not handle our belt, ask him to procure it for you.
DEALERS WANTED IN EVERY LOCALITY

GENERAL SUPPLY Co. of CANADA Ltd.

Woods Western Bldg., Market Street East

OTTAWA

TORONTO

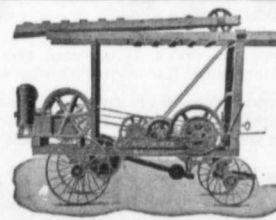
WINNIPEG

SIX REASONS WHY YOU SHOULD HAVE THE MORRIS IMPROVED BEADING TOOL



1. Because it can be used in any and all makes of looms.
2. Because it does not require an experienced hand to operate it.
3. Because it expands the flue at the same time as beading.
4. Because it compels you to treat all parts of the loom alike.
5. Because it expands under a spring pressure allowing flue to upset and reinforce in flue sheet instead of being crushed away as by other expanders.
6. Because flues beaded with the Morris Improved Beading Tool will last three times as long as flues beaded in the old way.

For particulars address, G. E. MORRIS, Box 347, Regina, Sask.



AUSTIN Well Digging and Prospecting Machinery

Rock Drilling Hydraulic Jetting or Hydraulic Rotary Machines to drill any depth in any formation. Operated by steam or gasoline engines or horse power.

Write for Illustrated Catalogue No. 15.
AUSTIN MANUFACTURING COMPANY,
CHICAGO.

Canadian Sales Agents—BURRIDGE COOPER CO., LTD., Winnipeg.



The above is a Horseless Harvesting Scene in which The Hansmann Binder Hitch is being used.

Notice to Manufacturers, Dealers and Users of Agricultural Implements:—

The Hansmann Manufacturing Company will prosecute any person or concern that builds, sells or uses a Binder Hitch which infringes The Hansmann Patents.

THE HANSMANN MANUFACTURING CO. LONG PRAIRIE, MINNESOTA

each end of bearing to assist in getting rid of the worn matter from the bearing and the solid matter from the grease.

Right here is where we find the weak spot in this form of lubrication for cylinder bearings. All cup greases contain a small percentage of solid matter which the wearings from the babbitt will clog the outlet at ends of bearing and gradually fill up the veins, and the first intimation the operator will have that all is not right will be when he comes around to turn down his grease cup and find a hot box, and lucky he will be if he does not find those telltale splatters of metal on the frame of his machine. It takes only a very few minutes to do the damage and cause a shut down of several hours to babbitt a box.

The only way to avoid this trouble when using grease is to take the cap off cylinder boxes and clean grease veins and bearings thoroughly at regular intervals of three to four days. You might get along alright for a week but it is risky. Also grease cups on cylinder must be visited and turned down slightly, a quarter to a half turn at intervals of not longer than fifteen to twenty minutes. And this is imperative if trouble is to be avoided. With a grease cup the supply of grease ceases when you take your hand

off the cup. The amount forced in will last so long and no more, and if you are not on hand at the right time to give it more there will be trouble. Again, it is not always possible to time the filling of your cups so that they will not go empty while threshing. If this happens at a time when there is a bad side wind, or for some other reason there is a lot of chaff blowing around, it is a hard matter to get cup filled and on again without getting dirt into the grease. If you do get it in it will soon work down to the small hole leading to the bearing, and block it. You will know this by the cup refusing to go down. To prevent getting into this trouble it is a good plan to be provided with a piece of paper just large enough to cover exposed grease in stem of cup. This can be slid into place as the cup is taken off. Then the cup can be taken away from machine and filled. Returning, hold open side of cup on palm of hand till ready to put in place, when it can be slipped on as the paper is withdrawn. If done carefully this will be found to work well and to save some trouble.

My preference is for the use of oil for this most important part of the separator. In commencing a season's work, I take off caps from cylinder boxes and clean the whole bearing thor-

oughly, taking out liners if necessary till shaft will not lift when caps are screwed down tight yet will revolve freely. Then I fill oil box on top of cap with candle wick packing, almost to the top pressing down firmly (this is important) to prevent oil running through too quickly. This packing should not be moved till the season is finished as in addition to holding the oil it makes a perfect strainer for the oil and though a lot of dirt may accumulate on top, if left undisturbed it will prevent any dirt or grit from getting into the bearing. If a good grade of oil is used, attention every half hour is all that will be required by a bearing treated in this way, and beyond the possibility of having to take out a liner perhaps once or twice in a season, it will require no further attention.

There is not nearly so much danger of a cylinder box heating through failure to oil at the regular time if using oil in this way, that there is when using grease and the bearing is always clean and in good condition.

The coming of cold weather always brings with it another problem in lubrication, applying more particularly to the lighter bearings. This is the time when you will hear, around some machines, what might at first thought be taken for a flock of

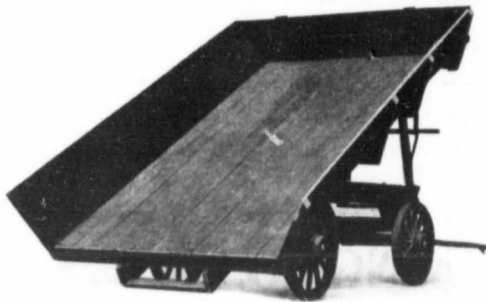
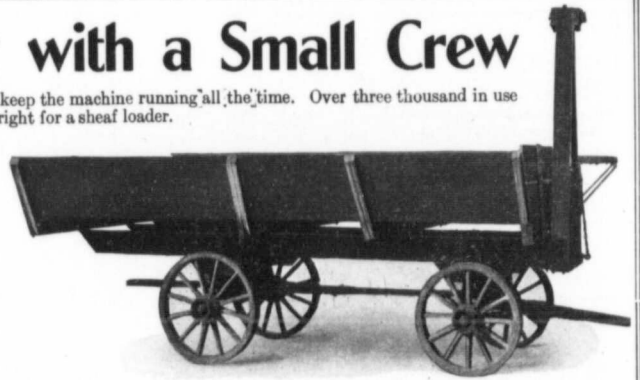
blackbirds in a nearby grove, or a disc seeder in dry weather. There is no excuse for any man allowing his separator to squeak in this way, no matter how cold the weather. When a machine is squeaking it is most certainly wearing out rapidly and as surely the operator is not doing his duty. A great many oils will thicken in cold weather and even though warmed in the can will, as soon as poured on an iron bearing become as thick as jelly, and the bearing might wear out under it for the need of oil. This is the time of the year when grease cups would come handy, but in their absence the trouble can be very easily gotten over by simply adding enough kerosene (the low grade engine oil will do) to the lubricating oil to keep it liquid even when very cold. This will be found to give satisfaction and it will be just as easy to keep the machine from squeaking as in warm weather.

It is an easy matter to waste a lot of oil and a lot of work on a separator and yet not have it well oiled. Many a small bearing that could not make use of more than two or three drops at one time gets a spill of ten times that much and other bearings that require considerable oil get very little because it is poured on the top of a heap of dust from where it rolls to the ground and

Do Big Threshing with a Small Crew

Six bundle teams will supply the largest threshing outfit and keep the machine running all the time. Over three thousand in use in the States and Canada, where big threshing is done. Just right for a sheaf loader.

No empty machine while bundle teams are driving to or from the feeder. If you have a sheaf loader or are contemplating getting one, you must have dump racks. Load can be dumped in 15 seconds and driver does not have to get off the wagon. Saves half the number of teams when used in connection with the extension or wing feeders. Ask any feeder company about it. Reduces the number of men so a thresherman can always have a full crew and make money. Makes a clean saving of from \$25.00 to \$50.00 per day in the operation of a threshing outfit. A necessity for hauling straw from wind stacker to engine. No time lost in pitching off load. No mixing of bundles or dragging part of load. Rack works equally well on high or low wagons, however, easier to load when truck or medium height wagon is used. Rack constructed with tight bottom, saves all the grain. No scattering of foul seed as with the old style. This rack is no experiment. Hundreds have been sold in the past two years. Write for prices. Order at once. Our capacity is limited.



Perfection Dump Rack Co., Grand Forks, N.D.

Fairmount, N.D., May 5th, 1909

Gentlemen:—Last August I ordered a set of six of your dumping bundle racks and I ran my 30-horse-power engine with 40x70 separator with five of those racks all fall and never had to wait for a bundle.

Last fall was the first fall I ever made money threshing, and I lay it all to the racks. My whole crew only amounted to thirteen men and my big machine was run to its full capacity all the time. No thresher can do without a set of these racks, and I am sure that all threshers who saw mine last fall (and some cannot say they would much rather use these racks than the old style, as they are out in the field practically all of the time and are not standing in dust and dirt at the machine. Any man can dump one of the racks in from one to twenty seconds. I cannot praise your racks enough. I will be pleased to answer any letters written to me as to how the racks worked.

Yours truly,

LEN STELTON.

Perfection Dump Rack Co.

Box 456 Winnipeg, Canada

the bearing goes dry. A man must use judgment in oiling if he is not going to waste both oil and machinery. A great many of the working parts of a separator if properly oiled twice a day will have quite sufficient, other parts may need oiling four times a day, and others again, every hour or half hour. I have found it work well to have a general oiling up time twice a day, about eleven in the forenoon and about six in the afternoon. At these times I oil everything that requires oil and turn down every grease cup. Midway between these general oiling times I turn down grease cups on all shafts that require attention more often, such as feeder, deck, beater, fan shafts, etc. Other shafts such as blower belt guides in some cases or anything else requiring still more frequent oiling I attend to every hour. Cylinder boxes as I said before I oil every half hour, and I have had a blower box that required attention every ten minutes. If a man will just do a little thinking and adopt some system in his oiling, and also remember that it is not quantity of oil that counts, but rather oiling in a proper manner and at proper times, he will have less trouble with worn and broken parts and hot boxes, and will give greater satisfaction to himself and his employer.

The Engine Gang Plow Competition.

Continued from page 36

W. C. McKillican, Superintendent of the Brandon Experimental Farm.

When the data was all in hand and the scores tabulated, it was found that the Avery had pulled down both gold medals, Rumely had chosen both silver medals, and the Case had taken as its portion both bronze medals. It is to be regretted that more firms did not enter, but as this was the first of its kind, much has been learned, and doubtless by another year a set of rules can be so framed that everyone may feel like coming in.

The Tolerant Man.

"I like the man who is conspicuous by his tolerance. He is broad-minded, and overlooks small annoyances. He is never impatient nor intolerant of other people's failings and limitations. He is cosmopolitan in his views, and accurate in his judgment of people and things.

"He has firm opinions, and is no way ashamed of them. But he never forces them down other people's throats. He is never dogmatic or overbearing. He would much rather hear your side of a question than propound his own."

He is Always Reliable.

"I do like the man who is always reliable. He never makes rash promises, but when he does make one, he keeps it. He is always ready to give way up to a certain point, but beyond there you can't move him. He knows when to be angry, and will blaze with righteous indignation, but he doesn't lose his temper, and never, never bears malice in any way. He needn't be handsome, but he must be good-looking. He must at least be moderately big and strong, and he simply must not know what fear is."

All They Could Do.

A Baltimore man, who recently moved into a suburb of that city, was acquainted with his neighbors on both sides by sight only, hence it was with keen gratitude that, when his home caught fire one evening, he observed that they proceeded with great promptness to offer assistance.

"Won't you run down to the post-office and turn in an alarm?" the owner cried excitedly to his right-hand neighbor.

"I'd be glad to," said the neighbor with a sad smile, "but I'm so crippled with rheumatism that I can't run a bit."

Then the owner turned to the other man, "While I am getting out some of the things, you yell 'Fire' as loudly as you can," he said.

"I've got laryngitis and can't yell," came in a hoarse whisper from the other neighbor.

And the unhappy owner composed himself sufficiently to remark:

"Then I'd thank both of you to slip into the house and bring some chairs out. We might as well sit down and enjoy the fire."

PRINTER'S PIKELETS.

It is only when we are not able to commit any more folly that we recognize what fools we are.

The sublimest motive to the smallest duty; all else is wasted energy.

Like a school boy's holiday with the school at the end of it, the good things of life come not singly; all bring their task.

Cheap and lasting, there is no entertainment so cheap as reading, nor any pleasure so lasting.

Flies spy out the wounds, bees the flowers, goodness the merits, common men the faults.

Needless worry is just fright spread out thin, and is not beyond the control of anyone.

The Wisdom of the past comes to us in sentences, not pages.

Man may not reach perfection but he can reach for it. This is all that is required of him.

To select well among old things, is almost equal to inventing new ones.

The busiest of living agents, are certain dead men's thoughts.

Let us be prepared by to-day's work, for to-morrow's opportunity.

Two things never return, the spoken word, the neglected opportunity.

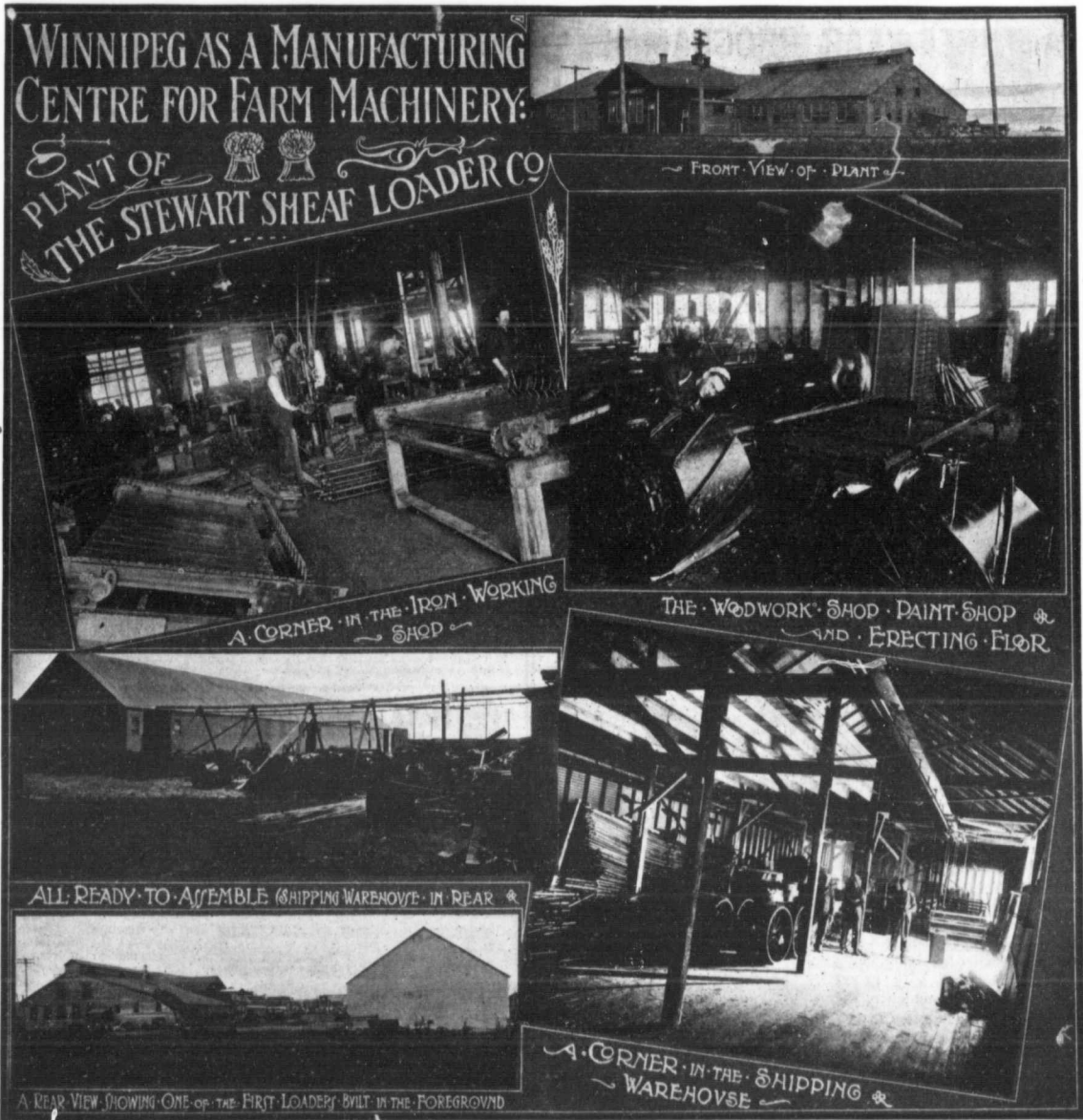
Against a foe, I can myself defend, but Heaven protect me from a blundering friend.

Time is the great innovator.

No prudent man will embark in an undertaking till his first enthusiasm has passed away.

The main difference between men, insignificant and great, is energy.

Get to know yourself and you haven't another difficulty in life.



THE above group of illustrations are of the Stewart Sheaf Loader Co. Winnipeg a farm implement manufacturing concern of which Winnipeg is proud. There are larger plants in the city, housed in finer buildings, but when we take into consideration the circumstances we must give credit where credit is due. The Stewart Sheaf Loader has been so well described and advertised in these columns that little more need be said



J. S. MENZIES
Treasurer and Manager
Stewart Sheaf Loader Co.

but suffice it to say that if they were to be as generally used as the binder we could cut our harvest help requirements in 1912 to about two thirds and possibly one-half.

The first loaders were put out in 1909 and placed in the field for experimental purposes. This was again done in 1910 although it was not until the fall of 1910 that the first real successful machine was built.

In the fall of 1910 a shop 40 x 80 was built, machinery was installed and sufficient material was purchased to build 50 machines. These were carefully put upon the market in 1911, 27 being placed in Saskatchewan, 18 in Manitoba and 5 in Alberta. These were watched carefully for im-

perfections with the idea of putting them out in quantities in 1912.

In the fall of 1911, four new buildings were erected, one 64 x 75, two 40 x 60, and one 34 x 150 and the finest wood and iron working machinery obtainable was installed. Material for 500 machines was purchased and a sales organization perfected in order to dispose of them. That this sales organization has done its work is evidenced by the fact that up to August, 1912, 300 machines have been delivered and shipments are being made at the rate of 8 to 10 per day. At one Western point one machine was sold in 1911 and up to date this year 25 have been delivered at

the same point. At another point the ratio is 16 to 1.

The Company is capitalized at \$200,000.00 with 100,000 paid up. It is the intention of the factory this fall and to place at least 1,000 machines upon the market in 1912. Ninety are on the Company's pay roll at present and by 1913 it is expected that this number will be increased to over 200.



ALEX SIMMERS
President, Stewart Sheaf
Loader Co.

A THREE-YEAR PROGRAMME

for a New Settler in Western Canada

One day last October a young Scotchman, Andy McGregor by name, who was the engineer on a threshing outfit, got talking to me about land, wanting to know if any land could be purchased in my district at reasonable prices. I asked him what he wanted to pay, as land was held at various figures. So he told me that he had only \$3,000, and was wanting to get a farm in a settled part.

There was a half section, three miles south of me, which had been bought at a school sale for \$9 an acre, ten years previous, by a man in Toronto. He could have sold since more than once, but for personal reasons would not. The past year he got a man to break and backset twenty acres. I told Andy about this farm, so he said he would write the owner.

Not long afterwards he came to me, having received a reply to his letter, in which the owner made conditions of sale. He wanted \$25 an acre, payment to be made as follows, \$1,000 down, payment for first year, and \$500, with 7 per cent interest yearly, for 5 years, when he could pay as he wished. I told Andy he had better take a look at the land, assuring him that he was getting a snap. We drove over, inspected the farm, and finally Andy decided to purchase, but not before he had asked various questions regarding climate, soil, markets, etc.

This land is 7 miles west of Brandon, Man. The soil is a rich sandy loam rather low lying, being near the moisture. It grows staple crops in abundance, and contains enough inorganic matter to bring all cereals to early maturity, at least this is the case of farms along side, having the same nature of soil.

The climate is of the best, plenty of sunshine, with a good precipitation. It is a district that is free from hailstorms, frosts, ruts, blights, insects, or fungus attacks. This farm is in close proximity to schools, churches, and markets, with good roads throughout the country. Prices for farm produce of all kinds are good, the supply never exceeding the demand.

Andy had secured the services of a lawyer, to look after the legal business connected with the transaction, and it was not accomplished till January 20, 1907. After Andy became owner of the farm, he came to me wanting pointers as to the working of it, although he was cognizant of conditions on the farm in the old country; he was also of a mechanical turn of mind, but not knowing the coun-

try as well as I he didn't want to make any mistakes. He was a canny, shrewd, intelligent young man, and was married, his wife being in Scotland waiting for him to find a home.

I had taken quite an interest in him, knowing that he would make the right kind of a settler, so I told him I would map out a three year system for working his farm.

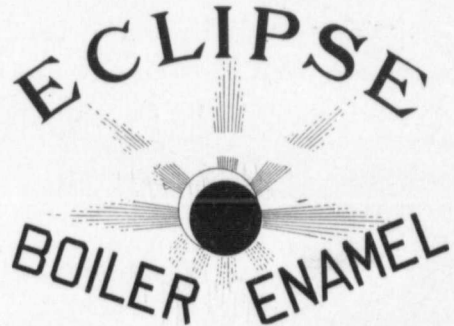
He decides that he will work his farm himself during the first year, as his finances will not allow him to go too strong. He has a lot to do before spring arrives, and gets right down to business. He buys a team of horses at a sale, with harness and sleigh, for \$450, paying cash—he intends to pay cash for all his purchases. The horses were not of the best, but good enough to stand some hard work for a year or two. He makes arrangements to board at a neighbors for the winter until he has a roof on his land, agreeing to pay \$40.

His next move is to buy lumber for a small shanty and stable, and with a few household necessities this costs him \$400. He hauls the material from town, and gets a local carpenter to construct the building. This comes to \$50. He had already chosen a site for his farm steading, which was in the centre of the farm against the centre line of the section. He immediately starts to dig a well, getting a machine from town, the cost (with the cribbing which he had got with the other material) amounting to \$35 and a good supply of water has been tapped. It is situated on a nice rise, with good drainage.

In the meantime he has sent for his wife, and she lands on March 1st, her journey costing \$150. Andy looks around the machinery firms, and buys a combination sulky, a set of drag harrows, and a second-hand buggy, costing altogether \$115. Time is going along, and he has to buy another team yet. He bought a stack of hay 12 miles distant, and he gets that home, borrowing a rack. \$40 in cash gone for the feed. In the meantime he has been looking around for a team, and finally he buys a team, with harness, wagon, and rack for \$500. The team are in fair shape, but getting up in years. He decides that he will fence 10 or 12 acres for pasture, and to guard his buildings. He pays \$60 for posts and wire, and he gets the posts sharpened at odd times. He also brings home some wood for fuel, \$10.

THRESHERMEN!

what is SCALE costing you?



The Eclipse Boiler Enamel absolutely prevents formation of Boiler Scale in any water.

"Eclipse" is a purely vegetable preparation made from tropical plant which treats the iron on a new principle. It contains no mineral acid, soda lye or any injurious substance whatever, and may be used indefinitely without injury to the boilers or their fittings. "Eclipse" forms a film-like coating on the plates and tubes of boilers in which it is used. This coating is of such a slippery character that scale cannot adhere to it. Hence the solid particles in the water are deposited in the bottom of the boiler as a soft, slimy mud, which is readily blown out. The coating has no visible thickness and has nothing of an oily or greasy nature in its composition.

Send for our Booklet, free by mail.

W. W. Carruthers, Manufacturers, Winnipeg.

Freedom From Tire Troubles

is the invariable experience of automobile owners who use Woodworth Treads over good tires



Woodworth Treads protect the tires from all outside injury or wear. They also prevent skidding. If the tires on which the treads are put, are in good condition, there will be no danger of injuring them and they will remain in good condition for a long time. Nails, glass, broken stone, oil, tar and so forth cannot injure them so that if kept properly inflated, they will retain their strength almost indefinitely.

It has long been known that covers made of chrome-steel rivets were practically puncture-proof and an excellent anti-skid but it has been found difficult to fasten the

leather covers in such a way that they will stay in place and not injure the tires. The patented method of holding Woodworth Treads has proven absolutely successful on over 50,000 protectors. A ring on each side made of strong steel springs takes up all stretch of the leather keeping the cover always perfectly tight on the tire. Woodworth Treads cannot get loose to cause chafing and heating.

We agree to repair free any tire injured by them when used according to instructions or to replace it with a new one of the same make.

If you wish to feel that your tires are always safe, if you wish to be protected from slippery places and save some of the money you are paying for tires you should have Woodworth Treads.

Sold by John Millen & Son, Limited, and the Russell Motor Car Co. at Winnipeg, and at all their branches and by first class dealers everywhere.

LEATHER TIRE GOODS CO. NIAGARA FALLS, ONTARIO

THE GOLD MEDAL WINNER

In Class "C" for Gasoline Engines at the
WINNIPEG MOTOR COMPETITION

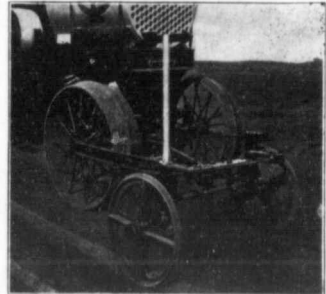


It was equipped with the
Cuddy Steering Device

The "Cuddy" was the only steering device that was used by any contestant although there were others on the ground.

The demonstration given on the 1912 Motor Contest field by an Aultman and Taylor tractor equipped with the Cuddy Steering Device showed beyond a question of a doubt that it benefits the engine, and, at the same time does not require any more power to operate it. In a motor contest every ounce of fuel counts and no contestant can afford to use a drop more than is necessary.

With the Cuddy Steering Device the engine using it plowed at a fuel cost of 36.8 cents per acre, the lowest in the class, and at the same time making the best speed of any engine in the contest. A Cuddy Steering Device will save its cost in a season to say nothing about the ease with which your engine can be operated.



Can be fitted to any tractor now on the market. It is adapted for either the swinging type of axle or the automobile knuckle type. No other device on the market is adapted to the knuckle type axle. It is the only patented steering device now in general use on tractors and at last insures to all tractor engine operators the most perfect self-steering arrangement, regardless of what make of tractor they are using. Extends only 2 feet in front of tractor from tractor axle to truck axle and makes very little if any more headland at end of furrow than would the tractor running without it. Unanimously endorsed by prominent engine experts who acknowledge it to be a direct and simple solution of all engine steering troubles. Proved over three seasons. Any man can attach it to any engine. Price is reasonable backed by a **Positive Guarantee that it will fulfill its purpose.**

The Western Steel & Iron Co. Ltd.

Sole Manufacturers & Distributors in Canada
WINNIPEG MANITOBA

He decides to sow his 20 acres to oats, and he buys seed--good banner oats, also feed from a neighbor, for \$84. Andy now feels that he is ready for farming, incomplete as his outfit is, but he is only going to buy just what is absolutely necessary for the first few years. Spring opens up about the usual time, the 1st of April, and on the 15th day he starts to break, having now moved into the shanty. He breaks a few acres around his buildings, intending to grow a shelter belt, none being around.

He has decided to divide his farm into six fields, as is shown

here. He is now ready for breaking in earnest, and I told him to break 100 acres, and no more, he would find that amount ample, and would then be doing a good job. So he starts in, and breaks till the 15th of May, when he stops to sow his oats, borrowing neighbor's drill; he sows at the rate of 2.5 bus. per acre, first having treated his seed with Blue-stone. He also planted a few hills of potatoes. He gave the 20 acres, two strokes of the harrows, before sowing and one after--the land is in a fine mellow moist condition, and with the plump seed sown, he expects a quick germina-

tion. He starts his breaking again, finishing the allotted amount by June 25. His horses have been going fine, and his plow has given him no trouble. He would like to break more, but after persuading him not to, he quits. There have been a few good rains, which kept the sod in a moist condition.

He has his fence to put up, and I gave him a help, this being a very poor job for one man to go at. His wife gets him to buy a cow and a few hens, the cost being \$40. She is anxious to be earning some money to keep down the expenses. Andy starts to backset, and continues till the middle of

July, when he borrows a neighbor's mower and rake, and puts up 12 ton of hay from the meadow, hiring a young lad, \$3.00, to help him. He finishes backsetting, and buys adisc for \$40, and gets over the most of it before harvest.

The summer has been a very short one for Andy, he has been exceedingly busy, always finding something to do when not working in the fields. He has not only been busy with his hands, but does considerable reading, he having subscribed to a few reliable farm papers--he is becoming a thorough Canadian, keeping up with the daily news.

The Largest Threshing Outfits are Equipped with the GANDY Thresher Belt

The experienced and well informed thresherman is the one whom you will find uses the Gandy Thresher Belt.

For instance--here's the threshing outfit of Mr. Amos Poggensoe, one of the most successful threshermen out in Wilson Creek, Washington, who uses The Gandy Thresher Belt on his powerful Case Engine. Even stronger evidence of the satisfactory service given by

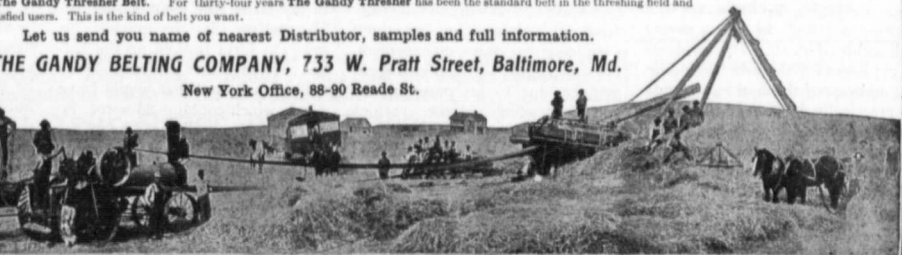
THE GANDY THRESHER BELT

is proven by the fact that the largest Thresher Engine manufacturers, such concerns as the J. I. Case Company, The Rumely Company, The Aultman & Taylor Company, Reeves & Co., and many others equip their machines with The Gandy Thresher Belt. For thirty-four years The Gandy Thresher has been the standard belt in the threshing field and now includes more than 20,000 satisfied users. This is the kind of belt you want.

Let us send you name of nearest Distributor, samples and full information.

THE GANDY BELTING COMPANY, 733 W. Pratt Street, Baltimore, Md.

New York Office, 88-90 Reade St.



Waterloo Lion Brand

of Farm Machinery has never yet been surpassed by anything in Agricultural Engineering for Quality, Durability, Efficiency and Value. Plowing and Threshing Engines (Steam or Gasoline) ranging from 14 to 30 H. P. are unsurpassed by anything of their size. Wind Stackers, Feeders, Baggers and Drive belts a specialty.

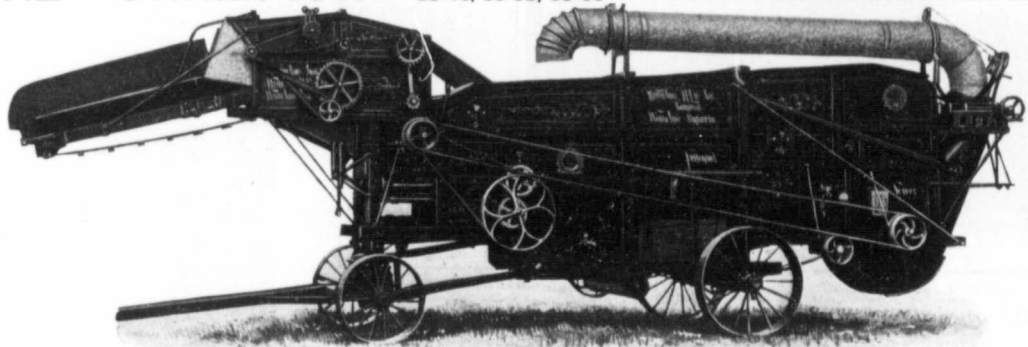
Waterloo Separators, 28-42 to 36-56

Are the Greatest Grain Savers in the Market

THE "CHAMPION"

Made in three sizes,
28-42, 33-52, 36-56

Write for CATALOGUE OF COMPLETE LINE



WATERLOO MANUFACTURING CO., Limited, PORTAGE LA PRAIRIE

His harvest is not very large in extent, but with the rains and the new land he has a very heavy crop. He agrees to pay a neighbor \$8 to cut his crop, and he does the stocking himself, afterwards going on with his discing. He came over, and gave me a couple of day's work, to pay back the help I gave him in the spring. After some more working on his land he hires a man and stacks his crop, the wages amounting to \$7. He hires out at threshing time, and earns \$25. Then he builds a bin to hold his oats, which cost him \$15. He gets a thresher to come to his oat field in due time, and he has 1,500 bus, besides a few loads of sheaves in the yard. The threshing expenses, including twine, the feeding of the men, amounts to \$76.00. As soon as they are away, he plows his oat land and harrows it well. This he intends to sow to oats next spring. It is now getting late in the fall, and gradually freezes up. Andy gets everything in shape for the winter, and finds he has a pretty full stable of stock. His incidental expenses for the year, including the upkeep of the house, amounts to practically \$100. And they have been kept down to quite an extent through the increase of the cow and poultry. He pays his taxes, \$30.76, and buys fuel, \$40. This ends the expenses for the first year. Then he has 1,000 bus. of oats that he has sold to a seeds-

man, to be delivered during the winter. He gets 60c per bus., which amounts to \$600. So that his expenses for the first year have been \$1,668.76, and he has to his credit \$331.24.

1908. Andy plans his next sum-

mer's work, and draws liberally from my opinions on anything pertaining to farm management. He can argue in an intelligent manner, due to his practicability and his reading of the various farm papers and experimental farm reports. He has taken hold of the conditions of the country very fast, and has made many friends throughout the neighborhood. Towards spring he gets his horses in shape, repairs the harness, and overhauls what machinery he has, which, by the way, is stored away in the corner of the yard, out of the road of stock, etc. I told Andy he should try and get a steam plow, to break some of his

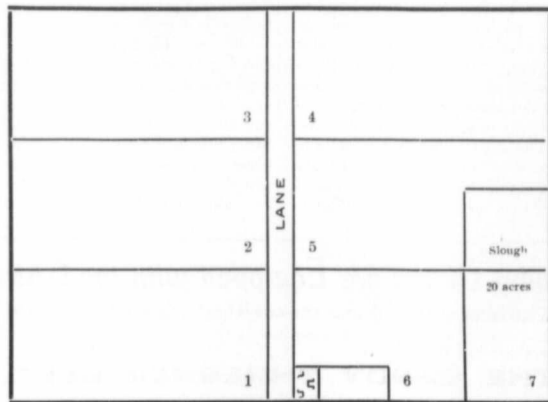
wheat for seed, costing \$175. He also purchases a double disc drill, which I told him was the best kind, costing \$125.

Spring opens up as usual, and as soon as the land is fit he puts the drag harrows over his new land, and gets it in good shape for sowing. He sows his wheat after treating it with formaldehyde. The new drill makes an excellent job, and after sowing the field (1.5 bus. per acre) he harrows it again, the land being rich and moist, the seed plump, the grain sprouts in a short while.

He starts the breaking after burning the grass up, and goes on till the 15th of May, when he puts in his oat crop after cleaning them (the grain separator costing him \$45), and treating for the prevention of smut. A few drills of potatoes are planted on the tree plantation site.

He gets the steam plows on to the farm, gets them started, and has quite a time watching them, to see that they do not skip any, or that they do not, on the other hand, go too deep. However, while not doing as good a job as he would like, it is fair, and it is finished in a short time.

Andy has been busy, doing his end of the business, and finishes in two month's time. He commences backetsetting, and he finds the land in a good rotted condition, due to some very heavy rains. He keeps discing close up to the plowing.



mer's work, and draws liberally from my opinions on anything pertaining to farm management. He can argue in an intelligent manner, due to his practicability and his reading of the various farm papers and experimental farm reports. He has taken hold of the conditions of the country very fast, and has made many friends throughout the neighborhood. Towards spring he gets his

Towards spring he gets his

farm, during the coming summer. He realizes that the quicker he gets the farm broken up the better. He says that he could break fields 3 x 6, and that would leave 4 x 5, which contains 93 acres. So with this idea in his head he makes some inquiries, and at last comes across a man that agrees to do the breaking, backetsetting, and discing for \$7.50 per acre. This amounts to \$712.50.

Andy buys some good Red Fife

THE
STEWART
 SHEAF LOADER
 SAVES YOUR GRAIN
 INSIST ON THE THRESHERMAN
 WHO DOES YOUR JOB HAVING ONE

FOUR CHEAP MEN
 DOING THE WORK OF A
CROWD OF SKILLED WORKERS

Testimonials

"I think it is the only machine I have ever bought that will pay for itself in twenty days."
 I. E. Bergey, Rosser.

"It saves me at least 20 dollars a day, and I recommend it to all threshers."
 W. Setter, Russell.

"It has saved us money outside of paying for itself, and we can honestly recommend it to every thresherman."
 Staffin Bros., Strasburg.

"It is a great labor-saving machine and pays for itself in twenty to twenty-five days. I am saving four stook teams and five men or say twenty dollars a day."
 Colin Carmichael, Weyburn.

"I have worked your sheaf-loader for 34 1/2 days and can safely say that during that time it saved me one thousand dollars in wages."
 Wm. Miller, Starbuck.



Testimonials

"Your Sheaf-loader does not leave so much grain on the field as the pitchers and saves me thirty-five dollars per day, making a saving of seven hundred dollars for twenty days, besides eight men less to board for twelve rainy days during the time we have been threshing."
 H. J. Falloun, Strasburg.

"Enclosed find cheque in full payment of machine. In my opinion, your sheaf-loader is the greatest labor-saving machine on the market."
 David Whyte, Hamiota.

"I would not like to be without this machine at twice the price as it soon pays for itself, and would recommend it to all threshermen."
 Geo. Jones, Kenton.

"We believe it is the greatest boon yet offered to the thresherman. No thresherman can afford to be without one. It not only saves six pitchers and two stook teams, but it also saves the men's board as well as the noble house-wives this extra cooking."
 Ring Bros., Crystal City.

You have seen the STEWART SHEAF LOADER on show at the Western Fairs. Here it is doing business. It is saving the money and sweat of several bundle teams and highly paid men. It is cleaning up the last loose straw of a heavy crop in a way that human hands could never do it except at ruinous cost, and saving on an average twenty-five dollars a day on your harvesting bill. Read what the men say who are using it and let us refer you to hundreds of others.

The machine will pick the sheaves or stook from the ground when lying flat and deliver them into the bundle wagons. With proper handling it will load the wagons fast enough to keep any threshing machine in Western Canada supplied with sheaves.

Get Your Order In At Once.

Stewart Sheaf Loader Co., Ltd. 804 LOAN AND TRUST BUILDING WINNIPEG.

The Stewart Sheaf Loader Co., Ltd.
 804 Trust and Loan Building, Winnipeg.

Please send me full particulars of the "Stewart Loader" as advertised in the Canadian Thresherman and Farmer.

Name

Post Office

He gets the other man started with the engine around the middle of July. This plowing suits Andy much better, and the discs chew the sods up in great style. Andy now has his farm broken up, with the exception of his pasture field and hay meadow.

Besides doing field work, Andy has been very busy at odd times, building chicken coops, repairing the fence and buildings, besides taking in a few holidays, the fair having a strong attraction for him, as he is a lover of good stock, and intends to get the start, as soon as possible, in this direction.

He also put up his hay crop, getting the same boy to help him, paying \$4 for the services rendered. Andy's crop is coming on fine, and gives every indication of a heavy yield. He has to buy a binder, and he gets a 7 ft. one from town, costing him \$175. He commences cutting the crop September 3, finishing everything in 9 days. The grain is well filled, and apparently of a good sample, the straw clean and hardly a weed to be seen, he having been through the fields during the growing season, picking out a few noxious weeds, but the new land gave the crop such a start that had there been any likelihood of any being present they would have got choked out.

He hired a man for \$50 for a month, and gets it stacked and threshed in that time. He built a small granary, getting the material from town, which cost him \$200. His wheat after threshing averages 32 bus. per acre, and he sells 2,650 bus. at 99c clear---\$2,623.50. He keeps the remainder of the wheat for seed. His oat field yielded 1,000 bus. They are a good plump berry, and he decides to keep them till spring before he offers any for sale, knowing that he will have to get more horses the following year, and being of a conservative nature he likes to have a reserve. He got the help of his neighbor during threshing time, and paid it back in a similar manner. He manages by dint of long hours and hard work to plow 75 acres, also harrowed before it freezes up. He turned over a stiff furrow, and it was consequently hard work. The remaining 25 in the field he will plow in the spring, intending to sow it to oats. He fixes things preparatory for the winter. His expenses for the year, odds and ends have been higher than the preceding one, which was only natural. They came to \$200. The payment on the land falls due, \$500, this leaving \$6,999 yet to be paid. His taxes are \$30.70. The increase in stock necessitates \$25 expenditure in lumber, and some wood bought in the spring was \$15 more. His threshing expenses amount to \$225.00, including twine and extra household expense.

This closes up the expenses for the year with the winter supply of fuel, \$35.00. The total amounting to \$2,497.26, this leaving \$126.24. Andy thinks that this is pretty close work, but says that he has been economizing as close as possible, and I quite agree with him. He keeps a diary of his work, and also a close account of all his assets and liabilities, and has done so from the start.

1909. He now starts on to his 3rd year, and his farm is broken up, his land is new, and the prospects for a bumper crop are of the best. With this in view he decides to do some building, and during the fall he starts hauling some gravel for cement foundations, and gets a couple of weeks work in, with two teams borrowing gravel boxes and a wagon, Andy does not like borrowing, and decides that from now on he will do as little as possible.

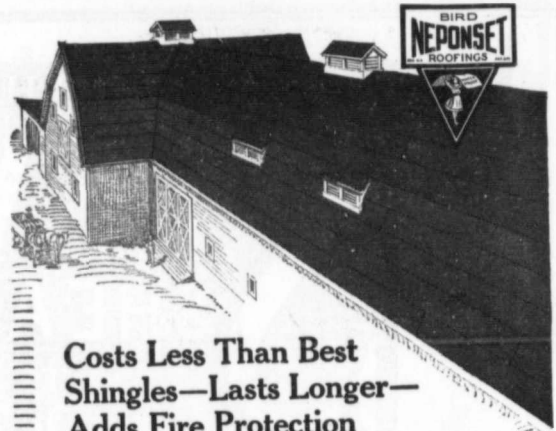
He hardly knows what to build, the fact is he requires a complete outfit of buildings, with the exception of his granary, and that is too small; this, by the way, he painted. Three things stand out prominently, a house, a stable, and an implement shed. He would also like to fence his farm, build a hen house and piggery. Up to the present these buildings have been very rough. Various other things along improvements he would like to get, but they will have to wait their turn.

Andy decides to build a house, and gets the plans and specifications from a carpenter. The cost is estimated at \$2,200. He orders the material, and gets it home during the winter. This and other work keeps him busy during the winter.

He hires a man for 7 months, \$240. He gets the grain cleaned, and starts sowing on the 17th of April. He puts in 247 acres of wheat in 15 days. The half of field No 1, all of 2, 3, 4, 5, and 6. No. 7, and the half of 1 he has for oats. He harrows the land after sowing, and it works up in a good suitable condition for new land. He buys a 12ft. gang plow, \$80, and plows harrows and sows his oat crop. This is finished in 17 days. He himself has been busy getting things arranged for the building, also keeping an eye on the man in the fields.

When the crop is in he gets to work, and digs out a foundation for the house, choosing a good dry situation on the west side of the yard. He hired another man for 4 months, arranging to pay him \$120. He finds work for the three of them, having to do a lot of the building himself, only one man, the carpenter, arriving on the scene to construct the house.

In the meantime he has put up his hay, and he buys a mower and rake, this coming to \$85. He also bought two shorthorn heifers (pure bred) paying \$300. This is



Costs Less Than Best Shingles—Lasts Longer—Adds Fire Protection

These are the three BIG reasons that have led thousands of farmers and manufacturers, as well as the big railway systems, to use

NEPONSET PAROID ROOFING

It has stood the test of the hardest service in every climate for years. The Chicago and Northwestern Railroad laid NEPONSET Paroid on one of their train sheds seven years ago. Last summer when the shed was torn down the NEPONSET Paroid Roofing was found to be in so good condition that it was cut in strips and used to re-roof several suburban stations. Isn't that the kind of a roof you want for your farm buildings?

Send for Our Free Booklet on Roofing

It is filled with interesting facts about roofing that you should know. A postal will bring it.

F. W. BIRD & SON, 424 Heintzman Bldg., Hamilton, Ont.

Established 1765. NEPONSET Roofings Are Made in Canada
Winnipeg St. John, N. B. Vancouver, B. C.

NEPONSET
Proslate Roofing
makes a handsome reddish-brown roof for houses



Capacity about 46 Imperial gal.

A THRESHING SPECIAL!

5 Steel Barrels for \$45.00

F.O.B. WINNIPEG

Regular price \$10 each. We have only a few of this style drum left. Made of 16 gauge steel, galvanized inside and out. Brass name-plates free of charge. No order accepted, unless this ad. accompanies the order

Steel Barrel Company of Canada

383 Ederton Building, Winnipeg, Man. Phone Main 7155
Remit by draft or money order

For Farming Purposes

Hillcrest Steam Coal

Is the Most Economical

Because "Hillcrest" "the best coal in the Rocky Mountains," contains less slate, rock and other foreign substances. It will plow more land per ton than any other Coal.

Order some now and try it

HILLCREST COLLIERIES, LTD.

Hillcrest, Alta.

Dr. T. R. Ponton, MacGregor, Man.:
 "I go 107 miles on 5 gallons of White Rose Gasoline. The best done previously with other gasoline was 87 miles."
 "Never cleaned a spark plug since I used it."

Consolidated Bicycle & Motor Co. Winnipeg, Man.:
 "Have been using White Rose Gasoline for over a year and have found quality particularly good. You may have noticed how successful Indians have been in race meets during past year. At Kirkfield track last year using White Rose we cleaned up nearly everything."

H. B. Thomson, Brandon, Man.:
 "Having trouble getting good gasoline and want price on White Rose. Used it when I was in implement business at Sibley, Sask., and know it to be good."

F. E. Vatnadal, Merchant, Wadena, Sask.:
 "Please ship me at once 100 White Rose Gasoline. I want for my automobile as I know it is the best on the market to-day"

Fischer and Gelder, Pincher, Alta.:
 "We recommend White Rose Gasoline to everyone. We have more power and have no trouble from carbon."

A chain is no stronger than its weakest link, but there is no weak link in this chain of evidence which unquestionably proves the merits of

White Rose Gasoline

A post card addressed to our nearest office will bring you prices and information

Canadian Oil Companies, Limited

REGINA WINNIPEG SASKATOON

OUR OWN REFINERIES AT PETROLIA, ONT., MARIETTA, OHIO., FINDLAY, O., COFFEYVILLE AND CLEVELAND

H. Bellinz, Winnipeg, Man.:
 "White Rose Gasoline gives my tractor satisfaction than any other, produced with carbon," and can never

City of Edmonton, Edmonton, Alta.:
 "This is to certify that we have used your White Rose Gasoline ever since the installation of our motor fire apparatus, and the chauffeurs speak in highest terms of same, in fact we have found it to be satisfactory in every respect."

F. G. Kenworthy, Aviator, used White Rose Gasoline in his flying machines at River Park meet, Winnipeg.
 He says: "White Rose Gasoline never failed me yet. I will always have a good word to say about it."

McPhee & Wicks, Crossfield, Alta.:
 "We have always found White Rose first class and get more power out of it."

A. L. Alton, V.S. McGregor, Man.:
 "Get 23 miles from a gallon of White Rose Gasoline. The best I got out of any other was 16 1/2 miles. The carburetor adjustment in both cases being the same."

a start, and he intends going in for the rearing of cattle. Andy now comes to the conclusion that he has to buy a team and after looking around he buys a well matched team of mares for \$600.

His crop is coming to maturity, and from present indications it is going to yield well. He is going to use the one binder, and change horses. He commences cutting and despite his efforts to keep up with the ripening crop, some of it shells on him, but he had no breakdown or delays, and gets it down in fast time.

He hires another man by the day, his wages amounting to \$37.50, and commences stacking his crop. He got another wagon, costing \$100, and finishes the stacking in 22 days; he was interrupted by damp weather. As soon as stacking was over he put the men to the plow, hiring a horse from me, to make a 4 and 3 horse team. A very heavy rain happened about this time, but Andy's stacks are the kind that shed water the right direction. Andy gets 125 acres plowed and harrowed before freezing. This leaves a lot for the following spring, but he will be able to manage that. In the meantime he has got threshed, and the yield is as follows:—147 acres, 1st crop, average 29—4,263; 100 acres, 2nd crop, average 22—2,200.

This gives a total of 6,663 bus. for his wheat, and he threshed 800 bus. of oats.

Andy exchanged help at threshing time, and put 5,800 bus. into the elevator, selling it for 95c. This brought in \$5,510. His threshing expenses amounted to \$437.15. Other expenses for the year come up to \$300. The total expenditure for the year being \$5,030.35. This includes the taxes of \$30.70, and the \$500 payment on his land. This leaves still to be paid on his farm \$6,979.



Oil Pull Tractor and Rumely Engine Gang plowing in Michigan

NOW FOR YOUR FALL PLOWING!

You want to do RUSH work—you want to do a good plowing job! You must have an Engine Gang Plow that will respond to every test—the most severe! Have you irregular and trashy ground to work? If so, you must have a plow especially designed to meet such conditions—one that will turn ANY sod completely up-side-down! That plow is the Rumely Engine Gang Plow sold in sizes of 4, 5, 6, 8, 10, 12 and 14 bottoms. Below we tell you why.

SOME SPECIAL FEATURES.

Careful study of plow balance has enabled us to remove the landside entirely—thus cutting out much moldboard friction.

Greater clearance below the beams and between the bottoms makes the plow unchokable. These features are especially advantageous for Fall work where irregular and trashy land is so often encountered.

Castored wheels and steering levers make it capable of following round the sharpest corner that an engine can make.

Convenient levers and a large platform add comfort to the work of the plowman.

Flexibility is secured by means of one lever to each bottom. This enables each plow to follow its depth wheel independently and plow all spots, high or low, to an even depth.

It has lighter draft than any other Gang Plow on the market. This has twice been demonstrated at Winnipeg, and time and again in the farmers' fields.

The bottoms are interchangeable, thus making the replacement of a damaged bottom an

easy matter. With the Rumely it will never be necessary to stop plowing or skip a furrow.

WHAT THE RUMELY PLOW CAN DO

is proven most convincingly by what it has done.

Remember the splendid record made by the Rumely six-bottom Gang at Winnipeg in 1911! By the time this ad is in print, the results of the 1912 contest will have been made known. Look them up and see how the Rumely stands! We know what the Rumely Engine Gang Plow can do, and have enough confidence to believe that it will head the list!

One hundred of our Engine gangs were shipped into Canada this year in response to a rapidly increasing demand. Perhaps you can see one of them at work in your neighborhood—if so, it will convince you of the merits of our plow better than all of the literature that we could send to you.

At any rate, write for an Engine Gang Circular. At the same time tell us of your plowing difficulties. Our Traction Farming Experts are here to give you personal attention and advice—and it is free.



RUMELY

1988 DUFFERIN AVENUE.

PRODUCTS CO.

(INC.) WINNIPEG, Man.

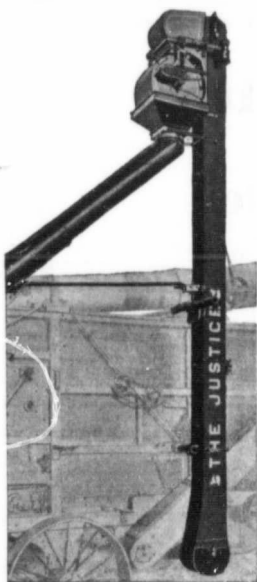
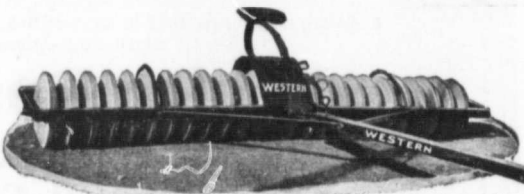
DURING THIS HOT WEATHER

Just watch how much better the grain is that was packed than you find that which was not packed. Every farmer **should have a Packer.**

THE WESTERN

is the correct idea, as it packs **all** the land. This is 60 per cent. more than any other will do, and, on account of its weight, it **does the work 33 per cent. better.** Made in all sizes, from 4 feet to 14 feet.

If at all interested, write for full information.



WE MANUFACTURE THE FAMOUS

Practical Oil Pump

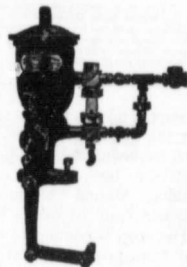
The only pump that works as well at 60 below as it does under the most favorable conditions. A demonstration will convince as to its simplicity, durability and reliability.

Every Justice Measure

bears the Government Stamp, proving its correctness, which works to the benefit of all parties involved. The Threshermen like it because it makes law suits on account of disputes arising from dissatisfied farmers impossible.

The farmer likes it because it assures him that he is getting every bushel that he has to pay for being threshed.

No dogs to wear, no springs to go wrong. The tally box is always locked, which insures against any monkey business.



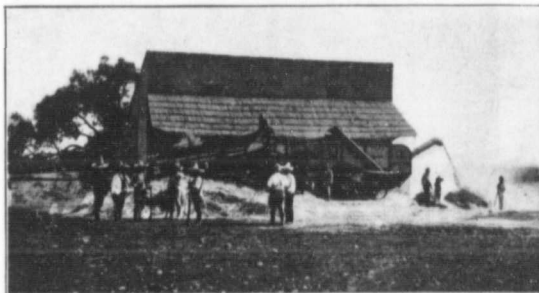
The Western Foundry and Machine Co. Limited

Saskatoon

Threshing in Mexico.

Imagine, Mr. Thresherman, your going to work each morning guarded by fifteen mounted soldiers! But if you were in "Barbarous Mexico" most likely this strange and unusual experience would be yours, as in these days of revolutions and uprisings it is very necessary carefully to guard all farm implements, threshing machinery and their operators in Mexico.

The accompanying photographs, loaned the Canadian Thresherman by the J. I. Case Threshing Machine Co., of Racine, are most interesting to us peace loving Canadians, because a condition such as illustrated is impossible to picture as happening in our farming communities.



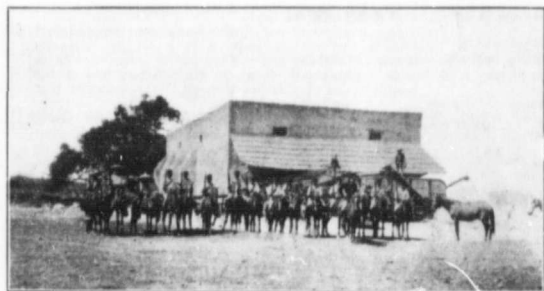
Case Separator Working in the State of Yto, Mexico, D.F.

This introduction of modern farming machinery and agricultural science into Mexico has been one of the notable signs of the awakening of the "Land of Cortez." Those familiar with Mexico have been used to seeing

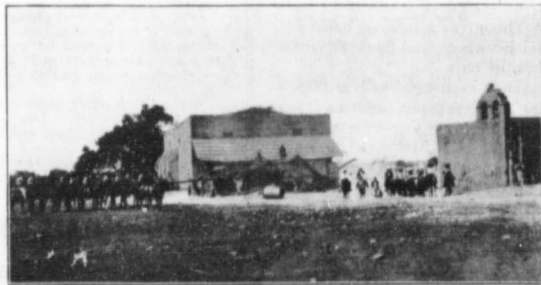
the threshing done by hand, but with the realization by the "progressives" of Mexico, that the agricultural resources of this country were not contributing their share to the national wealth, this condition began to

change. In the stead of the primitive devices of planting, reaping and threshing, the modern labor saving machines are becoming familiar sights in the fields. The huge traction engines and steel separators attractively painted in reds and greens, fascinate the natives. They have overcome their early prejudices, and now envy the owners and workers of these machines. So much are they "envied when they are envied, and hated when they are hated," that at such times as Mexico is passing through now, it becomes necessary most strictly to guard these threshing machines.

And, therefore, we present to our readers this episode illustrating as it does "how the other half works."



Case Separator in Operation in Mexico, D.F. Guards all on Horeback.



Case Separator in Operation in Mexico.



HAMILTON

HEAD OFFICE
AND
FACTORIES

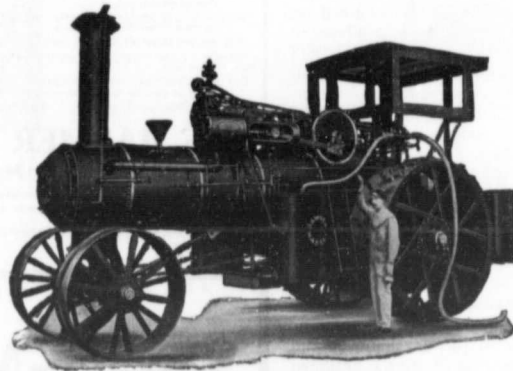
CANADA



250,000,000 BUSHELS OF GRAIN

That is what some of the best authorities estimate Western Canada's crop at this year. In order to save this you will need the **BEST THRESHING MACHINERY ON THE MARKET**. Separators that will do the work. Power that can be depended upon. There are many kinds of outfits on the market—also many trails on the prairie, but only a few that lead to anywhere. Get on **THE SAWYER-MASSEY TRAIL**. The trail that leads to success in the threshing business. They are the Premier Company with the Premier Goods—the oldest and largest Engine and Thresher Manufacturers in the Dominion.

Not in a
Combine



Not in a
Combine

The Builders of Sawyer-Massey Threshers and Separators

Have behind them three-quarters of a century of successful experience in the threshing machinery field. The result of this experience is shown in the design, quality of material and workmanship found in the S-M line. Their "Great-West" Separators were designed especially for the Great West of Canada. Where Sawyer-Massey Outfits are in use, satisfaction is guaranteed.

We Can Supply You with a Separator to Suit any Power
We Can Supply You with Power for Any Purpose

WE ARE NOT IN A COMBINE

Sawyer-Massey Company Limited

WINNIPEG, MAN.

REGINA, SASK.

HAMILTON, ONT.



BRANCHES—WINNIPEG MAN. AND REGINA SASK.



IMPLEMENT COMBINATION

No. 2

INCREASING its capital stock to fifty million dollars, the Emerson-Brantingham Company of Rockford, Illinois, manufacturer of the world famous "Foot Lift Line" of implements, has purchased the Gas Traction Company of Minneapolis, manufacturer of the famous Big Four "30"; the Geiser Manufacturing Company of Waynesboro, Pa., manufacturer of the celebrated "Peerless" line of steam engines and threshers, saw mills and saw mill outfits, stationary and portable gasoline engines, steam gang plows, road rollers, clover and alfalfa hulkers, baling presses, etc.; and Reeves and Co., Columbus, Indiana, manufacturer of double-cylinder simple and cross-compound steam thresher and plowing engines, compound separators, clover hullers, corn shellers, automatic and pneumatic straw stackers, band cutters and feeders huller feeders, single and double saw mills, steel baling presses, etc.

The Emerson Carriage Company, which has a large plant at Rockford entirely separate from that of the Emerson-Brantingham Company and manufactures a high grade and well known line, is included. A well known line of seeding machines and another of farm wagons will be added in the near future, making the Emerson-Brantingham line the largest and most complete in the world.

The initial move was the purchase by the Emerson-Brantingham Company of the entire plant and patents of the La Cross Tool Company of Chicago Heights Illinois.

These include their original gearless hay loader, low-down steel manure spreader, all-steel combined side delivery rakes and tedders, fork type, swinging and overshot hay stackers, power-lift rear-hitch sweep rakes, etc. This entire line is now marketed under the name Emerson in connection with the celebrated Emerson alfalfa, corn stalk and sulky hay rakes, Emerson combined revolving side delivery rakes and tedders and other Emerson Foot Lift implements, the whole making the most complete hay tool line manufactured and sold by one company.

All Non-Competitive Companies

A notable feature is that all the companies thus purchased by the Emerson-Brantingham Company are non-competitive, and while the Emerson-Brantingham Company will manufacture

and sell the entire line which has heretofore been manufactured and sold by the different companies, the identity of each line will be carefully preserved. The "Foot Lift Line" of the Emerson-Brantingham Company does not compete with any of the other lines in any way. The Gas Traction Company manufactures only the Big Four "30". The Geiser Manufacturing Company has a very large trade throughout the eastern part of the United States and in foreign countries and Reeves & Co. specialize on the larger sizes of steam engines and threshers and are especially strong throughout the West.

All the principle officers and heads of departments of the several companies are retained in practically the same or advanced capacities with the enlarged Emerson-Brantingham, of which C. S. Brantingham is president, E. P. Lathrop and Fred Glover vice presidents and J. W. McLachlan secretary and treasurer.

It is interesting to note that the purchase of the Gas Traction Company by the Emerson-Brantingham Company unites the pioneer in the development and manufacture of the four-cylinder farm tractor and the pioneer in the development and manufacture of plows designed especially for use with tractors. The Big Four "30" and Emerson plows have been largely used together for many years all over the American continent. Both companies do a large export business and Big Four "30s" are pulling Emerson plows in all parts of Europe and South and Central America, in Australia, northern and South Africa and in some parts of Asia.

The Emerson-Brantingham Company.

The Emerson-Brantingham Company has been building farm implements since 1852. Its plant at Rockford is one of the largest and most modern and complete in the world. Its implements are in use not only throughout the United States but also all over the world and every farmer knows the high quality of "The Foot Lift Line for the Boys on the Farm." The various branch houses of the company, which heretofore have been conducted as separate concerns, are made a part of the enlarged organization. These branch houses are as follows: Emerson-Brantingham Company,

Load Your Own Cars and Fill Your Granary with a

New Taggart PORTABLE ELEVATOR

Entirely Strengthened and Remodelled Will Save its Cost in One Season

It is a back saver, time saver, money saver.

It will save three men's time and two teams at least



For loading cars and filling granaries — operated by gasoline engine which sits on front end of skids.

We can supply engine, if wanted, or fit elevators to be run by your own engine by giving us speed and size of pulley.

Will elevate from 500 to 1,000 bushels of wheat per hour according to power.

We also have a Horse Power outfit complete, called our Junior Star. Only a few of them left.

Our 1912 Model has improved Gearing and Frame and is as near to perfection as an elevator can be made for convenience and capacity.

Write for descriptive circular. Agents Wanted.

THE HARMER IMPLEMENT CO. WINNIPEG

This cut shows Elevator mounted on truck, with leg up and Hopper swung back to let team drive up alongside of Elevator.

CONSTRUCTION

The "Taggart" Portable Grain Elevator is built with 18 or 21 ft. leg. Grain is elevated by cups and conveyed by worm screw. Mounted on skids or farm truck.

Hopper swings back out of the way for wagon and will slide along conveyor so that it fits between the wheels of wagon and does away with the spilling of grain.

Leg swings down when moving and rests on front end of frame. Spout may be swung in any direction either up and down or side ways.

Our Prices Are Right

Sawyer-Massey Co.

NOT IN A COMBINE!

SPARK ARRESTER

One that gets all the sparks without clogging or interfering with the draft. Fits any engine. Screens adapted to any fuel.

ACETYLENE GAS HEADLIGHT

Turns night into day. Bracket to fit any make of engine. Throws light 400 feet. Operating expense about 1c. per hour.

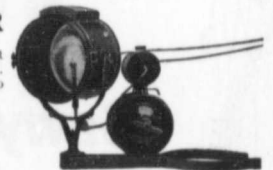
FLUE CUTTER

You need this tool to get ready for your Spring Plowing. Is adjustable in length and size. Cuts the flue without burring the end. Try it.

Estate of E. M. POPE, Watertown, S. Dak. U.S.A.

SEND FOR CATALOGUE AND PRICE LIST TO

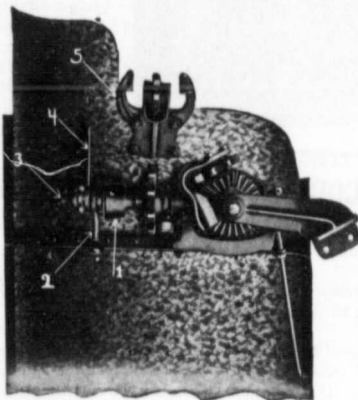
THE MAYTAG COMPANY, LIMITED - Winnipeg, Man.



Hart-Brown Wing Carrier

Carriers are Under Control of Feeder Governor and Start and Stop with Feeder Conveyor.

Either Wing May be Run Independently of the Other.



An Adjustable Friction Clutch is provided for each wing which not only prevents breakage but allows either wing to be thrown in or out of gear independently of the other.

Attaches to Any Separator With Any Feeder Old or New

Attaches to Main Frame of Separator. No Weight on Feeder. Can be Put On Quickly and Easily. Need Not Alter Feeder or Change in Any Way.



Bundles are Delivered Straight and Evenly — No Slugging

Hart Universal Thresher Rack

The expense of a field crew is the largest item in threshing cost. If you can cut this expense in two, you can make more money, can't you? You can do it by using the Hart Universal Thresher Racks. One Hart Universal and driver will do as much work as two ordinary racks, two drivers and one field pitcher.

Hart Universal Racks will save the cost of one-half the bundle wagons and drivers and all field pitchers you now use.

The Hart sets on any wagon or truck gear and unloads instantly by a pull off gate, no waits to unload, no time wasted in unloading. Racks may be purchased complete or we will furnish all hardware, plans and specifications and you can build them yourself. Write us for particulars.



Machine and repair stocks carried at Winnipeg and Regina.
Write to-day. State kind of Separator you use.

Hart Grain Weigher Co., Peoria, Ill., U.S.A.

Des Moines, Indianapolis, Sioux Falls, S. D., and Waterloo, Iowa; Emerson-Brantingham Plow Co., Dallas, Texas; Emerson-Newton Company, Kansas City, Mo., and Oklahoma City, Okla.; Spokane Implement Company, Spokane, Wash.; Emerson-Brantingham Implement Company, Omaha, Nebr., and Emerson-Newton Implement Company, Minneapolis.

The Big Four "30"

The Big Four "30" was the first four-cylinder farm tractor built and it was only after years of experimenting in the field that the company adopted the design which has since been

changed very little. The Big Four "30" uses gasoline, kerosene, benzine, naphtha, distillate or any other similar fuel with remarkable economy and efficiency. One of its most valuable exclusive features is its self-steering device, which in plowing automatically guides the engine in a course absolutely parallel with the last furrow turned, so that it is not necessary for the operator to touch the steering wheel from one end of the field to the other. Another very original feature is the selling of the Big Four "30" on approval, the farmer not paying for it until he

has given it a thorough trial on his own farm.

In addition to the main plant at Minneapolis, the Gas Traction Company has a factory at Winnipeg and branch houses at Winnipeg, Calgary, Saskatoon, Lawrence, Kansas, Walla Walla, Wash., and other important points.

Geiser Manufacturing Company.

The Geiser Manufacturing Company of Waynesboro, Pa., manufacturer of the celebrated "Peerless" machinery, has branch houses at Toledo, Indianapolis, Kansas City, Columbus, Ohio, St. Louis, Williamsport, Pa., Balti-

more, Harrisburg, Pa., Springfield, Mo., Peoria, Ill., Batavia, N. Y., Fargo, N. Dak., Knoxville, Tenn., Salisbury, N.C., Easton, Md., Trenton, N.J., Pittsburg, Nashville, Tenn., Lake Charles, La., and Winnipeg.

The company was established in 1859 and its steam engine and thresher plant at Waynesboro covers forty-five acres. "Peerless" engines are largely used in the West for heavy road work, such as hauling logs, lumber and ore, road building, contractors' uses, plowing, etc. The "New Peerless" sieveless separator is well known to the trade, espec-

ially throughout the East and abroad. Geiser machinery is well known throughout Europe and other foreign countries, where the company does a very large export business.

Reeves & Company

Reeves & Co., of Columbus, Indiana, manufacture a line of machinery which has been known throughout the United States and Canada for many years. The plant at Columbus is a very large and complete one. Reeves and Co., have branch offices at Sidney, Ohio, Indianapolis, Minneapolis, Peoria, Des Moines, Kansas City, Oklahoma City, St. Louis, Madison, Wisc., Lansing, Mich., Wichita, Kans., Lincoln, Nebr., Fargo, N.D., Denver, Regina and Billings. The company has been engaged in the manufacture of power machinery for thirty-eight years and each succeeding year has seen a steady increase in sales.

Did Not Compete

The Kinnard-Haines Co. did not take part in the Contest this year. In a communication to this paper, they state it was their intention to be on hand, but on account of the pressure of business, together with the enlargement of their factory and installing of new machinery, were not able to attend.

This Company has come back each year since these Contests have been in progress and have always been able to carry off the gold medal having been awarded four gold medals and one bronze medal in the four years of these Contests, and can afford to rest on the honors they have received.

This photo of the "Ann Arbor" hay press in operation in the Yakima Valley of Washington, was accompanied by a sworn affidavit that the operators Pettijohn & Craig of Toppenish baled 73 tons, 800 pounds in 10 hours. The methods of getting the hay





Oil Pull Tractor at work with a 14-bottom Engine Gang Plow

Quality Secures Business—Economy Insures Profits

Competition in custom work means that you must deliver the best service to satisfy your customers; and to do this and secure maximum returns from your work, you must own an economical, efficient outfit.

For both quality and economy of work, the verdict of farmer and thresherman is evidenced by the car loads of *Oil Pull* Tractors shipped daily from our plant to make history in hitherto poorly plowed and virgin lands.

Perhaps you were the purchaser of one of these powerful Rumely Tractors. If so, you found it just the engine to do your threshing in the speediest, steadiest and surest manner.

Now you are looking for further work for your engine. If it's a Rumely Tractor you can find use for it every month of the year.

Do Fall Plowing with an *Oil Pull* Tractor and Rumely Engine Gang Plow

You know the "reasons why" of the *Oil Pull* Tractor popularity—its power—adaptability—simplicity of operation—automatic power regulation—its fuel kerosene—the cheapest and most easily procurable of all fuels, and finally, its economy, as a result of all its good features combined.

The Rumely Engine Gang Plow is of equal efficiency. It is made in all sizes. It is strong—compact—flexible—light draft—easy to handle—inexpensive to maintain—has large capacity—and will work at any plowable depth in any kind or condition of soil.

The time of plowing is short and quick work counts. With an *Oil Pull* Tractor and a Rumely Engine Gang Plow, you can take care of job after job in the shortest possible time.

We can fit you out with other famous Rumely Money Making Power-Farming Machinery comprising machines for hulling, husking, shredding and baling. The man with an *Oil Pull* Tractor and Rumely outfit is always in demand in his neighborhood. He is prepared for every farm power job.

Tell us what machines interest you and catalogs will be sent you by return mail—free.



RUMELY PRODUCTS CO. INC.
Winnipeg, Man.

Canadian Branch Houses: Regina, Edmonton, Brandon, Calgary, Yorkton, Saskatoon, Toronto.

to the baler are worthy of study. The clinching fact of the whole thing is that the "Ann Arbor" baler has never reached its capacity limit even with the most ingenious and rapid methods of hay handling used to get hay to it.

The manufacturers of this "Baler for Business," the Ann Arbor Machine Co., of Ann Arbor, Michigan, invite every Canadian engine owner to send for their catalogue No. 3079 and consider the features of their line which make it

possible for you to have a baler not only of large capacity, but one of strength, speed, reliability and covered by the absolute guarantee of a firm which builds nothing but baling machinery and has been at it for 25 years.



Champions the Old Reliable Steam Outfit.

As I have been a silent reader of the Canadian Thresherman and Farmer, I can say that I read several magazines, but find the Canadian Farmer the best because it not only contains interesting reading, but I also find its pages in every way educational.



As I see owners of plowing and threshing outfits giving their experience in the department of Traction plowing, I will say a few words not as an owner, but as an operator of steam engines and generators.

In connection with the boiler or steam generator, I have taken particular notice of several threshing engines. The boilers were polished, and brass work shone like diamonds, but upon examination found the interior much different the outside polished, and the inside dirty. I say, reverse this. Let the outside of your boiler get greasy. It shows you are using lots of oil, but polish the inside. Forcing a quantity through the boiler-barrel is all right in its place, but call that a wash out is absolutely worthless.


Use plenty of water, and often, clean your crown-sheets above all and the water-leg, and force plenty about the tubes where they are liable to scale, near the tube-sheet, I say this not to the old experienced engineer but to the young engineer: the more care you take of your boiler the less your trouble will be, as if scale is allowed to accumulate about the tubes, they will certainly burn. This means they lose their elastic state and the result is your boiler is leaking and then the tank-man catches it for not hauling soft water. Although hard alkali water is not good for boilers, I venture to say that the reason why we see so many boilers leaking during threshing season is not altogether due to the feed-water, but poor management.

This proves itself by other outfits. When one boiler starts to leak in a neighborhood, where all threshers get their water from the same lake, some boilers leak while others of the same make, age, and style are perfectly tight and do not leak a particle. Keep your boiler clean, blow out all impurities which accumulate two or three times a day, and do not allow cold draught to strike the tube sheet or allow your boiler to cool too suddenly. If you do this I can assure you the blue troubles will be somewhat less.

In my fifteen years experience in the operation of steam boilers and engines, I have learned it is poor policy to expand and bead flues or tubes with boiler full of water. You can, I dare say, roll your tubes, but when the beading is to be done, you cannot do it against the

"The Liquid Lifter"



LIFTS 22 TO 25 FEET. ELEVATES 25 TO 100 FEET. [30 TO 100 LBS. PRESSURE

Traction Engine Ejectors

Owing to High Steam pressure carried by these engines considerable trouble has been experienced with the Injector handling the heated water as delivered to engine tanks by steam syphons. We have a special XL-96 Ejector which delivers water to these tanks at 30 degrees less temperature than that of other ejectors, which decrease of temperature overcomes all trouble with the Injector. We cannot too strongly recommend that this Ejector be used on threshing engines, road rollers and engines of such type. Specify the PENBERTHY Ejector for your traction engine. Stocked by all leading jobbers and retail hardware stores throughout the country.

Manufactured by
Penberthy Injector Company, Limited.
 Windsor - - - Ontario

Ann Arbor

"THE BALER FOR BUSINESS" **MAKE MONEY**
 Out of Your Hay Crop.

Get The Baler That Always Does The Business
 The Baler That Always Works.

Ann A'bor "Columbia," with 10-16 H.P., Bales 25-75 Tons per day.
 Ann Arbor "35," with 8-10 H.P., Bales 20-35 Tons per day.
 Ann Arbor "20," with 3 1/2 6-H.P., Bales 12-25 Tons per day.
 Ann Arbor Horse Presses, 10 - 20 Tons per day.



MANUFACTURED BY THE
ANN ARBOR MACHINE CO., Ann Arbor, Mich.

25 years on the market.

1912
 Catalogue No. 6
 NOW READY.

water pressure. Drain your boiler, then expand and bead them tight to the tube sheet; this will also strengthen your boiler, and when tight will stay there unless they are rolled too thin or have overheated, and lost their temper,

I will drop out for this time and like to see more letters regarding steam in these plowers.

Don't let the gasoline department get ahead of the old reliable steam power. I will come again this season, and give my exper-

ience with automatic Cut-off engines.

Wishing the magazine and readers success, I remain,

Yours truly,

F. L. Smyth,
 Fielding, Sask.



NO. 1 HARD

THE Midsummer month of July with its usual scarcity of high-grade wheat has come and gone. Throughout the month there has been a good demand for contract grades, the large dealing in the July option in the month of June resulting in the July option being somewhat congested toward the close of the month, and in at least one speculative advance about the twelfth. Save for three Northern none of the contract grades were on an export basis. But for the rest of the old-crop year the three high grades should be in fair demand, being largely required for home milling purposes. The relative percentage of these grades left to be marketed seems small since so many cars are going out of condition when graded here.

The four lower grades have fluctuated more according to the momentary demand to fill boat-space already contracted for, than in sympathy with the higher grades. The foreign demand for six and feed has been quite poor, while the off-grades of four, five, six and feed have not been wanted at all. The grain commissioners are confronted with the problem of large quantities of many off-grades now occupying many of the bins in the Terminals, and none of these off-grades going out, while much of this space will be wanted for new crop within two months and the ever-necessary repairs must be made. One logical solution is to make arrangements for a renewal of the special rates to Duluth and Superior.

For many weeks past several hundred cars of grain, out of condition have been waiting in the yards at Fort William and Port Arthur. As a last resort, the big Armour drying plant was hurried up from Chicago, and working in conjunction with the driers of the permanent terminal elevators, is slowly catching up, though the progress is greatly hindered by the great number of grades. In one railway yard on checking up the cars it was found that two hundred cars contained one hundred and sixty-seven different grades. Some shipments may be made by lake to Duluth for drying, but at this writing about one million bushels

of grain in a dangerous condition are still on the rails. Farmers having off-grade grain should by turning, etc. try to save it at home till the situation is relieved at terminals.

Foreign markets have been weaker the last fortnight partly as a result of prospects for an exportable surplus from the United States, if their big crop through the three spring wheat States comes off safely. The Argentine had some forty million bushels of old crop still for export on July 1. Russian prospects are fair while France, already hard-up for wheat, exports another small crop, which is being deteriorated by rain. The United Kingdom is also getting too much moisture.

In the United States, new crop is moving freely in the South-western States. It might be noted that at Minneapolis old one northern is bringing 12 to 13 cents over September. Some rust has struck late wheat in the Dakotas but most of the crop will likely be harvested before material damage can be done.

In our own provinces some rust has appeared at a few points but improved weather now should ripen the crop safely. Alberta has a large crop but the other provinces only a good average crop, according to present indications.

October, the new crop Option, has been greatly depressed the past month, but is likely low enough now and any rust damage would cause a sharp rally. But the fluctuations in that Option will largely depend upon weather conditions. It is not advisable for farmers to carry over old wheat into the new crop year.

Good crop prospects, the weakness in the Wheat Option, cheaper corn and oats in the United States all served to cheapen oats with us. Off-grades have not been wanted. Prices seem quite low, especially for

October, the new crop option, in keeping qualities and should be marketed at once.

The usual midsummer dullness in barley has obtained and likely will continue till the end of August.

Flax has steadily weakened and seems destined to go lower yet, at least until the volume of America's flax crop can be more accurately gauged.

UNION BANK OF CANADA

HEAD OFFICE

Established 1865

WINNIPEG.

Paid-up Capital.....	\$ 4,952,370
Reserve.....	3,075,000
Total Assets (over).....	61,000,000

Board of Directors.

Hon. John Sharples, Hon. President
John Galt, Esq., President
William Price, Esq. Vice-President
R. T. Riley, Esq., Vice-President
S. Barker, Esq., M.P. W. R. Allan, Esq.
F. E. Kenaston, Esq. G. P. Reid, Esq.
Colonel John Carson S. Haas, Esq.
E. L. Drewry, Esq. M. Bull, Esq.
G. H. Thomson, Esq. W. Shaw, Esq.
E. E. A. DuVernet, Esq., K.C.

G. H. Balfour General Manager
H. B. Shaw Ass't. General Manager
F. W. S. Crispo Superintendent of
Branches and Chief Inspector
J. W. Hamilton East'n Superintendent



1 Branch in Nova Scotia
2 Branches in New Brunswick
7 Branches in Quebec
25 Branches in Ontario
41 Branches in Manitoba
69 Branches in Saskatchewan
42 Branches in Alberta
15 Branches in British Columbia

London, Eng. Branch, 51 Thread-needle St. E.C.—F. W. Ash, Mgr.

With its chain of over 260 Branches extending from Halifax to Prince Rupert, the Bank offers excellent facilities for the transaction of every description of Banking business. It has Agents and Correspondents in all Cities of importance throughout Canada, the United States, the United Kingdom, the Continent of Europe, and the British Colonies.

Collections made in all parts of the Dominion and returns promptly remitted at lowest rates of exchange. Letters of Credit and Travelers Cheques issued available in all parts of the world.

Special Attention given to Farmers' business. Grain drafts negotiated

Winnipeg Branch - D. M. Neeve, Manager

Imperial Bank of Canada

Capital Authorized, : : \$10,000,000
Capital Paid Up, : : \$6,000,000
Reserve Fund and Undivided Profits, \$7,000,000

Directors

D. R. WILKIE, : President
HON. ROBERT JAFFRAY, Vice President
WM. RAMSAY, of Bowland, ELIAS ROGERS
Stow, Scotland. PELEG HOWLAND
J. KERR OSBORNE HON. RICHARD TURNER,
SIR WM. WHYTE Quebec.
CAWTHRA MULLOCK W. J. GAGE
WM. HAMILTON MERRITT, M.D., St. Catharines.

Head Office, : Toronto

D. R. WILKIE, E. HAY, W. MOFFAT,
General Manager. Assistant General Manager. Chief Inspector.

Branches and Agencies in Principal Canadian Points.

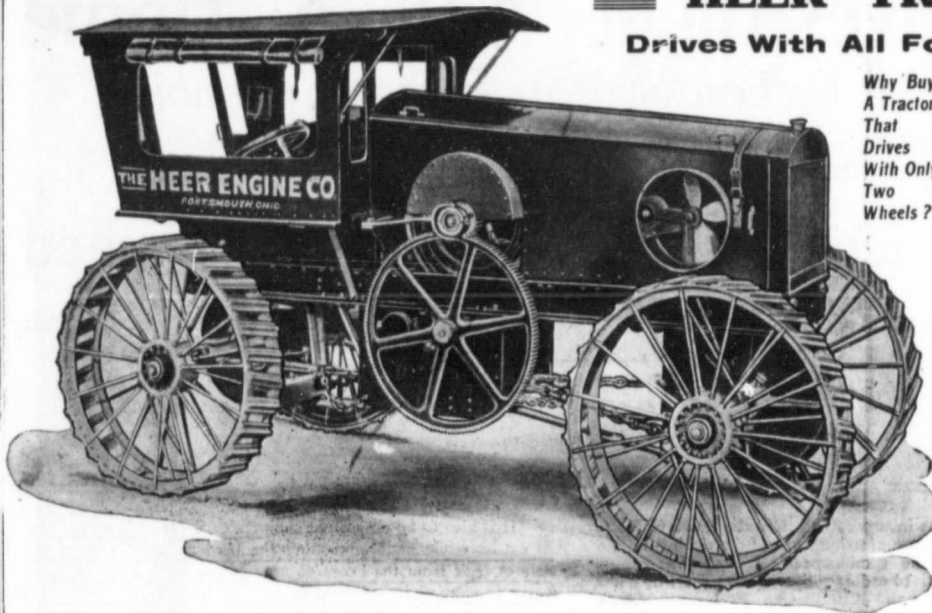
Agents in London, England, : : Lloyd's Bank, Ltd.
Agents in New York, : : Bank of the Manhattan Co.
Agents in Chicago, : : First National Bank
Agents in Minneapolis, : : First National Bank
Agents in St. Paul, : : Second National Bank

Letters of Credit issued.

Winnipeg Branch, Cor. Main & Bannatyne

The Horse pulls with all Four Feet - - **THE HEER TRACTOR**

Drives With All Four Wheels



Why Buy A Tractor That Drives With Only Two Wheels?

THE FOUR WHEEL DRIVE means that power is applied to **All Four Wheels**. One, two or three wheels may be put out of business, but the fourth will keep on in spite of the trouble and the tractor will move. The **Four Wheel Steering Device** cannot be applied on other engines. The "Four Wheel Drive" does not pack the soil—it can't because of the construction of the wheels.

The "Four Wheel Drive" does more work with half the weight and with less than one-tenth of the repairs occasioned by the ordinary tractor. By actual test it develops more power than any other tractor made. It positively means less fuel cost, less trouble with details and less engine worry, because engine and frame are set on heavy springs which absorb the shocks and jolts over rough roads and furrows. It stays on top of the ground and goes over furrows and sink holes without stalling.

Get the HEER to do your Threshing and Fall Plowing

Made in three sizes—20, 25 and 40 Brake Horse Power; or 16, 20 and 32 Tractive Power

WRITE FOR CATALOGUE AND CIRCULARS TO THE

CANADIAN HEER ENGINE COMPANY 808 McARTHUR BUILDING WINNIPEG, MANITOBA.

Professor Moorhouse follows Professor Bedford at M.A.C.

Professor L. A. Moorhouse, who has just been appointed as successor to Professor Bedford in the Department of Field Husbandry, Manitoba Agricultural College, is a native of Canada, having been born and brought up on a farm in Lambton County, Ontario. After completing his course at the high school, Glencoe, he entered the Ontario Agricultural College, from which he graduated with honors in the year 1902. He immediately received a call to the Department of Agronomy in Oklahoma Agricultural College, and two years later was given the status of Professor, being placed at the head of the department of agronomy at that Institution. In 1906 he was given leave of absence to take post graduate work in soils and plant breeding at Illinois University, and while there he obtained a Master's degree in science.

Professor Moorhouse continued at Oklahoma until 1909, when he accepted a position as superintendent of farm management investigation work for the Bureau of Plant Industry, Department of Agricultural, Washington. In this investigational work he has had under his direction a large staff, and the reports of his work have been highly valued by college men as well as farmers throughout the United States.

Within the past two years Professor Moorhouse has frequently been urged to come back to Canada, but it was not until offered this position in Manitoba that he felt justified in returning to his native land.

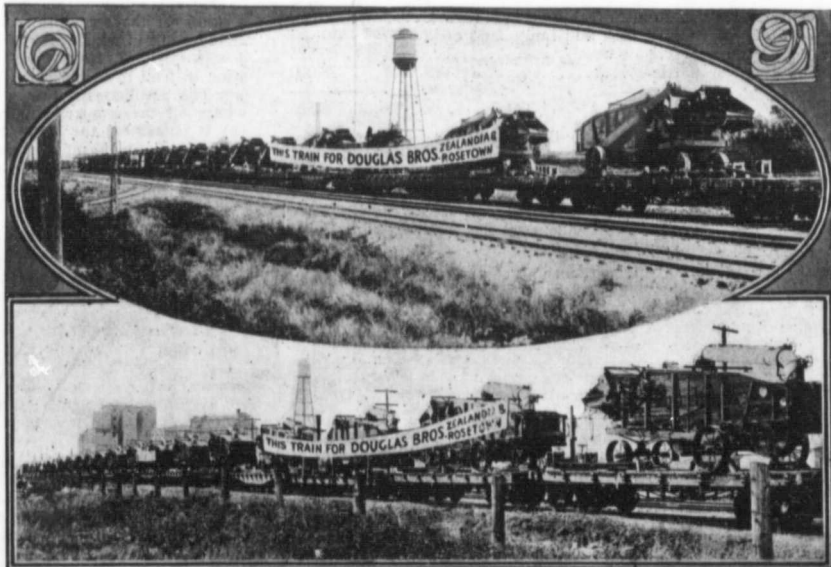
A Big Man

"The man I like is one who is still thoughtful to all men. He suits

himself to his company and circumstances, overlooking what others would call faults, looking for and seeing only the best in the people around him, and drawing it out to the best of his power.

"His charm and his popularity spring from this determination of his to look for and see the best

in everybody. Big-brained and big-hearted, scorning anything mean or petty or narrow, he does not take life too seriously or frown on innocent pleasures. He is not goody-goody, but he always does the straight thing himself, and often unconsciously, through sheer force of character, makes others do it, too."



Rumely Ideal Separators on the way to take care of a bumper crop at Zealandia, Sask.

An Investment And A Home In The Richest Spot in British Columbia

To those farmers of Western Canada who have labored for years at wheat growing on the prairie, and who are seeking at once a safe investment and ideal conditions in which to spend the evening of life, an exceptional opportunity is now offered by the

Similkameen Fruit Land Company Limited

AUTHORIZED CAPITAL \$1,000,000

<p>Bankers:</p> <p>Canadian Bank of Commerce</p> <p>Union Bank of Canada</p>	<p>E. L. Taylor, Esq. K.C. - - - - - President</p> <p>W. T. Alexander, Esq. - - - - - Vice-President <small>(President of Great West Permanent Loan Company, etc.)</small></p> <p>Hilliard Taylor, Esq. - - - - - Secretary Treasurer <small>(Investment Broker, Winnipeg Real Estate Exchange)</small></p> <p>Richard Langtry, Esq. - - - - - <small>(Western Manager, Page Wire Fence Co.)</small></p> <p>F. H. Alexander, Esq. - - - - - Directors <small>(Vice-President, The Canada National Fire Insurance Co., Director, The Great West Permanent Loan Co., etc.)</small></p> <p>A. Brostedt, Esq. - - - - - <small>(General Agent, G. N. Railway Co., Winnipeg)</small></p> <p>D. J. Taylor, Esq. Winnipeg - - - - - Managing Director</p>	<p>References:</p> <p>R. G. Dun & Co.</p> <p>Bradstreet Co.</p> <p>Mercantile Agencies, Winnipeg, Manitoba.</p>
--	--	---

THIS Company was incorporated under the Laws of Manitoba for the purpose of acquiring and developing certain fruit lands in the Similkameen Valley. The capital stock is divided into ordinary Stock, \$700,000 (which has been fully subscribed) and Cumulative Preference Stock \$300,000 which is now offered for sale at par in 3,000-eight per cent. (8 per cent.) Cumulative Preference Shares of \$100.00 each.

Over \$50,000 of the Preference Stock has already been subscribed. The plan of payment is as follows: \$25.00 per share on application, and the balance in six consecutive half yearly instalments of \$12.50 per share the first of such half yearly instalments to become payable six months after allotment. Dividends are payable half-yearly on the first days of January and July in each year. If desired, shares may be paid in full on application or instalments may be paid prior to due dates.

The directors of this company are all well known public men of high financial standing and long business experience. They do not require to make this preference stock the subject of advertising, but as they are desirous of placing it in the hands of men who are likely at some future date to locate on the property, occasion is taken in this issue of "The Canadian Thresherman and Farmer" to offer its readers the opportunity of securing some of this desirable Stock while it is still available.

The present security for Preference Shareholders consists of 3,000 acres of land peculiarly adapted to fruit raising, at a conservative valuation of \$400 per acre..... \$1,200,000

2421 Acres of mixed fruit and range land at

\$25.00 per acre	60,525
700 Head of Cattle	28,000
Total.....	\$1,288,525

Note that the estimate applies only to the present valuation of the company's holdings, which, in view of the rapid development now in progress in this great Province, cannot fail to steadily increase. Subscribers are further reminded that the funds obtained through the sale of the Preference Stock will be invested in and used for the general development of the property.

The surveying of the property and the irrigation system is under the superintendence of Mr. C. A. E. Shaw, C.E. & D.L.S., an engineer of high repute and long experience in such work. The development of the Similkameen Fruit Land Company's acreage, including the cultivation of the soil, the extension of the present valuable irrigation system, and the setting out of young orchards will, in the course of five years, according to Mr. Shaw's statement, bring the value of the fruit lands up to from \$1000 to \$1500 per acre. The other lands included in the Company's property (embracing mixed fruit and range lands), will also increase in value, and grow in demand with the general development of the property.

It is also to be noted that the present revenue from the sale of cattle, while not diminishing the herd as well as from the sale of fruit from the orchards now in full bearing on the property is more than sufficient to pay the interest on the preference stock. A handsome revenue will also accrue during the growing period of the young orchards, from the cultivation and sale of vegetables (potatoes, corn, onions, tomatoes, etc.) for which there is even at the present time a constant demand at profitable prices.

As additional security to the Preference Shareholders, a By-law provides that the holders of Preference shares shall have preference and priority as to capital and dividends over the ordinary stock and the holders thereof, so that it will be at once evident that the Preference Shareholders will have absolute security for their investment, both in regard to capital as well as dividends.

Preference Shareholders have privilege to purchase fruit lands at a discount of ten per cent (10 per cent) on the current price, a provision to this effect having been incorporated in the Preference Stock by-law.

In view of the extraordinary fertility of the lands held by this Company and the uniformly salubrious climate at every point in the Similkameen Valley, the directors believe that the opportunity is one of special significance to the Farming public, and more particularly to the hundreds of men and women who, having spent a long and arduous life-time on the prairie, are seeking for those conditions in which they will not rust out in idleness but in which they may enjoy a certain measure of freedom from the necessity to toil and still find a profitable recreation in fruit growing.

The Similkameen Valley is (1) the only district in Canada where all the sub-tropical fruits can be grown to perfection. (2) It possesses the longest and warmest season in the Dominion. (3) Fruit and vegetables mature here two weeks earlier than in any other district in Canada. (4) It has easy access to the markets of the Pacific coast and Prairie Provinces.

Having regard to the growing importance of the fruit industry in British Columbia, and the active interest displayed by the people of Western Canada in this most important branch of agriculture, the Directors of this Company confidently anticipate that the issue of preference stock now being offered to the public will be promptly subscribed. As there is but a limited amount of the preference stock open for public subscription, the Directors would strongly advise intending subscribers to make application for stock at once.

Read the illustrated article in this issue on page 96 on the Similkameen Valley, written by an independent correspondent who is an experienced horticulturist, and who spent an extended period in the district with the specific purpose of obtaining facts at first hand.

Cut off and mail the coupon at bottom when we will mail complete literature free to any address.

SIMILKAMEEN FRUIT LAND COMPANY LIMITED, 505 McArthur Building, Winnipeg, Man.

Please send me full particulars of your Fruit Land proposition (together with application form for shares) as advertised in the Canadian Thresherman and Farmer. Name

Address in full

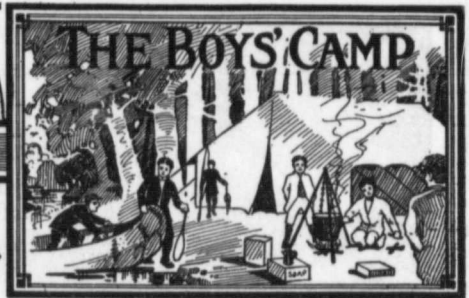
MAGAZINE
SECTION

WITH THOUGHTS LIKE THESE
ARE ALL OUR CARES BEGUILED.

Old Mothers

I love old mothers—mothers with white hair,
And kindly eyes, and lips grown softly sweet
With murmured blessings over sleeping babes,
There is something in their quiet grace
That speaks the calm of Sabbath afternoons;
A knowledge in their deep, unflinching eyes
That far outreaches all philosophy.
Time, with caressing touch, about them weaves
The silver-threaded fairy shawl of age,
While all the echoes of forgotten songs
Seem joined to lend a sweetness to their speech.
Old Mothers!—as they pass with slow-timed step,
Their trembling hands cling gently to youth's strength;
Sweet Mothers!—as they pass, one sees again
Old garden-walks, old roses, and old loves.

RACING FOR THE THRESHERMAN & FARMER



The Girls' Cozy Corner

I must not tease my Mother.

I must not tease my mother for she is very kind. And everything she tells me, I must directly min. For when I was a baby, and could not speak or walk, She laid me on her bosom, and taught me how to talk.

I must not tease my mother, and when she likes to read, Or when she has an headache, I'll silent be indeed; In play I'll not be noisy, or trifling troubles tell, But sit down beside her, I'll try to make her well.

I must not tease my mother, she loves me all the day, She tells of God and heaven, and teaches me to pray; How much I'll strive to please her, she every hour shall see; For should I lose my mother, what would become of me?

Beatty, Sask.

Dear Cousin Doris,—This is my first letter to the Girls' Cozy Corner. I live on a farm a half a mile from the nearest post office. The buildings that are in Beatty are as follows:—A grocery and dry goods store, a hardware store, an elevator, a station house and a boarding house, and a few other buildings. For pets we have two dogs and two cats. We have over thirty head of cattle, six oxen and two pigs. I am going to school quite regular now and I like going to school very much. I am in the sixth grade and am twelve years of age. I have three brothers and one sister. We are one of the healthiest families around here. I will close with a riddle or two.

Big at the bottom, small at the top; a thing in the middle goes flipperty flop.

A churn.

As round as an apple, as deep as a cup, All the king's horses can't pull it up. A well.

Well, I had better close, since my letter is getting pretty long. Hoping my letter will be in print, yours truly,—Agnes E. Bohn.

Glenella, Man.

Dear Cousin Doris,—Papa takes the Canadian Thresherman and Farmer. I like reading the Girl's Cozy Corner very much. You asked some of the girls if they could cook. I can bake a cake and a few other little deserts. I like cooking very much and have often made the supper without mamma. I am learning to sew, but cannot make anything yet, but dolls' clothes. How is your little girl Monona getting along? I am taking music lessons and like them very well. My grandfather has got an automobile this spring, so we shall have lots of rides. I am going to describe a game called musical chairs. First, you take as many chairs as there are people, and face each one

a different way. Then the music begins, as soon as the one that is playing stops, everybody tries to get a chair. Everytime they knock a chair out, and the one that stays up longest wins the game. Now I must close. Wishing the club every success. Yours sincerely,—Frances Huxham.

Monona is very well, thank you, Frances. By the way, I have only one niece and her name is Frances.—C. D.

Canora, Sask.

Dear Cousin Doris,—This is my first letter to the Cozy Corner. My brother takes the Canadian Thresherman. He has taken it for a long time. I like to read the letters very much. I can cook quite a bit, and I can sew some. I have made myself a dress. I go to school every day. I don't like to read very well, but my ma makes me read, so that I will be a good reader. I have read a few books. The names of them are "Swiss Family Robinson," "Through the Looking Glass," and "Little Bunny Boy," and a few more. I go to school every day. I am in the sixth grade. My studies are reading, writing, spelling, history, grammar, arithmetic, physiology and geography. I like to study at school. I live just about 2½ miles from school. I will be 15 years old in June. I will close for this time. I wish to see my letter in print. From your loving cousin,—Grace Roux.

Strasburg, Sask.

Dear Cousin Doris,— My brothers take the Canadian Thresherman and Farmer, and I thought that I would write to your fine little corner. I think it nice to have a little corner all for our own so we can write and let each other know what the rest of the girls in Canada are doing. I came from the States six years ago. My brother and I went to school for three years, but now we are six miles from school, so I don't know what we will do. We'll get some bicycles, I guess. I wish the girls had some kind of a society class like the boys. They have got Boy Scouts. I would like to exchange post cards with any of the girls of my own age (14) if they would write first. My address is with Cousin Doris. Well, I am closing with the best of hope for the membership of the Girls' Cozy Corner.—Nellie S. Lee.

Asker, Alta.

Dear Cousin Doris,—This is my first letter to the Girls' Cozy Corner. My father takes the Canadian Thresherman and Farmer, and likes it fine. I live on a farm 16 miles from Ponoka. I have about a quarter of a mile to go to school. For pets I have a reester, a hen, a cat and a dog. We have got 23 head of cattle and 4 horses, 12 sheep and 15 pigs. Well, I guess I will stop, for it is getting bedtime. I would like to correspond with any boy or girl of my own age (seven years). I remain, yours truly,—Myrtle Krefting.

Asker, Alta.

Dear Cousin Doris,— This is the second letter I will write to you. I would like to see my letter in print. I live 16 miles from Ponoka. I am nine years of age and I am in the second class. I have got two brothers and four sisters. Well, as it is getting late, I will have to stop. From your loving cousin,—Marie Krefting.

The Canadian Boys' Camp

Laugh.

By Adelbert F. Caldwell.

Whatever you've learned you've missed one half, Unless you have learned, my boys, to laugh. 'Tis one of the lessons you all should know. Before another day older you grow. When the day is dull, and the sky is drear, When the rain comes down when you wish it clear, When troubles unthought of, appear to you, When the friend was false whom you thought to be true, When your work is hard and the day is long, When everything seems to be going wrong— No matter what comes, it won't seem one half As troublesome, boys, if you've learned to laugh. —The Comrade.

Dear Campers,— I know you have been busy this summer, but it seems too bad to have the girls beat you in the letters. You like to read letters from boys, so let us have a full mail for next month. Surprise the girls by beating them. I wish our Boy Scouts would tell us about their work. Our readers want to hear from them. Sincerely,

Cousin Doris.

Incidents relating to the Scouts by Lt.-Gen. Sir Robert Baden-Powell, K.C.B.

(Taken from the Scout.)

A VANCOUVER STORY.

At Seattle I had got the farthest corner in the North-West of the United States; a few miles farther I should be in Canadian territory. So I went a few miles farther, and having two or three days to spare I spent them in Vancouver and in Victoria, which as you know, is on the island of Vancouver, opposite to the city of Vancouver, which is on the mainland. Both are in the province called British Columbia.

Vancouver city is growing very rapidly and the citizens are awfully proud of this.

The story is told that a little while ago, a Vancouver man met a friend in the train and in conversation said:

"Have you been to Vancouver lately?"

"Yes," said the friend, "I was there last week."

"Last week!" said the Vancouver man. "Oh! but my dear fellow, you should see it now."

Well, I had not seen it for a year and a half, and in this time the change was marvellous. New streets and suburbs had sprung up in every direction, and 25,000 new citizens had come to live there.

I saw the Boy Scouts there, and a very smart lot they were, too. I must say I was glad to see the bare knees again, and for in America nearly all the Scouts at present wear breeches and canvas gaiters, which don't look half so well as the

British bare-kneed system. Now that the Americans know that that is also the kit worn by explorers and big-game hunters and soldiers in central Africa just as it is in India, they are wanting to change their long breeches for shorts.

A SCOUT HERO.

There are at present among the Scouts at one of the towns I visited in America a happy smiling one who, however, went on crutches; he had lost a leg. He wore on his breast the medal for life saving, so I asked him what he had done. He had seen a boy drowning in the river when he was out fishing, so he rowed a boat hastily to the spot and was just in time to catch the drowning boy as he was sinking for the third time.

Not long afterwards he was looking at a motor-boat race when one of the craft went wrong in its steering gear and dashed in among the spectators. A man was killed and a woman was severely injured and this Scout had his leg very badly crushed. But he bore it gallantly; he would not cry or groan, and only begged them to let his mother think that he was not badly hurt, so that she would find it out by degrees and not receive a bad shock.

His leg had to be cut off, but he never complained, and took it all quite cheerfully. When his comrades sent flowers to him in hospital he begged them not to, as it meant so much expense to them.

So he behaved like a good, plucky Scout all through, thinking of others rather than of himself, and smiling at his own trouble. So I felt proud to shake hands with him.

A LUMBER CAMP.

While at Vancouver I was able to visit a lumber camp, that is a place in the forest where the woodmen are cutting timber and getting it out to the saw-mills.

Most of the forests have streams or lakes in them, and the timber when it is cut is run down to these and then floated, sometimes for a hundred miles, down to the saw-mill. In this particular forest there was not a river handy, so the owner had to build a railway to carry the timber down.

We went up on this line for seven miles through beautiful woodland scenery up and down hill till at length we reached the "camp." This consisted of a few log houses or "bunk" houses in which the lumbermen live, and a "mess house" in which they have their meals.

We got there just at dinner time. The men had all come in from their work. An iron crowbar hanging from a tree was their bell. When this was struck the first time it was the warning to get ready for dinner, and everybody got to work washing himself, brushing his hair, and generally tidying up. You have probably heard of the lumbermen being a pretty rough and tough crowd, but whatever they may be they are at any rate clean.

Then when the second "bell" rang, they all walked very quietly into the mess house to dinner.

I have often pointed out to Boy Scouts that scouts of the woods always walk so lightly that, even when they come into a house with their heavy boots on, they make very little noise, so that you can tell them at once from a closhopper who goes stamping about fit to smash the floor.

These lumberers not only walked very quietly, but also there was scarcely a sound while they ate their dinner, because they have a curious rule which does not allow any talking at meals.

The reason for this is that in a busy lumber camp the dinner hour has to be short. The men are well fed by the cook and his mates, and to get the food served quickly, everything has to be done in good order. This would be impossible if the men were all racketing about, and shouting and talking, and possibly arguing up to fighting point.

So instead of a wild rollicking crew that one might expect in a lumber camp, one found a very clean, quite, well-disciplined lot of men, and fine healthy, active-looking fellows they were.

THE FIRST V.C.

It Was Won by a Boy.

The Victoria Cross, the proudest decoration which our soldier and sailors can win, was instituted in 1856 by Queen Victoria, and the first person to whom it was presented was a boy named Lucas, who two years previously, during the Crimean War, had behaved with such gallantry that everyone agreed he ought to have it.

Lucas was a midshipman aboard the Hecla, and during the bombardment of a place called Bomarsund a shell, flung from one of the forts on shore pitched clean on deck of the Hecla.

It was one of these occasions when there is no time for hesitation; the lives of all around depended upon immediate action, and in an instant young Lucas realised the position.

He might have escaped by running, mind. Instead, he dashed forward, lifted up the hissing bomb in both hands, and hurled it overboard into the sea. It exploded before it reached the water.

Young Lucas went steadily ahead from this time onward, and was eventually promoted to be an admiral of the fleet.

Lonesville, Sask.

Dear Cousin Doris:—This is my first letter to the boys' camp. Papa has been taking the Canadian Thresherman and Farmer for I do not know how long. I like to read the children's page. I am eight years old and live on two sections of land and 7 miles from the town named Moose Jaw. I like to work outside but my most fun is to climb and run around an engine. Do you boys like skating? I like it and I like skie riding too. We have a big hill about half a mile away, and every Sunday I go over there and go sleigh riding and skie riding. Of course I would go there between Sundays but I am too busy feeding my pets and running around. And I am outside a lot, too, learning to live with you boys. But I suppose you have got a good tent so you won't freeze. I wish I lived near your club, we would have dandy times in the summer and it is nice and warm so we could go out more, for in the winter it is so cold. My papa has an engine out by Moose Jaw now but is going tomorrow to take it home because we have not got threshed yet, and we have more than a hundred acres in this year and I have a little field of oats and flax in too. So I would like to get threshed out too. Do you boys like carpenter work? I do. I have made a little doll's bed for my sister's doll and a table and two chairs and I have made cups and plates and a butter dish and a milk jug out of tin. I am going to send for some tools for to do some more. Papa just came home from town and he bought me a jack knife and a pair of shoes and a new suit of clothes and a cap. Today I took my sister's doll clothes and dressed the cat in them and she got away from me and jumped into a tub of water and I was hunting around for her a long time and at last I saw her behind the plows and I had a hard time to catch her, and when I caught her her clothes were torn and frozen stiff and she was too so I too; the clothes off of her and took her into the house and warmed her up and now she is all right.

Well, I guess my letter is getting pretty long, wishing the club a Merry Christmas and that Santa Claus will bring you a lot of presents. M. Norman Burgesson.

(Sorry this letter has been so long held over.—C. D.)



Will you be one of the 108 farmers who will receive our Prize Contest checks?

THERE will be twelve cash prizes in each of the nine provinces (108 in all) in the 1912 Prize Contest for Canadian Farmers. The 1911 Contest was so successful in awakening interest in the use of Concrete on the farm, that a second contest, in which three times as many prizes are offered, was decided upon for this year.

The Contest this year is divided into three classes, "A," "B" and "C," and there will be four prizes in each class. (First prize, \$50; Second prize, \$25; Third prize, \$15; Fourth prize, \$10.) Thus there are three \$50 Prizes, three \$25 Prizes, three \$15 prizes, and three \$10 Prizes, for each province.

DESCRIPTION OF CLASSES

In Each Class there will be First, Second, Third and Fourth Prizes (\$50, \$25, \$15, and \$10) for Each Province.

- CLASS "A"—Prizes to be awarded to the four farmers in each province who use most "Canada" Cement on their farms in the year 1912.
- CLASS "B"—Prizes to be awarded to the four farmers in each province who send photographs of the best concrete work done with "Canada" Cement on their farms in 1912.
- CLASS "C"—Prizes to be awarded to the four farmers in each province who send in the best description, telling how any piece of concrete work was done with "Canada" Cement. (Entries for this prize must be accompanied by photographs of the work.)

Don't think that you must use a large quantity of cement in order to win a prize. The quantity of cement used does not count in Classes "B" and "C." Many of last year's prize winners used very little cement.

When you enter the Contest, you have a chance to win a cash prize of \$50 as well as the certainty that you will add a permanent improvement to your farm. If you haven't a copy, be sure and ask for our book, "What the Farmer Can Do With Concrete." It will not only suggest many improvements that you can use in entering the Contest, but will tell you all about the use of concrete on the farm.

Just write your name and address on the attached coupon, or use a postal card, and we will send full particulars of the Prize Contest and a copy of "What the Farmer Can Do With Concrete" to you absolutely free.

Address Publicity Manager

Canada Cement Company Limited
502, Herald Bldg. - - Montreal



COUPON

CANADA CEMENT COMPANY LIMITED
Herald Building, Montreal

Please send me full particulars of the 1912 Farmers' Prize Contest, and a free copy of your book "What the Farmer Can Do With Concrete."

Name _____

Address _____

The Way To Reach
The Fertile Irrigated Valleys of
Colorado, Utah and New Mexico
"The Cream of the United States"
is by way of the
Denver & Rio Grande Railroad

"The Scenic Line of the World"

Soil, climate and Irrigation combine to make the products of the valleys of the Rockies the best of their kind.

Valleys in Colorado	Montezuma	Wet Mountain	Uintah
Arkansas	North Fork	Valleys in Utah.	Utah
Animas	Paradox	Green River	
Crystal River	Roaring Fork	Price River	Valleys in New Mexico.
Eagle River	San Juan	Provo	Chama
Grand River	San Luis	Salt Lake	Espanola
Gunnison	Shenandoah	San Pete	San Juan
La Plata	Uncompahgre	Strawberry	Taos

Choice of Two Separate and Distinct Routes to the Western Slope

Special Rates for the Homeseeker and Settler to all Points in the above mentioned Sections.

For free illustrated booklets, giving a concise description of "The Cream of the United States," address;

FRANK A. WADLEIGH, General Passenger Agent, Denver, Colorado. Dept. 217



Womans' Department

Conducted by PEARL RICHMOND HAMILTON

A HOUSEHOLD FORUM FOR THE DISCUSSION OF EVERYTHING THAT PERTAINS TO THE HOME



Mother's Corner

I thank the readers of this corner for their splendid letters of appreciation. There is a great demand for the article on "Helps for Expectant Mothers," which I am pleased to send free to any wife who writes for it.

One woman writes: "Many thanks for the book I received. I have read it through and think it is fine; in fact, it is just what I was needing and I feel that I cannot thank you enough for it. I have three neighbors half a mile away; they tell me they cannot help me as they do not know what to do. Since I have read your booklet I feel more contented and am not dreading the time now."

I am sorry that neighbors do not help more. Many write me that they cannot persuade a neighbor to help. In the days of our mothers in pioneer places they helped most willingly. The excuse women make is that they have had a doctor during their own need and consequently do not know how to help. I think since the women in early days learned to do home nursing that women of to-day can and should. When the life of a neighbor woman is in danger it is one's duty to help her. One woman wrote me this month, saying that a neighbor had begged her to help her, and she wrote to me for advice, saying she was going to learn all she could and help her at the needed time. Two lives might be saved by a few hours' help from a neighbor. Let us do what we can until the government is persuaded to station nurses to save the wives of our new country. It is a pity that provision is not made for saving the lives of mothers. Every inducement is made to attract settlers to our country, but many splendid men are held back because they are not willing to risk the lives of their wives. I can hardly refrain from publishing some of the letters that come to me every week from women who find it impossible to have help. But I have promised not to publish the letters. I am pleased that these women regard me as their friend. If at any time I can help in the way of advice concerning ailments that need medical attention I shall be pleased to consult a doctor for any of our readers. All letters will be carefully attended to and kept private.—P. R. H.

SHE MADE HOME HAPPY.

"She made home happy!" These few words I read
Within a churchyard, written on a stone;
No name, no date, the simple words alone
Told me the story of the unknown dead.

A marble column lifted high its head
Close by, inscribed to one the world had known;
But ah! that lonely grave with moss o'ergrown
Thrilled me far more than his who armies led.

"She made home happy!" Through the long, sad years
The mother toiled, and never stopped to rest
Until they crossed her hands upon her breast,
And closed her eyes, no longer dim with tears.

The simple record that she left behind
Was grander than the soldier's to my mind.

—Henry Coyle in Youth's Companion.

Just now Dr. L. B. Kebler, of the Bureau of Chemistry, in the agricultural department at Washington, D. C., is saying, "Babies doped with soothing syrups containing harmful drugs are particularly liable to infantile paralysis and kindred diseases." He has made public a list of thirteen soothing syrups which he calls "baby killers" and which he warns the public against.

Dr. Kebler has suggested that druggists enter into an agreement not to sell these harmful drugs except upon prescription from a physician. He also classes Jaynes' carminative balsam as a "killer."

Some of Dr. Kebler's "baby killers" have been printed on these pages before, but they cannot be held up to the public eye too often, so here they are:

Mrs. Winslow's Soothing Syrup (morphine sulphate).
Children's Comfort (morphine sulphate).

Dr. Fahey's Pepsin Anodyne Compound (morphine and sulphate).

Dr. Fahrney's Teething Syrup (morphine and chloroform).

Dr. Fowler's Strawberry and Peppermint Mixture (morphine).

Dr. Grove's Anodyne for Infants (morphine sulphate).

Hooper's Anodyne, the Infant's Friend (morphine hydrochloride).

Jalway's Elixir for Infants (codeine).

Dr. James' Soothing Syrup Cordial (heroin).

Koepf's Baby's Friend (morphine sulphate).

Dr. Miller's Anodyne for Babies (morphine sulphate and chloral hydrate).

Dr. Moffett's Teething Powders (powdered opium).

Victor Infant Relief (chloroform and cannabis indica).

The bowels are often affected during the teething process of a baby twenty months old, sometimes being constipated, and sometimes going to diarrhoea. There is no better cure for constipation than irrigating the bowels with plenty of cold water. Olive oil is excellent for constipation as is also more cream and butter. Then attempt to have the fruit juices, orange and prune, supplement the oil. It is better to give the juices midway between the morning and noon meals. Graham crackers are better than ginger cookies, and may be given freely. They are wholesome and good for the bowels.

COLIC.

A teaspoonful of warm water with a peptizyme powder in it just before nursing often gives relief for colic. The powder can be obtained at the drug store, but the physician should tell you how much to give. The baby's feet must be kept very warm. Cold feet and legs often cause colic and stomach trouble. Keep the legs and stomach warm. A baby should wear a woollen covering over the stomach until he is two years old.

A hot water bottle wrapped in a flannel cloth placed near the feet will sometimes relieve colic. A heated flannel over the stomach will sometimes relieve the ache

A nursing mother's diet should not include too much meat and solid food—plain, nutritious foods, regular meals, no stimulants, hot milk, cocoa or tea, between meals, and increased diet as exercise increases. Drink plenty of water and give the baby water to drink—before and after nursing, to help get rid of constipation. Your milk may be too solid. Drink water yourself—to keep in good condition. The child should evidently be fed some supplementary food—if it does not grow from your breast milk—you need not be afraid to try Fairchild's Peptogenic Milk powder, to be had at any drug store, with good cow's milk—giving him one bottle a day in place of one nursing, and gradually adding another bottle in place of a nursing—six and one-fourth ounces in each bottle—until the child is taking all bottle milk. Then, just as gradually, you can return, bottle by bottle, to plain milk, and by the time the child is twelve to fourteen months old you can begin to add cereals.

The baby's mouth should be washed out every morning with boric acid water. Use absorbent cotton by wrapping it around the finger, dip it into the glass of boric acid water and carefully wash the mouth out. Take clean absorbent cotton and in the same way wash the eyes. This should be done until the baby is a year old.

Ten cents worth of boric acid powder will last a long time. Make it fresh every morning by putting a teaspoonful in a cup and fill the cup with boiling water. Stir till it dissolves. This is very cleansing and healing. If the navel is sore wash it carefully in the same way.

STORIES FOR CHILDREN.

I wonder if we realize the tragedies that result in the minds of children from reading certain stories. I never read a story to a child with a sad ending or one with ugly characters. My little one is very happy and is not the least bit nervous. One month I found her nervous and frightened every evening, and she was troubled and irritable. Upon investigation I learned that a child had read her the story of Red Riding Hood. I worked for weeks before she recovered from the effects of that story. Stories full of "the scare" cause nervous wrecks among children. There are so many beautiful stories that the others should be burned. Always leave a child happy at the end of a story.

One of the most soothing applications for a fresh burn is raw potato scraped or grated and bound like a poultice on the injured surface.

Did You Know That—

A little orange or lemon juice put on the blacking-brush after it has been dipped in the blacking or polishing cream will give a brilliant shine to boots or shoes?

Linsed oil is excellent for cleaning varnished grained paint? It should be applied with a piece of clean, soft flannel rubbed well in and polished with a soft duster. And only the very tiniest drop of oil should be used.

Old toothbrushes are very useful for washing out the corners of window-

panes or cracks in furniture, where a large brush will not go?

A strip of carpet glued to a piece of wood will remove mud from boots very quickly and without the slightest injury to the leather, and is much better than the usual brush?

RECIPES.

Rice Jelly.

A delightful rice jelly can be made by washing one cupful of rice and soaking for two hours in a cupful of water. Pour both rice and water into one quart of boiling water, and let boil for three-quarters of an hour. Strain through a muslin bag. When cold and thick serve with the powdered sugar and cream. If desired it may be garnished with berries or other suitable fruit.

Vinegar Pies.

Thoroughly mix one-half teacupful of vinegar, two teaspoonfuls of flour, two eggs, one-fourth teaspoonful of butter, one and one-half cupfuls of sugar, one cupful of water, and pour into dough made out into pie pans, then bake in moderate oven.

Try putting two graham crackers together with chocolate icing. They are more easily prepared than cake and just as delicious. They are particularly nice for luncheon.

Do not beat the whites of eggs stiff for angel food cake. It makes it tough.

A spoonful of brown sugar in the boiling water will improve the taste of turnips. It takes away the bitter flavor.

An ingenious cook has a holder fastened to the dress belt by a long tape, while working in the kitchen, thereby saving steps and burns.

THE WIFE.

By Reina Melcher Marquis.

I smooth the pillow for your head;
I make your loaf of daily bread;
The taper in the window there
That guides your coming is my care;
And on the hearthstone, clean and bright,
I keep the fire of home alight.

Thus all the day I serve—and wait;
And if your step is dull or late,
My pulse in instant unison
Adopts the weary minor tune.
I scorn the gifts a woman brings!
I count my tasks such little things!

Within the shelter you have made
I sit secure and unafraid,
The while life beats upon your breast,
For you the fight, nor pause nor rest;
For you the man's unflinching part:
For me—the haven of your heart.

ABOUT WOMEN.

Mrs. Amelia E. Barr, who is now nearly ninety, is writing the story of her life, which she says will be her last book.

Mrs. Singh, one of the two Hindu women in Vancouver, who, by "an act of grace" of the Canadian authorities, was not deported and separated from her husband, gave birth to a daughter—



DON'T BAKE—BAKE—BAKE IN THE HARD
OLD FASHIONED WAY

It shortens your life, spoils your temper and ruins your looks.
Try the new way—the **MOONEY** way.

No spoiled baking. No overheated kitchens. Lots of leisure in the home.
MOONEY'S BISCUITS are so fresh, so crisp, so appetizing that they
are largely taking the place of home baking with thousands of Western people.
Ask for

MOONEY'S PERFECTION SODA BISCUITS

in air tight, dust proof and damp proof packages
—or in sealed tins if you prefer them.
Made in the Big Sanitary Factory in Winnipeg.

Hira—on June 17th: Hira has the distinction of being the first Hindu born on Canadian soil.

Cecilia Laminska, a sister in the Ursuline Convent at Lemberg, has gained the degree of doctor of philosophy cum laude in the university there. She is the first nun to take a secular degree and she secured the degree for the purpose of teaching in the women's college.

Ten thousand women clad in white sold roses in the streets of London on June 26th for the benefit of the charitable institutions in which Queen Alexandra always has been interested. The date celebrates the fiftieth anniversary of Queen Alexandra's arrival in England. Every well known woman in society seemed to be selling wild roses. June 26th is to be known henceforth as Alexandra Day.

The habit of women smuggling has caused their exclusion from the new bridge over the Rhine at Lustenau, which connects Germany and Austria. The latter country originally opposed the bridge under any circumstances, but finally consented to it on condition that it should be used only by men, because women were very efficient smugglers.

The Empress Eugenie, widow of Napoleon III, the Emperor of the French, celebrated her eighty-sixth birthday on May 5th. She received congratulations from all quarters of the world. She has recovered from her recent severe illness, and she attributes her recovery to her general good health and her fondness for walking, which exercise she takes every day whether it be wet or fine. Daily she covers at least two miles either on the grounds or in the long corridors of her house at Farnborough, a small town in Hampshire thirty miles from London.

Mrs. Nellie L. McClung, Canada's brilliant author and lecturer will bring out a new book this year. Many requests have already been made for it at the book stores. Her other books—

"Sowing Seeds in Danny" and "The Second Chance"—are so popular in the libraries that librarians say it is not easy to supply the demand. We predict a great sale for her new book, as her writings contain a rare treat in fine humor as well as interesting delineation of character that is real and genuinely fascinating.

ARAB FIGHTING GIRLS INSPIRE TO BRAVERY.

Much has been heard in London recently of the exploits in Tripoli of the Amariyehs or Menders, the young Arab girls who are fighting in the desert to stem the Italian invasion, but nothing definitely has been learned of this amazing adjunct to the Turkish fighting forces until the return of a correspondent who has been with a large force of Arabs in the desert for sometime. The girls are between the ages of 16 and 18, and they derive their name from their duties, which are to mend the courage of the falling, to rebuke the wavering and inspire the brave. They also bring water to the thirsty in the foremost ranks of the warriors, and in performing this service many girls have lost their lives. They are the best substitutes that the Arabs have for Red Cross nurses and they bear the dead as well as the living from the battlefields, another service which has taken toll in many of their lives.

Sophie Wright, who recently died in New Orleans, was known as New Orleans' best citizen. She was a cripple and was never free from pain—yet she established a system of free night-schools for working people and also a home for crippled children. She worked all through her life to help others. Though frail she carried the crushing burdens of others until she had recognition at last—rich, full and affectionate.

Women are better teachers of boys who are learning to work in wood than men, according to Prof. Frank M. Leavitt of the University of Chicago. Prof. Leavitt was invited to a board of education conference on vocational

training. In answer to a question of the board, Prof. Leavitt detailed the results of his twenty years' experience in Boston with manual training, vocational and continuation school teachers. "In the first place, you can get a better teacher for \$1,000 if you choose a woman than you can if you choose a man," he said. "That applies through all sorts of elementary and high school teaching. The women teachers had better success with teaching boys to work in wood than men."

SWAN LAKE.

As the thermometer was soaring between 90 and 100 on Saturday, June 9th the meeting of the Swan Lake Home Economics was held on the lawn surrounding Mr. Wasey's house.

The first item on the programme was a lecture on "Flies: their menace and how to get rid of them," and was extremely interesting and instructive. Dr. Rice pointed out the absolute necessity of beginning the fly crusade quite early in the year and stated that each fly was capable of reproducing six million of its species between the months of June and October, and each carry six thousand disease germs in its mouth. Also it should be remembered that flies can travel quite a distance and are often the agents for spreading infection within a radius of four and five miles. There are three well defined sources of typhoid infection—flies, fingers and food; and of these the fly is the worst and the most to be feared. Flies are also responsible in many cases for the spread of summer cholera which is so often fatal to young children.

Attention to strict cleanliness and the forbidding of all accumulations of rubbish, manure piles and collections of garbage and decaying matter are the best, and indeed the only means of getting rid of the fly pest. It must be borne in mind that the early flies, the progenitors of the countless swarms that threaten the health of the community later, are bred almost entirely in the houses, they being so much warmer than the outside atmosphere in the beginning of the year, it follows that the killing of every fly as soon as

it is discovered, and the scrupulous cleanliness of all dwelling places will do much to abate the fly nuisance. Formalin, lye and a strong solution of lye are all excellent agents for destroying the fly maggots and should be freely used in all outhouses and over all accumulations of rubbish pending their cartage to the nuisance ground, which should be arranged for at the earliest possible opportunity.

A hearty vote of thanks was passed to Dr. Rice for his most interesting paper, and then Mrs. Garner was called upon to read her paper on "How to Keep Cool," which was particularly appropriate for the afternoon. Mrs. Gardner pointed out that as the heat had to be borne, one very good way was to keep cool mentally; it was inevitable that all housekeepers should suffer from the heat in the summer, but that it was unnecessary to add to existing discomfort by grumbling at it and so making it worse; the advisability of a light, easily digested diet, hot drinks rather than iced ones, living in the open air, closing doors and windows during the hot hours and opening them for the cool, were a few of the suggestions made by Mrs. Gardner. Altogether it was a bright interesting little paper and was much appreciated.

Mrs. C. K. Wilson had kindly brought her gasoline iron and gave a demonstration on how to light and use it, and explained its many advantages over the present system by making the worker independent of fuel during the hot weather and enabling one to work without recharging for reheating for three hours.

Mrs. Hartwell, the secretary, was then asked to give an account of the progress of the improvement of the cemetery scheme, and she stated that the response to the appeal for funds had been most gratifying, the necessary \$100 being already almost gathered. It being mentioned that the work in the cemetery was at a temporary standstill the president (Mrs. Gordon) requested Mrs. Hartwell to see the gentlemen in charge of affairs to have the work pushed forward in all haste.

Lunch was then served and the members dispersed.

MINNEDOSA.

The meeting of the Minnedosa society was a business one. The three summer meetings will be held in the country at the homes of some of the members. Miss McArree read a bright paper on "Camping Out" at the close of the June business meeting.

FOR THE TIRED HUOR.

Tempt Us Not.

Cecil was much impressed by the Sunday school teacher's plea for missions, and decided to save his pennies for the heathen. He made a great effort and failed once or twice. Then he prayed: "O Lord," he begged, "please help me save my money, and—don't let Jim the peanut man come down this street."

A woman missionary in China was taking tea with a mandarin's eight wives. The Chinese ladies examined her clothing, her hair, her teeth, and so on, but her feet especially amazed them. "Why," cried one, "you can walk and run as well as a man!"

"Yes, to be sure," said the missionary.

"Can you ride a horse and swim, too?"

"Yes."

"Then you must be as strong as a man!"

"I am."

"And you wouldn't let a man beat you, not even if it was your husband—would you?"

"Indeed I wouldn't," the missionary said.

The mandarin's eight wives looked at one another, nodding their heads. The oldest said softly:

"Now I understand why the foreign devil never has more than one wife. He is afraid!"

"Do you pay your servants by the week or by the month?"

"Merely! How long do you think they stay with us? We have to pay them by the hour."

JUST IDEAS.

A pattern table at a church sale will be found a very profitable undertaking. Let each lady supply patterns of something she owns that is pretty or fits well, having the article itself on a form or, better still, on a living model for show.

Patterns for shirt waists, fancy and kitchen aprons, sewing bags, etc., sell well; also fancy articles of every description. These patterns can be made at home, with little work and no expense, from tissue or wrapping paper, and each should contain explicit directions for making. The patterns sell for five or ten cents apiece, according to the work and size. E. M. N., Ohio.

A Literary Salad.

A pretty use for quotations is to twist pieces of different shades of green tissue paper into the shape of lettuce leaves and place them in a salad bowl—having previously pasted upon each a short quotation, written distinctly on white paper, then pass them about as a salad, inviting each guest to guess the name of author whose quotation adorns the lettuce leaf which he has chosen.

GOSSIP.

This paper was prepared for the Woman's Home Economic Society, Miami, by Mrs. J. A. Beattie.

I have chosen this subject not so much because it applied to our town as to the fact that I had never heard it discussed from pupil, in the press, or on the platform during my stay of five years in this town. Speaking of gossip, is it any more woman's weakness than man's? I believe all will agree with me that this is not so, in many cases men are the most reckless gossips. However, we must acknowledge that gossip is a pernicious habit when practised by either sex.

Our immortal Shakespeare says: "Good name in man or woman is the immediate jewel of the soul. Who steals my purse steals trash. It's something, nothing, 'twas mine, 'tis his and has been slaves to thousands. But he who fleches

from me my good name takes that which not enriches him, and leaves me poor indeed."

How true are these words. What is life worth to any self-respecting person whose good name has been besmirched by the tongue of slander? One may live down a false report but life can never be just the same to one who has incurred the tongue of evil or careless gossip. There are two kinds of gossip, viz: ill-natured and careless. It is hard to say which of the two does the most harm to the victim. The vicious gossip may by her very venomous attitude so defeat her own purpose as to give the lie to the slander she is trying to circulate. On the other hand, the careless gossip by repeating something she has heard, or overheard, not through any special desire to harm the one of whom she is speaking, may do more harm because he or she naturally wins the ear of the listener more easily than the vicious gossip. The careless gossip acts because of a social instinct of the nature of a low order in an attempt to interest those to whom she is speaking. He or she has no regard for the consequences that may follow.

There are various causes for gossip. The first cause is found in the person possessing a low, course, envious nature, with a wish for evil to come to others.

Another cause may be attributed to a lack of education, and a consequent lack of material for conversation. In such a person the social instinct is strong and the moral perception weak. Those who repeat ill-natured gossip are so plausible. They say they hope that what they say may not be true; this acts as a salve to their conscience. How much better it would be to leave unsaid the evil report! Let it die a natural death. If it be not true, or if it be true, remember that a tale gains in magnitude every time it is repeated. Let every one who would not help to circulate an evil report remember that a word once spoken can never be recalled, and that the one to whom the tale is told, let their promise be ever so faithful never to repeat, is almost certain to tell just one other very intimate friend, they giving the same injunction "not to tell," and so the tale is circulated until pretty soon every one knows and each one says "I was told so, but of course I don't know whether it is true or not." In the meantime, what of the poor victim. He or she may be going around looking very innocent and quite unsuspecting, but sooner or later they hear the report, and who can blame such a one if they lose their trust in friendship, and if physiology is true, who can wonder if they are more or less dragged down for the time being, and more or less lose their self-respect. To say the least of it, a real sting is left behind and also a wound which even after it is healed leaves a scar on the heart or mind which time can never wholly efface.

Now what is the cure for gossip? Cultivate that spirit of love which Christ came to teach, and that charity which thinketh no evil. Always expect the best of everyone, think the best of everyone and talk of the best in people. I once heard of an old lady, who had never been known to speak evil of any one, a grand-daughter asked her something about Satan, thinking to trap her into saying something unkind of him but even in that evil life she found something to commend and she replied: "We might all learn from Satan faithfulness to our life work. Another cure may be found in reading good books, the daily papers, magazines, and by getting interested in public affairs. Study the things that go to help to build up our nature. Get interested in Women's societies, for example: Daughters of the Empire, Home and Foreign Missions, Woman's Institute of Home Economics, or any of the societies which are broadening woman's sphere, and enlarging her capacity. Let us get outside of ourselves. Let us remember that Christ said: "That with whatever judgment we judge we shall be judged," and Burns wrote "Oh wad some power the giftie gae us, to see ourselves as others see us, it would frae many an evil free us and foolish notion." But Christ again warns us "that whatsoever a man soweth that shall he also reap." The law of the harvest is to reap more than we sow. If



An Unusually Fine Watch For Ladies

There is no better lady's watch at a medium price than the presentation set which we illustrate.

It consists of an extra quality gold-filled case, either plain or engraved with your monogram, in which is fitted a fine 15-jewel "Dingwall" movement of solid nickel, highly finished and specially adjusted.

Complete with a rope pattern, gold-filled chain, and enclosed in a handsome case this watch sells for

\$20.00

D. R. DINGWALL

LIMITED

JEWELLERS

WINNIPEG

Kindly send me by return mail a copy of your 1912 Catalogue, and also put my name on your mailing list for your next edition.

NAME

ADDRESS

W.H.M.

DOMINION Business College
THE POPULAR SCHOOL OF BUSINESS

Phone Entry 1833 WINNIPEG 7318 DASH

Dear Reader:

If you are looking for a school where a high standard of thoroughness is maintained, and where the moral and intellectual interests of the students are carefully guarded, you will attend the Dominion Business College.

It is no longer a question with the young men and women of the present day as to whether they shall or shall not attend Business College. Modern demands and rapid growth of business have made it almost impossible to enter the commercial world without a knowledge of Business, Shorthand and Typewriting.

Our aim is to maintain a school that regards the advancement of its students welfare as its main object—a school free from pretence and that claims no more than it deserves and provides nothing that it does not perform—a school placed "not" above self-interest and a "good name above million money."

We now possess a reputation for thorough, wide and honorable dealings with our patrons, a reputation of which we are justly proud. We place our most earnest efforts to advance the interest of our students and you can rest assured that we will put forth our greatest effort to advance your interests, not only by giving you personal instruction from experienced teachers, but by placing you in a situation after graduation.

Our watchword is "progress"—our motto "efficiency".

Yours for advancement,
THE DOMINION BUSINESS COLLEGE.

IT PAYS TO STUDY
 DIPLOMA GIVES PRACTICE
 BOOK-KEEPING
 ARITHMETIC
 SHORTHAND
 TYPEWRITING
 PENMANSHIP
 ENGLISH
 SPELLING
 LETTER-WRITING
 OUR MOTTO
 EFFICIENCY

Fall Term Begins Tuesday, Sept. 3rd
Special Courses for Farmers' Sons and Daughters
WRITE FOR FREE CATALOGUE

we sow evil reports we shall reap envy, malice, spite and all uncharitableness in our own natures. We shall win enemies among those whose friendship would be worth having, and even those who pretend friendship will be suspicious of us; and what of our characters we are here to build for eternity? It rests with us whether we shall build in righteousness and true holiness, bright, beautiful structures, ornaments to society and worthy of our best selves or whether we will crush out all the good in ourselves and drag others down with us and so defeat the plan laid down for us by God from the beginning.

But are we never to talk about our neighbors or their affairs?

Yes. There is an innocent kind of gossip we may indulge in. We may speak kindly of our neighbor's children, our neighbor's wife's dress, her good house-keeping, her sweet smile, her kind word. We may sympathize with her in her real sorrows and rejoice with her in her joys, otherwise we would be selfishly indifferent and we would be of no use at all.

Again you ask: Are we never to speak of the evil we see in others? Yes, if by speaking we can help to correct those evils. If possible, speak to the person concerned first, and settle the matter definitely before repeating the tale. We can use our influence to put down every evil in our midst. We can help to make a model community by forgetting our selfish selves, and living more for others. One noble life in a community may be the leaven which will leaven the whole. We have each an influence and we are each inspired at times to use that influence for good. What would happen if those times grew more and more frequent until at last they merged into the whole life? I realize how impossible it is in a short paper like this to treat the subject at great length, but much more could be said with profit.

Use as much energy in learning to prosper as you use to learn to smoke, and you will be buying cigars for millionaires before you die.

At Lunch.

While the two boys were walking through the woods they heard some bees buzzing in a hollow tree. One of the boys held his head close to listen. All of a sudden he jumped away, crying to the other:

"Johnny, these bees must be havin' their dinner, 'cause one stuck his fork in my ear."

Explained.

Andrew Carnegie tells of an old Scotch lady who had no great liking for modern church music. One day she was expressing her dislike of the singing of an anthem in her own church, when a friend said:

"Why, that anthem is a very ancient one, David sang it to Saul."

"Weel, weel!" said the old woman. "I noo for the first time understand why Saul threw his javelin at David when the lad sang for him."

An eminent lecturer, self-made and proud of it, was addressing a young people's meeting at the Somerville Y.M.C.A.

"My dear young people," he began, "let me refer briefly to the humble auspices under which my start in life was made. Without a dollar in my pocket, and with no worldly possessions in consequence, my indomitable nature and an inborn determination to utilize to the fullest advantage my abilities constituted my entire assets. But even with this modest beginning, what do you suppose was the first thing I sought—that which, at the very outset of my career, I strove most earnestly to attain?"

Enthusiastic juvenile chorus:

"Milk!"

HOME MAKER'S DEPARTMENT.

Conducted by Edith Charlton Salisbury.

GOOD HEALTH TALK NO. III

Home Treatment of Cuts, burns and discharging sores
Preventing infection through cleaning

Dear Martha:—Isn't it remarkable how much suffering is the result of comparatively little mistakes? Not long ago I saw a little girl who had a needless sore finger because it had been carelessly or ignorantly dressed when first wounded. As the dressing was done by a regular physician it seems as if the mistake must have been carelessness for surely a medical man would understand the dangers of infection. The child had crushed her finger in the clothes wringer and the little nail had been pulled out. It was still hanging by a bit of skin when the mother hurried to the physician to have the wound dressed. The doctor bandaged the bruised finger, first putting the nail back in place. Not that he expected it to grow to the finger again, he said, but simply to protect the new nail when it should appear. Of course the little hand was not perfectly clean when the finger was caught in the wringer for the little girl had been playing in the sand box a few minutes earlier and naturally there was a little dirt under the nail. When it was put over the bleeding flesh in that condition it infected the finger and a formation of pus was the result. After that the wound was much more painful and required careful dressing every day. With proper treatment at first, the wound should have healed without pus and with the exception of some sensitiveness until the new nail grew, there should have been very little soreness at the end of a week.

I saw a ten year old boy this summer who had been hit by a stone on the top of his head and the wound was still very sore and discharging pus after several weeks, because his mother did not know how to properly dress it.

Every thing must be Sterilized.

To know how to dress a simple wound so as to avoid danger of infection is a part of emergency nursing with

which every woman should be familiar. I wonder if I can't in this letter, give you a few simple directions on the subject that may be helpful?

Two important things to bear in mind before beginning to dress the wound is to make sure that all water used in the cleaning has reached boiling point; that any instrument to be used has been sterilized and all bandages and dressings are antiseptic. Then have your hands thoroughly washed and brushed, the nails absolutely clean. A little lyeol, or antiseptic soap, should be put into the water in which you wash your hands, or a few drops of carbolic acid added to the water will answer the purpose. If you use carbolic acid for washing your hands it is well to also add to the water a few drops of glycerine to prevent the skin being made rough and hard.

One of the necessary things, almost invariably overlooked when preparing to do a dressing, is that the skin surrounding the wounded part should first be thoroughly washed. If it is a finger that is to be dressed, first wash the rest of the hand but don't allow the soap and water to come in contact with the raw surface. Spread a clean towel under the part to be dressed and then carefully but thoroughly cleanse the wound with small pads of cotton dipped into carbolic acid, or boric acid, solution, which you are using. It is well to have a roll of absorbent cotton near you, from which you can tear the small pads. These are to be dipped only once into the cleansing solution then as you have used one put it into a piece of paper intended for soiled dressings. This precaution, of using washing pads but once is especially important in dressing a wound in which there is infection.

The cleansing solution generally recommended is carbolic acid but care must be observed not to have it too strong; a two or three percent solution



Mason & Risch Pianos

Represent the highest standard ever attained in the art of piano building. At home and abroad their wonderful tonal qualities, easy and responsive touch, beauty of design and finish, durability and "tone standing" capacity, have won for them acknowledged supremacy among the world's greatest pianos.

Nearly every prominent musical and educational institution of the Dominion and twenty five thousand cultured homes in which **Mason & Risch Pianos** afford service and pleasure, attest their superiority.

Write us to day about our "Factory to Home" selling plan. We can save YOU money on your piano purchase just as we have thousands of others.

SPECIAL NOTE: Just now we have some exceptional bargains in slightly used pianos and player-pianos, also a large number of used organs that have been entirely renewed in our work-shop and are in perfect condition, that we are offering at a fraction of their real value.

Easy Payment Terms on All Instruments

Mason & Risch, Limited

Factory Branch: 272 Portage Avenue, Winnipeg

CHALLENGE Save you money

Stop all laundry troubles. "Challenge" Collars can be cleaned with a rub from a wet cloth—smart and dressy always. The correct dull finish and texture of the best linen.

If your dealer hasn't "Challenge" Brand write us enclosing money, 25c. for collars, 50c. per pair for cuffs. We will supply you. Send for new style book.

THE ARLINGTON CO. OF CANADA
Limited
54-64 Fraser Ave., Toronto, Can.
2142

WATERPROOF

GOLLARS

National Trust Company, Limited

TORONTO MONTREAL WINNIPEG EDMONTON
SASKATOON REGINA

Capital and Reserve, \$2,800,000.00

SAFE DEPOSIT VAULTS SAVINGS DEPARTMENT MONEY TO LOAN

Acts as Trustee, Executor, Administrator, Guardian, Liquidator, Assignee and FINANCIAL AGENT

ARTHUR STEWART, Manager, Winnipeg Branch, 323-325 Main Street

FIRE INSURANCE

The Manitoba Assurance Co.

All Policies Guaranteed by

THE LIVERPOOL AND LONDON AND GLOBE INSURANCE COMPANY, LTD.

Northwest Branch - WINNIPEG, Canada

Agents wanted in unrepresented districts. S. N. RICHARDS, Local Manager

is strong enough for the majority of cases, even weaker is better to use on a child.

Boric lotion is useful in home nursing and is made by dissolving the crystals in boiled water, one part crystals to 30 of water gives a lotion commonly used.

After cleansing the wound with either of these lotions, by squeezing the liquid over the raw surface from the cotton pad, the next step is to disinfect it if there is any sign of pus. For this purpose there is nothing better than peroxide of hydrogen which can be poured full strength directly over the wound. If there is the least pus present the peroxide will cause a bubbling or boiling and when this is the case you should continue to pour on the peroxide until the bubbling ceases.

If the wound has pus it will be well to cover it, after the cleansing with iodoform crystals or a little pure boric acid. If there is no pus a small pad soaked in boric acid may be used on the wound with the bandage.

Bandaging a Finger.

In bandaging a finger always begin by fastening the bandage with a couple of turns around the wrist. Then bring the bandage up the back of the hand, to the tip of the finger. Carry the bandage over the end of the finger to the front, bend it back over itself and then make spiral turns with the bandage around the finger from tip to base, allowing each turn to overlap the last about one-third the bandage. When the base of the finger is reached carry the bandage down the back of the hand towards the outside and fasten it once more around the wrist. This makes not only a secure bandage but comfortable as well, the latter quality because the palm of the hand has been left uncovered. The wound should be washed and dressed at least once a day, fresh dressing and clean bandage must be used each time.

If the wound is on the scalp the hair should be shaved at least an inch and a half around the sore part. Next the washing and cleansing should be done in much the same manner as when dressing the hand; the sore place should be covered with boric dressing or iodoform and the dressing kept in place with a figure-eight or four-tail bandage. The latter is much simpler for the novice to put on. It is made of $\frac{1}{2}$ a yard of cotton crosswise through the center then tear from each end towards the center, leaving a space in the middle of the cloth large enough to cover the head. Put the widest part of the bandage, that is the center, over the head, covering the wound. Then tie the two front ends at the back of the head and the other two ends under the chin. The four-tail bandage is also used to keep a dressing in place on the knee.

Dressing Boils, Burns, etc.
An ulcer is a raw, discharging wound such as a bed sore, or may result from a burn or a bruise. In dressing it the first care must be to get the wound perfectly clear and free from the discharge which collects on the surface. Cleanse with small pieces of absorbent cotton dipped in carbolic solution, followed by a thorough cleansing with peroxide. Then cover the boric dressing, kept in place with a piece of surgeon's gauze and this fastened to the skin with strips of adhesive plaster which must extend an inch or more beyond the wound. A boil in the same way, special care must be taken to clear the wound of pus as it is discharged and a fresh dressing should be put on, at least twice a day.

A carbuncle is sometimes mistaken for a boil, though there is generally considerable difference in the cause. A carbuncle is usually an indication of an impoverished condition of the blood and its treatment requiring very nourishing diet as strength is frequently very much reduced by this ailment. It is well to have a physician's care for a carbuncle for at least one or two treatments as he will in all probability touch it with pure carbolic, as rather strenuous treatment is sometimes necessary to hasten recovery.

The treatment of burns is important because they are of such frequent occurrence in many households. If the burn is slight, probably only reddening the skin, about all that is necessary is

to cover it to keep out the air. Rubbing the burned part very lightly with sweet oil will be soothing and stop the pain. If the skin is blistered the usual treatment is to let out the fluid by cutting the skin at the point where the most fluid has collected with a sharp knife or pair of scissors, that has been sterilized. Hold a bit of absorbent cotton at the edge of the blister to catch the fluid when the blister is opened. Then the burn may be treated with sweet oil and lightly bandaged to exclude the air. A deep burn, or one that covers a considerable portion of the skin, is much more serious matter and requires the attention of a physician.

Your Country Sister.

Mentioned in Passing.

(6)

Two Reliable Recipes.

Every housekeeper is glad to add to her collection of recipes, especially if she knows they have been tried and have proved thoroughly satisfactory. In looking through one of my favorite cook books the other day I turned to the page on which are some reliable and the page on which are some of my "very choicest." I have always found them perfectly reliable and they are all the more interesting to me because they were given to me under usual circumstances and in place very far from Winnipeg.

The following recipe for batter bread—the true Southern corn bread—came from Alabama. It is the kind of corn bread that is always served in real Southern homes for breakfast and for supper along with the fried chicken. If any of our readers of the Canadian Thresherman and Farmer are familiar with those old Southern homes they will welcome this recipe as an old friend. If you have never had the pleasure of eating it then let me tell you not to expect a stiff, rather dry bread such as is usually made with cornmeal. Batter bread is soft and very light and puffy very much like a foamy omelet. It should be served from the dish in which it is baked, a granite pudding dish, and should be taken from the dish with a spoon—it is very often called spoon bread.

Batter Bread:—Sift together $\frac{3}{4}$ cupful of yellow cornmeal, one tea-spoonful salt, add 1 cup boiling water and cook for 15 minutes in a double boiler; remove from the fire and add 1 cupful of sweet milk in which 1 tsp of baking powder has been dissolved; add the beaten yolks of 3 eggs and 1 tablespoonful each of butter and lard melted. Last fold in the stiffly beaten whites of 3 eggs, pour into a buttered granite baking dish and bake $\frac{3}{4}$ of an hour in a moderate oven. Do not use a tin or sheet iron baking dish and be sure the cornmeal is cooked for at least 15 minutes; simply pouring boiling water over the meal is not sufficient.

MAHOGANY CAKE:—This recipe was given to me by a little woman in Pincher Creek, Alberta. It had come to her from Oregon and she gave it to me to experiment with for she did not understand the combination of sweet milk and soda. I have used the recipe scores of times and have always found it perfectly satisfactory if directions are accurately followed. There is sufficient acid in the chocolate to form a gas when combined with the soda; that explains why sweet milk is used instead of sour, as is the general rule. Soda always makes a darker, better flavored chocolate cake than baking powder but the amount of soda must be measured very accurately as even a little too much will give the cake a red tinge and a slightly bitter taste.

Cook 2 cups of grated unsweetened chocolate in $\frac{1}{2}$ cup of sweet milk, over hot water. Cream $\frac{1}{2}$ cup of butter and $1\frac{1}{2}$ cups of brown sugar together; add 3 eggs, one at a time and beat thoroughly as each egg is added. Dissolve 1 tea-spoon of soda in another $\frac{1}{2}$ cup of sweet milk add to the eggs and sugar, add the cooked chocolate and then stir in $1\frac{1}{2}$ cups of sifted flour. Bake in a shallow sheet iron pan in a moderate oven about 40 minutes. Cover with Cream frosting.



The Soft Creamy Deliciousness THAT Benson's Prepared Corn

Imparts to custards, ices, blanc mange, puddings, etc

Is the strongest proof of its extreme purity and fineness.

Benson's is indispensable in preparing those light and dainty Summer dishes that tempt the jaded appetite, and also finds a hundred uses in the kitchen for thickening sauces, gravies, etc.

It is a most nourishing food for children and convalescents, because of the ease with which it is assimilated.

Your Grocer has it—Ask him. Write today for book of Recipes.

THE EDWARDSBURG STARCH CO.
LIMITED
MONTREAL—CARDINAL—TORONTO—BRANTFORD—VANCOUVER

Just A Little Cleaner Than Ever Before

Children like FAIRY SOAP. Its whiteness shows its purity and appeals to them. It floats always within easy reach; the youngster does not have to dive for it. The shape of the cake is oval—fits the hand—fit for any hand.

FAIRY SOAP lathers freely, cleanses quickly and thoroughly, without smart or stinging of any kind. Being made of edible products

FAIRY SOAP

agrees with even the tender skin of a babe. Try this pure, white, oval cake of floating purity and you'll want no other.

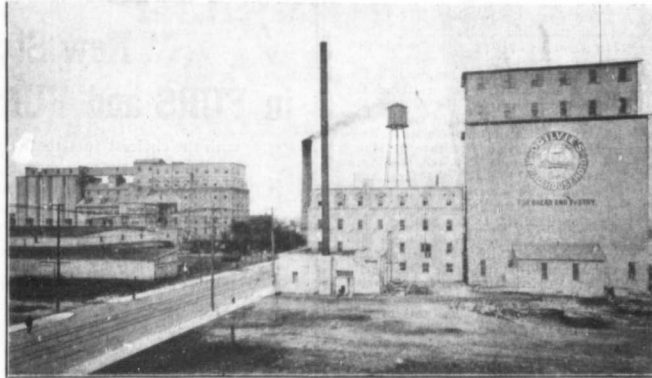
Made by
THE N. E. FAIRBANKS COMPANY
Montreal

"Have you a little 'Fairy'
in your home?"



Known The World Over

S
T
R
E
N
G
T
H



Big Mills of the Ogilvie Flour Mills Co. at Winnipeg

P
U
R
I
T
Y

:: OGILVIE'S ::

Royal Household Flour

OGILVIE'S OATS FOR A GOOD BREAKFAST

Ask Your Grocer For Them Always



CREAM FROSTING.—Mix together 1 cup of granulated sugar and 1 teaspoon of corn starch, add 3 tablespoons of boiling water and set on the back of the range until sugar is melted. Then put over the fire and boil exactly 2½ minutes, taking the time the syrup is bubbling all over. Pour the syrup gradually over the stiffly beaten white of 1 egg beating constantly; continue beating until of the right consistency to spread; add vanilla and spread on the cake. If not beaten long enough frosting will run and if beaten too long it will not be smooth. It should be soft inside and glossy on the surface and I like to have the frosting about ¼ inch thick all over the cake.

Raspberry and Currant Jelly.

Raspberry and currant jelly is made in the same way as currant jelly, the only difference being that an equal part of raspberries and currants is used, rather than the whole quantity of currants.

Preserving.

After cleansing and testing, sterilize jars, covers and rubbers by bringing to the boiling point in water. Rubbers should never be used the second time. The small cost of a new rubber is more than compensated for in the entire lack of risk, for rubber will deteriorate by use and time.

Have all the needed utensils ready at hand, using only glass procelain bottles or jars. No metal of any kind should be used with fruit, as the acid from it is detrimental. Stand the jars in hot water while the fruit or vegetable is cooking. Fill and seal one jar at a time. Empty from the jar, place on a folded cloth wrung out in hot water, or stand in a pan with a little hot water, to prevent any danger of breaking. Fill each jar or bottle well and let all air bubbles escape. Wipe off the edges carefully, fit on the rubber (if you are using jars with rubber rings) and screw down the cover tightly. There are jars which, instead of rubbers, have permanently attached to the cap a metal gasket that is said to be airtight and impervious to all

acids. Set each jar upside down on the table, free from draughts. When cold, rescrow down the covers, as glass contracts in cooling, and the cover can be tightened. Wipe with a clean cloth, and if there is no leakage or loosening of the cover, place in a dry cellar or storeroom. The amount of sugar used in all canning and jellies is a matter of taste, as sugar does not affect the keeping qualities of the fruit.

Green Grape Jam.

Thin out the grapes when the seeds begin to show through the skin—sooner than this they are too sour, and later they have too little flavor. Take out the seeds with a toothpick. Put the seeded grapes into the preserving pan with an equal weight of sugar, broken in small lumps. Cook them over a quick fire, and do not pass them through a sieve until the jam thoroughly cooked. If they are passed through the sieve in such a way that the skins remain behind, a green grape jelly is obtained which has a pleasant flavor.

Grape Jelly.

Small grapes will soon be plentiful and cheap, and as a relish for all kinds of cold meat, ham or tongue, nothing is so delicious as grape jelly. Stew the grapes, put them into a preserving pan, and barely cover them with water; put the lid on the pan and allow the fruit to simmer gently until quite tender, then strain through a flannel bag. To every pint of juice allow one pound of granulated sugar. Stir until the sugar is dissolved, and afterwards boil quickly and continuously, taking off all scum, until the liquid begins to jelly. The time for this will often vary, but it usually takes from fifteen to thirty minutes. Have some jars heated, fill them with the jelly, leave them to get cold, then cover them securely and store them in a cool, dry place.

Raspberry Jam.

Take a pound of sugar—or, better still, a pound and a quarter—to each pound of fruit. Macerate the raspberries for three or four hours in powdered sugar. Then put them into a preserving pan with half the sugar, and

cook them on a quick fire. When the raspberries have melted, pour the whole on a rather fine sieve, so that the extremely small seeds cannot pass through. Rub them through the sieve with a wooden spoon. Put the pulp back into the preserving pan with the other half of the sugar. Boil up quickly until the jam has attained a suitable consistence. Take the pan off the fire, allow to cool and pour into pots.

Preserved Pears.

Peel the pears without removing the stems, and as fast as they are peeled put them into cold water to prevent discoloration. When all the fruit is peeled, weigh it, and to every pound of fruit allow one pound of preserving sugar. Put the peelings into a preserving kettle (over which a steamer can be placed), and add enough cold water to cover them. When the water begins to boil put in the steamer, which should contain enough pears to cover the bottom, and steam until just tender; then take them out, lay them carefully on a dish and put in a fresh supply. When all are cooked, steam the peelings, and to each quart of liquid thus obtained add one pint of sugar and a few strips of green ginger. When the sugar is dissolved, return this mixture to the preserving kettle, bring it up to the boil and skim it thoroughly. Add the pears and let them simmer very gently for fifteen minutes. Have the glass jars well warmed, put in the pears carefully, then allow the syrup to boil again fast, until it is quite thick; pour it over the fruit and seal the jars securely.

Peach Jam.

Take thoroughly ripe autumn peaches, which have the most flavor and perfume. If the skin is difficult to remove plunge them for a minute into boiling water and it will come off without difficulty. Open the peaches, and after having taken out the kernels put the fruit into a large dish layer by layer, with an equal weight of powdered sugar over them. Then let them rest in a cool place overnight. Next day boil them slowly until they become quite soft and the juice jellies well. Cover like other pre-

serves, but not till a few days after it is made.

Tempt Us Not.

Cecil was much impressed by the Sunday-school teacher's plea for missions, and decided to save his pennies for the heathen. He made a great effort and failed once or twice. Then he prayed, "O Lord," he begged, "please help me save my money, and—don't let Jim the peanut man come down this street."

ECONOMICAL MEAT DISHES GIVEN BY THE MINNEDOSA MEMBERS.

Mrs. Boyd.—Meat Roll.

Boil enough odds and ends of meat to make 1 qt.; when tender, add 1 large onion and pinch of sage or other flavoring if desired. Salt and pepper to taste. Put through meat chopper. Make a biscuit crust. Roll out and place meat in centre. Round crust round it. Bake till crust is done. Short crust can be used instead of biscuit.

Mrs. Gerry.—Rissoles.

Two parts cold meat, chopped fine and flavored, one part mashed potato. Roll into balls, dip in egg and breadcrumbs. Fry till nice brown.

Mrs. Sprague.—Savory Steak.

Cover the bottom of the frying pan with slices of fat bacon. Lay a thick round steak on this drége with flour, salt and pepper. Cover with slices of bacon. Put lid on and put in oven (hot) for 20 minutes. Cover with boiling water. Add a chopped onion. Simmer till tender.

Mrs. Woodcock.

Meat prepared as for stew, add a chopped onion and flavoring. Put in a greased bowl. Take two-thirds cup suet, 2 cups flour, ½ level teaspoon soda, 1 teaspoon salt, 1 level teaspoon cream of tartar, enough water to make a pour batter. Pour over meat. Tie a greased paper over bowl. Steam for 3 or 4 hours.

Mrs. Cooper.—Hot Pot.

6 potatoes, 3 carrots, 4 parsnips, a slice or two of turnip, small onion. Slice all these and put a layer in bottom of double boiler. Put in layer of meat prepared as for stew. Alternate the layers till pot is full enough. The last layer to be vegetables. Steam till tender. Flavor. Thicken with brown gravy.

These are few of the meat recipes given at the March Home Economics meeting.

The Housekeeper's Calendar.

"I remember, I remember, how my childhood flitted by;

The mirth of its December and the warmth of its July."

This is one of our real summer months when we expect hot days and some nights when it is difficult to find a place cool enough to invite sleep.

The harvest is still in the future, and there should be a lull in the house wife's duties. Why not plan to live most of the month out doors? Have picnics, take in the fairs, have a rollicking time generally. There are lots of days ahead when you will have work aplenty, and when you must stay in doors.

Even if you must stay at home, and there are dozens of worse places, and few better, than a prairie farm home in July—make believe you are to have a holiday for the whole month. Change your entire mode of living if you can, a change is as good as a rest you know.

Introduce all the fresh vegetables you can into the daily bill of fare. By this time the home gardens should have an abundance of lettuce, radishes, and onions. I hope you planted several long rows of each. Salads make the very best kind of food for this month, and there is nothing more appetizing and attractive in the way of salad than one in which these three vegetables are generously used.

Another good way to persuade yourself that you are taking a holiday is to arrange to get the heaviest work out of the way early in the morning, and take a good rest in the middle of the day. Find a cool, shady nook, get a cushion or two and an entertaining book or magazine, and see if you will not pronounce your holiday a success.

REMODELLING AN OLD HOUSE.

Out on one of Manitoba's best farms stands an old farm house built some fifteen or twenty years ago, long before farm houses were supposed to be modern and the unnecessary steps which women had to take in a poorly laid or planned house were taken into consideration, as it is at the present day.

We shall start at the cellar and go to the attic in our remodeling plans.

The cellar, or really a hole under the ground floor, was poorly ventilated with one tiny window in it, and with narrow stairs leading from the dining room into this cellar. These stairs came up to the centre of the room and a trap door was opened underneath the dining room table. In this cellar or basement we will put a cement floor and cement walls raising the house three feet above the level of the ground, putting two windows on each side that can be opened from the inside, also a door with a wooden porch over it leading to the outside. This door properly made will not cause basement to be too cold to keep vegetables in. There should be a stone wall run across lengthwise in the centre of the basement for the weight of the house to rest on. At one side of this stone wall is to be the furnace, as near the centre of the house as possible; near this is to be the coal bin and place for the ash pan.

A good cement cistern will be put in and this is to have a tight-fitting cover. The ceiling of the basement should be plastered. On the side of this cement wall is to be a bin for vegetables and a cold room to keep apples and all kinds of fruit. In one corner a fireplace flue runs to the bottom and ashes can be taken out when required.

The stairs should go up as near the furnace as possible, into the kitchen.

On the ground floor there is a large gloomy kitchen which is far too large, with only two small windows in it. Then there is a long narrow dining room and a small hall. The door from the hall opens into the parlor, also a door from the hall into the dining room. This hall is at the front of the house and has a stairway leading up from the front door.

Tear down the partition between the dining room and the parlor and have a fair sized living room with the addition of two large plate glass windows. In one end put an open fire place. The hall is made to run the width of the house thus taking off the part of the old dining room which is longer than the parlor or living room a little longer than the width of it. Have the stairs go up part of the way and then turn and on this turning have a large window with a window seat, also have a plate glass in the front door so as to give lots of light to the hall.

The large kitchen can be divided into two rooms one for the dining room which opens from the hall. This should be at least fourteen feet by twelve feet. It should have one large and one small window in it. The rest of this gloomy kitchen is to be made into a snug little kitchen with a sink at one side, built-in refrigerator, a good sized pantry, and the cellar stairs coming into the kitchen not far from the pantry. The pantry is to have a window in it. The back stairs is to lead out of the kitchen not far from the outside door.

The up-stairs, now, is laid out in eight small bedrooms with never a closet. The hall is a large dark place. We will tear down the partitions and make four good-sized bedrooms with plenty of light and a closet for each room, also put transoms over all the doors. Have a fair-sized bath room right over the kitchen so as to have the water works as nearly straight as possible. Both stairs are to come up to a long hall, from opposite ends. Have this hall well lighted by the window in the turn of the front stairs also by a door with a large glass in it. Out of this door we will put a screened-in porch, ten by eight. At the other end of the hall a window near the landing of the back stairs.

The attic will be large enough for two small rooms as it is only a two and a half story house. The attic stairs will go up over the back stairs.

We regret that we have not the name of the writer of this prize essay, but we will publish the name in our next issue.

The Bravest Battle.

The bravest battle that ever was fought,
Shall I tell you where and when?

On the maps of the world you will find
it not;

'Twas fought by the mothers of men.

Nay, not with cannon or battle shot,

With sword or nobler pen;

Nay, not with eloquent words or thought
From mouths of wonderful men.

But deep in a walled-up woman's heart,
Of woman that would not yield,
But bravely, silently bore her part—
Lo, there was the battle-field.

No marching troops, no bivouac song,
No banner to gleam or wave;
But, oh, these battles, they last so long,
From babyhood to the grave!

Yet faithful still as a bridge of stars

She fights in her walled-up town—
Fights on and on in the endless wars,
Then silent, unseen—goes down.

O ye with banners and battle shot,

And soldiers to shout and praise,
I tell you the kingliest victories fought
Were fought in these silent ways.

O spotless woman in a world of shame,
With a splendid and silent scorn,
Go back to God as white as you came,
The kingliest warrior born!

—Joquin Miller.

One Reason.

Teacher: "And now who can tell me why we should always be neat and clean?"

Little Lizzie: "In case of accident."

Fairweather
& CO. LIMITED

New Styles
in FURS and FUR GARMENTS

with the choicest furs that can be obtained on the market. We are now showing many entirely new and exclusive ideas in fur garments—some of which in point of quality and design are unapproached by anything of the kind made in Canada or imported into the Dominion.

We have no second quality goods. The least expensive article we sell represents the very best material and workmanship. We guarantee everything we make and we make all we sell. Our purchasing facilities give us the Command of the Fur Market.

Our handsome and profusely illustrated Catalogue of 1912-13 Fall and Winter Catalogue Specialties is now ready. We will be glad to mail it Free to any address on receipt of post card.

Fairweather & Co. Limited
297-299 Portage Avenue, Winnipeg
Toronto Montreal

The West Recommends



One Western woman after another has told her friends how delightful she has found Blue Ribbon Tea. Such recommendations are the very best advertising Blue Ribbon can get. It has proved its fine qualities in thousands of Western homes for many years. Ask your grocer about Blue Ribbon's guarantee.

REGISTERED TRADEMARK



JOSEPH RODGERS & SONS, Limited
SHEFFIELD, ENG.

Avoid imitations of our CUTLERY by seeing that
This EXACT MARK is on Each Blade.

SOLE AGENTS FOR CANADA

JAMES HUTTON & CO., MONTREAL

The Art of Resting.

Nowadays when there is so much said and written about exercises and physical culture, I am afraid we are in danger of forgetting the importance of rest; and rest, in its way, is quite as necessary as is exercise to the human frame. But there is resting, and resting; and many people have a very vague idea of what the word really means. One may come in tired, and throw oneself wearily into a chair, but it does not follow that a real rest is being obtained thereby, unless at the same time one relaxes one's muscles—and to relax the muscles properly is not so easy as it sounds, and requires some practice. It is amazing, when one comes to think of it, how much we take out of ourselves needlessly in ordinary every-day life! How common an experience it is, for instance, when walking anywhere in a hurry, to hasten along not only with the limbs, but with the whole body and mind, and after having expended all this unnecessary nerve force, we wonder why we should feel so unaccountably fatigued. And again how often, when driving to a railway station, perhaps a little pressed for time—we find ourselves, though quite aware that we have no means of hastening the vehicle, sitting forward on the extreme edge of the seat, every muscle and nerve strained to tension; and naturally we arrive at our destination feeling as tired as if we had got out and pushed the rig from behind! It is all very foolish, and the nerve force thus uselessly expended might well have been stored up for more urgent occasions if we would only exercise a little self control and common-sense. For anyone who comes home from work or play tired or over-strained, and wishful to secure the maximum of rest in the minimum of time, I recommend the following mode of procedure. Lie flat on a bed or couch—preferably in a darkened room—with the head low and the eyes closed, and then proceed to relax every muscle, from the feet upwards, until the body is laying a dead weight and absolutely limp. Lastly try to relax the brain also, and, as far as possible, think of nothing. I can guarantee that after five minutes of this treatment, you will rise feeling more completely rested and refreshed than after an hour of what is usually miss-called "resting." I have a friend who in pursuit of her profession is obliged to get through a great deal of tedious travelling. She is a fragile creature, and not by any means robust yet she has brought this system of "resting" to such a fine art that she is able to enjoy half-an-hour's restful sleep almost whenever she likes, and invari-

Housekeepers vote on the Range Question and the "SASK-ALTA" RANGE carries the day by a big majority

We are stating a fact, which can be easily verified, when we say that a majority of women prefer the "SASK-ALTA" Range. Simply because they have proven, by actual experience, that the "SASK-ALTA" is the best cooking and baking apparatus on the market

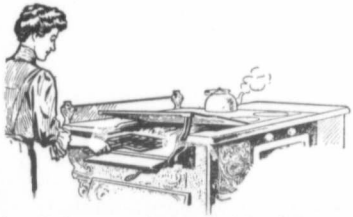
You may want a range now—you will want a range some day; and you may be disposed to buy a range of another make, since there are other good ranges. But—don't you think that it would be only fair to yourself and family to investigate the "SASK-ALTA" before buying—to consider the reasons why so many prefer it to any other range.


The "SASK-ALTA" is a strong and beautiful steel range made by McClary's—the range specialists of Canada. The name of the makers is ample proof of "SASK-ALTA" superiority. Whenever you see that name on a stove or a range you may be sure that it is the best made.

The "SASK-ALTA" Oven is a delight to the cook. It is big and roomy and made of nickelled steel. It's easily kept clean. You can wash it out like a kitchen dish—always have a clean, fresh oven when you have the "SASK-ALTA" in the kitchen. The Oven of this handsome range is evenly heated because built in exact proportion to the Fire-box, and thoroughly ventilated, leaving all the rare and generous juices in a roast while cooking it just the way you want it.

"SASK-ALTA" users are loud in their praise of the Broiler Door and Automatic Lift Top as shown in the cut. This makes broiling and roasting easy. "SASK-ALTA" is the only range with this new and convenient device.

The reasons for "SASK-ALTA" Superior-looking-cooking-economical and lasting qualities would fill a book. Hence we can only print a few of them in one advertisement—merely hint at the reasons why you should own a "SASK-ALTA" range. But—you can do us a favor and at the same time gather range knowledge that will be useful to you now or later on. Just tell your dealer that you want to see a "SASK-ALTA"—tell him you want to know the reasons why so many Housekeepers declare it to be the best range. This will place you under no obligation to buy but it will save you money when you do purchase a range. Because when one knows the "SASK-ALTA" one knows the best there is to know about a range.





LONDON
TORONTO
VANCOUVER
ST. JOHN, N. B.

McClary's

402

MONTREAL
WINNIPEG
HAMILTON
CALGARY

ably arrives at her destination after her long railway journeys looking and feeling almost as fresh as when she started. It is a valuable thing to know how to "rest" properly, and I advise everyone who desires to have a healthy body and sound nerves to cultivate the art.—A.C.

Hold on Boys.

Hold on to your tongue when you are just ready to swear, lie, or speak harshly, or use an improper word.

Hold on to your hand when you are about to punch, strike, scratch, steal or do anything wrong.

Hold on to your foot when on the point of kicking, running off from study, or pursuing the path of wrong-doing.

Hold on to your temper when you are angry, excited, or imposed upon, or others are angry with you.

Hold on to your heart when evil associates seek your com-

pany and invite you to join in their mirth, games and revelry.

Hold on to your good name, for it is of more value than gold, high place, or fashionable attire.

Hold on to the truth, for it will serve you well, and do you good throughout eternity.

Hold on to virtue—it is above all price to you in all times and places.

Hold on your good character, for it is and ever will be your best wealth.

A Gold Mine in Fruit Growing

"The Gem of the Cascades."

THE one inexhaustible and the only dependable source of material wealth is the land. There isn't a patch of it on the face of the globe that may not be compelled to pay tribute to men's labor, either in mineral or vegetable product. And it will be found to be the unanimous verdict of the men who have made

Once they have come within the magic circle, they have no desire to get without its circumference, but we sometimes are called upon to witness the pitiable spectacle of a man who has been torn by the roots from his homestead and set to grind out his life in a dry goods store.

When a tiller of the soil wants

been materialised again and again in the markets of the world in the shape of products in fresh and preserved fruits that are out-classed by nothing of the kind grown anywhere else.

We know that poor fruit has been grown in B.C., and that there are thousands of trees there yet, planted by the pioneers, that are only cumbering the ground and ought to be gathered into a huge provincial bon-fire. But we have also the concrete results of a large number of intelligent and experienced horticulturists who started and have continued in the right way with trees that are worthy of the matchless soil of inexhaustible mineral salts in which they find the most

perfect and plentiful food supply.

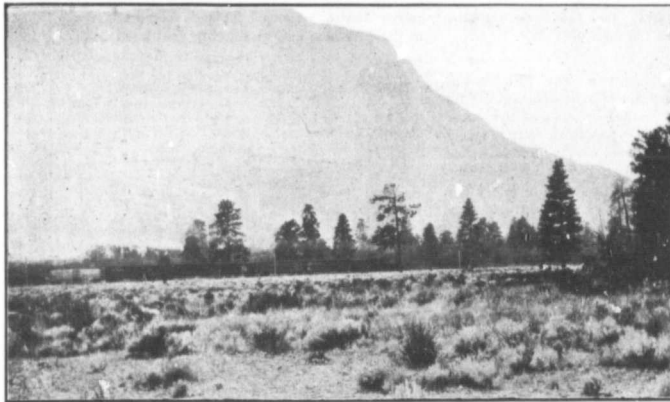
The orchards of these men have been in full bearing now for several seasons and they challenge the world with their products, whether in point of flavor or keeping quality.

The accompanying illustrations are from Similkameen Valley which has been called "The Gem

The writer of this article spent a considerable time in that valley in the summer and fall of 1909 for the specific purpose of obtaining facts at first hand with regard to climate, soil and marketing facilities, and can say that particularly in the East and South portion of the Similkameen the very best natural conditions exist from which at a minimum outlay of labor and capital, the very best can be obtained that may be hoped for in response to ordinary care and intelligent work applied to the virgin soil.

The configuration of the land is admirable. There is no occasion for expensive "terracing." The bottom lands are of great extent, and continue to bear extraordinary fruit products while the "benches" are of billiard-table flatness or dip so gently towards the river that there need be little trouble or expense in providing a fine irrigation service where necessary.

On page 84 of this issue the Similkameen Fruit Land Company is advertising the sale of a portion of its stock, preferably to investors who have a desire to locate on the property. We have looked carefully into the Company's proposition, and can say without reserve, that it will repay the serious attention of any interested reader who will take the trouble to obtain full particulars of the proposition and the mass of information the Company is enabled to provide, whether or not



Great Northern train passing through The Similkameen Fruit Land Company's property

soil-cultivation the serious business of their life, that there isn't a more fascinating occupation or a more productive one, whether it is pursued under the iron heel of necessity or as a mere recreation or pastime.

Readers of the "Canadian Thresherman and Farmer" know more about this than can be written on the subject, but their business has been more exclusively that of the raising of cereals, and what are commonly known as "root" crops on the open prairie; and they will tell you that "it has been a tough job," too. To many we know of, it has become an almost insufferably monotonous one, and if it has brought in the golden shekels till there has grown up a weary indisposition to "make any more in that way," the prairie toiler of a quarter of a century is seeking for some quiet backwater in life in which to spend his hard-earned leisure.

The ideal life of leisure for a man who has spent the best of his days in wooing the soil, is to keep on wooing it, but perhaps under less crowded conditions that have necessarily been his lot in grain growing and stock raising in one or other of the prairie provinces. There is a bewitching influence about the soil that seems to hold men spell-bound.

to part with some of his burden, his better course is to stick to the soil, and change his programme to something less arduous and more congenial than the humdrum of wheat and barley and oats and barley and oats and wheat.

With some experience of the case, and the testimony of thousands in our hands, we say, take a small plot of five or ten acres of soil that can be handled with a garden rake and go in easily for fruit and vegetables, a few hens, and possibly one or two bee swarms just to impart to the scheme all the interest of a novelty or a hobby.

For many years British Columbia has held out the most tempting offers of a glorified life in this connection, and recently has been specially active in displaying her wealth of fruit products. She has long since done with experiments, and the alluring prospect held out to fruit growers who will work intelligently, have



View of Late Mr. Richter's Home, Keremeos, Similkameen Valley

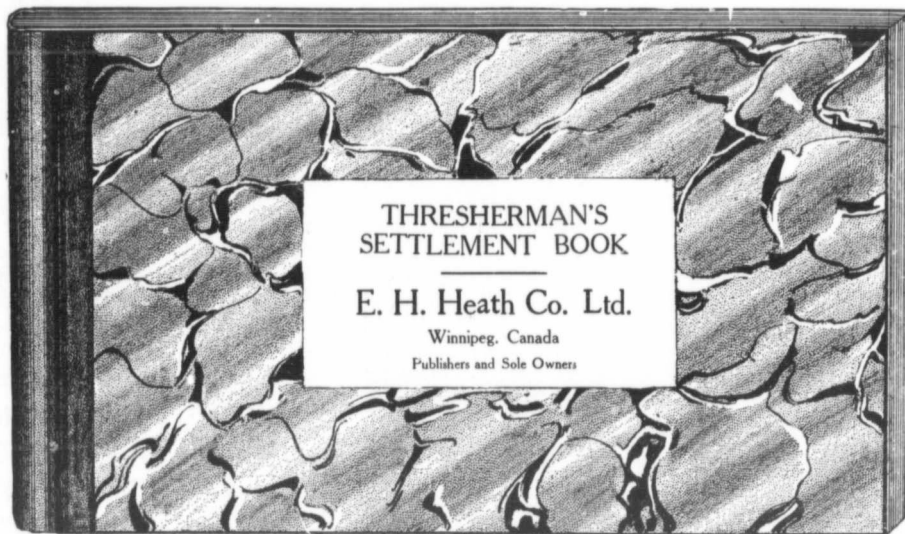
of the Cascades," and which, it is claimed, is the only spot in Canada where semi-tropical fruits attain perfection in the open air without artificial means, and the growing of which has long since been proved a commercial success.

he may subsequently locate in this really ideal fruit growing corner of the Dominion.

The security of any investment made in this way, is beyond question. From personal knowledge we can say that there is no

Threshermen

You lose money if you don't have it. Farmers—insist on the thresherman who does your job having one.



It Prevents Disputes

It is a Safeguard Against Lawsuits

Cut is exact size

The keeping of threshing accounts in a blank book is a dangerous method. Disputes arise and hard feelings between the farmer and thresherman result. The best time to adjust an account is when the job is just finished. With our settlement book a complete record can be kept of every bushel of every kind of grain threshed and a duplicate is given to the farmer. There is no come-back. The farmer is also protected in that he cannot be charged for more than he signs for. Forms are also provided for keeping track of wages, repair bills, oils, etc. In fact it is the handiest and most complete thing you ever saw. Lien note forms are also provided. You shouldn't thresh without it and every farmer should have one on hand as a safeguard against the mistakes of the thresherman. It will save you many dollars. It can only be obtained with a year's subscription to this magazine. If you are already a subscriber your subscription will be extended from date of expiration. Both the Settlement Book and a year's subscription to The Canadian Thresherman and Farmer, \$1.00. Book sent postpaid.

The Handiest Tool About the Farm or Threshing Outfit



Cuts belt lacings, makes belt holes, mends harness, is an excellent knife, punch, rule, guage, etc. Every Farmer should have one. Every threshing outfit incomplete without one. Made of the finest tool steel with wood handle. Sent postpaid with a year's subscription to this magazine for \$1.25. If you are already a subscriber your subscription will be extended from date of expiration.

E. H. HEATH CO., Limited,
Winnipeg, Canada.

Please find enclosed \$.....for one year's subscription

for The Canadian Thresherman and Farmer and..... [premium]

to be sent to

Name.....

Address.....

Order Early

E. H. Heath Co., Ltd. Winnipeg, Canada

finer portion of the famous valley than that of the 5,400 odd acres owned by our friends, a large portion of which, they have put in condition for immediate occupation.

Our own observations and inquiries are fully confirmed by government reports and by the statements of independent experts who have made a lengthy sojourn in the valley. Transportation facilities are being con-

The Fun-Loving Instinct.
Life was given to us for enjoyment, not for one long, strenuous straining struggle spent in the dreary drudgery of scraping money together. Living-getting was intended to be only a mere incidental in the larger life of growth, or freedom, of expansion, mind enlargement. Men could get fun out of their business if they only knew how, and by taking the crudgery out of it they

laugh out loud or say something funny. "He that cannot laugh and be gay should look to himself. He should fast and pray until his face breaks forth into light."

Sunshine and Shadow.

Pleasure and pain are closely interwoven in the web of life. Everyone has anxieties and sorrows; but many writers have greatly underestimated the blessings

for which we have to be thankful. In life, sunshine and shadow succeed one another as quickly as on an April day. Whether the result is happiness or sorrow depends a great deal on which elements we look at or brood over. If we turn our backs on our blessings and magnify our troubles we make ourselves miserable; if we look to the sunshine and leave the shadows

behind we find that we have much to be thankful for, and in most cases that the good things are real, while what seem evil are blessings in disguise. We live in a very beautiful world, but few good things are to be had in it without hard work. It is not a world in which anybody can expect to be prosperous if he is easily discouraged. Perseverance, earnest, steady perseverance, is necessary to success. This is no drawback. Good solid work is as necessary to peace of



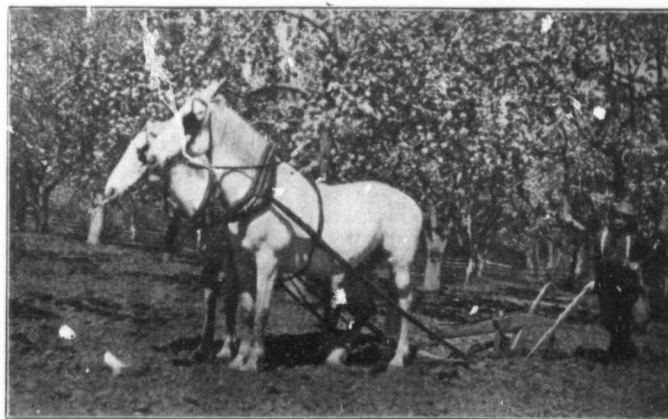
Tobacco growing at Keremeos

stantly improved, until in the near future, there will be a regular daily service from all portions of the valley direct to the Pacific Coast, or to the prairie provinces, full particulars of which are given by the Company and may be absolutely relied upon.

The Similkameen is no pioneer outpost. There are scores of delightful homes clustered around the property of the Land Company and everything in social, educational and Church activity, any prospective resident might wish to identify himself with.

In view of the fact that so many "tempting" proposals are sent abroad in these days with regard to British Columbia which the public have difficulty in verifying, we are glad to offer any testimony we can, in behalf of this particular development. And the more especially, as we receive inquiries from time to time from readers who are seeking some retreat of this kind in which they can rest a little from their long and arduous term of labor on the prairie, and at the same time, feel that they have a security which cannot depreciate but is humanly certain to increase in value as time goes on.

would be happier, but they would also be more properous. A great many men fail because they are too serious; because they develop unsocial, morose, cold qualities which repel. It is the sunny, happy nature which attracts friends and trade. The too-serious people seem to say, "Keep away from me, life is too serious a matter to be spent on trivial things." Some people think it is undignified to give full vent to their fun-loving instinct. They think they must be thoughtful,

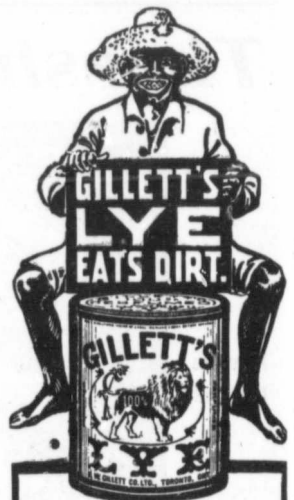


Among the Apple Trees in the Orchards of the Similkameen Fruit Land Company.

sober-minded, very dignified, if they would carry any weight in this world, and do not be regarded as light-headed and frivolous. We have all seen people who go about with their fingers on their lips, figuratively speaking, as though they feared they might

mind as it is for the health of the body, in fact, the two are inseparable. Very, few, happily have cause for anxiety as regards the real necessities for life—for bread, water, meat, fruit or household.

But we make ourselves anxious



**FOR MAKING SOAP
FOR WASHING DISHES
FOR SOFTENING WATER
FOR DISINFECTING SINKS
CLOSETS, DRAINS ETC.**

MADE IN CANADA
E.W. GILLETT CO. LTD.
TORONTO-ONT.
WINNIPEG MONTREAL

**Gas, Automobile and
Traction Engineering**



The young man who completes either one of these courses is sure of a job, with good pay. In the West there is a continual demand for young men with a technical knowledge of gas, traction engines and automobiles.

Highland Park College
In three months learn in that many years as an apprentice. Students work right in machine shops, traction engine house and auto garage. Repair and drive gas and steam engines and automobiles. Gas Engine Course may be taken with either the Traction Engine or Auto Course without extra tuition. Small tuition fees. Low cost of living. Largest garage and machine shops in the country. No entrance examinations. Send for catalogue.
G. H. LONGWELL, Pres., Highland Park College, Des Moines, Iowa



LUNKENHEIMER "RENEW" VALVES

These valves are exceptionally durable, as all parts subjected to wear are renewable, and this includes the seat and disc. The seating faces are regrindable, and the scientific construction of the seat and disc minimizes the wear on the seating faces. Keeps them free from scale or dirt and eliminates water-hammer. Made of a high grade bronze composition, with the exception of the seat and disc, which are made of a most durable nickel alloy.

Your local dealer can furnish them; if not, write us. Write for catalogue.

THE LUNKENHEIMER COMPANY,
Largest Manufacturers of High Grade
Engineering Specialties in the World.
General Offices and Works: CINCINNATI, OHIO, U. S. A.

about delicacies, and superfluities, carriages and horses, gold and precious stones, for luxuries and appearance, making ourselves anxious and miserable lest we be deprived of things which we can, perhaps, be even better and happier without. Time is said to be money, but it is much more—it is life. No doubt most of us will have to work for money, but let us not sacrifice our lives to it. —Lord Avebury.

"The man I like never finds anything that is to be done for somebody else 'too much trouble.'"

"The man I like is well-groomed himself, and can take a pride in the appearance of his women-folk."

Our Fortune in Time.

Philosophers have explained space. They have not explained time. It is the inexplicable raw material of everything. With it, all is possible; without it, nothing. The supply of time is truly a daily miracle, an affair genuinely astonishing when one examines it. You wake up in the morning, and lo! your purse is magically filled with twenty-four hours of unmanufactured tissue of the universe of your life! It is yours. No one can take it from you. It is unstealable. And no one received either more or less than you receive.

Talk about an ideal democracy! In the realm of time there is no aristocracy of wealth and no aristocracy of intellect. Genius is never rewarded by even an extra hour a day. And there is no punishment. Waste your infinitely precious commodity as you will, and the supply will never be withheld from you. No mysterious power will say—"This man is a fool, if not a knave. He does not deserve time; he shall be cut off at the meter." It is more certain than Consols, and payment of income is not affected by Sundays. Moreover, you cannot draw on the future. Impossible to get into debt! You can only waste the passing moment. You cannot waste to-morrow; it is kept for you. You cannot waste the next hour; it is kept for you.

You have to live on this twenty-four hours of daily time. Out of it you have to spin health, pleasure, money, content, respect and the evolution of your immortal soul. It's right use, its most effective use, is a matter of the highest urgency and of the most thrilling actuality. All depends on that. Your happiness—the elusive prize that you are all clutching for, my friend! —depend on that. Strange that

Facts About McClary's "Sunshine" Furnace

—The Understudy of the Sun—

The Fire-pot of the "Sunshine" is made of Semi-Steel—that of the ordinary furnace is made of Grey Iron. Here's the difference—Destructive sulphur fumes penetrate Grey Iron easily because it is porous. Semi-steel is not porous—it is a close-grained material with a smooth surface secretly processed by McClary's. Gas fumes cannot penetrate Semi-Steel therefore it lasts longer. The "Sunshine" Fire-pot is built in two sections joined together with our famous cup joint. The shape of this joint, combined with a layer of McClary's asbestos cement, makes it absolutely gas, smoke and dust-proof.

Clearly, the "Sunshine" is the premier furnace as far as the Fire-pot is concerned.

The Grates of the "Sunshine" Furnace have three sides each. Plainly, they have three times the endurance of one-sided grates. Every time you rock down the ashes of the "Sunshine" you can expose a fresh side of the grate to the fierce heat of the fire—lengthen the life of the grates.

And the short, strong teeth of "Sunshine" grates simply grind up clinkers. The "Sunshine" Furnace is the best as far as grate construction goes.

Shaking an ordinary furnace is hard, back-breaking labor. You don't need to shake the "Sunshine"—you simply rock

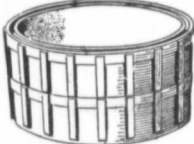


it and the ash drop into the ash-pan. A child can easily rock the grates of a "Sunshine"—merely another reason why you should buy a "Sunshine" Furnace.

Ordinary furnaces are called coal glut-tions. There may be good reasons for that—we don't know. But—we have built the "Sunshine" Furnace so that it is very easy on coal. Hundreds of people now using the "Sunshine," and having used ordinary furnaces, declare that the "Sunshine" makes two tons of coal do the work of three. Evidently, the "Sunshine" Furnace saves coal and money.

The ordinary furnace has a water-pan hidden somewhere about the base. There, it cannot carry out the purpose for which the water-pan was devised. The water-pan of the "Sunshine" Furnace is placed scientifically above the

radiator near the dome—the heat laps up the water, before being diffused all over the house. It contains the same amount of moisture as the air of a balmy June day. Plainly, as far as the water-pan is concerned, the "Sunshine" is the furnace you should buy.

There are many more reasons why you should invest your money in "The Understudy of the Sun"—McClary's "Sunshine" Furnace. Call on the McClary agent and ask him to show you all the mechanical reasons and exclusive devices which go to make the "Sunshine" the best and therefore the cheapest furnace you can buy. Write us at our nearest address if you cannot get in touch with him.

LONDON
TORONTO
VANCOUVER
ST. JOHN, N. B.

McClary's

303

MONTREAL
WINNIPEG
HAMILTON
CALGARY

the newspapers, so enterprising and up to date as they are, are not full of "How to live on a given income of time instead of how to live on a given income of money!" Money is far commoner than time. When one reflects, one perceives that money is just about the commonest there is. It encumbers the earth in gross heaps. We never shall have any more time. We have, and we always had, all the time there is.—Arnold Bennett.

Make Use of What You Have.

By Frank Wood.

SUCCESS is the result of getting what you want. The way to get what you want is by making the best use of what you have.

Simple, isn't it?

Are you making the best use of your time or are you spending a part of it dawdling around or pondering over the past or building air castles for the future?

If so, quit it.

Map out a schedule for work and play, recreation, planning and rest, and stick to your schedule until you are putting in your time just like a millionaire. You will then be well on your way towards being one.

Are you making the best use of your energies or are you spending your time on trifling whims?

Quit it.

Do things that are worth while and do them in a way

that is worth while. People will soon be realizing that you are worth while.

Are you making the best use of the goods that you have to sell, or is your store filled with a lot of worthless junk that is of no value to anybody and that you wouldn't buy yourself for 50 cents on the dollar?

If so, get rid of it. If it is worth anything, sell it for what it is worth. If you can't sell it, give it away. If it isn't worth anything, throw it away.

Have you room in your store, in your shop, or on your farm that you don't use?

Get rid of it.

Clean up.

Get rid of the junk piles. The world will never be so big that space in it won't be valuable. Make every foot of square count for some useful purpose. Have you talents and abilities that you are not using?

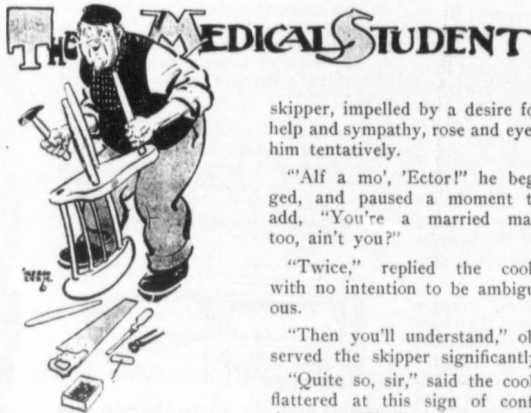
Put them into action. Make them bring you in something, either in money or knowledge or happiness.

Put things into action and watch them grow.

Simple, isn't it?

By making the best use of what you have, you may get what you want.

And "Getting what you want is success."



IN the comiortless light of early morning, Cap'n Simon Gooster, skipper of the Dandy wandered forlornly along the wharf to the spot where his battered old vessel was berthed.

Down in the fo's'le the cook, temporarily the sole occupant of the Dandy, reluctantly took leave of a pleasing dream, to the sound of footsteps on deck, and slipped noiselessly from his bunk to inquire into the origin of these sounds that had disturbed his rest.

He reached the deck just as the skipper, sinking on to a coil of rope, assumed an attitude of weary dejection.

"Good morning, sir," observed the surprised cook.

"It may be morning for you, 'Ector," replied the skipper heavily, "but it's still night for me."

"Aven't you been to bed yet, sir?"

"Do you think I'd be ere if I 'ad?" said the skipper. "Do you think I'm a sleepwalker, or what? You can't 'elp your looks, 'Ector, but you needn't act up to 'em!"

The cook, thus repulsed, began slowly to edge away. The

skipper, impelled by a desire for help and sympathy, rose and eyed him tentatively.

"'Alf a mo', 'Ector!" he begged, and paused a moment to add, "You're a married man too, ain't you?"

"'Twice," replied the cook, with no intention to be ambiguous.

"Then you'll understand," observed the skipper significantly.

"Quite so, sir," said the cook, flattered at this sign of confidence. "She'll be sitting up for you likely?" he suggested.

"She'll be standing up for me," amended Mr. Gooster. "'Ang card-parties!" he exclaimed, with sudden vicious irrelevance.

"Been playing cards, sir?" queried the cook, with interest.

"Met a few pals five minutes after I left the ship last night. Nothing would do for 'em but we must 'ave a 'and at cards. I told 'em I was on my way straight 'ome; but they would keep a-tempting me. One of 'em said 'e'd never played nap before. We sat down just for an hour, at seven o'clock, and it was a quater-past five when we left off."

"And then you come on down 'ere?"

"I wasn't going 'ome, you bet! You see I'd promised the wife I'd be 'ome by 'alf-past seven last night. But I shall 'ave to go 'ome some time, and then—"

The skipper finished his sentence with an eloquent sigh.

"Bit of a talker, is she?" asked the cook.

"Takes after 'er father," replied the skipper, "and they always used to shove an extra ten bob on 'is fine for the way 'e argued with the magistrates."

HOUSEHOLD MUSIC



How Every Farm Home May Enjoy the Best

THE day has gone when it is necessary for the farmer, with his household, to travel long distances to Expositions or even to attend a concert in the village hall, to hear the best musical compositions played by the world's skilled musicians. He may have it on tap in his own parlor, and it is not needful that he or any of his flock are able to play so much as "God Save the King" or "Yankee Doodle," with one finger, if he possesses a piano of any description.

And he need not buy one of those elaborate and expensive player pianos, which, in common with the aeroplane, are among the amazing products of the early twentieth century. At Winnipeg Exhibition this season, the Doherty Piano and Organ Company provided one of the most imposing exhibits that has ever been shown at an exposition of the kind in the Dominion. Their piano and organ specialties beggar description, both in point of musical quality and the splendid designs of the cases in which the soul and sweetness of their unique productions were embodied.

But their great "drawing card" was a remarkable bit of mechanism, in the nature of a player attachment, which can be fitted to any piano, and in such a manner that no one could suspect the presence of such an accessory to the ordinary instrument, unless informed of the fact.

This is a most ingenious device, and the more particularly, because of its extremely compact form, and the extraordinary manner in which it can be sprung into service or made to disappear, when not required. It was fitted to the smallest piano in the whole exhibit—a particularly dainty little instrument—and the contrast between this neat combination and the very bulky player pianos is very striking.

The idea is entirely that of the Doherty people. It has been thought out, designed and constructed by the firm in its own factory, in Clinton, Ont., and

like all really great and effective creations, it is the least conspicuous, and still the most perfect and effective adjustment that has yet been fitted to any musical combination.

It is not represented by anything of the kind the world over, and in this respect it brings the highest credit, not only to the ingenious mind that conceived it, but adds its own fresh laurels to the enterprise and skill of Canadian Industry.

The Doherty Company is now prepared to provide and fit this fine attachment (which is by no means an expensive item) not only to its own instruments, but it will be happy to adapt it to any other description of piano made.

So that if you have a piano of any kind or condition in the house, which is merely filling the place of an ornamental piece of furniture, it can be instantly and cheaply transferred into a fully equipped "band," from which any child old enough to sit independently on the piano stool, can produce the complete score of any popular music, or the most difficult compositions that are written and played to-day. The quality of the music will, of course, entirely depend on the character of the piano, but if it is an instrument of ordinary compass, and has not been battered to death, there isn't a note or any harmonious combination of notes in any required time and shading it will not play perfectly. All that is required is the slight application of the feet to the pedals and a finger touch on the lever—nothing more than pressing the spring latch of a gate.

With its reputation of nearly half a century in the special line of piano manufacturing and organ building, the house of Doherty is one of the country's industrial monuments that the Canadian citizen justly regards with pride, and its latest triumph in the exhibit of 1912, at Winnipeg, is something of which any nation on the map of the world would willingly acknowledge as among its greatest achievements.

WRITE
THE DOHERTY PIANO & ORGAN CO., WINNIPEG

ENG-O-LENE

THE PEER OF ALL FUEL OILS FOR

OIL BURNING ENGINES

Free from impurities such as carbon, asphaltum and sulphur. Has a low flash test which permits it to ignite quickly, thus getting immediate action and the best results.

ROYAL ENGINE GASOLINE

A Pure, Sweet, High-test Gasoline. Strongly recommended for Automobiles and Engines.

ROYAL GAS ENGINE CYLINDER OIL

A high-grade oil for gasoline engines. Also all grades of lubricating oils, greases, waste, etc.

Continental Oil Company, Ltd.

Winnipeg Regina Saskatoon Calgary Lethbridge

WE CARRY A STOCK AT FIFTY OTHER POINTS. WRITE FOR PRICES

A YEAR'S SUBSCRIPTION TO THE CANADIAN THRESHERMAN AND FARMER GIVEN WITH EVERY BARREL OF CYLINDER OR VALVE OIL PURCHASED FROM US, PROVIDED YOU MENTION THIS MAGAZINE WHEN ORDERING

The cook, scratched his head, remarked that he'd often thought so, by the look of her. The skipper realising that it was too late to resent such familiarity, continued his gloomy soliloquy.

"And what did she want me to come 'ome early for?" he complained. "Why, to mend the kitchen door-'andle! She's like that: she thinks I've got nothing else to do when I'm at 'ome but mend things. Always after me to paint something or make something or clean something."

"I mended a clock for my missis once," mentioned the cook reminiscently. "She never asked me to do anything for 'er again."

"Ah, but that ain't all!" went on the skipper, with acerbity. "She thinks I ought to spend more time with 'er. She goes on at me like anything, just because I'm a bit popular, and don't spend all my spare time at 'ome with 'er, messing about with a pot o' paint. And 'ow my wife will go on about last night I don't like to think. She'll say I broke my promise to 'er—she's just the kind of woman to throw that in my teeth."

"Oh, well, we'll be sailing again in five days!" the cook reminded him encouragingly.

"Yes, but them five days!" groaned the skipper. "Look 'ere, 'Ector, can't you think of some way to get out of this trouble?"

The cook, thus appealed to, frowned fearfully to stimulate thought, and promenaded the deck with a statesmanlike air, watched eagerly by the skipper.

"I've got it, sir!" cried the cook excitedly. Ten minutes after you left the ship last night I was took ill. I was so bad that they fetched you back to see me. You 'ad the doctor to me, and 'e despaired of my life. And you sat up all night with me, nursing me!"

He stepped back and leered triumphantly at Mr. Gooster. The skipper, drawing a deep breath, looked up in dawning hope.

"And there being no one left on board," went on the cook, "you couldn't send any message to 'er because you daren't leave me for a minute."

"And what was the matter with you?"

"Something even the doctor couldn't put a name to," rejoined the cook readily. "But I'm much better to-day, though still a bit weak. Ow's that, sir?"

"'Ector," said the skipper gratefully, "you ought to be in Parlyment."

Vastly cheered, Cap't Gooster

WHEN YOU BUILD



When you build, first consider well your plans. We will send, prepaid and duty free, to Canadian customers, two famous Hodgson cloth-bound books showing Bungalows, Cottage and House Plans, each containing over 225 pages and more than 300 designs, including floor plans, upon receipt of \$1.

The regular price of these books is \$1 each. Every design is by a licensed Architect; Mr. Fred. T. Hodgson being a resident of Canada and member of the Canadian Architects, F.A.I.C. Many of the houses are the last word in architectural beauty. Adapted to every purse and every taste. Every design a typical modern home, with approximate cost to build given. Complete

Blue Prints and Specifications

for these cheap and moderate-priced homes may also be obtained from us at about \$5 per set, and from which any carpenter can build. If made to your order, an architect would charge from \$50 to \$75 for any one of them, and it would be no better. If you purchase a set of our plans, we will rebate the \$1 you paid for the books. To any prospective builder this offer is easily worth ten times the cost. Address:



FREDERICK J. DRAKE & CO.

Architectural Department

1325A Michigan Ave.

Chicago, Ill.



Makes 'em Last Longer and Look Better

There is much more to shingle stains than the mere beauty they add to the building. Some people used to sneer about "style" when their neighbors stained their shingles with

Stephens'
Shingle Stains

In a year or two, when their own unstained shingles began to curl and the roof began to leak and need repairing—while their neighbors' roofs were as smooth, tight and good as new—their sneers turned to sighs that they were not as wise. **Stephens' Shingle Stains** not only add beauty to the house, but better still their crocodile and preserving oils add life to the shingles, and make the roof last longer. Twenty soft, velvety, artistic colors, sold by leading dealers. Write today for free book of "Suggestions"—for paint users.



**If You Have a Motor Car
Jaeger Motor Coats and
Usters will Interest You**

**They are Very Comfortable!
Very Stylish! Well Made!
Durable!**

A Jaeger Double Fleece Coat gives greater warmth and does not induce perspiration like a leather or fur coat.

See them at the Jaeger Stores in their attractive variety.

Dr. JAEGER SANITARY WOOLLEN SYSTEM

364 Portage Avenue, Winnipeg, Man.
316 St. Catherine St., West, Montreal
231 Yonge Street, Toronto, Ont.
And from JAEGER Agents throughout the Dominion

TACKS

WE ARE MANUFACTURERS OF ALL KINDS OF
Guaranteed Tacks and Small Cut Nails
ALSO MAKE A SPECIAL FEATURE OF
Brass Plating and Electro Tinning.

Write for Quotations to
Dominion Tack and Nail Co.,
Limited,
GALT, ONTARIO

Erickson Leg Does not chafe, over-heat or draw end of stump.
Sold on Easy Terms.
The largest limb factory in the world.
E. H. Erickson Artificial Limb Co.
Washington Ave., St. Louis, Mo. Send for catalog. '12

quitted the Dandy and walked briskly homeward. Arrived outside his domicile, a wave of optimism caused him to insert his key in the latch with elaborate precautions against noise. But before he had fully turned the key the door swung open to reveal his vigilant wife.

"A nice time to come 'ome!" she shrilled. "Ain't you ashamed of yourself?"

"Poor old cookie!" was the skipper's reply.

"As 'e been with you, then?" she asked fiercely.

"I've been with 'im," corrected the skipper. "And a nice old time I've 'ad of it, too!"

"I daresay you 'ave!"

"Oh, I dont mean what you're thinking of," said the skipper hurriedly. "Poor old 'Ector was took bad last night, and I 'ad to sit up with 'im all night. I didn't 'ave a chance to send word to you, because there was nobody else aboard."

"What was the matter with him?" she asked sceptically.

"Ah, there you 'ave me!" conceded the skipper with regret. "But cook was bad—raving and screaming, 'e was; regular delirious. It took six of us to 'old 'im down sometimes."

"I thought you said there was nobody else aboard?"

"Oh, that was—that was afterwards!" replied the skipper vaguely. "But there, 'Ector's better this morning, though still very weak, of course. And now I'll get off to bed. I shall sleep like a top, especially now I'm easier in my mind about poor cookie."

"Well, don't you go to sleep for too long," she retorted. "I want you to mend that doer-'andle as soon as you get up. And the kitchen range wants seeing to, too."

"Anything else?" queried the skipper coldly.

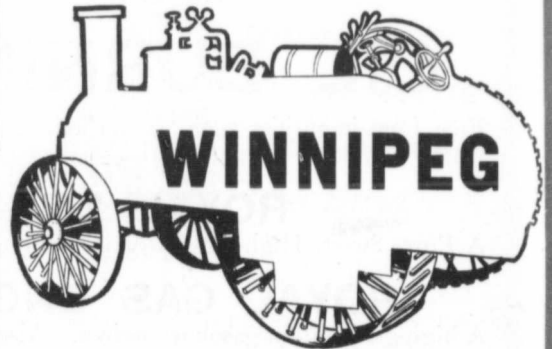
"Yes," she hastened to answer, "lots! There's them kitchen stairs and the clothes'orse and—"

"One of these days," he promised, purposely vague, "I'll spend a 'ole week at 'ome and then I'll get all these odd jobs done for you. As it is, I'll just get my nap over, because I've got to go out again later on, on business. I've got to see a man about—about another man."

Secretly congratulating himself on the success of his repressive measure, he passed up into the bedroom and sought his postponed night's repose.

Mrs. Gooster, nourishing a sense of dissatisfaction, set about the household routine for the day. Twice she went in to peep at the slumbering skipper, and each time the smile on his

The Tractor City of Canada



OFFERS

Manufacturers of Farm Tractors and Farm Implements of all kinds

Greater Combined Advantages for Making and Distributing Their Products than any City in Canada

WESTERN CANADA

IS THE WORLD'S GREATEST GROWING FARM IMPLEMENT MARKET

Increase in Grain Acreage:

Year	Acres
1900	3,491,413
1906	7,894,666
1911	14,626,234
1912	16,872,750

160,000,000 Acres yet to be brought under Cultivation in Winnipeg's traction field. Consider what this development makes possible for the Manufacturer.

GET CLOSE TO THIS MARKET

YOUR OPPORTUNITY IS NOW!
Winnipeg wants this Business; and offers Cheap Power, Cheap Sites, Low Taxation, Varied Raw Materials, the Best of Labor Conditions, Unexcelled Railway Facilities

Special Reports prepared and mailed Free of Charge on the manufacturing possibilities of any line of industry by addressing—

CHAS. F. ROLAND

Commissioner of Industries

WINNIPEG, Canada

nada

G

ctors kinds

DA OW-KET

ration in lopment

KET

V! rts n, or ies

s on the stry by

nada



The First Big Ben Cost \$12.85

Big Ben is the result of 26 years of fine clock making. The first Big Ben cost \$12.85 to make. The first hundred cost \$6.50 each. But the great demand has brought the price down to everyone's pocketbook.

Buy Him Now for \$3.00

Big Ben the national sleep-meter, is arousing thousands of farmers on time. Everywhere, everyday, the gentle, insistent voice of Big Ben taps the "sleepy heads" to joyous action. This "minute-man" starts the day with a smile. Big Ben never fails—he's on the job always. He rings 5 minutes straight, or at intervals of 30 seconds for 16 minutes. He tells the truth and gets you and the farm hands up "on the dot."

Big Ben is hand-built, like a fine, time-model watch, and "time checked" for 140 hours for accuracy. 1,055 skilled watch-makers build Big Ben—the clock that's the pride of the famous Westclox Community of La Salle, Illinois.

2,500 Big Bens now leave the factory every 10 hours and the demand gets bigger daily. Big Ben has ticked himself into popular favor because he is built right, runs right and is priced right.

Big Ben is sold by 5,000 Canadian dealers. If you cannot find him at your store send us \$3.00 today and we will send him by return express, duty charges prepaid.

Big Ben

WESTCLOX, La Salle, Illinois

BIG BEN ALARM CLOCKS

Are illustrated in the 1912 Catalogue of

D. R. DINGWALL, LIMITED

JEWELLERS, WINNIPEG.

Write for a copy of this book.



SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS

Any person who is 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. The application must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made in any agency, on certain conditions, by a wife, mother, son, daughter, brother or sister of the intending homesteader.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead. The farm or at least 50 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price \$3.00 per acre. Duties—Must reside six months in each of six years from date of homestead entry (including the time required to secure homestead patent) and cultivate fifty acres.

A homesteader who has exhausted his homestead and cannot obtain a pre-emption may enter for purchased homestead in certain districts. Price \$10.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. CORY

Deputy of the Minister of the Interior
Unauthorised publication of this advertisement will not be paid for.

sleeping face added vastly to her doubts.

At last she determined to test the truth of his story by interrogating the cook of the Dandy. Quickly putting on her bonnet, she hurried down to the wharf.

She came in sight of the vessel at an unfortunate moment, for the cook was on deck. He was surrounded by his admiring shipmates, and, with great geniality, was exhibiting to them a new step he had invented in fancy dancing.

He looked up suddenly and saw his skipper's wife looking down at him from the wharf, but, retained his presence of mind, and went slowly up the gang-plank towards her.

"Morning, mum," he said. "I wonder if you'd mind taking a little message to the skipper from me? I want you to ease 'is kind 'eart by telling 'im I'm 'eaps better this morning. You might tell 'im 'ow you found me 'aving a little gentle exercise."

"My 'usband's told me everything," she said, with disconcerting directness. "I don't want any more of your lies!"

"In that case—" murmured the cook, and coyly began to back away from her.

She accelerated his departure with a few terse criticisms which set him looking longingly at a lump of coal on the pathway.

Then she set out on the return journey to her home, anxious to discuss the situation with her husband without delay.

She had nearly reached the house when a sudden idea caused abandonment of all previous schemes for retaliation. With a smile that boded no good to Mr. Gooster, she made her way to a house a few streets distant from her home.

The skipper was still sleeping peacefully when she reached her dwelling at last, but soon he was startled into wakefulness by an imperative assault on the door-knocker.

His wife opened the door, and Mr. Gooster, summoned to the parlour a few minutes later, found himself addressed by a spruce young gentleman.

"Captain! Gooster, I presume?" said the visitor. "I've come to see you about that cook of yours."

"Oh, 'ave you?" replied the skipper sourly. "Well just you go straight back and tell 'im it's no good. I told 'im last time that it 'ud be no use to send for me to get 'im out of 'is troubles any more."

"I'm afraid 'you're making some mistake," said the young man. "I'm from the Health Department."



The Howard Watch

WHEN the jeweler shows you a HOWARD Watch—note the printed price ticket affixed to the box. It states the standard price of that watch.

Responsible jewelers all over the Dominion sell HOWARD Watches—and the price of each grade is uniform everywhere.

That means that you buy on the one sound basis of value received. It means that you and every other HOWARD purchaser owns the finest practical watch in the world on the most favorable terms.

It means the fullest possible service from the jeweler—his attention

and advice as an expert in watches, not as a shrewd bargainer over the splitting of a half-dollar.

A HOWARD Watch is always worth what you pay for it.

Several months ago the demand for the higher-priced HOWARDS became so great that we had to discontinue the making of the models at \$35 and \$37.50.

The lowest-priced HOWARD that we are making now comes at \$40. It is a 17-jewel (double roller) case in Crescent Extra or Boss Extra gold-filled. The 23-jewel HOWARD sells at \$150—and the EDWARD HOWARD model at \$350. There are several grades in between these prices.

You can buy HOWARD Watches all over Canada. Find the HOWARD jeweler in your town. Not every jeweler can sell you a HOWARD. The jeweler who can is a representative merchant—a good man to know.

Send us your name on a postal card and we will send you—free—the little HOWARD Book, full of valuable information for the watch buyer.

E. HOWARD WATCH WORKS

Dept. No. 222, Boston, Mass., U. S. A.
Canadian Wholesale Depot: Lumsden Building, Toronto

Do You

as a property owner, carry Fire Insurance—and yet neglect to insure the life and energy that built up that property?

Put first things first—and arrange for Life Insurance in the Company charging lowest rates and paying highest profits, that is—

The Great West Life Assurance Co.

Head Office: WINNIPEG.

Over \$73,000,000 now in force.

Patronize those who

Patronize this Magazine.

3

Leading Brands

Sold everywhere throughout
Western Canada

DREWRY'S

Refined

Ale

(Registered)

Extra Stout

AND

Redwood

Lager

These well known malt
beverages are brewed from
barley malt and hops only.
Always uniform in quality and
flavor.

THE

Double Track

Route

TO

Detroit, London, Hamilton,
Toronto, Montreal and New
York via Niagara Falls

Smooth road-bed, polite employees, ex-
cellent dining-car service, and latest stan-
dard equipment

AGENTS, COOK'S TOURS AND ALL
STEAMSHIP LINES

Rates, reservations and all particulars at
Ticket Office

Phone Main 7098 260 Portage
WINNIPEG

Are You Thinking of Having a Well Drilled?

Are You Thinking of Buying a Well Drill?

SPARTA

WELL DRILLING OUTFITS

If you are thinking either of having a well drilled or of buying a well drill, be sure to write to us for information that will be of great value to you and save you a great deal of money. The information will cost you nothing and will obligate you in no way. Ask for it now. Dept. 4.

The Canadian Fairbanks-Morse Co., Limited
Winnipeg Saskatoon Calgary
Montreal Ottawa St. John Toronto Vancouver Victor

"Faith Department?" murmured Captain Gooster.

"Yes," said the visitor. "It seems that your cook was taken ill last night—"

Oh but e's better this morning," replied the skipper.

"I'm afraid not," said the visitor gravely. "As a matter of fact he's much worse."

"E's—much—worse?" echoed the skipper dazedly.

"Very much worse. He's suffering from menengitic cholera, so it's you we've got to think about now."

"Me?" cried the skipper in alarm.

"Certainly. You passed the evening with him. You sat by his bedside during the first stages of the illness—when it is most contagious."

"Oo's been telling you all this?"

"Why, your wife. It seems that she was nervous about the cook's illness last night. And to secure proper treatment for him, she looked in at the Health Department this morning. We sent someone down to see him at once, and found him in fearful agonies."

"But there was nothing the matter with 'im," began the skipper, and stopped abruptly.

"Well, I've told you how he is now. And of course, menengitic cholera is a disease that wants careful watching. And it's so contagious that I'm sorry to say you—must be quarantined. You may be sickening for it now, for all we know, and you'll spread it over half the town."

"But we're sailing again in five days' time," protested the skipper.

"Then, if all's well, you'll just be in time to go away again. Now, please listen," said the visitor, accentuating his official air. "We have to take certain repressive measures in a case such as this, and you must follow these instructions. You will not go out of the house for those five days. You will not attempt to communicate by word or letter with anyone outside the house. You will abstain from taking alcoholic liquors, and you will take a certain amount of exercise every day."

"But 'ow about business?"

"You can give your wife here all instructions, and she will carry them out for you. Now let me impress on you, Mr. Gooster, that this is usually a fatal illness, so don't run any risks. And, another thing, the penalty for breaking quarantine is fifty pounds, so don't run any risks in that direction, either."

"I won't forget," said the skipper forlornly.

Silver Star

Engine Kerosene

THE BEST FUEL FOR

Oil Burning Engines

— AND —

Imperial Motor Gasoline and
Standard Gas Engine Oil

Recommended by the Hart-Parr and Rumely Companies, and used by all Tractors in Motor Contest at Winnipeg Industrial Exhibition, 1912, and previous years.

Also Distillate Fuel Oil

Oils Carried in Stock at 273 Tank and Warehouse Stations in Manitoba, Saskatchewan and Alberta.

For Prices at our Branch Station nearest you write to office of

The Imperial Oil Company, Ltd.

Winnipeg Regina Moose Jaw
Saskatoon Calgary Edmonton Lethbridge

A REVOLUTION COUNTER THAT'S RIGHT

Discount to
DEALERS


\$1.00

By Mail

THE GRANT MANUFACTURING AND MACHINE CO.
110 SILLIMAN AVENUE BRIDGEPORT, Conn.

Do not guess at your speed

Buy a Tabor Stop Motion Counter



Acetylene Headlight

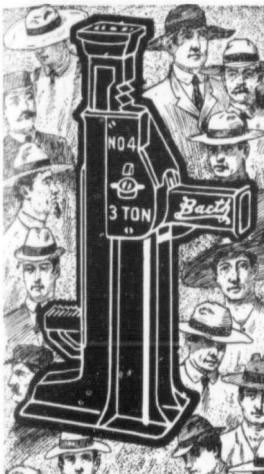
For Traction Engines

Complete in one apparatus. The latest and best on the market. All the light you want whenever you want it. Wind-proof. Jar-proof. Every man who operates a traction engine should have one. Indispensable for plowing at night or moving over rough fields or bad roads. Projects a strong light 300 feet. Runs 12 hours with one charge. Costs 1 cent an hour. Write for Catalog.

American Acetylene Stove Co., 516 Masonic Temple, Minneapolis, Minn.
CHAPIN CO., CALGARY, Agents for Alberta.



Patronize Those Who
Patronize This Magazine



WITH A No. 4 BARTH JACK

one man can lift 6000 pounds which ordinarily takes a lifting power of 20 men. Don't you see how a Barth Jack will save you a lot of time?

Ask Your Dealer for the Jack. Ask Us for the CATALOG.

BARTH MFG. CO.
146 L. STREET
MILWAUKEE, WISCONSIN

"Also, the more exercise you take, the better," advised the visitor. "If you can go to bed tired out every night, you might work the illness right out of your system—that is, if you develop it, of course."

"What exercise do you think I can take indoors?" suggested the skipper coldly. "Run round the kitchen table fifty times?"

"Oh, you can find some odd jobs, surely?" replied the visitor easily. "They'll provide you with enough exercise. And now, Mrs. Gooster, if I could speak to you for a moment, I could tell you what symptoms to look for. There's no need to make your husband uneasy by telling him of them."

A few minutes later the visitor withdrew. The depressed skipper returned to his bed and remained there till late in the evening.

Coming downstairs refreshed, he announced a determination to risk detection and go for a short walk. Mrs. Gooster, taking advantage of the coincidence of a passing policeman, pointed out that obviously the house was being watched, and said that fifty pounds seemed a lot of money to pay for a short stroll.

Resentfully, Mr. Gooster returned to his bed, and so passed the first day of his quarantine.

He spent the second morning in fretting aimlessly about the house. In the afternoon Mrs. Gooster sorrowfully mentioned that restlessness was one of the first symptoms for which she had been told to keep a look-out.

"Then for goodness' sake find me something to do!" begged Mr. Gooster savagely.

Nothing loth, his wife brought several distressed household appurtenances to his notice, and, until a late hour that night, the skipper wrestled with odd jobs. And so passed the second day of his quarantine.

On the third morning the skipper gave his spouse some business items that needed attention; a feeling of weariness from the previous day's exertions made him rather alarmed about his health, and he had no desire to break his quarantine in her absence.

He rested all that day, but next morning Mrs. Gooster said she detected a fishy look in his eyes, and told him that this was a symptom she prayed never to see. She mentioned widowhood so often that the skipper, his fears becoming more acute, voluntary went round the house, finding more and more odd jobs to perform in order to free his system from pernicious microbes. By the evening of the fifth day the abode of

RUMELY AUTOMATIC HAY PRESS

Feeds Itself



HERE is the new Rumely Automatic Hay Press, with self feeder that saves one man's wages and board, does away with the dirty work of feeding and makes the press a paying proposition from the word "go."

Our self feeder is patented, it can't be used on any other press; it is an exclusive Rumely feature.

EXCLUSIVE FEATURES

The Rumely Automatic Hay Press has a number of other exclusive features—features that give it the greatest capacity and make it the easiest-to-operate press you ever saw or heard of—features that insure a square, smooth, evenly packed bale composed of any kind of material that can be baled and a bale that will bring top prices for quality.

Get a Rumely Automatic Hay Press and a Rumely OIL-TURN Motor mounted together on a serviceable steel truck; it is the outfit you want for custom baling; the one that will bring you the business.

Ask for the Rumely Hay Press Book—today.

Rumely Products Co., Inc.
1981 Dufferin Ave., Winnipeg, Man.

PATENTS TRADE MARKS AND DESIGNS

Write for booklet, circulars, terms, etc.

FETHERSTONHAUGH & CO.
FRED. B. FETHERSTONHAUGH, K. C. M. E.
GERALD S. ROXBURGH, B. A. Sc.
Portage Avenue, WINNIPEG.
209-10 Bank of Nova Scotia

CHEW MAPLE SUGAR TOBACCO

MILD, SWEET, MELLOW AND JUICY

Manufactured by
ROCK CITY TOBACCO CO.

Quebec Winnipeg

LOOK! THRESHERMEN AND FARMERS



This is the Jones Complete Belt Tool and Leather punch. This recently patented device will punch holes and repair belts without the use of hammer or any other tool whatever.

It will punch holes any size from 1/4 in. to 1/2 in. This fact alone fills a long felt want.

For the repair of harness, etc, this tool is indispensable. Send 50c. and we will mail one of these useful tools, postpaid with your own name and address stamped on blade. Every tool guaranteed.

The International Knife Co., St. Catharines, Ont.

The Occidental Fire Insurance Co.

Head Office: WAWANESA, MAN.

A. NAISMITH, President R. M. MATHESON, Vice-President
A. F. KEMPTON, Sec. and Mgr. C. D. KERR, Treasurer

Subscribed Capital \$500,000.00
Security to Policy-holders 640,817.29

Full Deposit with Dominion Government
Agents wanted in unrepresented districts

Alex. Naismith, Pres. Wm. Paterson, Vice-Pres. C. D. Kerr, Treasurer

The WAWANESA MUTUAL INSURANCE COMPANY

HEAD OFFICE: WAWANESA, MAN.
A. F. KEMPTON, Secretary-Manager

Amount of Insurance in force Dec. 31st, 1911 \$21,247,598 00
Assets over Liabilities 522,944.15

THE NUMBER OF FARMERS INSURED 21,543

The Largest Farmers Mutual Fire Insurance Company in Canada. Agents wanted in unrepresented districts

In Answering Advertisements

In this Magazine be sure and mention where you saw the advt. Remember we guarantee the reliability of all our advertisers.

Take Good Care Of The Colts

It's cheaper to raise colts than to buy horses. But it's costly if you lose the colts. Keep a bottle of Kendall's Spavin Cure handy. For thirty-five years has proved it the safe, reliable remedy for spavin, splint, curb, ring-bone, bony growths and lameness from other causes.

Kendall's Spavin Cure

Fort William Ont.
Dec. 15th, 1911.

"I have cured one Spavin with your Spavin Cure, and am now trying it on another with good results. I am highly pleased with your medicine."

F. WINTERS,
\$1 a bottle—6 for \$5.
Ask druggist for free copy of "A Treatise on the Horse" or vice



Dr. B. J. Kendall Company 72
Eneburg Falls, Vermont, U. S. A.

G.O.W.L. BRAND

POST PICKLE

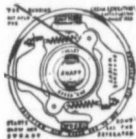
A Wood Preservative of Exceptional Penetrative Power

POPULAR, SPRUCE OR FIR POSTS TREATED WITH IT

WILL HAVE DOUBLE THE LIFE

Farmers Can Treat Their Timbers at Home

FULL INFORMATION FROM
THE CARBON OIL WORKS, LIMITED
Winnipeg - Manitoba



STRITE GOVERNOR PULLEY CO., 310 S. 3RD ST., MINNEAPOLIS

Dealers Increase Your Sales!

Take a Look at the Strite Governor Pulley. It's the original and the only thing for driving cream separators with gasoline engines. Once tried, always used. TRY ONE. More in use than all others combined. Costs no more than imitations. Also, ask about our friction clutch pulleys.



WELL DRILLING

GUS PECH
FOUNDRY AND
MANUFACTURING
COMPANY

Manufacturers of the Celebrated
MONITOR WELL AUGERS AND DRILLS

Write for prices and Illustrated Catalogue.

L. H. MARS, IOWA U.S.A.
Branch House:
REGINA, SASK.

ERZINGER'S No. 2 CUT PLUG

Leads them all. It's the Best Dollar Tobacco sold anywhere.

JOHN ERZINGER
McIntyre Bldg. - 293 Portage Ave.
Phone 69 Phone 2677

the Gooster's was a transformed dwelling; every thing had been mended, cleaned or furbished up.

The skipper breakfasted early on the morning that the Dandy was due to sail again, and went briskly off to the wharf. Reaching his deck, he found himself surrounded by the crew, all uttering remarks of sympathetic and congratulatory character.

"I'm all right, thank 'ee, lads," said the skipper. He singled out the cook. "But you've been 'aving a rough time, ain't you, 'Ector?" he asked.

"Me, sir? No I've been all right."

"Why, they told me, you was awful bad and—"

"No, sir, it was you they told us was 'awful bad.'"

"Me?" cried the skipper.

"Yessir," came the chorus.

"You was so ill, we was told, that we wasn't to go near your 'ouse."

"'Oo told you that?"

"Why, your missis, sir. She said you was so ill that was why she was doing all your business for you."

"Wait a bit!" begged the skipper. "Didn't you 'ave a young chap from the 'Ealth Department down 'ere to see 'Ector? A young chap with spectacles, and clean-shaven, got yellow 'air and a frock-coat."

"We did 'ave that young chap down 'ere, sir," he was told. "But 'e ain't got nothing to do with the 'Ealth Department. 'E only came down 'ere to tell us 'ow bad you was, the first morning."

"But 'oo is 'e?" demanded the skipper.

Why, 'e lodges with Mrs. Bask, your wife's friend sir; 'e's a medical stoodent. Larky sort of young chap, I should think," was the reply. "We thought, seeing 'e was your wife's pal's lodger, 'ed be bound to know what was 'appening."

For a long, long time there was silence. Mr. Gooster, thinking over the wasted energies of his last few days, swelled with bitter indignation.

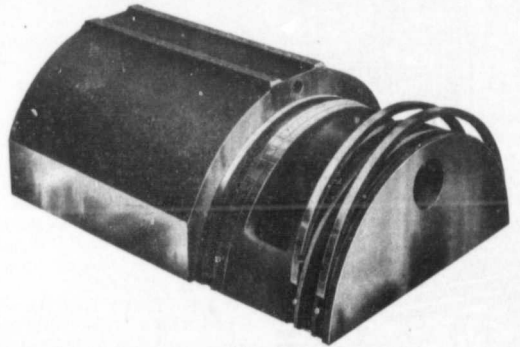
"Oh, well, I can't go back now and 'ave it out!" he said, choking down his emotion. "The tide's on the turn, and we can't miss it. But—"

The cook, watched him, began to put two and two together.

"Seems to me sir," he ventured confidentially, someone's been a-talking."

"Yes, and I believe that someone was you!" roared the skipper. And I'll do some talking to you later on! I'll teach you to come interfering between man and wife! You want keeping under, my lad, and you'll get this trip. Someone's got to suffer for this—as well as me!"

Why the Demand for Gould Balance Valves on traction engines in the field?



Because no engine is complete without a balance valve. No engine gives the best service that is in it with a common 'D' slide valve. No engine that wastes from 18 to 30 % of its power performing a needless service is giving the best there is in the engine to its owners; and if some manufacturers hesitate to put a Gould Balance Valve on their engines their customers will do it themselves, for you cannot keep them from having the best there is. They are doing it every day. One customer ordered his fifth engine equipped with this valve, another his fourth, while we have hundreds of customers who have equipped their second and third engines with a Gould Valve. These men tried the valve and know what it will do. They are not guided by the musty records of by-gone ages regarding the benefit of a Gould Balance Valve to their engine, but like all the notable achievements of today, defy the predictions of failure by realization.

Our Catalogue and "Evidence" tells you what to do. Send for them.

Gould Balance Valve Co., Kellogg, Iowa
Geo. White & Sons, Ltd. London, Ontario
Manufacturers in Canada

There Is No String To This Pipe



It is absolutely FREE to subscribers who take advantage of this offer

The Weekly Free Press and Prairie Farmer
Winnipeg

The Canadian Thresherman and Farmer

Both including Pipe for the nominal sum of **\$1.25**

The lowest price at which these two papers will be offered this year is \$1.25. It makes no difference whether you take the pipe or not, the price is the same. While the supply of these pipes lasts they will be given away free to all who subscribe. Better get your order in early and be sure of a good smoke.

1911.

Weekly Free Press and Prairie Farmer,
Winnipeg, Man.

Find enclosed \$1.25, for which send the "Weekly Free Press and Prairie Farmer" one year, and the "Canadian Thresherman and Farmer" one year, together with pipe, to the following address:

Name _____
Town _____
Province _____ P.O. Box _____

Well Drilling Machines

Over 70 styles and either deep or any kind of well on wheels or on glaces or horse styles for drilling shallow wells in any kind of soil. With en- powers. Strong, simple, durable. Any mechanic can operate them. Send for catalog.

WILLIAMS BROS.
ITHACA, N. Y.

Imperial Bank

OF CANADA
Established 1875

Capital Subscribed \$ 6,000,000
Capital Paid Up 6,000,000
Reserve Fund 6,000,000
Total Assets 72,000,000

BRANCHES IN WESTERN CANADA

Province of Manitoba
Brandon Portage la Prairie Winnipeg

Province of Saskatchewan
Halgoin Broadview North Battleford
Northern Fort Qu'Appelle Prince Albert
Saskatoon Moose Jaw Regina
Wilkie Hague Wynyard

Province of Alberta
Athabaska Landing Edmonton Strathcona
Banff Lethbridge Wetsaskwin
Calgary Red Deer Rediff

SAVINGS DEPARTMENTS AT ALL BRANCHES

Interest allowed at Current Rates
Drafts and Letters of Credit issued available in all parts of the world.

Winnipeg Branch
N. G. LESLIE,
Manager.

INVENTIONS

Thoroughly Protected in all Countries

EGERTON R: CASE
P.M. Chart, Inst P.A. London.

Specialist in procuring Canadian and Foreign Patents

Dept. H., Temple Bldg., TORONTO

BOOKLET AND DRAWING SHEET ON APPLICATION

The Pump That Pumps

SPRAY PUMPS

Double-acting, Lift, Tank and Spray

MYERS' PUMPS

Stare Ladders, Etc.

HAY TOOLS

Glass Valve of all kinds. Write for Circulars and Prices.

Myers Stayon Flexible Door Hangers

with steel roller bearings, easy to push and to pull, cannot be thrown off the track—hence its name—Stayon. Write for descriptive circular and prices. Exclusive agency given to right party who will best in quantity.

F. E. MYERS & CO.
Ashland, Ohio.

THE ORIGINAL PECH

Boring Machine

THE OLD RELIABLE Easiest to operate Bore Faster Most Durable

Improved Up-to-date Drilling Machines

DESCRIPTIVE CATALOGUE FREE

Cherokee Mfg. Co., Dept. A, Cherokee, Iowa.

JOKES

"But surely you are the man whom I gave some pie a fortnight ago?"
"Yes, lily, I thought p'raps you'd like to know I'm able to get about again."

Sorry He Spoke.

A man who moved to the country and bought a farm was just getting settled, when a man with a book under his arm leaned over the fence and said:—
"Just bought this land?"
"Yes."
"Very fine farm. Must be worth £400."
"More than that. I paid £500 for it. Then there are indications of coal, on it, too, which are alone worth £1000."
"You don't mean it?"
"Yes, sir, there's coal on it. Then the new railway is going across one corner. I consider my farm worth £3000 of any man's money. I wouldn't take a penny less. What are you putting down in the book?"

"Oh, nothing much. You see, I am the tax assessor. Other farms round here are not worth more than £300 or £400; but I've just put yours down at £3000 because you insist. Good-morning, sir! Glad you've moved into the neighbourhood, and hope you'll stay some time."

His Own Medicine.

A tramp was one day strolling through a wood that belonged to the Duke of Norfolk. The duke happened to meet him, and said:
"Do you know you're walking on my land?"
"Your land?" said the tramp. "Well I've got no land of my own: so I'm obliged to walk on somebody's. Where though, did you get this land?"
"I got it from my ancestors," said the duke.

"And where did they get it from?" went on the tramp.
"From their ancestors," said the duke.
"And where did their ancestors get it from?"
"They fought for it."

"Come on then," said the tramp, fiercely, as he pulled off his coat, "and I'll fight you for it."

But the duke, retreating hastily, declined to accept this fair offer.—Washington Star.

Stayed Indoors.

"Sixteen shillin' a day did they charge me for my room at the hotel in Lunnon!" exclaimed Sandy, indignantly, on his return to Croburch' from a sight-seeing expedition in the Metropolis.
"Ou, aye, it wasna cheap," agreed his friend Sanders; "but ye must 'a had a gey fine time seen' the sights."
"Cein' the sights!" returned Sandy.
"I dinna see a sight a' the time I was in Lunnon. Man, ye dinna suppose I was going to be charged that much for a room, an' then no get the proper use o' it!"

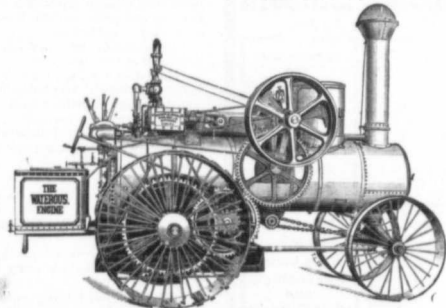
A Too Forceful Sermon.

"In one of the early Scotch settlements in Canada, the men took turns in conducting Sabbath services. In course of time it came to the turn of Lachlan McGillivray who had been a lumberman. McGillivray took as his topic the story of David and Goliath. Warning up with his subject, he rose in excitement to the climax. "The stone from wee David's sling was guided to the head of the giant, and the stone pierced his brain, and he fell; David rushed up—and—and—tore his sword from his scabbard, and whirled his sword round his head, and he cut off his—his—d—d—d head," thus using the graphic language of the river driver. This was 'big Lachlan's' last invitation to conduct the service."

A Welcome Relief.

"There is one time of year when I really enjoy work."
"And when is that?"
"For two or three days after coming back from vacation."

Rebuilt Threshing Machinery



SPECIAL NOTICE.

Owing to the large increase in our business of manufacturing SAW MILL MACHINERY, ENGINES, BOILERS, FIRE ENGINES, and PULPWOOD MACHINERY we were compelled to withdraw from the manufacturing of a line of threshing engines. We however have a few second hand machines to dispose of, as per the following list to clear out our stock, and these we are offering at **SPECIAL BARGAIN PRICES.**

REPAIRS.

We wish to assure any intending purchasers that we will always carry our usual stock of repairs for our engines and that the Goodison Company manufacturers of the McCloskey Thresher have arranged an agency with the International Harvester Company, and this company will carry a stock of repairs for the thresher.

We draw special attention to the condition of the following machinery, all machines have been thoroughly rebuilt in our own repair shops, worn parts replaced, and all machines thoroughly fitted and put in first class working condition and repainted. Call and examine and assure yourself before purchasing elsewhere.

PLAIN STEAM ENGINES.

- 1—14 H.P. Watrous Plain Engine with Locomotive Boiler \$ 600.00
- 1—17 H.P. Watrous Engine with Locomotive Return Tubular Boiler 600.00
- 1—18 H.P. John Abell Engine with Locomotive Boiler 650.00

PLAIN GASOLINE ENGINES.

- 1—20 H.P. Watrous Portable Gasoline Engine (good as new) 950.00
- 1—20 H.P. Watrous Portable Gasoline Engine (good as new) 950.00

STEAM TRACTION ENGINES.

- 1—25 H.P. Watrous Single Cylinder Engine with Locomotive Return Tubular Boiler 1300.00
- 1—26 H.P. Watrous Double Cylinder Engine, Locomotive Boiler 1600.00
- 1—26 H.P. Watrous Double Cylinder Engine, Locomotive Boiler 1600.00
- 1—30 H.P. Watrous Double Cylinder Engine, Locomotive Boiler, Rear Mounted, 39 inch Face Road Wheels 1800.00
- 1—30 H.P. Watrous Double Cylinder Engine, Locomotive Boiler, Rear Mounted, 39 inch Face Road Wheels 1800.00

THRESHERS.

- 1—36 x 56 American Peerless 18 inch Carriers, Self Feeder, Short Weigher and Bagger 450.00
- 1—36 x 60 McCloskey, Side Fan Blower, Rich Feeder, Perfection weigher 750.00
- 1—40 x 60 McCloskey, Side Fan Blower, Hawkeye Feeder, Perfection Weigher 750.00
- 1—40 x 60 McCloskey, with Side Fan Blower, and Perfection Weigher 675.00
- 1—36 x 60 McCloskey with Side Fan Blower, Perfection Weigher, New Rich Feeder 775.00

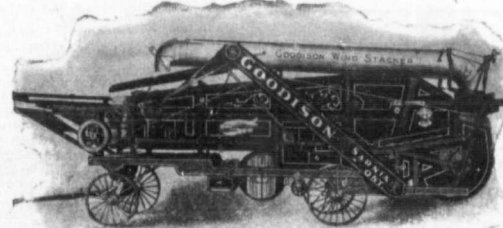
COMPLETE THRESHING OUTFIT.

- 1—26 H.P. Watrous Double Cylinder Traction Engine 2500.00
- 1—40 x 60 McCloskey Thresher with Rich Feeder, Goodison Side Fan Blower, and Perfection Weigher. L.o.b. cars Cayley, Alta. Sold as is. Not repaired.

SUNDRIES.

- 1—New Perfection Wagon Elevator 40.00
- 1—Power Jack Wood Frame 5.00
- 1—Ham Headlight 5.00
- 1—Cassell Belt Guide 10.00
- 1—Set Separator Wheels and Axles, Iron Wheels 30 x 8 and 34 x 8 30.00
- 1—Mangel Single Connection force Feed Pump 10.00
- 1—No. XL 90 Ejector 1 1/2 inch steam 2 inch discharge 5.00
- 1—No. 1 Willford Three Roll Chopper 250.00

WRITE FOR FURTHER INFORMATION.



The Watrous Engine Works Co. Ltd.
Winnipeg, Manitoba.

THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

Gombault's Caustic Balsam IT HAS NO EQUAL

For... is a penetrating... and for all Old Sores, Bruises, etc.

A Perfectly Safe and Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Strains, Lumbago, Diphtheria, Sore Lungs, Rheumatism, and All Stiff Joints.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use.

REMOVES THE BORENESS—STRENGTHENS MUSCLES! One bottle Gombault's Caustic Balsam did my rheumatism more good than \$100.00 paid in doctor's bills.

JOKES

Our English Customs.

It was the polite Frenchman's first visit to a party in England, and he was very anxious to do the right thing.

Unfortunately her husband had been a witness of the occurrence. "How dare you, sir, take the liberty of kissing my wife? And before me, too" was his indignant exclamation.

Circumstantial Evidence.

Farmer: "The city people that engaged the room yesterday are going to stay all the season." Friend: "Did they say so?" Farmer: "No, but they asked me if we had a bathtub."

He Wanted to Learn How.

Burglar: "Don't shoot me, sir." Householder: "On one condition, that you tell me how you got in without waking my wife."

How Well He Knew.

In school a boy was asked this question in physics: "What is the difference between lightning and electricity?" And he answered: "Well, you don't have to pay for lightning."

He Knew.

Teacher: "Now, Tommy, what is a hypocrite?" Tommy: "A boy that comes to school with a smile on his face."

Another Match.

On the death of his first wife a literary celebrity of the South erected an elaborate memorial to her on which was inscribed the sentiment, "The Light of my Life has gone out." The late Bishop Wilmer, of Alabama, pointed out the memorial to a friend who read the words and then asked, "But he married again, didn't he?" "Yes," replied the bishop, "he did. You see, he struck another match, as it were."

On Foot.

A small girl, aged five, was studying intently a picture of the Garden of Eden. At last she said, in a perplexed voice, "But, mother, where is the carriage?" "Carriage?" exclaimed her mother in great surprise, "What can you mean, dear? There was no carriage in the Garden of Eden." "But," remonstrated the child, "you told me that the Lord drove Adam and Eve out of the Garden."

Pardonable Pride.

A Boston lady attended a funeral in a country church a short time ago. After the singing of a hymn which was strikingly melodious and appropriate, a rustic male friend who was seated beside her, remarked, with an air of intense local pride: "Beautiful hymn, isn't it?" The corpse wrote it."

Out of the Mouths of Babes.

Teacher: "What is an engineer, Tommy?" Tommy: "A man that works an engine." Teacher: "That's right. Now, Johnny, what is a pioneer?" Johnny: "A woman that works a piano."

Let Us Show You FREE How To Cure Your Lame Horse FREE

HERE'S a fair and square proposition to every man who owns, breeds or works horses. We offer to tell you how to cure a horse of lameness—absolutely free.

Mack's \$1,000 Spavin Remedy Is Guaranteed to quickly and permanently relieve the very worst case of Bone or Box Spavin, Ringbone, Thoroughpin, Curb, Capped Hock, Shoe Boli, Sprung Knee, Lacerated and Ruptured Tendons, Sweeney and all other forms of lameness affecting a horse.

Relieves Cases Formerly Considered Incurable

No matter how long your horse has been lame, or that the nature of his lameness, you can absolutely rely upon Mack's \$1,000 Spavin Remedy.

\$1,000 Warranty Bond

Write for a sample of this bond and other valuable information about lame horses. Mailed free upon request.

Your Druggist Will Obtain Mack's \$1,000 Spavin Remedy For You—

If you ask him. Price \$2.50 per bottle. If he refuses, remit \$2.50 to us and we will see that your order is filled without delay.

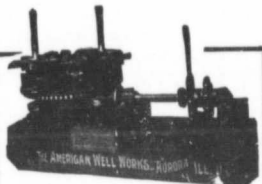
Free Book—"Horse Sense"

Send us the Free Diagnosis Coupon, get absolutely free a copy of our book "Horse Sense."

FREE DIAGNOSIS COUPON



On picture of leg mark with an X just where swelling or lameness occurs. Then clip out coupon and mail to us with a letter, telling what caused the lameness, how long horse has been lame, how it affects the animal's gait, size of horse, etc.



\$1500 to \$5000 Per Year

have been made by hundreds of people operating the "American" Drilling Machines. 40 years' experience, 50 regular styles and sizes, and the output of the world's largest manufacturers of this kind of machinery make

"AMERICAN" MACHINES STANDARD

Made in types for every kind of earth and rock drilling or mineral prospecting, equipped with any power, or operated with your traction engine. Our new 1912 page Catalog Free.

THE AMERICAN WELL WORKS

General Office and Works: AURORA ILL., U.S.A.

Chicago Office: First Nat. Bk. Bldg.



HOT IRON IN 3 MINUTES

Every housewife needs a WAMA Spirit Iron. Burns, mottled spirits. Double nickel finish—never tarnishes, never gets out of order, guaranteed. Price includes delivery. Send for Circular. Agents wanted.

WAMA SPECIALTY CO. WINNIPEG.

Oxy-Acetylene Welding

Save your cracked or broken castings from the scrap heap. We weld cylinders, crank shafts, gears, levers, etc., retain original form and strength at a small cost. Metal added to worn out parts. All metals welded satisfactory.

The Manitoba Welding & Mfg Co. 62 1/2 Princess St. Winnipeg

Lyman Bros. & Co., Distributors to Drug Trade

Allan, Killam & McKay

Insurance, Financial and Real Estate Agents

BULMAN BLOCK, WINNIPEG

Fire, Life, Marine, Accident, Liability and Burglary Insurance

GUARANTEE BONDS - - - MONEY TO LOAN

The Vulcan Iron Works

Winnipeg LIMITED Canada

MANUFACTURERS OF Boilers and Engines, Elevator and Milling Machinery, Iron and Brass Castings

JOBBERS OF Steam Fitting Supplies, Architectural and Bridge Material, Steam Pumps, Rubber Belting, Packing and Hose, Pipe and Supplies, Boiler Plate and Sheet Iron Boiler Tubes, Etc., Etc.

AGENTS FOR FAIRBANKS, MORSE & CO., Gasoline Engines, Pumps and Scales HUNTLY MANUFACTURING CO., Monitor Grain Cleaning Machinery TAYLOR FORBES CO., Sovereign Radiators and Boilers

FOR SALE AND EXCHANGE

Conducted for the benefit of Dealers, Threshermen and Farmers who have anything to sell or exchange. Three cents a word for each insertion.

ENGINEER MACHINIST—Wants position in job for threshing season. Can do own repair and capable of keeping engine in first class condition. Write J. T. H. c/o Canadian Thresherman and Farmer, Winnipeg.

BUYERS ATTENTION.

GEORGE WHITE & SONS COMPANY. LIMITED, BRANDON, MAN.

ENGINES

- 20 H.P. White tractors thoroughly rebuilt and in good shape, each... \$1600.00
Second Hand
20 H.P. American Advance tractor, \$ 700.00
20 H.P. Minneapolis tractor, \$ 600.00
20 H.P. Brandon Cornell, Portable, \$ 400.00
20 H.P. White tractor, \$1200.00

- SEPARATORS—Second Hand
Alman & Taylor 28x50, all attachments, \$400.00
20x50 Goodson separator, all attachments, \$400.00
20x50 Goodson separator, all attachments, \$300.00
20x50 American Abell, all attachments, \$325.00
20x50 Felable separator, all attachments, \$300.00
32x50 Great West Separator, all attachments, \$300.00
20x50 Great West Separator, all attachments, \$300.00
20x50 Challenge separator, thoroughly rebuilt, all attachments, each, \$800.00
Write us re new goods—We have the best.

AS ENGINEER wants position on Hart-Parr Rumely Oil Pull. Thoroughly experienced. Not dependent throttle puller! J. H. Nugent, Weymouth, Sask.

TEAM ENGINEER wants position plowing on 1912, Saskatchewan License. Strictly temperate. References. State make and size engine. Chas. L. Simpson, Box 834, Regina.

FOR SALE—Two portable steam engines, 12 1/2 H.P., also two separators, 30 Bell City and Sawyer Casey, all in good shape, \$150 each. Will be sold. G. T. Grant, Ituna, Sask.

CENSURED ENGINEER MACHINIST (not a stalle puller) would like a plowing or threshing job this season. State wages. Apply Box 284, care of The Canadian Thresherman and Farmer, Winnipeg.

H. F. FAIRBANKS-MORSE Gasoline Engine. Worked only 12 days. Suitable for plowing. Also 32-50 Goodson Separator, Feeder, Bagger and Blower. Price for all plowing & barrel gasoline Tank \$3500. Terms cash. Wm. Paterson, Wawanesa, Man.

FOR SALE—One 26 H. P. S. M. Tractor engine, in first class shape. Box 70, Tuxford, Sask.

CHOPPING OUTFIT FOR SALE. A 15 H.P. Stationary International Gasoline Engine, inch plate chopper, elevators, belting, pulleys and scales. Apply Box 137, Camrose, Alta.

FOR SALE—40 H. P. Flour City engine and plow John Deere gang. Price and terms on application to Lock box 127, Elbow, Sask.

EXPERIENCED ENGINEER wishes job on steam plowing outfit for coming season and will be running during threshing season. Apply stating name to D. McDonald, Red Jacket, Sask.

WANTED Position on steam plowing outfit for the season of 1912 as engineer and obliging driver truly, R. H. Hargest, McLean, Sask.

HOW TO START YOUR GAS ENGINE in the coldest weather first clip. No hot water, save gas. Formula 50c. For your information, this formula is a real, very high explosive, will vaporize in coldest weather. I use it myself at all times in cold weather. J. W. BARON 2112 Louise, Brandon.

WANTED—Position as engineer on steam tractor, plowing or plowing, scrub, industrial and residential. Fifteen years experience on traction engines. Emergency repairing performed, satisfaction guaranteed, references furnished. C. T. O. Hall, Sheverson, North Dakota.

FIREMAN wants position on Steam Plowing or threshing engine, preferably in Sask. In replaying case state wages and probable length of run. Box 3, Sike, Blanche P. O., Que.

FARMERS WANTED. We have direct buyers, don't pay commissions. Write describing property, naming lowest price. We help buy—locate desirable property. Free. American Investment Association, 15 Palace Building, Minneapolis, Minn.

WANTED—Position as engineer on Hart-Parr portable engine, state wages. Apply J. H. Cogan, Caron, Sask.

FOR SALE OR EXCHANGE FOR AUTOMOBILE OR HORSES
One 18 H. P. John Abell Simple Tractor Engine McDonald and McCrindle, Glen Ewen, Sask.

FOR SALE—One J. I. Case, 20 H.P. Tractor Engine, only used a short time in good shape; one 32-54 J. I. Case steel separator in good shape, will sell outfit for \$1800.00. Will take stock in payment or will trade on a gasoline tractor. Apply Box 10, Laidler, Man.

BE AN ENGINEER—The Heath School of Tractor Engineering, B.C. correspondence offers you a thoroughly practical course in Traction and Stationary Steam Engineering for spare time home study. Send for prospectus and full information to E. H. Heath Co., Limited, Winnipeg.

FOR SALE—One Gould Balance valve for 22 or 25 H. P. Gas-Scott engine. J. Reynolds, Yellow Grass, Sask.

FOR SALE—30 H. P. Flour City gasoline tractor engine, price \$2400.00, plowed 400 acres. A good as new for terms, etc., write to Glennie & Hodger, Macdonald, Man.

FOR SALE—Hawleys Band Cutter and Self Feeder used one season. Size 36 inch. First fifty dollars takes it. G. W. Vincent, Cor. Arlington and Ellice, Winnipeg.

WANTED—Engine gang six or eight bottoms must be in good repair. Box 70, Morse, Sask.

FOR SALE—Case 25 H. P. engine, fitted with contractor's tank and coal bunkers. Engine was refitted this fall and a new cylinder and steam chest put on. Is in 1st class running order. Also case separator, 44 x 66, in good repair. \$1600 buys this outfit, or will sell separate. This is a bargain. Apply J. T. Taylor, 775 Corydon Ave., Winnipeg.

FOR SALE—One 33-inch Waterloo Feeder—used 24 days. Cor. Henrichs, Box 18, Lowe Farm, Man.

FOR SALE—Lots in 34 and 35 St. James, close to several large manufacturing industries. Price \$250.00 each. Easy terms. Box 3079, Winnipeg.

FOR SALE—We have a few lots left in Transcona Gateway, the best buying in the district. Prices \$6.00 to \$10.00 per foot. Hurry if interested. Box 3079 Winnipeg.

FOR SALE—Five acre improved fruit ranch on the (Manitoba) Lake, B.C. For sale or exchange for Winnipeg property. Box 3079, Winnipeg.

WANTED—Position as Engineer on a steam traction outfit. Fully experienced. Can furnish references. Address J. E. Peatch, Clava, Man.

WANTED—Gasoline Tractor engineer for "Flour City 40." Must have had traction experience. References required. Good pay. Also want woman cook for cottage; also man for garden and dairy. W. H. Pawson, Jr., Coaldale, Alta.

TWENTY HORSE GAS ENGINE, Separator, five furrow plow, stable and breaker bottoms, twenty-five shares. First class running outfit. References required. Good pay. Also want woman cook for cottage; also man for garden and dairy. W. H. Pawson, Jr., Coaldale, Alta.

TWO MECHANICS, experienced in Gasoline Tractors, desire positions running Rumely, International, etc. Both have worked with Rumely and International Companies, understanding thoroughly the construction and maintenance of tractors. Communicate with Geo. Hart, 707 St. Seville Ave., Oak Park, Ill.

FOR SALE—FOR SALE—John Deere engine gang & breaker bottoms, 1910 make, in first class condition, broke 300 acres. Apply to Neil Wright, Box 185, Wellwood, Man.

FOR SALE OR TRADE FOR GOOD LAND —32 H.P. Double Cylinder Steam Engine with 10 Bottom Cokeshuff Plow. All in first class shape. Elias Gjertson, Warren, Man.

WANTED—Position on steam plowing outfit, firing preferred, experienced. Frank Campbell, Marquette, Man.

FOR SALE—Imported English Bull Dog "Lucky Barges," big winner, Winnipeg Winter Show 1911—Cheap. M. Cochran, Imperial Bk. Winnipeg.

WANTED—Position as Engineer on steam traction outfit for threshing, or would take both jobs. Can do own repairs. Nine years experience. Best of references and certificate for Sask. Am strictly temperate. Address E. F. Sharpe, Maple View.

WANTED—Gasoline Tractor, Separator, and Plows, one or all. Write giving Make, Size, Age, Price and terms to Box 81, Daysland, Alta.

LIVE IN A MILD, WARM CLIMATE. The Fraser Valley of British Columbia is the big city of Vancouver. Grass greener than in any part of the world. Residents have running water, bathrooms and telephones in their houses. Splendid high schools and churches. Fast electric train service into Vancouver. Railroad station only a quarter of a mile away; splendid driving roads. Farmers can sell their 5 acre farm for \$50 to \$200 down the balance \$10 to \$20 a month. If you want to know just how they make big money do write me. W. J. Kerr, Ltd., 1711 Columbia St. et. New Westminster, B. C.

FOR SALE—Threshing machine, also engine gang plow. For particulars apply to W. L. Barker, Box 1714 Calgary.

WANTED—Catalogues of Steam and Gasoline Threshing and Plowing Outfits. Address G. H. Lewis, Coxy Nook, Sask.

FOR SALE—Massey-Harris warehouse in first town near Saskatoon. Agency guaranteed to good terms. Apply care of Canadian Thresherman and Farmer.

WANTED TO BUY Steam Traction Engine about 20 H. P. Address W. W. Kennedy, Magyar, Sask.

GAS ENGINEER desires position with reliable farmer. April to November, operating engine. Box 171, Lumsden, Sask.

ENGINEER WANTS POSITION on ploughing outfit for coming season. Holds third class certificate, four seasons' experience. Strictly temperate. Apply to R. McGhie, Caron, Sask.

WANTED—Position on plowing engine for summer as fireman. Am holder of diploma from Heath School of Engineering. By correspondence, send for prospectus and full information to H. E. McMahon, Box 11, Kinley, Sask.

FOR SALE—Avery 1911 model 30 h.p. Alberta special under-mounted engine, equipped for plowing, Cokeshuff engine, rear 8 bottom. Both run 8 days. Also new 38 x 60 Avery separator, with feeder and blower. All for \$1,900.00 cash. No trade considered. Davy C. Purfurt, St. Paul Minnesota.

160 ACRE FARM FOR SALE OR TRADE—For Traction Plowing outfit. Land is quarter mile from town of Ladysmith, Man. Andrew Dewar Hanlan, Man.

FOR SALE—Small separator complete with all attachments. \$400 cash. Box 13, Welby, Sask.

WANTED—Gasoline-Keroene Tractor. Write giving make, size, age, price and terms. Box 24, Colonsay, Sask.

FOR SALE

- No.
15 Horse Case Simple Portable Engine..... 20540
15 Horse Case Simple Portable Engine..... 10833
15 Horse Compound Portable Engine..... 13429
18 Horse Simple Traction Waterloo..... 823
18 Horse Portable Sawyer-Massey..... 8299
20 Horse Portable Sawyer-Massey..... 1419
20 Horse Simple Traction Sawyer-Massey..... 1116
20 Horse Simple Traction Engine, Case 7850..... 17721
20 Horse Simple Traction Engine..... 16912
20 Horse Simple Traction Engine..... 19019
J. I. CASE, THRESHING MACHINE COMPANY, Winnipeg, Canada

EXPERIENCED Licensed Engineer and Traction Plowman wants position for the coming season. Eight years practical experience in steam traction work. Will consider position in Man., Sask. or Alta. Charles Rondeau, Saint Leon, Man.

WANTED—By holder of second class certificate position as engineer; have also good knowledge of gasoline engines. Address care of Box 148 Osborn, Sask.

FOR SALE

SECOND-HAND AND REBUILT MACHINERY.
20 25 H. P. Simple J. I. Case engines.
One 15 H. P. Simple J. I. Case engine.
One 15 H. P. Compound J. I. Case engine.
One 20 H. P. Compound J. I. Case engine.
One 28x50 steel Case separator, with wind stacker, self feeder and weigher.
J. I. CASE THRESHING MACHINE CO., Calgary, Alberta.

FOR SALE

We have on hand at present a very full line of Rebuilt and Second-hand Engines and Separators which we are offering at attractive prices. Write us fully what you are thinking of buying, when we shall be pleased to tell you what we have and quote prices. All our rebuilt goods are sold under same guarantee as new ones and of course are carefully repainted and look exactly like new. If you write us at once we are sure to have the size you almost want.
We also have a thoroughly Rebuilt 35 H. P. Saw Mill Engine. Can hardly be distinguished from one which would be sold at bargain.
SAWYER-MASSEY COMPANY, LIMITED Winnipeg, Man.

BARGAINS

- 1-32 H.P. Port Huron engine, r-built and in first class shape.
1-American-Abell 20 H.P. engine, rebuilt.
1-Minneapolis Separator 44x72, rebuilt. With all connections.
1-32x54 Avery Separator complete, just rebuilt.
1-30x60 Avery Separator to be rebuilt complete.
2-Avery 30 H. P. double undermounted engines.
1-30 H. P. Northwest engine, not rebuilt, cheap.
1-T. Case 42x60 separator complete with all attachments.
1-42x70 Avery separator, will be rebuilt in time for fall work.
If you are interested in second hand goods, please write and let us know what you want as we are making deals almost every day, and feel sure that we can fix you out with almost anything you want, either in new or second hand goods.
HAUG BROS & NELLEMEOE Co. Ltd. WINNIPEG

FOR SALE

30-60-H. P. Gasoline - Keroene Engine. New, secured on a trade. Also eight-bottom Cokeshuff plow, slightly used—a bargain. Address, Caswell Manufacturing Co., Box 3079, Winnipeg, Canada.

FOR SALE Second hand repairs for Garr-Scott Separator, size 36-60. Will sell for less than half price. Fred Crump, Two Creeks, Manitoba.

FOR SALE Hart-Parr plowing engine, John Deere and furrow plow, all complete and in first class condition. Full particulars apply to H. J. Wilbur, Morris, Man.

For Sale—One 20 H.P. double cylinder Nichols & Shepard traction engine, and one 32 x 62 Red River Special tractor complete, feeder, weigher, blower, etc.; run five seasons; in good running order. Box 155 Russell, Manitoba.

For Sale at sacrifice price—Good second-hand steam plowing and threshing outfit located 32 miles south Winnipeg, Manitoba. Address Owner, Box 184 Mapleton, Blue Earth County, Minn.

For Sale—Hart - Parr engine, seven bottom Cokeshuff breaker; also stubble plow, three discs, three fire bars, wagon, harness, two buggies, blacksmith tools. Plowed but 2000 acres, now at New Dayton, Alberta. Guaranteed in good workable condition or no sale. Cost \$5000; now offered for \$2000 on good terms. Am no farmer. Dr. Beck, Clarkfield, Minnesota.

FOR SALE—A BARGAIN—Hawkeys Self-Feeder, 36 inches. Run only one season. In good condition. 555 Burnell Street, Winnipeg.

FOR SALE—32 H. P. Reeves Steam Engine only plowed 320 acres. Cheap for quick sale. May consider a trade. Apply, Reg. L. Armstrong 314 Donohoe Block, Tel. 1484, Regina, Sask.

A SNAP FOR SALE—One Double Cylinder 35 H.P. Geiser Steam Tractor. Have specially built for plowing and threshing, complete, in first class condition. Apply Burridge-Cooper Co., Ltd., Winnipeg.

GASOLINE TRACTOR FOR SALE—I have a first class 30 H.P. Gasoline Tractor for sale. This Tractor is manufactured by Kinnard-Haines, Minneapolis, whose Gas Tractors have specially over Diplomas and first class prizes at Agricultural Fairs than any other Tractor sold in Western Canada. Having disposed of my farm, I will sell this Tractor right. Buy now, as so have use of it for threshing season. Write for particulars, Address W. D. Weedy, Brandon, Manitoba.

SALESMEN WANTED—Threshermen or engineers to sell oils, greases, belts, packing, lacing, paints, etc. First-class opportunity for first-class men. O. L. Duty, Cleveland, Ohio.

FOR SALE—AT A BARGAIN—Seven Furrow Cokeshuff Gang, also six breaker bottoms, all in good shape, has plowed less than 600 acres—Address Box 31 Dominion City, Man.

Wanted now for Western trade, good men only, to sell our well known line of specialties in fruit and ornamental trees, shrubs, seed potatoes, etc. Outfit free, exclusive territory, pay weekly; whole or part time engagement. Write Pelham Nursery Company, Toronto, Ont.

WANTED—Experienced and Licensed Engineer wishes position on Gasoline Tractor for season with reliable party, industrious and sober. Address George Merking, Leopold, Sask.

ENGINEER WANTS POSITION on plowing engine in Sask. or Alberta. Had 4 years experience. Can do own repairing. Graduate of the Heath School of Engineering. State wages. Chas. B. McMain, Summerberg, Sask.

WANTED—Excellent opportunity for energetic salesman: highest salary paid to right men to represent an old established company and demonstrate and sell their Cream Separator. Reply in writing, stating salary, age, experience and references, to P. O. Box 255, Regina.

GAS ENGINEER would like position on plowing outfit. Thoroughly experienced. Emergency repairing performed. Best references. State make and size of engine. Wages. J. E. Hslop, Pelly, Sask.

FOR SALE

- 30 H.P. Bell Tractor Engine.
26 H.P. Bell Tractor Engine.
22 H.P. Bell Tractor Engine.
20 H.P. Sawyer & Massey Traction Engine.
18 H.P. Battle Creek Advance Traction Engine.
15 H.P. Case Compound Traction Engine.
20 H.P. Giant Traction Engine.
18 H.P. Case Portable Engine.
36 x 60 Imperial Separator, Stacker and Ruth Feeder.
32 x 50 Imperial Separator, Stacker and Ruth Feeder.
36 x 60 Avery "Yellow Fellow" Separator, Russell Stacker and Ruth Feeder.
28 x 44 Goodson Separator, stacker and feeder.
32 x 50 Dainey Separator, Stacker and Lindsay Feeder.
32 x 54 Port Huron Separator, Stacker and Feeder.
32 x 54 Challenge Separator, Stacker and Feeder.
8 H.P. Gasoline Engine.
10 H.P. Stationary Gasoline Engine.
1 Parsons Hawk-eye 36 inch Self Feeder.
3 Perfection Weighers and Loaders.
1 Dauntless Shingle Machine and Edger.
Address
ROBT. BELL ENGINE & THRESHING CO. WINNIPEG

WESTERN CANADIAN IMPLEMENT DIRECTORY

EXPLANATION.—First find the Implement Wanted and the Number opposite will be the Number of the Concern, in the first column, that handles it.

1—AMERICAN SEEDING & MACHINE CO., Winnipeg.

2—BEATTY BROS., Brandon.

3—BELL ROBT. ENGINE & THERESHER CO., Winnipeg.

4—BRANDON PUMP & WIND MILL WORKS, Brandon.

5—BRITISH CANADIAN AGRIC. TRACTORS, Saskatoon.

6—BUFFALO PITTS CO., Moose Jaw.

7—BRIDGE-COOPER CO., Winnipeg.

8—CANADIAN FAIRBANKS CO., Winnipeg, Calgary, Saskatoon, Vancouver.

9—CANADIAN HOLT CO., Calgary.

10—CANADIAN MOLINE FLOW CO., Winnipeg.

11—CANADIAN RUBBER CO., Winnipeg, Vancouver.

12—CANADIAN STOVER CO., Brandon.

13—CANADIAN SWENSONS CO., Winnipeg.

14—CASE, J. I. T. M. CO., Winnipeg, Regina, Calgary.

15—COCKSHUTT PLOW CO., Winnipeg, Regina, Calgary, Edmonton.

16—CRANE & ORDWAY, Winnipeg.

17—DEERE, JNO. PLOW CO., Winnipeg, Regina, Calgary, Edmonton, Saskatoon, Lethbridge.

18—DE LAYAL SEPARATOR CO., Winnipeg.

19—DOMINION SPECIALTY CO., Winnipeg.

20—DUIS GEO. & CO., Winnipeg.

21—EMPIRE CREAM SEPARATOR CO., Winnipeg.

21½—GARDEN CITY FEEDER CO., Regina.

22—GAS TRACTION CO., Winnipeg, Saskatoon, Calgary.

23—GENERAL SUPPLY CO., Winnipeg.

24—GOODYEAR TIRE & RUBBER CO., Winnipeg, Regina, Calgary.

24½—GOULD, SHAPLEY & MUIR, Winnipeg, Regina.

25—GRAY-CAMPBELL CO., Winnipeg, Brandon, Moose Jaw, Calgary.

26—HAUG BROS. & NELLERMOR CO., Winnipeg, Calgary, Regina.

27—HARMER IMPLEMENT CO., Winnipeg.

28—HART PARR CO., P. la Prairie, Regina, Calgary, Saskatoon.

29—HERO IMPLEMENT CO., Winnipeg.

30—HT. HARVESTER CO., Winnipeg, Regina, Calgary, Edmonton, Saskatoon, Brandon.

31—LISTER R. A. & CO., Winnipeg.

32—LOUDEN HARDWARE & SPECIALTY CO., Winnipeg.

33—MANTOBA WINDMILL AND PUMP CO., Brandon.

34—MASSEY-HARRIS CO., Winnipeg, Regina, Calgary, Edmonton, Saskatoon.

35—MAYTAG CO., Winnipeg.

36—McLAUGHLIN CARRIAGE CO., Winnipeg.

37—McRAE ALEX., Winnipeg.

38—MELOTTE CREAM SEPARATOR CO., Winnipeg.

39—MINNEAPOLIS STEEL AND MACH. CO., Regina.

40—MOODY MATHEW & SONS, Winnipeg.

41—NEEPAWA MFG CO., Neepawa, Regina.

42—NICHOLS & SHEPARD CO., Regina, Winnipeg.

43—ONTARIO WIND ENGINE & PUMP CO., Winnipeg.

44—PETRIE MFG. CO., Winnipeg, Calgary, Vancouver, Edmonton.

45—PIONEER TRACTOR CO., Calgary.

46—RAYMOND MFG. CO., Winnipeg.

47—REEVES & CO., Regina.

48—RENFREW MACH. CO., Winnipeg.

49—RIESBURY PUMP CO., LTD., Brandon.

50—RUMELY M. CO., Winnipeg, Calgary, Saskatoon, Regina.

51—SAWYER & MASSEY CO., LTD., Winnipeg.

52—SHARPLES SEPARATOR CO., Winnipeg.

53—STEVENS BRUSH CUTTER CO., Disbury.

54—STEWART SHEAF LOADER CO., Winnipeg.

55—TUDHOPE-ANDERSON CO., Winnipeg, Regina, Calgary.

56—VIRDEN MFG. CO., Virden.

57—VULCAN IRON WORKS, Winnipeg.

58—WATERLOO MFG. CO., P. la Prairie, Regina.

60—WATSON JNO MFG. CO. Wink. nipeg.

61—WESTERN FOUNDRY CO., Saskatoon.

62—WESTERN STEEL & IRON CO., Winnipeg.

63—WHITE, GEO. & SONS, Brandon.

63½—WINNIPEG CEILING & ROOFING CO., Winnipeg.

64—WINNIPEG RUBBER CO., Winnipeg.

BUGGIES AND CUTTERS.

Armstrong Buggies and Cutters... 15

Berry Buggies and Cutters... 33

Bayne Carriages Co... 37

Brockville Buggies and Cutters... 17

Dominion Carriages (Tractor Agents)... 6

Gray Buggies and Cutters... 25

Munro-McIntosh Buggies & Cutters... 10

Henry Buggies... 30

McLaughlin Buggies and Cutters... 36

Reinhardt Buggies... 17

Tudhope Buggies and Cutters... 55

CREAM SEPARATORS

Blue Bell... 30

Champion... 55

Dairy... 30

De Laval... 18

Empire... 21

Magnet... 34

Melotte... 31

National... 42

Sharples... 48

Standard... 48

CULTIVATORS AND STUMP PULLERS.

Climax Stiff Tooth Cultivators... 15

Cockshutt Cultivator... 15

Deere No. 2 Cultivator... 17

Deering Cultivator... 17

Elk (2 Horse) Cultivator... 17

Flury's Cultivator... 17

Frost & Wood Sculler... 17

Hilborn Stump Puller... 64

K. A. (2 Horse) Cultivator... 21

McCormick Cultivator... 30

Massey-Harris Corn Separator... 34

Paris Sculler... 49

Sylvester Cultivator... 55

Verity Cultivator... 34

DISC AND DRAG HARROWS.

Ajax Drag... 17

Bissell Disc... 17

Boss Drag... 90-92-60

Canadian Moline Boss Drag... 10

Canton Disc... 33

Case, A. L. Disc and Drag... 27

Cyclone Wheel Disc... 17

Cockshutt Disc and Drag... 15

Cockshutt Lever and Clip... 15

Deere Disc and Drag... 17

Deere King Boss Drag... 17

Deere Steel Boss... 17

Deering Disc Harrow... 30

Defiance Jr. Disc... 62

Deering Disc... 10

Emerson Disc and Drag... 64

Evans Disc... 1

Flury's Disc... 17

Flury's Clipped Drag... 17

Flury's Disc... 17

Fuller and Johnston... 61

Grand Detour Drag and Disc... 60

Hosier Wheel Disc... 1

International Diamond and Lever... 10

Massey-Harris Disc and Drag... 34

Moline Flexible Drag and Lever... 10

Nelson Disc and Drag... 64

Harris Disc and Drag... 49

Scott's Diamond Drag... 5

Superior Wheel Disc... 1

Universal Drags... 17

Universal Tongue Trucks for Disc Harrows... 17

Watson Drags... 60

Wilkinson Drag and Disc... 61

Windsor Disc... 15

FEED AND SILAGE CUTTERS AND PULPERS.

Cockshutt Feed Cutters... 15

Cockshutt Pulper... 15

Flury's Feed Cutter... 17

Geiser Feed Cutter and Grinder... 14

Massey-Harris Feed Cutter... 34

Watson's Feed Cutter... 60

Watson's Root Pulper... 60

FEED GRINDERS.

Brandon... 6

Chalmers... 27

Cyclone... 27

Diamond... 7

Daisy... 7

Flury's... 17

Flury's... 17

Gold Shapley & Muir... 15

Manitoba... 37

Maple Leaf... 44

Ontario... 43

Ontario... 43

Scientific... 60

Stover-Harris... 9

Vesot... 30

Victor... 60

Watson's Ideal... 60

GARDEN IMPLEMENTS, INCUBATORS AND POULTRY SUPPLIES.

Chatham Incubator... 25

Cyphers' Incubator... 60

Fountain Air Sprayer... 53

Iron Age (Garden Implements)... 53-61

Maxwell... 55

Cockshutt Pulverizer and Sub-Soil Packer... 15

Deere Land Roller... 17

Flury's Pulverizer... 17

Hilborn Land Roller... 10

Hilborn Pulverizer... 64

Moline Parallel Pulverizer... 10

Verity Land Roller... 34

Verity Pulverizer... 34

Watson's Flexible Pulverizer... 60

Watson's Land Roller... 60

Western... 61

CLEANERS, FANNING MILLS AND PICKERS.

Acme Pickler... 6

Automatic... 19

Chatham Fanning Mill... 25

Foster Fanning Mill... 17

Horo Fanning Mill... 20

Horo Pickler... 20

Superior Fanning Mills... 27

Webber Grain Cleaner... 10

Wender Fanning Mill... 15

GASOLINE ENGINES.

Avery Tractor... 26

Brantford... 6

Buffalo Rite, Portable... 6

Caters... 4

Case Tractor... 14

Fart-Parr (Stationary, Portable Traction)... 8

Flour City (Tractor)... 43

Fuller & Johnston... 41

Gate... 7

Gas Traction ("Big 4, 30")... 22

Geiser (Stationary, Portable Traction)... 7

Gilson... 48

Hart-Parr (Stationary, Portable)... 28

Holt Caterpillar... 7

Ideal... 24½

International (Tractor)... 30

International (Tractor)... 30

Level (Tractor)... 62

Manitoba... 33

Minneapolis... 20

Motor Workman... 60

Nelson (Stationary, Portable)... 42

Olio (Tractor)... 68

"Oil Pull" Rumely (Tractor)... 57

Olds... 45

Pioneer (Tractor)... 34

Rustin Procter (Tractor)... 5

Sawyer-Massey (Tractor)... 43

Sticker... 43

Stover (Stationary, Portable Traction)... 12

Sylvester... 38

Twin City "40" (Tractor)... 38

Universal (Gas Tractor)... 50

Watson... 58

Waterloo Boy... 7

HARVESTING MACHINES.

Champion... 30

Deering... 30

Frost & Wood... 15

Massey-Harris... 34

Massey-Harris Corn Harvester... 30

McCormick... 30

Noxon... 55

HAY LOADERS, HAY PRESSES, HAY TOOLS, MOWERS, RAKES, SWATHERS, HAY STACKERS AND SHEAF LOADERS.

Admiral Hay Press... 15

B.T... 2

Buffalo Hay Press... 21

Canton Hay Press... 30

Champion Hay Press... 30

Champion Mower... 30

Champion Side Delivery Rig... 25

Dain Hay Loader and Stacker... 17

Dain Hay Press... 17

Dain Side Delivery Rig... 17

Deere Hay Loader... 17

Deering Hay Stacker... 30

Deering Sweep & Hay Rack... 30

Deering Mower... 35

Frost & Wood Mower... 15

Tedder... 15

Leader... 15

International Hay Stacker... 30

International Sweep Rake... 30

International Hay Press... 30

Jenkins Sweep Rake... 10

Louden Hay Tools... 34

Massey-Harris Mower... 34

Massey-Harris Mower and Stacker... 34

Massey-Harris Hay Tedder and Loader... 34

McCormick Side Delivery Rig... 34

McCormick Hay Stacker... 30

McCormick Mower... 30

McCormick Sweep & Hay Rake... 30

Noxon Mower & Rake... 55

Stewart Sheaf Loader... 54

Success Hay Loader... 15

Tiger Steel Rake... 15

HORSE POWERS AND JACKS, SAW MILLS, WOOD SAWS AND TREAD POWERS.

Caters Wood Saws and Jacks... 4

Cockshutt Horse Power... 15

Flury's Horse Power and Jacks... 17

Kentucky... 17

Powers... 17

Gear Scott Saw Mills... 50

Geiser Saw Mills and Horse Powers... 7

Gold Shapley & Muir Wood Saws... 15

Horse Powers, Tread Powers Bevel Jacks... 51

LAND ROLLERS AND PULVERIZERS.

Acme Pulverizers... 17

Cawson and Roller... 30

Canton Packer... 30

Campbell Sub-Surface Packer... 30

Cockshutt Land Roller... 15

Cockshutt Pulverizer... 15

Deere Land Roller... 17

Flury's Pulverizer... 17

Hilborn Land Roller... 10

Hilborn Pulverizer... 64

Moline Parallel Pulverizer... 10

Verity Land Roller... 34

Verity Pulverizer... 34

Watson's Flexible Pulverizer... 60

Watson's Land Roller... 60

Western... 61

MANURE SPREADERS AND LITTER CARRIERS.

B.T... 2

Clover Leaf... 30

Corn King... 30

Hawkeye... 30

Kemp... 15

Mandl... 10

National... 10

Massey-Harris... 34

National... 10

Success... 17

GANG PLOWS, ETC.

Canton... 30

Case, J. I. Engine Gang... 27

Case, J. I. Engine Gang... 27

Canton Moline Engine Gang... 30

Cockshutt... 15

Canadian Engine Gang... 15

Deere... 17

Deere Engine Gang... 17

Emerson... 17

Emerson Engine Gang... 55

Geiser Engine Gang... 7

Grand Detour... 60

Janeville Gang... 1

Massey-Harris Engine Gang... 39

Moline... 10

Moline Engine Gang... 10

Oliver Engine Gang... 30

Paris... 49

Railroad Grading & Road... 58

Verity... 34

PORTABLE GRAIN ELEVATORS

Cyclone... 17

Gopher... 27

North Star... 27

Tasgar... 27

Winnipeg Ceiling & Roofing Co... 63½

Wisard... 27

POTATO AND BEET MACHINERY.

Aspinwall Potato Planters and Sprayers... 15

Aspinwall Saws and Cutters... 15

Deere Potato Diggers and Beet Tools... 1

Dowden Potato Harvester... 1

Egan Potato Sprayer... 43

Evans Potato Planter... 1

Evans Potato Planter... 1

Hoover Potato Digger... 15

Moline Knecker Potato Digger... 10

Splittator Sprayer... 17

RIDING ATTACHMENTS, HARROW CARTS, WHEEL BARROWS AND HAND CARTS.

Cockshutt Wheel Barrow... 15

Cockshutt Harrow Cart... 15

Deere Harrow Cart... 17

Deere Harrow Cart... 17

Eclipse High Harrow Cart... 27

Emerson Harrow Cart... 35

Flury's Wheel Barrow... 17

Flury's Wheel Barrow... 17

Fuller & Johnston Harrow Cart... 61

Naylor Harrow Attachment... 27

P. & O. Harrow Cart... 30

P. & O. Hand Cart... 30

Racine Rotary Harrow... 14

Success Harrow Cart... 10

Verity Wheel Barrow... 34

Watson's Wheel Barrow... 60

ROAD SCRAPERS AND ROAD MACHINES.

Cockshutt Scrapers... 15

Good Roads Machines... 59

Indiana Road Machines... 55

Russell Elevator... 32

Standard Reversible Grader... 61

Toronto Pressed Steel Scrapers... 61

Sawyer & Massey Reversible Grader... 51

THRESHING MACHINERY, BELLY FEEDERS, WIND STACKERS AND ATTACHMENTS.

Advance... 50

American Abell... 50

Aultman & Taylor... 30

Avery... 26

Bell Robt... 3

Buffalo Pitts... 6

Case, J. I... 14

Cuddy Steering Device... 62

Dakota Weigher (Ask Any Thresher Co.)... 50

Dreadnought Engine Guide... 50

Garr Scott... 50

Geiser... 1

Goodison... 35-68

Garden City Feeder... 21½

Hawkeye Feeder... 35

Hartley Weigher... 58-67

Manitoba... 20

Monarch Feeder... 40

Moody... 40

Neepawa... 41

Nichols & Shepard... 42

Parson's Feeder... 53

Perfection Weigher (Ask any Thresher Co.)... 47

Reeves... 47

Rumely... 35

Stover... 30

Sawyer Massey... 51

Waterloo... 58

Western... 59

Whiteford Justice Measure... 56

White Iron & Sons... 63

White Wings Feeder... 35

THRESHERS' SUPPLIES.

Brown Wing Carrier (Ask Any Thresher Co.)... 8

Canadian Fairbanks... 8

Canadian Rubber... 11

Crane & Ordway... 17

Demond Stephen... 17

General Supply Co... 23

Goodyear Tire & Rubber Co... 24

Thresher Supplies Carried in Western Canada by all the Thresher Co's... 35

Madison Kipp Lubricators... 35

Massey-Harris Pump... 17

Maytag Co... 35

Olio Injection Co. (Ask any Thresher Co.)... 35

Penberthy Injector & Brass Goods Handled by all Leading Jobbers and Wholesale Companies... 64

Winnipeg Rubber... 64

WAGONS AND SLEIGHS

Adams Farm Trucks... 15

Adams' Lorries & Heavy Team Wagons... 15

Adams' Wagons & Sleighs... 15

Anderson Metal Wheel Trucks... 55

Avery Wagons & Grain Tanks... 17

Bain Wagons & Sleighs... 39

Canadian Crescent Wagon... 30

Chatham Wagon... 10-64

Cockshutt Metal Wheel Truck... 15

Columbus Wagon... 30

Davenport Wagon... 27

Electric Steel Wheel Truck... 27

Fish Bros. (Hacine) Wagon... 55

General Supply Co... 23

Grand Detour... 60

Gray Light Farm Sleigh... 25

Hamilton Wagon... 30

Hilborn American Wagon... 64-60

Metal Wheel Truck... 17

Millburn Wagon... 36

New Deal Wagon & Sleighs... 17

New Deal Farm Truck... 17

New Moline Wagon... 17

Northern Steel Metal Wheel Truck... 17

Old Dominion Wagons & Sleighs... 30

Petrolia Wagons & Sleighs... 30

Rushford Wagon... 28

Stone & Gravel Spreading Wagon... 58

T. G. Mandt Sleighs... 10

Weber Wagon... 30

Winnona Wagon... 36

WELL DRILLING MACHINERY.

Austin... 6

Brandon... 6

Kelly & Tannhill... 8

Sparks... 8

Standard... 48

WIND MILLS, TANKS AND PUMPS

Caters Pumps... 4

Chicago Star Windmill... 4

Canadian Air Motor... 43

Chicago Aerometer... 27-7

Flourence Pump... 34

Gold Shapley & Muir Wind Mills and Pumps... 24½

Hayes Pumps... 35

Louden Pumps... 34

Manitoba Pumps & Wind Mill... 23

Manitoba Tanks... 33

Ontario Pumps... 43

Sylvester... 49

Riesbury Pumps... 49



The Cheapest Power For Threshing

Do your threshing this year in record time, with less worry and expense. Secure **all** your grain in prime condition and thus realize the highest market prices for it.

Reliable, steady power is the keynote of quick, thoro, profitable threshing. It's the kind furnished by the "ever-ready"

Hart-Parr Oil Tractor

No other threshing power plant gives such sure, steady power in the belt. This outfit will drive your separator with a steady hum, hour after hour and enable it to deliver the biggest output of clean grain—grain that grades high and sells high.

**READ WHAT THIS MAN SAYS—
THEN WRITE FOR OUR CATALOG**

Hart-Parr Co.,
Charles City, Ia.

Watson, Sask., Can., Jan. 1, 1912.

Dear Sirs—

When threshing began, we hired a steam engine to do our threshing, so that we might plow with our Hart-Parr Oil Tractor. The steamer did not prove satisfactory, so we ran the separator with our Hart-Parr Tractor and threshed about 15,000 bushels. Threshing was slow on account of bad weather.

After we finished threshing, the ground froze, and of course we did not get much plowing done. We set our tractor aside; meanwhile it snowed considerably and got very cold, so that some steam threshing outfits got disabled by the cold weather and others quit altogether, with still quite a lot of threshing to be done in the neighbourhood. Some of our neighbors asked us to thresh their grain. They offered us 1c to 1 1/2c a bushel, they to furnish everything but power.

Altho' it was hard getting around in the snow and very cold mornings, of course we threshed. We got our Hart-Parr Tractor started any cold day. It was the only one that could pull a separator behind it in the snow.

It has got to be very cold when our Hart-Parr Tractor will not start with the first turn of the fly wheel.

Very Truly Yours,
F. J. WEBER.

**A MONEY MAKER—A MONEY SAVER
ELIMINATES FIRE DANGERS**

A Hart-Parr Tractor Saves you money with every turn of the fly-wheel. Operates on cheapest kerosene. Eliminates the licensed engineer, burned out flues and melted crown sheets. Does away with water and fuel teams. Means less help to board, less drudgery for the women. Light in weight, safe on bridges. Easy to move. Goes through the average gateways.

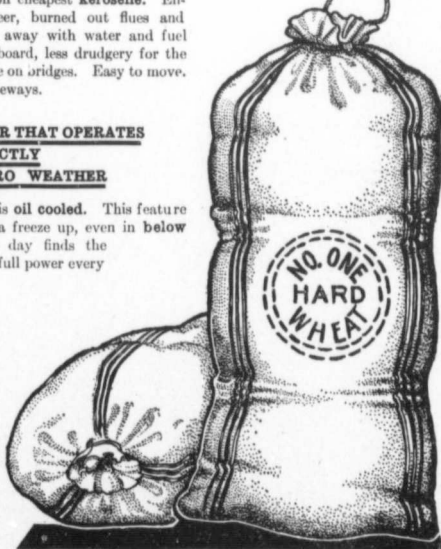
**THE ONLY TRACTOR THAT OPERATES
PERFECTLY
IN BELOW-ZERO WEATHER**

Every Hart-Parr Tractor is oil cooled. This feature positively insures it against a freeze up, even in below zero weather. The coldest day finds the Hart-Parr Tractor delivering full power every minute it works.

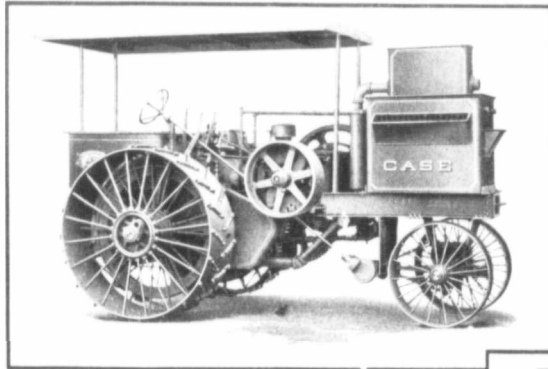
THE HART-PARR CO.,
30 Main Street, Portage la Prairie, Man.

Regina and Saskatoon, Sask.

The Chapin Co., Calgary, Agents
for Alberta.



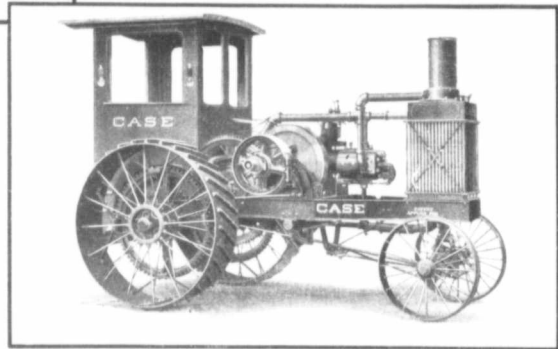
LET THE CASE OIL OR GAS TRACTOR PLOW YOUR WAY TO SUCCESS



The Case 60 Horse Power Oil Tractor.

Learn all about
them and you will be
convinced that they can

Get in Touch
with Our Nearest
Branch House



The Case 40 Horse Power Gasoline Tractor.

And they will be pleased to show you these wonderful Power producers. Get a demonstration. Pay particular attention to the Transmission, Radiation, Ignition, the steering device, try its ease of operation and above all *Watch Their Pull*. The closer you examine and the more complete your test the more you'll be convinced that the Case Gas or Oil Tractor is what you should have to make your profits go up.

BRANCH HOUSES:

ALBERTA—Calgary MANITOBA—Brandon, Winnipeg ONTARIO—Toronto SASKATCHEWAN—Regina, Saskatoon

— CALL OR WRITE WITHOUT DELAY —

J. I. CASE THRESHING MACHINE CO.
INCORPORATED
RACINE, WIS. U. S. A.