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# THE CANADIAN THRESHERMAN -AND- FARMER

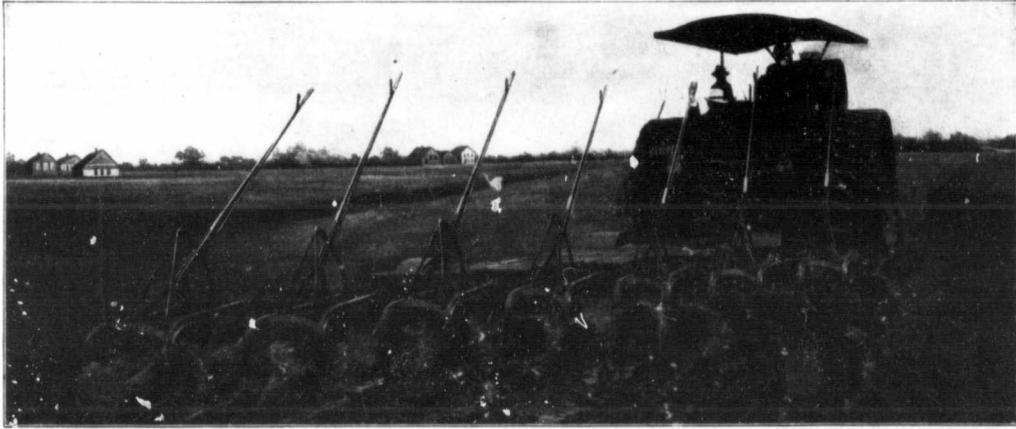
CANADA'S FARM  
MACHINERY MAGAZINE

WINNIPEG CANADA

JULY - 1910

E. H. Heath COMPANY LIMITED Publishers

# John Deere Engine Gangs



4, 6, 8, 10, 12 and 14 Bottoms

## Big Plows for a Big Country

Why turn a single furrow when you can turn from 4 to 14 furrows at the same time

More John Deere Engine Gangs sold in Western Canada this past spring than ALL OTHER COMPETITIVE MAKES PUT TOGETHER.  
THERE ARE REASONS FOR THIS.

Canada is a country of big farms, big possibilities and big profits—if you are a big dealer.

A general couldn't fight much of a battle with one soldier, and a dealer can't make much money selling one-furrow plows.

### Get the Right Gang

Bottoms in pairs give great strength and make the plows run steady. The beams can be braced and each plow steadies the other. You notice these features on a two-bottom horse gang—you can't beat that construction.

### Don't Clog

Curved frames give great clearance, and the JOHN DEERE Engine Gang will go through straw, trash, weeds and scrub where other gangs clog and cause trouble.

### Screw Clevis

In addition to the regular clevis adjustment, each beam is fitted with a screw clevis when attached to the frame. A man can stand on the platform and adjust any one plow with a wrench while the engine and gang are working. This saves time and is a most important feature.

### Works with Coulters

Rolling Coulters can be used on the JOHN DEERE Engine Gang just the same as on a sulky plow.

### Level Platform

The platform is roomy, free from obstructions and so arranged that the levers are all in reach.

### Standard Sizes

4 or 6 Plows on One Frame 6 or 8 Plows on One Frame  
10 or 12 Plows on One Frame

Extension can be furnished for the 12 bottom frame allowing two more plows to be used; making 14.

### ILLUSTRATED BOOKLET FREE

Write us to-day for Booklet showing JOHN DEERE Gangs being used with all kinds of steam, oil and gasoline tractors. Don't fail to get this book and learn all about engine plowing. Let us know the names of those in your district interested in Engine Gangs and we will mail them this Booklet.

We Carry a stock of Engine Gangs at Winnipeg and at all of our Branch Houses. Orders promptly filled,

# JOHN DEERE PLOW CO. LTD.

Winnipeg

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We are not exhibiting at the Fair but will put up the Greatest Implement and Vehicle Display ever shown in Canada at 110-120 Princess Street. Call, you'll be welcome.

# INVITATION

## TO FARMERS OF WESTERN CANADA

The John Deere Plow Company, Limited, extend a most cordial invitation to the Farmers of Western Canada to visit them at their Warerooms while at the Winnipeg Industrial Exhibition.

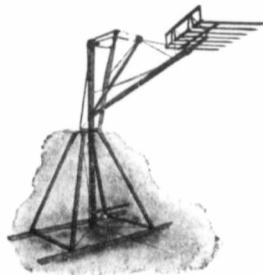
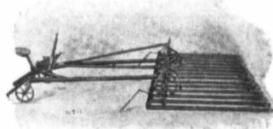
We will not have an exhibit at the Fair, but will have a full and complete line of samples at our Warerooms, 110-120 Princess Street. Make this your headquarters, and have your mail addressed in our care.

John Deere Engine Gangs can also be seen in the Plowing Contest, where a most practical demonstration will be given.

*John Deere Plow Company, Limited.*

### THE GREAT DAIN LINE

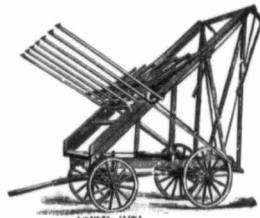
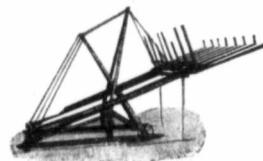
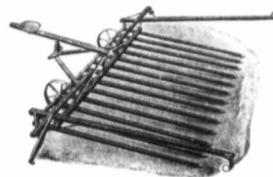
of HAY TOOLS



Hay is one of the most valuable crops raised on the farm, one of the most necessary commodities grown, and is getting to be more valuable each year. To make the most of it, you must have the right kind of tools, and good tools.

In the **GREAT DAIN LINE** we have a tool for every purpose. Each **Dain Tool** has special features that commend it for the use of the **Hay grower** that wants to do the most and best work with the least labor.

**Dain Tools** are built "a little better than necessary" to stand the strain, that means lasting satisfaction, a pleased purchaser every time; it means tools that do the work without constant tinkering; it means money saved and more work done. Every **Hay Maker** ought to learn the advantages possessed by **Dain Hay Tools**; our descriptive literature is free, and we will gladly send it to you if you will inform us which tools you are interested in. Write to-day.



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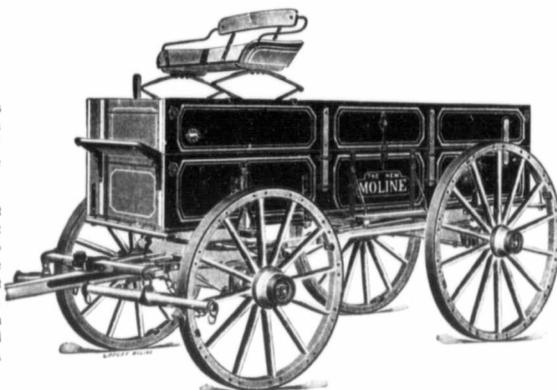
SASKATOON

# NEW MOLINE WAGON

## WHAT CONSTITUTES A GOOD WAGON

**FIRST.** The most important requisite for a lasting farm wagon is good **WOOD STOCK**. This is the foundation and must be right if the completed structure is to be enduring.

**SECOND.** The **IRONING** must be applied on proper principles if it should properly fulfil its purpose: to strengthen, brace and prevent undue wear of the wood portions. Must be of best quality and good weight, but not prove an interference with that characteristic of the wood which is so essential to the life of a farm wagon—its elasticity.



## WHAT CONSTITUTES A GOOD WAGON

**THIRD.** The **PROPORTIONMENT** of the component parts must be correct, to the end that each member shall be adequate to withstand the strains put upon it, and that none shall be spared any portion of its proper work at the expense of its fellows.

**FOURTH.** The **FINISH** must be good, with durable paints and varnishes, also attractive in appearance.

**FIFTH.** and last, but by no means least,

**A FARM WAGON MUST BE LIGHT OF DRAFT.**

## Clad in Iron, Shod with Steel

**THE MOLINE WAGON** consists of a hardwood foundation, with heavy iron and steel reinforcements. It not only has heavier pattern **woodwork** but the **iron** and **steel** that doubles its durability, is of **extra size, extra weight** and **extra strength**.

—Steel against steel at friction points.

—Iron protecting wood where strain is the greatest.

—Double bracing of gears and grain-tight box. Is it any wonder that farmers call this wagon the "**IRONCLAD**"?

# NEW-DEAL WAGON

## NEW-DEAL WAGON

Is made of air-seasoned lumber.

Is equipped with double collar skein.

Skeins are dust-proof, therefore will hold grease longer and run easier than others.

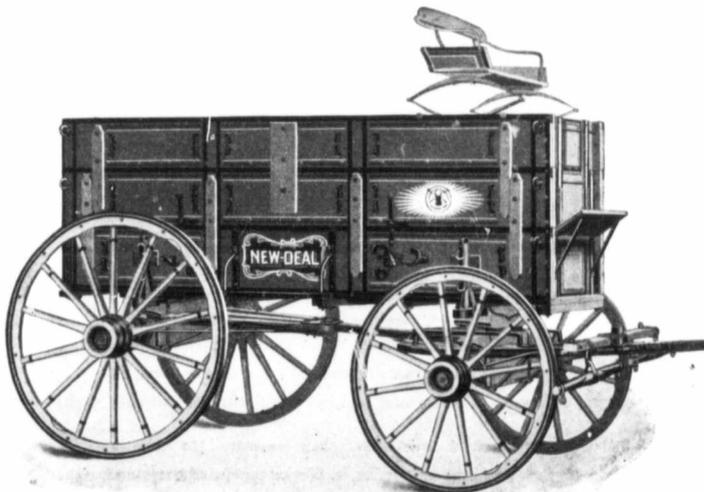
Skeins are heavier; bell is longer and larger, taking more axle.

Has riveted grain cleats (not nailed or screwed.)

Bottom of Box is reinforced both front and rear.

Has clipped gear, both front and rear.

Box is made flax tight.



## NEW-DEAL WAGON

Spring Seat, with 3-leaf springs (not single leaf.)

Steel-bolster stake plates on side of box.

Neck yoke 48-in. long (not 42-in.)

Has trussed tongue—cannot break or warp.

Has channel-iron reach—really indestructible.

Is extra well painted, striped and finished.

Possesses a great many distinctive features of merit.

**A Wagon you can use with Profit.**

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A Theatre at Home



A Genuine Disc Graphophone

# COLUMBIA

Still Unrivalled.

In beautiful oak cabinet, with largest sound box, latest aluminum scientific tone arm and revolving horn, exactly as shown. No crane, stand or rubber tubing required. So simple, no Attachments. Plays all makes and sizes of disc records. The disc style reigns supreme.

**\$35 Only** freight paid, including 10 large selections of your own choice.  
**PAY \$5.00 DOWN AND \$3.50 Monthly**  
 or Full Payment can be arranged.

We sell all makes of Talking Machines and Records. Our prices are lower than other houses! When buying from us you do not pay for extravagant advertising, nor do we send you second hand goods. Easy payments, from \$2.00 monthly. No C.O.D. Return if not as represented and money refunded. Satisfaction guaranteed. A straight business offer, no mysterious philanthropic aid.

Here are some of our specials:  
 Columbia 10 inch Double Discs (2 different selections) 85c, new velvet finish, fit any machine, last for ever. All languages. Hear George Eastwood and Raymond Hitchcock, funnier than Lauder. We send records on approval, write for details.

Gold Moulded Cylinder Records. Edison, Bell and Columbia, new, 25c each.  
 Columbia Indestructible Cylinder Records, 45c, beautiful tone, cannot break, fit any machine.  
 Four Minute Cylinder Records, 50c.  
 Columbia Indestructible Four Minute Records, most wonderful invention, 65c.  
 Edison Gem Phonograph and 12 selections, \$19.50 Brand new.  
 Edison Fireside with 6 genuine Gold moulded two minute and 6 four minute records \$33.10.  
 Victor Disc Gramophone with 10 large selections \$26.40 and upwards. Second hand machines at bargain prices. Old machines taken in trade; 40 styles of talking machines; 20,000 records; 40 styles of pianos.

Our Piano Specials \$200.00 and \$350.00  
 Three full payments arranged.

Be sure and visit our warehouses when at the Winnipeg Exhibition.

## WINNIPEG PIANO CO.

295 PORTAGE AVENUE, WINNIPEG.  
 Biggest Piano and Phonograph House in Canada  
 Wholesale and Retail.  
 Columbia, Berliner, Victor and Edison experts.  
 Write for interesting Graphophone history and Free Booklet, No. 44.

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OF CANADA

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CAPITAL SUBSCRIBED	5,575,000.00
CAPITAL PAID UP	5,330,000.00
RESERVE FUND	5,330,000.00

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# ABOUT OURSELVES

IN these columns from month to month we shall attempt to give to our Readers a brief digest of what we consider the strongest features of the issue in question, notices of New Departments, etc., etc. In short, it will be a handy place to turn to when you wish to know what you may expect from future numbers of "THE CANADIAN THRESHERMAN AND FARMER."

THIS will be the last number that will be issued before most of the big fairs in Western Canada and we wish to take this occasion to extend a most cordial invitation to all of our readers and their friends to make us a visit when attending any of the exhibitions.

At Winnipeg, Brandon and Regina fairs you will find our tent and we would like to have you call around and see us. Have your mail addressed in our care and we will see that you get it. Call around and take a rest, as we will be more than glad to see you.

In another part of this issue will be found a full and complete discussion of our Wheat Guessing Contest, which closed on the 31st of May.

We enjoyed this Contest immensely and we believe that our readers did likewise. We have added during the past year a great many new readers to our list and it is our sincere wish to get out the most interesting paper possible in order that we may give value received for the dollars that have been sent us. We believe that no other publication in Western Canada furnishes as much for a dollar as we do. When you take into consideration the quality of the paper, numerous illustrations and the class of matter that it contains, we believe that you will agree with us. We are nobody's official organ and nobody has any string on us. We are free to say anything that we please. The paper has a certain policy and beyond that policy it does not go, but the policy is our own and not that of any clique or organization.

We have got a number of things in mind for another year that should be of immense value to the farmers and threshermen of Western Canada. Just what they are at present we are not at liberty to state, as the arrangements are not as yet completed.

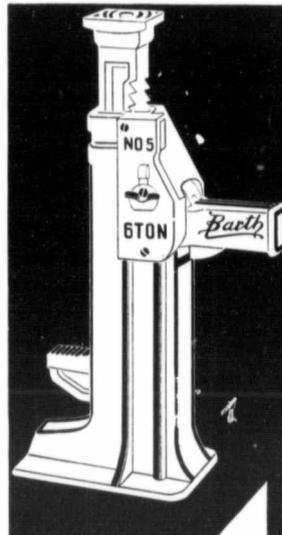
We have one thing in mind for which we expect to pay the men who are writing it for us over \$1000.00, but we believe the matter to be of sufficient importance to warrant our spending this amount of money. It will deal with a topic that is most vital to the farmers and will deal with it in such a way that the absolute facts will be presented. This matter will begin in our November issue and the facts that we will present should be worth to every farmer in Western Canada \$500.00.

We just mention this now, so that you can tell your neighbors about it and think about it yourself. If your subscription is about to expire, renew in order not to miss this matter. It should be of such interest that you will watch for every first of the month in order to get your copy of The Canadian Thresherman and Farmer.

The reports up to date show that more threshing machinery has been sold in Western Canada than has ever been sold up to the present time in any previous year.

This would indicate that the ranks of the threshermen have been swelled. As a publication that has your interests at heart, there is one little hint that we would like to drop and we would like to have you ponder it carefully in order that it may sink in and that is, do not disgrace that new threshing outfit by making it work at a cut-rate price. The farmers won't thank you for doing so. You will think a whole lot less of yourself and the first thing you know, the thresher manufacturer will come around and repossess the outfit he sold you on account of your inability to pay for it.

Just turn this matter over in your mind.



### HEAR THE WHISTLE? Trouble—Something Wrong

ALL HANDS wanted. Drive wheels gone through a culvert, separator settled, axle needs oiling, belt slack. Every man idle for 30 MINUTES, when one man and a "Barth" Jack could remedy the trouble in 45 MINUTE. See where the saving comes in?

Ninety per cent. of the Threshing Outfits carry "Barth" Jacks. Found they couldn't afford to be without them. There were reasons. Our illustrated catalogue tells all about it. Ask your dealer or write us.

BARTH MFG. CO., 42 E. Street, MILWAUKEE, WIS.

## Dominion Day



JULY 1st 1910

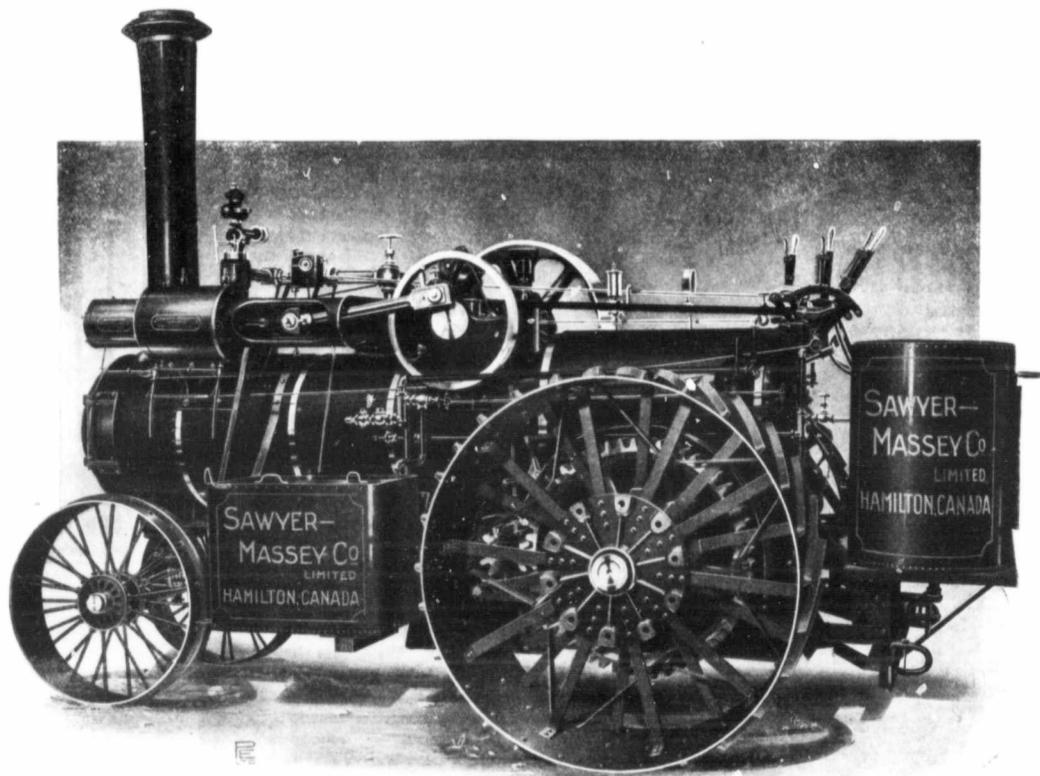
## EXCURSIONS

FARE AND ONE-THIRD FOR ROUND-TRIP, BETWEEN ALL STATIONS ON THE CANADIAN NORTHERN RAILWAY IN CANADA.

Tickets on sale June 29 to July 1, inclusive. Return Limit to July 4, 1910.

Full information from local agent or write to

R. CREELMAN, Asst. General Passenger Agent, Winnipeg, Man.



New Model S-M Combination Plowing and Threshing Engine, Manufactured in 27, 30 and 32 H. Powers.

## ANY THRESHERMAN OR CONTRACTOR IN THE WEST

seeking safe and profitable investment for his money, will do well to consider the purchase of a Sawyer-Massey Combination Engine. The immense areas to be broken and plowed and harrowed, the unquestionable amount of Threshing ahead of the Farmer, the Roads that are to be opened up and graded by Engine Power, and the many other uses to which our Tractions can be put, make it simply a question of how effective and how economical an Engine can be had for the least money. The Sawyer-Massey Combination Engines and their "Great West" Separators are recommended by every Farmer in the Great West who has used them. These recommendations obtain from the very highest agricultural authorities, so that the man who may not be posted, will not be long in doubt.

Call and see us at your earliest, and in the meantime have us send you our new Catalogue.

**A Full Line Of Our Goods will be on Exhibition At All The  
Leading Summer Fairs.**

# Sawyer Massey Co. Limited.

The Largest Engine and Thresher Manufactory in Canada.

HAMILTON

WINNIPEG

A MAGAZINE  
FOR

THE FARM  
AND HOME

# THE CANADIAN THRESHERMAN AND FARMER

Vol. XV.

WINNIPEG, CANADA, JULY, 1910.

No. 7.



## Harvesting the Grain Crops

By E. F. W.



Ever since Ruth went glean- ing in Boaz's field harvest time has been tuned to the poetic. The people who wield the brush are, however, not those who get into the actual game, but are those who view it from some shady nook and whose artistic temperament is so far developed as to enable them to overlook the heat and grime and labor of garnering in the harvest and to see only the golden fields tinged with a boarder of green.

Harvesting the grain crop today is a commercial proposition. It is largely a problem of getting the most grain cut in the shortest possible time. It is different than what it was in the days of the scythe and sickle when the clean swath was laid by hand and the women folk gathered it with the rake, and it was bound into sheaves by bands twisted from the grain itself.

This change is due to two things; first, the increased demand for grain as food for man and beast, and secondly, to the improved machinery that has been invented for the use of the farmer. Whereas it formerly took days to take care of a small patch of grain, it is now the work of only a few hours. Whereas it was formerly done by hand, it is now done almost entirely by machinery. Even the horse is being put out of business gradually in so far as harvesting is concerned, the traction engine being made to pull the harvester.

The world over, the wheat crop is the most important, speaking from an economic standpoint. Commercially, its value may not be so over-whelmingly large, but it is the stuff from which bread is made and bread is the thing upon

which mankind largely exists. It has furthermore, the advantage of forming some portion of the grain crop of practically every country in the world.

The calendar of the wheat harvest of the world is as follows:—

In January, Australia, Chili and Argentina; in February and March, East India, Upper Egypt; in April Lower Egypt, Asia Minor and Mexico; in May, Algeria,

North Russia; in November, Peru and South Africa; in December, Burmah and Argentina.

The usual practice in harvesting wheat is to cut when the straw begins to turn yellow and the grains are in the dough, soft enough to be easily indented with the thumb nail and hard enough not to be easily crushed between the fingers. Investigations indicate that there is a continuous

tion, a slight decrease in the actual substance of the grain may take place. This is explained by Deherain on the ground that the seed continues to respire, thus giving off carbon dioxide.

In general there is a decrease in the percentage of ash, nitrogen and fiber as the grain ripens, due to the increase in carbohydrates other than fiber. This is due to the endosperm developing later in the growth of the wheat. The germ develops first, and later, when the endosperm develops, the percentage of ash and nitrogen becomes less, although the actual amount may remain the same or, as is probably the case, may increase. The changes in composition after the grain has reached the dough stage appear to be very slight.

While the stage of maturity of grain through the ordinary range of wheat harvest does not affect materially the quality (composition) of the grain, climatic conditions which affect the full maturity of the grain may materially modify the quality. The higher per-

centage of nitrogen in the spring wheat is probably due, in part at least, to a lack of full maturation. The per cent. of nitrogen decreases somewhat in the straw up to the dough stage. The per cent. of crude fibre increases in the straw throughout the ripening period, while there are corresponding decreases in the other carbohydrates.

There is always danger of over-ripe grain shelling out in the harvesting, and there is also danger of lodging. It is not good farm practice, therefore, to delay harvesting until wheat is entirely ripe. Investigations have



A good crop of wheat and

Central Asia, China, Japan and Texas; in June Turkey, Spain, Southern France, California, Tennessee, Virginia, Kentucky, Kansas, Utah and Missouri; in July Roumania, Austria-Hungary, Southern Russia, Germany Switzerland, France, Southern England, Oregon, Nebraska, Southern Minnesota, Wisconsin, Colorado, Washington, Iowa, Illinois, Indiana, Michigan, Ohio, New York, New England, Eastern Canada; in August, Holland, Belgium, Great Britain, Denmark, Poland, Western Canada, the Dakotas; in September and October, Scotland, Sweden, Norway,

increase of the plant during its growth until the plant is entirely ripe. There is a continuous increase in the weight of the grain from the time it is formed until it is hard and dry. The increase in weight of grain is most rapid up to the time when the grain can be crushed between the thumb and finger. The increase seems to be decided and of economic importance up to the time when the grains indent but do not crush under the pressure of the thumb nail. After that time the increase is slight. The indications are that if allowed to stand beyond the period of full maturation,

proved beyond question that at the early stages of seed formation a considerable transfer of material from the straw to the grain may occur after cutting, when the wheat is placed in a condition similar to the shocking and capping of bound sheaves. Prompt shocking and capping, therefore, facilitate the completion of the ripening process. Where it is necessary to cut the wheat quite green, it is important that the sheaves should not be left long on the ground exposed to the hot sun.

The sheaves may be put in long shocks by placing pairs of sheaves in a row, about a dozen bundles to the shock, or preferable in round shocks with caps, twelve to sixteen bundles to the shock, depending upon the size of the bundles, the stage of maturity and the amount of green weeds. In building a shock of twelve bundles, place three pairs in a row, then place two bundles on each side, making ten bundles. Now lay one bundle on the top, then take another bundle, break both ends of the bundle at the band, spreading the ends fan-shape, and lay this crosswise of first bundle. In some cases only one bundle is used, treating it as just indicated, and in other instances the caps are entirely omitted. Usually, however, capping with two bundles is to be preferred. In building a shock of sixteen bundles, place four pairs in a row, then three bundles on each side, and cap with two bundles. Both for efficiency and economy of time, two bundles should be handled at once, and care should be taken

to place the bundles firmly on the ground. There is a knack in shocking that may be easily learned by practice, which adds greatly to the ability of the shocks to withstand wind storms. There are four types of power machines for harvesting wheat and other stored grain at the present time. They are: (1) the self-rake reaper; (2) the self-binding harvester; (3) the header; and (4) combined harvester and thresher. The hand cradle is still manufactured and used for harvesting small areas.

All harvesting machines have certain features in common. These are the serrated sickle vibrating through stationary guards, a platform to receive the cut grain,

some provision to bring the grain regularly against the sickle and deposit it on the platform, a divider to separate the swath to be cut from the remainder of the standing grain, and some means by which the operator can quickly raise or lower the cutter bar while the machine is in motion.

In the self-rake reaper the platform has the form of a quarter of a circle, and upon it operate automatically rakes which serve the double purpose of bringing the grain onto the platform and removing it from the platform

The size of the bundle is therefore determined by regulating the pressure required to trip the binder. Binders are made which cut different widths, the standard width being six feet. Three horses are used with the six-foot cut, and an ordinary day's work is from ten to twenty acres, depending upon many factors, the most important of which are the yield and the condition of the straw.

The header and the combined harvester can be used only where the climate is such as to permit

lines attached. It requires four men to operate this machine; one to drive, one to tilt cutter bar, one to sew filled sacks and dump upon ground from time to time as they accumulate in groups of six or eight and one to have general charge of the machine. Five to seven hundred bushels of wheat may be harvested, threshed and sacked with one of these machines in a day. There are still larger machines, cutting a swath twenty-five or more feet in width and operated by steam power, and doing a correspondingly larger amount of work. This machine is not used in Canada, but is used quite extensively in California, Oregon and Washington.

#### OATS.

The evidence appears to be that oats may be cut when one-half the leaves are still green and the machine and treated as any other hay crop, or may be cut with self-binding harvester and put in round shocks of six bundles each, with one bundle for a cap. The methods of harvesting, threshing and storing of oats are similar to those of wheat. The Ohio Station found the shrinkage of grain between September and March of

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fifty-five varieties to be less than one per cent. and of a sample of baled oat straw during the same period about six per cent. Michigan Station obtained similar results with the grain two years, and a loss of three per cent. another year.

#### BARLEY

Barley that has been allowed to ripen fully will be likely to have the most mealy endosperm, and most likely to sprout uniformly. On the other hand, if allowed to ripen fully, there is more danger of discoloration from rain and dews, and as this character is counted so important in fixing the commercial grade, early cutting is frequently practiced.



The Massey Harris at Deloraine, Man.

far enough to one side so that the reaper can again pass around the field without running over the cut grain. The size of the bundle is determined by regulating the number of rakes which remove the grain. Because of the necessity of binding the grain by hand, they are used only where small quantities are to be harvested. The reaper cuts a swath of five feet and is drawn by two horses. An ordinary day's work is from six to eight acres.

By far the larger area of small grain is now harvested by this

harvesting the wheat after it is fully ripe and thoroughly dry, and hence are in use only in the western half of the United States. Instead of cutting the wheat near the ground, they merely head it, leaving the bulk of the straw standing in the field. The header conveys the headed grain to the side of the machine and elevates it so that it is deposited in a wagon driven along side to receive it. The grain is either immediately carried to a threshing machine or first put in stacks and subsequently threshed.



© Frost and Wood binders in one string. Just think of what they can do to a section of grain.

machine, generally called the "binder." They are manufactured in a number of styles, but in their essential features they are nearly all practically identical. It differs from the reaper in having a reel to bring the grain against the cutter bar and deposit it on the platform. This reel is attachable at the will of the operator while the machine is in motion. The cut grain is conveyed on an endless canvas to an elevator consisting of two endless canvases which deposit the grain on the opposite side of the drive wheel, where it is packed into a trim bundle and automatically bound with twine. The binding device operates as often as the pressure of the increasing bundle trips it.

The header cuts a swath twelve and twenty feet wide, and is usually pushed by four horses. An ordinary day's work is fifteen to thirty acres.

The combined harvester and thresher is a combined header and threshing machine. The standard machine of this type cuts a swath eighteen feet wide, the cutter bar being attached directly at the side and forward end of the thresher. The headed grain is conveyed to the thresher, which is made to operate by being pulled over the ground by twenty-eight horses or mules. The animals are hitched in three sets of six, then two sets of four. In front of these are two, and to this pair alone are

If bundles are shocked promptly the shocks are carefully capped with two bundles, ripening may proceed, and both ends—full maturation and bright color—be measurably secured. Formerly the barley crop was usually cut with a self-rake reaper and laid off in small gravels or in continuous swaths. These were allowed to dry a day or so, as required, and then raked together, or more usually, placed in piles by hand with a large wooden, four-tined fork. The aim was to get the barley dry as quickly as possible, so that it might be subject as little as possible to the rains and dews before reaching the stack. The severity of the beards and the shortness of the culms made it almost impossible to bind by hand. With the self-binder, it is the easiest of our cereal crops to bind. The shocking is now the most unpleasant operation. Barley of as good color is not obtained ordinarily when the sheaves are bound as when they are left open, chiefly because it is necessary to allow it to be long exposed to the weather before stacking or threshing. Considerable improvement in color may be effected by threshing the cap sheaves separately and using the grain from them for food for domestic animals.

**RYE**

Rye usually ripens about a week in advance of winter wheat.

On account of the greater length of culm, heavy crops of rye are likely to tax the capacity of self-binding harvesters. Rye may be shocked as indicated for wheat. But ordinarily it is not necessary to cap rye because the spikes lie so close together as to form a sufficient protection without capping. On account of the much higher price which can be obtained for straight rye straw as compared with tangled straw, threshing machines have been devised for keeping the straw straight during the operation, and some of the machines have a self-binding attachment by which the straw is bound again into bundles. Machines are made suitable for the use of individual farmers as well as the large machines intended for itinerant threshing.

I cannot enter into a discussion of Harvesting without saying something about the binder, the machine which makes the grain Thresherman Galley Thirty Six crops of to-day possible and in this connection the following, by Mr. F. W. Hunt, is very apt:

"When the announcement was made less than a generation ago, that a successful twine binder had been produced many there were who did not hesitate to de-

clare that such a thing was absurd, an impossibility, too good to be true, etc. The need had been felt for some time, for the wire binder was far from satisfactory, and many still preferred to bind the sheaves by hand. Now, the twine binder, or as it has come to be familiarly called, the binder or self-binder, since there is no need to distinguish from the wire binder which has long since disappeared, is taken as a matter of course. There still remains, however, in the minds of many, more or less of an element of mystery as to the manner in



The Champion Binder in Heavy Wheat

which the knot is tied, and as a thorough understanding of the principles on which the binding mechanism operates is necessary to the intelligent care of same, it might not be out of place to explain briefly the manner in which the sheaf is bound. While the binding mechanism varies considerably in appearance and in details on different binders, the underlying principles will be found to be substantially the same, so that a description of one will suffice.

The end of the cord is held by the cord-holder which is pressed

against the cord-holder ring by a spring. The grain is pressed down against the compressor by the packers until sufficient has accumulated to operate the trip, causing the needle to advance and bring the cord around the sheaf and to the point where it enters the notch in the cord-holder ring, which then revolves sufficiently to carry the cord beneath the cord-holder where it is firmly held while the bill-hook revolves and ties the knot. The knife cuts the cord and the discharge arms discharge the sheaf from the binding platform or deck.

the binding device operate and will be a great help in locating any troubles with this mechanism. Now, before you start your binder in the field turn the binding attachment by hand and watch carefully until you understand what each part does, and why it does it. Do not touch any adjustments of the knotter until you can give a reason for doing so. Be sure that the needle is properly threaded. It may not be easy to see why putting the twine in from one side or the other makes any particular dif-



The Massey Harris in some real heavy stuff

ference, but this is very important. If the knotter misses a sheaf or two at the start do not jump at the conclusion that it is out of order; it has been tested before leaving the factory, and it is more than likely that a little grease or dirt on the billhook is the cause of the trouble and when this is cleaned off it will work alright.

The operation of the binder is a comparatively simple matter. A lever is provided for adjusting so as to tie the middle of the sheaf with grain of varying height. The size of sheaf can also be

regulated as well as the tightness of same. The size of sheaf is regulated by adjusting compressor. The tightness of sheaf is regulated by adjusting the trip spring. In a binder which differs from the one shown, you can easily determine what adjustments will correspond to these.

Keep all bearings well oiled, when you are through with the season's harvest, coat the knotter and other bright parts with thick grease to protect them from rust and store the machine under cover at once. Plenty of oil when working and a dry place when not in use means several years added to the life of the binder. Now as to the difficulties which

may sometimes arise. Breaking of the twine is a very aggravating form of trouble. It occurs between the knotter and the tension it is due to too much tension—or poor twine. Do not have too much tension on the twine; it is better to tighten the trip or compressor spring if a tight sheaf is desired. If the twine breaks at the knot it may be caused by the knife being dull or worn down so that it does not cut the twine quickly enough. It is well to examine the ends of the twine on a sheaf occasionally to see if the knife is cutting smooth and clean. If there is any indication that the twine has been frayed or broken, the knife needs attention. In grinding the knife take care to do it as it was originally done—if all on one side, do it that way when you sharpen it.

The tension or bill-hook should not be changed unless absolutely necessary. By turning the knotter slowly a point will be found where the spring does not appear cutting smooth and clean. If there is any indication that the twine has been frayed or broken, the knife needs attention. In grinding the knife take care to do it as it was originally done—if all on one side, do it that way when you sharpen it.

The tension or bill-hook should not be changed unless absolutely necessary. By turning the knotter slowly a point will be found where the spring does not bear on hook, and at this point the spring should be loose enough to be moved slightly with the fingers. Failure of the bill-hook to hold the twine may be due to a little dirt or grain under the jaw. Clean it out and do not tighten spring unless absolutely necessary, as that means increased friction and wear. The same might be said of the cord-holder spring; if the end of cord slips out it is better to have a little tension on the twine and get

tightness of sheaf by compressor as previously mentioned. All parts of the binder device must work in time in order to properly perform their work. Should it become necessary to replace any part of the binding mechanism have the binder in a locked position and carefully note the marks which are provided for setting all parts to work in time. The gears will usually be found marked with notches or pointers, which must come together when gears are in locked position. Sprockets are provided with notches and a certain number of links of chain must come between these notches to bring all parts in proper relation. Instructions on

## Stacking vs. Threshing from the Stook

It is somewhat of a problem with many farmers as to just whether they will stack their grain or thresh from the stook. With the idea of throwing some light upon the subject we have solicited the following letters from representative farmers in the three prairie provinces and we believe they contain some valuable information. We recommend them to our readers—Ed.

### Depends Largely Upon Conditions.

In answer to yours requesting information on the stacking of grain versus threshing from the stook, I will just give you the history of my experience since starting in this province.

Coming to the province in the year 1877 before the advent of railroads, it was a few years before there was any grain grown in the country save for local use.

I cut my first crop in the year following my arrival here and threshed about 70 bushels of wheat, 200 of oats, and some 40 bushels of barley. This was my first stacking and I continued to stack until the year 1895. In that year the crop was very heavy and it would have entailed the employment of considerable more help than was available. So I started to thresh out of the stook. Some of my neighbors thought I was fit for the lunatic asylum, but since then stook threshing has become the rule, and there is little or no stacking done in this district save by those who only have a few hundred bushels of crop.

I have nearly always been able to get threshed in good time, and to get the best market price for my wheat. The only exception was in the year 1901, when I did not get threshed until about the 5th of November after the first snow came. Although there was considerable ice in this grain I got the top price that was paid that fall, but as I sold to the local mill, cannot give you the official grade.

My reasons for beginning to thresh from the stook were the shortness of the season and the scarcity of help to handle the crop in any other way. By threshing from the stook the work is done in a week, which otherwise would not be done in a month, and then the grain is safe from the weather and can be sold or shipped at any time.

In the old days of stacking, sometimes the threshing was not done until mid winter and although machines have become more numerous since then and are able to handle the crop before winter sets in, those who stack always have to wait until the

stooks are disposed of and often have to take a lower price for their crop when the season's rush is on.

For the past two seasons I have had a small rig of my own, and find that I can get my fall work fairly well done up before first comes to stop it, which I could not do when I helped back and forth with a big rig, but will say right here that I was always favored and got my grain safe in good time, even if the plowing had to stand over.

I always try to have the stooks put up well, with a cap sheaf well put on, and find that the greater part of the grain does not get weathered and besides, the cap head keeps the center of the stook dry, and the outside

Hoping this may be of use to you, I will close.

Yours very truly,

James J. Stewart,  
Cherry Grove Farm,  
Gladstone, Man.

### Prefers Stacking the Grain.

In reply to yours re stacking versus stook threshing. From experience extended over some thirty years in Manitoba, I prefer stacking could sufficient help be obtained of practical, careful men that would stack properly and hired at reasonable wages, and the crop to be stacked not of large acreage. Where the amount of grain to be stacked exceeds 150 acres and the owner having a machine of his own, I consider

sheaves in a stook properly built, when settled will withstand wind and keep dry inside and receive little damage generally.

It would be as well for farmers depending on the hiring of a machine to stack some of their grain, in the event of wet weather while the thresher is with them. Too often the owner of the machine and the farmer also are often in too much of a hurry to get through, and threshing is resumed before the grain is in a condition to thresh. Whereas if there are some stacks to work at, the grain in stook will have time to dry.

Yours truly,

Walter James,  
Rosser, Man.

### Stook Threshing has Come to Stay.

In answer to yours re Stacking versus Stook Threshing, I would say that whatever may be our opinion of the relative merits of the two systems, stook threshing has come to stay.

The scarcity of labor makes it imperative that all unnecessary work in the handling of the wheat crop, be cut out, and the stacking is not only cut out by the system of stook threshing but the work of gathering the grain is done to better advantage by the thresher than it can be done by the individual farmer, especially the small farmer.

Owing, no doubt, to the attraction and novelty of working in large gangs, the thresher can demand of his men, longer hours and more strenuous work than the farmer can expect. Suppose, for instance, the latter should insist on his men breakfasting and being in the field before daylight, allowing only time for hasty meals (no time to Fletcherize on a threshing gang) and hold them long after dark as the thresher often does. How long could he keep his men? Though such long hours are not to be desired even by a threshing outfit, it helps to save the crop. Still stook threshing has to my mind some serious disadvantages.

The greatest objection is perhaps the spreading of noxious weeds. Your correspondent is not by any means the only farm-



Disking the Ground Immediately After the Grain is Harvested

soon dries out after a shower. I always try to have about twelve sheaves put in a stook and have them evenly built, else they will push from the heavier side, and take the rain almost as bad as if they were not put up at all. Nearly every year my grain has graded 1 Northern and I think this is about as good a record as I could expect.

My advice is, for those who can get a rig, to thresh from the stook where they have any considerable quantity of grain to handle, but if there is not any prospect of getting threshed in good time it would be better to stack, if the stacks are properly built; otherwise the grain is as safe in the stook and perhaps even safer.

It better to thresh from the stook, as one handling means a great saving in expense, and I would prefer should the grain be not properly stacked to run the risk of getting a lower grade if the grain should get wet in the stook, than trusting to badly built stacks.

I have seen very wet falls here where numbers of stacks, through being badly built, were a total loss. Too much care cannot be given in stooking the grain. Simply throw the grain into heaps, or build stooks from one side so that the first wind blows them over, and they would be about as well left as they fell from the binder, as a couple of day's rain on a badly built stook works havoc. Eight or nine

er who owes the introduction to his farm of wild oats or other noxious weeds to the stook wagon, and even reasonable care in this respect (which is rarely exercised) can scarcely entirely overcome this danger.

Next, comes the risk of damage by the weather. This risk might be materially reduced if the farmer would plan to go on stacking until the thresher comes and so each day ensure the safety of a part of his crop, instead of putting in time, as is so often done, waiting for the thresher. In February of this year I saw hundreds of acres of stooks still standing in the fields that might have been in stack but for this unfortunate desire to let the thresher and his men do the work. It so happened there was more wheat than the available machine could dispose of before the winter and somebody had to get left.

We had frequent complaints of the deterioration of our wheat. It does not grade so well as it did some years ago and many reasons are advanced to account for it. Some claim the land is wearing out or the seed is not up to the old standard owing to the practice of cutting too green, etc., but I believe stook threshing has more to do with it than any other one thing.

Before stook threshing began, the thresher would not start until the stacks had stood long enough for the grain to sweat, the result being a bright plum berry that would grade to the top. Instead of this, the wheat is now left in the stook, a large percentage of it exposed to the weather for weeks, wet and dried out perhaps many times, then hurried to the market in a bleached and wrinkled condition that must inevitably reduce the grade.

The consequent loss in price, and reputation as producers of fancy wheat is a part of the premium we pay for stook threshing or for the privilege of growing a maximum of wheat with a minimum of labor.

While present conditions continue and wheat growing is the sole object of the farmer, stook threshing will be, more or less, a necessity, but when mixed or a more intensive system of farming is adopted, as it will be sooner perhaps than many think, the advantage of stacking will be recognized and utilized.

Yours sincerely,  
George L. Smith,  
Saskatoon, Sask.

#### Stacking by Far the Best.

The question you ask my opinion on is an important one, and calls for the most thoughtful consideration on the part of the farmer in harvest time.

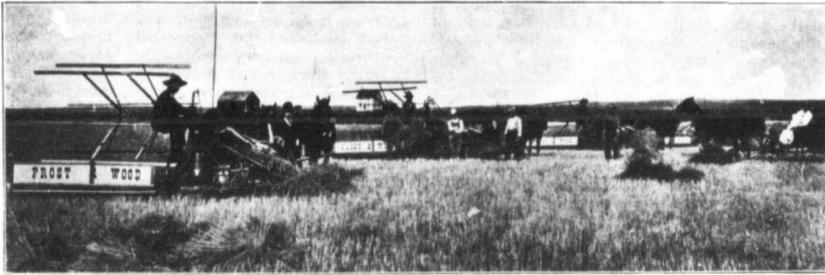
As we all know, stacking the grain on a large farm consisting of a section or more is a long, tedious job, so much so that many of those farmers invest in threshing outfits and do their own work, and some of their neighbors. No doubt, they are wise in doing so, provided they can successfully operate the machine and secure sufficient hands to run it. Often three or four

his neighbors and get the threshing done at stack prices. By all means try to avoid the thresherman who goes around with a big array of stook teams, cook car, etc. and charges from eight to twelve cents per bushel, thereby eating up most of the year's profit.

Yours truly,  
J. J. Ring,  
Crystal City, Man.

#### Favors Stook Threshing.

Re stacking grain in preference to stook threshing. Personally, I favor the stook threshing for the following reasons.



A Frost and Wood quartette doing some excellent work.

farmers work together and get their threshing done from the stook at the same price as stack threshing and thus avoid a lot of hard labor and extra handling of the sheaves. When the neighbors are close together and live near market this is a very satisfactory method as they often catch the high prices by getting their grain marketed early.

In my experience, however, as a thresherman for quite a number of years, I have noticed that the half section farmer who stacks his grain and gets his fall plowing done early and threshes later in the season, in nearly

1st.—Because we get the land cleared to plow earlier.

2nd.—We get from one to three cents per bushel more when we thresh early.

3rd.—When threshed from the stook it has to be handled twice, but with the stook, this is not necessary.

4th.—The straw goes in larger stacks as a rule.

The above are my reasons for being in favor of stook threshing. Some people say that the grain is a brighter color by stacking, but as far as my experience goes, I think the grain would

#### Always Stacks His Grain.

In answer to yours of recent date asking me for my views on the matter of stacking of grain versus threshing from the stook, I beg to say that I always stack my grain, believing it to be much the best course to pursue. I can only judge of course, by results, obtained by some others that thresh from the stook. I have seen much trouble caused after threshing, by grain heating in the bins of the granary and elevator. Only last season I know of cases where wheat was ruined in this way, and also large quantities of oats. I have never in my thirteen years' experience in the West, had trouble of that kind.

Apart from that I feel sure that a much better quality of grain is obtained by giving the grain time in the stack to go through the sweat. I have noticed that wheat I have stacked, that has been of poor color before stacking,

has much improved after going through the sweat in the stack. No doubt, much less grain would be threshed from the stook could we solve the labor problem. My opinion is that satisfactory results from stook threshing can only be obtained in ideal seasons.

I am inclined also to think that a farmer can get through his threshing much more quickly and at less expense when stacked, and also save the housewife a lot of work in providing meals for the larger outfit.

Many other reasons can be given I think in favor of stacking, such as delays caused by even light showers of rain in the night, and often on account of a team or two not turning up to help. For my part I prefer the extra work in stacking to the risk of extra trouble caused by stook threshing.

Yours truly,  
Rice Sheppard,  
Strathcona, Alta.

#### Lack of Help Prevents Stacking.

In reply to your inquiry re stook and stack threshing, I beg to say that in this district nearly all the farmers thresh from the stook. The main reason, I believe, why this is done is because it is almost impossible to get help enough to stack the grain. The development has been very rapid in this district and the farm help problem has not yet adjusted itself.

I feel quite satisfied from my own experience and observation that we would get grain of a better color and quality by stacking it, but as I have said above, we have more than we can get stack-



Frost and Wood Binders at work near McLeod and the Broad Indian Reserve.

every case is the best off. He has a cleaner farm, as only his own wagons are over the fields. The grain is a better sample as it has escaped the bleaching from long standing in the stook exposed to wind and rain. The threshing is done at considerably less per bushel and not nearly so many men are required to operate the machine; thus cutting down the board bill and the work in the home.

In conclusion I would advise the small farmer to stack his grain, and the large farmer to make some arrangement where-by he can exchange work with

just color as well in the granary after it is threshed. Those who stack the grain run chances of getting it threshed last. The days then are very often shorter and cold and one does not get the same amount done in a day, so that you can count on at least two meals extra for about 20 men. When the weather is cold steam is much harder to keep up and the consequence is the man who threshes late in the season pays more all round.

Yours truly,  
Wm. H. Anderson,  
Arcola, Sask.

ed in any reasonable time and so we have it threshed from the stook.

Another thing that has tended to make stook threshing popular, too, is the fact that those who get their grain (wheat) threshed and marketed at the very earliest possible moment get not only a better grade but also a premium over the regular price. This has happened for the last two seasons at any rate, and has made us all anxious to thresh at once and at the earliest possible opportunity.

The exceedingly good weather we have had so far here in threshing season has perhaps had the effect of making us a little careless of the condition of the grain and if it is always as dry here in the fall as it has been up to now, it may be that we shall continue stook threshing, especially if there be enough machines to get it done in fairly good time.

If only one or two farmers stack their grain they are at a disadvantage because the threshers start out with stook teams first and do not start at the stacks until the stook threshing is done. This, for reasons set forth above, re price and grade, tends to discourage stacking of grain. However, we are new at it here yet and it may be that the next few years may make considerable changes.

Hoping this may be of some use to you and assuring you that I am ready at any time to give any information that I can, I am,

Yours truly,

E. H. Malsolm.

P. S. I thank you for the subscription to The Thresherman. I shall certainly be pleased to get it.

E. H. M.

**Threshing from the Stook the Only Way.**

Yours to hand re stacking grain versus threshing from the stook received.

In my opinion there is only one way that the farmers can handle their grain in this country and that is to thresh from the stook. One objection to stacking is that it is impossible to get men who are stackers, and I think grain is much safer in stooks than in poorly built stacks.

I believe the farmer can put his grain into a threshing machine for half the expense that he could put it in stacks for which will counter-balance any loss he may sustain from bleaching in the stook.

Yours truly,  
J. H. Francis,  
Indian Head, Sask.

**Don't Let Wheat Stand in the Stook too Long.**

Regarding the stacking of grain versus threshing out of the stook. This is the all-important

point in the raising and caring of the grain in order to have the best possible sample that can be obtained.

I prefer to thresh-out of the stook. My reason is that I always try to have everything ready after cutting, so that we can start threshing wheat the very day that it is in perfect condition, that is when it is perfectly hard and the straw dry.

I have done this for the past ten years and we have always come out with the best possible color that can be obtained. We can thresh as fast as three or four binders can cut and by starting to thresh what we cut first, we just keep up with the curing process of the grain and there is none of it gets too dry or shells out too much.

Now, if I could not have this arrangement to start threshing when the wheat was ready, I would try hard and have a stacking outfit that would put up the wheat in stack as fast as it was ready, as I believe that a farmer loses a grade or two in not threshing or stacking soon enough, as the longer wheat stands in the stook after it is fully cut and hardened, the more white kernels are added to the sample. For

quires handling the straw and grain an extra time.

2nd. Help is very scarce during harvest and threshing time and very expensive.

3rd. The season at best is very short in which to do the large amount of work required of the farmer to convert his standing crop into cash.

4th. The rainfall in Saskatchewan, which is approximately 14 inches, falls largely during the month of June and July and leaving the fall for the most part dry. The damage therefore done to the grain in stook is very light.

Of course to all the above there is an exception and this is with the small farmer. He generally does nearly all his own work and cannot command the services of the thresher immediately his crop is ready, the thresher preferring to take the large and more profitable jobs first. For these small farmers it is much better to get their crop stacked and out of their way so that they may get at their fall cultivation. Then should they be so unfortunate, as some were last fall, to be unable to get threshed until the following spring, their loss would not be nearly so great.

In view of the above facts I

gard the Brandon Fair as an excellent opportunity to get next to their customers, the farmers. The management is besieged with applications for space and everything possible is being done to meet the demand and to assist the manufacturers in making a creditable display.

The premium list is the most attractive ever offered by the Association. The prizes offered in the live stock sections show an increase of \$2,000 over 1909 making it the largest premium list for live stock in the west. Western breeders of horses and cattle have received recognition by having a class for western bred Clydesdale and Shorthorns. Exhibitors in these classes are eligible to compete in the open classes. As a sample of liberality of the directors we observe that in the heavy classes for harness teams. \$665 in prizes are offered in addition to this they have a special competition for 6 horse teams. This is a municipal competition to be competed for by municipalities, for which 12 gold watches are offered for the 4 winning teams. With this goes a silver cup, value \$100 offered by Jas. D. McGregor, Brandon.

New stables for horses and cattle and pens for sheep and swine are being erected to meet the demand for additional accommodation.

The grounds never looked so well. Their park-like appearance, with the groves of shade trees, make it the most beautiful Exhibition ground in Canada. Those who fail to attend the Brandon Fair, July 25 to 29th, will not see the best that the West produces.

**This is to Your Interest.**

It will no doubt interest the many farmers and threshers in this Western Country to realize that they now have the opportunity of buying their lubricating oils and greases direct at prices considerably less than hitherto paid.

By this we refer to the Monarch lubricating Company whose advertisement appears elsewhere in this issue. We understand that this company, which was organized at the beginning of the year, has behind it some prominent Winnipeg business men who have the interests of the Farmers and Threshers at heart, and who are determined to see that they are given a square deal.

This firm sells everything in the way of Oils, Greases, Waste, Boiler Compound, Metal Polish and a number of other specialties which are included in their attractive Price List which is sent free on request. We would strongly advise all oil users to avail themselves of the opportunity now open and write at once stating their requirements.



Massey-Harris binders doing the work

if you will look carefully at the curing process of wheat, it is right in the top of the head where the kernels are found and the longer it stands exposed to the weather the more of these will be in your sample. Now, will it pay to grow wheat. If it does, it will pay to grow the best quality as well as quantity and above all, it is quality that counts. The wheat that I have handled in this way has always graded One Hard and always gets a place in money when showed at the Agricultural College or any of the big fairs.

If there is anything in this letter that I have not made plain, just let me know and you will get it if I know how.

Yours sincerely,  
W. H. English,  
Harding, Man.

**Believes in Threshing from the Stook.**

Re threshing from stook versus stacking. I might say that for the farmer who crops a section or more, I consider it advisable to thresh from the stook for the following reasons:—

1st. The stacking of grain re-

find it profitable to thresh all my grain from the stook.

Yours truly,  
E. J. Meilicke,  
Dundurn, Sask.

**The Inter-Provincial Fair, Brandon, Man., July 25th to 29th, 1910.**

To readers of the Canadian Thresherman little need be said by way of boosting the Brandon Fair. It is acknowledged to be one of the greatest agricultural and industrial exhibitions in Canada and as such is an important factor in the agricultural and industrial development of the west. It is essentially an agricultural exhibition and is so recognized by agriculturists of western Canada. Elaborate preparations are being made by the management to make the fair of 1910 the best ever held by the Western Agricultural and Arts Association of Brandon. The fair of 1909 was a splendid success and a credit to the West. The industrial exhibit was one of the largest collections of machinery and farm implements ever seen on any fair grounds in the West, demonstrating that the manufacturers re-

# The Importance of the Binder on the Farm

By F. W. CRAWFORD, of the M.A.C.

**WE** HAVE only to look back over past history and compare the stage of agricultural development, the kind of machinery, the methods of doing work employed by the people of that time, and the various stages of development along other lines, of 100 years ago with the stage of agricultural advancement, the improved machinery and the stage of development which other things have attained at the present time, to realize the importance of the farm machine on the farm.

Agricultural machinery has done much for the agriculturist by enabling him to accomplish more in a given time and with less expenditure of energy than before its introduction. Although this is true of all agricultural machinery, it is especially true of harvesting machinery. It has been estimated by authorities on this subject that the amount of labor required to produce a bushel of wheat has been reduced from three hours and three minutes to ten minutes by the use of harvesting machinery alone, or we might say, in other words, the change from the sickle to the self-binder has produced this effect. The importance of the binder to Canada alone will be clearly seen by the following figures. In 1908 we find that approximately 15,526,330 acres of wheat, oats and barley were in crop (in Canada) exclusive of British Columbia, for which province no figures were available.

The harvesting period covering about fourteen days and a man with a cradle is good for one acre per day. From the above figures it will be seen that it would require 1,109,024 able bodied men to harvest Canada's wheat, oats and barley crop within the period of 14 days and without the use of the self-binder. This does not provide for other crops handled by the self-binder, nor does it provide for men to bind the sheaves.

The use of harvesting tools dates back as far as 1500 years B.C. They were used at that time by the ancient Egyptians. These people first produced a style of sickle very much like the sickle of the present day. This tool was slow and difficult to operate and only served for harvesting very small crops. But nevertheless it served to reap the crops of that time and as the most improved tool in that line, compared very favorably with those in other lines. The sickle was closely followed by the scythe which improved conditions slightly as it was swifter and easier operated. The cradle was the next to follow and was produced about 3200 years later than the sickle. This

was and is the most efficient hand harvesting tool ever produced. Thus we see the advancement along the line of agricultural machinery was exceedingly slow during the 3200 years from the time of the production of the sickle until that of the cradle. But we also find that it kept pace with other mechanical advancement and not until then was a general awakening among agricultural machinery experimen-



The Sickle—the White Man's Burden.

ters, did advancement take place along other mechanical lines.

Not long after the invention of the cradle there was a general awakening in mechanical interest, and the invention of a horse reaper was among the earliest productions. There were a great number of reapers produced and a lot of experimenting was done, but of all the machines placed before the public, only two, those invented by Hussey and McCormick, were of any particular im-

ported, factories were established to handle the farm produce, towns and cities of business grew in size and number to consume the products of the soil. The effect of this advancement was increased invention and increased interest in science of all kinds. Mechanical investigation was the subject which possibly interested more men at this time than any other. And from this time on interest increased and investigation continued to reveal new things. Many inventions were made and thus a great many of the necessities or valu-

ables of life were produced. Many of these were minor things and not being so wonderful as useful were soon forgotten. But some which were produced in later years and were such wonderful productions of science that they are not likely to even be forgotten are: The telegraph followed a little later by the telephone. And the latest great wonder, wireless telegraphy, with a possibility of successful aerial navigation in the near future. All this wonderful advancement in mechanical science has followed the introduction of high class agricultural machinery and that



The Cradle—a Step in Advance.

portance. They were crude affairs but from them developed the self-rake reaper and later the self-binder, the machine which has had such an effective influence upon the mechanical progress of the world. Closely following the inventions in agricultural lines came the invention of such machinery as the locomotive engine and accordingly railroads were built, factory machinery was

mainly of harvesting machines, the greatest of which is the self binder.

From the foregoing we see that the era of mechanical development has been during the last 120 years; but we believe even then it is only in its infancy and many greater things will take place in the following years. In the years previous to the time I have mentioned (120 years ago) little was

known of mechanical science and very little progress was made. But at about that time (1780 or 90) advancement, improvement and invention in the agricultural machinery line was begun in earnest and other development followed accordingly and farming has become during that time rather than a means of livelihood for the laboring man a profession for the shrewd business man. And further the effect of development has not all been upon science. The social position of the farmer as well as the professional man has been greatly improved. More attention is paid to education. Pleasure is indulged in to a greater extent and the farmer lives an enjoyable, as well as a useful, life.

Heretofore I have been treating with the importance of the development of harvesting machinery and the introduction of the binder. But the total importance of this machine does not lie in its introduction and development. Its greater importance since its introduction lies in its performance and improvement.

The performance of the binder (with which I will deal first) depends somewhat upon the firm by which it was made, because the different makes of machines must differ a little in performance, being constructed by different firms. The construction of these various makes of machines, although slightly different, is based on the same general principles and almost any make of machine on the market to-day will put up a pretty good performance. But then, again, there are individual machines of every make which will not do good work. I have seen a binder of a particular make do excellent work in every way while another one of the same design produced the same year would not give satisfaction. This occurrence, however, is rather rare and is generally due to some mistake in building.

There are a number of points which I consider of special importance to the good performance of any first class machine. I will mention these in the following paragraphs.

The table or platform of a binder may be made of either wood or steel. The steel one is preferable first because it is stronger and second because it does not warp and decay with the weather. The steel table has come into such universal use that it is scarcely necessary to mention this.

The drive wheel, although it may not be considered very important by a great many, it is, because upon it depends a great deal of the draft of the machine. The wheel may be either large or very



small, the large one is preferable; because it has more driving surface and has a long leverage from the axle tending to make the machine run much lighter. The greater durability of the steel wheel may also be considered from an economic standpoint.

**The Reels:**—These are run in different ways on the various machines. In some they are driven by bevel cog gears and in others by chain. The former works fairly well in nice even grain and on smooth ground, but on rough ground or in heavy and lodged crops it is not steady enough. The reel will stop (if it catches a bunch of grain) until the slack is taken up in the cogs and then it will jump forward very quickly, scattering the grain all over the table. The chain reel will run steady and smooth at all times, providing the chain is kept tight, because the chain does not wear slack like the cogs. The chain reel may also be preferred from an economic standpoint because it does not cut and wear like the cog gear.

We find two styles of butter being used on the binders of the present day, the canvas butter and the kicking butter. The canvas butter works very nicely in straight, even grain, but it does not last very long and works very poorly in down or tangled grain. The kicking butter will handle all kinds of grain and is very simple with very little about it to wear out rapidly and is therefore preferable. One essential feature of a butter no matter what kind, is that it has a lever on it to move it back and forward to suit the length of the grain. This lever assists greatly in short grain where you can not move the knoter far enough forward to tie the sheaves in the centre. By moving the butter back the grain can be made to run into right position.

The elevator of a binder should be a little wider than the table. The canvas on the elevator reaching about 3½ inches farther forward than the table canvas. This is necessary to allow the butt of the straw plenty of room when it is dropped on the table. Some binders bother badly by dragging the grain at this point if the elevator is not constructed as I have outlined. To assist in delivering the grain from the elevator there should be an extra roller placed at the top of the under elevator to help in delivering the grain to the packers. The top elevator of all binders should be floating so that it can move up and down two or three inches when any large masses of grain run into it and thus prevent the elevator plugging. When the grain leaves the elevator it runs down the deck to the packers. The construction of the deck here plays an important part. Some people favor the steep deck so that the grain will run down more rapidly. But I think the moderately steep deck (say about 45° with the angle of the elevator) has the advantage providing it is made roomy as any deck should

be. On the steep deck the grain rushes down too quickly and if the grain is heavy and tangled it is likely to block the packers and needle and causes them to stick. On the other hand the moderately steep deck when equipped with three packers lets the grain down at just about the right rate to let the arm clear itself every time. After the grain has reached the deck it is the work of the packers to make it into sheaves. The efficiency with which they do this depends mostly upon the number present. In some machines two are used and in some three are used. The three packer machine is the most successful, it

sharp. If the bill hook is too slack or too tight the knoter will not work. When it is too slack it lets the twine slip out and when it is too tight it will break it. If the knife works loose it will flop around and not work right when it is thus out of position. The disc may get loose and let the twine slip or it may be too tight and break it. Both the disc and the bill hook are regulated by steel springs and should be closely attended to. A kernel of grain often gets under the tongue of the bill hook and holds it up. This should be looked for if the knoter is letting the twine slip out of the hook while the spring is still

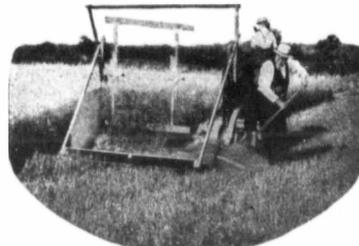
farmer's harvesting equipment. It is as yet treated with much scepticism and doubt. Many intelligent men have been heard to say that its success was impossible but we find in looking up history that the same thing was said about the self binder. Many men stated that it was impossible for a self binder to work and later these were the men who purchased this machine in large numbers. Is there any doubt but what this will be the case with the grain shocker? Shocking grain is not nearly so intricate a piece of work as is binding.

The importance and efficiency of the binder will be increased 50 per cent. by the use of the grain shocker in connection with it. It will, in the first place, solve the problem of labor for the farmer during the harvest. It will save stray heads and straws which are scattered by the arm when delivering the sheaves and would otherwise be wasted. The grain would always be shocked right up to the binder, which would be a great advantage in case of sudden rain. The stook made by the shocker would be undoubtedly better because they would all be exactly the same. The machine would build just the same and just as good stooks after a hard day's work as before; while this would be well nigh impossible for a man. After a hard day's work the man is bound to do poorer work than he would do at the beginning of the day.

The firms handling these machines claim that they do not increase the draft because the balancing of the side draft completely overcomes the difference in draft. But this I think is absurd. If we wish to get work out of a machine we must put work into it, so therefore I claim the shocker will require some extra power for its operation. But if it does the work efficiently, would it not be easier, cheaper and safe to apply a little extra horse power than to depend upon hand labor?

I do not consider the grain shocker as it stands to-day a perfect machine in the same sense that I do not consider any machine of the present day absolutely perfect. But I will not claim that the grain shocker is absolutely practical at the present time, under all conditions. But if we are to bring them to perfection, which we hope to do, their use should be commenced at once and thus allow a greater chance for their immediate improvement in the places where they are weak. The sooner their use is commenced by the farmers the sooner will they have the effect I have mentioned in a preceding paragraph.

The binder has by its introduction, improvement and successful performance exerted as great an influence upon the advancement of the human family as any other machine produced up to the present time. Its improvement in the near future will make it the most useful machine in the agricultural world to-day.



The First Reaper—the Breaking of Dawn.

packs the grain down evenly from head to butt. While the two packer machine is inclined to pull it down head first if it is heavy and tangled and is thus more likely to clog the deck. The three packer machine is much to be preferred, other things being equal, and is now being placed on most all the machines.

We now come to the most important and most essential part of the binder, the knoter. This is of the same general construction in all machines, but on the different makes of binders it differs slightly. Some binders never give any trouble in tying, while others are very easy put out of order and some are, in fact, very hard to

tight. Too much twine tension should not be used on the twine, just enough to make the twine run even and steady. If careful attention is paid to all of the above items any half decent machine will tie.

In the preceding paragraphs I have dealt mainly with the importance of the binder by its introduction and performance. I am now going to show how its importance must increase with its improvement. The binder at the present time is a very successful and thorough machine but time must bring many little improvements which will greatly improve its performance. Of the many improvements that are like-



The Marsh Harvester—the End in Sight.

keep in order. If a binder is missing sheaves it takes a man who understands the mechanism to make it work properly. There are several small things that effect a binder's tying ability. They are small in themselves but they are the parts which exercise an all important influence. Poor twine is often the cause of missed sheaves; it may break or if the twine is full of coarse spots it is likely to stick solid in the needle. This should be watched very closely and poor twine discarded. A dull twine knife is another cause of missing sheaves; when it is so dull that it tears the twine, rather than cutting it; keep it

ly to effect the binder, there is one in particular which I think will effect the usefulness of the binder and assist the farmer more than any other. This is the grain shocker. Possibly some will say that the grain shocker is not a part of the binder, but I claim that although the automatic grain shocker is a piece of machinery, built separate from the binder, it is a part of the binder because it is used directly in connection with it.

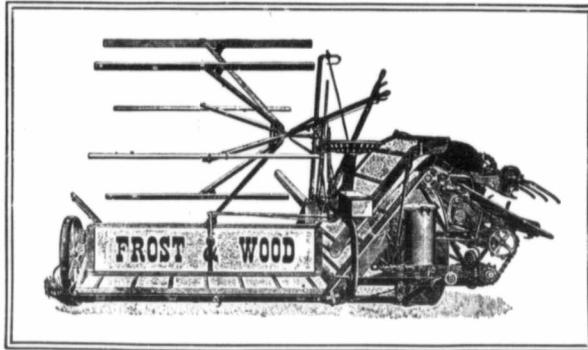
This machine, we may say, is as yet only in the experimental stage, but it has proven fairly successful in a great many cases and is the latest addition to the

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**Strong  
Foundation**

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Bearings**

**Light Draft**



**Automatic  
Force Feed**

**Sure Knotter**

**Runs Easily**

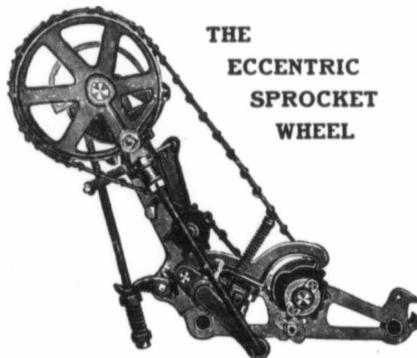
# FROST & WOOD

## Improved Binders

**"DEPENDABILITY"** practically sums up the whole question about a Binder. When your crops need harvesting, you must have a machine that will do your work quickly and efficiently without a hitch from start to finish. And that machine is the Frost and Wood Binder—it is built in one of the largest factories in Canada where farm implements of the highest quality are being constantly improved—all that is latest and best has been put into this one successful Binder.

**ROLLER BEARINGS** of generous size fit neatly and accurately in their boxes and the liberal way in which we have equipped this machine with this class of bearings accounts for its remarkable light draft and also ensures very small cost for repairs.

**AUTOMATIC FORCE FEED.** Our Binder is capable of elevating whatever the machine cuts—from lightest to the heaviest grains. The upper canvas on the elevator is so arranged that it will grip the straw as it is delivered from the platform. Hard to explain without an illustration but our booklet "Binder Facts" gives all details. Can we send you this book?



THE  
ECCENTRIC  
SPROCKET  
WHEEL

**NOTICE** that three of the arms of the Sprocket Wheel are shorter than the other three which accounts for greater power and speedier work.

When the grain is being compressed and tied, the packer arms require all the power they can get to make tight sheaves and the chain which drives the Eccentric Sprocket is then pulling over the long arms of the wheel, exerting a steady powerful draw. After the bundles are compressed and tied the chain has reached the short arms of the Eccentric Sprocket and must therefore travel faster, thus the bundles are discharged quickly and everything is ready again for another bundle to be compressed, tied and discharged. Actual experience in the field has proved the superiority of this action on our Binder.

**A SURE KNOTTER.** Before any of our Binders leave the factory we try them out thoroughly in all kinds of grain. We make it a point to see that all sheaves are tied securely and that there are no "misses" and no waste of twine. The binding attachment can be regulated to tie any size sheaf—we will guarantee the efficiency of this knotter in every particular.

**THE MAIN DRIVE WHEEL** that generates the power, cuts, elevates and ties the grain is a substantial piece of machinery capable of standing the heaviest strain it may be put to. It has a double row of spokes arranged on the "staggered" principle with the centres securely held in the wheel hub casting and with ends firmly fastened through the rim—absolutely no chance of them working loose. The large Angle-steel Mud-hugs rivetted to the outside of the rim prevent the wheel from skidding on soft ground or dry slippery stubble—the wide tire makes work easy under all conditions.

**OTHER GOOD POINTS.** You could not wish for a sturdier, stronger foundation than we put on our Binder—in fact the whole machine is built for hard wear and tear and time and experience have demonstrated that the Frost and Wood Improved Binder is positively the strongest and most durable machine of its kind in Canada. Don't fail to see one of our Agents' dealers or write them direct for further particulars and booklet—it will save you both time and money.

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# The Care and Handling of the Self Binder

The following essays were written by students of the Manitoba Agricultural College in a prize contest put up by The Canadian Thresherman and Farmer. While these essays did not win a prize, they nevertheless are full of meat for the wide-awake farmer. They show, if anything, that the average agricultural student is just a trifle more familiar with the self binder than any other piece of machinery, and that he devotes more time and attention to it than any other farm implement.

By H. E. Potter.

The care of farm machinery in this country should be an important object, for several reasons. The present advancement of immigration shows that the West is going ahead in agriculture, and for that reason there will be a large amount of farm machinery needed. At the present time most of our machinery comes from the East or the United States, which makes it expensive. If machinery is properly cared for it is almost sure to last nearly double as long as machinery improperly used. The main thing in caring for machinery is shelter. People sometimes ask why the machinery of this country gets old looking so quickly. It has been given by good authority that 75 per cent of farm machinery stands in the fence corners or right where they are last used until they are needed again. How then can we expect our machinery to stay new looking very long? Ploughs are often left with mould boards covered with dirt, binders with the reel left on to warp all out of shape, and drill shoes all mud which is sure to rust them. Besides this care of the cheap machinery, the expensive one doesn't always seem to be cared for much better. Threshing outfits, which cost \$3000 or more, are often left right out in the open from one threshing time to the next without even caring for the drive belt or things which are sure to get out of order. Now an implement shed is going to cost considerable, but it is cheap in the long run when the cost of the machine is considered. Just a shelter to stop the sun's rays is a great advantage, even if it does not stop the wind.

The most important time of year in farm work is the harvest time, and for that reason I consider the binder the most important implement. Years ago the farmers had just a sickle to cut their grain with but it has been improved on by different machinery from time to time until we have now the great labor saving self-binder. Some people prefer the eight-foot binder, while others prefer the six or seven. Of course, the wide binders are only an advantage generally, as to fast cutting. Early frost and snow occurs sometimes in this country, so the faster the grain can be cut when its ready the better the sample is likely to be. The wide binders have a truck under the tongue to support it, and as most binders have a certain amount of side draft I consider it an important feature. It

not only takes the weight off the horses' necks, but also the side draft.

In selecting the make of binder it is desirable to look it over carefully. A binder needs to be heavy enough to stand the strain without breaking, but not too heavy to handle in the grain. It should be fixed with suitable levers so it can be easily adjusted to cut long and short grain and tie a good round solid sheaf. The way the binder works depends a great deal on the man that's handling it but the best of men can't make every binder satisfactory. Of course, the more a person handles a binder the easier it is for him to understand it. The first time a person drives a binder I think he finds out it is a rather complicated machine to manage. The horses have to be kept going straight up beside the grain, the sheaves need to be

the bolts and having the binder falling to pieces. It is not advisable to cut the grain when wet, but on account of dew or a small shower it is sometimes a little difficult to avoid. If cutting is done when the grain is wet the canvases should always be loosened or the straps are likely to break by the shrinkage of the canvas. Considerable attention should be given to the twine and knoter. Most of the parts of a binder are important, but as a binder was made to bind the sheaves, I think the way the knoter handles the twine is the most important work of a binder. Loose sheaves are an annoyance, both to the driver and the stooker. Whenever the twine breaks the driver has to get off and re-thread the needle. This is not a very long job if the twine is doubled and the double end pushed through the needle first, but

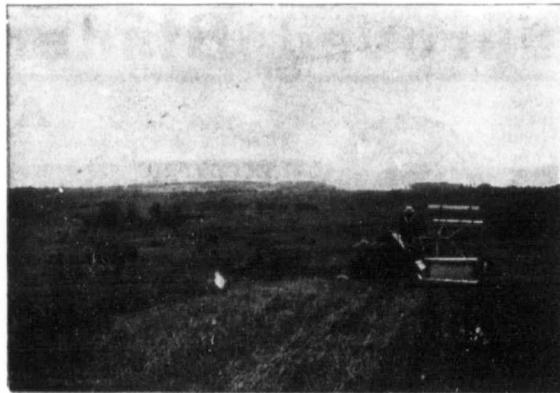
cular difference, as long as they run and carry the grain freely.

Now, considering the cutting finished, the next thing is to leave the binder in proper shape for the next fall. If there is not a shed to put it in it should be put in as sheltered a place as possible. The canvases should be removed and repaired where they need it, then laid away in a dry place where there is no danger of mice getting at them. The reel sticks are better removed and laid down on a flat surface where they will not warp all out of shape. It is advisable to give the knoter a good oiling after using it, then the rust will not affect it nearly so bad and it is left bright and clean to start its work next season. With regard to repairing, it does not make any difference as to cost when it is done, but I think it is advisable to repair it as soon as the cutting is finished. If it's repaired then you know just what parts are affected, whereas if it's left for a while some of the defective parts may be forgotten.

By Earl Smith.

Of all the implements that are used on the average farm in Western Canada there is none that requires greater care in managing than the binder. It is an implement about which there are a great many parts to become worn or broken, the speed at which the parts travel and the constant vibration that the machine is in while in motion, all go together to make the binder one of our hardest implements to operate.

We will suppose that the binder has been housed comfortably in a weather proof implement shed during the winter and spring months and that the canvases have been protected from mice and dampness. As the month of July wears on the large fields of grain begin to wear a golden hue and it is then that the farmer begins to prepare the binder for the work that he soon expects to do with it. The machine is taken from its position in the shed into a larger space and there given a thorough overhauling. All the canvases are taken to a competent harness maker and all broken straps and slats are replaced so that they are strong and ready for a season's work. The knoter is one of the most important parts and this is given a thorough overhauling. A new bill hook is probably needed, the disk may be worn or the knife dull. These should all be repaired thoroughly as there is perhaps no part of the binder on which more work is laid than the knoter, and a



Easy Sailing and a Clean Swath.

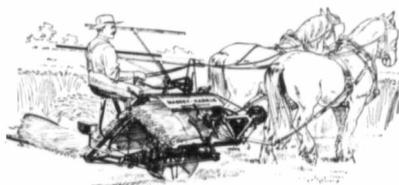
dropped at the right time or they will get out of line and the twine, canvases, and dozens of other things all have to be watched to keep them going properly.

In the morning before starting the machine into operation, of course, it has to be oiled. It should be gone over carefully so that any of the parts will not get overlooked. If some of the less important parts are missed once it will not make any difference, only extra wear on the machinery, but if a boxing on the main shaft were let get dry it would heat and melt the babbit from the boxing in a very few minutes. After the oiling is finished I think a good practice is to take a look over the binder and tighten up all loose nuts. This may be looked upon as unimportant and waste of time, but there is very little time wasted compared with loosening nuts off

it all takes time. The knoter should be made tie fairly tight and the frame adjusted so the sheaves will be tied in the middle.

The height the stubble is to be cut depends a great deal on the length of grain. It is not advisable to cut too high, however, as the long stubble will make considerable work for the plows in getting it turned under. When the field of grain is practically all the same length the reel can be set and left practically the same, but if the length of grain varies the reel has to be shifted or there is sure to be some heads missed. It is better set just low enough to catch the heads nicely, because if it's set lower when the speed goes up a little, the heads will be thrown in on the table and it will make ragged sheaves. How tight the canvases are put on the rollers does not make any parti-

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Repairs form a very small item. Binder is lightly built in the first place. A great money saver in this respect.

Frame is almost entirely of Angle Steel. Seventh roller prevents bunching and loss of grain.

No missed sheaves, binds them all, any size and always in middle of sheaf. Exceptionally wide canvasses facilitate handling down and tangled grain. Elevator floats at both front and rear, adjusts itself automatically to any volume of grain; ensures perfect elevation; saves canvas. Reel is controlled by one lever. Reel has wide range of movement. Main wheel is nearly all steel and is well supplied with lugs.

Whether the grain is light or heavy, lodged and tangled, or has a good stand, makes no difference. The "Massey-Harris" Gets it All

The "Massey-Harris" Binder every year is far in the lead in sales. This fact brings but one conclusion, — that the farmer is well satisfied. Make your work as light as possible and obtain most satisfactory service by getting a binder carrying the stamp

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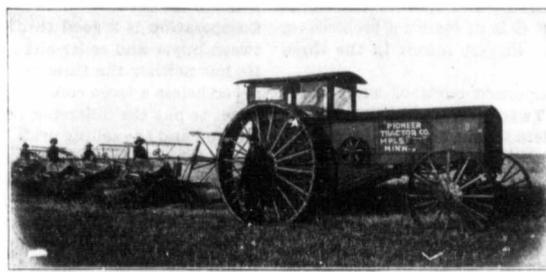


Massey-Harris, Co., Ltd.

binder that misses sheaves is a cause of great annoyance, both to the operator and the stooker. The packers should all be taken off and if any are badly worn, new ones should be purchased. All the oil holes should be thoroughly cleaned out and the packers put on again and all the nuts tightened thoroughly. It is advisable to inspect all parts through which the twine has to pass to see that none of them have sharp grooves worn in them, which are often the cause of the twine breaking and the general habit of the operators in this case is to blame the twine. The chains should next get a thorough overhauling. If all the links of the large drive chain show considerable wear, it is advisable to purchase a new one rather than have valuable time wasted later on in the harvest hurrying to town to purchase a new one. The same might be said of the elevator chain, better to secure a new chain at the beginning than have trouble with the old one. The cutting apparatus should then be looked to. The pitman has probably begun to rattle loose on the crank. This can be made to work temporarily by putting leather around the crank but it is best to buy a new one. The knives should be removed and all broken sections removed and new ones put in. The guards should all be cleaned and tightened to insure the knives running smoothly. The broken and cracked slats ought to be replaced and on all

bolts on the reel it is best to put jam nuts on to prevent nuts from rattling off while the machine is working. All the rollers should next be examined and here care is to be taken that they run free and smoothly. All the nuts should then be tried with a wrench and all should be tight. Don't have chains so tight that they will cause undue friction. In putting on canvases care should be taken not to draw one buckle

ways use something to pick out the oil holes and see that the oil reaches its destination. When leaving the binder for the night cover the canvases thoroughly with loose grain to prevent dew or rain shrinking the canvas. When the harvest is over the canvas should be removed and all noxious weeds cleaned off the binder and it can then be put under shelter again. The tongue should be removed and the bin-



Four Binders at One Time with the Aid of a Gas Traction Binder Hitch.

tighter than the other as this will cause the canvas to run towards one end of the rollers. Then with a stiff, sharp wire and some good machine oil go over every part of the machine making sure that the oil gets to every bearing. While the machine is working the best care should be taken to keep all parts running smoothly. Oil the pitman and packers at least every half hour and the rest of the binder every hour. Al-

der balanced on the drive wheel by putting a support under the frame of the binder. The canvases should be thoroughly cleaned and put away in a dry place where the mice will not get at them. By taking these precautions the binder will undoubtedly wear better, last longer and give better satisfaction than if it were allowed to winter at a fence corner and given as little attention as possible while running.

By W. K. Fraser.

With good care a binder will last eight or nine years. One of the first considerations when the binder is running is the lubrication; all bearings and other places where there is any friction must be steadily and effectively lubricated in order to remove friction as far as possible. The oil should form a thin layer between the two surfaces which would otherwise rub against one another. Good oil adheres to the surfaces and forms this thin frictionless cushion between two pieces of metal. It will always pay the farmer to acquire a knowledge of the difference between good and poor oil. Care should be taken never to let the supply of oil stop, either from the stopping of the oil holes or by not filling them often enough. If from either cause the oil does not get to the point of friction the draft of the binder will become much heavier and the bearings will "cut" very rapidly. A good way to keep the flow of oil steady is to have a piece of wool or cotton waste in the larger boxes. The next important consideration is the care of the canvases. They should be taken off every night and put under the deck or in some other dry place. Perhaps a handier and more effective way of protecting the canvases is to throw an oiled canvas cover over the binder at night. It never pays to start in the morning before the dew is off, as the strain

Continued on page 88.



## The Canadian Thresherman and Farmer

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\* \* \* \* \*

From time to time we have mentioned brome grass in our columns and whenever we do we hear from some of our readers to the effect that it is a pest. Recently we received a letter from a Manitoba farmer to the effect that it should be classed as a noxious weed. This may be putting it rather strong but there certainly seems to be something bad about this grass. If any of our readers can enlighten us regarding their troubles with this grass we would be pleased to hear from them.

The all-absorbing question before the farmers of Western Canada at the present time is that of "ownership and operation of elevators." It is not only a question but it is in reality a problem—a problem so big that it is taxing the biggest minds in the three prairie provinces in the solving.

It is moreover a problem the component parts of which have taken years for their development. Twenty-five or thirty years ago such a thing as a grain elevator problem among the farmers did not exist. They were glad and willing to sell their grain in any market that offered itself. They also took what was offered them in the way of price and raised few if any complaints. Concerted action among the farmers was impossible because the number was too few and the farmers themselves were too widely scattered. The majority of grain men at that time were also farmers and in consequence there was less distrust on the part of grain raisers of those to whom they sold their grain.

But like all things that pass through a period of time a change has been effected and there is riot bordering on revolution in the grain raisers' camp.

Has the farmer been cheated out of his just dues? Has he been robbed of monies that rightfully belong to him? If not, no problem exists. If so, it is high time that something be done.

For the sake of argument we will grant that there has been dishonesty and unfair dealing on the part of the grain dealers. We will assume that the farmers of Western Canada have been robbed of hundreds of thousands of dollars in the past decade. Are the

farmers in calling for a change ready with a substitute for the present system of handling grain, that will guarantee freedom from trickery and excessive overhead expenses? Will Government elevators and Government supervision solve the problem? Will a system of grain handling that will have practically 100,000 stockholders (for every farmer in Western Canada will be a stockholder) be practicable? If it is a Government proposition and a loss is sustained who will bear this loss, the farmers or the entire body politic from whom all revenue is secured? If it can be run at a nice profit who will share the profits?

The grain business is an all-absorbing one in a country like Western Canada. It is but the natural duty of every farmer to zealously watch the fruits of his labor until they are in such a position that he can check against them at his local bank.

But at the same time the farmer must not be carried away with the idea that he has everything in his own hands. The leader and the platform orator may be loud in his proclamation that the farmer has but to say the word and the world will answer to his "beck and call." It has taken thousands of years to develop our present industrial system (let it be good or bad and it will take some little time to perfect a substitute. It cannot be done in a day, a month or a year.

Already in Western Canada there are those who are clamoring loudly for co-operative stores, co-operative implement houses, etc., and who are positive in their statement that they can be had for the asking. These ideas have grown out of the agitation for a farmers, grain handling system and are in reality the desire to have the whole cake because there is a good prospect of getting one slice. Co-operation is a good thing but there must be co-operation between buyer and seller alike. The farmer is not a manufacturer. He has neither the time nor inclination for such things but he is nevertheless a large consumer of manufactured goods. It galls at times to pay the difference in price between the actual cost of production and the selling price. Yet these goods must be distributed and it takes time, men and money to accomplish this distribution. Now it matters little whether the manufacturer affects his own distribution or whether it is left to the consumer, the cost of making the same will remain comparatively constant, all things being considered.

Don't be in too great a hurry in this matter of co-operation. Get one thing at a time and get it sure.

\* \* \* \* \*

A Ten Dollar per day engineer, providing he can earn it, is ten times as cheap a proposition as a three dollar per day man. He will keep his engine running longer and better and is always on the job.

Cheap help around a threshing outfit is dear at any price. It continually delays the game and turns what should be profits into losses. Get the best help you can secure and pay them good wages.

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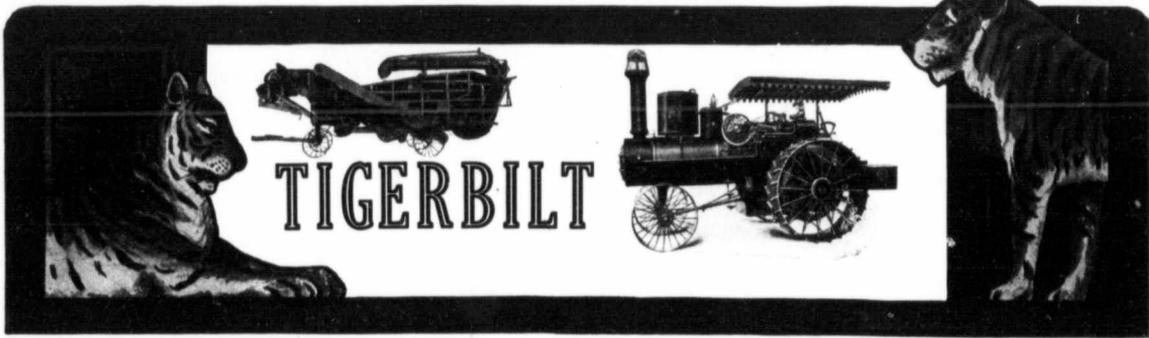
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- TIGERBILT** Means always machinery that is a business investment and not an expense—an investment that has proved profitable to four generations of threshermen and appeals stronger in 1910 than ever before.
- TIGERBILT** Means Honorbilt, no matter whether you buy an 8 h. p. traction or portable engine or a Gaar-Scott Big "Forty" special plowing engine.
- TIGERBILT** Means an extra large safe, quick steaming boiler made from best marine-flange steel, 60,000 lbs. tensile strength, stayed, braced and re-enforced to conform with the highest standards.
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- TIGERBILT** Means an engine that is amply warranted, but just as good without a warranty as with it, because Gaar-Scott 75-year quality and reputation mean more than the letter of the broadest warranty.

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- TIGERBILT** Means a new double-strength frame structure of best selected hardwood seasoned and re-seasoned; all joints painted with white lead as put together, water tight, dust proof and as near decay proof as it is possible to make them.
- TIGERBILT** Means continuous sills of heavy timbers and narrow matched and beaded siding, proof against cracking and splitting in any climate.
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- TIGERBILT** Means a cylinder with 16 double bars 30 inches from tip to tip of teeth, weight about 900 lbs., and momentum like the fly-wheel of an engine.
- TIGERBILT** Means double-bladed reversible teeth, as good as two sets of ordinary teeth, made so strong and set so securely that we guarantee to replace free every one that breaks, bends or comes loose in a season's run, when only grain is threshed.
- TIGERBILT** Means 97 per cent of grain separated on large concave and grate surface with perfect front and rear adjustment.
- TIGERBILT** Means 3-way-crank separation—the crankiest of all about getting the last grain out of the straw—straw racks have twice the throw and agitation of eccentric devices, and carry through surely and quickly either a handkerchief or a bag of wheat.
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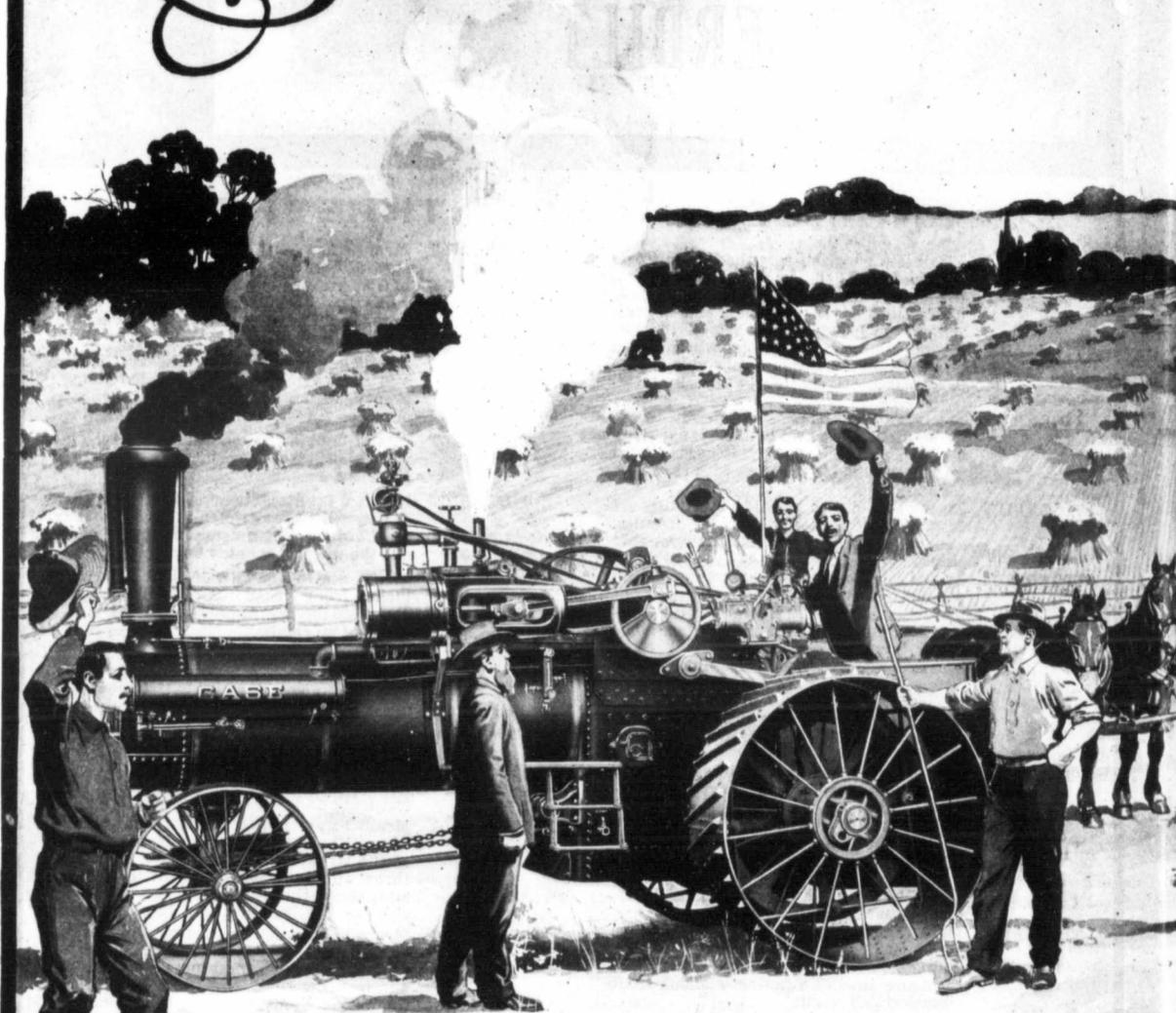
Little "Tiger" Threshers with a big appetite, Big "Tigers" with the biggest appetite, and the largest line of Engines between the Oceans.

Write for "Tiger Truths" and see what "Tigerbilt" means to thousands of satisfied successful threshermen all over Canada and the U. S.

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# GASOLINE TRACTION ENGINES

## A DEPARTMENT FOR THE USER

WE want every owner of a gas tractor in Western Canada to give us his experience. The owners of gas tractors 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.)

WHEN we pause to think that it has been thirty years or more since the steam traction established itself as a successful machine for agricultural purposes, we are led to wonder why it was not successive enough to the inventive geni of America and other progressive countries to quickly bring about the development of a motor wagon for general farm use. The gas engine was used for a number of years as a stationary and even a portable farm power before it was seriously considered for automobile purposes. But it seems that it was necessary to run the gas engine through several stages of development before it was seriously considered as a traction proposition, and especially its ready adaptability as a convenient power for the purpose of propelling a general utility agricultural motor wagon.

It is no longer a question of the fitness of the gas engine for this purpose but only what is the best method of its application? The farmer is ready for the motor wagon that can be regarded as a success. He has been ready for a number of years. In fact, he is not only ready but he wants it, and will buy it eagerly as soon as he is shown that it will do to rely on. He never was as anxious for something to help him out as now. He was able, formerly, to get three hired men to help out where it is impossible to get one now.

Much of the farmer's time is taken up in caring for, harnessing, hitching up and unhitching his teams, especially if he has to care for six or eight horses. A motor wagon can be so constructed as to be able to do the work of three or four teams, and will require no more attention than one team of horses ought to have, and the beauty of such an outfit is that the farmer can accomplish as much with it as he and two or three hired men could with a team each at certain kinds of work. We have just reached a period when this proposition is agitating many minds, but there seems to be no settled opinion concerning it. A Frenchman proposes to localize, or rather, make a semi-portable arrangement of his power plant and, by placing it at one end of the field—draw plows, harrows and other agricultural implements to and fro by means of a drum and cable, thereby obviating the necessity of moving the machinery, or rather the power tractor, over the soil, which might, in some instances, at least be detrimental to the land. This method, however, has the disadvantage of requiring two persons at least, one with the implement in use and one with the power plant. Since it

would be necessary to make a tractor of the power machine for the purpose of propelling itself along the end, we are of the opinion that the expense of cables and apparatus at each end for anchoring it along, with possibly the expense of an extra man, could be entirely avoided.

Some Englishmen, and several Americans, have thought of and developed gasoline tractors for a special purpose, such as plowing, that could not well be adapted to other uses. Then there are others who have busied themselves with the gasoline traction engine, built somewhat along the lines of the steam traction. These engines are meeting certain requirements but, like the steam traction, are confined to farms or ranches of large proportions. They are entirely too clumsy for ordinary light agricultural work. There are still others who have directed their attention to fitting mowing machines, binders, etc., with small gas motors for the purpose of driving the machinery only, thereby helping out the team which would be required to draw the load or weight of the implement only. By this means a different truck construction than that commonly used for mowers and binders is possible, which makes it much easier on the team. Such an arrangement is certainly a great improvement over present methods, but will help out only at certain kinds of work that may not be of more than from a few days to a couple of weeks' duration each year.

The kind of machine that is now in demand and required is a general purpose tractor, or motor farm wagon, which will be sought by the great army of agriculturists who operate farms of from forty to one hundred acres. Such a motor wagon will enable a farmer to intensify cultivate forty acres alone, and if he has two or three boys, one hundred acres is within his family capacity. Such a motor wagon need not exceed from two to three thousand pounds in weight. It could be built somewhat after the type of the present farm trucks with front wheels of practically the same diameter as rear wheels and large enough to climb readily over farm lands as well as road obstacles. We would regard it advisable to have the wagon equipped with two sets of wheels that would be interchangeable, but of different width.

### Plowing uses same amount of fuel as threshing.

We bought a 20 h.p. International gasoline traction engine last summer. We averaged about 1,000 bushels of grain per

day for 28 days with a Buffalo-Pitts separator, using from 15 to 25 gallons of gasoline per day. The quantity of oil consumed depended upon the condition of the grain and the way the engine was working.

A gasoline engine is like any other implement. It seems to work better some days than it does others. This is usually the fault of the operator. Poor gasoline, faulty ignition, slow explosions and many other causes, make quite a difference in the quantity of oil used.

Gasoline cost us 22 to 24 cents per gallon laid down at Sperling. We should have contracted for oil in the early summer, as it would have saved us at least 2c. per gallon.

We stopped threshing about the first of October and went to plowing. We turned off one job of a section of grain because I thought the plows ought to be going. The farmer cannot afford to own an outfit of this kind and work away from home all the time. He had better be at home getting his land ready for another crop.

Plowing requires about the same amount of gasoline that threshing does. We drew five fourteen-inch plows and did excellent work with an ordinary two gang plow and a three gang plow. From eight to twelve acres is a day's work, or about an acre to the hour.

Any farmer with a half section or more of land will find a gasoline engine a profitable investment, besides quite a satisfaction in the saving of horse flesh when the ground plows as hard as it did in our locality last fall.

Yours truly,

J. H. Grover, Sperling, Man.

### Keep Cool.

I will tell you my experience with a gasoline threshing rig last fall, in the hope that it will be of use to some one.

As we had a fairly large crop and a large part of it was badly damaged by hail, so that the threshers did not like to tackle it, we decided to buy a gasoline rig of our own, to insure getting our job finished before the winter set in.

After making a careful study of the different machines on the market we finally decided in favor of the Geiser. Accordingly we opened up a correspondence with Burrige and Cooper Co. and placed an order with them for a rig, which arrived in due time.

The machine started off with-

out a hitch. The expert stayed with us for not more than half an hour after the machine was running. I regret that any data which I could give regarding the number of bushels threshed would be misleading because our crop was badly damaged. We were short handed a good deal of the time, but in fifteen days we threshed what stuff it took twelve hundred pounds of twine to tie up, and I think if the straw had been straight it would have gone through in two thirds of the time. Our separator had a twenty six inch cylinder and a forty six inch rear.

The machine ran very smoothly during the entire run and we didn't spend five cents in repairs. The longest stops we ever had was to lace belts and once I got some dirt into a check valve on the engine, which was my own fault for letting dirt get into the gasoline. But what pleased us most was the quality of work we did. We have had a great deal of threshing done for us and we have estimated and feel safe in stating that on an average every year, we have had enough grain thrown into the straw stack (which the separator would have saved) to have made a payment on this machine.

In a portable engine that is well constructed, there is practically nothing to go wrong for a good long time if everything is kept tight and clean, and good oil is used in proper quantities on all moving parts, except valves, which do not need oil. If you oil your cylinder properly with the best gas engine cylinder oil that you can buy, you will save yourself lots of trouble. It is a bad thing to use too much oil, but be dead sure you have enough. I find that the engine will start at once in zero weather absolutely without fail if a red hot iron is held in the intake pipe to warm the air as it goes in. You can never gain anything by getting in a hurry with a gasoline engine. Keep cool. Put it in perfect shape for the next day's run before you leave it at night.

In conclusion I would say to those who are contemplating the purchase of an engine. First, don't always take in just all that an agent tell you. He might be the soul of honor, but then he might not be. Remember, it takes a slick talker, coupled with loud advertising, to sell a low grade engine. Make some use of your own judgment.

Yours truly,

B. S. English, Caron, Sask.

# See These Two Wonderful Farm-Labor Savers at Winnipeg Exhibition

## YOU KNOW WHAT HORSELESS HARVESTING MEANS TO YOU

You know what time can be saved—how much crop can be saved, if you have a surer quicker way of harvesting than with horses. Knowing this it is up to you to find out all about the Gas Traction Binder Hitch because this Hitch successfully solves the problem of "horseless harvesting."



### THE GAS TRACTION BINDER HITCH

lets you use any number of binders of any size or make, in connection with any traction engine. If that statement interests you, stop reading this advertisement right here, get a post card, write on it that you want to know more about the Gas Traction Binder Hitch, and send it to us. If you don't do it right now you may neglect it.

### READ WHAT IT DOES

With the Gas Traction Binder Hitch you attach any number of binders to your engine. Each binder will cut its full swath—will run exactly where the operator desires. No side-draft. No running over bundles—the sharpest corners turned perfectly. Your interest is roused now Mr. Farmer, isn't it?

Do your harvesting when it should be done. Do from 75 to 200 acres per day according to the number of binders. Cost won't be more than 25 cents per acre. One half the time, one-third the expense of horses, and absolutely certain.

### WE GUARANTEE THE GAS TRACTION HITCH

We know where we're at with our Hitch. It is not an experiment. It has been tested and proved by thousands. If upon trial it does not prove satisfactory—no pay. One Hitch for every binder. Shipped on approval.

If you haven't already written that card get at it before you put this paper down  
Mention the Canadian Thresherman and Farmer

## Gas Traction Company

Makers of  
Gas Traction Engines

Winnipeg, Manitoba

## You Have "Horse Sense"—now Get "Gas Traction Sense"

While writing your card about the Gas Traction Binder Hitch mention that you want our beautifully printed book "The Passing of the Horse". By return mail you will receive the greatest traction engine catalog ever printed. Clearly written—beautifully illustrated—truthful in every detail—facts, figures and photographs furnished by actual users of the Gas Traction Engine—these are but a few of the sterling features of this splendid book. From cover to cover it is crammed full of earnest, honest Gas Traction Sense—and it's all free to you for the mere asking. Once you read this interesting book you will understand why



### The Gas Traction Engine

is the ONLY Traction Engine Sold Absolutely **7/3**  
on Approval

See us at Winnipeg Exhibition and at Plowing Contest

The liberality of our sales policy at once makes it apparent that The Gas Traction Engine is "best". Back up that liberal sales policy with a "Golden Rule" guarantee that states specifically just what the engine will do in your own hands on your own farm, and The Gas Traction Engine is immediately placed above suspicion. That is unquestionably the kind of an engine you want—an all-purpose farm engine, fully guaranteed and sold absolutely on approval.

### Write for a FREE Copy of "The Passing of the Horse" Now

Before you forget it put down your name and address on a post card or a slip of paper and mail to us AT ONCE. You may not need an engine to-day, but you will eventually want THE GAS TRACTION ENGINE to do all the work on your farm—so write immediately for a free copy of "The Passing of the Horse" and make yourself acquainted with the many superior qualities of this unqualified all-purpose farm power. **DO IT NOW.**

## Gas Traction Company

"First Builders Multiple Cylinder Farm Tractors"  
Made in Canada

Winnipeg, Manitoba

Visit Our Elmwood Factory While in Winnipeg for the Fair

# Course in Gas Engineering

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

## LESSON IX.

### Mechanical Forms of Generators, Dynamos and Magnetos.

Mechanical forms of current producers have the advantage over primary and secondary batteries in that the energy required by them is derived directly from the engine they operate. Hence current will be produced as long as and only when desired. The other forms of generators depend upon sources of energy entirely extraneous to the engine plant, and the supply of current is therefore not in any sense automatic, which would be the ideal condition. The terms dynamo and magneto have been variously used. Some writers designate by "dynamo" any generator having electro-magnets serving to establish the magnetic field, and by "magneto" any machine employing permanent magnets for this service. Others define the difference as existing in the kind of current produced, a dynamo furnishing direct, i. e., continuous current, while a magneto produces alternating, i. e., pulsating current. Whatever definitions

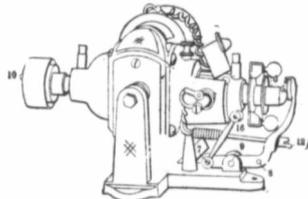


Fig. 1

adhered to, it should be remembered that in either machine the current is produced by an electrical conductor cutting the magnetic field. The current is produced in exactly the same way, and for exactly the same reason, as that established in the secondary winding of a spark coil. In this case the conductor of electricity is wound upon a piece of metal, called an armature, which is rapidly rotated in a magnetic field. It makes no difference whether this field is produced by permanent magnets or by electro-magnets. If there are a number of such conductors upon the armature, and the current induced in each is properly collected by a so-called commutator upon the armature shaft so as to be practically continuous in its flow through the external circuit, we have what is generally called a dynamo. On the other hand, if the current in the external circuit rises to a maximum value and then dies out to give a maximum value next in the opposite direction, the machine is generally known as a magneto. While in all dynamos and most magnetos the armature constantly rotates in one direction, it

should be stated that in all magnetos this is not at all necessary. Thus in the Simms Bosh magneto, the armature is stationary, and only a sleeve surrounding the armature is rapidly oscillated in the magnetic field. It would be beyond the scope of this lesson, however, to discuss all the possible modifications, and the reader is hence referred to the works upon this subject.

In general, the small dynamo used for ignition purposes is driv-

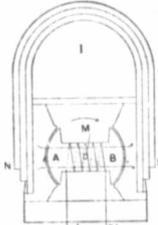


Fig. 2

en by means of a friction wheel from the fly-wheel of the engine. There is then no current available from the dynamo when the engine is started, and it becomes necessary to use a battery of some kind for the first minute or two, switching in the dynamo when it is up to speed. This scheme has the disadvantage that the battery is sometimes left in the circuit and the dynamos have been known to burn out under excessive engine speeds. A device called the Auto Sparker, Fig. 1 overcomes these difficulties. This little dynamo is fitted with a centrifugal governor which controls the position of the friction wheel on the fly-wheel rim, so that even at starting the armature rotates rapidly enough to furnish starting current. This does away with an auxiliary battery. As the engine speeds up, the governor of the dynamo acts to keep the armature speed constant, independent of the diameter of the fly-wheel or the engine

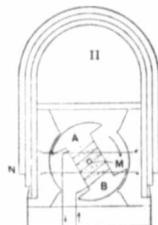


Fig. 3

speed. By adjusting the governor or tension spring, it is possible to control the speed of the dynamo to get any current between 1 and 3 amperes and any voltage between 3 and 10 volts.

Regarding magnetos, the following description of the action of a magneto, together with the explanation of the method of con-

necting it up, is taken from a catalogue of the Holley Bros. Company, of Detroit. For clearness and simplicity this description can hardly be improved upon.

"A magneto, so far as its essential parts are concerned, is a very simple thing. It consists of a U-shaped piece of special steel, which is permanently magnetized; in other words, a common horseshoe magnet and a rotating armature. The armature consists of a soft iron core of approximate H cross-section as viewed along the shaft upon which it is supported and on which it is designed to rotate. The magnet, to the free ends of which are affixed soft iron arc-shaped pole pieces, and the armature core with the sides of the H correspondingly are shaped, is shown in vertical section in Fig. 1. In the slot formed in the armature core by the sides of the H, wire is wound in turns lengthwise of the armature shaft. So much for the construction of the elementary magneto. In order to understand how it generates in its armature,

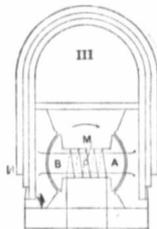


Fig. 4

when turned, an electric current, it is necessary to remember one law of physics, namely: Whenever a wire is wound about a magnetized soft iron core and the magnetism of the core suddenly dies out, there will be a tendency for a current to be produced in the wire. A familiar example of the working of this last is found in the operation of the common jump-spark coil. Here we have a core made of soft iron wires and around it is wound a great many turns of fine wire, the ends of which are connected to a spark plug. The core is also wound with a coil of wire which is supplied with current from a battery, and when this current is flowing the core is magnetized. When the current from the battery is interrupted, the magnetism in the core suddenly dies out, and, in accordance with the law above stated, a tendency is created for a current to flow in the fine wire coil which is connected to the spark plug and this 'induced' current jumps at the plug.

"In order to explain how the iron core of the magneto armature with its winding is magnetized and how the magnetism of

the core is caused suddenly to die out, it is necessary to refer to four diagrams of Figs. 2-5, showing the armature in different positions of rotation with respect to the pole pieces. In diagram (I) the armature is represented with the two ears of its core in close proximity to the faces of the pole pieces. The space between the pole pieces is thus almost completely filled or bridged with iron, and magnetism passes from one pole piece to the

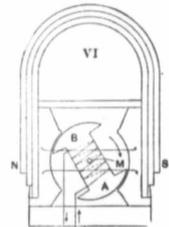


Fig. 5

other through the armature core, thoroughly magnetizing it. Next consider diagram (II). Here the armature is shown rotated into such a position that one edge of the armature core is just leaving the vicinity of one of the pole pieces. As soon as this position is passed, the space from pole piece to pole piece is no longer filled with iron, but with air which is not a conductor of electricity. Thus very little magnetism passes from one pole piece to the other and the core is no longer traversed by the magnetic influence and suddenly ceases to be magnetic. This is exactly the condition prescribed by the above quoted law for the production of a current, and, in fact, when the armature in its rotation leaves position (II), there is a sudden impulse of current produced in the wire of the armature which dies away after the armature rotates a little beyond this position. In position (III), the conditions of armature magnetization existing in position (I) are reproduced, except that the armature has changed ends in respect to the pole pieces and the magnetic influence passes through it in the opposite sense, charging it oppositely, so that when the magnetism is discharged in position (IV) the current will be in the opposite direction through the wire of the armature winding. As the armature is turned upon its shaft, there are thus produced, in each complete rotation, two rather short impulses of current of opposite direction nearly corresponding with the instants at which the armature heads, so to speak, 'part company' with the pole pieces and are half a revolution apart. During the remain-

Continued on page 90

# ENERGY WITHOUT EFFORT!

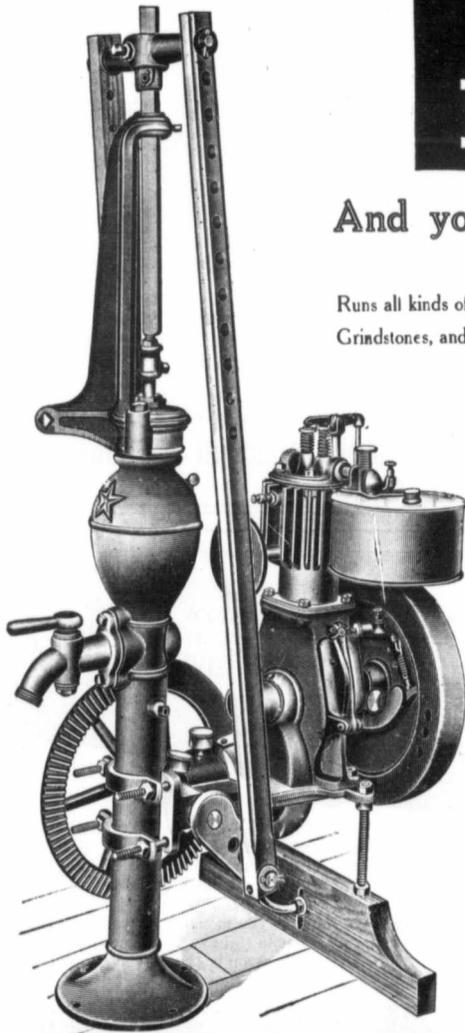
## WHY SWEAT AND SWEAR-UNNECESSARILY?

◆ GET A

# Farm Pump Engine

And you get rid at once of the whole  
drudgery of the farm

Runs all kinds of hand power machines.--Separators, Churns, Fanning Mills, Feed Cutters,  
Grindstones, and pumps abundant water for stock and domestic use.



## PROTECTION Against FIRE

This energetic engine pumps from 800 to 1000 gallons per hour: throws a stream as high as a house or barn, or 60 feet on the level.

Of what avail is the smartest "bucket brigade" when a fire that knows its business has got hold of your home or barn? The Farm Pump Engine is ready on the instant and equal to any outbreak.

## COMPLETE as it COMES TO YOU

There is nothing to build--no "extras" to buy. It is a complete portable plant, fully equipped and ready to adjust itself to any job you've got for it. Gets busy within fifteen minutes from the moment it reaches the farm. Will fit any pump.

Out-pumps the largest windmills. Air-cooled without fans or attachments. As high grade as best automobile engines. Starts or stops on the instant. Cannot freeze or overheat. A child can operate it. This engine saves time, muscle and money. Gasoline costs only a few cents a week and that represents the inclusive board-bill.

Send for interesting free  
booklet, today to

Think of it! All for a few cents a week!

**THE BRANDON IMPLEMENT MFG. CO.** Dept. 40  
Brandon, Man.

### Gas Engine Experience Department

**U**NDER this heading we shall publish regularly the experiences of our readers with gas engines, stationary, portable or traction, as a matter of mutual help. We want you to give us your experience. Tell us your troubles, no matter how small, and we shall be pleased to set you right. We have made arrangements whereby your questions will be referred to a staff of experts, and the answers to your questions can thus be relied upon. What we want principally is your experience with a gasoline engine. It is only in this way that we can build up this department making it mutually valuable to yourself, your neighbor, and to this magazine.

#### Trouble Largely Due to Inexperience.

I received your letter regarding my experience with a gasoline engine. Four of us purchased a threshing rig for our own use. We got a 28x48 American-Abell Separator, and an Ideal 20 h. p. portable engine. The engine was second hand.

By the time we had hauled our outfit twelve miles from town to our first job of threshing, we had had enough of a portable outfit. The engine was also too small for the separator, so had to switch one end or the other. Of course, we switched the engine.

We then investigated a little and decided on a 30 h. p. Kinnard Haines Flour City engine. It was late in the season when we ordered and as the company were rushed with orders, it was three weeks before the new engine arrived.

In the mean time we coupled our separator with a Hart-Parr engine belonging to a man whose separator had not come. We used the Hart-Parr nine days, using 10 barrels of gasoline. But in fairness to the engine, I must say that there was a good deal of evaporation from the wooden barrels. When our Flour City arrived it was late in the season and quite cold.

When preparing to run the engine out, the parties who brought it, put a castor oil in the gear case and it was too heavy to feed to the ball races properly. When we started the separator with it the brass oil distributor "seized" on the shaft and "killed" the engine. After considerable work we took off the whole of the transmission gear and took it to the machine shop, where we managed to take the clutch drums off wrong end first.

The ball races were what was really damaged, but we left them alone and put in a new brass distributor, setting it up closely, and put it on the engine.

Now up to this time I knew absolutely nothing about an engine of any kind. We expected the gas engine man who ran the rig out would stay and give me some instructions, but at the end of the first day's run I told him that he had better set me at running the engine and he could watch me. "Oh," said he, "I am going in tonight or in the morning. You can run it all right. There will be no trouble except with the sparking apparatus or with too much oil in the crank case."

The first morning all went well and continued so till about 3 o'clock when we needed more water in the cooler. I went after the water and the separator man watched the engine. He noticed, soon after I left, that the oil on

the cylinders was smoking, and decided that it was too hot, although the water was still circulating, and that it needed more oil. He took a can and poured a goodly supply into the crank case. Of course, we had trouble with the plugs after that, and when they got to missing and firing through the carbureter, we were all at sea. We were moving at night and we saw the fire so near the gasoline that we were frightened. The engine ran on three plugs, then two and finally one of those ceased to act. We were crossing a piece of fallow and left the machine there, and at 3 o'clock in the morning I went for a man to help us out. I told him my trouble and he said I had too much oil in the crank case, and that I would just have to work it out and clean the plugs when they got to missing.

I accordingly cleaned the plugs and the engine went fine. So it was, I got my knowledge by experience. We had a few little experiences of the same kind, each one giving me a better knowledge of gas engines. We had a goodly lot of flax to thresh and we, with other outfits, have quite a lot to do yet. A barrel of gasoline ran us two days and sometimes longer. We have run the engine when it was 22 degrees below zero and our only trouble was getting the frost out of the water pipe so that it wouldn't freeze up. Sometimes we would put a torch of waste dipped in gasoline under the intake pipe and one under the pump. I made a box for the battery in such a way that a lantern sits underneath. We take the cells in the house at night and when we put them in in the morning we light the lantern and put in the box and close the door. The lantern must not be turned too high. After the engine warms up I turn out the lantern and place the box with the battery and box near the exhaust, which keeps it warm.

As our engine came so late, we have had no experience with plows. We intend to plow in the spring and would like to hear from any one who has had experience in plowing with horse disc plows.

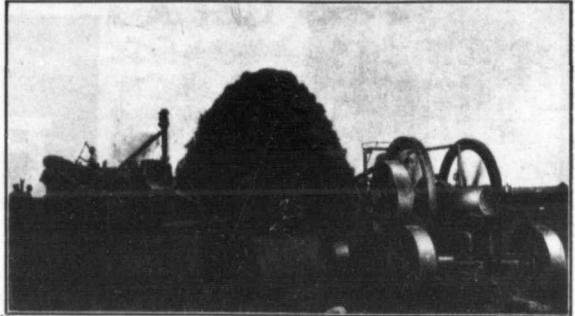
A copy of your paper comes here and I always look for the gasoline engine articles and study them thoroughly.

Yours truly  
C. T. Babcock,  
Rouleau, Sask.

**Costs \$4.25 per 1000 Bushels to Thresh.**

I have run a gasoline outfit for three seasons. I have an International 20 h. p. gasoline engine and a 24 inch separator, and I

## The Manitoba 25 H.P. Gasoline Threshing Engine will save you Money, Time, Worry



Write us for catalog C, and particulars of the most liberal guarantee ever given with a threshing engine. They are guaranteed to do the work, at low in price and sold on easy terms of payment. Investigate before buying.

We manufacture GASOLINE ENGINES for every purpose, POWER and PUMPING WINDMILLS, WOOD and IRON PUMPS, GRAIN GRINDERS, SAW FRAMES, Etc.

See our Big Exhibit at BRANDON FAIR

**The Manitoba Windmill & Pump Co. Ltd.**  
Box 301  
Brandon, Man.



We want every Farmer, Thresherman and Dealer who visits the Winnipeg Industrial Exhibition, July 13th to 23rd, to call and see our exhibit, in the Centre Industrial Building. We will then explain to you why you should investigate our WESTERN STANDARD Wagon Tanks.

**Threshermen.** We can save you money. If you have not procured a tank, send your order in right away, or we will book you at the Fair. The season will soon be here, and you will not want your order delayed.



#### SPECIAL MADE OIL AND GASOLINE PUMP

We also show in this ad. a cut of our special made Oil and Gasoline Pump. This is something that every user of gasoline should have. If you have not procured a copy of our illustrated catalog do so at once. Be sure and write.

**Red River Metal Co.**  
55 Aikens St., Winnipeg

think I have got as fine a rig for a small rig as any man need want.

Last year I had about 17,000 bushels altogether and there was 11,000 bushels of that wheat and the balance oats and barley. I never had an hour's lost time in threshing the whole amount.

I just had four teams hauling sheaves and we never threshed less than 600 bushels and up as high as 800 bushels per day on wheat and as high as 1,500 bushels on oats.

I had a portable engine for two seasons and last summer I got a trade with the International people and got one of their new traction engines.

As regards cost of gasoline for threshing. It cost me about \$4.25 per 1,000 bushels and about 25 cents per day for moving the outfit. As regards starting the outfit in the mornings, we never had five minutes' detainage any morning.

Hoping I have not taken up too much of your space I remain,

Yours truly,  
J. A. Patterson,  
Boissevain, Man.

#### Breaks 14 Acres in 10 Hours.

In 1909 since June 1st we did about 1,000 acres of plowing of all kinds in the vicinity of Morris with a 45-22 h. p. Hart-Parr gasoline-kerosene engine and a John Deere engine gang.

We pull six fourteen-inch plows in breaking and backsetting and use from 3 to 4 gallons of kerosene per acre.

The engine handles 8 bottoms nicely plowing stubble and summerfallow and uses from 2½ to 3½ gallons per acre in this work.

We use a low grade kerosene for fuel, which costs from 16½c to 18c per gallon in Winnipeg. The freight is about 70c a barrel to Morris or less than 2c a gallon and as we get a refund of \$1.60 for each empty oil-barrel returned, we figure that this refund pays the freight and also furnishes our lubricating oil for engine and plow.

The engine requires a little water mixed with the kerosene for fuel, using from 20 to 40 gallons a day in plowing. As it is an oil cooled engine, there is no water to be supplied for cooling, and on this account we run a half-way without stops, which is a saving of much time driving a season's run.

We use a little gasoline to start the engine with, about 4 or 5 gallons a day, costing 22½c to 25c a gallon in Winnipeg.

We had a caboose with us all summer, so there was no lost time in driving to and from work, and two men were with the outfit all the time and a third man brought out fuel and drew the necessary water supply, making two or three trips from town a week.

An ordinary 10 hours work was about 14 acres in breaking and backsetting and 20 acres plowing stubble and we find that backsetting is the hardest on the fuel on account of poor engine footing.



## THE Flour City Tractor

Twice Winner of the Gold Medal in the Winnipeg Contest, 1908 and 1909.



**A General  
Farm  
Engine of  
the  
most  
Modern  
Design  
and  
Construction**



**The Acme  
of Strength,  
Lightness  
and  
Durability**  
  
**Our Catalog  
tells all  
about it**

An Engine that has Demonstrated by Comparative Tests its Superiority

**Kinnard-Haines Co., 828 44th Avenue North and Bryant, Minneapolis, Minn.**  
**Ontario Wind Engine & Pump Company, Ltd., Dominion Sales Agents, Winnipeg, Calgary and Toronto.**

As this was our first summer in Manitoba we had all the plowing we wanted, so we did not undertake threshing, but would say that we believe that plowing is much harder on an engine than threshing as there is no let up on the load on engine when plowing, while there is generally a let up once in a while when threshing.

We would be pleased to give any information in our line to anyone asking at any time.

Yours truly,  
C. S. Wilbur,  
Morris, Man.

#### Two Gallons of Fuel Per Acre for Plowing and Harrowing.

My engine is an International 20 horse power traction. I got the engine the last week in September and hitched it on to our 28-50 Case separator which has all attachments, and found it ran the machine satisfactorily.

We threshed over 900 bushels of wheat in a day's run and 1500 bushels of oats. I may say that the grain did not yield well for the quantity of straw, which makes the bushels per day smaller than if the grain had been better filled.

The consumption of gasoline for an average day's threshing was about 20 gallons or about 2 gallons per hour and the price of gasoline laid down at Myrtle is 22 c. per gallon in barrel lots.

After finishing threshing I used the engine for fall plowing. For deep plowing we used two three-furrow twelve-inch Cockshutt engine gangs and one set of harrows, which cover 23 feet, so that the land is harrowed twice.

Regarding the gasoline consumed for plowing an acre and harrowing twice, as near as I can figure it out would be two gal-

lons, and the water used would be between 3 and 4 gallons. I have used the engine plowing both stubble and timothy sod and it handles the two three-furrow twelve-inch plows and 12 feet harrows in either. For shallower plowing, say from 3 to 4 inches deep we pull an extra two furrow plow and 15 foot harrows.

For crushing we have a ten-inch Maple Leaf crusher and can easily crush 20 bags per hour. Regarding the amount of gasoline used in crushing, I could not give you the exact amount used, but it would not be more than one gallon per hour.

Regarding the cost of lubricating and gear oils for plowing. It costs about 50c. per day. We have plowed 250 acres and do not notice any wear on the gear. I may say that there are five more gasoline engines in this district and they are all giving good satisfaction. I am,

Yours very truly,  
George Swales,  
Myrtle, Man.

#### Uses Engine for Crushing in Winter.

I have done my own threshing with the outfit we have for three years now and the last two years threshed for a neighbor also. We did it all out of stook, and had teams and men enough between us to run the outfit.

I have a 20 h. p. International engine and a 32-inch separator, but we might have a larger one as we have power to spare.

I like the gasoline for threshing all right. One misses all the bustle and confusion of the big outfit gang, and the woman folk don't want any more big outfits around.

It has cost me ¾c. a bushel for gasoline on an average, and I

think the future mode of threshing in Manitoba is for two neighbors to own a small outfit run by gasoline and do their own work. No big priced men standing around with hardly anything to do only look nice.

My engine is a portable and does good work. We crush with it all winter and do not have very much trouble with it.

There is no traction gasoline near us and I have not heard of any plowing being done with one, but can't see why they should not work as well as steam with less trouble for fuel and water.

Gasoline is retailed here for about 35c. per gallon, but one can usually get it cheaper through the company who sells the engine.

I have been a subscriber to your paper almost since it started and must congratulate you on the splendid success you have made of it. It is as good a farmer's paper as any printed and you deserve encouragement and a subscription from every man who would like to see farming a success. I remain,

Yours truly,  
A Manitoba Farmer.

#### Trouble When Engine is Idle.

I own and operate a 7 h. p. Stickney engine. I have the engine in an annex to the granary and operate a crusher, circular saw, fanning mill, grind stone and emery stone. The circular saw is conveniently situated outside the granary and I connect to line-shafting in the building. Gasoline is worth 28c. per gallon by the barrel lot and the engine consumes about 8 gallons of oil for a ten-hour run.

The only trouble I have had with the engine has been of a very simple nature; the first be-

ing the loss of power, owing to misfiring, the batteries being at fault. That was easily remedied. I might give this hint to users of gasoline engines who use dry cells to obtain their spark. It pays to have a good hot spark. The Stickney engine is sent from the factory with four dry cells. I find that 6 dry cells produce a much hotter spark and so eliminate the possibility of misfiring. The best method of attaining a constant spark is with the magnet.

The only other little bit of trouble I have had is that if the engine lays idle for ten days or so the electrode is apt to stick in the brass bushing. I am not quite clear why this should be. It cannot be due to expansion of the metal as when I am using the engine two or three days a week as I am this winter I have not been bothered with it.

I saw recently in this series of articles where a writer favored using a little water at a time, renewing it often to cool the cylinder. I suppose the idea was that the constant addition of cold water tended to keep the cylinder cooler.

In cold weather I cannot start the engine unless I have warmed up the cylinder with a couple of buckets of boiling water. When I have done that the gasoline vaporizes at once and I can start the engine without the slightest difficulty. I should advise intending purchasers of gasoline engines if they are farmers, to consider only those which are hopper cooled and gravity fed. I should also strongly advise the putting up of a building to house the engine, as valves are apt to rust up and damp air to get to the electrodes etc. if the engine is left, as I have seen many, out in the open with a horse blanket thrown over it.

I should like to hear of the experiences of practical farmers using the small type of gasoline tractors pulling say 4 plows in stubble land.

Hoping that the above may be of some practical use to farmers with shamm engines, I remain,

Yours faithfully,

"A Reader"

Glen Adelaide, Sask.

#### A New Gas Tractor

A copy of the latest catalogue of the Universal Tractor Company, of Stillwater, Minn., has come to our notice.

This is a two-cylinder, horizontally opposed type, water cool-

ed machine, and from appearances is a first class tool. It is of neat design and strong and durable construction.

For further information write the Universal Tractor Company, Stillwater, Minn., mentioning The Canadian Thresherman and Farmer.

#### Reduces Keep to a Minimum.

I have a 15 h. p. Stickney portable gasoline engine which I purchased from the Ontario Wind Engine and Pump Co., Winnipeg. I use 1½ gallons of gasoline per hour and pay 30c. per gallon for gasoline.

The engine is simple and easily operated. I do my own threshing, and operate a 29-44 Sawyer and Massey separator. I have had the outfit three years and last fall it ran better because I understood it better. I run the engine and separator and do quite a lot of feeding. Last year the straw was light and easily handled. I did my threshing with three men and myself, I running the engine and separator, the two men with the stook teams taking turn about in cutting bands and feeding. One man took care of the grain and straw. Instead of stacking we put it through the separator.

It cost me 2c. per bushel for oats and 3c. per bushel for wheat. I find it more economical to do my own threshing, as there is no grain thrown over and none wasted in the feeder. I would advise anyone contemplating to make a purchase to get a 20 horse power engine, so that it will operate a stacker. It is no trouble to get men to hand feed but no one likes to handle the straw.

Yours truly,

R. H. Robertson,  
High River, Alta.

#### Uses a Quart of Gasoline Per Hour.

I am in receipt of yours asking for my experience with a gasoline engine. In reply would say that I own and operate a 4 horse power Monitor engine, the same as are made in Brandon.

I run a six-inch grinder and can grind about 25 bushels per hour and use not more than one-half gallon of gasoline per hour. I also do all my pumping. I use about one quart of gasoline per hour to pump. As I have not had my engine very long I have not put it to all the work that I intend to. The engine gives perfect satisfaction.

The cost of gasoline is from 23c. to 28c. by the barrel and from 30c. and 35c. by the gallon.

I made my own pumping jack, using the gear wheels and Pitman shaft of an old binder. I changed the gear wheels to make it run slow, fastened the pitman shaft to the top of well and attached pitman to pump handle, and it gives splendid satisfaction.

Hoping this will be of some benefit to you I remain,

Yours truly,

H. T. Porter,  
Elm Creek, Man.

#### Looking Toward the Gas Tractor.

You asked me a short time ago to give an account of my experience with a gasoline engine. I bought my first one four years ago. It was a 6 h. p. International and I used it for crushing grain and sawing wood and was very pleased with it, but I decided that I would like to have a larger one and do threshing as well. In the fall of 1908 I bought a 15 h. p. International portable engine and a 32 inch Belle City separator, with self feeder, blower and weigher and did my own threshing and one neighbor's job. Last season I threshed over 22,000 bushels with a gang of three, two pitchers and myself.

I am well pleased with the machine, but think that it would pay me to have a 20 h. p. engine. The 15 h. p. can handle oats fairly well, but the pitchers have to go slower with the wheat.

All the farmers I have threshed for seem to be very well pleased with the work done. I think it is an ideal power, which needs very little attention and needs comparatively few to handle the outfit, as it does away with fireman, waterman, strawman; and only needs one man to run both ends.

With the 15 h. p. the most we threshed in a day of wheat was 550 bushels and 1200 bushels of oats, but could easily do more wheat with more power and still make a good job.

As to the amount of gasoline consumed per hour I cannot say with any certainty, but I should think a trifle over 1½ gallons.

The price of gasoline this year was about 24c per gallon.

I also do a good deal of custom crushing in the winter and saw all my own wood. I have no photographs of the outfit at present, but may have shortly and if they are any good I will send you one.

I sometimes think I should like to have a traction engine, but as my land is rather stony, I am doubtful whether the plows would work satisfactorily and unless I could use it for that purpose I don't think it would pay to have one.

I am very pleased to see that you are giving more attention to the gasoline engine department in your paper, as I think it is getting to be just as important a subject as steam power and hope you will give more attention to the subject every month.

Wishing you every success I remain,

Yours truly,

Robert Peel,  
Miniota, Man.

#### No Trouble in Winter.

I own and operate a gasoline engine. It is a 3 horse power International gasoline engine. I have it mounted on trucks which makes it convenient for all kinds of farm use. I use it for crushing grain in the winter, and spring and fall for wood cutting. I have an eight-inch plate Brandon crusher and can grind twelve ordinary bags of oats per hour and the amount of gasoline used per hour would be about two-fifths of a gallon. But for barley I can only put through eight bags per hour, as barley is much harder to grind.

I have also done considerable wood cutting both for myself and neighbors. I can cut wood in good shape and with the assistance of three men can cut several cords of cord wood and cut each stick twice in 10 hours. The gasoline used would not be as much used as for crushing grain, about 2½ gallons in 10 hours. Gasoline costs 30c. per gallon by the barrel.

Now I understand gasoline engineering as well as steam engineering and would say that gasoline engines are more handy than steam and can be operated much cheaper. For instance, take custom feed grinding; one can start grinding in a few minutes after the load arrives where with steam it would take half a day to get started unless one had certain days appointed; then it might be an inconvenience to the farmer to take his grain to the mill on those days.

In the winter some people have trouble in starting their gasoline engine. I have run my engine all winter outside without the least shelter whatever and had no

READ ABOUT  
**HART-BROWN WING CARRIERS**  
SEE PAGE 61.

# Farm Power

is What You Get When You Purchase an "IDEAL" Gasoline Engine

To prove this to you conclusively we have put our engines into the Winnipeg Motor Contest where they will be rated according to their merits. We want you to come and see us do our work and then judge for yourselves.

### Some Features

**Double Opposed Cylinders**—making a perfectly balanced engine.

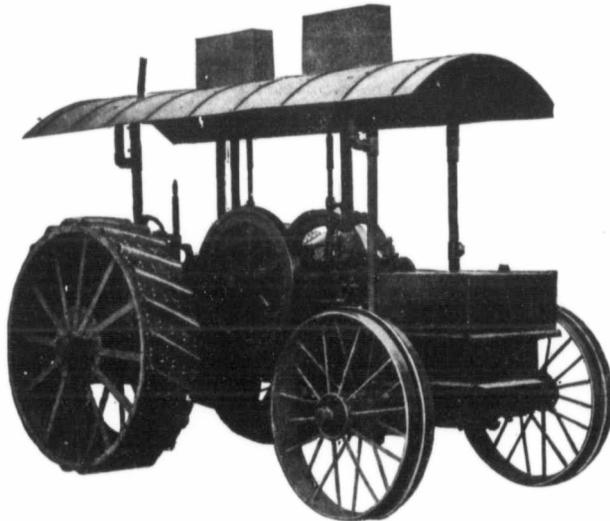
**Wave Cleat Drive Wheels**—Acknowledged to be the best in sticky and muddy soils.

**Automobile Steering Device**—Doing away with steer chains and making steering almost automatic.

**A Perfect Cooling Arrangement**—Insuring perfectly cooled cylinders on a minimum of water.

**Power Transmitted through Cone Clutches**—One lever controls all speeds and reverse.

**Larger Fuel Capacity**—Fuel tank holds sufficient for a day's run.



### More Features

**Easily Operated**—Using only one lever and the steering wheel is so placed that the operator has the engine under full control at all times.

**Double Exhaust**—Which ensures perfect scavenging of the cylinders and individually assists in keeping them running cool.

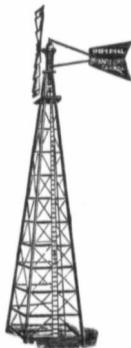
**Heavy Channel Steel Frame**—Insuring perfect support for both engine and traction, thus reducing the possibility of breakage to a minimum.

**Heavy Construction**—In building our engines we have kept the needs and requirements of the traction plowman constantly in mind and have designed and built the "Ideal" Gasoline Traction Engine accordingly.

Built in 28 h. p.—20 nominal and 45 h. p.—30 nominal. Write for our special catalog on gasoline engines.

**DON'T FORGET OUR OTHER LINES WHEN AT THE FAIR.**

## BEST BY FAR IN Wind Power



is the "Imperial" wind engine made at Brantford, Ont., by Goold, Shapley & Muir Ltd. Under the most severe test in competition with other makes, this Wind Mill has never failed to come out top dog.

Made throughout of best quality material, and every unit is thoroughly tested and guaranteed before leaving the works.

Proof against any Wind Storm that will not move a town from its foundations.

WRITE FOR CATALOGUE

## The "IDEAL" GASOLINE ENGINE ....

Is in every respect exactly what its name indicates. It is a perfect engine for Farmers and Threshermen

and there is not a job on the farm where power is required which it will not adapt itself to perfectly. This unique engine is made (Stationary or Mounted) from 1 1/2 to 50 horse power; is guaranteed in every detail to be constructed of the very best quality material and by skilled, conscientious workmen.

Most Reasonable in Price

### The "MAPLE LEAF" Grain Grinder

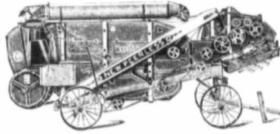
is Canada's Standard. Built exceptionally strong and so nicely designed that it is very easy on power. It has sectional plates and all wearing parts are lathe turned. Large hopper capacity. An endless belt can be used with this grinder.



**FACTORY: BRANTFORD** **Goold, Shapley & Muir Co., Ltd.** **230 PRINCESS ST. WINNIPEG**

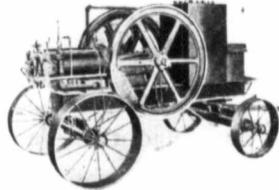
## "Geiser" Celebrated Sieveless Separators and Threshing and Plowing Engines

Are the latest and most up-to-date machines on the market.



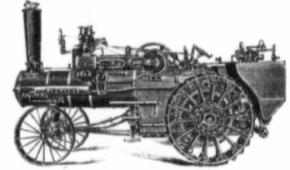
**"Geiser" Sieveless Separator**

The new system which has revolutionized the whole process of threshing and cleaning grain. What is known as the "Grain Plate and Roller System and Automatic Blast." The simple invention eliminates the sieve and riddles and practically revolutionizes the old and antiquated method of threshing. Built in all sizes from 25x21 to 10x10. Special sizes built for Gasoline Engine Power.



**"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.



**"Geiser" Steam Tractor**

The All Steel Plowing Engine. Double Drive. The gearing is of large dimensions, wide face made of open hearth steel and are all covered in steel cases and dust proof.

Send for illustrated catalogue. Free on request.

## Burrige, Cooper Company Limited

156 Lombard Street, Winnipeg, Man.

Branch Office, 2159 Smith Street, Regina, Sask.

trouble to get it to start with a few motions of the wheel. In cold weather I pour about one gallon of boiling water into the jacket of the engine and if everything else is all right my engine will start with a few motions of the wheel. I never had the least trouble in any way. I remain,

Yours truly,

A. Sanford,  
Wadena, Sask.

### Costs \$5.20 for Fuel for 12 Hours.

I own and operate an International 20 h.p. portable gas engine in connection with a 28x40 Red River Special separator. This is the second season of my threshing outfit and the time lost from breaks has only been 12 hours in the two seasons.

We have no trouble in getting any brand or grade of gasoline that we require, as both the Continental Oil Co. and the Imperial Oil Co. keep a large stock here. I use either the Engine gasoline or the Royal, finding the one as good as the other and the cost about the same, that is 28½¢ per gallon in barrel lots, with a refund of a dollar for barrels returned, making a net cost of about 26¢ per gallon. In cold weather I find it advisable to use a better grade of gasoline for starting in the morning when the engine is cold.

I use my engine for threshing purposes only. In 1908 the season was short as the crop was light, but I threshed 44,000 bushels and last year I threshed 70,000 bushels.

In my opinion the gasoline engine will in the future take the place of the steam engine both for threshing and plowing, as the cost of operating is much less and the number of men required is reduced to a minimum. In this locality a 20-horse steam engine requires an engineer, fireman, two tank teams and many have extra straw team, whereas a gas engine requires only one man.

My engine consumes about 29 gallons of gasoline in a 12 hour run, costing \$5.20, which is very little more than the cost of hiring a tank team and driver for one day. So I save the wages of a fireman and tank team and take the place of the engineer myself. Besides I do not have to put in Sundays washing out flues, nor do I have to be out an hour or so earlier in the morning to get up steam.

In this locality and I believe in many other localities the gasoline engine has not found very good success. In my opinion the trouble is not with the engine, but the lack of experience in the operator. No inexperienced man would dream of trying to run a steam engine, and no inexperienced man should try to run a gasoline engine. A man must understand his engine thoroughly.

One great point in favor of the gas engine is that there is no danger of fire. Many of my neighbors will wait weeks to have me thresh the stacks at their barns for this reason only.

If any of the readers of the Canadian Thresherman have any questions they would like answered, I will be only too pleased to reply to their letters.

Yours truly,

W. K. Fletcher,  
Saskatoon, Sask.

### Engine Comes out Ahead.

Replying to your favor, would say that I have a 7 h. p. gasoline engine. This engine is only intended for chopping and elevating grain and pumping water. It works very smoothly and gives good power. It is called the "Monitor" manufactured by the Manitoba Windmill & Pump Co. and consumes one gallon of gasoline per horse power per day of ten hours.

Gasoline costs me 23¢ per gallon, by the barrel. I pay the freight. My experience and knowledge of gasoline engines is very meagre. Occasionally my engine takes a notion to stop and it puzzles me to get it going. The engine usually came out one ahead, however.

Yours truly,

G. R. Campion,  
Bellevue, Man.

### Can Thresh 35 Acres per Day.

We own a 20 h. p. International portable engine and Belle City separator. We have run the outfit three seasons.

At the time we bought out outfit we had never had any experience with gasoline engines and of course we had a lot to learn with regard to it, but now know fairly well where to locate any trouble. My brother looks after the separator, while I look after the engine. We keep four stook teams busy, each of us taking turns spike pitching.

We cleared over 35 acres per day on an average of a good average crop, the grain being nearly all oats. Our engine consumes two gallons of gasoline per hour when pulling its full load. Gasoline cost us 29½¢ per gallon in Yorkton, Sask.

After we finished threshing we put the engine in the engine house, which I built opposite the granary door, where I put in a chopper, and also have a wood saw handy, so that we can chop and saw wood without taking engine out of doors. I have an old stove in the engine house, which I heat up the building with in winter time, as I find that the water does not have a chance to freeze in the pipes if you have to stop down for an hour or two.

Yours truly,

W. F. Boulden,  
Yorkton, Sask.

### Has Done No Plowing.

I have a 15 h. p. International gasoline traction engine and a 32 x32 Belle City separator.

This fall I threshed about 30,000 bushels of all kinds of grain and am well pleased with my outfit. The engineer gets lots of power to run the separator in any any descent kind of grain.

I use about one gallon of gasoline per horse power for ten hours. If I use only ten horse power I would only use ten gallons of gasoline for ten hours' work. I paid 30¢ a gallon for my gasoline.

I have not had any trouble with my engine except with the water pump last year, but we put a force pump on and now it works all right.

I have not plowed with my engine but have pulled brush and poplar trees with it, for which the engine is all right. In fact, I don't want anything better for that work in the winter. We have run the engine when it was 40 below zero without any trouble. We have an eleven inch Champion Grinder and the engine runs fine.

I intend to do some breaking with the engine next summer and would like an idea of some kind of a hitch for the brush plow.

Yours truly,

Henry Borgwardt,  
Horse Hills, Sask.

### No Trouble.

We own and operate a 22 h. p. Hart-Parr gasoline traction engine and cannot praise it too highly. We purchased our engine on the 23rd of April, 1909, and during the breaking season we broke thirteen hundred and sixty acres of prairie sod, pulling seven fourteen-inch Cockshutt plows with perfect ease, much of the land being heavy gumbo and very dry. We broke this land from three to five inches deep using on

an average about 2 3/4 gallons of gasoline to the acre. Gasoline cost us to begin with 31 1/2c. per gallon, but later on we ordered a car load from Winnipeg and got it for 27 1/4c. F.O.B. Lethbridge. This was a big saving.

We kept four men busy pitching into a 40x62 inch Case separator last fall. The engine handled this separator very easily and as steady as any steamer could.

We have never had any trouble or break-downs since we have owned the machine. During the first 1000 acres we broke, our repair bill was \$1.35. After that we wore out an induction coil and broke a valve lever, which cost in the neighborhood of \$20.00.

Trusting that this information will be satisfactory, we remain,

Yours very truly,  
Swerdfeger Bros.,  
Bowville, Alta.

**A Good One.**

I have a 20 h. p. International gasoline traction engine and an Aultman Taylor separator 27x42 with self feeder, windstacker and high bagger. I used this outfit last season and find it satisfactory in every way.

I threshed about 1,000 bushels of wheat a day and if we had a good crop we could easily threshed 1,200 or 1,300 bushels of wheat per day and from 1,800 to 2,000 bushels of oats per day.

I had no trouble during the whole threshing season and could run the engine the whole day without stopping. I used 20 gallons of gasoline per day of ten hours.

When the threshing was done I did some plowing with the engine. I had no engine plows but just three Cockshutt gang plows, and I plowed from 20 to 25 acres per day and the cost of plowing one acre for gasoline and cylinder oil was 50c. I used two gallons of gasoline for every acre.

There is much less work in connection with gasoline as with steam, and I can speak from experience as I had a steam engine for ten years. If I should buy a new engine again I would certainly take a gasoline traction engine.

Yours truly,  
Peter P. Falk,  
Lowe Farm, Man.

**Expects to Plow.**

We operate a 20 h.p. International engine and an Aultman and Taylor separator 27x42 inches, and could average about 2500 bushels of oats and 1800 bushels of wheat per day. Last year, however, was a very backward season around here and it is really hard to tell the amount of grain that we could thresh.

As yet we have done nothing else with our engine but thresh and we expect this spring to put four fourteen-inch plows behind, breaking sod.

On an average of threshing when the engine was handling its full capacity of power, we used

# The Wonderful Sale of a Simple Car

The Overland—the simple and trouble-proof Overland—now commands a larger sale than any other car in existence. And the demand is now growing five times faster than it ever grew before.

**The Car That Sells Itself**

The second year's sale of the Overland was ten times as large as the first. And this year's orders are already five times as large as last year's.

Now we are making 140 Overlands daily. Last year at this time our output was from 20 to 25.

Two years ago we had one little factory. To-day we have five factories employing 4,500 men.

But never before has the demand increased as fast as it is increasing to-day. The more cars we get out the greater the call, for the Overlands sell themselves.

**The Reasons**

One of the Overland's greatest attractions lies in its utter simplicity. It has fewer parts than any other car. It has none of the usual complexities.

And it has the pedal control. Push a pedal forward to go ahead, and backward to reverse. Push another pedal forward to get on high speed. It is as simple as walking—so simple that a child can master the car in ten minutes.

Then the Overland is almost trouble-proof. Many an owner has run from 7,000 to 10,000 miles without even cleaning a spark plug. Any novice can handle and care for it.

It is a car which always keeps going. In the Post-office service, where Overlands are used, these cars have been run for 500 days, winter and summer, without missing a trip.

**The \$1,000 Car**

This year we are selling a 25-horse-power Overland for \$1,000 in roadster style, and for \$1,100 with complete tonneau.

It is not undersized, not under-powered, like the usual low cost car. The wheel base is 102 inches.

We are this year selling a 40-horse-power Overland, with single rumble seat, for \$1,250. It has a 112-inch wheel base.

Overland prices run up to \$1,500. Each includes magneto and full lamp equipment. Each gives a great deal more for the money than any other maker can give.

We have cut our costs 20 per cent in the past year alone by the use of modern automatic machinery. Also through multiplied output.

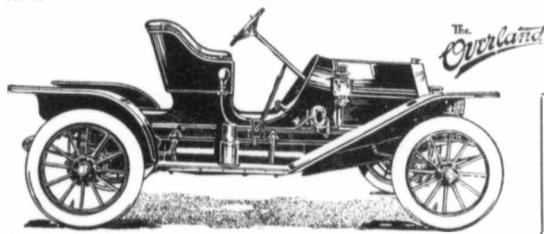
**Let us Send All the Facts**

Every motor car lover should know the facts about the most successful car in the world.

Think of the place which this car has gained in a little more than two short years. And the success is all due to each car selling others.

The men who are buying these cars—140 per day—are men who seek just what you seek. The car which they buy is the car which you'll buy when you know it.

Please send us this coupon and we will send you a book showing all of the styles and giving all of the facts. We will also give you the address of the nearest of our 800 dealers. Please cut out the coupon now.



The \$1,000 Overland—25 Horse Power—102-inch Wheel Base. Same car with Tonneau, \$1,100.

**The Willys-Overland Co.** 191  
Toledo, Ohio  
Licensed Under Selden Patent  
Please send me the Catalog Free

about three gallons of gasoline per hour. In the winter we ground feed about two days a week with a ten-inch plate Easy Grinder, and can grind from 125 to 150 bushels per hour, according to the grain, wheat or oats.

Yours truly,  
Sam W. Johnston,  
Nanton, Alta.

**Raising Pipes.**

Talk about diversified farming, what do you think of a crop of pipes as a part of your system of rotation?

Pipes made from the South African calabash, or gourd, have created considerable interest in the growth of the vine. It is a native of South Africa. The use of the calabash as a pipe bowl was discovered by the Boers, and after the Boer war they were introduced in England and from there were brought to this country. The Boers attempted to monopolize the product and to prevent the exportation of seed, but failed, and there is now a supply of the seed in this country. The vine grows luxuriantly and produces a large crop of gourds, but many of them have to be rejected for pipe making, either on

account of defective growth or of insect bites which mar the surface. The pipes are graceful and distinctive in shape, no two being exactly alike. They color like meerschaum, and are delightful smokers. The imported pipes sell for from \$8.00 to \$12.00 each. One of the reasons for their high price is the necessity for hand work in their manufacture, as, on account of their varying shapes and sizes, machine work is not practicable. The growing, drying, and shaping of these gourds should be interesting, and they can be easily made into pipes by buying inside bowls and mouth-pieces.

# Results of Our Big Prize Contest

The Big Two Thousand Prize Wheat Guessing Contest of The Canadian Thresherman and Farmer closed on May 31st. Since that time we have had many inquiries from our subscribers in Western Canada wanting to know just how it came out and it is only now that we are able to announce full and complete details.

This contest attracted a great deal of attention and met with a hearty response from the farmers and threshermen of Western Canada. They took hold of it in a way that far exceeded our expectations, so that we are more than satisfied with the results in so far as we are concerned.

A guessing contest is a peculiar proposition and we have had a number of enquiries from people in Western Canada wanting to know if it was a lottery. It is the farthest from such, in that you are guessing on a definite proposition.

In Nov., 1909, we went to the office of Dominion Grain Inspector Horne and secured from him a quantity of wheat, which graded No. 2 Northern. This wheat did not come from any particular locality, but was a mixture of samples of No. 2 Northern wheat from practically all over Western Canada. A bottle was secured and the wheat was taken to the office of the Dominion Weights and Measures, Winnipeg, and on scales that set the standard for practically all of the scales in Western Canada this wheat was weighed. The bottle was filled as full of wheat as it would hold and this wheat was carefully poured out in a vessel. The bottle was then weighed absolutely accurate. The wheat was again put back into the bottle and carefully weighed, thus getting the weight of the bottle and the wheat. The difference between the weight of the bottle and wheat was found to be exactly 8 lbs. 8 7-16 oz.

This will probably clear up in the minds of many of our readers just why there was a fraction of an ounce. The bottle was then carefully sealed up and stamped with the seal of the Dominion Weights and Measures Office. It was then taken to the office of the National Trust Company and was placed by them in one of

their vaults, where it remained until the evening of the 31st of May, 1910. At that time we gave an order to Mr. D. D. Campbell, Dominion Shippers' Agent on the National Trust Company for this bottle of wheat. Mr. Campbell had selected as his assistants to

kernels into groups of five, until fifty kernels had been thus separated out. The other two gentlemen would watch closely in order to see that no mistake had been made, and if in their opinion, there was the slightest question of a doubt that a wrong

their count did not make 143,272 kernels, which was the number in the bottle.

This is by no means any indication that the count was at all wrong. You may take ten bushels of No. 2 Northern wheat and divide it up into as many lots of 8 lbs. 8 7-16 oz. as it will make and it is almost safe to say that when the entire number is counted that no two amounts will be the same. A kernel of wheat is a small thing, and the kernels in even two 1/2 lbs. will vary to an amazing amount.

We simply make the above statements to show our readers that in the particular 8 lbs. 8 7-16 oz. of wheat upon which they guessed, that the count was absolutely correct.

Now, as to the guessing. Everyone who subscribed for The Canadian Thresherman and Farmer between November 1st, 1909, and May 31st, 1910, was entitled to a guess for every subscription that he sent

in and the contest was so arranged that a larger number of subscriptions or a subscription paid up for a greater number of years than one, entitled the subscriber to a proportionately larger number of guesses. These subscriptions were entered in a large guess book, which we had arranged for the purpose. The subscriber's name was entered, the date upon which the subscription was received, the amount of money he sent in and his guess or guesses. This guess book is a very interesting thing. It contains names from all over Canada and it will be kept by us as long as there is a Canadian Thresherman and Farmer.

On the fourth of June we received the following letter from Mr. D. D. Campbell, who was the chairman of the counting committee.

To The Canadian Thresherman and Farmer.  
Winnipeg, Man.

Dear Sirs:— We, the undersigned, having been asked to count the grains of wheat contained in the bottle stored in the vault of the National Trust Company, containing by weight 8 lbs. 8 7-16 oz., find that the correct count is (143,272) One hundred and forty-three thou-

RECEIVED  
FEB 12 1910  
E. H. HEATH COMPANY, LIMITED  
WINNIPEG, CANADA.  
Subscriptions Blank.  
Date Feb 10<sup>th</sup> 1910  
for two years subscription to  
"THE CANADIAN THRESHERMAN AND FARMER" and Premium Wanted  
to be sent to John Edwards  
ON MAILING LIST, Address High River Alta  
FEB 23 1910  
My estimate on the number of Kernels in 8 lbs. 8 7/16 oz. No. 2 Northern Wheat is 143,272  
2 143,265 3 143,272 4 5

SEE OTHER SIDE FOR LIST OF PREMIUMS.  
Fac-simile of subscription blank sent in by Mr. Edwards which won the Avery Tractor.  
count this wheat Mr. Jas. D. Fraser, of the Dominion Grain Inspector's office, and Mr. D. A. Stewart, of Pilot Mound, an ex M.P.

On the morning of June 1st these gentlemen started in to count this wheat, finishing their task about ten o'clock on Satur-

day, June fourth. It is a long tedious task to count 8 lbs. 8 7-16 oz. of wheat and in order to insure absolute accuracy, the following method was used.  
A small portion of the wheat was poured out on a table, which had been covered with clean, white paper, and one man with a paper knife would separate the

there is not the slightest possibility of a doubt but that the count was absolutely accurate.

There is one thing regarding this guessing contest that we would like to straighten out in the minds of our readers. A great many have no doubt counted 8 lbs. 8 7-16 oz. of No. 2 Northern wheat and they have found that



D. A. Stewart, Pilot Mound. Counting the Wheat in Our Recent Prize Contest. Jas. D. Fraser, Winnipeg. D. D. Campbell, Dominion Shippers' Agent, Winnipeg.

# We're Well Satisfied— BOTH OF US

## What the Grain Owner Said—

*Mr. V. R. Selles has this day finished my threshing with the Rumely Ideal Separator purchased this year. He has done the best job of threshing we ever had done on the place.*

**H. F. BRAND, PARKER, S. D.**

### To Satisfy the Grain Owner

The work of a separator must be steady, fast, thorough and dependable. The work of Rumely Separators is just that—steady, rapid, thorough and dependable, because of simplicity in construction, strength of working parts, great capacity, general design and the principles of construction carried out.

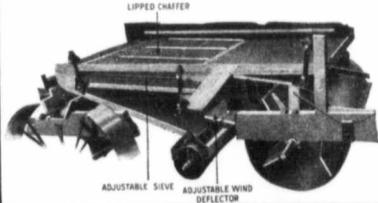
The moment a kernel is loosened from the heads, it is at once separated from and not again permitted to mingle with the straw. This principle is adhered to from the time the first head touches the cylinder until the chaff passes out of the stacker.

After passing over the chain rake

**nineteen out of every twenty kernels**

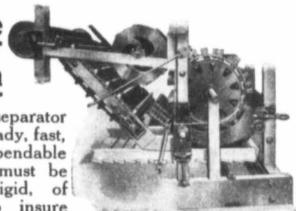
have fallen into the grain pan.

Once in the grain pan it only remains for grain to be thoroughly cleaned. The tipped chaffer, the adjustable sieve, the adjustable wind deflector, the smooth even throw of the entire shoe, all insure the grain reaching the sack in a clean, ready-for-the-market condition.

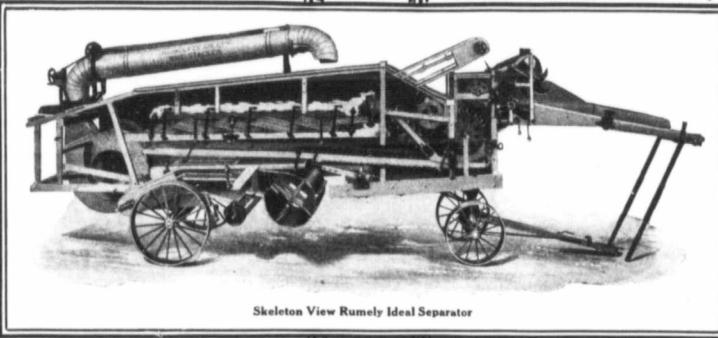


### To Satisfy the Thresherman

The work of the separator must not only be steady, fast, thorough and dependable but the separator must be built strong and rigid, of honest materials to insure freedom from costly waits and expensive repair bills, designed to economize in power and to reduce delays to a minimum—it is the little delays that eat so rapidly into the thresherman's profits.



The Rumely Separator saves time, power and does away with the numerous delays, because the feeder is automatic and positive in its action, no possibility of choking, cylinder large and of excellent suction, side plates rigid, bearings extra long reducing possibility of overheating.



Skeleton View Rumely Ideal Separator

All bearings that need daily attention are on the outside. All working parts easily accessible—daily oiling is an easy matter. All parts requiring adjustment so arranged as to permit of adjusting while the machine is in operation.

The satisfied operators of Rumely Separators number into the thousands. Their customers number into hundreds of thousands. Are you one of them? If not,

**WRITE FOR CATALOG NO. 58**

It means success for you.

M. Rumely Co. 1972 Rose St. Regina, Sask.

Gentlemen:—Please send me the Rumely Annual Catalog No. 58.

Name.....  
County.....  
Town..... State.....  
I own..... Separator  
..... years old and an  
Engine..... years old

## What the Thresherman Said—

*I am more than pleased with the Rumely Ideal Separator purchased from you as it is all your agent claimed for it. The separator will clean and thresh wetter grain than any I have ever seen, and I have threshed for ten years.*

**V. R. SELLES, PARKER, S. D.**

# M. RUMELY CO. Regina, Saskatchewan

1972 Rose Street

Distributing Warehouses:—Winnipeg, Man., Calgary, Alta., Saskatoon, Sask.

sand, two hundred and seventy-two grains.

Signed:—D. A. Stewart,  
James D. Fraser,  
D. D. Campbell.

The above letter is now on file in our office where it may be seen by anyone.

Immediately upon receipt of this letter, we went to our guess book and began a search for the prize winner and you can be assured that it was no small task. We had over fifteen thousand guesses to go over carefully and after considerable search, we found that Mr. John Edwards, of High River, Alta., was the winner of the first prize. We publish on another page a fac-simile of his subscription blank. We also found that Mr. Edwards was the only man who guessed the correct number of kernels. It was, of course, not absolutely necessary for a man to guess the exact number of kernels, as one condition of the contest was that it was the one who came nearest, it being a mere coincidence that Mr. Edwards guessed the exact number.

While Mr. Edwards' subscrip-

tion was sent in from High River he has since moved to Hand Hills, Alta., and it is there that the Avery Tractor will go. Mr. Edwards secured this machine which is worth \$2500.00 in cash anywhere, for \$2.00.

The next thing was to pick out the other 1,999 prize winners and it has taken a staff of six people for practically three weeks to get this matter all straightened out.

After the prize winners had been found in the guess book, it was necessary to go back through our subscription files and check every one of these guesses with the original subscription blank in order to be sure that no mistake had been made in entering up the guess. A source of satisfaction to us was the fact that we found no incorrect entries which served to show that we have kept our records very carefully.

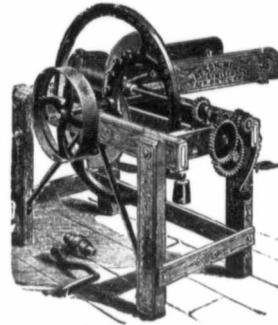
We would like to publish the names of all the prize winners, but two thousand names makes a long list; consequently we are only publishing the first one hundred and seventy five, the names being as follows:

1.	143,272	Feb. 14	John Edwards, Hand Hills, Alta. via Gleichen Avery Tractor	Map
2.	143,276	Apr. 16	E. W. Gregory, Millet, Alta.	Map
3.	143,267	Mar. 5	R. T. Stewart, Maple Creek, Sask.	Map
4.	143,266	Nov. 13	Wm. Orr, Vernon, B. C.	Phonograph
5.	143,266	Nov. 18	John Funk, Stavelly, Alta.	Cream Separator
6.	143,265	Feb. 14	John Edwards, Hand Hills, Alta.	Sewing Machine
7.	140,261	Nov. 13	Jas. B. Stewart, Deloraine, Man.	Heath School Scholarship
8.	143,259	Jan. 4	Jas. S. McCartney, Longburn, Man.	Heath School Scholarship
9.	143,259	Mar. 22	J. J. Barber, West Gravelburg, Sask.	Heath School Scholarship
10.	143,259	Apr. 16	J. S. Hornbrook, Box 1428, Calgary, Alta.	Heath School Scholarship
11.	143,255	May, 20	J. H. Kinsey, Miniota, Man.	Map
12.	143,254	Mar. 7	J. P. O'Neill, Steeple Creek, Sask.	Map
13.	143,254	May 23	Jas. S. Richardson, Spy Hill, Sask.	Map
14.	143,295	Feb. 8	S. J. Webster, Rocanville, Sask.	Map
15.	143,300	Mar. 3	Donald McLeod, Vandura, Sask.	Map
16.	143,300	Mar. 30	Wm. Sherlock, Gilbert Plains, Man.	Map
17.	143,300	May 21	W. H. Brown, Fort Pelly, Sask.	Map
18.	143,243	May 10	J. R. Wain, Wapella, Sask.	Map
19.	143,241	May 27	Wm. H. Wideman, Mayton, Alta.	Map
20.	143,237	Nov. 22	Stanley Robbins, Rich Farms, Sask.	Map
21.	143,237	Nov. 29	John McOmachie, Box 102, Tulliville, Sask.	Map
22.	143,234	Jan. 8	S. Guild, Blue Hill, Sask.	Map
23.	143,311	Feb. 11	J. A. Hill, North Battleford, Sask.	Map
24.	143,232	Mar. 2	Edwin Gedoke, Kindersley, Sask.	Map
25.	143,319	Feb. 25	G. P. Hiebert, Gretna, Man.	Map
26.	143,225	Apr. 27	Ernest Anderson, Box 15, Young, Sask.	Map
27.	143,325	Nov. 22	A. M. Nichol, Rich Farms, Sask.	Map
28.	143,325	Jan. 11	T. E. Assmus, Radisson, Sask.	Map
29.	143,325	Feb. 14	John Edwards, Hand Hills, Alta.	Map
30.	143,325	Mar. 19	C. W. Thompson, Bowville, Alta.	Map
31.	143,215	Dec. 21	John D. Scott, Makinak, Man.	Map
32.	143,333	May 16	Chas. Wells, Claresholm, Alta.	Map
33.	143,210	Dec. 25	John Wagenhorst, Reid Hill, Alta.	Map
34.	143,210	Feb. 5	J. Gillan, Lloydminster, Sask.	Map
35.	143,339	Feb. 7	A. J. Spauke, Brant, Alta.	Map
36.	143,200	Jan. 5	Mrs. P. McEwen, Dauphin, Man.	Map
37.	143,196	Mar. 14	Roscoe Johnson, Elgin, Man.	Map
38.	143,195	Feb. 17	T. E. Ward, Bagot, Man.	Map
39.	143,350	Jan. 31	M. Kawalski, Kenaston, Sask.	Map
40.	143,194	Apr. 5	A. W. Brewer, Cupar, Sask.	Map
41.	143,355	Nov. 22	A. G. Smith, La Riviere, Man.	Map
42.	143,189	Feb. 25	Geo. Denny, Dubuc, Sask.	Map
43.	143,359	Nov. 17	E. Ford, McGregor, Man.	Map
44.	143,185	Feb. 17	R. B. Taylor, Box 429, Portage la Prairie	Map
45.	143,359	Apr. 11	Ed. Vasey, Box 19, Midland, Ont.	Map
46.	143,360	Feb. 14	Jos. H. Bennett, Arcola, Sask.	Map
47.	143,360	Feb. 22	Allan R. Tillotson, Bender, Sask.	Map
48.	143,360	Feb. 28	R. K. Hanna, Emerson, Man.	Map
49.	143,184	Mar. 22	J. Zinger, Swan River, Man.	Map
50.	143,184	May 4	Harry Baker, Hartney, Man.	Map
51.	143,183	Feb. 8	S. J. Webster, Rocanville, Sask.	Map
52.	143,362	Dec. 21	Jas. LeBurrow, Deloraine, Man.	Map
53.	143,190	Feb. 8	Alex. Williamson, Makinak, Man.	Map
54.	143,168	May 26	H. C. McKinnon, Leifer, Man.	Map
55.	143,162	Feb. 23	R. K. Hanna, Emerson, Man.	Map
56.	143,157	Jan. 5	Mrs. P. McEwen, Dauphin, Man.	Map
57.	143,391	Feb. 11	F. E. Hildreth, Neolton, Alta.	Speed Indicator
58.	143,153	Feb. 16	Aff. Grapham, Treherne, Man.	Speed Indicator
59.	143,391	Mar. 8	Wm. McDonald, Leifer, Man.	Speed Indicator
60.	143,400	Dec. 27	Geo. Peterman, Central Butte, Sask.	Speed Indicator
61.	143,142	Feb. 8	D. Ruse, 1630 Salisbury Drive, Vancouver	Speed Indicator
62.	143,136	Jan. 27	Andrew Nugent, Seep Creek, Sask.	Speed Indicator
63.	143,132	May 21	G. F. Snelgrove, Kesey, Man.	Speed Indicator
64.	140,120	Dec. 2	F. Bailey, Bradwardine, Man.	Speed Indicator
65.	143,421	May 26	C. Schmidt, Wapella, Sask.	Speed Indicator
66.	143,425	May 13	A. C. Coghill, Cold Banks, Alta.	Speed Indicator
67.	143,425	May 26	Thos. Balaam, Vegreville, Alta.	Speed Indicator
68.	143,118	Nov. 25	W. W. Walt, Headlands, Sask.	Speed Indicator

# Watson's Feed Cutters

ARE BUILT TO DO THE WORK.

7 STYLES



This machine has been re-modeled and up-to-date in every respect. Write for catalogue and prices.

### Why it Pays to Cut your Hay, Straw or Corn ?

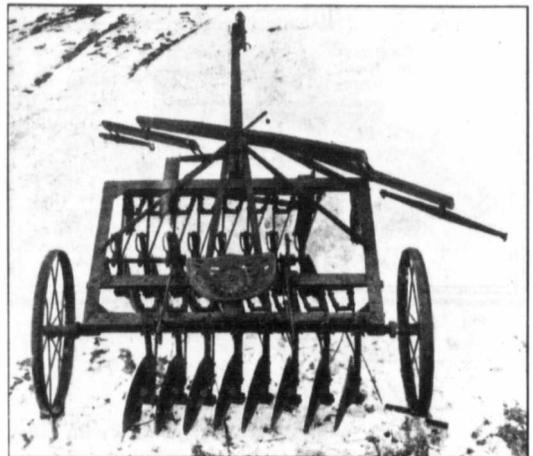
1. No waste of fodder, every bit is eaten up, not tramped under foot.
2. Cut feed is more easily and thoroughly masticated, and stock thrive much better on it than on uncut feed.
3. Cut feed can be blown into stall directly in front of stock, avoiding any unnecessary labor.
4. Because Watson's can supply you with a Feed Cutter that will exactly fill your needs, that will give absolute satisfaction at a fair price.

*John Watson Mfg. Co.*  
LIMITED

# New Disc Harrow And Cultivator

Patented

Aug. 31, 1909

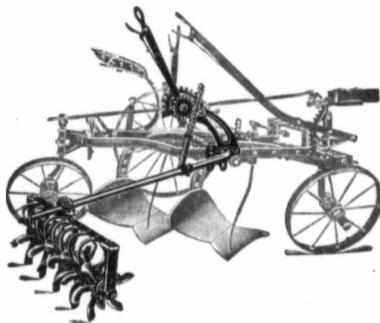


This wonderful implement will be one of the most interesting exhibits at Winnipeg 1910 Fair. **Don't Fail To See It.** The cut of the combination of Disc, Harrow and Cultivator speaks for itself. **It Does Not Ridge The Land.** With the truck in front, the weight is taken off the horses' necks. An oil box is fitted to each independent disc, which need only be oiled once in three or four days.

One of the most important contributions to Agriculture in recent years.

This machine will be on exhibition at the Winnipeg Fair, where the inventor will be on hand to demonstrate its merits and to show its advantages.

**FRED ROGERS, 709 VICTOR ST., WINNIPEG.**



NO COMPLICATED ACCESSORIES OR  
AWKWARD CHAINS TO PULL

# The KRAMER ROTARY is KING of HARROWS

If absolutely faultless work and an enormous saving of time, labour and money interests you, than you will never run a farm without a KRAMER ROTARY HARROW. For Plow attachment it is the only implement for the Job and this is attested by the fact that nearly 100,000 farmers are using it in preference to any harrow that has ever been exploited on the farming public. It is also highly recommended by the Manitoba Agricultural College.

## THE EASE OF SIMPLICITY THE POWER OF PERFECTION

PRICE AND TERMS WILL FIT THE  
PURSE OF ANY HOMESTEADER

Every fragment of material used in the KRAMER is of high grade steel. Its durability has been demonstrated by time and the severest tests of soil and climate. If you want an ideal seed bed, that is scientifically formed for the conservation of moisture and the production of bumper crops—get a KRAMER ROTARY which is also a perfect pulverizer and packer. Endorsed and strongly recommended by the U.S. Departments of Agriculture

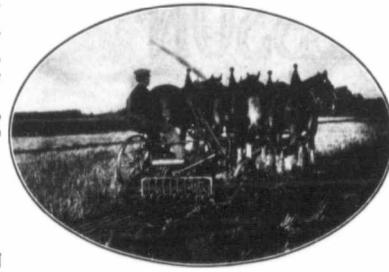
Don't fail to look up the Kramer Exhibit while at the Fair. A complete line of plow attachments will be exhibited. Our exhibit will be either in the Kramer Tent or in Agricultural Halls. You will be welcome.

THE KRAMER CO. MANUFACTURERS, PAXTON, ILL.

JOHN DEERE PLOW CO., LTD., Winnipeg

Exclusive Selling Agents in Manitoba, Saskatchewan and Alberta

CALGARY REGINA EDMONTON SASKATOON



NO.	GRASS	DATE OF SUB.	NAME	ADDRESS	NO.	GRASS	DATE OF SUB.	NAME	ADDRESS
69.	143,426	Jan. 6,	Jas. Allan, Cordova, Man.	Speed Indicator	120.	143,532	Mar. 23,	J. E. Housnell, Coxyby, Sask.	Speed Indicator
70.	143,113	Feb. 25,	Frank Dise, Froude, Sask.	Speed Indicator	124.	143,537	Dec. 10,	Geo. W. Hanna, Sinaluta, Sask.	Speed Indicator
71.	143,431	Mar. 18,	H. Osborne, Neepawa, Man.	Speed Indicator	125.	143,001	May 3,	Arthur Gray, Lenore, Man.	Speed Indicator
72.	143,434	Mar. 30,	Chas. Caudwell, Oldbury P. O., Maymont, Sask.	Speed Indicator	126.	143,000	Jan. 5,	Mrs. Peter McEwen, Dauphin, Man.	Speed Indicator
73.	143,437	Dec. 17,	Angus Morrison, Dunrae, Man.	Speed Indicator	127.	143,000	Jan. 17,	Luther Payne, Warsaw, Ont.	Speed Indicator
74.	143,100	Mar. 16,	Robt. Leopard, Portage la Prairie, Sask.	Speed Indicator	128.	143,000	Feb. 5,	Wm. Oxley, Melita, Man.	Speed Indicator
75.	143,190	May 19,	Mrs. Paul Cota, Box 58, Landrieu, Alta.	Speed Indicator	129.	143,000	Apr. 15,	Thos. Torsen, Box 21, Wetaskiwin	Speed Indicator
76.	143,450	Jan. 24,	M. L. Blinkinsopp, c/o T. Burdes, Headingly, Man.	Speed Indicator	130.	142,996	May 11,	T. A. Jones, Osbow, Sask.	Speed Indicator
77.	143,450	Apr. 12,	W. F. Thompson, Caroy, Man.	Speed Indicator	131.	142,996	Apr. 20,	A. S. Fraser, Beulah, Man.	Doctor for a Dollar
78.	143,088	Nov. 22,	Jacob W. McNichol, Rich Farms, Sask.	Speed Indicator	132.	143,550	Apr. 5,	Mrs. H. Lochore, Lytton, B.C.	Doctor for a Dollar
79.	143,460	Feb. 23,	A. H. Spiers, Alexander, Man.	Speed Indicator	133.	142,993	Jan. 28,	S. Lampman, Whitewater, Man.	Doctor for a Dollar
80.	143,083	Dec. 13,	Frank H. Owens, Ft. Pelly, Sask.	Speed Indicator	134.	143,552	Jan. 18,	Robt. D. Booth, Austin, Man.	Doctor for a Dollar
81.	143,462	Dec. 21,	Jas. B. Stewart, Deloraine, Man.	Speed Indicator	135.	142,990	Jan. 12,	Leslie Stewart, Daysland, Alta.	Doctor for a Dollar
82.	143,080	Apr. 13,	Chas. Tudge, Eildon, Sask.	Speed Indicator	136.	143,555	May 18,	John I. Oliver, Sourisford, Man.	Doctor for a Dollar
83.	143,079	Dec. 27,	Geo. Peterman, Central Butte, Sask.	Speed Indicator	137.	143,557	Feb. 23,	R. H. Hanna, Emerson, Man.	Doctor for a Dollar
84.	143,079	Feb. 5,	John Jampolski, Lipton, Sask.	Speed Indicator	138.	142,985	Nov. 17,	J. E. Ford, McGregor, Man.	Doctor for a Dollar
85.	143,078	Jan. 31,	C. F. Wood, Lipton, Sask.	Speed Indicator	139.	143,560	Jan. 19,	R. M. McLaren, Neepawa, Man.	Doctor for a Dollar
86.	143,078	Feb. 2,	J. B. Cooper, Lanigan, Sask.	Speed Indicator	140.	143,562	Dec. 21,	Jas. B. Stewart, Deloraine, Man.	Doctor for a Dollar
87.	143,466	Mar. 9,	G. P. Jack, P. M., Monominto, Man.	Speed Indicator	141.	143,562	Feb. 15,	Wm. H. Irlson, Bridgeford, Sask.	Doctor for a Dollar
88.	143,077	Feb. 5,	M. Leobovier, Lipton, Sask.	Speed Indicator	142.	142,980	Dec. 17,	Chester A. Sparrow, Elgin, Man.	Doctor for a Dollar
89.	143,075	Feb. 5,	Kaspar Beisick, Lipton, Sask.	Speed Indicator	143.	143,567	Feb. 14,	Chas. A. Thode, Dundurn, Sask.	Doctor for a Dollar
90.	143,471	Jan. 17,	W. C. Kern, Box 152, Maple Creek, Sask.	Speed Indicator	144.	143,977	Feb. 28,	E. A. H. Poceok, Gotham, Dubuc, Sask.	Doctor for a Dollar
91.	143,472	Nov. 24,	W. R. Bartaer, Deloraine, Man.	Speed Indicator	145.	143,568	Nov. 5,	Jas. Armstrong, Jr., Rossburn, Man.	Doctor for a Dollar
92.	143,071	Jan. 3,	Dr. S. Dickey, Perdue, Sask.	Speed Indicator	146.	142,976	Feb. 3,	Andrew Thompson, Ivor, Sask.	Doctor for a Dollar
93.	143,476	Dec. 13,	J. M. Keay, Box 451, Moose Jaw, Sask.	Speed Indicator	147.	142,975	Jan. 31,	Wm. Lotz, New Hamburg, Ont.	Doctor for a Dollar
94.	143,066	Apr. 15,	S. E. Nelson, Battle Lake, Alta.	Speed Indicator	148.	143,571	Mar. 16,	E. A. Horrocks, Brookside Farm, Wapooki, Man.	Doctor for a Dollar
95.	143,480	Feb. 19,	R. Kerlake, Elgin, Man.	Speed Indicator	149.	142,970	Feb. 5,	C. F. Wood, Lipton, Sask.	Doctor for a Dollar
96.	143,063	Feb. 7,	Wm. Gillett, Rosser, Man.	Speed Indicator	150.	143,575	Jan. 5,	W. S. Simpson, Larchmont Farm, Swift Current, Sask.	Doctor for a Dollar
97.	143,485	Feb. 8,	A. Lochore, Lytton, B.C.	Speed Indicator	151.	142,967	May 3,	Ernest Groombridge, Lenore, Man.	Doctor for a Dollar
98.	143,487	Mar. 4,	G. J. Hingston, Landis, Sask.	Speed Indicator	152.	143,578	Apr. 16,	J. S. Hornbrook, Box 1428, Calgary, Alta.	Doctor for a Dollar
99.	143,496	Feb. 14,	Chas. H. Thode, Dundurn, Sask.	Speed Indicator	153.	143,579	Apr. 30,	Hoctor Gunn, Greenridge, Man.	Doctor for a Dollar
100.	143,496	Feb. 16,	B. J. Bedford, Rouleau, Sask.	Speed Indicator	154.	142,963	Feb. 28,	R. K. Hanna, Emerson, Man.	Doctor for a Dollar
101.	143,499	Dec. 30,	B. Skatfield, Wheatlands, Man.	Speed Indicator	155.	142,956	Dec. 23,	John Allan, Swift Current, Sask.	Doctor for a Dollar
102.	143,499	Feb. 22,	Chas. E. Clare, Colonsay, Sask.	Speed Indicator	156.	143,592	Nov. 12,	Mrs. Harry Bell, Sinaluta, Sask.	Doctor for a Dollar
103.	143,045	Mar. 14,	Geo. L. Snelgrove, Willow Brook, Sask.	Speed Indicator	157.	142,950	Nov. 23,	Robt. Pickering, Ladstoek, Sask.	Doctor for a Dollar
104.	143,000	Dec. 29,	Harrison Gloor, Iron Springs, Alta.	Speed Indicator	158.	143,594	Mar. 16,	W. McLean, Carlyle, Sask.	Doctor for a Dollar
105.	143,500	Feb. 5,	Wm. Oxley, Melita, Man.	Speed Indicator	159.	143,597	Feb. 12,	H. Graham, Lytton, B.C.	Doctor for a Dollar
106.	143,500	Feb. 8,	S. J. Webster, Rocanville, Sask.	Speed Indicator	160.	143,597	Apr. 29,	Aff. Parry, Yorkton, Sask.	Doctor for a Dollar
107.	143,500	Feb. 15,	J. Lingholt, Box 12, Belmont, Man.	Speed Indicator	161.	143,600	Apr. 5,	Mrs. H. Lochore, Lytton, B.C.	Doctor for a Dollar
108.	143,500	Feb. 28,	Mrs. H. Lochore, Lytton, B.C.	Speed Indicator	162.	143,608	Nov. 22,	O. Sonstenes, Bridgeford, Sask.	Doctor for a Dollar
109.	143,500	Apr. 7,	Chas. H. Bell, Lockwood, Sask.	Speed Indicator	163.	142,935	May 27,	John T. Shaw, Gurnsey, Sask.	Doctor for a Dollar
110.	143,510	May 16,	Mrs. M. Stemmum, Pasqua, Sask.	Speed Indicator	164.	142,933	Jan. 17,	B. L. Mauder, Clearwater, Man.	Doctor for a Dollar
111.	143,517	Mar. 22,	Geo. Kent, Kenton, Man.	Speed Indicator	165.	142,932	Feb. 15,	John Holm, N. Gabriola, Nanaimo, B.C.	Doctor for a Dollar
112.	143,520	Feb. 5,	Jos. Mang, Edenwald, Sask.	Speed Indicator	166.	143,613	Feb. 14,	Chas. H. Thode, Dundurn, Sask.	Doctor for a Dollar
113.	143,520	May 11,	John Rivenes, Watson, Sask.	Speed Indicator	167.	143,613	Mar. 29,	J. H. Newman, Pifoon Lake, Man.	Doctor for a Dollar
114.	143,521	Feb. 19,	Wm. Hall, Minto, Man.	Speed Indicator	168.	143,614	Mar. 19,	D. McKinnon, Cupar, Sask.	Doctor for a Dollar
115.	143,021	Jan. 17,	Reg. O. Birchard, Maple Bush, Sask.	Speed Indicator	169.	142,926	May 31,	Jas. R. Andrews, Box D, Cupar, Sask.	Doctor for a Dollar
116.	143,017	Dec. 21,	Wm. Leizery, Kinbrae, Sask.	Speed Indicator	170.	142,926	Jan. 6,	Jas. Allan, Cordova, Man.	Doctor for a Dollar
117.	143,531	Dec. 22,	C. Sukke, Langham, Sask.	Speed Indicator	171.	143,621	Apr. 18,	W. G. Kilgour, Greenway, Man.	Doctor for a Dollar
118.	143,012	Nov. 29,	Edwin Woodhouse, Lily Plain, Sask.	Speed Indicator	172.	143,624	Jan. 8,	Robt. Rutherford, Box 137, Minnedosa, Man.	Doctor for a Dollar
119.	143,532	Dec. 20,	Geo. Reid, Jr., Mannville, Alta.	Speed Indicator	173.	142,909	Mar. 2,	Duncan Martin, Wadena, Sask.	Doctor for a Dollar
120.	143,532	Dec. 21,	Clifford Harper, Pierson, Man.	Speed Indicator	174.	143,637	Nov. 26,	J. J. Thompson, Sinaluta, Sask.	Doctor for a Dollar
121.	143,532	Jan. 17,	Ernest Hiebert, St. Pierre, Man.	Speed Indicator	175.	143,637	Mar. 14,	C. M. Tully, Box 95, Stoughton, Sask.	Doctor for a Dollar
122.	143,532	Jan. 24,	Thos. Nevin, Chater, Man.	Speed Indicator					

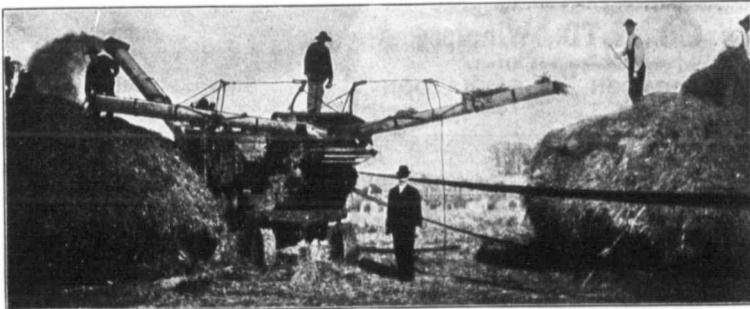
Continued on Page 18

Parsons Hawkeye Mfg. Co.

# Parsons Hawkeye Mfg. Co.

## AN ARITHMETIC LESSON

4 x \$2.50	- - - - -	\$10.00
5 x \$4.00	- - - - -	20.00
		<u>\$30.00</u>
\$30.00 x 40	- - - - -	\$1,200.00
\$4.00 x 5 x 40	- - - - -	800.00
		<u>\$2,000.00</u>
Subtract	- - - - -	375.00
		<u>\$1,625.00</u>
Subtract	- - - - -	175.00
		<u>\$1,450.00</u>
Subtract	- - - - -	250.00
Answer	- - - - -	<u>\$1,200.00</u>



Question : How can I make \$1200.00 extra in forty days?  
 By buying a White Wings feeder and set of five Dump Racks. By doing it you will save at least one half of the pitchers—say, 4 at \$2.50 a day. Next you save half of the teams used in the field, say 5 at \$1.00 a day. \$30.00 a day for 40 days equals \$1200.00 saved in forty days in wages alone. Next, on account of the even steady feed from both sides, you can easily thresh 400 extra bushels a day at an average of 5¢ a bushel, for forty days, will give you \$800.00 more, which, added to the \$1200.00 makes an even \$2000.00 cash gain in your receipts. Now, go a little further. While it is not exactly fair to us to do it, subtract from the \$2000.00 the cost of a White Wings feeder, \$375.00, and you still have \$1,625.00. Next, subtract the cost of five Dump Racks, at \$35.00 each, from the \$1,625.00 and you have \$1,450.00 left. Once more, subtract \$250.00 which represents the cost of the feeder you may now have on the Separator, and you still have \$1200.00 left.  
 Now you have \$1200.00, have a new feeder and set of Dump Racks which will be good for years to come. So every year after this, the first one, you are in a position to make \$2000.00 extra each year, and if you only stayed in the business for five years, you have an extra **Ten Thousand Dollars**. Can you afford **not** to buy a White Wings feeder and set of Dump Racks?

## THE RUTH "WHITE WINGS"

Every Thresherman knows of the Ruth feeder. Its place among feeders is so well established that its good qualities need no discussion. Thousands are in use and just as many thousand satisfied customers are the result. For Ruth Feeder owners either real or prospective, we have some exceptionally good news. We have just been advised by our factory that they will be able to furnish us this year all of the "White Wing" Ruth Feeders we can sell. This they were not able to do last year in account of the demand for them in the States being so much greater than they had anticipated. The Ruth Feeder is not only now furnished equipped with the "White Wings" or Swinging Elevators, **but the Wings can be attached to any Ruth feeder now in use.** This is glorious news for the thousands of Canadian threshermen who are using a Ruth. The "Arithmetic Lesson" applies to the Ruth exactly the same as it does to the Parsons White Wings. The figures are conservative throughout, and there is no other way to figure it. By putting the White Wing on, at the end of five years, you are at least **TEN THOUSANDS DOLLARS** to the good.



# Parsons Hawkeye Mfg. Co.

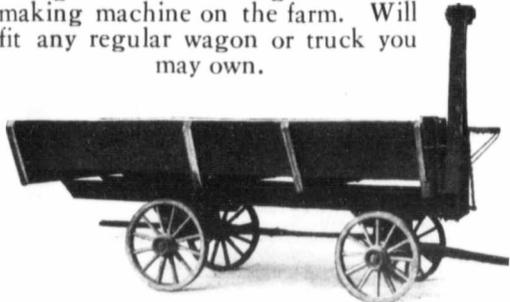
WINNIPEG, CANADA

# Parsons Hawkeye Mfg. Co.

## PERFECTION DUMP RACK

PRICE \$35.00 EACH, F.O.B. WINNIPEG

The greatest labor-saving and money making machine on the farm. Will fit any regular wagon or truck you may own.



SIDE VIEW OF RACK

Easy to load. Easy to unload. Any boy can handle it that can drive a team.

We furnish all of the bolts, and other hardware, and all of the lumber EXCEPT ABOUT 140 ft. OF PLAIN BOARDS, WHICH SHOULD BE DRESSED ON ONE SIDE which are used for the bottom and sides of the rack. There is no use in the buyer paying freight on these boards from Winnipeg when they can be bought at your home town at the same price they would cost here. We do not furnish the wagon gear unless specially ordered.

### Note a Few of its Advantages:

No empty machine while bundle teams are driving to or from the feeder.

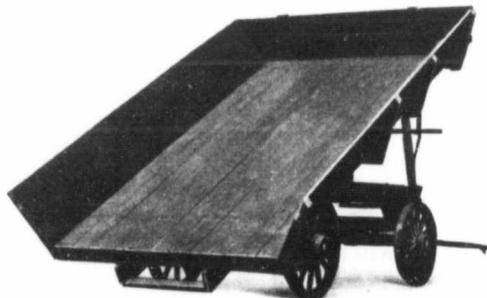
Load can be dumped in 15 seconds and driver does not have to get off the wagon.

Saves half the number of teams when used in connection with extension or wing feeder.

Reduces the number of men so a thresherman can always have a full crew and make money.

Rack constructed with tight bottom—saves all the grain.

No scattering of foul seed as with old style of rack. This rack is no experiment. Hundreds have been sold in the past two years.



REAR VIEW OF RACK SHOWS TIGHT BOTTOM.

A necessity for hauling straw from wind stacker to engine. No time lost in pitching off load.

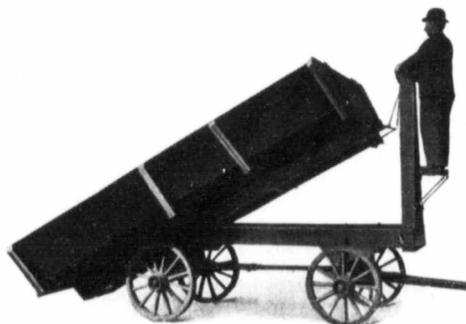
Just the thing for a farmer to haul and dump hay, straw and fodder.

The end dump is the correct principle. Load slides off and is deposited on ground just as loaded on wagon.

No mixing of bundles or dragging part of load. Rack works equally well on high or low wagons.

Rack is substantial and well built. With proper care will last many years. Order at once.

Do Not fail to carefully read and study the arithmetic lesson on the opposite page. It is full of Dollars for you as the owner or operator of a Threshing outfit.



DUMPING THE RACK.

Parsons Hawkeye Mfg. Co.

# Parsons Hawkeye Mfg. Co.

WINNIPEG, CANADA

We want to say to our readers that we have tried in every way possible to make this contest absolutely fair and we are thoroughly convinced that it has been fair. If there are any of our readers can prove to us that he is in any way entitled to a prize and did not receive one, or that his guess as we have it was wrong, we stand ready to make the matter right. We had nothing whatsoever to do with the counting and we are thoroughly convinced that the honesty and integrity of the men who counted our wheat is unimpeachable.

We wish to take this occasion to most sincerely thank each and every one of our readers for the hearty support that they have given this contest. We want to assure you that the prizes we are giving away, are given most cheerfully. You have earned them by your efforts and all that we ask in return is that whenever the opportunity presents itself, that you say a good word for The Canadian Thresherman and Farmer.

We are trying to give you just as good a publication as we possibly can for the money and the many kind words of commendation that we receive from time to time, convinces us that we are meeting with success in no small measure. Your support is what makes the paper. The dollar which you send us for a subscription may seem small. It is those dollars that have built up and are continuing to improve The Canadian Thresherman and Farmer.

Now that we have got you with us, may we not have your continued support. We will give you more than value received.

### The Field Crops of Canada.

Under date of June 10, The Census and Statistics Office at Ottawa issued a report on the estimated area and condition of the principal field crops of Canada at the end of May, based on the reports of a large staff of correspondents.

The area under fall wheat is put down at 707,200 acres, which is 45,100 acres more than last year, and its per cent. of a standard condition is given as 87.65, which is 5.50 higher than last year. Spring wheat is given an area of 8,587,600 acres, being 1,499,300 acres more than last year, and its condition as compared with the end of May last year is 91.49 to 92.15. Oats, which has an area of 9,864,100 acres, is 561,500 acres more than last year, and its condition at the end of May was 93.95. A year ago its condition was 92.32. The area of barley is 1,834,000 acres, or 30,500 acres less than last year, and its condition is reported at 92.94 compared with 91.49 last year. The rye crop continues to decrease, but its condition is about the same as a year ago. Peas with 386,100 acres is less than last year by 7,200 acres, and its condition is 93.01 as compared with 90.59 last year. The area of mixed grains is 575,700 acres, or 6,400 acres less than last year, and

their condition at the end of May was 94.72 compared with 91.71 last year. The area in hay and clover is given as 8,515,400 acres, which is 305,100 acres more than last year, and the condition is 97.64 or 7.28 more than in 1909.

The area of all these field crops is reported at 30,554,200 acres, which is 2,359,300 acres more than last year and 4,951,050 acres more than in 1908. The largest increase has taken place in wheat, which has now reached 9,294,800 acres. In 1909 it was 7,750,400 acres and in 1908 it was 6,610,300 acres, which is a gain in two years of 2,684,500 acres or more than 40 per cent. The provinces of Manitoba, Saskatchewan and Alberta increased their area in wheat from 2,495,466 acres in 1900 to 3,941,369 acres in 1905 and to 8,395,400 acres in 1910. In Saskatchewan alone the increase of this year over last year is 1,163,000 acres. In 1900 the area of the three provinces sown to wheat, oats and barley was 3,491,413 acres; in 1905 it increased to 6,009,389 acres and this year it is 13,809,300 acres.

Ontario shows an increase in fall wheat from 581,100 to 609,200 acres and in oats from 3,142,200 to 3,272,000 acres. In Quebec the increase in oats is from 1,574,000 to 1,649,600 acres, Manitoba from 1,390,000 acres, Saskatchewan from 1,847,000 to 1,973,000 acres and Alberta from 820,000 to 974,000 acres.

The condition of pastures is over 100 in the Maritime Provinces and Quebec. It is 93.60 in Ontario, 89 in British Columbia and around 80 in Manitoba, Saskatchewan and Alberta.

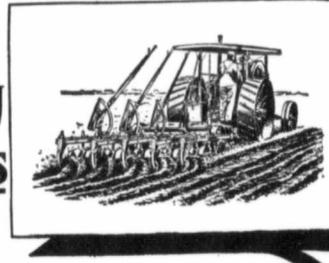
Alfalfa is growing in favor in all the provinces, but especially in Ontario where a large number of correspondents report upon the increased areas in this crop.

The effects of late frosts have been felt in many places, and injury has been done to fruits and tender vegetables in some localities, but generally the prevailing low temperatures of April and May have strengthened the field crops and have left them better able to withstand the attacks of night frosts, and re-seeding and re-planting have been less necessary than in former years.

### Counting too Soon.

During the recent election a man walking along a quiet street was startled to see a house door suddenly opened, and a man fall bumping down to the sidewalk. Picking him up, the pedestrian asked what was the matter. "That's my club in there," said the human projectile. "It's a political club; there are nine Jones men and I'm for Smith. They threw me out. But don't worry. I'm going in and clean 'em all out. You stand here and count 'em." In he went, and sure enough, in a minute the door burst open, and a figure cleared the steps without touching. "One!" said the spectator, holding up one finger. "Hold on!" cried the prostrate one; "don't begin to count yet. This is only me again."

## Power Plowing Multiplies Profits



LET the next plowing season find you in the first rank of progressive, business like, money-making farmers. Prepare to cut down the expense of plowing and thus increase your profits with an International Gasoline Tractor.

It has been proved beyond question by competitive tests in this country, Canada and Europe that plowing can be done with greater speed, efficiency and economy with an International Tractor than with any other power.

Yet these tests are only official acknowledgment of a fact that hundreds of practical farmers have proved for themselves.

With an International Gasoline Tractor

—You can plow 5 or 6 furrows in the same time it takes to plow 2 or 3 with a horse drawn plow.

—One man does the work of several men and many horses.

—There is no expense for feed.

—You avoid the drudgery of walking thousands of miles for every square mile plowed.

—You avoid the expense of replacing broken down horses.

—You are independent of hired help.

—You have an economical, dependable power always ready for drawing heavy loads, road making, running threshers, shellers, shredders and other machines and hauling them from place to place.

## International Gasoline Tractors

have none of the disadvantages of the steam tractors—no smoke, steam, sparks or soot—no expense of men and teams for hauling water and coal—no loss of time to raise steam—no danger of boiler explosion.

The consumption of gasoline is less per acre than that of any other gasoline tractors. They can be turned around in less space than any others. They can be used where other outfits can not because of their excessive weight. You will find the machine for your requirements in the I H C line. See the local dealer, or, if you prefer, write the International Harvester Company of America at nearest branch house for catalogue and full information.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA Chicago U S A  
(Incorporated)



## The MELOTTE

IS A

# Cream Separator

the most perfect because the least complicated of any dairy machinery on the market. For this reason, it is the most easily operated and is popularly known as the

### "Easy Running Melotte"

The bowl of this machine is suspended by a steel spindle—ONE support only, only ONE point of friction and cannot get out of balance.

Send for Catalog B. (FREE) to the

### Melotte Cream Separator Co.

WINNIPEG      CALGARY

FIRE INSURANCE

## The MANITOBA ASSURANCE CO.

(Re-Organized)

All Policies Guaranteed by

THE LONDON AND LIVERPOOL AND GLOBE INSURANCE COMPANY

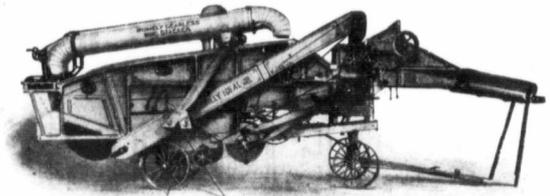
Northwest Branch      WINNIPEG, Canada

Agents wanted in unrepresented districts.      FRED. W. PACE, Superintendent

# For an Individual Outfit— The Rumely Ideal Junior Separator—

It's just the thing for farmers who wish to own individual outfits or for use in connection with internal combustion engines.

Owners of kerosene, gasoline or oil engines—here's **your** opportunity to utilize **your** engine thirty to sixty days more each year and make a handsome profit by so doing.



The Rumely Junior is not a toy or makeshift. It is not thrown hurriedly together nor cheaply built simply to supply the growing demand for an individual outfit, but in its design is embodied the experience of fifty-eight years Separator building.

After using your separator for two seasons I am more convinced than ever that I have the best separator on the market. It has not cost me one dollar for repairs since I first started out with it. I have made money. It threshes fast, cleans the grain excellent and my customers are all pleased with the work. W. J. COCHRAN, Hamiota, Man.

The same advantages of strength, durability and simplicity for which the Rumely Ideal Separator is so well known are embodied in the Rumely Ideal Junior Separator. It is constructed exceptionally low, hence it is just fine for barn threshing; made in one size—24 inch cylinder, 40 inch rear. **It is small**, but its capacity is **proportionately big**. It is economical in power, time and labor. It needs only a trial to prove itself a grain saver and a money maker—a profitable investment.

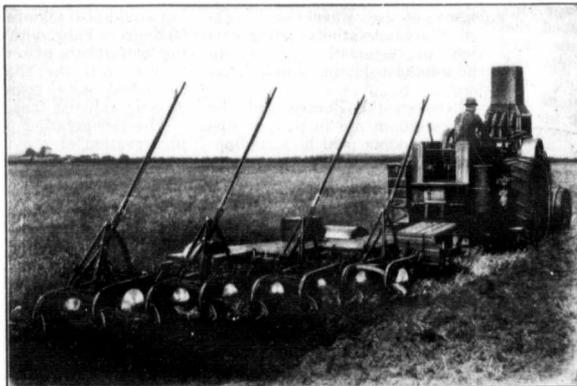
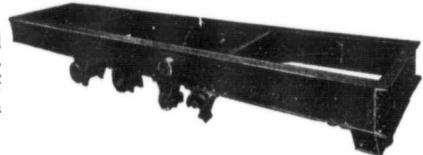


## The 100% Engine



is not an ordinary internal combustion tractor that *occasionally* can burn a *little* kerosene when conditions are favorable, but it is the **only** internal combustion tractor now on the market that burns kerosene at light load, heavy load, summer or winter.

**For Plowing** When traveling at the rate of two and one-third miles an hour and pulling eight plows *develops* a draw bar pull of 4800 pounds, turns twenty-two and one-half acres per day at a cost of from 60c to 90c per acre, depending on soil and other conditions.



**In the Belt** *develops* fifty-two horse power on the brake at an oil consumption of, approximately, one pint per brake horse power per hour. The entire daily fuel supply carried right on the engine.

We build *along* the same, strong, rigid substantial lines as we do our steam engines. Every pound of metal just where it is needed. You will find it there, too.

A look at the foundation of the engine proves this. We use 12 inch by 31 1-2 pound steel I-beams that are **riveted together in one solid block**.

When buying a tractor one should look to the future and the future profits of his investment. From every view point *presents* distinct and exclusive advantages over the ordinary type of gasoline tractor.

*The entire line of Rumely Machinery will be shown at the Motor Contest held in in Winnipeg July 13 to July 23, 1910. Make our exhibit your headquarters. A Welcome to all.*

# M. RUMELY CO.

1971 Rose Street

REGINA, SASKATCHEWAN

Distributing Warehouses; Winnipeg, Man., Calgary, Alta., Saskatoon, Sask.

# THE BIG DUTCHMAN ENGINE GANG

For Catalogue and Other Information Write  
**CANADIAN MOLINE PLOW CO.**  
WINNIPEG, CANADA

### A New Link Between Canada and Great Britain.

Time was, when a trip from Canada to the Mother Country was a thing to be dreaded. It was long, it was tedious, it was dangerous and to be avoided if possible.

The strides that have been made in the past twenty-five or thirty years in the improvement of ocean traffic have been remarkable and one by one the steamship companies have added their big ocean liners to the list—each and everyone of which is a veritable floating palace. The latest of these lines to come into commission are those which have recently been put on by The Canadian Northern Steamship Co. The new line will be known as the Royal line, which at present consists of two vessels, The Royal George and The Royal Edward. Another vessel to be known as the Royal Sovereign is contemplated.

The Royal Edward was built by the Fairfield Shipbuilding Co., Glasgow. Her chief dimensions are as follows: Length over all, 545 feet; breadth, 60 feet 3 inches; depth from keel to shelter deck, 32 feet; tonnage, 12,000 gross; horse-power, 18,000. The machinery consists of three of Parsons' latest compound steam turbines, one high pressure turbine in the centre, and two low pressure turbines on either side of the vessel. Their collective power is the equivalent to 18,000 indicative horse-power, when each of the shafts is making 340 revolutions a minute. Every care that could be taken has been employed to reduce noise and vibration to a minimum, so that in spite of enormous power, there is practically no throb or jerk whatsoever. Every requirement of

Lloyds and the Board of Trade has been more than met with. The Royal Edward is subdivided into ten compartments by watertight bulkheads, while a cellular double bottom has been fitted from stem to stern.

### Seven Decks.

In all there are seven decks, beginning with the lower, and rising in succession to the main, upper, shelter, bridge, promenade and boat decks.

Immediately abaft the officers' quarters is a cafe, 63 feet by 40 feet. It is designed in the Regency style, panelled in oak, and with seating accommodation for 85 passengers. The roof of the cafe forms the flying bridge, upon which have been placed the chart and wheel houses, the bridge, of course, being designed exclusively for navigating purposes. At the other end of the boat deck is a large office for the reception and despatch of Marconi wireless telegrams.

Below, on the promenade deck, is a long steel deckhouse, built in island fashion, in the centre of which has been placed the music room, which is 45 feet by 30 feet. This is a charming room, furnished in the Louis XVI style, and finished in white. In the centre of the room is a large well, which partly lights the library and the dining saloon on the deck below. Forward and aft of the music room are groups of state rooms, arranged to accommodate two or three persons in each, and in all 133 first class passengers. A portion of this vast deckhouse has been divided up into suites, containing sitting rooms, bedrooms and bathrooms, all self-contained and fitted in the most delightful and luxurious manner. The construction of the bridge deck is very similar, and on this deck is

the main entrance to the grand staircase, which provides ample, easy, and well-lighted access from deck to deck. An electric passenger lift also links up all seven decks. On the bridge deck is the library, which in size resembles the music room; but in style it is Regency, rich tapestries being hung against the dark oak panelling. Further aft is the smoking-room, 30 feet by 40 feet. This is a really magnificent and artistic apartment which has been ingeniously mapped out with little bays, in which small groups of people can enjoy the society of their own particular friends. The walls and ceiling are finished with oak, and the design is of the Elizabethan period, the whole scheme being carried out systematically down to the minutest details of upholstery.

Between the library and the smokingroom are further groups of staterooms which accommodate 107 first-class passengers.

### Shelter Deck.

The shelter deck is for the most part allotted to public rooms and in this respect must be regarded as the most important deck of the ship. On it are arranged not only the first-class saloon, but also the second-class dining saloon, the second-class "social hall," and the second-class smoking room.

Also on this deck, just aft of the bridge, and in the centre of the ship, is the children's dining-saloon, a dainty place, richly furnished and bright with white enamel work. On either side of the children's saloon are groups of staterooms arranged in island fashion. Here families of children can be accommodated in little flats all of their own, and here again the endless variety of the ship has play, the panelling and

the furniture and the fittings of every suite being different.

It is the first-class dining saloon, however, that is undoubtedly the most striking apartment of all. It occupies the whole breadth of the ship and is 77 feet in length. The design is of the Georgian period, and in all 266 persons can sit down at one time.

Very special care and thought has been bestowed on the subject of ventilation, and the vessel can never be uncomfortably hot or uncomfortably cold, and is never stuffy. Air is distributed by fans through trunks leading to every section of the vessel. The tanks are not only capable of renewing the air twelve times in an hour but could also maintain the air at 60 degrees Fahr. with a surrounding atmosphere of zero. In addition to this the ship has been furnished with scores of little electric exhaust fans.

The refrigerating plant for the preservation of provisions is the best that can be got, while the electric plant is so complete that every stateroom is fitted with ladies' electric curling tongs.

The ship is practically as safe from fire as a ship can be for she has been fitted with the Clayton Fire Extinguisher, an apparatus which is capable of discharging in any part of the ship 25,000 cubic feet of fire-extinguishing gas per hour by means of pipes laid out to each and every room. The machine extracts the air of a compartment, simultaneously injecting sulphur dioxide. The fire extinguished, the sulphur dioxide is withdrawn and fresh air pumped in. Thus this machine can be used not only for extinguishing fire, but for airing the ship.

### The Captain.

Captain Roberts, of the Royal Edward, is well known on the St.

Lawrence. He commanded the Dominion line steamship Englishman for many years. He commenced his life at sea in 1875, and made his first voyage to Calcutta, and has travelled the world practically over in sail from one ship to the other. At last he found himself ashore in Australia, and went through the bushman's life for some years, eventually drifting down to the coast again, and served several years on the coast between Brisbane and Fremantle, when his thoughts turned towards the old country. He shipped on one of the finest passenger clippers in those days, and made several voyages in her between London and Melbourne. He then turned his thoughts to steam, and joined the Dominion Atlantic line in 1886, and after making several voyages across the Atlantic was transferred to the Mediterranean fleet of Richards, Mills, and served in the Mediterranean, Sea of Marmora, between Marseilles and Odessa, and is well acquainted with all the intermediate ports in the Mediterranean, Sea of Marmora, and Black Sea. He rejoined the Dominion line in 1896, had command of the Englishman during the Boer war carried a number of Australian troops, and also brought several hundreds of the Boer prisoners back from India and Ceylon. For his services on the Englishman Captain Roberts holds the Transport Medal. After the Boer war he was transferred to open the passenger trade between Boston and the Italian ports for the Dominion line, and remained there until the North Atlantic combine was formed, when the White Star ships were put on the trade. Captain Roberts reckons that he is one of the pioneers of the passenger trade between Boston and the Mediterranean. After that he went on the St. Lawrence trade, and has been in that service ever since. He has now transferred his services to the new Royal line, the first vessel of which he has the honor of commanding.

**Don't You Think So ?**

Better work a little less and get more good out of life.

When the other quarter section adds a lot more of hard work and strips the life of some of its enjoyment, better not buy it.

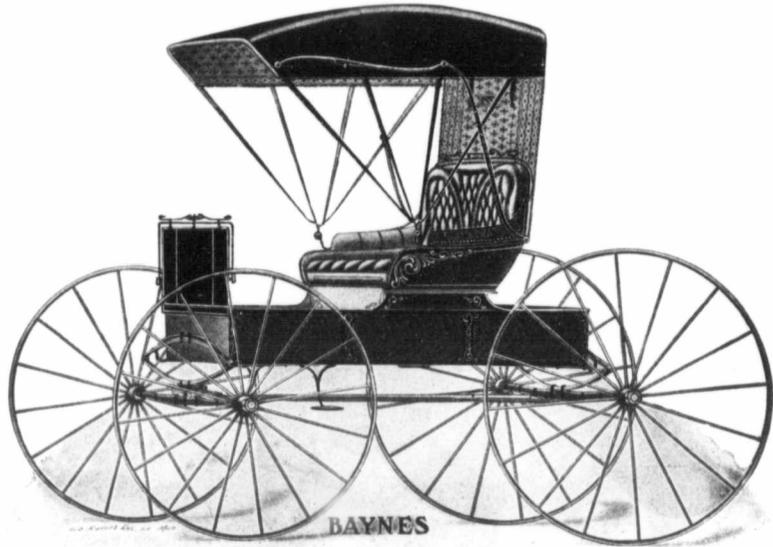
If the new machine you have bought keeps you awake nights wondering how you are going to pay for it, hadn't you better wait a bit till you can pay for it before you buy it?

If a farm paper costing a dollar a year brings you pointers that are worth ten times that amount, is the price of the subscription thrown away?

It isn't worth while to work so hard that you can't smile and appreciate a good joke.

When your wife makes an extra good dish, it is not a waste of strength to tell her so.

Going barefoot and getting a big stonebruise on the heel will not make up for the cent or two saved in shoe-leather.



No. 480 Standard Buggy

We will display a full line of these up-to-date Carriages and Cutters at the show rooms of A. C. McRae, corner King and James Streets, Winnipeg, during the Exhibition and we cordially invite all dealers to call and thoroughly examine these goods or write for catalogue and prices to

**A. C. McRAE,**  
Winnipeg, Man.

**W. J. BELL,**  
Saskatoon, Sask.

**Baynes Carriage Co. Ltd., Hamilton, Ont.**

If the mortgage brings grey hair and bowed shoulders, better worry along with the smaller farm a few years more until you have the money in hand to pay for the piece adjoining the old place.

You can save a few minutes every day by following the "eat and run" policy. But when you are down flat on your back with a bad spell of sickness and the doctor says it is all due to eating too fast and not taking time to let digestion get started, the question naturally arises, "Does it pay?"

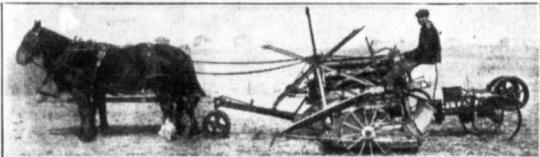
It is better to keep one good cow than two poor ones.

Men who think themselves wonderfully smart make the most miserable mess of it when they do get on the wrong track.

**Another New Life Preserver.**

A camp stool which serves the double purpose of a life preserver and a seat is reported among recent inventions. A description says:

**GILSON ENGINE HARVESTER ATTACHMENT**  
HAILED AS THE GREATEST INVENTION SINCE THE SELF BINDER



A trailing attachment with universal joint and friction clutch. Standard GILSON "GOES LIKE SIXTY" air cooled engine, useful the year round. Extra weight rests on truck wheels. No strain or vibration on binder. Saves grain, horses and time. You can cut on any kind of ground, no matter how wet or rough. Fits any style of binder.

Write for detailed description. GILSON MFG. CO., L td., 905 York Street, GUELPH, ONTARIO

**HARMER IMPLEMENT CO. Winnipeg, Agents for Western Canada**

The new life preserver is in the form of an ordinary camp chair with a solid block of cork ingeniously placed underneath the seat. All that is necessary when occasion demands is for the passengers to pick up the chairs on which they are sitting, pass the straps around their bodies and drop into the water. The loss of time in the often unsuccessful at-

tempt to reach life preservers when an accident occurs is eliminated by the use of the campstool preserver.

Industry need not wish, and he that lives upon hopes will die fasting. There are no gains without pains; then help, hands, for I have no lands; or if I have, they are smartly taxed.—Franklin.

**PERSONALS**

Thresherman and Farmer wishes him the best of success in his new field.

Mr. O. S. Stinson, Manager of the American-Abell Engine and Thresher Co., together with Mr. R. Rigden, Accountant for the Minneapolis Threshing Machine Co., of Minneapolis, Minn., are at present on a somewhat extended tour through the West in the interests of the American-Abell Engine and Thresher Co.



PETER PAYNE  
Pres. Interprovincial Fair, Brandon

The Winnipeg Industrial Exhibition of 1910 will see a large number of visitors representing the machinery interests of Eastern Canada and the United States. There will be an unusual number this year on account of the Motor Contest, for a great many of the manufacturers will attend who have not entered any machinery.



WILLIAM NICHOL  
Director Interprovincial Fair, Brandon

Mr. R. Coleman, whose photograph appears on this page has recently left the J. I. Case Threshing Machine Company to take up a position with the American Seeding Machine Co., in Alberta.

Mr. Coleman has been with the Case Company a number of years in the position as traveller and takes with him into his new field of work a large experience in the machine industry. The Canadian



A. C. McPHAIL  
Director Interprovincial Fair, Brandon



W. J. SMALE  
Secy. Interprovincial Fair, Brandon

Mr. H. W. Hutchinson, Managing Director of the John Deere Plow Company, Limited, is at present on an extended trip south and east in the interests of his concern.

Mr. E. S. Tecktonius, Field Manager for the M. Rumely Company passed through the city recently on his way to La Porte, Ind., the home office of the company. Mr. Tecktonius reports a most excellent business in Canada in 1910.



L. J. CLEMENT  
Director Interprovincial Fair, Brandon

Mr. George Bathrick, Sales Manager of the Nichols and Shepard Co., Battle Creek, Mich., made our office a pleasant call recently when on his way to Regina, the Canadian office of the company. Mr. Bathrick reports a much increased business in Western Canada for 1910.

On this page will be found a number of illustrations of the men who have the Inter-Provincial Fair at Brandon in charge for 1910. Some of these men have been connected with the Fair for a number of years. Much of the promised success of this



ROBERT MATHESON  
Director Interprovincial Fair, Brandon

year's enterprise is due to Mr. Smale, the Secretary. Mr. Smale has had a large experience in such work in Western Canada and is bringing to Brandon the full benefits of such experience.

The Inter-Provincial Fair in 1910 promises to be one of the biggest yet and well deserves the patronage of the farmers of Western Canada.

On this page will be found illustrations of M. Townsley and



M. TOWNSLEY  
Pres. M. Townsley & Sons, Minneapolis

O. W. Townsley. These two gentlemen have probably done more than any other two men to put the lightning rod business on a legitimate basis.

Mr. M. Townsley, the elder gentleman of the two, looks after the Minneapolis end of the business and Mr. O. W. Townsley is Manager of the Canadian Lightning Arrester Company.



ROBERT COLEMAN  
who recently left the J. I. Case Co. to go with  
American Seeding Machine Co. in Alta.

The M. Townsley Co. will have a complete working outfit at the Exhibition at the Winnipeg Fair and respectfully invite all the farmers in attendance to make them a call and see a practical demonstration of lightning and lightning rods.

We are in receipt of a communication from Mr. Gerald S. Roxburgh, Manager for Featherstonhaugh and Company, Patent Attorneys, to the effect that the Company is now in their new offices, 209 and 210 Bank of Nova



O. W. TOWNSLEY  
Manager The Canadian Lightning Arrester Co.

Scotia building. This new building has just been completed and is opposite the Free Press on Garry Street, the building also fronting on Portage avenue.

Mr. Roxburgh extends a cordial invitation to old customers as well as new to call upon him at their new offices. Much larger quarters have been secured than what the company formerly occupied, which was made necessary by the increase in business.

**STANDARD NINE SIZES**  
IN ONE  
Is the only EARTH AUGER that  
Really Hores

**NINE POINTS OF ADVANTAGE**  
1 - Enters hard earth. 2 - Has Expansion blade. 3 - Holds flaps, dry sand. 4 - Does not bind in hole. 5 - Opens to discharge contents. 6 - Hores all conditions of earth. 7 - Double "V" point cutting blades. 8 - Saves half of the time and effort. 9 - Nine sizes in one. Price \$2.50 to \$5.00. If not at dealers, we deliver. Send for Catalog No. 11 Standard Earth Auger Co., 1725 Newport Ave., Chicago, U.S.A.

**ABSORBINE**

Will reduce Inflamed, strained, swollen Tendons, Ligaments, Muscles or Bruises. Cures Old Lameness and Stop pain from a Splint, side Bone or Horse Spavin. No blister, no hair gone. Horse can be used. Horse Book 2 D free. \$2.00 a bottle at dealers or delivered.

**ABSORBINE, JR.**, for mangled ft. Reduces Strained Torn Ligaments, Enlarged glands, veins or muscles—heals ulcers—relieve pain. Book Free.

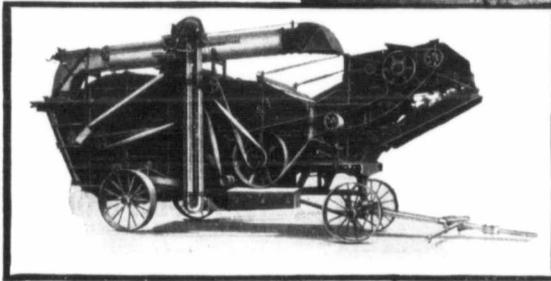
W. F. YOUNG, P.O.E., 112 Temple St., Springfield, Mass.  
LYONS Ltd., Montreal, Canadian Agents.  
Also furnished by Martin Sale & Wynne Co., Winnipeg; The National Drug & Chemical Co., Winnipeg and Calgary; and Henderson Bros. Co., Ltd., Vancouver.

**DON'T FAIL TO RENEW YOUR SUBSCRIPTION**  
Before it is too late.

# Double Separation *beats* Single Separation *as a* PROFIT EARNER



The Reeves Compound Separator  
With Mammoth Cylinder.



In this REEVES "Compound" Separator

the upper separating device, itself the most effective ever invented, is re-enforced by a second separating table which in turn is as effective as the whole separating mechanism of most machines.

*Remember that point*

when buying a threshing outfit. If there is any one thing more than another that will drive away a customer it is to see what he knows to be too large a proportion of his grain going into the straw.

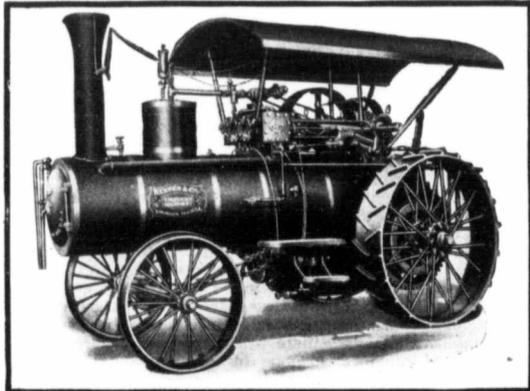
¶ You cannot fool a farmer. Most of them have seen a REEVES "Compound" Separator in operation and they know what "real" separation is. REEVES Double Separation tickles the farmer every time and brings you business. Lack of it is liable to cost you many good accounts.

¶ A thresherman is known by the work he delivers. Thresh with a REEVES Compound Separator and you will have the satisfaction of knowing that you have nothing to fear from your competitors on this point.

## Another Pointer

Don't buy a SINGLE CYLINDER engine without reading the comparison between them and this REEVES DOUBLE CYLINDER ENGINE in the REEVES Engine Catalogue.

After that you won't want one.



# REEVES & COMPANY

COLUMBUS · INDIANA · U.S.A.



CANADIAN BRANCH: REGINA, SASKATCHEWAN



## Practical Talks to Threshermen

Conducted by PROFESSOR P. S. ROSE

TALK No. XXXIV.

There are very few threshermen or farmers or men who make their living directly in some form of agriculture who keep a system of books. They never know exactly the condition of their business. They cannot tell whether they are making or losing until all accounts are in and they count the cash left. They depend upon their memories, trust to luck and blunder along. They do not do business on business principles and often carry along a losing proposition, because they have never figured out just what they are doing. In fact, they have no certain sure data at hand to use as a basis for figuring and they cannot have such data until they start a system of accounts.

The only way for one to study his business intelligently is to keep an exact account of all receipts and expenditures and make due allowance for all fixed charges, such as interest and depreciation. These two latter items are the ones on which most threshermen fall down.

I have just finished reading a large number of letters from men who do steam plowing in which they set forth their receipts and expenditures and state how much they are able to make or have made in a season and in none of these letters was there one word said about interest or depreciation. I figured over a number of their reports and found that these men in most instances were actually losing money while they stated in their letters that they were making money. They simply did not know how to keep their accounts if they were so disposed, and most of them were not so disposed.

It has been only within the past dozen years or so that manufacturers have adopted close and accurate methods of cost keeping. When they did adopt such a system many experienced painful shocks of surprise. I knew of one firm of machine tool builders a few years ago who discovered after establishing a cost keeping system that on certain tools that they had been manufacturing that they had been actually losing money on every part turned out. Needless to say they proceeded to correct their mistake at once, but it was uphill business for a while to establish the higher level of prices and convince their customers they were justified in raising prices. However, it was the only sensible thing to do because a business that continually loses will soon go to pieces anyway.

For the thresherman or farmer a very simple system of book-keeping is to be preferred. With a little study a man can easily invent a system for himself even

if he knows nothing of the theory of accounts. What is needed is a system that will show the condition of the business at all times. That is all a set of books is for anyway, and the simpler they are the better, provided they give the desired information.

A day book in which are set down all transactions as they occur and a cash book recording all receipts and expenditures are the two important books.

If a thresherman has some other business such as farming he will find it advisable to keep a "threshing outfit" set of books. In this way he will not get his accounts confused and at the end of the season can find out where he stands financially. If he has a record of all receipts and all expenditures and takes into account his own labor as well as interest and depreciation he can figure out how much he must charge a bushel for threshing. If he is a good business man he will do this and if competition comes in and the price is cut he will know just where he must retrench to meet it, or better yet he can go to his competitor with his books and show him the truth.

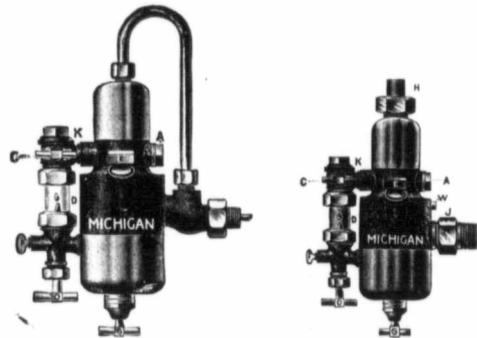
The principal reason for the existence of the price cutter is ignorance. He does not know actual conditions and a little good educational work with him by a man who has the facts might do some good. The only way to cure price cutting is to compile accurate information on the cost of threshing in different localities and see that every man in the business be made acquainted with the facts. It would pay threshermen's organizations and manufacturers both, to gather accurate data on the cost of threshing, plowing, etc., and place it in the hands of all owners of rigs.

The farmers whose threshing is done need a little enlightenment in the same direction. In fact every one connected with the threshing business from the manufacturer down needs to know more about the actual cost of threshing a bushel of grain, of plowing an acre of land, of grinding a hundred pounds of feed.

The business of threshing needs to be placed on a sound business basis where it pays a reasonably sure profit. If it were there would be fewer failures of owners of threshing outfits and more in it for the manufacturer of such outfits. It is a bad deal for all parties involved when the security has to be levied upon to pay the purchase price of the outfit.

There is no sense in condemning the price cutter and holding him up to ridicule when no one, neither he nor his detractors, know the facts. I believe, after

# MICHIGAN LUBRICATORS



## Our Hot Stuff and Pepper Pod Lubricators

are guaranteed to maintain the oil at scalding temperatures, in the most severe cold weather

We want Threshermen to have a copy of our Catalogue free

## MICHIGAN LUBRICATOR CO.

Manufacturers, DETROIT, MICH.

OUR GOODS ARE JOBBED BY

J. H. Ashdown Hardware Co., Winnipeg, Man.  
Miller-Morse Hardware Co., Winnipeg, Man.  
The Canadian Fairbanks Co., Winnipeg, Man.

## MADISON-KIPP OIL PUMPS

THE FAVORITES WITH THRESHERMEN AND PLOWMEN

These pumps have won an enviable reputation among all heavy power machine users owing to their simplicity, long life and durability. The present Madison-Kipp construction is the result of years of actual experience in oil pump manufacture. The parts are all drop forgings, forged from open hearth steel and hardened in the most modern hardening ovens. The plungers are a special grade of steel, case hardened as hard as the hardest glass and after hardening are ground as smooth as a mirror. All castings, both gray and malleable, are made from the best known formulas. No acid, sand, dirt or grit will affect our pumps. Our style B force feed lubricator is especially recommended for use in temperatures where the oil will not remain in a liquid state.

OVER 50,000 PUMPS IN ACTUAL USE

Our shop is devoted exclusively to the manufacture of oil pumps and force feed lubricators. All our energies are expended in this line. The highest grade of mechanics and skilled workmen are employed by us, and our shop equipment consists of the most modern machine tools, ligs, fixtures and limit gauges. This combination, together with our knowledge of knowing how to combine and use the best known materials, enables us to furnish a pump that will meet every requirement, and will work for years without any expense.

PARSONS HAWKEYE MANUFACTURING CO.  
Sole Agents for Canada WINNIPEG, Man.

Manufactured by MADISON-KIPP LUBRICATOR CO., Madison, Wis.



STYLE B-FORCE FEED

## Sawyer Drive Belt QUALITY

is the result of manufacturing Stitched Canvas Belting as a specialty for 20 years.

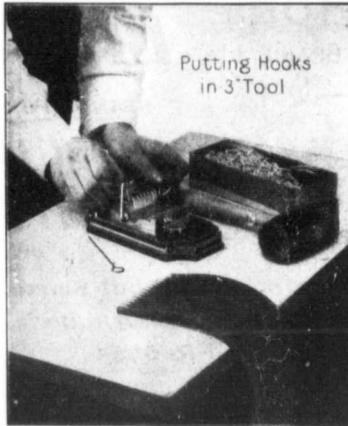
You can bank on it when you buy a "SAWYER" you've got the best money can buy.

Send for Book "L"

SAWYER BELTING CO.  
CLEVELAND, OHIO.



## Something New For Every Thresherman Clipper Belt Lacing Outfit



Putting Hooks  
in 3 Tool

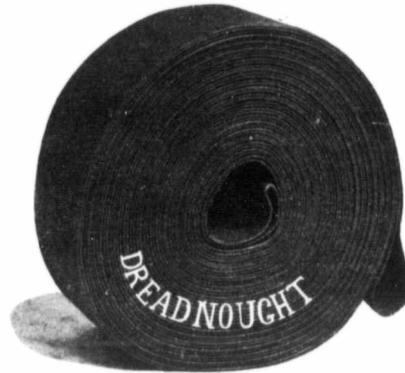
Turn hands of ECCENTRIC PIN upright so that pressure is off before placing Hooks in slots alternately, long and short ends. Then insert loose pin and turn ECCENTRIC PIN from you until hooks are held firmly in place.

Any thresherman purchasing one of these outfits saves time and money. Guaranteed to save 25 per cent. of your belting bills. If your implement dealer does not handle this machine write us direct, and we will be pleased to give you full information as to price, etc. This outfit is done up in neat case 12x8x6, containing all tools required and 1000 of each size of hooks, and remember, a boy ten years old can operate it. We would be pleased to have you call at our Ware-rooms at any time.

For  
LEATHER,  
RUBBER  
or  
CANVAS  
BELTING  
Made To Run As  
Smooth As  
ENDLESS.

**THE GENERAL SUPPLY CO. OF CANADA, Limited**  
Woods Western Bldg., Market St. E., Winnipeg

## "Dreadnought"



Manufactured in London, England, from the highest grade cotton duck and in accordance with specifications to suit the Western Market. Every belt guaranteed to give satisfaction.

Large stock carried by the **sole importers**.

Threshermen write at once for samples. Ask your dealer if he does not handle our belt to procure same for you.

Dealers wanted in every locality.

giving the matter careful consideration, that it would be a matter of sound business policy for manufacturers and threshermen's organizations to appoint a commission whose duty it would be to study this subject of actual costs in different parts of the country and place a copy of their report in the hands of every owner of a threshing outfit.

The matter of making settlements with customers is another matter upon which there has been considerable discussion, but since it is a vital question it will bear a little further comment.

Many threshermen are altogether too careless in this matter. They do not do business on business principles, and often come to grief in consequence. The proper method to follow is to make settlement when the job is done before moving to the next place. Let this settlement be in writing on a proper blank prepared especially for this purpose. This statement should be signed by the customer, and a similar statement should be made out, signed by the thresherman and left with the customer. In this way an exact record is made at the time; there is no chance for a misunderstanding afterwards due to poor memory and the transaction is business-like throughout.

When it comes to the matter of the collection of accounts, the thresherman should be as careful and as diligent as the implement dealer or merchant or the thresh-

er company that he bought his rig from. It is as much a part of the thresherman's business to look sharp after collections as it is to get threshing to do or to keep his rig in order. As stated in a former article, the business end of the profession is the all important one and every move should be in strict accord with business principles. This does not mean that there should be any sharp practices, harshness in forcing collections or anything of that sort. People do not care to deal with that sort of a man, but everyone has confidence in the man who is straightforward, honest and business-like in his dealings. If he combines this with good, careful, conscientious work he will make friends and obtain the best business in his community.

### Matches From Straw.

The straw of various grasses and cereals has been tried and found suitable as a substitute for wood in making matches. The straw is cut into two-inch lengths by machinery, winnowed to obtain uniform size, and then boiled in paraffin, dried and dipped into the mixture of chlorate of potash, gum arabic, etc., for the inflammable tip. The process should, if adopted on a large scale, obviate the use of wood, and also give an improved match, with advantages of a wax vesta, at a very small cost.

### Foaming and Priming of Boilers

Continued from page 56, June issue.

but had some good but unknown reason for putting it in. That it was not an accident was certain because nipples with a 5-inch thread are not a standard article; therefore it must have been made for a purpose.

As a flange has been introduced into the pipe connections, experiments at a trifling cost could be tried. Accordingly 2½ inch nipple was inserted, projecting into the boiler about 3-in., which accomplished precisely what was feared, namely, that the result would be the same as with the flush nipple, except that the water level would have to be 3-in. lower.

All hands having arrived at their wits' end, it was finally decided to try one more experiment. It was to drill four holes, each 1½ in. in diameter, through the nipple, opposite to each other and as close as possible to the flue sheet. As soon as this was completed the engine was started and water pumped up to the third gauge, but no injurious effects were in evidence. The next Monday morning the engineer was stationed at the engine throttle, when the heaviest shop load was thrown on and then thrown off and on again, but priming did not take place. The conditions at this time were: Steam pressure (gauge), 100 lb.; safety valve just beginning to blow; three gauges of water; ashpit doors open; furnace doors shut; slide valve engine cutting off at three-quarters stroke; r. p. m. of engine 120;

steam at bib cocks showing very little saturation.

The next day the water level was allowed to vary around the middle gauge, and since then priming has not been in evidence. Now the question is: Why did the four 1½ in. holes drilled through the nipple close to the flue sheet stop the priming? To the writer the following explanation seems the most reasonable:

When large demands for steam are made upon the boiler, the steam rushes across the surface of the water carrying it along by friction with ever increasing velocity toward the inner end of the steam pipe. As this action takes place in a circle, having its center in the vertical nipple, the water would accumulate under the nipple assuming a hyperbolic shape, like an inverted waterspout. Then, when once established in that shape, siphoning would complete the process of projecting a torrent of water through the steam pipe and into the engine. Drilling the half-inch holes opposite to each other, close to the sheet, causes four opposing currents of dry steam to meet in the center of the steam pipe causing there a violent eddy, which destroys the upward rush of the heavy, water-laden steam ascending in the nipple.

While the writer has ventured to express an opinion as to the way the cross-holes in the nipple prevented priming he would, nevertheless, be much interested in the views that fellow engineers might express on the subject.

## The Thresherman's Question Drawer

Answers to Correspondents

**F. V. GARDINER** Q. Is valve after once properly set  
**ALTA.** very apt to come out of order?

A. A valve or eccentric is apt to slip, if they are not properly secured, but in some engines the eccentric is keyed to the shaft and the valve is so securely fastened that it is almost impossible for it to get loose. Yet in all engines the valve gets out of place in time, due to the wear in the bearings of the engine. This, however, should not affect the valve to any marked degree within a few years of work. Some engines will need attention in this respect sooner than others and whether or not it needs attention can always be noticed by the exhaust. If the exhaust is square your valve is likely all right, but if it is "lame," or louder on one end than the other, it should be looked after, and usually the only thing that is needed in this case is simply the shifting of the valve.

**M. C. DARLINGFORD** Q. There is something wrong with  
**MAN.** the valve gear on my engine.

When I place the reverse lever in the centre notch while the throttle valve is open, the engine will continue to run. If I reverse the engine and again place the lever in the centre notch, it will continue to run in the reversed direction. I will say that the engine will only do this running without any load. Should it not stop when the reverse lever is in the centre notch? Don't this show that there is something wrong? How can this be fixed? I sent to the factory for a man, and he went over the engine, moved the valve on the stem a trifle, set up the boxes a little and it acted all right when he was here, but in a few days I discovered that it was all wrong again. The eccentric is keyed on the shaft; do you think this trouble will have a bad effect on the power and economy of the engine? If so, I would very much like to know what to do for it.

A. This is a very common freak of reversing engine with a constant lead. That is when the engine has the same amount of lead at all points of cut-off, and therefore it will have the same lead when the reverse lever is in the center notch. Therefore it opens the port when the lever is in the center notch, which fills the clearance with steam, and the expansion thereof is sufficient to run the empty engine. This is not a fault of the engine and does not show that there is anything out of adjustment. In fact, your engine must be set very accurately, as it often happens that an engine will run one way when

the reverse lever is in the center notch while the throttle is open, but when an engine will run either way under the foregoing conditions, it shows that the rod connecting the reverse lever to the valve gear proper must be of the correct length.

If the eccentric is keyed up to the shaft, this shows that it is in the place which the builder intended it to be. The fact that the engine did not run when the throttle was open and reverse lever in the center notch after the man from the factory adjusted it shows that he made one or more of the boxes tight enough to make enough friction to prevent the engine running with the little steam which the engine gets with the reverse lever in the center notch. Tight stuffing boxes will make enough friction to hold an engine under such conditions. The fact that it runs so easily shows that it must be well lined up and in good condition generally, also well oiled.

**J. H. BEAVER** Q. Which is the proper way to set  
**MAN.** the valve and eccentrics on a Waterloo engine, with link reverse? Please give full detail of setting the valve, and the true way of getting the off center up and down; are there any by measuring on slides?

A. Place the reverse lever in end notch so that block is at end of link, divide the valve by turning eccentric from one extreme to the other, then set crank pin on center and move eccentric in advance of crank pin till proper lead is obtained, now place reverse lever in the other end notch and turn the other eccentric in the opposite direction to the former in advance of the crank pin till the proper lead is obtained. This will place both eccentrics and give equal lead on each end but not an equal cut-off due to the angularity of the connecting rod. To get an equal cut-off (providing you have given 1 1-15 inch lead) shift the valve so that you get 1-32-inch on cylinder head and 3-32-inch on end toward the crank. This will tend to equalize the cut-off which is of more importance than the lead.

**L. B. HEWARD** Q. Why don't  
**SASK.** threshing machine manufacturers build automatic engines? Why could not such an engine be built in connection with Woolf valve gear, so they could be reversed as readily as simple engines? I do not see why they would be much more expensive to build because they would not require a throttling governor. They would

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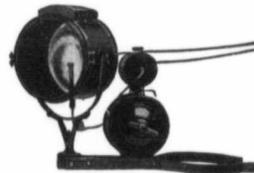
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you are taking long chances of having to do without a Baker Valve this season if you put off ordering until just the beginning of threshing.

If you haven't made a decision yet or don't know the advantage gained by the use of the **BAKER BALANCED PISTON VALVE**, write us at once for a catalog.

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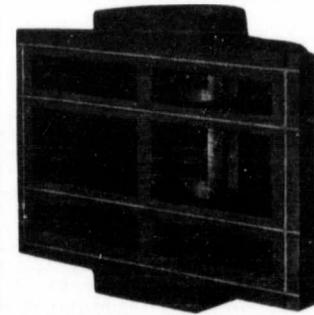
without your valve even if we had to pay

three times what you charge for them. We

will be glad to recommend them to any

one whom you may wish to refer to us.

Yours truly, J. A. VERNER, MEMBER CO.



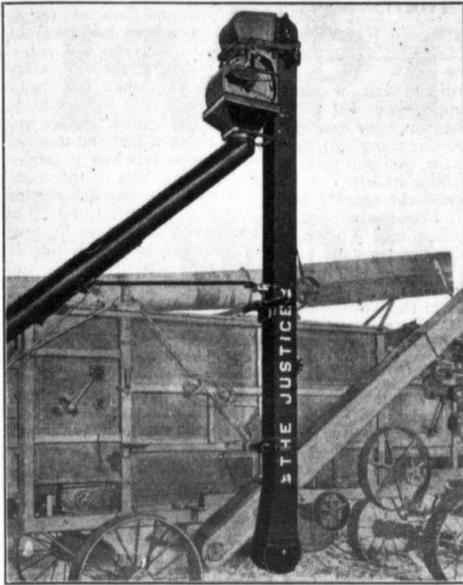
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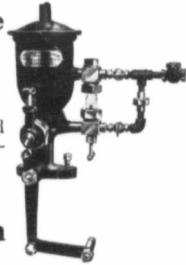


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A machine that cannot lie, cheat or steal. A servant whose fidelity is never in doubt. A detective that no species of dishonesty can tamper with. An accountant whose accuracy can never be questioned, whose statements never mislead.

The only Government Standard for this purpose having the sanction of the Department, made and sold by us at a price within the reach of every farmer.

Would You Forget All Your Engine  
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An absolutely perfect appliance—a god-send to every engineer and thresherman. It cannot get out of order and is so simple in every part that a novice can handle it easily and without risk by following the simple instructions accompanying it.

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be more economical. Some engines I think require more fuel than they ought to use for the power furnished.

A. In the first place the engine would be more expensive. It would be also harder to keep in order. Simplicity is the thing sought for in the building of a traction engine. However, the day may come when traction engines will have an automatic cut-off. There are already automatic, reversing valve gears worked out but not as yet on the market.

pressure (m.e.p.) of 15 lbs. (10x15=150) would be equal in strength to that of a horse raising 150 lbs. and a piston speed of 220 feet per minute (10x15x220=33,000) is the equivalent of the work done by the horse. Or in modern traction engine practice, a piston having 1½ square inch area, working with a m.e.p. of 55 lbs., and a piston speed of 400 per minute (1.5x55x400=33,000) would also be equivalent to the work done by the horse.

dynamo operates and lights the entire works.

Work has just begun on a new grey iron foundry, 246x270 ft. This will be mechanically operated, and this end will be equipped with the most modern foundry appliances. The center bay will be 43 ft. high, and contain an electric traveling crane of 20 tons capacity. Numerous smaller traveling cranes will also be used. It is expected that this new grey-iron foundry will be in operation by next December.

Early in the fall, work will be commenced on a new shop building, 396x462 ft., to be used as a stock room, machine shop, inspecting room, and erecting shop. This building will be completed in the spring of 1911, and give the works a capacity of 2500 to 3000 tractors per year.

All the above buildings are constructed entirely of steel and concrete, with re-inforced concrete roofs, and are absolutely fire proof; they are unusually well lighted and contain abundant toilet and locker rooms for the convenience of the employees.

### New Hart-Parr Buildings.

The Hart-Parr Co., of Charles City, Iowa, are now finishing their Steel Foundry, and installing the furnaces. The building is 116 x 250 ft. with a wing for a testing laboratory, 52x90 ft. The center bay is 43 ft. high and contains a 15 ton electric traveling crane. This foundry will contain two 10-ton open hearth furnaces, which are expected to be in operation early in the fall; it is the only steel foundry West of the Mississippi.

An extension, 65 x 180 ft., is being made to the Power & Testing building, which will make this building 65x330 ft. and capable of housing 21 tractors at tests. In testing each engine it is belted to a 220 volt dynamo, and run under load from 20 to 40 hours. The current from the

as a slight wrench, a sprain, a cut, etc. These are things to be expected. They are liable to happen to any horse at any time. The lameness may cause inconvenience but is not otherwise serious. All that is necessary in many cases is to be ready to treat promptly with some efficient remedy.

In this connection it is a suggestive thought that for over a score of years one could hardly speak or think of a horse remedy without calling to mind Kendall's Spavin Cure.

Perhaps no other single horse remedy has ever been so generally used or had so great a reputation. Almost everybody who owns a horse has heard of Kendall's Spavin Cure. Its popularity has not been confined to one locality or state. It is national, even world-wide. It is found on the shelves of well posted horse owners in many countries.

It is worth while to remember that Kendall's Spavin Cure has been in use for nearly half a century and its popularity is greater now than ever before. If it had not stood the test it would have been out of mind long ago.

The old favorite horse liniment is on sale at drug stores and general stores everywhere. The excellent horse book entitled "A Treatise on the Horse and His Diseases," can also be had free at drug stores or by writing for it to the Dr. B. J. Kendall Co., at Enosburg Falls, Vt.

**The Horse Remedy that Every  
Drug Store and Every  
General Store Sells.**

A very trivial thing oftentimes causes a horse to go lame, such

J. Mc. Q. How was the  
CARDSTON standard for h.p.  
ALTA. rating established?

A. The first application of the steam engine as a substitute for horses was in hoisting coal from mines. James Watt found the best English draft horse would raise a weight of 150 lbs., walking at a pace of two and one-half miles per hour, or 220 feet per minute; hence 150x220=33,000, or the same thing, 33,000 lbs. raised one foot per minute. This duty is the recognized English standard of the indicated horse power (h.p.) as applied to steam engines, and recognized by all engine builders in the United States. It follows that an engine having a piston of 10 square inches area, working with a mean effective

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WASH.

The first threshing machine I ever saw was a flail. The little job we had on the farm was usually postponed until the frost came in the fall, when the neighbors would come in and "change works" with my father, going around from one farm-house to another till the scanty harvest was all pounded out. It was a great time for us youngsters when the thud, thud, thud of the flails sounded their music over the hills and far away. The work of cleaning up the grain was no less interesting to us boys, for we liked to get a chance to turn the mill for a while, till our strength got run down so that we could scarcely make another revolution at the crank.

Next came the open-cylinder machine. I well remember the first time one of these machines set up in our barn. It was a new barn, and as we had recently burned the logs of the old house to make way for the new frame building that was to be our home some day, we had moved down to the barn and were living in the stable. Of course, as no cattle had ever been in the barn, the stable was as neat and clean as any house could be, and we liked the smell of the sweet new shavings.

But that job of threshing was a great one, and no mistake! We had bed quilts hung up all along the side of the barn floor next to the stable to keep the kernels of wheat from scattering over into the next house. And when the bundles of grain went into the cylinder, how the grain did fly everywhere! Up to the top of the barn, all about the big floor, against the side of the hay mow, into the eyes of the hands, peppering us all like hailstones in a great storm. Queer that no one had then thought so far as to provide a cover for that cylinder! So it seems to us now; but really, it was along with all other inventions we have: the thrasher was a growth. Men thought out one thing and put it into use and then, by-and-by another bright idea came into their minds, to be adopted after no small struggle.

Cleaning the grain was, as I remember it, still done at first with a fanning mill. The idea of combining a thrasher with a separator was a thing of the future. And after the machine was out of the barn we had to sweep and shovel the grain all up in a heap and run it through the fanning mill. It was a big thing, though, to have the grain pounded off the bundles by something besides the flail.

But that old fanning mill—what a glorious mystery it was to "us boys"! With the same grand disposition to investigate that has always inspired men to great efforts, we used to get that mill out on days when father was away from home, knock out the pins that held the swell part on and proceed to thresh hay and straw by holding it against the wings of the fan, while someone turned for dear life at the crank. It was a sorry day when grandmother appeared on the scene, quietly opening the big barn door which we had so carefully



## Threshing, Now and Then

EDGAR L. VINCENT



shut, thinking thereby to keep ourselves free from interruption. In her quaint downeast tone she would lift up her voice after standing a moment in the threshold looking at the disaster which our impious hands had wrought to the old mill:

"What on airth be you a-dewin' on!"

How the cold chills would run down our backs, and then how we would hustle to prove to dear old grandmother that we knew just how to restore the mill to its former condition, all safe and good. I never knew that she told father about our experiment. She loved us too well for that, I am sure.

But now—well, it makes one almost dizzy to think of the change! Think of the beautiful machines that now come to do our threshing! Perfect—not a thing lacking, so far as human ingenuity can contrive, to enable them to do the best possible work and do it in almost a twinkling of the eye! Run by engines that drive the cylinder and all other parts like lightning, they sweep across the country like tornadoes, taking the great stacks of grain and devouring them like mighty monsters with appetites that can not be stayed, and leaving in their trail only the sacks of clean, beautiful grain!

Ah, it is a far cry back to the flail or even to the little, old-fashioned open-cylinder machine! Such strides as we have made since you and I were boys. And that is not so very long ago. We are not yet old men; we never expect to be quite that. But thinking of the wonders that have been accomplished, in the perfection of the threshing machine, makes one wonder if there can possibly be as much improvement in the next few years as there has been in the past. I expect to live to answer that question. The splendid thrasher of today will help me to do it!

### Grain Worth Threshing

By E. L. V.

We threshed some of the finest grain last year that we ever put into the bins. I do not say this in any bragging spirit at all. If I know myself I do not want to boast of anything I do; but it is all right for us to think well of ourselves and believe in our ability to bring things to pass.

So may I say again that we never have threshed better grain than we did this present year? The berry was large, plump and as clean as a whistle. It did me good to stand and watch it come pouring out of the sprout in a beautiful golden stream. The straw, too, was nice and bright—never more so. How did it all happen?

Well, now, I am not one of those who believe that things happen in this world. We bring them about, or they never come.

If you sit still and wait for something to happen you will grow grey-headed before your time and after all only one thing will happen, and that is, you will make a miserable failure of life.

I went across the country last summer. I like to take such trips. They help me. The wind as we go along sweeps the cobwebs out of my brain and brings me back fresher than when I started. Out in the western part of Alberta I saw men working on the Sabbath day to get their oats ready to thresh. They were setting them out in the shock, so that the sun and air might dry them.

Working on Sunday is a poor business for any man, and particularly the farmer. No man who ever followed the practice can truthfully say that he is a better man for having done it, and I doubt if he would tell us that he was any better off from the money point of view; but those men were working on Sunday. There was a reason for it, at least in their own minds. I will tell you what it was. Every day for about two weeks it had been raining. You know what that means in the fall of the year when we have grain out and no prospect of a let-up in the storms. Those oats looked as black as buckwheat, almost; and men who came into the train told me the grain was growing in the shock. Too bad! It does come hard to work all through the season and then have it come to nothing! You have done that some seasons and so have I. It just about takes the tuck out of a man to have things turn out that way.

But there is another side to this matter. For weeks before we cut our grain there had been just the finest weather for harvesting you ever saw. Days and days of nice clear sky. What were those farmers doing then? Of course I cannot answer for them, but I do know how it sometimes is with men in such a time. They say, "This is a grand spell of weather! Not a drop of rain in six weeks! No sign of any, either. What is the use of being in a hurry about the harvesting? Time enough yet. The grain is all ready to cut, but we'll let it go till the first of the week."

And when the first of the week comes something else happens. We get up to find the rain coming down. Softly, at first, and then harder and harder till the grain is soaked and the ground soft. Then we try to hustle. Between showers we slip out and cut the grain. But there is another long wait. It keeps raining. The shocks are soaked to the bottom. Our under lip begins to fall. So easy to find fault when we have missed an opportunity and try to lay the blame onto somebody else!

A day or two after my trip I saw men drawing in grain that

seemed to me hardly worth threshing. The straw was dingy and black and I am sure the grain must have been badly sprouted. And at that very moment oats were selling at the mill at sixty-five cents a bushel. Too bad! So we say and it is. But what is it that is bad? Bad that we are so slow to learn that the time to do farm work is when it ought to be done and there is time to do it.

It takes a pretty smart man to do everything just right. If anybody ever has got so he can do that always and everytime I do not know who it is. He surely does not live around here. He may be in your neighborhood; he certainly is not in mine. But we might all do better than we do. That sounds like a thing somebody else has said. All right. Let it go. It will stand repeating a few times more.

Just about now lots of folks are trying to turn over a new leaf and get started on a better track. It is a good plan. When a man gets so that he never wants to be a better farmer and a better man he might just about as well be dead and done with it. But there isn't a particle of good in making new resolutions and stopping there. It is like sitting up to the table when your wife has brought in baked potatoes and sausage, splendid bread and butter, sweet-corn and pie and cake till the boards are just ready to break down under the load and then never take a bite. You go away just as hungry as when you sat down and a good deal more unhappy.

You have got to sit up and eat or your resolutions will not amount to anything.

If we would have grain worth threshing we must not only plow and sow and reap, but we must gather our crops when the sun shines. Then we can laugh when it rains.

### The Housekeepers Part in the Prevention of Tuberculosis

"The friends of tuberculosis are Dirt, Damp, Darkness and Drink. The enemies of consumption are Sunlight, Fresh Air, Good Food, Rest." All but "drink" relate to housekeeping. Tuberculosis is a house disease. Living in bad, stale air will so lower the vitality that we are likely to catch anything that is floating around.

The prevention of tuberculosis in a household can almost be spelled by one word, "cleanliness". Cleanliness must be a daily bath for the whole house with fresh air and sunlight.

Heavy stuffed articles of furniture are dust-breeders and in their turn create germs.

Carpets are bad for sleeping rooms.

Bedrooms should have little furniture and should be well cleaned.

The windows in a bedroom should always be open.

Let not the family hearth be the breeding-place of such a plague as tuberculosis. Let us then as housekeepers recognize the value of fresh air, sunshine, sanitation and clean nourishing food.

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To all Persons Buying and Using

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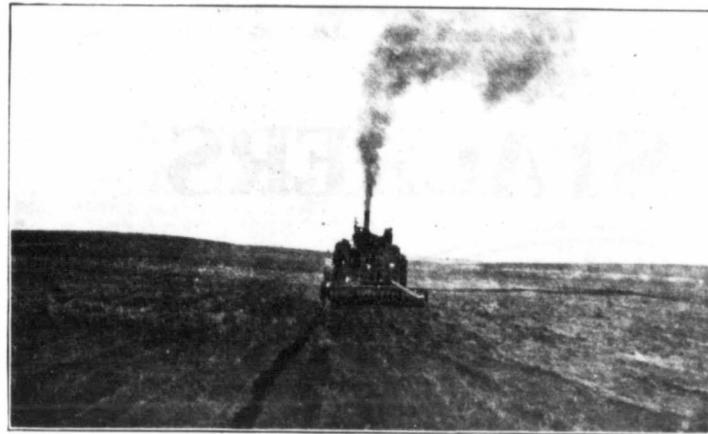
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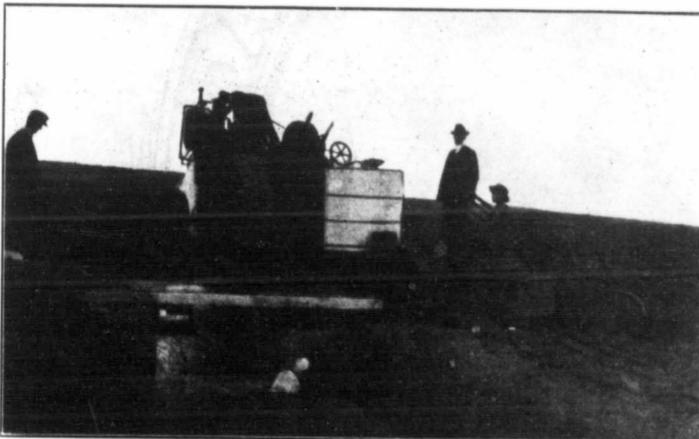
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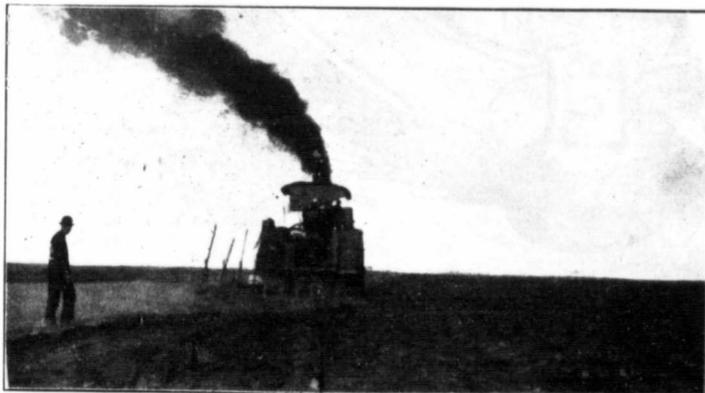
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Finishing up a half section in Saskatchewan with an American-Abell 32 horse power engine, owned and operated by Alex. Creelman, Gull Lake, Saskatchewan.



Taking water from the great C. P. R. irrigating canal ditch 25 miles east of Calgary. See affidavit of Dixon. This engine has more efficiency than any plowing engine working in Western Canada.



Breaking up the Red River valley in Southern Manitoba at the rate of 30 acres per day with a 32 horse power C. C. American-Abell Engine, owned and operated by Jos. Goundler 6 miles west of McTavish. This is a powerful engine.

Gleichen, April 28, '10.  
American-Abell E. & T. Co. Ltd.,  
Calgary, Alberta.

Gentlemen:—Enclosed find our marked cheque for \$3625.00 being payment in full for the Drummond engine we purchased from your Mr. Cooper last March. In addition to this we have paid the freight from Toronto to Strathmore.

You have asked us to let you know of any defects we might find on this engine, but we wish to say that there is none, except that the steering device worked a little stiff at first but has since loosened up, and is now alright.

We have given this engine as hard a test as an engine ever received as the land we are plowing is very tough and hilly but we have hauled ten 14 inch plows, 4 inches deep up a hill that would raise 25 ft. to the 100, without any apparent extra effort on the part of the engine.

The bull gear shaft as it takes that quiver out of the shaft which is always there on engines where the cogs of the bull gear go round.

The power feed is a long felt want with plowing, and we have decided to take of a steam pump as we have never used.

In our 15 years' experience with engines we have never seen any a steamer as this one; we also find very light on fuel and water, as was done two miles plowing with the horse and we only used the coal that is in the chute. The engine is in every way satisfactory to us, and we consider it an engine that will do the work she is built for.

Wishing the complete success they deserve for turning the first successful plowing engine we ever that has been built.

Yours truly, Mess & Goldsmith.

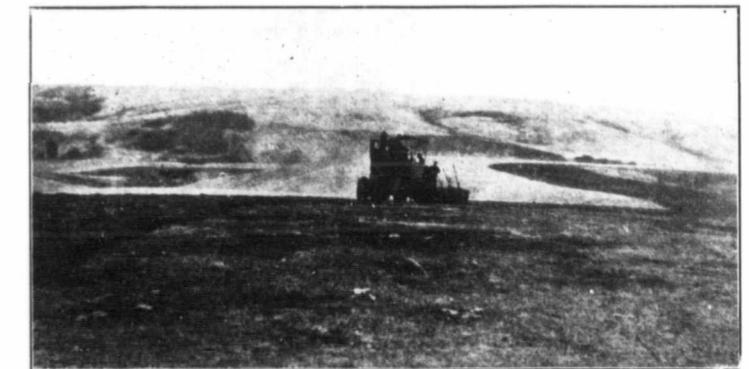
I have run American-Abell Engine No. 2124, 26 H. P. Special Plow engine for H. C. Gardiner & Son, of Delroy, Alberta, for five days. We made an average of 25 acres per day using about 2700 lbs. of coal per day. We pulled eight 14 inch plows 4 inches deep in dry prairie sod. We never made a single stop for any cause in the five days except to take coal and water. This is the smoothest running engine I ever saw and the easiest kept in repairs considering the load we were pulling; this engine is equipped with the new American-Abell balance valve and I run this engine locked up in the third notch which notch I put in myself.

(Sgd) Wm. R. Dixon,  
Sworn to before me this 1st day of June, 1910.

Wm. MacLaren,  
Commissioner etc.



32 horse power engine owned and operated by J. M. Johnson, Moose Jaw, Sask. "This is certainly the most complete plowing outfit on the market. Prospective purchasers should see your line before making a plow outfit".—Johnson.



26 horse power American-Abell Engine breaking up the famous West View Stock Ranch near Carbon, Alta., just rounding the curve on the banks of the beautiful Knee Creek. Owned and operated by the Hon. D. I. Pope & Sons. Easy to turn stock ranches into great wheat fields with the aid of an American-Abell special plow engine.



26 horse power American-Abell special plow engine doing a big stunt on the farm of McKinnon Bros., Napinka, Man. "We pull 15 plows with ease plenty of power and equipment and easy to operate".—McKinnon.

Scott, Sask., June 7th, 1910.  
American-Abell E. & T. Co. Ltd.,  
Regina, Sask.

Dear Sirs:—I have been somewhat slow in writing you in regard to our 32 horse power engine purchased from you this spring thinking I would give her a thorough trial before crowing over the fact that we have others to beat. To say that we are pleased and satisfied with her is putting it mildly because she will sure plow. We are hauling ten plows where we could just as well handle twelve. Thirty or thirty-five acres per day is a walk-away. We have just finished one section and will begin the next tomorrow.

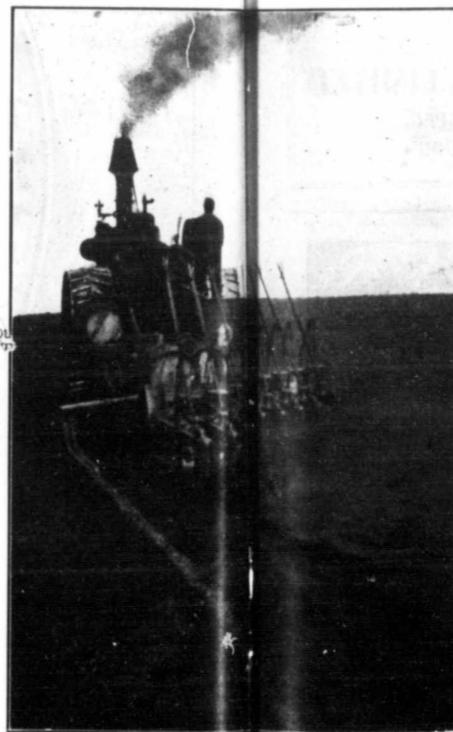
Steam plowing is no experiment if you have the power we have, with everything as handy, especially the gear pump, coal bunkers and water tanks which are on this engine.

We make two miles without stopping, then only to take coal and water which only takes a few minutes. The two syphons for unloading water make it easy for the water man.

You need not be afraid to put this engine in the field with them all.

I think she is rightly named "The Cock o' the North Line."

Yours respectfully,  
The Ann Arbor Saskatchewan Realty Co.  
Per (Sgd) C. B. Smith,  
Manager.



See Mickel's testimonial

American-Abell Separators and Plowing Engines are world beaters. See them during the Calgary, Winnipeg and Regina Fairs at our warehouses. We will not exhibit at the fair grounds.

The Advance Thresher Co., Battle Creek, Mich.

The Minneapolis Threshing Machine Co., Hopkins, Minn.

REGINA  
CALGARY  
EDMONTON

# American-Abell Engine and Thresher Co. Limited

TORONTO  
WINNIPEG



### Buttermilk Cheese—A New Farm Product.

Buttermilk is liked as a drink by most people because of its fine flavor. Cottage cheese from skim-milk is often made on the farm and finds a ready sale among town customers.

At the Wisconsin Agricultural Experiment Station it was found recently that a superior kind of cheese can be made from buttermilk, by a process much like that used for making cottage cheese from skim-milk. Buttermilk cheese looks like cottage cheese, but its flavor is much better than that of cottage cheese, just as buttermilk tastes better than sour skim-milk. Buttermilk cheese never becomes rubbery or hard to chew as cottage cheese sometimes does when heated too hot in making. It is not necessary to add cream to buttermilk cheese to improve its flavor, as is generally done with cottage cheese. Buttermilk cheese is easily spread on bread like butter and, when well salted, many people prefer it, especially when butter is worth thirty to forty cents a pound. On this account any one who makes buttermilk cheese can find a ready sale for it, in almost any locality.

Most farmers' wives who make butter know how important, in churning, it is to have the cream neither too hot nor too cold, but just right so that the butter will come after about half an hour's churning. On many farms this is so well understood that a thermometer is always used in churning, instead of guessing at the temperature of the cream, thus saving time and labor.

A thermometer should be used about cottage-cheese making, too, so as to have the skim-milk about one hundred degrees, where it will sour most quickly, and to avoid getting a dry, tough curd by heating too high after the milk is curdled. In buttermilk-cheese making it is even more important to use a thermometer. Neglecting to heat up the buttermilk properly will not spoil the flavor, but it may cause some of the cheese to run through the bag and be wasted, when it is put to drain. There is no need of buying an expensive thermometer for this work. Any accurate thermometer that is so made that it can be easily cleaned will do.

The cream should be churned quite sour, if you want to make the best flavored buttermilk

cheese. Collect the buttermilk from the churn in a tin pail or clean wash-boiler or any suitable vessel that can be heated on the stove. Do not use a galvanized pail for this purpose. Do not mix any water or skim-milk for the buttermilk.

As soon as convenient, set the buttermilk over the fire and stir it briskly, so as to heat it as quickly as possible to seventy-eight degrees. Keep the thermometer 1/2 lb in the liquid when reading the temperature. As soon as the temperature reaches seventy-eight degrees, remove the pail of buttermilk from the fire and put it where it can stand undisturbed for one and one-half or two hours, without cooling off very much. By that time the buttermilk will be fully curdled so that the clear green whey can be seen in the pail, with a large cake of floating curd.

If the cream was not very sour, the buttermilk may not be curdled so that the whey is clear, in two hours. Then the buttermilk should be left, without stirring several hours longer at this temperature. It will finally get sour enough so that the curd will separate from the whey as it should. It is better to ripen the cream well before churning.

Some farm butter-makers use an acid test, such as Farrington's Alkaline Tablets, to test the acidity of cream before churning. The same test can be applied to buttermilk. If the fresh buttermilk shows five-tenths of one per cent. acid or more, it will curdle properly in one and one-half hours at seventy-eight degrees. If the acidity of the buttermilk is only about four-tenths of one per cent., it can be curdled by heating to ninety degrees, instead of seventy-eight, or it can be left to stand at seventy-eight for several hours without stirring, as directed above, until it has ripened and curdled in a satisfactory manner. The buttermilk thus is finally changed into clear whey with a large cake of curd floating in it.

Set the vessel on the fire again as soon as convenient, stir the curd and whey gently and heat up to one hundred and thirty degrees, by the thermometer. Set the buttermilk off the fire where it will stay at about this temperature and leave it quiet for an hour to settle.

Have ready a cheese-cloth bag such as is used in draining cottage cheese. Do not stir up the curd and whey, but with a skim-

## The Magnet Cream Separator

Is entirely different in its construction and is better than any other cream separator.

**It is built MECHANICALLY CORRECT**  
**MECHANICALLY CORRECT** means putting the power on the machine by properly graded steps or gears. When you see a very large wheel turning a very small one, it is violation of mechanical rules and means wear, leakage and trouble, but is done to save the cost of the extra wheels or steps. The Canadians who originated the MAGNET were educated mechanics and could not be induced to apply the make shift, worm-gear drive, adopted by makers who preferred cheapness in construction to durability. Use has shown that the worm-gear drive soon wears, the bowl wobbles and then considerable butter fat goes into the skim milk at each separation. The square gear does not wear and the MAGNET skims as closely after twelve years use as the first day it skimmed.



THE SQUARE GEAR AND DOUBLE SUPPORTED BOWL DOES IT STEADY AS A ROCK

A cent postal card will give you a full demonstration of the MAGNET in your own dairy. No obligation to buy.

### THE PETRIE MFG. CO. LIMITED

VANCOUVER, CALGARY, WINNIPEG,  
 HAMILTON, MONTREAL, ST. JOHN

## WINDSOR BUTTER SALT

**Prize Butter**

—the kind that wins cash and medals at the fairs, and brings top prices in the market—is always made with

## Windsor Butter Salt

mer take off any floating curd and put it in the bag. Then tip the pail carefully and pour out as much clear whey as possible, without losing any of the curd. A thick layer of curd will be found at the bottom of the pail and this curd with the remaining whey is poured into the bag. If this is carefully done, after a little experience no curd need be wasted. After draining half a day or overnight, the curd is taken out of the bag and mixed with salt, using one ounce of salt to about five pounds of cheese. The cheese is then ready for sale. It should not be drained drier than necessary, as consumers like it rather moist, and more of it can be sold. From twelve to fifteen pounds of cheese can be made from one hundred pounds of buttermilk, and a steady demand can be found for it in almost any locality where it is put on sale.

If it is more convenient, the first heating to seventy-eight degrees can be done at noon when the stove is hot. The curdled buttermilk can then be left undisturbed till supper-time before heating it up to one-hundred and thirty degrees. After supper the scalded curd can be put to drain.

Where steam is available for heating, a large can or tub of buttermilk can be heated by means of a coil of half-inch or three-eighths-inch iron pipe connected by a piece of hose to the steam pipe. Such a coil, which can be made at home, is shown in the illustration.

One can often get buttermilk from the nearest creamery for ten or fifteen cents a hundred pounds and this can be made into buttermilk cheese worth seven to fifteen cents a pound.

The same general method of making buttermilk cheese can be used in creameries, where large quantities of buttermilk have heretofore been wasted. It can be shipped or sold in tubs to dealers, bakers or grocers, wherever cottage cheese is used. Creameries use a curd rack and cloth, instead of cheese-cloth bags, for draining the curd in large quantities. In a creamery the whey is drawn with a siphon, since the vat cannot be tipped to pour it out. The sale of cheese will often pay running expenses.

### Better Sheep for Saskatchewan.

The announcement some weeks ago regarding the proposed importation of breeding sheep has induced several persons interested in sheep breeding to write to the secretary of the Saskatchewan Sheep Breeders' Association, F. Hedley Auld, Regina, telling what they require.

The movement has aroused considerable interest in the question of sheep breeding. Some are of the opinion that in the sales of sheep that it is proposed to hold only grade ewes should be offered. Others would like to see only purebreds put in the sale. Certainly purebred stock is preferable if the farmers are prepared to pay the price, but as

grade ewes can be bought on the ranches in Southwestern Saskatchewan at much less than the prices of purebreds it would seem to be a better plan to begin with grades, and afterwards improve the flock by the use of purebred rams of the breeds most suitable to the West.

It is understood that the owners of purebred sheep are being communicated with in order to ascertain what stock they have for sale. This information will be used in preparing a directory of breeders of purebred sheep in Saskatchewan, and will be useful to any person wishing to buy sheep privately. Any sheep breeder in Saskatchewan who fails to supply the desired information would seem to be indifferent to his own interests. If any have been overlooked in sending out the circular of inquiry a copy may be obtained by Addressing F. Hedley Auld, Secretary, Saskatchewan Sheep Breeders' Association, Regina, Sask.

### How Often to Milk.

The frequency of milking is, of course, a matter that has to be adjusted to convenience of labor, and so forth, and on the farm and in the commercial dairy the twice-a-day schedule is probably the only practicable one. In the case of cows on record tests, however, and also in the case of other fine animals that are heavy producers, more milkings a day are desirable. The oftener a cow is milked, other things being equal, not only a trifle more milk will she give, but her average butter-fat test will be greater. I believe it pays to milk a cow every time she will give from ten to fifteen pounds, whether this be three or four times daily.

Whenever she is milked, it should be done thoroughly. Few milkers get all that is possible out of a cow. It should be borne in mind that the last milk is the richest and every drop of this last milk that can be got increases the test of that mess of milk. Not only this, but the stimulation given to the udder glands in obtaining this milk is helpful to them.

This was the secret that greatly aided the Jersey cows at the St. Louis fair. At each milking, after the milk had been obtained, the milkers manipulated or rubbed the udders of the cows from half a minute to a minute, and then milked out that milk which had accumulated in the udder and teats during the process. This does not mean that a cow should be stripped, but that the entire udder should be massaged, so to speak. The glands are stimulated to further activity, and not only will more milk and richer milk be obtained each time, but the same will be the result each following time. Thus persistency is added to the work of the cow, and this means high records for the year; for the cow with a big record is the one that continues her performance throughout the year instead of slacking up her pace.



## Ask the Creamery Man He Knows

The man who doesn't know the difference between mushrooms and toadstools takes a grave chance when he goes after mushrooms without the protection of an expert's advice, and the man who has had no opportunity to learn the difference between a real cream separator and a poor imitation of it may with advantage profit by the experience of those who have paid for it. Ninety-eight per cent. of the world's creameries are operated with De Laval Separators and all dairymen of international repute endorse them.

Get the De Laval free catalog or better still, apply to the Company or its nearest agent for a free trial of the New Improved De Laval Separator and learn the reasons.

## The De Laval Separator Co.

Montreal WINNIPEG Vancouver

## The "TAGGART" Portable Grain Elevator

### Construction

The "Taggart" Portable Grain Elevator is built any height, standard 18-ft. leg.

Grain is elevated by cups and conveyor by worm screw.

Mounted on skids but can be operated on a wagon or truck.

Hopper swings back out of the way for wagon.

Leg swings down when moving and rests on frame.

Spout can be swung in any direction, or up or down.

### Will save it's 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.

Our Prices are Right

For loading cars and filling granaries—it can be operated by horse power or gasoline engine.



This cut shows Elevator mounted on truck, with leg up and hopper ready to receive grain. Write for prices and terms. Agents wanted.

Our Line Includes Case Plows and Engine Gangs, New Superior Fanning Mills, Owens' Smut Cleaners, Steel Wheel Trucks, Caboose Trucks, Rotary Plow Harrows, Harrow Carts, Sewing Machines, Disc Sharpners, etc.

### The Harmer Implement Company

WINNIPEG

**Manure Will Still be Needed**

A report from Fargo has it that Professor H. L. Bolley, famous for the discovery of flax wilt, has now discovered that wheat has a wilt of its own. The report adds:

"The worst phase of the investigation is that, while flax wilt and flax-sick soil affect only flax, the wheat wilt affects not only wheat, but barley and oats as well. This feature makes the disease a grave affair. It causes wide-spread damage and materially interferes with the old system of crop rotation for eradication.

"Professor Bolley insists that the infected grain, even when seeded on uninfected land, will inoculate the new soil, and good grain, when seeded on infected land, results in a damaged crop so there is a double danger.

"He urges proper treatment of the seed with formaldehyde for the grain and rotation of crops, especially a cultivated crop, with cultivation and aeration of the soil as the only way to free the state from the danger that threatens.

"His investigations are attracting attention all over the Northwest, and he is now preparing photographs of his tests for a bulletin which will be issued by the station.

"Should his present theories work out, they may contradict to a great degree the idea of the exhaustion of soil fertility, and may also be a blow to the belief that farm fertilizers are of great value."

We are sorry that any reporter could be so short sighted as to write, and that any paper of general circulation so careless as to publish the last paragraph of the above. With properly enriched and rotated soils, England's average yields are about double ours, and does the fact that flax and wheat may have a deadly wilt to contend with and that this may partly explain many a light yield, have anything to do with the greatly increased yields of corn, potatoes, clover, and all other crops that are sown on rightly handled richly fertilized soil? At a time when all too many through neglect or ignorance are failing to haul out even the manure on the farm, or to properly rotate, to put out such misleading stuff is almost inexcusable.

**Some Important Points to Consider in Building a Barn.**

**Location of Barn.** The proper location of the barn is of utmost importance. When a barn has once been located amidst certain surroundings, it is not easy to make a change. Improper location may impose handicaps on the stock as well as the people who are to take care of the stock during the life of the barn; whereas if the location had been given a careful study previous to building, a better spot might have been selected for the barn.

It is important to locate the barn on a well-drained piece of ground. Occasionally it is im-

possible for the builder to locate it on high ground that will drain well and afford dry yards. Clean, dry yards surrounding the barn are quite as important as a convenient inside clean and dry barn, so the first consideration in locating a barn should be—selecting a dry place. If the ground is naturally low, there should be an outlet so that the ground can be underdrained.

The location of the barn in relation to the dwelling house should also be considered. The houses should be located on higher ground than the barn. If the barn is located on an elevation separate from that of the house, and the drainage between this does not make a great deal of difference. If the barn is located higher than the house on the same slope, the seepage from the barn will constantly drain towards the house instead of away from it. It is also a good plan to consider locating the barn in a direction from the house from which the wind seldom blows. However, when the manure is clean, and other barn surroundings kept sanitary, there is little danger of the wind blowing bad however the barn can be located, odors towards the house. If, on the leeward side of the house, as well as not, it is well to consider this point.

The barn should also be located so as to have easy access to the pasture. Not long ago the writer visited a place which had a barn on one side of the road and a pasture on the other. It was necessary to drive the cows across the road every day in order to get them to the pasture. The barn could as well as not—so far as the writer could see—have been located on the same side of the road as the pasture. This would have added many conveniences not only to the men but also to the cows. The cows could have had water, shelter and yard space at any desired time, and much labor would have been avoided.

When conditions permit, the barn should be located so as to get a maximum amount of sunlight into the barn. This is best accomplished by running the length of the barn north and south. The sun will then shine from the east into the barn all the forenoon, and during the afternoon from the west. Sunlight is the one great destroyer of germs, the latter causing foulness as well as disease. Sunlight costs nothing except a little previous planning.

Another point that should be considered is to locate the barn so as to have the yards on the south side of the barn and southeast. This is quite important especially in our climate, and perhaps should be considered of greater importance than running the barn north and south in order to get direct sunlight. An ell-shaped barn will, however, permit of both. It is best to have the main part running north and south and then a shed extending towards the east from the north end of the main barn. This will

**Regina, Saskatchewan's**  
**Big**  
**PROVINCIAL EXHIBITION**  
**REGINA, SASKATCHEWAN**

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**August 2nd, 3rd, 4th and 5th, 1910**

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**Good Prizes, Splendid Attractions**  
**and Attractive Purses**

**REMEMBER THE DATES**  
**August 2nd, 3rd, 4th and 5th.**

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**Your Days Full of**  
**Pleasure and Profit**





**Prof. West Dodd's**  
**Wonderful Invention—**

**D. & S. Woven Copper Cable Lightning Rod and System of Installation** affords the only safe and reliable protection to life and property against the terrible ravages of lightning. This positive, exclusive endorsement is made by the Mutual Insurance Companies of the United States and Canada (over 200 leading fire insurance companies).

**INSTALL THE D. & S. SYSTEM OF PROTECTION**

*Many a door is padlocked after the horse is stolen—look yours now.*

Endorsements of leading fire insurance companies (list of them in catalogue—send for it). There are allowances of 10 to 25% off insurance bills when your buildings are rodded with D. & S. Woven Copper Cable Lightning Rods. D. & S. Rods pay for itself and then saves you money off your insurance bills. More D. & S. Rods sold than any other three makes combined. Insist on trademark D. & S. It is your protection. Send for free book, "The Laws and Nature of Lightning." **Make Yourself, Your Family, Your Property Safe.**

**DODD & STRUTHERS, 451 Sixth Avenue, Des Moines, Iowa**

\$\$\$\$\$\$
Thousands of Dollars
\$\$\$\$\$\$

Last year we distributed upwards of TWO HUNDRED THOUSAND DOLLARS among our patrons for CREAM.

We are prepared to double that amount this year. How much of this are YOU going to get?

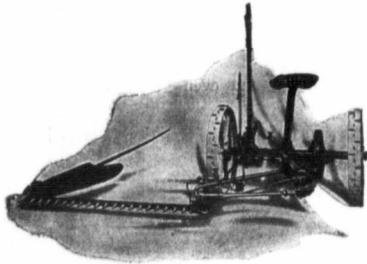
Have you any CREAM, EGGS or BUTTER to sell?

Write us at once and we will make you a proposition. Do it to-day.

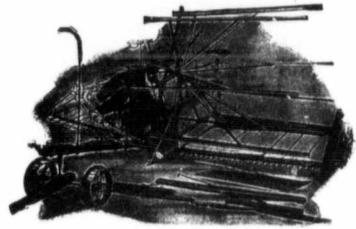
Address  
**The Brandon Creamery & Supply Co., Ltd.**  
 Box 2310 Brandon, Manitoba.

## DOES A GOOD BINDER INTEREST YOU?

Read a few facts about the NOXON No. 9a  
 A simple efficient knoter that will tie all day every day  
 An elevator that will elevate the heaviest crops without choking  
 A reel of many adjustments for crops in all conditions  
 A light but rigid main frame fitted with roller bearings  
 A whole binder that point for point cannot be beaten



The NOXON No. 3 MOWER is another interesting machine  
 IT will interest you. Look it over  
 A one piece steel pitman that gives no trouble  
 A perfectly aligned cutter bar that cuts where others fail  
 An automatic attachment that throws the bar out of gear when folded  
 Every machine is thoroughly run off and tested before leaving  
 the factory. Catalogues sent on request



**THE NOXON CO., LTD., INGERSOLL, ONT., CANADA**

give a south and southeast yard in which the cows and young stock may roam during the day. It would have to be very cold and stormy when cows in a well-protected and sheltered southeast yard could not be reasonably neglected more in barn buildings.

**Plenty of Windows is Desirable:**—Some may say or think that in this country where we have so many cold days, it is not advisable to put in too many windows, as the cold is more likely to go through glass than through the barn walls. Naturally the conclusion would be that a well-lighted barn is a cold barn. However, considering the effect of light on the healthfulness of cows, it is advisable to put in at least three square feet of light for each cow. In the east where dairy herd barns are very numerous, they usually put in four square feet of light for each cow. Darkness causes growth of germs, foulness in the stable, and hides dirt, and fosters the development of disease-producing germs. The stock also shows up better in a clean, well lighted barn. A person owning good cows takes pride in having a well lighted stable in which to show them to their best advantage.

Proper ventilation is perhaps neglected more in barn building than any other one point. A close, crowded and ill-smelling barn is undesirable for stock of any kind. A dairy cow, and in fact any animal, must have plenty of fresh air to do her best as a producer. Fresh air is as much a feed as is the grain and roughage she receives, and it can be had for nothing. It is one essential life-giving element that no living creature can be without.

There are two points in this connection that must be considered: first the amount of fresh air admitted to the barn, and its distribution; secondly, the amount of barn space allowed for

each cow. It is possible to crowd a large number of cows into a relatively small space and admit sufficient fresh air to them, but this would be an improper application of ventilation. The air in the barn would be cold and there would be a draught. To provide a cow with proper ventilation, one must first allow a certain amount of barn space for each cow. One should allow a space of between 400 and 1000 cubic feet for each matured cow. A modern barn should have no less than 500 cubic feet of space to each cow. This latter would be a space of about the following dimensions: 9 feet high, 4 feet wide, and 14 feet long for each cow.

If this amount of space is allowed for each matured cow, it can easily be ventilated without causing draught in the barn.

An adjustable or automatic ventilation may be installed. The King system of ventilation is perhaps the best automatic system known of. It consists of admitting the air into the barn near the ceiling. By this system the fresh air comes in near the ceiling and is partially warmed before it strikes the cow. The impure air, which is the carbonic gas exhaled from the lungs of the cows, is heavier than the atmospheric gas, and therefore sinks to the bottom near the floor, from which place it is removed by means of ducts leading to the top of the barn. The amount of inlet space is about one-fifth of a square foot for each cow. The inlet and outlet flues should be air-tight. The ceiling over the cows should also be reasonably air-tight in order for this system to work well.

The best adjustable ventilating system is perhaps the opening of windows and by the use of muslin window coverings. The windows should never be opened from the bottom as this is likely to cause a direct draught on the cows. A good way of admitting

air through the windows is to have hinges on the lower half of the sash at the bottom. Then have a transom lift attached to the top of the lower sash and have the window open in. When the fresh air strikes the open window the current passes off diagonally towards the ceiling of the barn, and virtually would admit the fresh air in a similar place as does the King system of ventilation.

### Hoofs and Horns

When the calf is about a month old separator jelly can be given with flaxseed jelly added. Begin with about two tablespoonfuls and increase to a cupful.

Many farmers neglect their swine in the hurry of summer work, and the result is the hogs become stunted. In the fall they have not made adequate growth and, besides, stunted swine do not finish well.

While it is true that some horses that sleep in a standing position continue to work for many years, it is equally true that they would wear much better if they rested naturally.

Don't let the back step be unsightly with swill pails, cat dishes and hen food, thus strewing food and attracting flies and disease. Cart away all the old cans, broken dishes, old coats and boots, from back places and yards.

It pays to keep very close watch of the sheep and lambs during these days.

The flock should be turned to pasture early, while there is a short bite, but leave them out only a short time at first.

There is little chance that the country will be overstocked with hogs this year. There has been

too much killing of the sow that produced the golden shoats for this to happen soon.

The sow that will raise two litters of pigs in a year is worth many times the price of pork.

Some folks can easily hatch chicks, but fail to raise very many of them. Our success depends on our ability to rear the little ones, after hatching, into large good ones, without losing many.

Hogs are waste savers. A farm without hogs has many leaks.

## Farmers Take Right Stand

Canadian farmers rightly insist that a cream separator which contains neither disks nor other contraptions, and yet produces twice the skimming force of common, complicated machines, must be most modern. They believe such a separator has made complicated machines out-of-date. This is common sense and explains why Canadian farmers are buying simply.

### Sharples Dairy Tubular Cream Separators

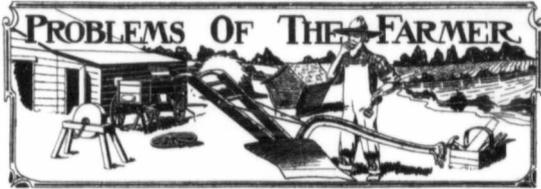
Dairy Tubular Bowl. Made right. No disks needed. In preference to disk filled or other common, complicated machines. The illustration shows all there is to the Sharples Dairy Tubular bowl. It contains neither



disks nor other contraptions, produces twice the skimming force, skims faster, skims twice as clean, wears a lifetime and is several times easier to clean than common separators. The World's Best. The manufacture of Tubulars is one of Canada's leading industries. Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines

30 yrs

THE SHARPLES SEPARATOR CO.  
 TORONTO, ONT. WINDYBEE, MAN.



**Alberta.**

BY G. H. HUTTON.

The cultivation of the land during the summer which is known as the summerfallow has its objectionable features as well as its points of merit. The former may be magnified by careless work so that the merits of the practise reach the minimum. The benefits of the summerfallow are that it:

- (a) Tends to clean the land.
- (b) Brings about a better physical condition of the soil.
- (c) Renders plant food readily available for the use of the crop.

The objection to summerfallow as usually practised in the west is that it adds nothing to the sum total of plant food in the soil. It makes it possible the more quickly to exhaust the plant food stored in the soil by liberating that food so that larger yields result. Where the application of barn yard manure is included in the summerfallow program then the chief defect of the system, which uses the summerfallow only to liberate plant food previously stored, is removed. It may be considered advisable by some to apply barnyard manure as a top dressing for meadows; but the point made is that we should make as large a return to the soil as possible, at some point in the rotation, of the constituents of plant food. At present summerfallow is too often used merely to increase yields thus exhausting the soil fertility without the slightest effort to maintain it.

There are many so called summerfallows in evidence each year all over the country that are unworthy the name. A beginning is made by ploughing though often not done before the weeds are advanced so far that the seed first produced will grow. Forgetting to "follow up," the ploughed land is left as ploughed for days and even weeks before harrowing. Such a summerfallow is far more injurious than beneficial. They seed the land with weeds and the injudicious cultivation given leaves the land with a lower moisture content than if it had been in crop.

This spring which has been unusually dry has given emphasis to the value of good cultivation and the men whose farm practises are good does not find his reward postponed. Those who ploughed their summerfallow in May or June, who followed at once—the very day ploughed with a harrow or packer and who followed up throughout the season with a stroke of the drag harrow every week or ten days or even after each rain have found plenty of moisture to

insure prompt and uniform germination of the seed even after the dry fall of 1909 and the equally dry spring of 1910. The effectiveness of the summerfallow as a cleaning agent is dependent to some extent at least upon shallow cultivation late in the season. The objection to deep, late cultivation is that weed seeds are brought to the surface which have not been within growing distance previously. These weed seeds are not likely to germinate late in the fall on account of the lack of moisture, but will be ready near the surface to avail themselves of the opportunity for growth the following spring. The summerfallow should embrace the following points:

1. All the barn-yard manure should be applied before ploughing; this is if it is thought advisable to apply barn-yard manure to the summerfallow.
2. Plough, but once, a good fair depth before the weeds have a chance to produce seed.
3. Follow the plough with a packer or drag harrow the day it is ploughed.
4. Watchful cultivation with a drag harrow every week or ten days thereafter, the object being to conserve moisture by providing a surface mulch after every rain and to kill the weeds while small.
5. Shallow cultivation during the latter part of the season.

**Saskatchewan.**

BY A. FRANK MANTLE.

A problem that has arisen on many farms in Saskatchewan and which will arise on very many more as years go by, is how best to plant out trees for the protection and adornment of the farmstead, and how best to care for them after they are planted. In a rather dry country such as western Canada, and one moreover that is blessed with somewhat severe climatic conditions, the problem of growing trees is an important one. The very fact that the country is largely bare of trees seems to indicate that there are forces of soil, climate, or other conditions that are antagonistic to the habits of trees. But on the other hand the fact that considerable areas in the southern portion of the three prairie provinces are covered with a growth of poplar and even of spruce, while the fact that the northern portion comprises almost one vast forest, is proof positive that trees can be induced to grow and thrive if we can but find out the laws and conditions that govern their growth.

At the outset it may be stated without fear of successful con-

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tradition that there is no part of the Canadian west as at present known and farmed in which trees cannot be induced to grow provided that there is sufficient soil to grow them in. The first trees to be grown should be some of the varieties suited to the purposes of a shelter belt. These are: Manitoba maple, cottonwood, ash, elm, Russian willows, and Russian poplar. The first and the last kinds are not hardy in all parts of the country. The Russian poplar is apt to become diseased in parts of eastern Saskatchewan, while the Manitoba maple is apt to kill back to a great extent in parts of southwestern Saskatchewan. In growing trees for a shelter belt there are several things to remember. Experience has taught the early tree growers in this and similar countries a few things and the wise man who intends to plant out some trees will do well to benefit by the experience of these pioneers.

Much of the success of a plantation depends upon the preparation that has been made for the reception of the trees. This should start a year before the planting is to be done and should take the form of a well-worked summerfallow. This will kill the weeds and store up moisture for the use of the trees. Another point to remember is to get young trees of hardy varieties from reputable growers whose nurseries are in this coun-

try. Very seldom do eastern or southern grown trees do well in this country. Set the plantation well back from the buildings so that there will always be room for more buildings and yards within the shelter and so that the snow will not pile into the yard and around the buildings. Plant the trees close together—four feet apart in the row and in rows four feet apart—so that they will afford each other protection and shelter and so that the sun and wind cannot get in among them and encourage the grass to grow. Also the trees grow faster and straighter when planted closely, and sooner reach the stage when cultivation and attention are no longer needed. Always remember that grass and trees will not grow together in this country, especially while the trees are young. Being nearer the surface and more vigorous, the grass will get the moisture and the trees will dwindle and die for lack of it. Remember, too, that a good shelter belt is essential to the growing of other and more delicate kinds of trees and plants. Given this, much can be done in the way of growing evergreens and fruit trees; without protection practically nothing can be done.

A problem that is bound to become more and more acute as time passes is how best to deal with the herd law question.

While a country is young and grain growing is far and away

the paramount industry, the simplest thing to do with the cattle appears to be to order them fenced in pastures or herded. That leaves the grain-grower free to cultivate his fields without being put to the expense of fencing them. While the number of cattle kept in a district is small, little hardship is worked by this solution of the question. But there are many districts in which a good deal of the land is not suited to grain growing and in which a farmer must keep some stock or starve. And there are other districts where the day of exclusive grain-growing is rapidly passing, and in which the early settlers are realizing that, for a variety of reasons they must keep stock or leave the farm. Are these districts likely for long to stand for a condition of affairs which is favorable to one element of the community but radically unfair to another and perhaps larger element?

Fencing is the logical and proper solution of the herd law problem. Let the grain fields at least be fenced if a man is not willing to or able to fence his whole farm, and let the cattle run at large the year round. Only in this way can a district be brought to its fullest state of development in this country. If this was a humid country in which grass grew rapidly the matter would be different. Then the cattle keeper could rightly

be expected to keep his cattle within the limits of a pasture field. But in this great country of wide road allowances, vacant lands, and scant rainfall, we believe that nothing less than all the area that is not actually used for the growing of crops should be regarded as the natural pasture field for stock. The keeper of stock is not an enemy of the country; he is its best friend. He is not trying to hold back the wheels of progress; he is trying to assist them. Why, then, hamper him in his work by expecting him to confine his cattle to his own land? To do so is to practically forbid him to keep more than a few head, for that is as many as he can hope to pasture in the early fall. Why not assist him, and aid the development of the community, by taking the common-sense step that will render almost every acre of the district productive, instead of, by keeping in force an outworn ordinance, confining production to the cultivated area and to as much of the wild land as farmers care to fence in, leaving all the road allowances, school lands (where unfarmed), and other vacant lands unproductive but for the hay that may be cut on them or the cattle that may be herded on them?

Of course, it is not contended that the keeper of cattle should be given the run of the country as a matter of right, although it

# THE FUNNY WORLD

The matter on this page lays no claim whatever to originality. The one idea is to amuse, to provoke a smile. If it fulfills this mission we shall feel amply repaid for the time and labor expended in its preparation. Have you read or heard something that has made you laugh? Has it chased dull care away for a time? Then pass it along for publication in our Funny World. Such contributions will be greatly appreciated.

An Irish school inspector was examining a class in geography. He had propounded a question regarding longitude and received a correct answer from the lad undergoing the ordeal.

"And now," he said, "what is latitude?"

After a brief silence a bright youngster with a merry twinkle in his eye, said:

"Please, sir, we have no latitude in Ireland. Father says the British government won't allow us any."

"That play isn't true to life."

"Why not?"

"The heroine is a Chicago woman, and although three months are supposed to elapse between the first and second acts, she has the same husband in both acts."

"Papa," said five-year-old Johnny, "please give me a dime to buy a toy monkey."

"You don't need a toy monkey," answered his father. "You are a monkey yourself."

"Well," continued the little fellow, "then give me a dime to buy peanuts for the monkey."

Wendell Phillips was, on one occasion, lecturing in Ohio, and, while on a railroad journey going to keep one of his appointments, he met in the car a crowd of clergy, returning from some sort of convention. One of the ministers felt called upon to approach Mr. Phillips, and asked him: "Are you Mr. Phillips?" "I am, sir." "Are you trying to free the niggers?" "Yes, sir; I am an abolitionist." "Well, why do you preach your doctrine up here? Why don't you go over into Kentucky?" "Excuse me, sir, are you a preacher?" "I am, sir." "Are you trying to save souls from hell?" "Yes, sir; that's my business." "Well, why don't you go there?" The assalant hurried into the smoker amid a roar of unsanctified laughter.

Robbie ran into the sewing-room and cried: "Oh, mamma! There's a man in the nursery kissing Fraulein."

Mamma dropped her sewing and rushed for the stairway.

"April fool!" said Robbie, gleefully. "It's only papa."

There was a young lady named Banker, Who slept while the ship was at anchor.

She awoke with dismay

When she heard the mate say:

"Lift up the top sheet and spanker."

When he came back from fair Paree, He brought a gift for sweet Marie—

A pair of gloves.

The summer passed, and by the shore, Amid the ocean's tuneful roar,

They told their loves.

They wed and they were happy, quite; They sang their vows both day and night,

Like katydids.

And now she has returned his gift— I hear them squalling down the lift—

A pair of kids!

The American opinion of coffee as understood in the English home is not high, and how the coffee of the English lodging-houses is esteemed may be understood from the following traveler's tale: It was the first morning in London "apartments", and his landlady came up with the breakfast. As she set down his coffee cup she opened a slight conversation: "It looks like rain," she said. "It does," agreed the American, "but the odor has a faint suggestion of coffee."

Years ago, when there was only wooden sidewalks in the city of Winnipeg, Canada, holes were bored in the planks to let the water run through. In the morning twilight a policeman found a man with the tip of his wooden leg in one of these holes and hurriedly walking around it.

"What are ye doin' here?" asked the policeman.

"G'way, offsher," said the man. "Got to get home before ol' lady wakes up."

"Am I the first girl you ever kissed?" asked the fair young thing from the refuge of his shoulder.

"Well," he replied, "after the way my arm just naturally slipped around your waist as you unconsciously leaned toward me, and my fingers tilted your chin as you unconsciously lifted your head, and I bent forward where your lips were waiting, and didn't get the kiss either on your nose or your chin, but where it belonged—after all that, and with the knowledge of the subject which you have displayed, I shall say nothing, except that I leave the question to your own judgment."

"The bravest are the tenderest, you know," said the landlady.

"Oh, what a coward this old rooster must have been!" sighed the boarder at the foot of the table, as he tried to bite a chunk out of the wing with which he had been favored.

The manager of an asbestos mill conceived a novel idea for New York's announcements. He had them printed on thin asbestos and enclosed in envelopes of the same material. As he was uncertain of the correct addresses of some of the stockholders, he ordered his stenographer to write on each envelope, "Please forward."

The idea was clever, but one may appreciate the feelings of the widow of one stockholder when she received an asbestos envelope addressed to her late husband, with the inscription, "Please forward," beneath the address.

A buxom colored sister once approached her pastor and said: "Brudder Johnsing, me an' yo' ole man don't agree at all. We is all the time quarrelin'. Will you oblige me wid some advice."

The pastor replied: "Sister Jackson, has yo' tried heapin' coals of fire on his head?"

She then exclaimed: "No, Brudder Johnsing, but I'se tried hot water."

Mr. Penn: "They say the streets in Boston are frightfully crooked?"

Mr. Hub: "They are. Why, do you know, when I first went there I could hardly find my way around."

"That must be embarrassing!"

"It is. The first week I was there I wanted to get rid of an old cat we had, and my wife got me to take it to the river a mile away."

"And you lost the cat all right?"

"Last nothing! I never would have found my way home if I hadn't followed the cat!"

A young lady who taught a class of small boys in the Sunday-school desired to impress on them the meaning of returning thanks before a meal. Turning to one of the class, whose father was a deacon in the church, she asked him:

"William, what is the first thing your father says when he sits down to the table?"

"He says, 'Go slow with the butter, kids; it's forty cents a pound,'" replied the youngster.

A Canadian lawyer tells this story:

A bailiff went out to levy on the contents of a house. The inventory began in the attic and ended in the cellar. When the dining-room was reached, the tally of furniture ran thus:

"One dining-room table, oak

"One set chairs, (6), oak

"One sideboard, oak

"Two bottles whiskey, full"

Then the word "full" was stricken out and replaced by "empty," and the inventory went on in a hand that straggled and lurches diagonally across the page until it closed with:

"One revolving doormat."

"Here's a nickel," said a thrifty housewife to a tramp at her door. "Now, what are you going to do with it?"

"Well, mum," replied the hungry man, "if I buy a touring car, I sha'n't have enough left to pay my chauffeur; if I purchase a steam yacht, there won't be enough left to defray the cost of manning her; so I guess, mum, I'll get a schooner and handle it myself."

After spending an evening with convivial friends, the head of the family entered the house as quietly as he could, and settled himself as if perusing a massive, leather-bound volume. Presently his wife entered the room, as he knew she would, and asked what he was doing.

"Oh," he replied, "I didn't feel like turning in when I first came home, and I've been reading some favorite passages from this sterling old work."

"Well," said his wife, "it's getting late now. Shut up the valise and come to bed."

### Auto Climbs Mount Helena.

Montana Daily Record, Helena, Mont., June 2: To the top of Mount Helena in an auto is the achievement yesterday of E. S. Reynolds, who drove the "Maytag" to the crest of the big hill west of Helena. The car is owned by General I. C. Speers, and it has the distinction of not only being the only automobile to reach the summit of Mount Helena, but is also the only vehicle of any kind ever on the crest of the hill.

The ascent yesterday was first attempted on the footpath which winds around the hill, but this was too narrow to accommodate the machine. Under the direction of William Hays, it was taken up a gulch leading from West Main street, and despite the fact that grades of forty-five, fifty and even sixty per cent. were encountered the machine wended its way until it reached a point very near the summer house on the uppermost peak of the hill.

At the tip H. B. Ebey, of the Automatic Telephone company, took four photos of the machine and the party, which included the driver, E. S. Reynolds, General Speers, William Hay, Edward J. Munson, a local telegraph operator, and Miss M. N. Fairgrieve of Helena.

### Party Signs Certificate.

Later Mr. Speers, who is the general agent of the "Maytag" machine, secured a certificate to the effect that the machine had gone to the top of the mountain on its own power. The certificate is as follows:

"Top of Mount Helena, 4:20 p. m., Helena, June 1, 1910.—We, the undersigned, saw the 'Maytag' auto driven by E. S. Reynolds and accompanied by I. C. Speers, agent, of Minneapolis, and William Hay, city fireman of Helena, on the tiptop of Mount Helena, overlooking the city of Helena and Prickly Pear valley and the Broadwater hotel. We also were photographed by H. B. Ebey of the Independent Telephone company on the top.

"This auto came all the way entirely on its own power and to our knowledge is the first vehicle of any kind ever to ascend this peak."

The certificate is signed by G. Benedict, caretaker of the Mount Helena forest reserve; H. B. Munson, W. N. Fairgrieve, E. S. Reynolds and I. C. Speers.

### The Best Use of Kitchen Refuse.

The problem of utilizing all waste from kitchen, table, etc., has been satisfactorily solved by me without the aid of the garbage man. I look upon every bone, parings from potatoes, apples, and all vegetables and fruits, as too precious to be carted off by him.

Each year after my planting is done, I start a refuse pile, having used up the accumulation of the previous year at this time. The spot selected for my refuse heap is quite near my garden and about a hundred feet from the house. I first sprinkle some air-



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**T**HE Annual Exposition of the Wonderland of the World; with its instructive competitions, its marvels on exhibit, its fascinating attractions and its progression of events; its premiums, its prizes. The Glittering Pageant of a Bounding New Nation. \* \* \* \*

*Swell the Enthusiastic Tramp of its Two Hundred Thousand Throng. \* Excursions from Everywhere*

**WINNIPEG INDUSTRIAL EXHIBITION**  
**JULY 13-23 1910**

slacked lime on the spot—after which all scraps and parings of every kind are thrown there—being covered each time with a shovelful or two of earth. All dead leaves and grass raked from the lawn finds its way to this heap. I sprinkle often during the hot weather with air-slacked lime, which aids decomposition. On wash days this heap is treated to a couple of pailfuls of good strong soap suds, thus enriching it still more. The scrapings from the chicken coop or a wheelbarrow of manure from the stable is a grand addition, as is also some leaf mold.

This heap is the better for being tossed over occasionally during the summer, and when spring comes around again is a delight to the gardener. Bones and old shoes burned up and the ashes thrown on this heap will add greatly to its fertilizing qualities.

If kept sprinkled with lime and covered with soil there need not be any disagreeable odor arising therefrom. I consider my compost heap equal to one load of manure and therefore save at least two dollars.

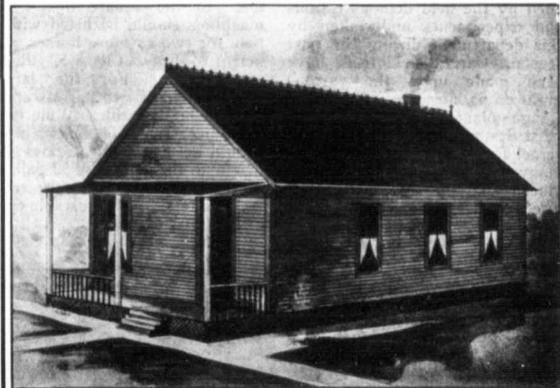
### What He Was.

Waterbury, Connecticut, was the home of an extremely musical family, according to Harper's Weekly, nearly every member of which played on some kind of an instrument.

A Bostonian, who was visiting the house of the Waterbury man, referred to this fact, remarking that it must be a source of great pleasure to the family, but to this observation the father made no reply.

"Really," continued the Bostonian, "it is remarkable. Your young son is a cornetist, both

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WINNIPEG

your daughters are pianists, your wife is a violinist, and, I understand, the others are also musicians. Now, what are you, the father of such a musical combination?"

"I," replied the old man, sarcastically, "I am a pessimist."

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We have hundreds of good positions now open, paying from \$100 to \$500 a month and all expenses. No former experience required to get one of them. If you want to earn from two to ten times as much as you do at present and all your expenses besides, write today for our Free Book, "A Knight of the Grip" and testimonials from thousands of men and women whom we have placed in good positions. Address (Nearest Office) Dept. 308, National Salesmen's Training Association, Chicago, New York, Kansas City, San Francisco, Minneapolis Atlanta.

# THE BIG DUTCHMAN ENGINE GANG

Write for Circulars to

## Canadian Moline Plow Co. Winnipeg

### The Use of Chemical Sprays.

The earlier experiments conducted by the botanical department of North Dakota Experiment Station looking toward the eradication of weeds in cereal grain fields by means of chemical sprays attracted world wide interest. Great interest was awakened by the field demonstrations and experiments undertaken by this department during the past season. Careful field trials have been made upon the various grain crops, meadow grasses and forage plants and against the most destructive of weeds in the cereal fields with the result that many persons have been convinced that in this method of weed eradication the farmer will have every efficient help. In general, it may be taken for granted that the increase in crop, straw and grain, because of treatment, will be in close approximation to the weight of weeds produced on unsprayed areas. In the weedier regions of the Red River Valley and in similar areas, this increased yield from field spraying far exceeds the cost of the work. It has also the merit of preventing the introduction of more weed seeds into the grain and soil to cause trouble in future crops.

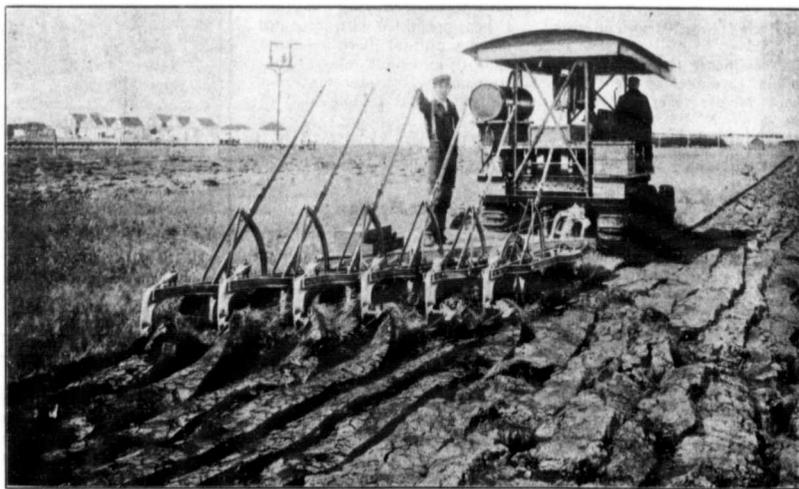
**Types of Machines to be Use:**—In buying a field sprayer the purchaser should have in mind the amount of work he has in view, and whether he desires to use it for other purposes than weed spraying, the following suggestions will perhaps aid. Produce as simple and as sturdy or rigid construction as possible. The solution corrodes all iron and steel parts, therefore all parts which come in contact with the solution should be of wood, rubber or brass construc-

tion. It is absolutely essential that the solution should be thrown in a fine, forceful spray, at the rate of one to one and one-half barrels of liquid per acre, therefore the pump capacity of the machine should be large. There should be a gauge to show the pump pressure. The pressure should not fall below 100 lbs. to the square inch. All machines should be fitted with a pole for two or more horses, and efficient to throw at least 52 gallons of solution. For the larger farms, carts of two barrel capacity will be desirable. Wide tires are a necessity. The spray beam should be fitted with nozzles sufficient to throw at least 52 gallons of solution per acre as the team walks along. An adjustable type of nozzle is desirable.

In the case of centrifugal machines they would be adjusted to throw a like amount of solution and the speed should be such as to produce a fine misty spray. Hand machines can be obtained when it is wished to spray small acres and in places difficult to reach with a traction machine.

**How to spray:**—Most all the carts for field work have nozzles so adjusted as to spray from a rod to twenty feet in width. When spraying at a rate of one barrel of solution per acre a cart which hold 52 gallons and has a spray beam slightly less than one rod wide can thus be driven 160 rods before being filled or approximately 80 rods and return. In a large field it is thus desirable to have two or more points

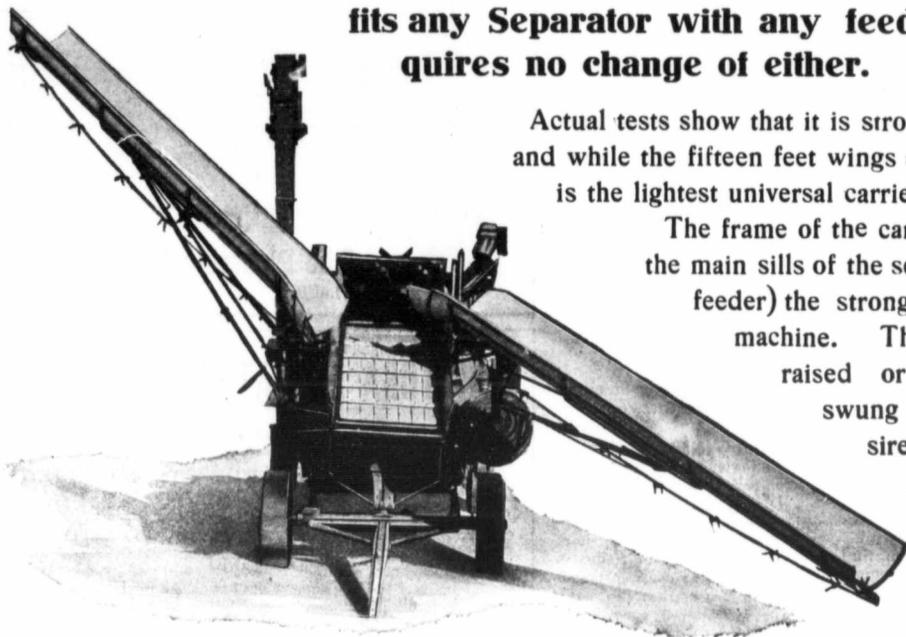
at which the solution is mixed at which points are located three or four mixing barrels. The water may be transported by means of the ordinary threshing tank. In the case of most substances it is desirable to allow the liquid to stand from five to ten minutes before it is placed in the spray cart thus allowing the person who is doing the mixing sufficient time to thoroughly stir and cause the salt to go thoroughly into solution. A hoe is the most satisfactory tool with which to stir the solution. When it is desirable to cover as large an acreage per day as possible it is desirable to have one or more helpers at each filling point, making it possible to speedily fill the spray cart and keep the teams moving. When placing these



Holt "Caterpillar" Gasoline Traction Engine pulling a 6-bottom 15 inch Big Dutchman Engine Gang in Heavy Gumbo.

# Hart-Brown Wing Carrier

**fits any Separator with any feeder and requires no change of either.**

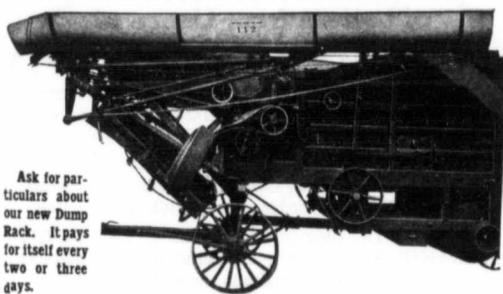


Actual tests show that it is stronger than others and while the fifteen feet wings are longer, yet it is the lightest universal carrier made.

The frame of the carrier attaches to the main sills of the separator (not the feeder) the strongest part of the machine. The wings may be raised or lowered and swung about as desired, and they deliver the grain to the feeder more evenly and correctly than can be done by hand

and will feed the largest separator to its full capacity.

The Hart-Brown Wing Carrier soon pays for itself as the wing swings about over the stack or load and saves the labor of from two to six pitchers. The wings can be folded for moving by simply swinging them around and hooking to side of separator, no chains need be moved or any adjustment made.



Ask for particulars about our new Dump Rack. It pays for itself every two or three days.

CARRIERS FOLDED FOR MOVING

Illustrated Catalogue Sent on Request

Sold by all the Leading Threshing Machine Companies

Manufactured by

**Hart Grain Weigher Co.**  
Peoria, Ill., U.S.A.

filling points it is desirable to note the direction of the wind so that the carts can be driven with the side on the wind thus causing a drift of the solution, so as to cover up any errors in driving and also to have the spray blow in such a direction that it will not interfere with the horses or driver. One cannot state what any one of the machines will do without a trial, therefore it is advised that a spray tank be filled with a known number of gallons and that it be driven until empty. It can then be computed how many gallons are being thrown per acre. If the machine is throwing one and one-half barrels of solution per acre then the strength of the solu-

tion will need to be lessened in proportion. In general, a machine should be adjusted on coming from the factory so as to throw approximately from one to one-fourth barrels per acre or else be made so that the operator can make the adjustment. The driver should either drive a stake or sufficiently overlap to insure the covering of all areas. In case of the centrifugal machines, a proper overlapping should be given to result in an equal distribution of the solution.

**When to Spray:**—As near as possible one should select a time when the graincrop is just ready to occupy the land if the weeds were not there and a time when the grain plants and weeds are

making rapid growth is most desirable. Slow growing weeds are hard to kill and slow growing grain is more apt to be injured than that which is making a rapid growth. The more succulent the weeds the more easily they are killed.

Generally speaking, when mustard or king head plants are from four to ten inches high just at a time when they are beginning to over-top the grain is the most desirable time for spraying; perhaps it may be stated, as when the weeds are in the third or fifth leaf. A still day is preferable for this spraying work but if care is taken in driving, reasonably good results will be obtained upon windy days providing there

is a bright sun. Select a time when it is not likely to rain for two or three days as the best effects of spraying will be prevented by rains closely following the time of spraying.

**What to Use:**—The substances which the writer has used with success on these weeds are iron sulphate, copper sulphate, common salt, and sodium arsenite. Against mustard it is probable that they are named about in order of their efficiency and desirability. As used against king head the reverse order will give about their order of efficiency. We recommend for use in cereal grain fields against mustard and king head the following strengths:

Iron sulphate 75 to 100 lbs. to each 52 gal. of water according to the succulent nature of growth. If the weeds are young and very succulent 75 lbs. will give splendid results. If it is a rather dry time and the weeds are slow growing 100 lbs. should be used. Copper sulphate may be used at the rate of 12 to 15 lbs. for each 52 gallons. Approximately 1-3 bbl. salt for each 52 gallons of water gave very satisfactory weed killing power in the experiments conducted this season. This solution is apparently somewhat more injurious to grain but acts much more quickly upon king head than iron sulphate. As yet, I am unable to recommend it as highly for work on mustard as in the case of iron sulphate or copper sulphate. Sodium arsenite in a number of preliminary experiments has usually given much more efficiency as a weed destroyer than either of the preceding. We recommend its use against king head at the rate of from one to one and one-half pounds to each 52 gallons of water. It is an extremely poisonous solution and great care should be used in handling and disposing of same. The merits of this substance are that it is quickly active, destroying the weeds even though the rain follows within a few hours. It, too, is somewhat more destructive in its action than iron sulphate and it may yet be possible that under certain conditions that it would be slightly injurious to the yield of grain. It has not yet been tried upon so extensive a plan though the small amount of material needed and cost is a matter that makes it worthy of general trial. As the arsenite is extremely poisonous, I would not recommend its use in hay fields nearing harvest time or upon grain fields, the

straw of which is to be fed to stock unless the fields are sprayed when the grain is very young. In spraying for destruction of weeds in grain fields it must not be forgotten that the road sides are important factors in keeping the land full of wind blown seeds, therefore give the roadsides an extra trip or two, that they may eventually become grown up to grass instead of annual weeds. These substances are recommended her for mustard and king head and will dispose of other annual weeds which they thoroughly wet including Red-River weed, common rag weed, and pepper grass, and will much weaken and retard the development of the French weed, wild buckwheat, black bird weed, rose bushes, wild dock, Canada thistle and many other of the destructive weeds which invade cereal fields.

**Driving and Shipping Stock in Hot Weather.**

Probably the lessons learned by a trader and farmer of many years' experience will be of interest and value to the readers of this journal. Fat hogs and hogs with defective breathing apparatus, die in a surprisingly short time after starting on a dusty, hot, waterless road, if pressed, and in some cases they can make but a few hundred yards' progress without water. Water every few hundred yards is the thing if you must drive them in the hot of the day. Shade and rest will not take its place, but are helpful. The best time to start to market if six or eight miles away is the evening before and put up for the night with a neighbor. For shorter distances to scales, delivery or shipping points, start early enough to drive there by nine o'clock or an hour or two before loading time. Let them wallow in the water—the more mud they get on the better, as it acts as a cooler. Never stuff hogs before starting—the emptier the better. Feeding in the pens, moderately, is allowable if in time before train is due, but a wallow in running water just before loading is worth more. Mud-bedding in the car, made by shoveling in soil and pouring water on, is the only one allowable—straw and sawdust bedding, for which the railroad companies charge \$1.50 to \$3, are detrimental, having a heating tendency.

Load the hogs with as little fatigue to them as possible. Never pile them up; it is better to take out a few and sell them to the butcher.

Shipping of lambs is very seldom done by the farmer on account of the great number required for a double-deck car and single-deck cars are at much higher rates. Many lambs die on the road in hot weather in careless and ignorant hands. Sheep cannot stand much heat, rest in the shade is one remedy or haul in buggy or wagon. Water is of little value. Load cool and do not crowd.

**DOES A WASHING JUST LIKE PLAY!**

Six Minutes to Wash a Tubful!

Ladies! just see how easy I do a big washing with my 1900 Gravity Washer. I start the tub a-whirling. Then the gravity device under the tub begins to help and the rest is just like play. Washes a tubful in six minutes! How's that for quick and easy work? The 1900 Washer Co. sent me this marvellous machine on trial. They didn't ask for notes or cash in advance. And they let me pay for it a little each week out of the money it saved me! They treat everybody the same way.

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on thirty days' trial, the same as I got mine. The company will let you pay for it on the same easy terms they offered me. The Washer will actually pay for itself in a very short time. Mine did! I wouldn't take \$100 cash for my 1900 Gravity Washer if I couldn't get another just like it. It does beautiful work—handles anything from heavy blankets to dainty laces. Every housewife who is tired of being a drudge and a slave to the washtub should write to

**C. T. E. BACH, Manager**  
The 1900 Washer Co., 357 Yonge Street  
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also for their beautiful Washer Book and generous offer of a Washer on free trial.  
MRS. R. H. FREDERICK.  
The above offer is not good in Toronto or near and suburbs. Special arrangements are made for these districts.  
Winnipeg Branch: 374 Portage Ave.



**SIMPLE SENSIBLE STATEMENTS from "PICKERING"**

Every one is mechanical enough to mix oil and emery if they desire cutting away metal. NOW, if you have joints in any mechanism you naturally oil them, of course—but in traction engine work how can you prevent the flying dust and grit mixing with the oil? YOU CANNOT, it simply acts the same as emery and for 250 hours every month you run. PICKERING GOVERNORS are made absolutely without joints. JUST THINK IT OVER and you will know why they last longer.

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

**The Pickering Governor Co.**  
PORTLAND CONN., U.S.A.

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D. W. McCUAIG, W. C. GRAHAM, F. B. MACLENNAN,  
Commissioner Commissioner Commissioner  
Head Office: 279 GARRY ST., WINNIPEG  
P.O. Box 2971

THE Commissioners wish to announce to the farmers of Manitoba that they have secured permanent offices for the transaction of their business, and all communications should be sent to the Commissioners at the above address. Petition forms and all information needed by farmers in order to secure elevators at their points will be mailed upon application. The Commissioners solicit the co-operation of the farmers of Manitoba in the work of establishing a system of public owned storage elevators in the province.

**Will You Sign This Coupon? So We Can Send You A Free Book of Letters from Users of THE GANDY BELT**

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**THIRD.** Every Gandy Belt is sold under an absolute guarantee. Look for the stamp "THE GANDY THRESHER BELT" and for our trade-mark consisting of a coil of bale of cotton. None are genuine without it.

Our stock embraces over a hundred different lengths, widths, and plies, and enables us to ship orders on day received. The Endless Gandy Thrasher Belts are also carried in stock by the leading Supply Houses and Thrasher Engine Manufacturers throughout the country.



Sign your name to the attached coupon and mail it to us for our booklet "Experiences with Gandy"

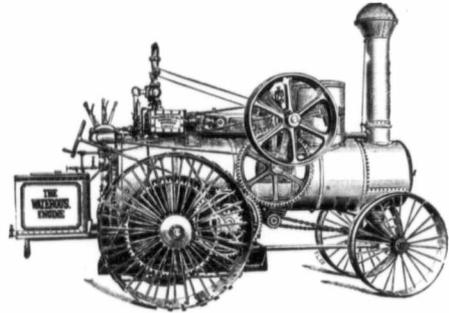
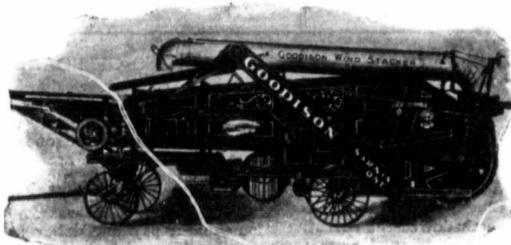
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# Bargains in Threshing Machinery



We have the following second hand threshing engines, threshers and thresher supplies, thoroughly repaired and repainted, all in good working order; boilers re-tubed and all worn or broken parts of all machines replaced with new and we will sell at the bargain prices mentioned below, to clean out our stock of second hand machinery. Call and examine these machines or write us for further information.

### TRACTION ENGINES

- 1-18 h. p. Waterous single cylinder with locomotive return tubular boiler..... \$ 750 00
- 1-18 h. p. double cylinder Waterous engine with locomotive boiler 900 00
- 1-22 h. p. Waterous double cylinder engine with locomotive boiler 1300 00
- 1-22 h. p. Waterous double cylinder engine with locomotive boiler 1300 00
- 1-26 h. p. Waterous double cylinder engine with locomotive boiler 36 inch face road wheel..... 1300 00

### PLAIN ENGINES

- 1-12 h. p. Waterous engine with locomotive boiler..... \$ 450 00
- 1-12 h. p. Champion engine with upright sectional boiler, wood burner..... 350 00
- 1-17 h. p. Waterous engine with locomotive return tubular boiler 650 00
- 1-18 h. p. Waterous engine with locomotive boiler..... 750 00

### THRESHERS

- 1-40x60 McCloskey thresher with side fan blower and perfection weigher..... \$ 775 00
- 1-36x60 McCloskey thresher with side fan blower, Rich feeder and Perfection weigher..... 775 00

- 1-36x60 McCloskey thresher with side fan blower, Hawkeye feeder and Perfection weigher..... \$775 00
- 1-36x60 McCloskey thresher with side fan blower, Monarch feeder and perfection weigher..... 775 00
- 1-40x60 McCloskey thresher with 18 ft. carriers and Perfection weigher..... 475 00
- 1-40x60 McCloskey thresher with 18 ft. carriers..... 450 00

### SUNDRY THRESHER SUPPLIES

- 2-8 in. 4 ply, 150 ft rubber belts in fair condition..... each \$ 35 00
- 1-New 7 in., 4 ply, 150 ft Gandy belt..... 50 00
- 1-New 36 in. Rich feeder..... 175 00
- 1-New Ham headlight..... 11 00
- 4-2 hd. Kipp double connection oil pumps..... each 10 00
- 3-2 hd. tank pumps with 20 ft suction hose..... each 13 00
- 1-New short Glendale weigher..... 55 00
- 1-New perfection wagon loader..... 15 00
- 1-2 hd. 12 barrel half round tank..... 30 00
- 1-Set McCloskey trucks, 34 and 36 in. by 6 in. wheels..... 20 00
- 1-2 hd. wire cable..... 8 00
- 25-New 1/2 bushel R. & S. grain scoops..... each 1 00
- 2-Power jacks..... each 5 00

**WATEROUS ENGINE WORKS CO. LIMITED, WINNIPEG.**

### Do You Make Butter?

Cleanliness has never before in the history of civilization been such a factor in the world's progress. There never was a time when so much attention was paid to food and food laws and one of the first questions that the average man asks himself before he puts anything into his mouth in this day and generation is, "Is it clean?"

Milk and butter are probably as easily contaminated by outside influences as anything, if not more so, and the utmost care and caution should be exercised in their handling. Every housewife knows that it is absolutely necessary to keep milk and butter away from anything with a strong odor, as it will be sure to spoil the flavor. Every farmer knows the disagreeable odor that comes from milk and butter that is made when the cows first get on to the fresh grass, or if the cows get into the turnip patch or rape patch.

It is therefore very necessary that all the utensils in which milk and butter is placed be clean. Doubtless some readers of The Canadian Thresherman and Farmer have heard of paraffined butter tubs. These tubs are coated on the inside with a coating of paraffine and as paraffine will melt when subjected to heat, it is therefore impossible to scald these paraffined tubs, only a washing of cold or tepid water being

permissible.

Viewed from a sanitary standpoint, the paraffined tub cannot be cleanly. This is not true of the old white spruce tub, which permits of using water up to the boiling point, or as hot as it can be heated. The white spruce tub can thus be scalded out in such a way that the germs are killed and the tub is left perfectly clean and sweet.

Another point in favor of the white spruce tub is the fact that this scalding process allows the tub to soak up a certain weight of water and makes the tub itself weigh heavier. When the farmer takes his butter to the merchant, both tub and butter are weighed and a certain amount of this weight is taken off for the weight of the tub, the amount of dockage being fixed for a certain size of tub.

In the case of the white spruce tub where it has soaked up a considerable amount of water, the weight of the tub will make up the amount of dockage; but in the case of the paraffined tub, which has soaked up no water and off from which the same amount of dockage is taken, the farmer pays for a portion of the dockage in good high-priced butter. As a matter of fact, this difference of weight on a nest of 20, 30 and 50 pound tubs will amount to about six pounds in favor of the white spruce tub, and six pounds of butter will generally pay for the tubs. Just think it over.

### THE STANDARD TRUSTS COMPANY

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Sections 5, 7, 9, 17, 34 & 9 West 2nd  
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A rare opportunity for the speculator or investor. Easy terms arranged. Apply to

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A large number of other estate properties for sale in Manitoba, Saskatchewan and Alberta at bargain prices. If interested, write for list.

**Patronize Those Who Patronize This Paper**



**"Makes more  
bread  
and better bread"**

**PURITY FLOUR**

*"ask for it"*

OBJECTS AND AIMS—INTEREST IN NOVELTY — REMEMBER THE SHOW PART — WEAKNESS OF BOARDS—SOURCES OF REVENUE — MUNICIPAL GRANTS.

# Fairs and Exhibitions

By E. HUGHES

JUDGING—CHOICE OF DIRECTORS — OFFICERS — THE BIG HEAD DIRECTORS—KEEP PEOPLE SATISFIED—PUNCTUALITY IN ATTENDANCE.

**OBJECTS AND AIMS**  
**W**HEN a number of farmers and others associate themselves together with the object of holding exhibitions, it is open to them to make very modest beginnings and develop into large undertakings. Especially is this the case in this new country where population, wealth and commerce are making such strides and facilities for transportation are annually improving. The object should be to educate the community in those branches of agriculture practicable but not in evidence in the districts, as well as in those which are already established, and, at the same time, to show, by the exhibition of specimens, any conveniences, inventions or products, the use of which will be advantageous to the resident farmer. The aims of an agricultural society may be various and many. It is sometimes a most laudable aim to give the community an opportunity for relaxation and amusement. There are localities where many individuals would be more benefited by swings, merry-go-rounds, and Punch-and-Judy shows than by lectures on tillage of the soil, balancing of rations or conversation of fertility. Not that the latter are not necessary to all, but in some localities they are really not the most crying need.

In the 80's the Brandon picnic brought out tired, over-wrought men, young and old, women that were prisoners or slaves and girls to whom the outing was a first glimpse of what existed beyond the view of the homestead. The meagre arrangement for amusements were marvels in their eyes, a first break in the monotony of existence on the farm of that day. The localities, similarly situated, are yearly becoming fewer, but they exist in all our provinces. Let the directors of Agricultural Societies be sure that, if there are any such in their constituencies their needs in this direction are catered to, as well as the more educational departments of the work. Aside from the policy of encouraging the less fortunate and progressive to come to the fair, it should never be forgotten that the raising of the lowest spots in the field, and the bringing of them into the producing area is good business in the general improvement of the farm. If they are not ready for bacteriology, bring them to the show to ride on the merry-go-round. If the prepotency of pedigree is beyond them, perhaps

they have a dime for the picture show. Make them think the show is worth while; not from your standpoint but from theirs.

## INTEREST IN NOVELTY.

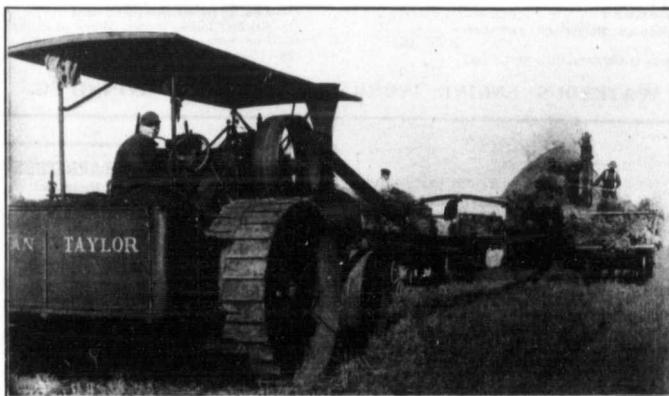
Every Agricultural Society should, as soon as organized, consider well, not so much what they have seen elsewhere with the object of copying, but rather in what particular the locality may possibly gain eminence and notoriety. The aims should be to bring to one another's and to visitors' notice something they do not see elsewhere or do not see so good.

Most likely the neighbor and the visitor will not be attracted by the same objects, and aim must be made to satisfy both. Pleasant surprise must await each individual or no desire to come again will fill the mind of those who pay gate money. This is putting it on the money basis, the only basis on which one can

men have been chosen as directors who were known to be, or sometimes simply thought themselves, eminently fit to manage that branch. Success has been varied. Bad taste has been displayed in some cases; in others the work has been overdone and grand stand performances have overshadowed the educative features. Gambling devices are able to offer Exhibition boards high prices for the privilege of robbing the unwary, and the boards have been weak and shortsighted enough to permit, for a price, the use of space that would have been peremptorily denied, on moral grounds, had the applicant not been able to offer a tempting figure. In this connection it might be well to call attention to clause (h) of section 27 of the Agricultural Societies' Act which reads as follows: "No agricultural society or exhibition association shall receive any grant where it is shown

## WEAKNESS OF BOARDS.

A very common weakness of boards is the fear to make reasonable charges for benefits conferred, fear that some one will kick. Many societies are in perpetual difficulties because they give away much that should earn a revenue. The time was when a man might pay one dollar for a membership and he had all privileges. Let us see what a member could do for that dollar. (1) He could vote at annual meeting; was eligible for a directorship, even the presidency. (2) He could go in and out of the show with all his family and anyone else who was willing to claim temporary relationship rather than pay admission. (3) He could enter every article in his possession through ownership, loan or hiring and draw prize money if such article was on the prize list. (4) He could buy and sell anything he chose, from stallions to stephanotis, from seed wheat to ginger beer. Being responsible for these conditions directors have been known to report to the membership that the society's affairs were in prosperous shape and to seek re-election. As a rule, those directors who were satisfied with this state of affairs were those who frowned on the "circus"; but "circus" and success came to the societies simultaneously if not hand-in-hand. By making a holidaying occasion for young fellows to take their "girls" to the societies have drawn to the shows many a good future member and not a few directors of these later days. As has been said above, bad taste and bad judgment have been responsible for the admission of objectionable



"Aultman-Taylor" outfit at Gleichen, Alta., Canada

appeal to many who fill director's shoes.

## REMEMBER THE SHOW PART

It might be safely said, that the dramatic instinct should predominate in a show committee. You must get the people coming and they won't come if you don't interest them. Had General Booth no dramatic instinct there would have been no Salvation Army. Many directors, when they first take office, scorn this phase of the situation and proclaim a determination to have an "agricultural show and not a circus." After a little experience the proclamation is modified or forgotten and a useful director is evolved. The circus, so called, is ubiquitous where successful agricultural societies are known on this continent. To promote anything in the way of light attraction and amusement some

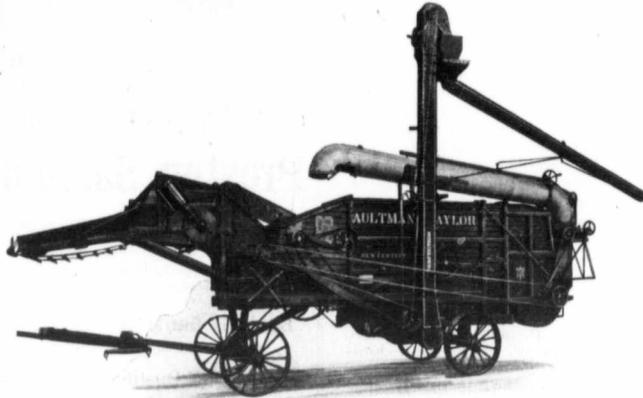
features, but the country is too young and technical interest not sufficiently diffused to dispense with the circus at our fairs, but those directors who bemoan the necessity, investigate the scientific societies, from the British association down. Is there not a social function and a ponderous, swell feed at every gathering? How about the church associations? Many in this country may not know that, at a Quaker meeting, the men sit on one side of the church and the women on the other. It does not seem as if the Quaker religion is attractive these days. Would an Epworth league run on those lines be a dazzling success? Does not the annual picnic swell the membership of Sunday schools? No Mr. Director-with-the-circus-grouch groan not in spirit, but take heart of grave. We are not all built alike. The giddy youth and maidenhood must be attract-

features, but the country is too young and technical interest not sufficiently diffused to dispense with the circus at our fairs, but those directors who bemoan the necessity, investigate the scientific societies, from the British association down. Is there not a social function and a ponderous, swell feed at every gathering? How about the church associations? Many in this country may not know that, at a Quaker meeting, the men sit on one side of the church and the women on the other. It does not seem as if the Quaker religion is attractive these days. Would an Epworth league run on those lines be a dazzling success? Does not the annual picnic swell the membership of Sunday schools? No Mr. Director-with-the-circus-grouch groan not in spirit, but take heart of grave. We are not all built alike. The giddy youth and maidenhood must be attract-

# The Aultman and Taylor Separator Is The Only Successful One In Use For Gas Power.

They will do more and better work, and with less power, than  
any other Separator built.

Ask ANY ONE of  
the **FOUR HUN-**  
**DRED** or more  
users in the **DO-**  
**MINION OF CAN-**  
**ADA** and let **THEIR**  
judgment govern  
**YOU. WE ARE**  
**WILLING TO**  
**ABIDE BY THE**  
**RESULTS**



The 27 x 42 New  
Century will  
thresh, clean and  
save 2000 to 2500  
bushels of oats or  
1200 to 1600 bushels  
of wheat in ten  
hours.

It Weighs Less and Runs Steadier Than Any Other.

Note a Few Testimonials Below.

Shoal Lake, Manitoba, April 5th, 1910.

Mr. Chadwick, Lethbridge, Alta.

Dear Sir:—Yours of the 2nd to hand and I may say that I am well satisfied with the Separator. I threshed the cleanest grain that went into the elevator (at least the elevator man said so). M. D. Moffett says we could not put grain over if we tried. I was short handed, only myself and four boys run the whole outfit. The best run that I made was 1,250 bushels of oats in one-half day.

Yours very truly,

J. DANDRIDGE.

Shoal Lake, Manitoba, April 19th, 1910

The Aultman & Taylor Mach. Co.

Dear Sirs:—We have used one of your 27 x 42 New Century Separators for the last two seasons with a 20-H.P. gasoline engine and although we had no previous experience with separators, it has given great satisfaction. We can thresh up to 2,400 bushels of oats per day and make a clean job.

Yours truly,

STEVENSON BROS.

Shoal Lake, Manitoba, Feb. 8th, 1910.

The Aultman & Taylor Mach. Co.

Dear Sirs—Regarding the Separator I got from you two years ago, I might say that it is all that you said it would be. It is easy to drive and a great grain saver. It is the wonder of the district. I can get twice as much work as I can do on account of the good work that it does. I have threshed for twenty years and I think I have had enough experience to know a good machine from a bad one. The new machine is the best all-round machine I ever run and if you can sell one machine in a settlement to a good man with machinery it will sell the rest.

Yours truly,

DAVID MOFFET.

Foxwarren, April 13th, 1910.

Mr. Chadwick, Lethbridge, Alta.

Dear Sir:—We are pleased with the threshing outfit that we bought last year, especially the "Aultman-Taylor" Separator. We never had the slightest trouble from first to last and our threshing was never so clean and well done, also the speed with which it threshed for a small machine quite exceeded my expectations. In fact, altogether, it could not have been better. On account of all of our crop being more or less hauled last year, I cannot give any idea of the amount that we can thresh in a day, but the "Aultman-Taylor" has made a good name for itself here and I have no hesitation in recommending it. Trusting you will have a good season, I remain,

Yours truly,

J. B. HODGSON.

Nanton, Dec. 7th, 1909.

This is to certify to the amount of grain threshed with the 36x56 "Aultman-Taylor" Separator bought of J. Tait Hunter, this season. Our entire season's run was 77,241 bushels of grain in 25¼ days. On Sept. 24th we threshed 5,118 bushels of oats for J. R. Eckert in 10 hours, in oats that yielded only 45 bushels per acre. On Oct. 20th we threshed 69½ bushels of oats for Frank Bowser in one hour. On the same day, on special test, we threshed 39 half-bushel dumps of 19 lbs. each, in one minute.

BOWSER & PATTERSON, Owners.  
A. C. MIDDLETON, Separator Man.

Solsgirth, Manitoba, Canada.

Mr. Chadwick, Lethbridge, Alta.

Dear Sir:—Replying to your favor of the 2nd inst., in reference to the "Aultman Taylor" New Century Separator which I purchased from you last summer. I have much pleasure in recommending this separator as one of the best, if not the best, on the market; running very smooth and easy and doing nice clean work. Last fall I threshed nearly 16,000 bushels in fifteen and a quarter days with my little outfit, giving good satisfaction, which I think is a very creditable showing, considering that everything was new and a good deal of time lost by belts stretching, etc. Anyone purchasing one of these machines cannot fail to be pleased. Wishing you every success,

Yours very truly,

J. LIONEL RIDOUT.

Binscarth, Manitoba.

Mr. Chadwick, Lethbridge, Alta.

Dear Sir:—The New Century Separator 27 x 42 that I bought of you the fall of 1909 has given every satisfaction and is a great saver of labor and money. With stock teams and two men in the field and myself to look after the outfit, I threshed 24,000 bushels of wheat, oats and barley in three weeks and loaded nine cars at loading platform. We used portable granaries and stopped threshing while loading cars and had to stop two days for wet. We could not have stacked the crop alone for the same labor. I remain yours truly,

JNO. S. IRVIN.

Strathcona, May 16th, 1910.

Mr. Chadwick, Lethbridge, Alta.

Dear Sir:—Regret having mislaid your letter. The "Aultman-Taylor" Separator purchased by us gives first-class satisfaction. It is a clean thrasher and the 27 x 42 size will handle from 2,000 to 2,500 bushels of oats per day of ten hours. The 20-H.P. International Engine (gasoline) drives the separator easily.

Very truly yours,

McTAVISH BROS.

FOR SALE BY

## J. Tait Hunter, Calgary, Alta.

or any general agency of the International Harvester Co., of America in Canada.

ed to the fair; for their joys are ever those that you and I prized once. Let us not proclaim ourselves back-numbers by forgetting we too once were young, went to see the circus and being there we learned to take an interest in something else; so will those that come after us.

#### SOURCES OF REVENUE.

Every director should make an effort to find from other and larger societies what are the possible ways of getting money, so that such ways may be adopted by his own. It is very easy to get the requisite number of members, ask for a government grant, municipal grant, and think you've done your duty. What you should do is to go over your municipal list of voters and see who are not members and canvass such, each director taking his share of names—miss no one. See that everything for which a prize is offered pays proportionate entry fee. I have seen a prize list where \$20 was offered for a first prize horse, entrance fee \$1. First prize dozen turnips, 50c; entrance fee, 25c. One fee was 5 per cent. of first prize the other 50 per cent. Twenty per cent. in both cases would be more reasonable.

See that no person does business on the grounds without paying for the privilege. If a lunch tent is a paying proposition, don't be cajoled by a committee of ladies into letting some church have the privilege for nothing or at their own figure, but to the highest bidder. You have no right to squander or donate the society's property, and the privilege of doing business on the grounds during fair time is a valuable property. I know a society that presented the lunch table privilege to a certain church for several years. Then another church offered money for it and got it. All the members of the latter church made a point of taking lunch there and so swelled the admission money. The former beneficiaries abused the board for taking money for the privilege; but other people said the lunch was better than ever and all added to the interest in the fair. The giving of something for nothing cheapens the gift and the giver, and earns little gratitude from the receiver. When you have once sold a privilege, try if you can't get more for it next year, and don't let it two years in succession to the same party if possible. Pay no prize for an exhibit that does not show outstanding merit. To do that earns just contempt of all who see a prize card on an inferior article or animal. In live stock classes never offer a prize for a breeding male that has no pedigree of pure breeding. Your society is organized to improve live stock not the multiplication of scrubs.

#### MUNICIPAL GRANTS

Taking government returns, I single out at random some municipalities to find out whether they are doing their duty in office. Birtle owns \$2,000,000 of as-

sessable property, collects \$25,000 of taxes, has no debenture debt and gives \$300 for the encouragement of good farming. Hamiota collects \$1,000 less, owes \$15,000 and gives annually \$350. Why should not these municipalities give \$2,000 each and see that the directors expended it properly, that the people themselves took membership tickets.

The strongest position a society could put itself into in the matter of getting a municipal grant would be to show a large membership list. Out of 50,000 farmers in the province 6,000 are members of agricultural societies. Not one in nine. Is that creditable to our directors? Are they doing their duty. There should be more members than farmers, for in cases of families more than one should pay.

#### JUDGING

In the past there has been much fault found with judging, but now the provincial department is providing men and there should be no excuse for exhibitors holding back on that account. Absolute justice is what every exhibitor is entitled to and the society that permits anything else has no right to exist. The director who is a party to misplacing of awards is not entitled to a franchise or to be at large.

#### CHOICE OF DIRECTORS

This is the initial step that makes or mars the society. The man most anxious for office is not always the best to elect. The man who is unwilling to act should not be urged unless he declines from extreme modesty. The directors should make an active canvass for attendance at the election of officers; for slim attendance puts a wet blanket on the enthusiasm of the best worker and gives a bad impression to those who attend for the first time. Those directors who neglect their duties should be replaced. The man who tries to hold office and is only in evidence when the fair is on should be relegated to the scrap-heap. The director who has been most remiss in attending committee meetings during the year should not be allowed to serve a second time. It is the duty of a member to vote for his worst enemy and against his best friend, if he thinks the working capacity of the board would be improved thereby.

It is a matter of so much moment to the community that the board should do good work, that the very best men should, in every case, be placed in office. Not the wealthiest, for there is no money in the job; not the best business man for he won't attend meetings and wants others to wait his pleasure. Let the weeding out be thorough at the annual meeting, and leave off all who have neglected their duties or shown unfitness for office. In a spasm of enthusiasm I once voted for a man who had gone round town and got forty membership fees in one afternoon; the day of the meeting. Next



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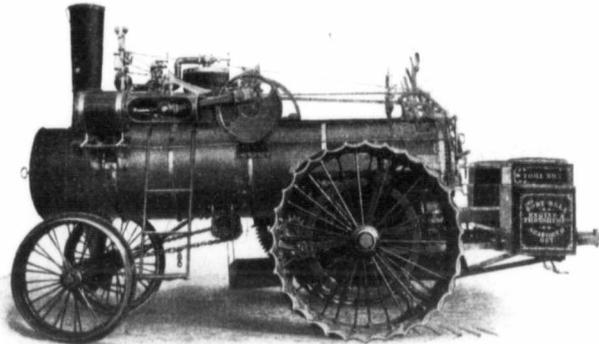
**Patronize Those Who  
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# EXAMINE "IMPERIAL" MACHINERY

AT WINNIPEG AND BRANDON FAIRS

## ENGINES

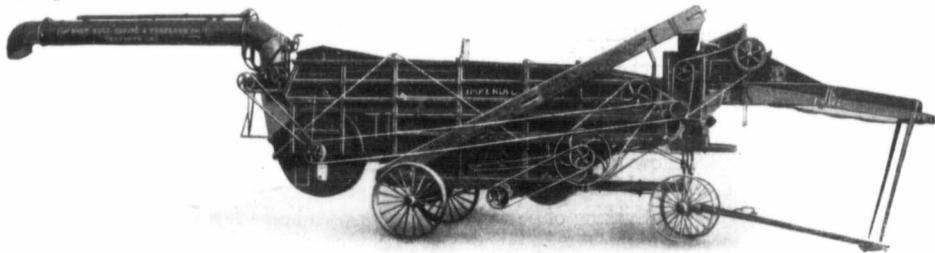
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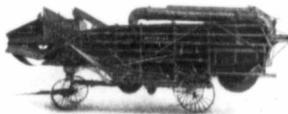
## SEPARATORS

36 x 60; 32 x 54; 32 x 50;  
28 x 42; Ruth Feeders, Side  
Fan Stackers and Attach-  
ments.

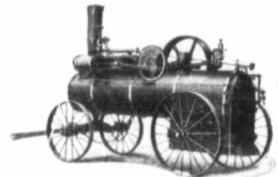
See 1910 model 26 and 30 h. p. Bell Tractions, HALF INCH SHELL PLATES AND HEADS throughout in these sizes. Shafting, axles, etc., in proportion. Extra long tubes—9 feet long in the 30 horse power. Do not miss inspecting these magnificent engines.



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**The Robert Bell Engine & Thresher Co., Ltd.**  
Seaforth, Ont.

**Winnipeg, Man.**

day the list was forty still and, as far as he was concerned, it would be forty yet. He had handed the cash over to the secretary, less his prize money from the previous year's fair. The latter amounted to \$39.50 and his interest had ceased. The man who always attends meetings, does not talk too much, does what he is given to do promptly, does not lose his head in a crowd and gets new members in a treasurer. Make him president. You haven't another like him. Perhaps you never will have.

### OFFICERS

The office of president should be filled by a man of position, if possible, to start with. It gives

more or less of a send-off to the society at all stages, but use him all you can. If he works, so much the better; but you must have a man that attends the meetings, or the fact of his neglect is more harmful than the loss of his prestige would be were he not in office.

The secretary or manager must have all the business at his fingers' ends and always beforehand with his work. The secretary who is tearing about, sweating and fuming and complaining of others' neglect is a great man in his own mind. Relieve him of his worry or it will kill him. Do so at once and for good. He is not a manager but a muddler. When your manager walks cool-

ly about, quietly inspecting the smooth running machinery of the show, don't kick because he has nothing to do. Think him a jewel for having things done at the proper time. His head is level. He is already at work at your next year's show. He is observing how his plans work, how each director has done his work, whom he will want to retain on the board and whom he will rid of. Don't blame him if he gives you a tip about your vote at next annual meeting. He won't be wrong. He wants the best men to back him up and do their duty. He has no favorites. He cannot afford such luxuries. He has preferences and is quite right. He knows whose services are

valuable and would retain such. His heart is in his work. Don't baffle him but encourage. He may sometimes have unpleasant things to say; but if he is hard on you, try to make out if he is right before you get mad.

### THE BIG HEAD

Every man has some superstition. Any one of us may imagine that the excellence of our work is of a supernatural order; that without our ghostly efforts the work about us could not go on; that ruin and desolation would follow in the wake of our departing steps should aught sever us from our work. Managers are human and may, in their minds, become managerial spoons. In

# They're Rolling in! They're Rolling in!

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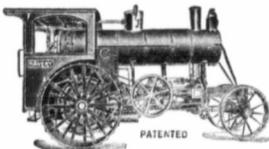
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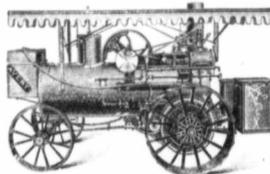
Canadian Jobbers,

Winnipeg, Canada



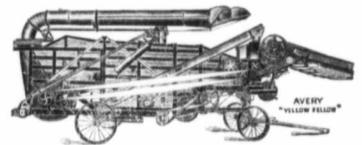
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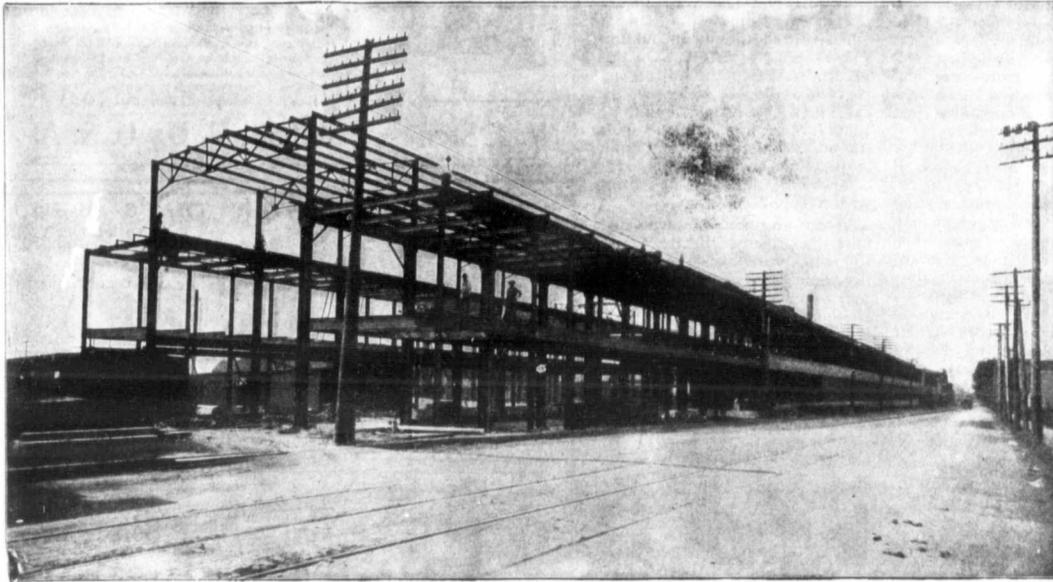
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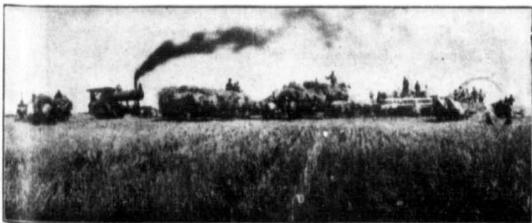
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such a case, as you would reason away the fear of the bloodthirsty mouse in the mind of a lovely woman, assist him to regain his mental balance, but at the same time look round for his successor. The first aberration may yield readily to treatment and no recurrence appear, but be prepared. It may be an acute case and a surgical operation necessary. The board must amputate just above the official shoulders.

#### THE DIRECTORS

The directors may be of all temperaments, for men of one extreme may need compensating opposites. The too sanguine may need the cautious mind thus to be held in check; but a board of stand-patters is a board of droppers. To stand still is to go back always—in the exhibition business. Always work harder this year than last, always spend more in advertising, always offer more in prizes, always have better attractions, always more new features, always the old ones improved. Then always your attendance will be greater, always your entry list will be longer, always your exhibits better. Have no truck with confidence men or sharks. Allow no overcharges for services or accommodation on the grounds. See that everyone gets the worth of his money. Retain the right, under your agreement of cancellation without compensation when any advantage is taken of a visitor's necessity or when he is overcharged. This was the policy at Seattle and people who were there think well of Seattle. The reverse is true of Quebec, and those who were there have forgotten the scenes and the scenery in the sordid memory of the vampires who beset them. If your show is held in a town, the council and the business men, if the matter is brought to their notice, will back up the board in preserving the good name of an institution that brings them business. If it is not possible to bring about such conditions in the town where your fair is held, look about for some other place where the people have more sense.

#### TO KEEP THE PEOPLE SATISFIED

The one great aim of all boards should be to avoid friction. Civility is the most potent lubricator of the exhibition machinery. No machinery needs so much; for it has been lying idle for a year and there is more or less rust in every bearing. Your new directors are new, untried repairs and the first time of using. They are likely to get hot before you are running an hour. There are always causes of friction with exhibitors. The new ones are always the worst for they don't understand. Civility comes in and by itself may make things run smoothly. Every employee should understand that he must be civil and obliging. If he get in altercations and makes people angry, drop him instantly. An uncivil servant has no business about a fair ground. Almost every other fault can be forgiven if your patron leaves your em-

ployee with a smile on his face. A loss of temper is not to be tolerated. Coming in contact with a tactless or impudent man at the gate gives a stranger an impression that will last through the fair and put him in a bad temper when you show him an indifferent place for his stock. On this head, all that applies to the employee has double weight in the case of a director. Nothing should ruffle him, not the most irascible exhibitor or spectator. A director who fails in this particular should not come in contact with the public.

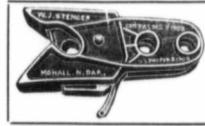
When an exhibitor who has missed a prize which he expected to win, encounters a director tired and worried, the sooner they are separated the better. Neither is just himself. At such times the model director shines if he can pacify the other man. Unless he is sure of himself, he had better get over the fence and lay low till the other man has partially cooled off. Then let the directors handle the injured man, one by one, till he is in his right mind.

Be very careful in making rules. When they are made, enforce them without fear or favor. When a director has certain work in charge never countermand his orders or interfere except at his request. Don't tender unsolicited suggestion or advice, especially when there is likelihood of offence being taken. If a man is left to discover his own mistakes he is much more tractable than if he is read a lecture while he still thinks, or is trying to make you believe, he still thinks he is right. If left alone he will likely admit he has erred and ask you for advice. That is the time to give it, without any prelude of a general, personal criticism as to his methods or knowledge or good sense.

Every man likes to have his own way in any matter in which he is interested. When you receive strenuous opposition it is often well to give in. If afterwards you are found to be right you will have accomplished much towards making a reputation. When the course you advised is demonstrated to have been right, never say, "I told you so." That will spoil all. If you give in at the start and it is proved you were wrong, you will gain a reputation for being a very reasonable fellow and you have lost no prestige among the members of the board. When the board have gone wrong against your counsel, don't tell your friends that you gave such advice but you were not listened to. That course throws discredit on the board.

In the case of any crookedness on the part of any exhibitor, mete out swift punishment. Never accept ignorance as an excuse. An odd case of hardships on an individual is a small thing compared with the reputation of your association. If you trifle once with a semblance of fraud the regular crook will make you an easy mark. Any man of sense knows whether he is behaving squarely and chances are that

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ignorance of rules is a faked excuse.

**PUNCTUALITY IN ATTENDANCE**

Want of punctuality and regularity at meetings is most deplorably prevalent at board and society meetings. A certain hour should be set and everybody there on the minute. Establish punctuality as a rule and your work is done in half the time and done better.

It is a good plan to have the secretary prepare a statement for the annual meeting showing the number of meetings during the past year and the number attended by each director. An attendance on time to be indicated by two, a late attendance by one. This gives the members an idea of how each man looked after the business entrusted to him, and should be a pointer to the members for whom they should vote again and who is better out of the way.

The man who deliberately allows his fellow directors to meet and makes no effort to attend deserves no place on the board. Rather is he entitled to a pen in the fourth section of the live stock division.

**Pure Water on the Farm.**

Absolutely pure water is not to be found in nature. The amount and the nature of the impurities vary widely, depending upon the source of supply and other conditions. Nor are all of these impurities harmful in a water intended for domestic use (and very few of them may be), but owing to the fact that water may be the agent for spreading certain diseases, it is essential that care should be taken to get a supply that is free from harmful constituents.

Impurities may either be dissolved in the water or carried in

suspension by it; and they may be of animal, vegetable, or mineral origin. Hardness in water is due to the presence of compounds of lime or magnesia. Iron may be present in quantities large enough to make a water unfit for laundry purposes.

The greatest danger to which a domestic supply is subject, however, is the possibility of contamination by decaying animal matter and wastes. Typhoid fever and other diseases result from such contamination. It is, therefore, important that any source of supply should be guarded. In those cases where the water comes down as rain and is caught upon the roofs, to be carried to a cistern, the first part of the rainfall should be wasted, as it is full of dirt from the roof. Brick filters in cisterns are not so efficient as they are generally supposed to be.

When the water is drawn from a well and comes up cool, clear,

and sparkling, it is very difficult to convince any one that it is possible for anything injurious to be present; but such is sometimes the case. No well or spring should be used which is located within several hundred feet of a barnyard and in lower ground. The barnyard filth will find its way beneath the surface of the ground and flow for some distance before it becomes harmless. What is said of wells is also true of springs. They may appear to come out of the solid rock, but there is a crevice in which they flow and there may be other crevices which will permit the entrance of the death-dealing sewage.

The examination of a sample of water to determine its goodness or its badness for any use is possible only to those who are specially fitted for that work, so reliance must be placed principally in doing away with all visible sources of harm.

**A Tragedy of the Forest.**

At a station of that part of the Maine Central railroad which runs through the little valley of the Swift River, in the Rangeley region, there alighted, one afternoon in October, two men, one of middle age and one younger, who asked old Peter Bowers, the section man, for the most direct route to one of the several camps that were scattered through the near-by foot-hills. He responded to their request for information and, when they left him, broke out into the following soliloquy:

"I was born in this region long before the railroad bored er hole in ther forest—when it was nothin' but er solitude—nothin' but ther home of wild animals—which wuz tame in them days—but I never expected ter see 'um made wild by what we call civilized man, who seem wilder'n ther beasts. They're mad! That's what! Mader'n a March hare. I never expected ter see God's wilderness—God's temple—made inter an annex to ther State Insane Asylum. 'Tis queer men'll leave good homes, when they don't havter, ter climb rocks and sleep in shacks jest ter kill, kill. They're so anxious ter kill they havter wear fire red shirts ter tell 'um from bucks. If they see er leaf stir they shoot, no matter what's behind the leaf. Oh, they're mad, mad!"

In due time the hunters reached their camp on the hillside, and threw down their packs on the ground. The younger man stood for several moments looking down through the valley and then up to the mountains in the far distance.

"It's a grand country," said he.  
 "It's a good country for hunting," said his companion. "I am glad you have concluded to try the woods this fall. I have been coming here for fifteen years and there is no such place for stirring the sluggish blood. You can shake off your civilized veneer and be as savage as you like. There is great sport here. Last fall was an exception. Was here a week. Got just one shot and missed that. He was a fine buck, too. Came out on a little bluff on the mountain side, not a quarter of a mile from this camp, he and a doe, and I was just below. It was a good shot, but I had been out all day and it was chilly. I couldn't hold my gun steady so I slipped the barrel through the crotch of a bush, but just as I pulled the trigger, the bush bent, so that I missed the buck. I hit him somewhere, for I heard a cry of pain. I think it was in one leg, as he made a big time in getting away. I followed, but it became dark so soon that I lost him."

"Isn't that a cruelty to animals?" said his companion, who was somewhat shocked by what was evidently a new idea to him. "Are many animals maimed in these annual hunting bouts?"

"Oh, yes," said his companion. "Anyone who can fire a rifle comes up here, and they shoot at any animal which comes along—aim at her anywhere—and their bullets are fully as likely to maim as to kill. To wound and not to kill prolongs the sport."

"And people come hundreds of miles to this region, which might be

an inspiration in itself, to kill innocent animals? Yes, not only to kill, but to maim—to cause them to die slowly and in agony—and call it sport?"

"Oh!" said the hunter, "the deer would overrun the state if they were not killed, and of course a man will miss his aim once in awhile."

"Deer probably would be killed, anyway," said his companion. "They were killed before there was a close time placed on them, but they were killed for food. Now they are protected not because they are valuable for food, but for sport. Because railroads get a benefit from passengers carried, and the number of state officials is increased."

"Oh, well!" said the old hunter, "take a night's rest on the subject. You will not be so pessimistic in the morning."

The next day was spent in hunting. No game was seen until near sunset. At this time they were near a brook running between steep and rocky banks. As they stood in the forest, their attention was attracted by a low cooing, and in looking in the direction of the sound, they saw a doe evidently communicating with some animal on the other side of the stream, but out of sight by reason of a big rock. In a moment, however, the reason of her cooing was apparent, for a big buck leaped across the stream. His body and antlers were of noble proportions, but on reaching the bank he stumbled slightly and the doe lent her body to steady that of her companion. Then it became evident that the buck had but three legs, one being missing from the knee down. The attention of the young man was riveted on the spectacle—the maimed buck and the attention of the loving doe—but he was awakened by a loud report and he saw the buck fall. The shot called him to his senses.

"Oh, Joe," he said, "how could you?"

"Oh!" said Joe, "those horns are too lose. I want them for my dining room. He's the one I fired at last fall."

When the two men left for home a few days later, Joe showed the antlers at the depot, while waiting for the train, with a good deal of pride. Old Peter, the section man, listened to his talk and said as he turned away:

"Young Tom Gould, who went inter ther army in ther Spanish War an' went to ther Philippines, said there wuz men out there who smoked ther heads of ther enemies kilt in battle an' hung 'um up in ther houses, an' this same Joe Brown, what's got the buck's head, heard 'im tell ther story, an' he said 'them men wuz savages.'"

# PRICE

Northwest Threshing Machinery is so well known that it is not necessary to go into detail about it here, but we have something of importance to say about the price.

Whoever buys threshing machinery wants to get it at a price that will enable him to make something on the investment. Now, if the ordinary price is charged, the buyer pays not only for the machinery but also a big margin to protect the manufacturer against loss from bad sales. It is no secret that many machines are worn out and never paid for. The thresherman who does pay pays both for his own machine and for the machine of the bad payer. If this were not so the factories could not run.

Plainly this is all wrong. To charge the paying thresherman so much that it covers the loss made in selling the non-payer is a grievous wrong against the good payer. The Northwest Thresher Company has quit this wrong way of doing business.

We have decided to cut out the doubtful sales; to sell only to those who pay cash or whose notes are good as cash. By not taking the long chances we don't have to charge the long price. By making sure pay sales we can make a sure pay price much lower than those who sell to both good and poor payers. When we get pay for all we sell we can well afford to cut the price down twenty per cent.

Suppose a manufacturer makes one poor sale in five, and that a machine costs \$2,000.00 including a reasonable living profit for the manufacturer. Then when we sell five machines to sure pay buyers for \$2,000.00 each we get for the five machines \$10,000.00. But the manufacturer who makes one poor sale in five must charge \$2,500.00 for each machine so that four machines bring him \$10,000.00 because he never collects for the fifth machine.

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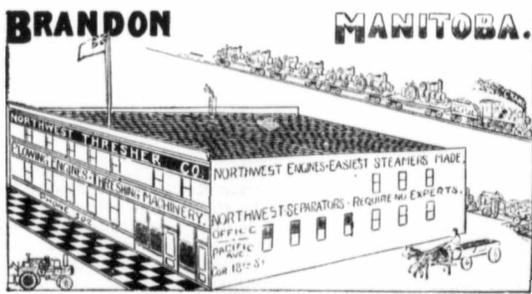
Buy where you get the biggest value for your money. Those manufacturers who make doubtful sales must either cheapen the construction or add to the price to protect themselves. If you buy a Northwest machine you get 100 cents worth of machinery for each dollar you pay—not 75 cents or 80 cents worth, leaving say 20 cents to go to pay some one else's debt.

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## Northwest Thresher Company

STILLWATER, MINN., U. S. A.

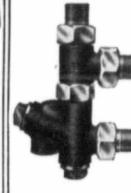
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When the connection is made to the boiler, the nut is tightened and the injector is ready for work.

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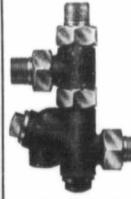
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### Market to Sell Dog Meat.

Quite the newest thing in Paris, says the Butchers' Advocate, is the dogmeat butcher shop. The first siege of Paris under the Third Republic is within the memory of the world's readers and some of the most impressive recollections of this terrible time were the awful straits that the citizens were reduced to for food. Horses, cats, dogs and even the wild animals of the zoological gardens were eaten with relish. Starvation made these strange meats welcome dishes on the insufficiently supplied table of both officer and private. The privations of a siege make all sorts of objectionable eatables desirable food, but to-day, in the time of plenty, one hears with astonishment that a Frenchman is about to open a shop where dog meat only will be sold.

In a little, narrow, dark street in Montmartre, not far from the fantastic cafes, ballrooms and easy-going music halls that so many strangers frequent to see the gay life of Paris, is a little shop over the entrance of which is a sign formed by two dogs' heads and under it is printed "dog meat." This sign brought to the spot in a hurry numerous city authorities and officials for the prevention of cruelty to animals, who vehemently forbade the intrepid butcher to engage in any such trade. But the threats of the men in authority did not ruffle the even temper of the stolid

butcher for one instant. He calmly and quietly told them that there was no law against selling dog meat as long as he advertised it as such, and also that it was a well-known fact that for years past Germany and other countries had made much of their sausage meat from the flesh of dogs, so that he was going to do openly what they had been doing in secret. The officials were nonplussed by his argument, but they were making every effort to put a stop to this undertaking, and now they are appealing to a law which does not cover the case of the dog butcher, and the public is watching with eagerness to see the outcome of this queer dispute.

The butcher claims that when horse meat was put on the market for general consumption the same hue and cry went forth from all quarters. He further explained that dogs being clean animals in their diet, the meat will be more wholesome than pork, veal or fowl, and that the only way to rid the city of the appalling number of mongrels it harbors is to make them marketable for the daily food of the people.

It is true that when horse meat first was introduced in this capital, vigorous protests came from all sides. The very idea of eating horse was repugnant to all people of refined tastes and they used all their power to prevent such a thing from becoming legal. How fruitless were their efforts is shown by the hundreds of shops

all over the city that deal in this one article of food. The law enforces, however, that where beef or mutton is sold, horse meat cannot be purchased at the same shop, but there is no temptation for a butcher to be dishonest, for there is by no means a small proportion of the French people who, either by the order of their physician or for economical reasons, seek the shops where horse meat is to be found.

It is impossible to escape seeing one of these butcher shops for they are invariably adorned with carved heads of the horse, brightly burnished with gold. Tastily arranged in the windows are half sides of the animal with colored artificial paper flowers here and there to attract the eye of the passerby, while underneath are placed steaks, roasts, etc.

One of the chief reasons for the great demand for horse meat is the result of the investigation of doctors and scientists. Persons afflicted with tuberculosis are ordered by the doctors to use only horse meat, and plenty of it.

### College Sentiment.

Dr. Blank, says Lippincott's, about twenty years a professor in the University of Virginia, was on the eve of a trip to Europe, to be absent two years. In pathetic and rather harrowing tones he made his farewell address to his class:

"Yes. I am about to part with you. This is more than distressing to me. Would that there was a window in my breast, my dear boys, that you might see the innermost recesses of my heart."

A stripling in the rear, seized with a happy thought, shouted:

"Professor, would a pane in the stomach do?"

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## CHAPTER III.

It was well for Bertha, and for Haney also, that she did not see him as he sat above his gambling boards, watchful, keen-eyed, grim of visage. "Haney's" was both saloon and gambling hall. In the front, on the right, ran the long bar with its shining brass and polished mahogany (he prided himself on having the best bar west of Denver), and in the rear, occupying both sides of the room, stood two long rows of faro and roulette and other outfits. Always of an evening the place was crowded with gamblers, miners and those who came as lookers-on.

On the right side on a raised seat, midway of the hall, sat the proprietor himself, a handsome figure, in broad white hat, immaculate linen and well-cut frock coat, his face as pale as that of a priest in the glare of the big electric light. On the other side, and directly opposite, Williams kept corresponding "lookout" over the games and the crowd. It would be a bold man who would attempt any "shinnigan" with Mart Haney, and his games were reported honest.

To think of a young and innocent girl married to this stern, remorseless gambler, scarred with the gun and the knife, was a profanation of maidenhood—and yet as he fell now and then into dream he took on a kind of savage beauty which might allure and destroy a maiden. What ever else he was, he was neither commonplace nor mean. The visitors to whom he was pointed out as "a type of our modern Western gambler" invariably acknowledged that he looked the part. He had a smile of singular sweetness—all the more alluring because of its rarity, and it was this smile and the warm clasp of a big soft hand that made him sheriff for four terms in San Juan County, and which would send him to Congress if he set about the task of winning that distinction from the rough men of his district.

The sombre look in his face resembled that of a dreaming leopard and was due to the new and secret plans with which his mind was now engaged. "If she takes me—I quit this business," he had promised himself—and yet he loved it. "She despises me in it and so does the mother."

Then he thought of his own mother who had the same prejudice and who would not have taken a cent of his earnings, and who died in poverty, agonizing over her son's purgatory. "I see no harm in the business," he often said. "Men will drink and they will gamble, and sure I might as well serve their wish as any other—better indeed, for no man can accuse me of dark ways, nor complain of the order of my house."

"I am a business man the same as him that runs a grocery store," he argued with his conscience—to no avail, for he knew that the little hazel-eyed girl considered it wrong.

## Mart Haney's Mate

The Girl and the Gambler

By HAMLIN GARLAND

"She's a clear-headed wan," he thought, with a glow of admiration for her. "She's the captain."

He no longer thought of her as his victim—as something to be ruthlessly enjoyed—he trembled before her, big and brave and relentless as he was in the world of men. "What has come over me?" he asked himself. "Sure, she has me repentant."

All through the week his agents were at work attempting to sell his saloons. "I'm ready to close out at a month's notice," he declared.

At times, as he sat in his place, he lost consciousness of the crowding, rough-hatted, intent men and the monotonous calls of the dealers. The click of balls, the buzz of low-toned comment died out of his ears—he was back in Albany, looking for his brothers whom he had not seen or written to in twenty years. He saw himself with a dainty little woman on his arm, taking the boat to New York. "I will go the best hotel in the city; the girl shall have—"

He roused himself to a touch on his elbow. One of his agents had a new offer for the two saloons. It was still less than he considered the business worth, but Haney, in this mood, said: "It goes!"

"Make out your papers," replied the other man with equal brevity.

During the rest of the evening Haney sat above his layout with mingled feelings of relief and regret. After all, he was a commander here. He knew this business. He loved the companionship and the admiration of the men who dropped round by his side to discuss the camp or the weather, or to invite him to join a hunting trip or some other form of outing. He was liked—there was no question in his mind of that. He felt himself to be one of the chief men of the town, and that he could at any time become their Representative if he chose. For some years (he couldn't have told how) he had taken on a thrift unknown to him before and had been attending strictly to business. He now saw that it must have been from a foreknowledge of Bertha. He had the superstitions of both miner and gambler. The cards had run against him for twenty years; now they were falling in his favor, and he must take advantage of them.

Slowly the crowd thinned out, and at one o'clock only a few inveterate poker-players and one or two young fellows who were still "bucking" the roulette wheel remained, and calling one of his men to take charge, Haney nodded to Williams and they went out on the street.

As he reached the cold, crisp, deliciously rarified air outside he took off his hat and involuntarily looked up at the stars blazing thick in the deep blue midnight sky. With solemn voice he said to his partner: "Well, 'Spot,' that ends Mart Haney's saloon business. We're all in."

Williams felt that his partner was acting rashly. "O, I wouldn't say that! You may get into it again."

"No—the little girl and her mother won't stand for it, and besides, what's the use? I don't need to do it, and if I'm ever going to see the world now is my chance. I'm goin' back East and see how many brothers I have livin'. The old father is doddering round somewheres back there, I'll surprise him, too. Now, have these papers all made out ready to sign by eleven o'clock. I'm going down the valley on the noon train."

"All right, Mart, but you're making a mistake."

"Never you mind, me bucko. It's my game."

As the big man was walking away towards his hotel a woman met him: "Hello, Mart!"

"Hello, Mag; what's doing?"

She was humped and bedraggled, and her face looked white in the moonlight. "Nothing. Stake a fellow to a hot soup, won't you?"

"Sure thing, Mag." He handed her a five-dollar gold piece. "Is it as bad as that? What's t'old man doin' these days?"

"Servin' time," she answered bitterly.

"Oh, so he is!" replied Haney hastily. "I'd forgotten. Well, take care o' yourself," he added genially, walking on in instant forgetfulness of the woman's misery, for his mind was turned upon his younger brother who was "troping it," as an Irish comedian, somewhere. "Handsome Larry" they called him on the bills, and personally he really was handsome, for Mart had met him in Denver and talked family matters with him.

It was not a cheerful conversation, for Larry profoundly and flippantly confessed that he didn't hold any family reunions and that all he knew of his brothers and sisters he gained by chance. "They're all great boozers," he said, in summing them up, Tim is a 'ward heeler' in Buffalo—came to see me at the stage-door loaded to the gunnel. Tom is a greasy, three-fingered brakeman on the Central. Mattie married a carpenter and has about seventeen young ones. Mary died, you know?"

"No, I didn't know."

"Yes, died about four years ago. She was like mother—a

nice girl. Dad sent me a paper with a notice of her death. He never writes, but now and then, when Tim has a fight or Tom gets drunk and gets into the criminal column, I hear of them."

Larry did not say so, but Mart knew that he was lumped among the other poverty-stricken, worthless members of the family, and he did not undecieve him; but now that he was no longer a gambler and saloonkeeper, now that he was rich, he resolved not only to let his superior brother know of his good fortune and his change of life, but also (and this was due to Bertie's influence) he earnestly desired to help his family.

"We had good stuff in us," he said, "but we went wrong after the mother left us."

As he walked a strange radiance came into the world. The distant peaks of the Sangre de Cristo range rose in dim and shadowy majesty to the south, and wondering, astonished at the emotion stirring in his heart, the regenerated desperado turned to see the moon lifting above the crown of the great peak to the east. For the first time in many years his heart was filled with a sense of its beauty.

## CHAPTER IV.

Bertie looked older and graver when Haney entered the Eagle Hotel next afternoon, and his heart expanded with a love that was partly paternal. She looked so young and so pale.

She greeted him unsmilingly and handed him the pen with which to register.

"How are you all?" he asked anxiously.

"Mother gave out this week. It's the heat, I guess. Hottest weather we've had since I came to the State."

"Why didn't you let me know?"

She avoided his question. "We're too low here at Junction. Mother ought to go a couple of thousand feet higher. She needs rest and a change. I've sent her out to the ranch."

"You're not running the place alone?"

"Why, cert—that is, except my brother's wife is taking mother's place in the kitchen. I'm runnin' the rest of it just as I've been doing for a year."

He looked his admiration before he uttered it. "You're a wonder!"

"Don't you think it! How does it happen you're down to-day? You said Saturday."

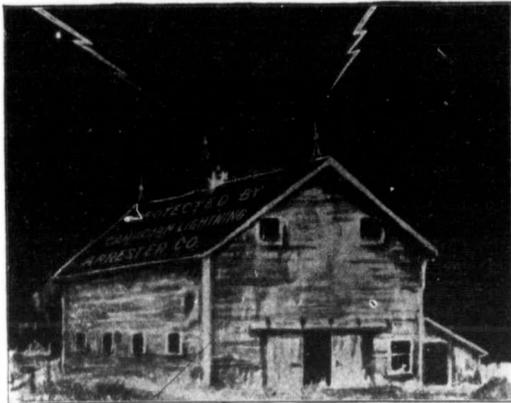
"I've sold my saloons—signed the deeds to-day. I'm out of it."

She nodded gravely. "I'm glad of that. I don't like the business—not a little bit."

He took this as an encouragement. "No, I'm neither saloonkeeper nor gambler from this day. I'm a miner and a capitalist—and it's all for you," he added in a lover-voice, bending a keen glance upon her.

The girl was standing very straight behind her desk and her face did not change, but her eyes shifted before his gaze. "You'd better go in to supper while the

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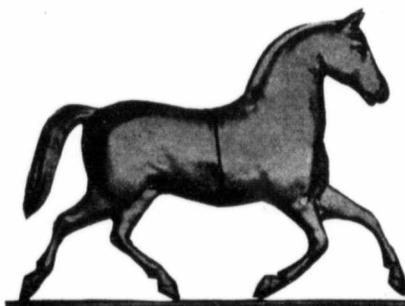
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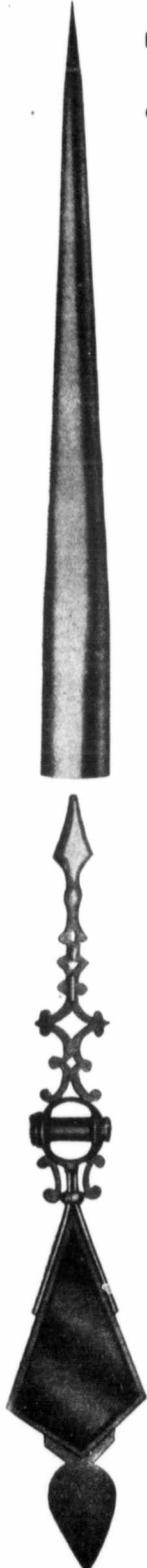


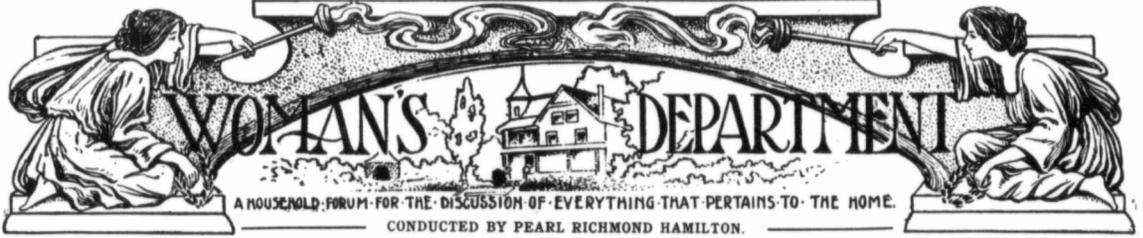
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## The Cost

By Ella Wheeler Wilcox

God finished Woman in the twilight hour  
And said, "To-morrow thou shalt find thy place;  
Man's complement, the mother of the race—  
With love the motive power—  
The one compelling power."

All night she dreamed and wondered.  
With the light  
Her lover came—and then she understood

The purpose of her being. Life was good!  
And all the world seemed right—  
And nothing was, but right.

She had no wish for any wider sway;  
By all the questions of the world unweaved,  
Supremely loving and superbly sexed,  
She passed upon her sway—  
Her feminine fair way.

But God neglected, when He fashioned Man,  
To fuse the molten splendor of his mind  
With that sixth sense He gave to womankind.  
And so He marred His plan—  
Aye, marred His own great plan.

She asked so little and so much she gave,  
That man grew selfish; and she soon became,  
To God's great sorrow and the whole world's shame,  
Man's sweet and patient slave—  
His uncomplaining slave.

Yet in the nights (oh! nights so dark and long)  
She clasped her little children to her breast  
And wept. And in her anguish of unrest  
She thought upon her wrong;  
She knew how great her wrong.

And one sad hour she said unto her heart,  
"Since thou art cause of all my bitter pain,  
I bid thee abdicate thy throne; let Brute  
Rule now, and do his part—  
His masterful, strong part."

She wept no more. By new ambitions stirred  
Her ways led out, to regions strange and vast.  
Men stood aside and watched, dismayed, aghast,  
And all the world demurred—  
Misjudged her—and demurred.

Still on and up, from sphere to widening sphere,  
Till thorny paths bloomed with the rose of fame,  
Who once demurred, now followed with acclaim:  
The hiss died in the cheer—  
The loud, applauding cheer.

She stood triumphant in that radiant hour,  
Man's mental equal and competitor.  
But, ah! the cost! from out of the heart of her  
Had gone love's motive power—  
Love's all-compelling power.

—Chicago American.

## About Women

The children of Mme. Schumann-Heink, the grand opera diva, are to have a foster mother. The singer finds it impossible to devote the proper attention to her family and continue on the stage. After several years' entreaty she has induced Alma Satter of Cincinnati, whom she met in Europe, to make her home at Mount Auburn, New York, and care for the little ones. Mme. Schumann-Heink says her stage work robs her family of maternal attention.

### To Educate Turk Women.

Industrial classes for women have been started in Adana, Turkey, the scene of a massacre of Christians about a year ago. An English society gave \$250 to start, the work and the government of Turkey has given \$20,000. The object is to enable women to become self-supporting.

Mrs. Mary Phares has been elected justice of the peace, at Bloomington, Illinois. Mrs. Phares is unusually well educated, is highly intellectual and well read and her friends believe that she will be a fearless justice.

"It was started in fun," said Justice Phares, when asked about her new post. "Last winter, Attorney L. O. Williams casually remarked, in my hearing, that he was going to see that I was elected justice of the peace, when the first vacancy on the board appeared. He said he thought I knew as much about weighing evidence and deciding controversies as the average masculine justice. I supposed he was joking and laughingly told him to go ahead and that it was all right with me."

Miss Caroline Risque is attracting wide attention. She has developed a remarkable genius in the sculptural depiction of babies. While surrounded by her infant creations recently, a visitor asked her how she felt, referring to her health, to which she replied gazing on the inimitable infantile statues her skill had created. "Like a founding asylum."

Seattle is a city of such wondrous growth and push and hustle that its progressiveness seems infectious, and it is not surprising therefore to learn that the women have caught the step and have recently formed the only women's commercial club in the country. Among the members of this organization are women engaged in almost every line of business, from practising at the bar to operating drug stores and restaurants.

Every member is a practical business woman, so it goes without saying that the aims of the club are far removed from gatherings of the pink tea and sewing circle variety. Dr. Ida M. Jayne Weaver, the president, briefly sums up its purposes thus: "Our aim is to encourage business development, assist in the social and economic welfare of Seattle, foster civic pride, and stand by business women in the business world."

Mrs. Henry Parsons of New York is one of the pioneers in "back to the soil" idea. Farm plots, on vacant city lots are the means by which she approaches the important question of the enriching and saving of child lives in the congested districts of large cities.

Each child is given the exclusive right to a farm plot four by eight feet for three months. Seven vegetables are planted by the children. Mrs. Parsons and her teachers supervise the work. Mrs. Parsons has mothered in this way ten thousand children. It is a successful work.

## Mother's Corner

A man's view of woman in general is, usually, the best test of what his mother was.

### To My Son.

Do you know that your soul is of my soul such part,  
That you seem to be fibre and core of my heart?  
None other can pain me as you son can do;  
None other can please me or praise me as you.  
Remember the world will be quick with its blame,  
If shadow or stain ever darken your name.  
Like mother, like son, is a saying so true  
The world will judge largely of mother by you.  
Be this then your task if task it shall be,  
To force this proud world to do homage to me.  
Be sure it will say when its verdict you've won,  
She reaps as she sowed. This man is her son.

### The Divine Birthright.

Cora A. Matson Dolson

The right of childhood is divine  
Its purity and dreams to keep,  
From sun and air breathe Nature's wine,  
And find fresh growth in full night's sleep.

The fathers and the mothers live  
In new-born souls of yesterday,  
A trust in future years to give,  
And lead in turn down Life's rough way.

To childhood's eye each dream looks fair,  
A promise is a sacred thing;  
Gauge, then, by this that heart's despair  
When hope and trust have taken wing.

The right of life to be well spent—  
This is the heritage of birth:  
Each child soul is from heavenward sent  
To build a higher hope on earth.

### Imprisoning the Toys.

By Eleanor Kelo

My children, like many others, had a very trying habit of dropping their toys on the floor of whatever room they chanced to be using them in. Often, the toys were stepped on and broken, and, again, several times people had hurt themselves by treading on the various articles. Talking did no good. Punishment was inflicted in vain. So I evolved a very efficacious remedy which other mothers might use, imitate or develop.

I announced that every toy found on any floor in the house would be labelled with date of finding and then be locked up in a trunk up attic, there to remain in solitary confinement for a whole month. If any toy had to be consigned to captivity three times in succession, it would be given away to some hospital or home.

I never had to resort to this drastic remedy, however. After Jessie's favorite doll and Robert's box of paints had finished one term of imprisonment, it became the rarest thing to find any toy left carelessly under foot.

My method, I think, was much better in all ways than a constant nagging, or picking up after the children as once I had to do. It worked wonders and there was an element of justice in it which the youngsters instinctively recognized.

## Mothers Are Responsible for Next Generation of Children, Woman Asserts

That the mothers of the land are largely responsible for the kind of men and women who will direct the onward march of civilization in the next generation is the opinion expressed by Mrs. George M. Drake, one of the active workers of the National Congress of Mothers, which held its annual session in Denver, June 10 to 15. "One of the signs of the time that is most encouraging to many thinking people," she says, "and which shows that the trend of the life of the world is upward, is the remarkable awakening of mothers to their responsibility in regard to child-rearing and child-training."

"All over this country and in lands beyond the sea, motherhood is taking on a new dignity and a new meaning. Mothers' clubs, mothers' councils and mothers' meetings are being held everywhere throughout the United States, and all these organizations are banding together into state and national federations, called 'The State Congress of Mothers' and 'The National Congress of Mothers.' Higher ideals of life and of the duties of parenthood are being placed before the public and every effort is made to attract the attention of the people to the fact that the mother is the central figure not only in the home life, and in social life, but also in the economic life of the state.

"As the children are directly and constantly under the care of the mother she wields an influence over their young lives, the effect of which is never to be eradicated. We hear talk about 'the good old times' and 'the good old days of our grandmothers,' and we point to our own home training. Sometimes we wonder why we need scientific knowledge of hygiene, and why we should study psychology and all those other things which it seems so necessary now that we should know for the best and highest interests of home life. We answer because our thought has become awakened to the knowledge that these things must be understood by home-makers, and that they are really necessary for the present times; not only for the home life of the American family, but they are imperatively needed for the good of the families of many who come among us from foreign countries.

"It is essential for the health and the best welfare of the children that the mothers of many foreign families should be instructed in home-making and home-hygiene. And where shall mothers gain this knowledge in a better manner than among other mothers, under competent lecturers in mothers' clubs? A scientific knowledge of household hygiene and economics has become necessary for a full and complete understanding of the best influence which should surround the life of the child in the home. An elementary knowledge of psychology and scientific principles of mental culture is very helpful to mothers in the control of their children, as well as a help to themselves in gaining a mental poise that will unconsciously influence the little ones who will also gain a mental and physical poise from the mother.

"If we go into the school rooms of the city schools and look at the children assembled there, we can read something of the home life in the face of each child. In the home where the mother is fault-finding and excitable the imprint of the home regime is seen in the faces of the children. And what is more pitiable in all this world than to see



such signs in the faces of small children? Compare those children with the sweet-faced little ones whose homes are a perpetual sunshine; see the unconscious joy that lights the countenance of those who come from the home where the mother is self-contained and sweet and note the difference. Rich and poor alike put the picture of the home life into the hearts and lives of their children."

**Women Build the Homes.**

The prominent part which women are playing in the development of the farm interests of the country has emphasized the great part they take in the home making of the nation. Many a little farm house on the prairie, miles away from a neighbor and with few periodicals and only occasional mail, would be a desolate place but for the heart and brain of the woman whose home it is, and it is this spirit of enterprise and comfort which has made many a log hut or dugout more of a home than some of the pretentious houses in the land, for there is a vast difference between a home and a house.

"A house is built of bricks and stones, of sills and post and piers, But a home is built of loving deeds that stand a thousand years.

A house, though but a humble cot, within its walls may hold A home of priceless beauty, rich in Love's eternal gold.

The men on earth build houses, halls and chambers, roofs and domes, But the women of earth—God knows—the women build the homes."

**Good Thought for the Day.**

After the children have started for school and you face the duties of the day, go off by yourself for a minute or two and read a sentence from some helpful book. Not a paragraph neces-

sarily, but just one sentence full of cheer and courage. Then, as you go about your work, think it over until your soul is filled with it. Our minds need food just as much as our bodies, and if we feed the mind with a good thought each day we will grow mentally strong and many a busy Martha has learned that mental strength is just as necessary to bear the burdens of life as is physical strength. We may have the strength of muscle and bone, but if we lack the mental strength life becomes a drag.

**Convulsions.**

Panic Reigns supreme in the heart and mind of the mother when baby, without a moment's warning, goes into a convulsion.

There is one thing to be done: the child must be immersed in hot water to the neck. The mother or attendant will, of course, test the water with the hand, and be certain that it is not hot enough to scald the child. Using a bathtub is, of course, the best method of giving this hot bath, but every home is not supplied with a bathtub. The writer remembers once dumping a dishpan of potato parings into a sink and using the basin. It served the purpose, and every home is supplied with a dishpan. The baby's bathtub is better than any other thing for giving this bath, unless the child has outgrown it; but the first thing that will hold water sufficient to immerse the child is the thing to use. The need is imperative. The head must be wet with cold water during the bath.

A handful of ground mustard added to the hot bath sometimes brings about better results than the hot water without it.

The bath usually gives immediate relief. After it the child is rapidly dried

and rolled in a blanket. If the mustard burns the skin, cold cream should be gently rubbed all over the body.

A physician should be called. The convulsion is over, but the cause has not been removed, and there might be one of half a dozen reasons for the convulsion, that the physician can locate quite readily usually. If the cause is not removed, there may be a recurrence of the convulsion any time. If a physician cannot be called at once, the mother gives the baby a dose of castor oil, and keeps it warm and quiet until she is able to get a physician.

The baby must be moved about just as little as possible getting it undressed. It is gently placed in the water, and must be as gently removed.

The brain grows more the first year of a child's life than any other year and the nervous system is in a most unsettled condition. Both brain and nervous system are readily influenced by disturbances in other parts of the body, and this condition shows itself in convulsions.

Indigestion and disturbances in the bowels are usually the cause of convulsions.

A convulsion calls for means of relief immediately. The mother should give the child an enema of quite warm soapuds. The child must be gently turned on the left side while the enema is given. If the trouble is in the bowels, because of material they have been unable to throw off, this process may remove the cause. The diet must receive attention, as the food is usually responsible for diseased conditions.

**For Diarrhoea.**

The first thing to do when diarrhoea puts in an appearance, is to give the

child a dose of castor oil. After this, the diet receives the most careful attention. If there is something wrong with the milk it is corrected, or the source of the supply is changed. Other foods, if there are any, receive their share of attention, nor does the water the child drinks escape the general inspection. It is sterilized by boiling. If the diarrhoea has not disappeared with the improved food, the mother can prepare a perfectly safe and effectual home remedy by adding an even tablespoonful of plantain seed to a quart of water. It must be steeped slowly for an hour. A half teaspoonful every three hours ought to be sufficient to decrease the activity of the bowels. If it does not, the dose must be slightly increased. Care must be taken not to check the activity of the bowels too suddenly.

**Experience Extracts**

When cooking rhubarb, if a pinch of soda is added, the quantity of sugar can be lessened.

When a mouse hole is in a corner or any other place, hard to cover, try inserting a piece of laundry soap in the hole; they will never go near it.

The care of lamps is an extremely important detail in the mechanism of the household. Unless it fulfills its duty of burning clearly and brightly, a lamp is of no use whatever. And it can not fulfill this duty unless all of its parts are kept free from dust and superfluous oil. If a lamp burns with a disagreeably odorous odor, and there is no leak or other obvious defect, its parts need by-line,

Take the lamp apart as much as possible, put the pieces in a kettle, cover them with cold water to which a handful of washing soda has been added, and bring to a boil. Remove the parts, and after drying thoroughly, adjust them. Very often this treatment is all that a "smelly" lamp requires.

Very pretty bedspreads can be made by taking the tops of old worn out lace curtains, and joining with insertion through which is run some dainty colored ribbon. Bolster covers and sash curtains can be made in the same manner.

If you find grass stains on clothing, apply a liberal solution of cooking molasses, rubbing the molasses in well; then proceed to wash out in soapsuds.

If lamp-wicks are soaked in vinegar and dried, the result will be a bright clear light.

A small paint brush used in blacking the stove will save the hands, as well as reach all troublesome places in the stove.

Add a small amount of clothes blue to your whitewash; it will be much whiter.

Use a clean brick to stand the iron on when ironing instead of the usual ironing stand. It has no holes underneath to admit the air and the irons will retain their heat much longer.

In order to remove the printing from cotton flour, sugar or salt sacks, soak in cold water over night, then boil in soapy water with a teaspoonful of kerosene oil; rewash and put in the sun.

The shells, as well as the filling, for tarts and pies such as lemon etc, must be entirely cold before the filling is put in. The meringue may be put on and browned in the oven as usual. You will always have a crisp crust, never become sodden, if the above rules are followed.

Onions to be fried are better when they stand several hours in salt water.

Put salt and lemon on rust spot. Hold over spout of tea kettle, keep water boiling, and apply lemon and salt. As it dries, rust disappears. This is quicker than drying in the sun and does the work as well.

A few drops of lemon juice added to rice while boiling blanches it and puffs the kernels.

Before serving mayonnaise or salad dressing, whip some cream and mix with it, which makes it thick and creamy.

The water in which potatoes have been boiled is good for cleansing silverware, as it produces a luster like the expensive polishes. It is also a good liquid to cleanse silk with.

**To Keep Out Moths.**

People who dislike the odor of moth balls should know that bags of dried tansy placed among the woolen garments will answer every purpose of keeping out moths, and with none of the disagreeable odor which is sure to tell the story of moth balls. Make small bags of thin white muslin and fill them with the dried crushed leaves and sew up. Place half a dozen of these in the packing box and the moths will vanish. —Elizabeth Clarke Hardy.

**Ridding the Pantry Shelves.**

I have discovered that pantry and bookcase shelves that have been wiped off with a cloth sprinkled with oil of sassafras are free from ants, moths and roaches. The odor of the oil seems to be unbearable to insects of all kinds though it is quite pleasant to the human nostrils. —Nora Johnston.

**Catching Ants.**

I fixed the ants that got into my kitchen cabinet by placing a piece of sticky fly paper under each castor. —Mrs. C. F. Streeter.

**Mosquitoes.**

Perhaps no other insect causes such universal annoyance as does the mosquito. We could save ourselves a good deal of discomfort and illness if we would take the trouble to kill this insect while it is in the early stages of its development. Mosquitoes breed in ponds and vessels of stagnant water and all that is necessary to kill them is to pour kerosene over the surface of the water. This method is effective and a great promoter of health and comfort. —Jane Brown.

**Garnish for Salads.**

Soak dried red pepper pods in hot water. When fresh and red into narrow strips and use as a garnish on slaw or other green salads.—Mrs. H. C. A.

**Mint in Tea.**

In addition to a few drops of lemon to a glass of iced tea add a sprig of mint. This makes a cooling and refreshing drink.—Mrs. E. M. P.

**The Ironing Sheet.**

Make your ironing sheet of strong unbleached muslin cloth and instead of pinning it at the back hem the sides and sew pieces of tape to the sides, about six inches apart, then when the sheet is drawn over the board tie the tape and the sheet will be kept firmly in place and will have no pinholes to start tears.

**For the Garden.**

The peonies soon lose their brilliant beauty. One woman plants climbing nasturtiums behind the peonies and the nasturtiums twine in and out among the peonies and blossom until frost, making the row of peonies a thing of beauty.

**Inexpensive Cedar Chest.**

A good substitute for an expensive cedar chest is made by lining an ordinary chest with the wood from cigar boxes. The cedar wood and the odor from tobacco clinging to the boxes combine to drive away moths.

**Light Fluffy Doughnuts.**

To make doughnuts light, put a teaspoonful of vinegar into the grease in which you fry them. The doughnuts will not then suck up the grease.

**A Remedy for Burns.**

A farmer's wife says the most efficacious remedy for a burn is an Irish potato. When a member of her family is burned, she goes immediately to the potato barrel, cuts a potato into halves, scrapes out the inside, and binds this finely scraped pulp on the burn. It relieves the sting immediately. If the burn is very deep, two or three applications may be needed.

**Recipes**

**BAKED CARROTS.**

Carrots are very wholesome and delicious when cooked properly. They should be boiled for a few minutes, then taken out of the kettle and put into a dripping pan with several thin slices of bacon on top. Season with salt and pepper and bake quite brown. Serve on a hot platter garnished with carrot tops. Carrot tops may be grown by laying several carrots in the cellar window and they make very pretty decorations. —Etta M. Arnold, Idaho.

**DROP GINGER COOKIES.**

One cup sugar, 1 cup butter, 1 cup molasses, 1 egg, 1 tablespoon of soda, 1 large teaspoon of ginger, a pinch of red pepper, 1 cup of boiling water, flour to make a stiff batter. Drop from a tablespoon onto greased pans and bake in hot oven.—A. V. H.

**BARLEY MUFFINS.**

To 1 cup of boiled barley add a pint of sweet milk, two eggs, a tablespoon of melted butter, scant teaspoon of salt and two heaping teaspoons of baking powder. Sift the last-named through a pint of flour and mix with the other ingredients. Bake twenty minutes. —A. V. H.

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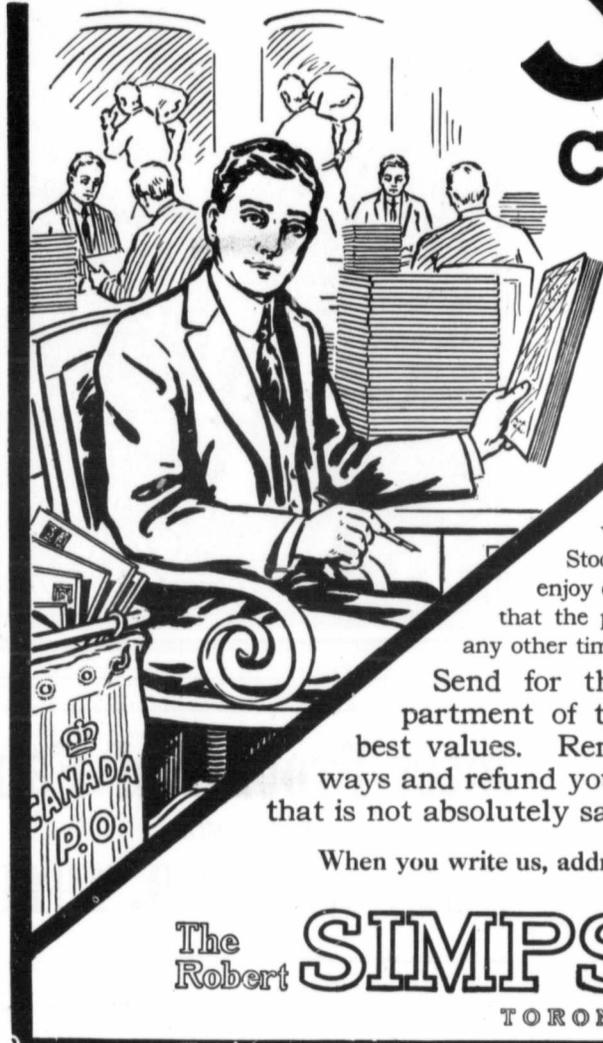
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#### BREAD PUDDING.

Pour one quart of milk into a pudding dish with one cup of dry bread-crumbs. Stir in two well-beaten eggs, one half cup sugar, three-fourths cup raisins, grate over nutmeg and place dish in a larger one of water and bake on the lower grate until custard is set. The fruit may be omitted.

#### PRINCESS POTATOES.

An excellent way to use what is left of the mashed potatoes is to spread, while still warm on a shallow buttered pan and set aside to cool; when ready to use turn out on board and cut with diamond shaped cutter into uniform pieces; brush each piece with soft butter, sprinkle with grated cheese, dust lightly with pepper and place in a buttered baking sheet in a hot oven to brown quickly. Serve hot, garnished with parsley.—L. B.

#### BROWNIE CAKE.

Cream together 2 cups brown sugar and ½ cup butter, add two well-beaten eggs ½ cup chocolate which has been dissolved in ½ cup hot water, add ½ cup

scour milk into which has been stirred 1 teaspoon soda, and 3 cups sifted flour. Flavour with vanilla. Bake in a slow oven.—Parsy.

#### SALAD CUPS.

While tomatoes are still too expensive for many purses try the following and see how delighted you will be. Dissolve one-fourth box of gelatine in hot water, cool, strain in the juice of a can of tomatoes; seasoning with pepper and salt to taste. Pour into teacups to mold, about a fourth full or size of half a tomato. When firm turn out on a lettuce leaf and serve with mayonnaise dressing.—Mrs. H. C. A.

#### EASY FRUIT CAKE.

Two cups of medium brown sugar, three eggs, one teaspoonful each, salt, cinnamon, nutmeg, and cloves, one cup each, raisins and chopped walnut meats, one cup thick sour cream in which one small teaspoonful soda has been dissolved, flour to make quite a stiff batter to which one teaspoon baking-powder has been added.—M. S.

#### STEAK BIRDS.

A nice way of using round steak is by making small "birds." Have the steak cut thin and then cut it into pieces about three inches square. Make a dressing as you would for fowl, fill the pieces of steak with it, double them over and tie with a cord. Roll them in flour, put into a baking pan with enough hot water to baste and bake until tender. Lay the "birds" on a platter and serve with a garnish of parsley. After placing fruit in the cans seal quickly and turn upside down, and let it remain for ten or twelve hours. This forms a sticky surface around the rubber which protects the contents of the can.

In all pickling, canning and preserving, use only granite ware or porcelain lined kettles. All metals are liable to be dangerously attacked by acids.

In canning or preserving strawberries, if each can is wrapped in newspaper to exclude the light, the berries will not lose their rich red colour. If exposed to the light they turn to a brownish tinge. Often there is considerable juice left

after canning strawberries. Try using it by canning rhubarb. It makes a delicious sauce.

Remember, if you want to preserve your fruits whole, no matter what kind, the earlier the sugar is put upon the fruit the harder the fruit will become.

The great point in sealing jelly and preserves, is to keep out the organisms that, by lodging upon it and subsequently growing, would produce fermentation changes. Paraffine being poured in hot, sterilizes the surface of the jelly, killing any organism that may have lodged upon it during the cooling. Jellies and preserves thus sealed are air-tight, and are protected against mold or insects.

Save all the extra juice in canning strawberries to use in punches and ices. Seal hot for winter use.

#### WITH STRING BEANS.

Served English style: Break the seeds from young, tender beans, remove the strings carefully, wash well in cold water. Then drain, cover them with boiling water, and cook until tender. Drain well, put them in a heated dish.

pour a little melted butter over them, season to taste, and sprinkle a little chopped parsley on top. Serve very hot. Beans require from 30 to 60 minutes to cook thoroughly, depending upon their age. If cooked too long they become dark and insipid, and if not cooked sufficiently they will prove tough and unpalatable.

**String Bean Salad:** Use the small, stringless beans, yellow or green, as preferred. Cook until tender in slightly salted water. Drain very dry, and chill until serving time. Then put small crisp lettuce leaves around the edge of the salad bowl, and fill the center with the beans. Pour over them a dressing made with  $\frac{1}{2}$  teaspoon salt,  $\frac{1}{4}$  teaspoon paprika, and four tablespoons each melted butter and vinegar. Toss the beans about lightly until every portion has received some of the dressing. Serve very cold.

**Beans and Potato Rolls:** Mix with  $1\frac{1}{2}$  cups mashed potatoes,  $\frac{1}{2}$  cup finely chopped, cooked butter beans. Add 2 table-spoons melted butter, 2 well beaten eggs, 1 tablespoon minced parsley, and just enough milk to make sufficiently moist to form into little rolls. Place in a buttered pan, cover, and bake in a hot oven 15 minutes. Remove the cover and let remain until lightly browned.

**Nice with roast beef and brown gravy.**  
**Pickled Beans:** String, cover with cold water, and let stand for half an hour. Then drain and cook in boiling salted water until tender. Drain again, turn into well sterilized glass cans, and cover with boiling hot vinegar seasoned with grated horseradish, salt and pepper.

**Canned String Beans:** Select very young, tender beans, string them and cut into  $\frac{1}{2}$  inch pieces. Wash thoroughly and drain. Pack perfect glass cans quite full, shaking them down to make as compact as possible, and fill up with freshly drawn water. Place the jars in a boiler with fresh clean, straw beneath and between them. They must not be allowed to touch each other. Lay the covers loosely on top of the jars. Half cover the jars with cold water, place the boiler over the fire, cover closely, bring gradually to a boil, and keep boiling constantly for 2 hours. Lift out a jar at a time, screw on the tops, and keep in a cool, dark place.

**Beans, Canadian Style:** Prepare and cook young beans tender in slightly salted boiling water. They should be almost dry when done. Stir one teaspoon flour in  $\frac{1}{2}$  cup rich milk or cream, add a generous lump of butter, and mix smoothly with the beans. Cook two or three minutes longer, season to taste, and serve very hot.

**Hodge Podge:** Boil string beans, green peas and young beets tender. A lump of butter to each and shake until it is melted and absorbed. Season and then mix by spoonfuls in a heated dish. Pour over a little clear melted butter, and sprinkle lightly with vinegar.

**Bean Hash:** One cup each cold boiled rice, chopped roast beef, and cooked beans. Season to taste, moisten with a little gravy, and cook in a frying pan with a generous lump of butter until the gravy is almost entirely absorbed. Turn very hot on squares of buttered toast.

## Health Hints

### Emetic.

Whenever poison has been accidentally swallowed, vomiting should be forced without a moment's delay. Remember that soap and water is a quick emetic and usually at hand. A cupful—or two—of strong soapsuds and water will bring up the offending intruder and also prevent the average poison from beginning its destructive action.

### Vomiting Indigestion.

Where you have a case of indigestion with vomiting after every meal and resisting all tonics, digestives, etc., take a glass of hot milk, lie down and apply hot fomentations over the stomach for half an hour. You will be surprised to find that you retain and digest the milk and before long can take other foods.

### Brain Injury from the Sun.

Many people receive brain damage without its being actual sunstroke. Yet

injury has been done and when once the sun has affected the brain, great care must be exercised, as the injured one is very sensitive to the sun's rays. Wherever the sun shines powerfully, people exposed to the rays ought to be very careful. I will tell you how to prevent the sun's rays affecting the brain cells. This information should prove of the utmost value to thousands of people. Wear an orange lining inside the hat or a dark red lining if the orange colour cannot be obtained. A large straw hat with even the brim lined with orange or red will protect the eyes, the head, and the back of the neck. When in India and Africa, an acquaintance used this device and was never harmed by the sun, whereas Europeans and Americans fell victims by the hundreds. Here's the reason for it. The sun has two kinds of rays, the caloric ray and the actinic ray. The caloric ray is the good ray, while the actinic ray is very penetrative and is the vibratory ray that does the harm. Orange or red colours arrest the actinic rays. Therefore, if you have an orange lining in your hat you are safe from the harmful effects of fierce sunlight. Nature tries to do this when we are exposed to the sun. Look how the skin turns red and finally a reddish brown. This is simply nature trying to protect us. In the tropics now they are even lining the clothes with orange-coloured linen. Remember this advice and pass it on to any friends who may be going to a tropical climate.

### Water for Babies.

Babies need water, and frequently they are ill, feverish and fretful because people don't know enough to give it to them. Because milk is a liquid, many parents get the mistaken notion that nothing else is necessary in the way of fluids. This is quite wrong. A drink of water several times a day should be given to every baby. Milk forms curd in the stomach—practically a solid mass—and a little water helps the baby's digestion and its kidneys and acts beneficially in many other ways.

### Quinsy Sore-Throat.

Quinsy should be treated promptly and this is one of the few ailments where a purge should be taken with Epsom or Rochelle salts, and the throat should be gargled with a weak solution of alum. The water in which the alum is dissolved should be warm. Or dissolve a table-spoonful of ordinary salt in two-thirds of a tumbler of water.

A felon can be cured by common rock salt dried in the oven, pulverized and mixed with equal parts of spirits of turpentine. Keep a cloth saturated with the mixture on the affected parts for twenty-four hours and the felon will disappear.

Onions are soothing to the nerves, cleansing to the system and a general tonic. They help to produce sleep and are valuable in breaking up colds. A syrup made from covering sliced onions with sugar and placing on the back of the stove to simmer down is excellent for coughs and colds of all kinds. Onions are a great absorbent and take up all the impurities in the air. They should never be eaten after they have been cut and exposed to the air for any length of time. A dish of sliced onions placed in a sick room will soon absorb the bad air.

The pineapple is well known as one of the healthiest of fruits, but its real medicinal value is seldom fully realized. In Hawaii experiments have been made which prove that the pineapple has digestive principals closely resembling pepsin in its action and it is often used in some forms of dyspepsia. One can easily prove its digestive powers by laying a thin piece of uncooked beef between two slices of pineapple and observing the change which takes place within a few hours. In diphtheritic sore throat and croup, pineapple is very valuable and often given as a medicine. The false membrane which causes the closing of the throat seems to be dissolved by the fruit acid and relief is almost immediate. It also acts as an appetizer and will coax an unwilling appetite to more readily relish food.

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## Fashion Fancies

### Low Heels for Shoes.

It is predicated that the peasant clad in dress will extend to footwear and heels of shoes will be lower, like those worn by peasant women.

### Flowered Lawns.

Pretty flowered lawns, sold for 15 cents a yard, make serviceable and dainty dresses for summer wear. Make them plain, with short sleeves, Dutch neck and a girdele of soft satin to match the flowers.

### Blue Linen Suit.

A blue linen suit, made with a cut-away coat and trimmed with an unpretentious design in blue braid, is among the nattiest of the summer suits, and the wearer will present an unusually chic appearance if she carries a blue linen parasol, the exact shade of the suit.

### Belts With Linen Suits.

Belts are worn extensively with linen suits. Red, white and black patent leather belts are all in great demand and the choice is simply a matter of taste, as one is quite as stylish as the other. A leather belt on a young girl is especially smart. A linen suit in natural color may be trimmed with bias bands of blue linen, the coat made with Russian blouse effect and worn with a patent leather belt.

### Plaids for Little Folks.

Plaids in gingham, percale and linens are always popular for children, and this season they are used in some new combinations which are as effective as they are stylish. One design calls for a white blouse with a plaided skirt of plaid. Some white dresses are trimmed with bands of plaid on both waist and skirt. And there are dresses of plaid with the bias bands of plain goods. Children's clothes are always pretty in their quaint likeness to garments of the elders, but this year the styles for children seem to be unusually attractive, not only in design, but in color combinations also.

## For the Tired Hour

The man with the sure thing never asks what, but who he shall do.

### An Open Confession.

The minister of a rural church gave out the hymn, "I love to Steal Awhile Away," etc. The regular preacher being absent, his function developed upon a good old deacon, who commenced, "I Love to Steal," and then broke down. Raising his voice a little higher he then sang, "I Love to Steal." At length, after a desperate cough, and clearing of his throat, he made a final demonstration, and roared out, "I Love to Steal." The effort was too much. Every one but the parson was laughing. He rose, and with the utmost coolness said: "Seeing our brother's propensities, let us pray."

### The Girl and the Cow.

A wealthy city man had purchased a tract of beautiful farm land and stocked it with fine horses and cattle. His daughter, a young woman raised in town, knew but little of country ways. But she was anxious to learn and fearless when exploiting the little knowledge she thought she possessed.

One evening, soon after her arrival at the farm for the Summer, she was seated on the broad veranda, entertaining guests from the city. From a nearby pasture, borne on the night air, came the faint and mellow loving of a cow. "Oh, listen!" exclaimed the girl. "Hear that dear cow mewing for his colt!"

## A Musical Party

Begin the evening with "quartettes." Write upon slips of paper the names of well-known songs such as, "America," "Home Sweet Home," "My Maryland" and so forth. Cut each slip into four pieces and drop the pieces of a number of the slips of paper into a basket. The guests match slips by the words written upon them, and when all are matched each four in turn must sing the song written upon their slip.

Then pencils and paper can be given out for this contest.

## Musical Terms.

1. Used in driving? 2. Bottom of a statute? 3. A reflection on character? 4. Used on a parcel? 5. An unaffected person? 6. A place to live? 7. An association of professional men? 8. Necessary on a check? 9. Index to nationality? 10. What we would die without? 11. Used in the Alps? 12. Whom mermaids flirt with? 13. Part of a fish? 14. A girl's name? 15. Often passed in school? 16. Characteristic of a bargainer? 17. Necessary to bicyclists? 18. Something no one can stop? 19. Needed at night? 20. Sad happenings?

The answers are: 1. Lines; 2. Bass; 3. Slur; 4. Cord (chard); 5. Natural; 6. Flat; 7. Bar; 8. Signature; 9. Accent; 10. Air; 11. Staff; 12. Swells; 13. Scales; 14. Grace; 15. Notes; 16. Sharp; 17. Pedals; 18. Time; 19. Rest; 20. Accidental. Then can follow the filling in of a

## Musical Love Story.

Each space is to be filled with the name of a well known song. There lived in \_\_\_\_\_, a young man named \_\_\_\_\_. He fell in love with a charming girl called \_\_\_\_\_. Their love was of long standing for they had first begun making \_\_\_\_\_ at each other when in those good old \_\_\_\_\_. But true love never runs smoothly. There was one who objected; this was her \_\_\_\_\_ who handed him a \_\_\_\_\_. In consequence of which they used to meet in the \_\_\_\_\_ or down by the old garden gate \_\_\_\_\_. The evenings were very warm and pleasant as it was in the \_\_\_\_\_. One evening when there was no one to watch them but \_\_\_\_\_, he told her of his love and said— "for I'm always \_\_\_\_\_ love of you. She called him her \_\_\_\_\_ and said, "I'll willingly \_\_\_\_\_. At last they gained her parents' consent through the effort of a relative whom she called \_\_\_\_\_. So they were married in the \_\_\_\_\_. The bridesmaids were the \_\_\_\_\_. The wedding march was played by \_\_\_\_\_. They spent their honeymoon \_\_\_\_\_ way down on the \_\_\_\_\_, after which they went to their \_\_\_\_\_ which is a beautiful place on the \_\_\_\_\_ far away. And now on \_\_\_\_\_ evenings they sit in the \_\_\_\_\_ and listen to the \_\_\_\_\_.

The names of songs are: 1. Dixie-land; 2. Ben Bolt; 3. Sweet Marie; 4. Goo Goo Eyes; 5. School Days; 6. Daddy; 7. Lemon in the Garden of Love; 8. Shade of the Old Apple Tree; 9. When the Moon Played Peek-a-Boo; 10. Good Old Summer Time; 11. The Man in the Moon; 12. Love Me and the World is Mine; 13. Dreaming; 14. Honey Boy; 15. Leave My Happy Home for You; 16. Old Uncle Ned; 17. Church Across the Way; 18. Two Little Girls in Blue; 19. Whistling Rufus; 20. Traveling; 21. Susanece River; 22. Home Sweet Home; 23. Banks of the Wabash; 24. Moonlight; 25. Shadow of the Pines; 26. Mocking Bird.

Prizes may be given for these contests, sheet music being very suitable. Ice cream and cake may be served, the cake cut in squares, iced white with a bar of chocolate lines and one or two chocolate "notes" on each.—Mrs. Joe G.

## Correspondence

Dear Editor:—Rhubarb is one of the best summer tonics, and its cheapness certainly brings it within the reach of all. It is the only instance of a vegetable being used in every respect as a fruit. The puddings and pies made with the stalks of the plant are equal in juice-giving properties to any made from fruits.

Do not strip the stalks until the skin begins to get tough, unless it gets bruised. For children it is the best medicine that can be taken; it is so wholesome, cleansing and cooling to the system.

Here are a few recipes for dishes which can be made from rhubarb.

### Rhubarb Ice Cream.

Put one quart of rhubarb into a saucepan with half a pint of water and six heaping tablespoonfuls of sugar; allow to boil till the rhubarb is tender, then rub through a sieve. Add a few drops of coloring and one tablespoonful of ginger extract. Mix with one pint of sweetened whipped cream or custard and freeze.



## THE Girls' Cozy Corner

### THE COMPANY LADY.

The Company Lady has a hat on her head;  
My mama only has hair.  
The Company Lady always wear gloves;  
My mama's hands are bare.

In winter, the Company Lady wears fur.  
In summer, a chain of gold;  
And every one always speaks kindly to her,  
And her dresses are never old.

One time when I broke one of sister's best  
cups

She shook me and made my teeth  
chatter;  
But when the Company Lady broke one,  
She said, "Oh, it doesn't matter."

I'd like very much to have nothing to do  
But drink tea on a porch that is shady;  
So when I get big, I'll try very hard  
To be a Company Lady.

Henrietta Lee Coulling.

### MULTIPLICATION.

I had a little secret  
And it just belonged to me,  
But Betsy Morris stayed all night,  
And as we watched the fading light,  
It slipped out ere I knew 'twas gone,  
As slyly as could be.

And now my little secret  
That I guarded faithfully,  
Belongs to Betsy Morris, too,  
The whole wide town,—and me.

### GIRL'S PRIZE LETTER.

Dear Cousin Doris:—This is my first  
letter to your interesting corner. I have  
read so many letters I thought I would  
write.

I am planting a flower garden this  
spring, and I am going to tell you what  
my favorite flowers are which are Astors,  
Sweet Peas, Zenas, Morning Glories, Ever-  
lastings and some other flowers that I do  
not like as well.

We have only a half a mile to go to  
school. I have not been going to school  
all winter for my eyes have been sore, but  
I have started again. My studies are  
Geography, History, Reading, Writing,  
Spelling, and Drawing.

I hope to see my letter in print. I will  
close now wishing your paper every suc-  
cess. Your Loving Cousin, Lizzie Sin-  
clair.

Young, Sask.

Dear Cousin Doris:—I will now take  
my time and write you and let you know  
my favorite game. It is hide and go seek.  
We play it this way. One is supposed to  
stand and not look at all and then the  
others go and hide and then when they  
have hidden, the one who blinds tries to  
find them and then he runs back to the  
goal and puts on the door or wall and says  
"one, two, three" for the name of child—or  
the ones who have hidden try to get there  
before him and if they all get there before  
him he has to stand again and so on. To-  
day it is awful stormy. Today I went out  
to get some snow and the wind nearly took  
me away. We have a gang here now. It  
works for the Canadian Pacific Railway.  
Wishing the club every success.

Would like a Prize Book. Yours truly,  
Miss Olga Setrud, Young, Sask., box 31,  
Can.

Last month I promised a continued  
story to the girls. I hope my girl readers  
will enjoy the story. C. D.

### IN THE LITTLE OLD LEATHER TRUNK.

By Charles Wisner Barrell.

Almost every summer since she could  
remember, Ellen Penfield had spent her  
vacation days on her grandmother's little  
farm down in Bedminster County. For,  
although born and bred a city girl, Ellen  
revealed in the free outdoor life of the  
country, and, besides, she had always been her  
grandmother's favorite. The eldest girl  
in a family of six, Ellen had gone to work  
as a stenographer in a law office in the  
city the year before, a few weeks after her  
seventeenth birthday, to assist in the  
support of the hungry and growing household  
of which she was a part.

This year she had decided to spend the  
two weeks allowed her by the company  
for which she worked, on Grandmother  
Penfield's place, as usual. It would be  
rather a sad homestead to visit, for, since  
her son's death, the old lady had been ob-  
liged to have her farm work done by a  
hired man. To make matters worse,  
there was a mortgage for nine hundred  
dollars on the farm, which had been held  
by Squire Harding of Bedminster Center  
since Grandfather Penfield's death, and  
during the past year Mrs. Penfield had  
fallen behind on the interest, owing to the  
expenses entailed by her son's fatal illness.  
Ellen often lay awake at night, after a  
hard day over her type-writer, endeavor-  
ing to think of some method whereby she  
could raise the money to pay off the hateful  
mortgage, so that her grandmother could  
pass the remainder of her days in  
peace.

It was after six o'clock in the evening  
when Ellen found herself once more before  
the familiar and dearly loved old farm-  
house.

Grandmother Penfield was looking for  
her on the front porch in a new linen cap  
and a spotless but visibly worn tea-gown.  
Ellen bounded over the wheel and caught  
her grandmother in a bear-hug, which  
made Mrs. Penfield cry out in make-  
believe alarm.

A moment later, with arms about each  
other, they turned and passed into the  
cheery, white-curtained little dining-room,  
where Ellen had spent so many joyous  
hours in times past.

It was Thursday afternoon of the last  
week of her visit. Grandmother Penfield  
and she were canning the last of the  
roses, and Ellen was offering the last  
tightening twist to a stubborn two-quart  
jar, when she straightened up and said:  
"Oh, Grandma! I just happened to  
think—what ever became of the deed to  
that section of Texas land that Grandpa  
bought so many years ago—and that  
turned out to be worthless land. Won't  
you let me see the deed, please, if you still  
have it?"

Her grandmother smiled dubiously, but  
she said:

"Why, of course you can see it if you  
really want to. You'll find it in the old  
leather trunk up under the rafters in the  
northeast corner of the attic."

A moment or two later Ellen had  
descended the back stairs to the low-roofed  
attic, and after rickling her way through  
the array of no longer used clothing and  
broken-down furniture which hung from  
the rafters and cluttered up the floor space,  
she found the little old leather trunk in the  
corner. Propping a decrepit chair against  
the wall, she placed the candlestick upon  
its seat and pulled the trunk out of the  
dim corner where it had reposed so long.  
A pale shaft of sun from the dormer-  
window behind her, together with the  
cheery beam of the candle, lighted up the

scene, so that Ellen could readily see to  
unbuckle the heavy straps which bound  
the trunk and to insert the key in the lock.  
It turned with a complaining creak and  
snap, and as it did so Ellen tossed the lid  
back and peered within.

An odor of camphor greeted her. Re-  
membering her grandmother's directions,  
she lifted out the tray and began to ex-  
plore the inner recesses of the antique  
trunk. One by one she laid the articles  
upon a paper on the floor beside her.  
There were some rolls of homespun linen,  
and one or two old-style bodies of flowered  
satin, a fancy waistcoat in which her  
grandfather had once shone resplendent,  
an old dagger-top hat which had become  
cracked and was now wrapped in a piece  
of watered silk, some scuffed-out baby  
shoes, a thick bundle of letters, yellowed  
and creased with time, a quaint old silver  
drinking-cup, the unfinished pattern of a  
fancy pillow-cover, a worn leather wallet,  
two or three yards of crinoline, and then,  
right at the bottom of the trunk, a packet  
of papers wrapped in a linen sampler and  
what appeared to be two small account-  
books tied together with stout white  
waxed.

With the papers was a deed from  
"The Texas Land Improvement and  
Realty Company," the reassuringly official  
appearance of which was increased by the  
half-dozen revenue-stamps on its outer  
fold.

Ellen opened the document and began  
to read. The law-book wording in which  
it was written was, though somewhat im-  
pressive, rather monotonous reading.  
But Ellen studied it out from start to  
finish with quickening pulse. Suppose  
this land really were valuable! She had  
heard of such things happening before—of  
swindlers who had sold better than they  
knew. Ellen's eyes burned hopefully as  
she laid the deed on the chair beside the  
candle and began to wrap the other papers  
up once more in the sampler. She would  
take the deed to a good real-estate lawyer  
up in Lancaster in the morning and find  
out definitely whether there was any trace  
of a foundation under her air-castle. As  
she put the packet back in its proper cor-  
ner, her glance fell casually upon the two  
old account-books bound together with  
the worsted string. A sudden impulse  
prompted her to have a look at them. So  
she lifted the books to her knee. But  
while they were in mid-air, the leaves of  
the under one spread apart a trifle, and  
several bits of colored paper fluttered out.  
In the uncertain light Ellen did not recog-  
nize what they were, but when she picked  
them up and held them nearer the candle  
she saw that they were old postage-  
stamps. And what queer-looking old  
things they were, too!

Ellen laid them carefully on top of the  
deed and began to untie the worsted that  
bound the books. Perhaps there were  
more of them inside, equally interesting.  
With this thought in her mind, the girl be-  
gan to examine the contents of the book  
from which the fugitive stamps had fallen.

It proved to be a small day-ledger of  
about a hundred pages in thickness.  
Each page was ruled off into little squares,  
and within many of these postage-stamps  
were neatly tipped. On the red line at  
the top of each page was written, in a  
round boyish hand, a brief description of  
the stamps pasted below. Some pages  
were completely filled, but most of them  
bore only a half-dozen or more stamps.  
Ellen leafed the book through slowly.  
It probably contained a trifle more than  
three hundred stamps, counting the loose  
ones in the back and those on the little  
bundle of envelopes which had caused the  
homemade album to bulge in the middle.

Grandmother Penfield had begun to put  
the jars of fruit away in the pantry when  
Ellen reached the kitchen again with the  
deed and the book of stamps under her  
arm. She set a chair near the window for  
Mrs. Penfield and got her spectacles from  
the mantelpiece in the dining-room.  
Then she handed the deed to the old lady  
and put the book in her lap. Mrs. Pen-  
field unfolded the paper, looked it over  
carefully, and at length passed it back to  
the girl with a sigh.

"I know it is very high-sounding as it  
reads, dear," she said, "but it's only a  
heartless fraud. Your grandpa was cheated  
out of twelve hundred dollars by the  
men who got it up. There were a lot of  
other people around the country who were  
taken in by them, too. When your grandpa  
went to investigate the location of the  
land, he found that it was part of a swamp  
and under three or four feet of mud and  
water. He hired a lawyer to prosecute the  
rascals behind this company, but when it  
came to trial we couldn't get a cent back.  
It was a wicked piece of business. How-  
ever," she went on, "if you really want to  
satisfy yourself about the matter, you can  
go over to Lancaster to-morrow and see  
Judge Arthur S. Bentham, who has an  
office in the Post-office Building. He was  
the judge that tried the case. He won't  
charge you anything for his opinion, for he  
used to be a very close friend of your  
grandpa's, and I know he felt very much  
disappointed when he had to decide the  
case against us. He'll tell you all about  
the matter and explain how it was the  
members of this company were able to  
keep their ill-gotten gains."

Mrs. Penfield began stroking her grand-  
daughter's hair as Ellen leaned down be-  
side her to open the book of stamps on her  
lap.

"Why, where did this come from,  
Ellen?" she inquired, as her eyes lighted  
upon the battered ledger.

"I found it in the old trunk with the  
deed, and I brought it down to ask you  
about it. You see, there are a whole lot  
of postage-stamps in it, and old postage-  
stamps are sometimes worth money, they  
say. I know a girl who has a collection  
worth twenty-five dollars. If these are  
worth half as much as that, and you'll let  
me sell them for you, you'll have enough  
to buy yourself material for a nice new  
dress."

Mrs. Penfield was turning the pages of  
the old ledger reminiscently.

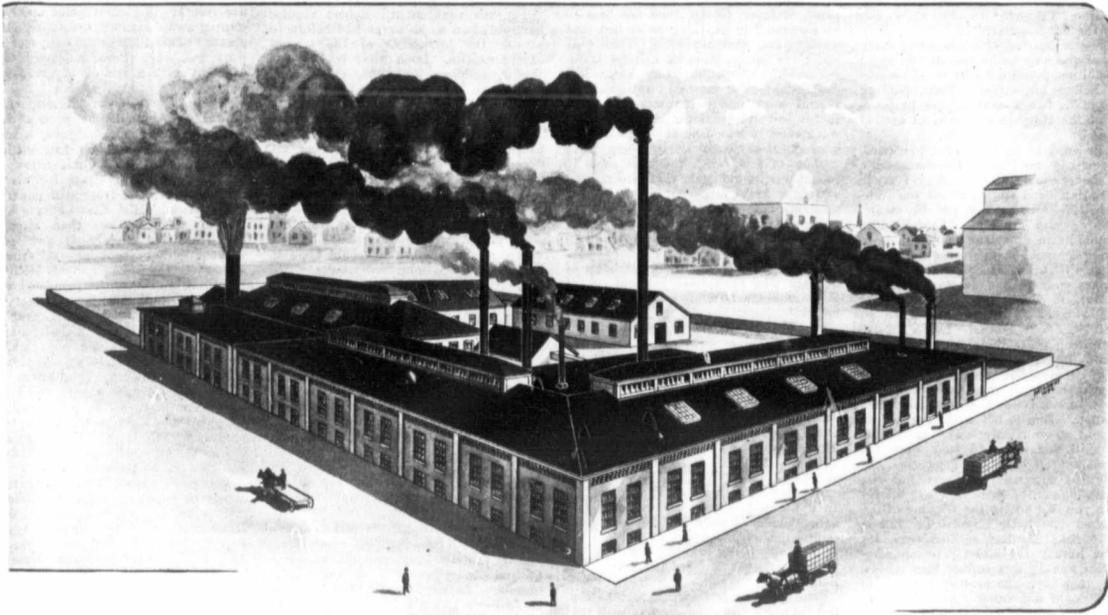
"Why, this is the stamp collection that  
your uncle Paul made when he was a boy.  
I must have put it away in that trunk  
years and years ago, for I'd quite forgotten  
about it. I remember now how he used to  
have me save all the stamps that came  
on the letters and how he got your grand-  
pa's friends to send him stamps from all  
over the country by exchanging with  
them. The poor boy died when he was  
just turned twenty-one."

Ex-Judge Bentham's law offices were on  
the third floor of the Lancaster Post-office  
Building. The judge was usually among  
the first occupants of his suite to arrive,  
but this Friday morning in late August he  
had hardly settled himself in his revolving  
chair, before his brief-strewn desk, when a  
visitor was announced.

It was Ellen, arrayed in her most be-  
coming frock, with a square, thin package  
under her arm and a long legal envelope  
in her hand.

Judge Bentham was somewhat past  
middle life, but he had always been dis-  
tinguished for his unflinching courtesy. As  
Ellen entered his office, at the direction of  
his stenographer, the old jurist arose and

Continued on page 86.



Plant of The Brandon Implement and Manufacturing Company, at Brandon, Man.

**STEWART NELSON CO. CHANGE NAME AND INCREASE CAPITAL.**

The Stewart Nelson Co., Ltd., which for a number of years has been favorably known to the trade throughout Western Canada, has been absorbed by The Brandon Implement and Manufacturing Co., Ltd.  
 The new company will be composed largely of the officers who conducted the business of the Stewart-Nelson Co. Hon. G. R. Coldwell being president, Mr. I. C. Nelson vice-president and Mr. P. W. L. Briar managing director.  
 The Stewart Nelson Co. was formed in September, 1904, at which time Mr. I. C. Nelson succeeded Mr. Geo. Metcalfe and the name of the company was changed. In June, 1906, Mr. P. W. L. Briar, who had for many years been identified with the Wilkinson Plough Co. and the Toronto Pressed Steel Co., of Toronto, took over the interest formerly held by Mr. A. Stewart and assumed the management of the firm. Owing mainly to the energetic efforts and shrewd business capabilities of Mr. Briar the company was piloted through the storms and stress of depressing times and came to be a success both from the point of view of the stockholders and also of their many customers.  
 The Brandon Machine Works Co., Ltd., whose plant will be operated by the new company, was organized in 1897 and the main buildings of the factory, of which an illustration appears herewith, was put in operation in 1899. Additions have however been made from time to time to accommodate the increase in business until at the present time the factory is considered one of the principal industries of the Wheat City.\*

**THE Canadian Boy's Camp**

**THE NORTH AND SOUTH POLE MEN.**

Said North Pole Man to South Pole Man,  
 "And how is the weather with you?"  
 Said South Pole Man to North Pole Man,  
 "There is something wrong with the dew."  
 It ought to be wet, but it's frozen yet,  
 And I don't know, when it will thaw.  
 My spirits are low, and I'm tired of snow,  
 And the weather is chilly and raw.  
 We both live in the Frigid Zone,  
 And I think it's a horrible plan,  
 So one of these springs let us pack up our things,  
 And visit the Equator Man."  
 "O Equator Man," said each Polar Man,  
 "We'd like to live always in sun."  
 To each Polar Man, said the Equator Man,  
 "You'd very soon wish to run.  
 You'll burn to the bone in the Torridy Zone,  
 And it's never the place for you,  
 For the sun's as hot as a boiling pot  
 And will roast you through and through.  
 Lo North Pole Man and South Pole Man  
 Both said "That is good advice."  
 They cling to the Poles, and the earth  
 still rolls  
 With the heat, the snow, and the ice.

**BOY'S PRIZE LETTER.**

Crystal City, Man.  
 Dear Cousin Doris:—This is my first letter to your paper. I have read all the letters in your paper and I think they are fine. I caught a little mud turtle and it became quite tame. It would come to the top of the water to get fed. I fed it grasshoppers, flies and worms. I could let it go in the water and it would not go away. I caught another one and it was

wild. I had it in a tub of water. I nailed a piece of wood at the side and he used to get upon it. I caught a big one and it was laying eggs. I took two of them and they had no shell but a thick skin. I wanted to see if any little ones would come out. But a gopher came and dug them up and ate them. I am yours truly,  
 Harry Ridgeway, age 9 years.

Dear Cousin Doris:—I must now write you a little letter. I saw my last letter in print for which I received a nice book. I am a boy twelve years old and live on a farm of 100 acres. My father has a saw-mill and does a lot of sawing. My favorite game is base ball which all boys will be able to play so I suppose I need not describe it. I am in the Senior Third class and like school very well, but it is 2 1/2 miles before I get to school.

I think you have picked a good name for the boys' corner, and wish with all my heart that the boys will write to this interesting club. My mamma was sick for nearly two years with dropsy which no doctor could cure so on Feby. 16th my dear mother died and I must now live through long sorrow. I guess I will soon have to come to a close. I hope this escapes the W. P. B. which is a dreaded thing by writers of the Canadian Boys Camp.

Would any boy wish to write to me. I would be much pleased.  
 I wish this club every success.  
 I remain, Daniel G. Subach, Carlingford, Ont.

If You Please, Miss, Give Me Heaven.  
 "Papa I am so sad and lonely" sobbed a tearful little child,  
 "Since dear mama's gone to heaven, papa, you've not smiled,  
 I will speak to her, and tell her that we want her to come home;  
 Just you listen I will call her through the telephone."

"If you please, Miss, give me heaven for my mamma's there,  
 You will find her with the angels on the golden stair;  
 She'll be glad it's me who's speaking, call her won't you please?  
 For I want to surely tell her we're so lonely here."

When the girl received the message,  
 Coming o'er the telephone,  
 How her heart thrilled in that moment,  
 And the wires seemed to moan;  
 I will answer just to please her,  
 "Yes, dear heart, I'll soon come home,"  
 "Kiss me mamma, kiss your darling,  
 Through the telephone."  
 Daniel Subach.

I want every boy who reads this letter to write a letter to Daniel Subach, Carlingford, Ontario. I am going to write just the nicest letter I can write to him. It is a terrible sorrow for a boy to lose his mother and Daniel misses her, so let us all try to help him bear his loss. Let him feel that we all want to cheer and help him. Cousin Doris.

**The Ariel Scholarship**

For more than a year Robert had dreamed of aeroplanes; he had planned aeroplanes, and the one wish of his life was actually to see one of these wonders of the air soaring about, guided by the hand of its intrepid inventor. Now he was to have part of this desire fulfilled; he was to see and hear one of the greatest authorities on the subject, though he would not witness a flight.  
 And when the great man's address closed with a startling, thrilling announcement, Robert was raised to the very pinnacle of delight, and vowed then and there that he would win the prize and show the inventor that Hillsford

had produced more than one son of great mechanical ability. The inventor's words were:

"And now I feel that I should do something for the city that furnished me a birthplace. To my mind I can bestow upon her no finer gift than one which will stir the ambition of her boys, which will cause them to use their brains and their hands, and to be of high courage. I have set aside in one of your banks a sum of money, the interest upon which will suffice to pay the expenses of one boy at any college in the United States which he shall desire to attend. This scholarship, which I have named the Aerial Scholarship, will be given to that member of the next graduating class who shall present himself at the next commencement with an aeroplane, made entirely by his own hands and according to his own designs, and which shall succeed in flying for a distance of two hundred yards. If there be more than one machine presented the prize shall go to the designer whose craft shall prove itself best in the judgment of myself."

When the speaker took his seat Robert did not need to restrain his desire to shout, for everybody in the big auditorium was cheering frantically.

"I'll win in," Robert whispered to

**STAMPS**  
 I buy collections and single stamps for cash. Highest prices paid.  
**H. C. H. SPRAGUE**  
 361 Main Street  
 WINNIPEG, CANADA

himself. "I'll win it. I'll show dad that I'm not a quitter."

Home he hurried with the news; every step of the way he hurried at top speed and did not pause until he stood breathless before his father. Then, panting and puffing like a small engine, he poured out the story in a torrent of excited words.

"I'm going to go for it, dad," he cried, "if you'll let me. It's a big chance—it's my chance—and I'll win. May I try?"

Mr. Hammond smiled at his son's impetuosity. "It's a big job to tackle, Bob," he said gravely. "There's more to building an aeroplane than there is to making a spool engine, or even a real engine. It takes study and planning; it takes courage and determination...."

"... But, if you think you can make good, you have my permission to go ahead."

"And can I use the machine shop and tools?" Robert eagerly asked.

"Of course; but before you get to using tools at all there will be a long period of study and of designing and planning. This is not a thing that can be done at hurriedly. The more care and skill you bring to your work the more likelihood there is to success.... Go into it with all your heart, Bob. Go in to win, for the prize is worth all the effort you can put to the winning of it."

Dinner had little interest for Robert that night. He had secured from the public library the latest book on aerodynamics and it was calling him with a voice that even the healthy appetite of youth could not resist. As soon as he could raise from the table he bolted for the library and there he sat with his nose buried in those fascinating pages until his father was obliged to order him off to bed. Even in his dreams he could not lay aside the subject, and all night long he sailed through the air in the most wonderful aeroplane ever conceived. He darted and swooped in and out among the clouds; he raced with huge birds, and, in the morning when he awakened, he was more than half sorry that his filmy adventures were not realities.

CHAPTER II.

The juvenile population of Hillsford knew but one topic of conversation on the following day. Every youth who ever handled a tool or who deemed himself possessed of the minutest mechanical skill was determined to become a contestant, and many were the lads who already could see themselves the proud pilots of ships of the air, and, in their minds, received the congratulations of their fellow-townsmen upon their success in winning the Aerial Scholarship. Wherever two boys forgot their aeroplanes were discussed. So early as this, the different types enlisted adherents who argued in favor of the monoplane or biplane with favor. The library was overrun with ambitious embryonic aeronauts demanding the literature of their chosen calling, and in the little park before this building arguments waxed hottest.

On the seats about the fountain half a dozen lads sat reviewing the situation, prophesying success for themselves or for some friend of known abilities, and chattering like a tree-fall of sparrows. One boy stood, hands in pockets, facing the others and listening to their words. He had arrived but a minute before and had not, as yet, contributed anything to the clamor. One of the excited debaters noticed the new arrival.

"Here's Emory Taine," he cried. "I'll bet he's made up his mind to go into it."

"Of course I have," replied Taine, somewhat coldly. "And I've made up my mind to win, too."

"Oh, you have, have you?" came in a chorus. "It was good of you to let us know so soon. Think of the trouble it will save us. We don't need to enter the contest at all now."

Emory Taine was a strong, healthy, good-looking boy, but there was naturally something of arrogance in his bearing that it was hard for his comrades to overlook. That he was gifted with a brain above the ordinary, his high standings in his class testified, and even if learning had come to him less laboriously than it did, he would, doubtless, have stood equally well at a greater ex-

pense of labor, for he could not bear to be surpassed in anything or to feel that another had snatched honors from him. Since the introduction of manual training into the schools young Taine had demonstrated an unusual aptitude for skillful work, and to encourage him his father had fitted out for him a complete workshop in which he could gratify his mechanical tastes to the utmost. As a matter of fact, when the boys came to consider it, it did seem that Emory possessed a very fair chance of making good his boast.

"Don't think you'll have any walk-away with this," called one of the lads. "Bob Hammond is pretty handy with tools himself. Maybe there are some of us here who can't beat you out, but I guess Bob can hold his own and a little better."

"Bob Hammond going into this?" demanded Taine.

"Don't know, I'm sure," observed the lad. "You might ask him, though. Here he comes."

The group waited for Robert to approach, and as he strolled up the walk Taine eyed him sullenly as though he already scented a dangerous rival.

"Hello, fellows," Robert called pleasantly.

There was no time for polite replies. In a hurry to get at the required fact nobody made a response, but a regular chorus demanded:

"Are you going into it, Bob?"

"Into what?" laughed Robert. "The fountain?"

"No. The contest—the aeroplane contest."

"I guess I'll have a try at it," Robert said smiling. "Is everybody else going in, too?"

"Looks that way," Taine rejoined. "But I guess quite a bunch will fall by the wayside."

Robert passed into the library, but presently reappeared with a volume under his arm. He passed the crowd of boys with a few words and set out briskly for home. He had gone but a few steps, however, before Emory Taine called after him:

"Oh, Hammond, wait a minute."

Robert slackened his pace, wondering what Taine could want with him. In boyhood one forms likes and dislikes quickly, and they are likely to be stronger and more unreasoning than when after years have come to attach their cheek to the hot spirits of youth. Robert disliked Emory Taine, and he knew that Taine returned the feeling. They usually avoided each other, and now Robert wondered greatly at the other lad's evident desire to speak to him.

"So you're going into this contest?" began Emory.

"Yes," responded Robert, briefly. "I'm going in, too, and I want to win," Taine said in a peculiar tone. It would please father a lot if I should win; in fact, he has promised to give me a year abroad before I start to college if I do."

"That will be very fine," Robert observed.

"Yes. But I've got to win. Now I haven't any fear of beating out that bunch back there, or any of the other fellows that go in—I know more about mechanics than any of them. You are the only fellow I'm afraid of—and I don't want to have to worry about you."

"Sorry," said Robert, "but I guess you'll have to."

"I want to make you an offer. I want you to keep out of the thing and help me make my machine. What will you take to do it?"

"Don't waste your time," snapped Robert. "You can't pay me to stay out. I'm going in, and if I beat you out, that will add a lot to my pleasure."

Taine flushed angrily.

"You won't stay out?"

"No."

"You'd better think it over. I'm going to win that scholarship, and if you know when you're well off you'll not try to beat me. You take my advice and stay out of it." With these words he turned and walked rapidly away.

"Hub," thought Robert, "I'll work just a little bit harder on your account, old fellow. When I get tired or discouraged I'll just think about beating you, and it'll be as good as a tonic."

For the next month Robert studied hard—studied as he never had before to, master the intricacies of the science of aerodynamics. Book after book treating of balloons, dirigibles, gliders and aeroplanes he devoured with painstaking care. It seemed that he could not find enough written of his chosen subject, and by the time he was ready to consider the work of commencing his designs and putting his plans on paper, he was thoroughly saturated with the theory that now he was to endeavor to put into practice.

Early in his studies Robert saw that some practical experience would be necessary to him before he could hope to arrive at any satisfactory results.

"It's well enough to know all that the books say about flying," he told his father, "but that is only a beginning. A fellow actually has to try out the things the books tell him about. He has to prove for himself why various forms of planes produce certain results, and he must learn how these planes are to be handled. To try to make an aeroplane with only book knowledge would be like trying to build a house after you read a book on carpentry. And I'll bet a man would find it pretty difficult to do that until he had learned by the real work to use the saw and hammer and the other carpenter's tools."

"That's right, Bob," his father agreed with him. "Knowledge is a great thing, but if we don't supplement it with actual experience it isn't of very great benefit to us in the end. What are you going to do about it?"

"I'm going to have a sort of experimental station," said Robert with a laugh. "I want to rig up a place over by the machine shop where I can experiment with little designs and models until I hit upon something that seems to be worth while making full size. After I have tested out in practice the things that these books have told me, I will then be in a position to begin the real work."

"Go ahead, son," his father gave permission. "Only don't do any more damage to the property or to yourself than your experiments actually require." Both laughed at this little joke, and Robert returned to his studies.

On the following day he crossed the river to the shops and looked over the surrounding yards and grounds to find a place suitable for experiments in aviation. He knew that he must have a stretch of comparatively level ground, because an aeroplane requires a considerable run before it will rise into the air and fly.

"It's just like taking a run before you jump," he said, "only an aeroplane doesn't come down at the end of the jump—it keeps right on sailing. That's because it has an engine in it to force it ahead, while a fellow, when he jumps, goes just as far as the force that jumped him lasts, and then he falls to the ground. If a fellow could have great wings on either side and take the same jump he would go much farther, because the planes would hold him up, but even then he would fall to the ground after a while because the power would give out. In an aeroplane the engine keeps right on working, and the propellers keep right on going around, so he has the force of his jump continued until he wants it stopped."

At last he found a reach of level grass which ran from the edge of the machine-shop to the brink of the river, a distance of nearly three hundred feet, and here he determined to carry on his work. The first thing to do was to build an incline down which he could coast his models to give them the force to carry them through the air. It was like sliding down hill on a sled, only that when the bottom was reached the sled ran along on the level while the planes rose and flew in the air. Robert knew that if he could arrange his planes so that they would fly a considerable distance through the air after a slide down the plane, it was almost certain they would make sustained flights when an engine was put in them to give them continuous power.

So he went to work, and from a pile of lumber and beams he made an inclined way which was about twenty-

five feet at its highest point and which slanted away somewhat abruptly to the ground. This took several days of hard work, but when it was finished he looked at it with a feeling of great satisfaction.

"There," he said to himself, "I feel as if I were actually at work at last."

Now he set about designing a model. The kites of which he had made so many when he was a little fellow, now stood him in good stead, for his first models were made from stiff paper and light sticks. His first efforts were nothing more or less than kites, for they consisted merely of two planes without either front or rear rudders, and with these he worked faithfully, endeavoring to find the form and shape that would skim through the air most satisfactorily. It may be thought that this was a boyish way of getting at the matter, but Robert did not think so. By his toylike models he solved many difficult problems in equilibrium, and, too, he decided upon the curve of plane that gave most lifting power while it presented least resistance to the wind. At last he felt that he might go about the construction of a glider of sufficient size to support his own weight.

This was much smaller than the aeroplane would be when complete, for the stretch of its planes was but fifteen feet; however, with so large a model he felt certain he could achieve results and make important deductions impossible in his smaller gliders.

From time to time he heard about the progress that various friends of his were making, but one by one the greater number of these gave up in disgust when they saw how many serious obstacles had to be overcome. Finally the only one to remain was Emory Taine. Emory appeared determined to succeed and was working with as much energy as Robert. Neither lad had much information as to the other's success, and Robert cared little what his rival was doing so long as his own work went along as he thought it should. This was not the case with Taine, however. His pride of leadership, his desire for superiority, drove him to the best efforts he was capable of; nevertheless he could not prevent himself from worrying about Robert. At last he determined to investigate and see for himself just what was going on in the machine-shop of the Hammond Steel Castings Company across the river, and in pursuance for his project set out for the works at a time when he was certain to find Robert at work.

Taking care to conceal himself, he approached the works just as Robert, aided by Old Tom Saunders, who had been retained as a sort of watchman, was hauling his big glider up the incline. Behind a small shed Emory crouched to witness the initial flight and listen.

"There," he heard Robert say, as the glider was set in position. "Now I'm off. Watch me fly all the way across the river."

Old Tom wore a troubled expression. "Can't you put a stone or something on there?" he asked. "There's no telling what that contraption will do. I'm afraid she'll balk or play off some kind of a trick and hurt you."

"No danger. She won't rise very high, and a little tumble won't do me any harm, even if I get one. Here goes."

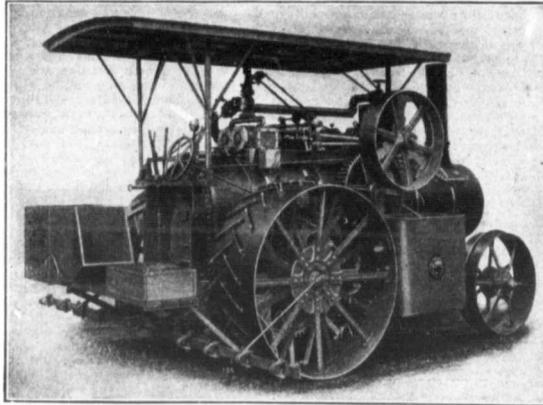
Robert raised the planes above his head, ran at full speed down the incline for several yards and then launched himself into the air with all the force there was in the spring of his legs. The glider swooped downward sharply, and the flight seemed doomed to speedy disaster. Emory held his breath. Then the machine became vivified, as it were, and swept along gracefully for fifty feet—a hundred feet. Emory watched it sullenly, enviously. Suddenly it swerved sharply to the left, careened violently and plunged sidelong to the ground with a splintering of braces and rending of cloth.

Robert picked himself up and gazed ruefully at his wrecked apparatus—then he gave Old Tom a crestfallen look.

"Never mind, Bobby," comforted the old fellow. "She flew a little—and if

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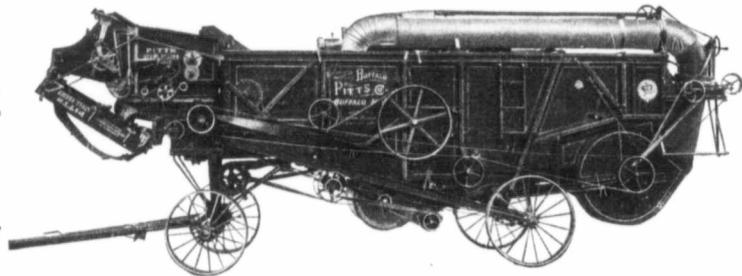
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she'll do that she'll do more. It was a likely start."

Robert smiled with renewed determination.

"Well," he laughed, "for a jump that was pretty good."

"They carried the nearly demolished glider into the machine-shop," grinned Robert. "I'll have to set a few busted ribs and graft on some skin before she's fit to appear in public again."

Emory Taine crept close and gained a view of the interior of the shop through an open window. For a time he watched Robert and Old Tom as they overhauled the smashed glider, and his ears caught fragments of their conversation.

"It's the balancing that must be fixed up," decided Robert. "She'll glide, but her equilibrium is uncertain. I'll get at it and work that out, and when I have solved it, the thing is as good as done. I've got to discover how she can be kept from tipping to either side or from tilting back or forward—although the elevating plane in front and the rudder in its frame and braces behind will do a lot to steady her up."

"You'll do it, Bobby," Old Tom said proudly. "I'll back you against any boy in the state on any kind of a mechanical proposition. Ain't I worked alongside of you for years? I guess I have. When that flying race comes off I know the lad I'm going to bet on."

Bobby laughed at his old friend. "You're prejudiced. I thing you're complimenting yourself, for you taught me all about the mechanics. I know 'Come over here and look at these plans and designs. I've never explained them to you."

Emory watched Robert and Tom Sands bend over the rough desk and strained his ears to catch what they said as they examined a thick sheaf of papers and blue prints. For the half-hour that the pair spent going over the designs the eavesdropper did not remove his gaze, and if he missed a word it was because it was spoken so softly that it failed to carry to his eager ears. At last the papers were folded and laid away in a cabinet.

"I'll be going home," he heard Robert say. "Do you stay here all night?"

"Yes, I've a cot in the office and I sleep there."

"Well"—Bob laughed at the idea—"don't let anybody get at those plans. If anything should happen to them it would come pretty close to putting me out of the race, for it would take a good long time to replace them."

"I'll keep a sharp eye on them, Bobby," assured Old Tom. "Don't you worry about them. Good-bye."

"Good-bye," called Robert, who was already at the door. "And don't let anybody carry off the shops."

Emory made haste to secure himself before Robert should emerge into the open air and see him; but as soon as the coast was clear he crept again to his window. Old Tom was no longer in the shop. It was deserted. For a long time Emory sat still with his head resting on his hands. Then he spoke to himself:

"If anything should happen to them it would come pretty close to putting me out of the race." That was all he said. "Come pretty close to putting me out of the race."

Softly he tried the window which Old Tom had closed. It gave under his

hands and he raised it quietly. Then, with a furtive look about him, he stepped over the sill and was inside the shop.

(To be Continued.)

### In the Little Old Leather Trunk

(Continued from page 82)

placed a chair for her. He smiled as he returned her bow, asking her meantime what service he could render her on such a beautiful summer morning.

With an impulsive gesture Ellen laid the envelope containing the deed on his desk, dropped the square, thin package into her lap, and, grasping the arms of her chair a trifle tightly, said:

"Judge Bentham, do you remember Mr. Eben Penfield of Bedminster County?"

The judge, ensconced in his chair once more, had begun to polish his eye-glasses with his handkerchief, and he looked up and smiled again cordially.

"Why, of course I know Eben Penfield," he returned. "He was one of my first and best friends here in Bedminster County. Did you want to know anything about him? If so, I can direct you—"

"Oh, no, thank you," the girl replied. "You see, I'm his granddaughter—my name is Ellen Penfield—and I just dropped in to see whether you would be so kind as to tell me about some property that he bought down in Texas a good many years ago. I wanted to ask you whether you thought it was of any value—whether it was located anywhere near the new oil-fields down there."

The judge set his lips tighter, then he shook his head dubiously. He placed the deed on the desk before him and reached for the gazetteer in the revolving bookcase beside him. Before replying he opened to that section of the volume devoted to the geography and history of Texas. He unfolded the large colored map of the State and turned the book so that Ellen could see it conveniently, and he soon made it clear that the oil-wells were many, many miles from her grandmother's land.

The judge was refolding the deed to return it to Ellen, and as the girl arose to go, she said:

"It's been ever so kind of you, sir, to explain this matter to me, though I must admit that I'm very much disappointed that I can't take better news home to Grandma. I did so hope that there would be something in it! But there was another, very much smaller, matter I'd like to ask you about. It has nothing to do with law, though. Yesterday when I was hunting for that deed up in Grandma's attic, I found an old book with several hundred postage-stamps in it which Grandma says her son Paul collected when he was a boy, over thirty years ago. Now I wonder if you could tell me where to go to find out whether they are worth anything? Couldn't somebody in the post-office tell me?"

As Judge Bentham listened to her, Ellen noted a new interest growing in his eyes. He laid the deed down again unsealed and motioned Ellen to be reseated.

"This sounds doubly interesting," Miss Penfield, he returned. "When you speak of stamps you touch me in a vital spot, for stamp-collecting has long been my favorite hobby. If you can let me see what you have unearthed, perhaps I myself can tell you what you want to know."

Thus encouraged, Ellen rapidly undid the covering of the impromptu album and handed the book to the judge. He opened it and began to scan the pages. His interest seemed to grow more pronounced as he proceeded.

"Well, I declare," he vouchsafed at length, "this is most interesting! And a moment later, 'Most unusual! Where did you say this collection came from, Miss Penfield?'"

Ellen related briefly the story of how she came to find the stamps and repeated the remarks which her grandmother had made about them. Judge Bentham listened attentively. When she had finished he turned again to the revolving bookcase and selected a thick, red-bound manual, which, Ellen observed, bore the title, "Complete Catalogue and Price-List of All Adhesive Stamps—Postage and Revenue."

"Miss Penfield," he said a few moments later, as he paused with the stamp-album open before him and one finger in the red-bound manual, "I don't want to startle you unnecessarily, but from a cursory examination of these stamps it strikes me that you have here one of the most valuable little collections that I have ever been fortunate enough to see. In fact, there are several specimens in this book that I have never seen duplicated outside of museums, they are so rare."

Ellen started forward with widening eyes, and a slight exclamation of mingled joy and amazement as the force of Judge Bentham's remarks broke upon her.

"And do you think they would be worth as much as twenty-five dollars?" Ellen asked, in a tone tinged with eagerness and a sense of incredulity.

The judge gave way to a peal of laughter. "Why, my dear young lady," he said, turning the stamp-album toward Ellen and pointing with his finger to an obscure triangular stamp engraved with the legend, "Cape of Good Hope—One Penny," "if that stamp there is genuine, which it has every appearance of being, it alone will sell for three hundred and fifty dollars or more at any philatelic auction. It belongs to the series of 1862 and is among the rarest stamps known to collectors. I have only seen two of that issue before, myself, and one of those is the particular gem of my own collection."

"Three hundred and fifty dollars!" Ellen repeated blankly. "Can it be possible that a little postage-stamp is worth as much as that?"

The judge had begun to study the stamps minutely again, and was too absorbed to reply at once. He turned the yellowed pages of the old ledger with the undivided interest of a connoisseur, only pausing now and again to consult the red-bound manual or examine a stamp with the magnifying-glass which he had taken from a drawer in his desk. As he continued to pore over the collection, he omitted queer judicial ejaculations of pleasure and surprise. At last he looked up over his glasses at Ellen again. "This is certainly a most unusual find, Miss Penfield," he said. "I don't know when I have come across anything that has interested me more. Besides that Cape of Good Hope rarity, you have here two specimens of the Spanish orange two-real issue of 1851, which will bring over a hundred and fifty dollars in any auction-room; an incomplete but highly valuable series of United States proprietary revenue-stamps that I dare say are worth fully sixty dollars; one of the very rarest specimens of the crude British Guiana issue of 1850, listed at seventy-five dollars; while these three-cent scarlet stamps, bearing the head of President Jackson, on the old-envelopes here, are of the issue of 1862 and are worth at least a hundred dollars apiece. There are four of them, you see, and the fact that they have not been removed from the envelopes greatly enhances their value. I haven't looked over the com-

moner varieties, that make up the body of your collection, very carefully, but I should think that they might bring you at least an additional twenty or thirty dollars."

Ellen listened to Judge Bentham's words like one in a maze. Surely he must be joking with her! But when she looked squarely into his eyes, she knew that he was sincere in what he said. The only words that came to her lips were:

"What will Grandma say?"

The judge had pulled a scratch-pad toward him and began to compute a little column of figures. As he finished, he looked up with a smile.

"Now that is something you will have to find out for yourself, Miss Penfield," he said. "But first, if you will take these precious stamps to a dealer in New York, whose address I will give you (I believe you said you lived there yourself), he will examine them carefully, and when he has satisfied himself that they are genuine, as I have no doubt he will, he will give you eleven hundred dollars cash for the lot, if you ask it, or maybe even twelve hundred, and that will be enough money to pay off the mortgage that you say has been worrying your grandmother so long, and also leave over two or three hundred dollars for emergencies. I can't imagine just what your grandmother will say then, but I have no doubt it will be something very nice."

Ellen's face was glowing with conflicting emotions, and she had to wink hard and suddenly to keep back the tears of joy and gratitude that were rising to her eyes.

"But, Judge Bentham," she exclaimed, "how can I ever repay you for this?"

The judge removed his glasses and began to wipe them vigorously again.

"My dear young lady," he replied, "I want you to know that it gives me a great deal of pleasure and satisfaction to be of this slight service to you. Your grandfather was foreman of the jury that decided the first case I ever won in Bedminster County, when I was a struggling young attorney, and it was the winning of that case that gave me my start in life."

### Kiss and Make It Well.

By Mary Morrison.

Little childish faltering feet  
Pattering everywhere;  
Clambering on the banister,  
Climbing up the stair.  
"Ah, be careful!" comes too late.  
"See where baby fell!"  
Quivering lips to mamma say,  
"Kiss, and make it well."

Little toddlers off to school  
From the sheltering nest,  
Weep their little hurts away  
On the mother's breast.  
Little wounds by malice given  
Bruise the heart as well;  
"Never mind, for mamma will  
Kiss, and make it well."

Soon the little barques set sail  
On the sea of life.  
Wild the waves which buffet them,  
Strenuous the strife.  
If they strike the rocks of sin  
"Neath the surges' swell,  
Mother-love is harbor safe;  
"Kiss, and make it well."

Geniuses are in some respects like high candle-power electric lamps; their lights dispels the shadows far and wide while they last, but their constitutions are delicate.

READ ABOUT  
HART-BROWN WING CARRIERS

SEE PAGE 61.

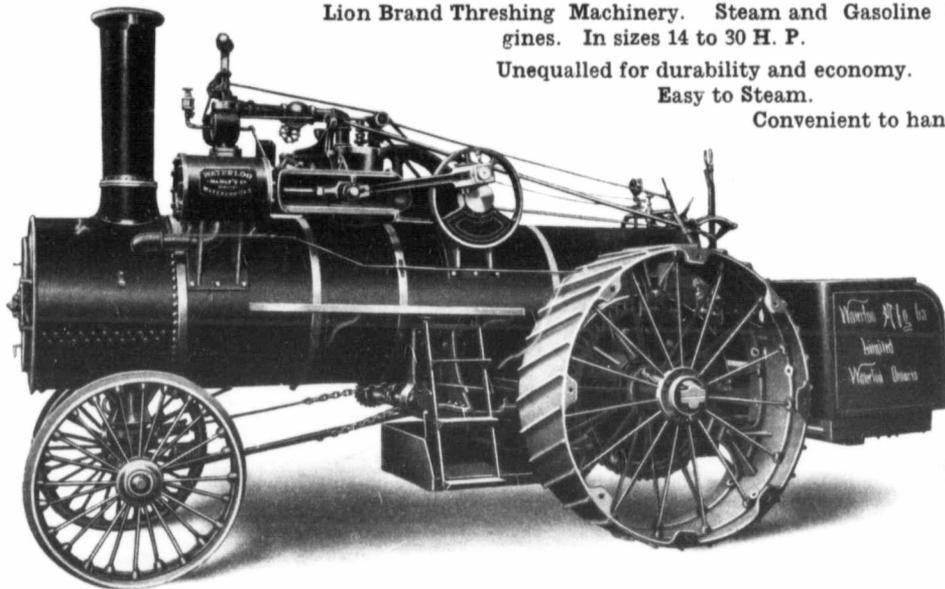
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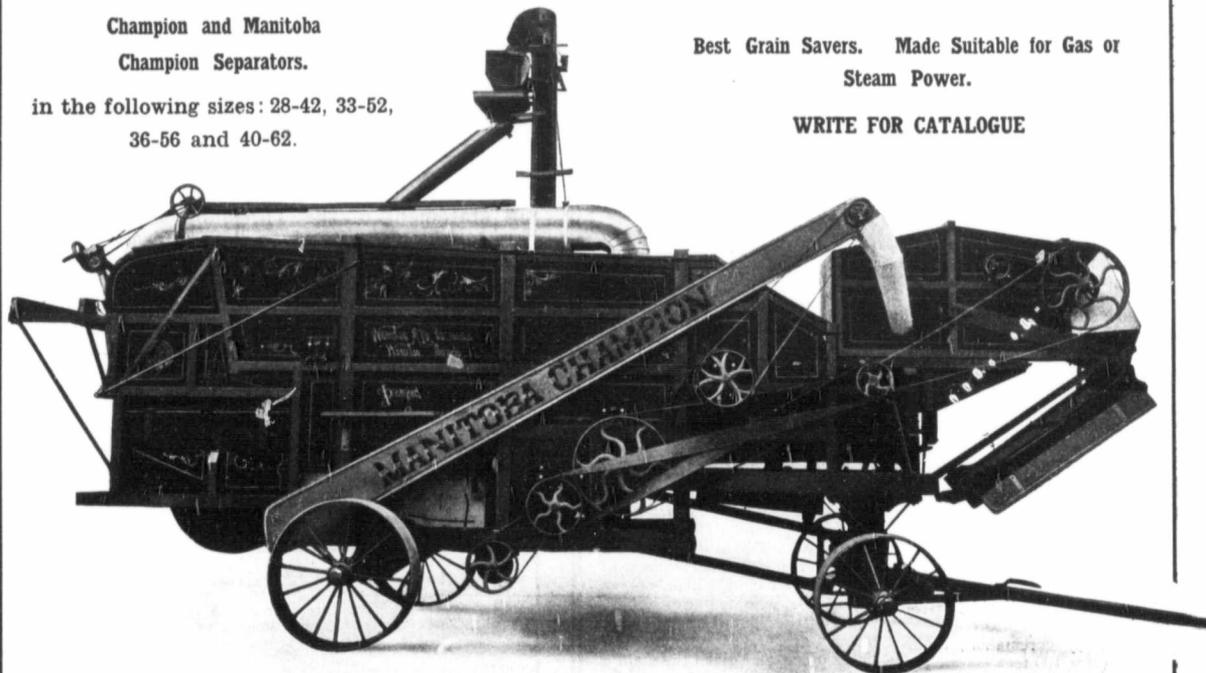


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## WATERLOO MFG. COMPANY, LIMITED.

PORTAGE la PRAIRIE, MANITOBA.

## Cockshutt Plow Company to Enlarge Plant

The Cockshutt Plow Company have planned an expenditure of between three and four hundred thousand dollars for new additions to be made to their present factory at Brantford, Ontario, this amount being exclusive of building sites. The Company estimates that with their new extensions, it will take approximately twelve hundred men to make up their staff, this being an increase of between four and five hundred on their present number.

This gigantic undertaking has been rendered necessary in order that the Company may be enabled to handle its trade next year. Besides twelve new structures, three large new warehouses will be erected in the Northwest, the sites for which have already been secured at a big outlay. A large warehouse at Regina will also be added, making in all sixteen new buildings to be put up by the Cockshutt concern. The additions to the Cockshutt Plow Company to be built this year are as follows:

Warehouse—Six-storey building, 150 ft. x 60 ft.

Experimental Dept. — Four-storey building, 65 ft. x 64 ft.

Machine Shop and Erecting Room—Three-storey building, 106 ft. by 60 ft.

Casting Storage and Paint Shop—Three-storey building 105 ft. x 60 ft.

Pattern Storage—Three-storey building, 50 ft. x 40 ft.

Foundry—215 ft. x 70 ft.

Engine Gang Structural Shop—192 ft. x 50 ft.

Blacksmith Shop—154 ft. x 70 ft.

Iron Storage Building—128 ft. x 100 ft.

Shear Shop—100 ft. 32 ft.

Transformer Station—14 ft. x 12 ft.

Cupola House—52 ft. x 32 ft.

Besides the above, new warehouses will be erected at Brandon, Saskatoon and Calgary. These additions are made necessary by the rapid increase of the Cockshutt Plow Company's business and they have planned these extensions well ahead in order that they may be able to take care of their 1911 trade.

## The Oliver Plow Company in Canada.

The Oliver Chilled Plow Company of South Bend, Ind., have secured a large tract of land at Hamilton, Ont. and will immediately begin the erection of a Canadian Plow Works.

About \$1,500,000 will be spent for building and equipment and the Company expects to employ anywhere up to two thousand hands in their new plant.

The Hamilton plant will be erected on the site bounded by Niagara Street, Sherman Inlet, the Northern and Northwest Division of the Grand Trunk Railway and Burlington Bay. It is expected that it will be one of the largest plow factories in the British Empire. The important buildings to be built and their dimensions are:

Warehouse dock, 80 feet x 500 feet.

Six storey warehouse, 100 feet x 300 feet.

Three-storey painting shop, 70 feet x 250 feet.

Three-storey assembly building, 100 feet x 400 feet.

One-storey forge shop, 100 feet x 420 feet.

Two-storey service building, 50 feet x 100 feet.

One-storey malleable iron foundry, 120 feet x 420 feet.

Two-storey coremaking building, 40 feet x 100 feet.

One-storey grey iron foundry, 120 feet x 420 feet.

Two-storey wood shop, 60 feet x 200 feet.

Three lumber sheds, each 50 feet x 150 feet.

One-storey flask and core scoring building, 50 feet x 80 feet.

Power house, 50 feet x 80 feet. Boiler house, 50 feet x 80 feet.

Iron storage building, 50 feet x 80 feet.

Charging building, 50 feet x 80 feet.

Two-storey office building, 10 feet x 100 feet.

Stable, 30 feet x 60 feet.

Minor structures such as oil houses, locomotive house, watchmen's offices, etc.

The name of the new concern will be The Oliver Chilled Plow Works of Canada, Limited.

### A Great Deal on His Mind.

They were trying to get off on their summer vacation. The wife had secured accommodations at a distant hotel, by telephone, to relieve her husband of that task, while the latter spread his entire wardrobe on the bed that "she" might "easily" select and pack whatever he would need.

He stood surveying them, deep in meditation, when his wife came into the room and began to speak to him.

He raised his hand rebukingly. "Don't talk to me now, Susie, don't talk to me! I have a great deal on my mind. If we are going to the seashore day after tomorrow there are many things to be done, and I must plan."

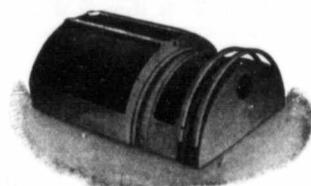
His wife, who had already telephoned the butcher, milkman, baker, grocer, expressman and ticket office, and given the maid a month's vacation and arranged with a relative for the care of the dog, gazed at him in silence.

"A great deal on my mind," he repeated. Then the interrogative nature of his wife's silence forced him to explain.

"You see," he said, "I have got to put a nail in the cellar window and stop the newspaper."

## The Gould Balance Valve

is sold under a specific warranty which fully protects the purchaser. We ask every reader to read this warranty, and in order that all interested may know what we warrant the valve to do, we give it in full:—



The Gould Balance Valve is guaranteed, when properly seated and fitted in a Traction Engine, to develop from 18 to 30 per cent. additional power; to save wear on valve gear and valve seat; and to save four-fifths of the power to drive the valve previously required by the common slide valve.

If within Sixty Days from date of delivery it shall be proven not capable of complying with the above warranty, written notice shall at once be given to the Gould Balance Valve Company at their home office in Kellogg, Iowa, stating wherein it fails, giving complete information by describing fully the results obtained and permitting the manufacturer to replace the valve or furnish written or personal assistance, the purchaser rendering the necessary help required, following all instructions given by the manufacturer when, if it can not be made to comply with the above warranty, the valve and seat, together with all necessary parts, shall be returned to the factory at the manufacturer's expense and another valve and parts substituted that shall fill the warranty. If then the valve fails to fill the warranty it may be returned to the factory and the notes or money refunded and no further claim made on the Company. Failure to give above notice within the required time shall be conclusive evidence of fulfillment of above warranty. Purchaser agrees to comply with the printed and written instructions given him by the manufacturer.

We further agree to replace free of charge at the factory all broken, worn or defective parts of the Gould Balance Valve for a term of five years from date of sale.

The construction of the Gould Balance Valve is right and therefore needs no changes.

We have no experiments to try, as the valve was fully tested before it was placed upon the market.

We have over 500 different styles and makes of valves in stock.

No measurements are required from purchaser. We know our measurements are right. Don't trust to chance on measurements.

Goulds can be shipped the same day that the order is received.

Write us for terms and prices. Agents wanted.

Geo. White & Sons Co. Ltd., Manufactures in Canada.

Gould Balance Valve Company, Kellogg, Iowa, U.S.A.

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This book is so arranged that it provides a full statement of the Threshing Account, a receipt which can be given to the Farmer, also a lien note which can be signed by the farmer in acknowledgment of the account, thus not only protecting the Thresherman, but the farmer as well. The book also contains tabulated forms to assist you in keeping account of expenses.

The book is of such size as to be conveniently carried in the pocket, and is durably bound in stiff board covers.

Single Copies 50c., Six Copies \$2.25 or given with a year's subscription for the Canadian Thresherman and Farmer for \$1.25

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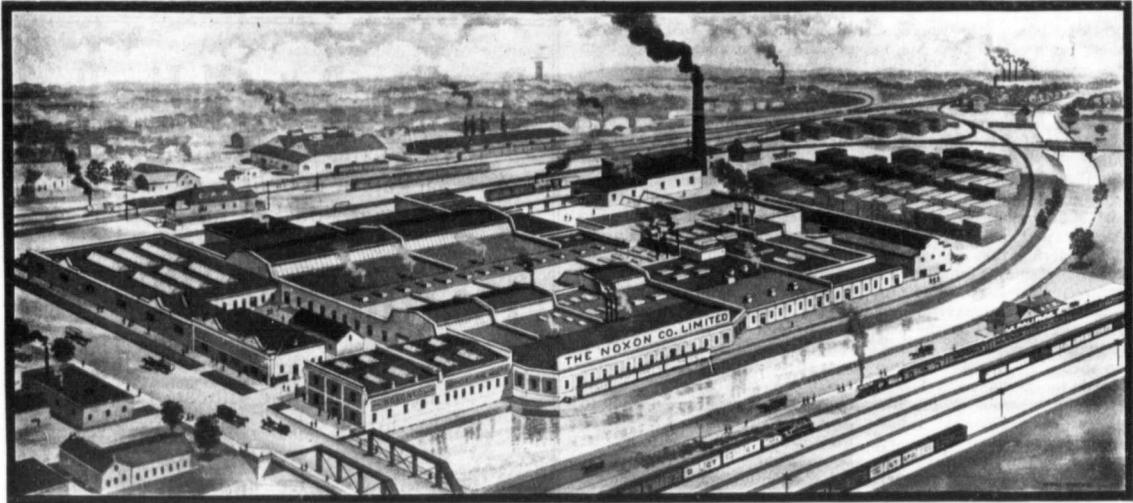
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PROVINCE \_\_\_\_\_

Address  
E. H. Heath Co., Limited - Winnipeg, Can.



"The above picture of the plant of the NOXON COMPANY, LIMITED of INGERSOLL, Ontario, is no doubt a familiar scene to a number of our Western people who have come from Ontario. To those, however, who have never seen this institution, an idea of the size of same will be obtained from the above cut.

The Noxon Co. have been in business since the year 1856, known in the earlier years as the Noxon Bros. Mfg. Co. and later as the Noxon Co., Ltd. The company have been doing a very large export business for the past few years, in fact, the export trade has engaged practically the entire output. Now, having increased the premises to a considerable extent by additions and new buildings, the company are in a position to devote part of their facilities to manufacturing machines for Western Canada and have already commenced doing business in Manitoba, Saskatchewan and Alberta, particularly in binders, mowers, rakes, cultivators and disc harrows.

Mr. W. F. Johnston late of the Massey Harris Co. is the designer and constructor of the machines which are giving splendid satisfaction in practically all countries of the world. Mr. Johnston has had a wide experience both in foreign countries and in Canada and the NOXON machines are a standing tribute to his mechanical genius.

Mr. C. W. Riley, the President of the Company, is one of Canada's largest Cheese exporters, also supplying a large amount of dairy produce to the Western markets. The Noxon Co. Ltd. have to date retained their independence being absolutely independent of any Trust or Combine and no doubt the dealers and farmers in the Canadian West will appreciate this fact and be pleased to see an independent harvesting line in the market.

The plant of the Company is situated in the Town of Ingersoll between the Grand Trunk Railroad on the one side and the Canadian Pacific on the other side, both railroads serving the plant with sidings making the railroad accommodations good as any plant in Canada. The Thames river which flows along the north side of the plant furnishes the water used on the premises both for steam and fire protection and the Town being almost divided equally by the river makes the premises extremely convenient for the employees.

At the present time the Tudhope-Anderson Co. are doing the transhipping for the Noxon Co. from their various warehouses at Winnipeg, Regina, Calgary and Saskatoon and both machines and repairs can be had promptly at these places."

### The Care and Handling of the Self Binder

(Continued from page 17)

caused by the shrinking of the canvas will soon ruin it.

With the most careful operation accidents will occur and as the binder is always wanted to run steady in harvest time it is well to have on hand an extra pitman rod, reel slat, or other repairs, besides a good supply of first class oil and binder twine.

When the crop is cut the binder should be brought into a dry machine shed. The canvases should be taken off and thoroughly repaired and hung up in a dry place. Then the whole binder should be overhauled and all worn nuts, bolts and castings replaced. Next it should be thoroughly cleaned, any dirt left on will collect moisture and destroy paint, rot wood and rust iron. The binder should be painted every two or three years. If the reels, bundle carrier and tongue are taken off, they may be stored in a convenient place and the binder will take up much less room in the shed.

By T. E. Fleming.

Every grain growing farmer requires a large array of implements to produce and harvest crops. Farm laborers are difficult to obtain, and large wages are demanded. Consequently the farmer must resort to labor saving devices in the shape of farm implements to do his work. Now, these

implements cost money, hence the machinery bill of the average farmer is no small item. But in the majority of cases the expenses connected with the stock of farm machinery, arises more from the neglect and ill usage that they undergo in the work for which they have been adapted.

One of the most useful and perhaps the most abused of farm implements is the self-binder. This machine is of a complicated construction and has some delicate parts; hence if it is operated in a careless manner it soon becomes reranged. This, coupled with the exposure that they are subjected to, tends to shorten their life considerably.

The housing of the binder during the inactive season is the greatest step toward extending its longevity. Eleven months' exposure will damage it far more than the three or four weeks' work that it is subjected to. I daresay that 95 per cent. of the binders in Western Canada never see the inside of a building after they leave the dealers' hands. Is it any wonder that the farmers implement bill is a large one. If no shelter is available in the ordinary buildings, a special building, to serve as an implement shed would be a profitable investment. Money spent in this way would pay many times the interest that it would return if placed in the bank.

So much for the care of the binder; let us now consider the

operating of it. The great object in running this, or any other machine for that matter, is to keep all parts working in unison, and with a minimum amount of friction. To maintain this condition there are a great many points to consider. The machine should be looked over at frequent intervals to see that all bolts and nuts are tight. The machine must not be strained in any way whatever. This must be especially observed in heavy crops or on rough land. An even speed is necessary for smooth running, an irregular speed causing unnecessary friction. Never continue operating a binder after some part gets out of order. Have it repaired before further damage is done. This is always the cheapest way in the end. All bearings and gearings require lubricating at least twice a day. There are, however, several parts that require it oftener and these should be treated according to the requirements. The chains should be kept well oiled with the exception of the drive chain which must be left dry.

Another item of no small importance is the caring for the binder at night during the busy season. The most satisfactory method is to keep it under cover, but this is impracticable on most farms and the machine must be left in the field. In this case the canvases must be slackened and the whole binder covered over as much as possible. If this precaution is not taken a heavy

dew or rain will stretch the canvases and perhaps break a few straps, causing delay and expense. Two or three worn out canvases make a good covering. Being water tight they shed the rain or dew.

Observing these points in the care and operating of the binder, its longevity can be extended over a great many years. And when we consider the large initial cost of this machine, coupled with the labor saving work that it performs, it is apparent that the self-binder is a machine to be cared for in a manner to prolong its efficiency as much as possible.

By Harry Hill.

A very important agent required—in order that the proper care may be taken of farm implements—is the machine shed. A machine shed once it is erected will be found to prolong and lengthen the working years of your machinery and in this way prove a very profitable investment. Now, if this preceding sentence be true—which we all know for a fact is true—then I think I am correct in saying, that any farmer possessing the implements necessary to work a farm of ordinary size—who is financially fit to build a shelter for them—should do so without delay. He will not only find it a profitable investment but will also be pleased when he takes his ten or twelve year old binder or threshing machine into the har-

vest field and finds it looking even fresher, brighter, newer, and in better working order than his neighbor's just across the way which has only run two or three seasons but hasn't been in under the shelter and protection of a building.

The instance which I have just given you, I think, proves the necessity of an implement shed. Of course, this is the view of the subject considering that the farmer is financially able to build such a structure for the purpose of protecting his machinery from the weather. But where is the sensible man that will build his machine shed first, and then finding his funds too low to erect a shelter for the increase of his live stock—which increase is generally large on a new farm—let them run out for the winter exposed to all kinds of weather, while his implements are carefully and snugly stored away in a dry and weather proof building. Such an incident as I have just mentioned would be a ridiculous thing to have happen. So you see it must always be kept in mind when criticising the farmer for not having a machine shed, that he has got to build some other buildings first, and also that the machinery itself must be paid for. Not like it is with some large farmers, who have a big machine shed and lots of machinery in it, but something more over it than a roof and that is a mortgage. Now you will see by what I have written that I think that a good many of our Manitoba farmers might be excused for not having an implement shed. But let me also add that I do straightway denounce the man who leaves his implements all over his farm just where they were last in use, when he might gather them together, leaving them in a convenient dry situation, and put a fence around them that the animals may be kept from making them their favorite rubbing places.

Now, the particular implement to which I would like to draw your attention for a short time is the self-binder. For the sake of making myself clear I will just suppose that you have bought a new binder and that it is about to be put to work in the harvest field. What would you consider the first thing to do? Well, I would say it was this: take a small memoranda or note book, place it in the tool box and keep it there for the future purpose of jotting down notes in connection with the binder, such as repairs required, their cost, etc. This little book may and may not be found useful the first season's run. But I assure that you'll see more clearly the necessity of it as your binder grows older. You'll find it a great help in keeping your binder in the pink of trim and perhaps find it save you a good many more dollars than you have any conception of, by preventing a trip to town being unnecessary just in the middle of a splendid day that would

have enabled you to cut twenty acres or more. Had it not been that you had to go to town for this small casting which you had forgotten all about, on account of not having a note of what your binder really did require.

Now, it is the custom of most implement companies when they sell a binder to guarantee it and that means that you are going to get the repairs, required during the first season's run, free of charge. Well, this is too often the case, that you'll hear purchasers saying how they put their binders through the work the first fall, cutting through everything that comes in their way and jerking it over the roughest of new land. Sometimes they do this to give it a thorough good test as they call it, and sometimes just because they don't care what they break the first year, seeing it will be made right by the company that they bought it from. Well, I think that the man who does such a thing as this makes an awful big mistake. The binder is put to undue strain, it is severely shook up, rivets in the frame are loosened and although this does not cause much trouble the first year, yet you find out the harm you have done when during the second or third year your binder begins to rattle to pieces. This brings it to my mind that on a binder and especially a new one, a close watch should be kept for nuts working loose. In fact, a new binder should be gone over with a monkey wrench two or three times during the first week's run and every nut on it tried to see that it is up good and snug. Now then, if this doesn't serve to keep some of them on, it would be better to put on a double nut if the bolt is long enough, but if the bolt isn't long enough you should either rivet it or else dint the thread with a cold chisel, because it is very often that just through the loosening of a single bolt a casting of considerable cost is broken.

Just at this part of my essay I would like to bring before you an improvement which I think might be made on all binders, and that is the introducing of grease cups into the packers, the knife crank, the big or main driving boxes and also into the rollers. No company to my knowledge has such a thing as a single compression grease cup on their binders and I have often wondered why it is. The only thing that I can see, that would answer this is, that it pays them better not to, because they wouldn't sell so many binders if the present little oil holes were done away with. Now then, when one can't get a binder with grease cups on it, I would suggest that he should have a try at putting them on himself. He may not get them put on all the boxings I have mentioned but I think it would be found a comparatively easy matter to put them on the rollers, and perhaps a good many more.

The handling of a binder is a

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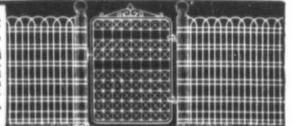
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thing that must be learned by practice and experience and I don't think that I can give very much on the subject here. But there is a little which I might mention, however, such as, always loosen your canvas straps every night and run all the grain out of the binder, see that it is making sheaves most suitable for stooking, that you're not wasting any grain and that it is running smoothly, each different part being set to do its work in the most satisfactory manner.

Now then in laying a binder up for the winter take the canvases off and be sure that they are laid away so that no mice will get at them during the winter. A good way is to put them all in one bundle and suspend it from the roof by a wire. Next thing to do is to run it into the machine shed if you have one, but if you haven't why then all wooden parts should be taken off and put under shelter for the winter. I might also add that a light coat of oil or paint be given them. Then the binder itself—which I presume has been hauled into the yard laid apart for the machinery after you get through cutting—should be blocked up just at the inner end of the table and enough weight allowed to come on the block to prevent any chance of the binder starting to sag in the centre. Next thing to do would be to oil the binder well in all the different boxings with coal oil to prevent them from getting ate by rust.

### Problems of the Farmer

Continued from page 51

not be as much within his rights in letting his cattle run as is the grain-grower in refusing to fence

and protect his crops. That is a debateable question, however, and we would prefer to base our plea for fence law upon the commonsense viewpoint of the question, namely, that fence law would permit the full development of any district, while herd law restricts that growth to its grain-growing possibilities together with a small part of its stock raising capacity.

A final point is that, although he might not see it in that light in the first case, fence law would be nearly as advantageous to the grain-grower as to the mixed farmer. It would enable him to keep his fields more free from weeds because he could keep wandering stock off his summer-fallow and stubble fields in the fall of the year. It would enable him to keep some of his own or his neighbor's stock on his summer-fallow during the season of growth, to the three fold benefit of stock, fallow, and farmer, and it would add to his sense of ownership of, and pride in his farm.

### Harvesting the Grain Crop

Continued from page 9.

these points, are usually given in the directions which accompany the machine and are frequently stencilled prominently on the binder. Always after making any change in the adjustments or any repairs it is advisable to turn the parts by hand to see that everything is working smoothly.

In conclusion there is one point which cannot be too greatly emphasized, that is, that a thorough understanding of the principles on which the binder works is of the greatest assistance in remedying any trouble which may arise.

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**Mart Haney's Mate**

Continued from page 74

biscuits are hot," she advised coolly.

He had tact enough to take his dismissal without another word or glance, and after he had gone she still stood there in the same rigid pose, but her face was softer and clouded with serious meditation.

Winchell, the young barber, came in hurriedly, his face full of accusation and alarm. "Was that Haney who just came in?" he asked insolently.

"Yes, he's at supper—want to see him?"

"See him? No! And I don't want you to see him! He's too free with you, Bert; I don't like it."

She smiled a little curious smile. "Don't mix it up with him, Ed—I'd hate to see your remains afterward."

"Bert, see here! You've been funny with me lately." (By funny he meant unaccountable.) "And your mother has been hinting things to me—and now here is Haney leaving his business to come down here the middle of the week."

"It's Friday," she corrected him.

He went on. "I knew he was coming to see you all this time, but I didn't suppose you'd think of marrying an old tout and gambler like him."

"He isn't old and he isn't a gambler—now."

"What do you mean?"  
"He's sold out—clean as a whistle."

"Don't you believe it! He's just palaverin to get you to think better of him. Bert, don't you dare to go back on me," he cried out warmly; "don't you dare!"

The girl suddenly ceased smiling and asserted herself. "See here, Ed, don't you try to boss me. I won't stand for it. What license have you got to pop in here every few minutes and tell me what's what? You 'tend to your business and you'll get ahead faster."

He stammered with rage and pain. "If you throw me down—fer that—thing I'll kill you both."

The girl looked at him in silence for a long time, and into her brain came a new, swift and revealing concept of the man's essential littleness and weakness. His beauty lost its charm and a kind of disgust rose in her throat as she slowly said, with cutting scorn:

"If you really mean that! But you don't—you're only talking to hear yourself talk. Now you shut up and run away—this is no place for chewing the rag, anyway—this is my office."

For a moment the man's face expressed the rage of a wildcat and his hands clenched. "Don't you do it—that's all!" he finally snarled. "You'll wish you hadn't."

"Run away—little boy," she said irritably. "You make me tired to-day—I don't feel like being badgered by anybody."

His mood changed. "Bertie, I'm sorry. I forget—but don't

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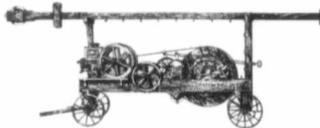
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talk to me that way—it uses me all up."

"Well, then, you stop puffing and blowing. I've troubles of my own with mother sick and a new cook in the kitchen."

"Excuse me, Bert, I hadn't ought to."

"That's all right."

"But it riled me like the devil to think—"

"Don't think," she curtly interrupted; "cut hair."

He saw that she was in a bad mood for his plea and turned away so sadly that the girl related a little—she called out:

"Say, Ed!" He turned and came back. I didn't intend to hurt your feelings, but this is one of my busy days and I'm touchy. Here's my hand—now shake, and run."

His face lightened, and he laughed, displaying his fine white teeth "You're a world-beater, sure thing, and I'm going to have you—"

"Cut it out!" she slangily retorted, and sharply withdrew her hand.

She was equally curt with two or three of the "traveling men," who brazenly tried to buy a smile with their cigars. "Do business, boys: this is my office," she said, and they took the hint.

When Haney came out from his supper he stepped quietly in behind the counter and said: "I'll take your place. Go to your supper. Then put on your hat and we'll drive out to see how the mother is."

The girl acknowledged a sense of relief as she left him in charge and went out to her seat in the far corner of the dining-room—a relief and a dangerous relaxation. And even as she sat waiting for her tea the collapse came, and bowing her head to her hands she shook with silent sobs.

The waitress stared, and young Mrs. Gilman came hurrying.

"What's the matter, Bertie; are you sick?"

"Oh, no—but I'm worried—about mother."  
"You haven't heard anything—"

"No, but she looked so old and so worn. She ought to have quit here a month ago."

"Well, I wouldn't worry. It's higher out to the ranch, and the air is so pure—she'll mend at once—you'll see."

Slowly Bertie recovered her self-possession. She drank her tea in abstracted silence and when she rose she said: "I'm going out there. Cassie; you'll have to look after things. I'll get Joe to tend the office."

"You ain't going alone?"

"No, I'm going to have the doctor go out—and then Mart Haney is going to drive me."

"Oh!" There was a kind of surprise and consternation in the face of the young wife, but she only asked: "You'll be back tonight?"

"Yes, if mother is no worse."

CHAPTER V.

Haney had the smartest "rig" in town waiting for her as she came out, but as he looked at her in her white dress and pretty hat

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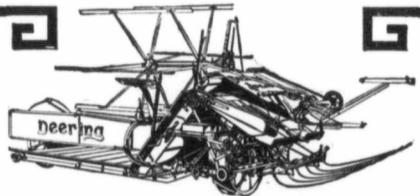
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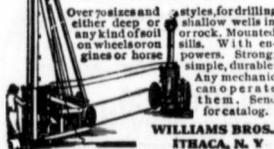
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of flowers and tulle, he said soberly: "Tis lined with cream-colored satin the carriage should be."

She colored a little at this, but quickly replied: "Blarney. Anybody'd know you was an Irishman."

"I am, and proud of it."  
"I want to take the doctor out to see mother."

"Not in this rig," he protested. She smiled. "Why not? No, but I want to go and leave a call."

The air was deliciously cool and fragrant now that the sun was sinking and the town was astir with people. It was the social hour when the heat and toil of the day were over, and they all had leisure and wondering eyes for Haney and his companion. The girl felt her position keenly. She knew that a single appearance of this kind was equivalent to an engagement in the minds of her acquaintances, but as she looked at her lover's handsome face and watched his powerful and skilled hands upon the reins, she didn't care what the judgment of the people might be. She acknowledged his kindness and was tired and ready to lean upon his strength.

"When did your mother quit?" he asked, after they had left the town behind.

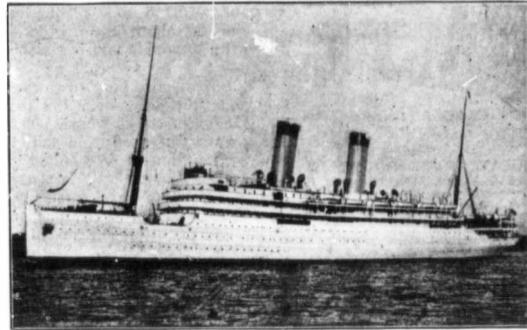
"Sunday night. You see, we had a big rush all day, and on top of that, about twelve o'clock, an alarm of fire next door. So she got no sleep. Monday morning she didn't get up, Tuesday she was up but too miserable to work, so finally I just packed her off to the ranch."

"That was right—only you should have sent for me."

She was silent and her heart began to beat with a knowledge of what was coming. She felt weak and unprotected here—in the office they were on more equal terms. She enjoyed in a subconscious way the swift rush of the horses and the splendor of the sunset, but the quiet authority in the man's voice occupied her consciousness—even as she lifted eyes to the mesa toward which they were driving.

He went on. "You know my mind, little girl. I don't mean to ask you till to-morrow—that's the day set—but I want to say that I've been cleaning house all the week, thinkin' of you. I'm goin' to be a man among men from now on. You won't need to apologize for me. I've never been a drinking man, but I've been a reckless devil. However, all that I put away. I want to do for you—and for your mother. I want to make you happy because that will make me happy. 'Tis true I'm forty, but that's not old—I'm no older than I was at twenty-one—sure, and besides, you're young enough to make up." He smiled, and again she acknowledged the charm of his face when he smiled. "You'll see me grow younger whilst you grow older, and so wan day we'll be of an age."

Her customary readiness of reply had left her and she still sat in silence—a sob in her throat—a curious numbness in her limbs.



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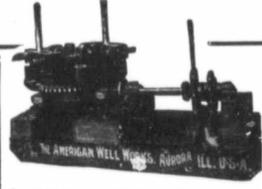
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He seemed to feel that she did not wish to talk. "But you're worried about the mother—and I'll not trouble you. Which road now?"

She silently pointed to the left, and they drew near the foot of the great mesa whose level top was cutting the sun in half.

The miner was filled with grateful homage. "'Tis a great world!" he exclaimed softly. "Sure, 'tis only yesterday that I found it out, and lifting me head took a look at the hills and the stars for the first time in twenty years."

It was wonderful to the girl—could it be that she was capable of changing the life of a powerful man like this? It filled her with a sort of marveling as well as with an exaltation which made a woman of her. She seemed suddenly to have put the hotel and all its worriments far, far behind her.

Seized by an impulse to acquaint her with his family Haney began to tell about his father and his attempts to govern his five sons. "We were devils," he admitted, "broncos, if ever such walked on two legs. We wouldn't go to school—except Charley—he did pretty well, and we fished and played ball and went to the circus—" He chuckled. "I left home with a circus. I wanted to be a lion-tamer, but had to content myself with driving the cook wagon. I've never been back and I've never seen the old man since, but now that I've made me pile I think I'll go home and see the old chap. He loved to read—I'll take him some books and I'll buy him new spectacles; it's ace to the three-spot he's using the same horn-rimmed ones he wore when I left."

Bertha was interested. "How long did you stay with the circus?"

"Till it busted in Salt Lake. Then I worked among the Mormons to get money to come to Colorado. I've been here ever since. 'Tis a good State."

"I like it—but I'd like to see the rest of the country."

"You can."

She did not follow this lead. "I've been to Denver once—went on one of these excursion tickets."

"How did you like it there?"

"Pretty good—but I got awful tired, and the grub at the hotel was worst ever—it was a cheap place, of course. Didn't dare to look in the door of the big places."

"You can have a whole soot of rooms at the Royal Flush—if you will."

Again she turned away. "There's our ranch."

"Shy as a coyote, ain't it? he commented as he looked where she pointed. "I'd prefer the Eagle House to that."

"I love it out here," she said. "I helped plant the trees."

"Did you? Then we'll lift the mortgage on the place. I want everything your pretty hands planted."

"Oh, rats!" was her reproving comment, and it made him laugh at his own sentimental speech.

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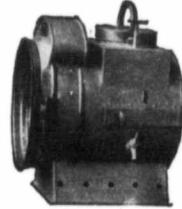
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CHAPTER VI.

The ranch house stood at the foot of the mesa near a creek that came out of a narrow gorge and struck out upon the flat valley. It was a little house—a shack merely, surrounded by a few out-buildings, all looking as temporary as an Indian encampment, but there was an orchard—thrifty green—and some stacks of grain to testify to the brother's energy and good husbandry.

Mrs Gilman was lying in a corner room, close to the stream which rippled through the little orchard, and its gentle murmur had been a comfort to her—it carried her back to her home in Oxford County (State of Maine,) where her early girlhood was spent. At times it seemed that she was in the little, old, gray house in the valley and that her father's sharp voice might come at any moment to break her delicious drowse.

Her breakdown had been caused as much by her mental turmoil as by her overtaxing duties. She was confronted by a mighty temptation—through her daughter. To urge this marriage upon Bertha would be to bring it about. The girl had said: "I'll do it if you say so, mother."

"I don't want you to do it if you'd rather not," had been her weak answer.

All her life she had known poverty of the pinching kind, as she told her son. "I never had a silk dress in my life—nor a decent chair, nor a day off from work—still I can't ask Bertie to marry a man she don't respect and that I can't trust—and Captain Haney's way of life is not godly. It may be fair from his point of view, but I never expected to even think of a man like that as a son-in-law; but there!—it may be that Bertie can change his way of life—"

The son was a tall, gawky-looking youth, slow and silent, as his father had been, and he now said sententiously: "I've always heard that the reforming business don't generally work out—the wife goes down with the man."

In this way, day and night (save for the respite of a little sleep, which the stream brought), the good mother debated the matter. She was worried, too, about the hotel, and that kept even the stream from putting her to sleep at times, and as the end of the week drew near, with the certainty of Haney's return for an answer, her perplexity deepened, and when she heard the carriage drive into the yard she fell to groaning in the anguish of an appeal to God to help her to the right decision. "Oh, God, don't take me now—give me time to see my baby settled in life," was her plea—for she saw only disaster followed by her death. There would be no one to hold the family together.

Bertie entered quietly in that singularly mature, almost manly, way she used, and bending to her mother asked cordially: "Well, how are you to-day, mother?"

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Lager, Ale and Porter  
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**THE BRANDON BREWING CO.**

THE ORIGINAL PEER  
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**Second**—Because it has a real Mineral Surface. Amatite, owing to these features, is the most economical roofing made. Its first cost is low, and you are saved all future expense for repairs or paint because it will need neither.  
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**F**OR you must make every minute count then to be sure of getting the full profit from your acres. Smooth, rapid, uninterrupted work is a necessity when the grain is ripe for cutting. Every delay due to a slow, inefficient broken-down machine will rob you of a part of the reward you have a perfect right to expect.

You have used great care in preparing the ground—sowing the seed—caring for it while it is growing.  
Don't, through lack of foresight now, run any risk of making valueless at harvest time the hours of labor spent in preparing for it.

Be prepared to get all the crop with a McCormick.  
Your grain may be tangled or down.  
It does not matter, a McCormick Binder will pick it up quickly and bind it in the best possible shape.

The McCormick Binder is made to meet the requirements of the Canadian farmer. It does so as no other machine does. It has stood the test of time. Its light draft, strength and uniform good work will permit you to save all your grain with the least labor on your part.

The McCormick line embraces a large number of other machines just as valuable as the binder, such as drills, tillage implements, gasoline engines, cream separators, wagons, hay presses, manure spreaders and motor vehicles.

Every McCormick machine is the superior products of expert designers and skilled workmen. Look over your machines today. See what you need to properly handle the harvest this year. Then call on a local dealer or write direct for further information. Take the step now that will insure your getting all the profit from your harvest.

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**Dairy Tubular Bowl. Made right. No disks needed.**

in preference to disk filled or other common complicated machines. The illustration shows all there is to the Sharples Dairy Tubular bowl. It contains neither disks nor other contraptions. It produces twice the skimming force, skims faster, skims twice as clean, wears a lifetime and is several times easier to clean than common separators.

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The sick woman took her daughter's hand and drew it to her tear-wet cheek. "Oh, my baby! I can't bear to leave you now."

"Don't talk that way, mother. You're not going to leave me. The doctor is coming out to see you, and everything is going all right at the house—so don't you worry. You set to work to get well. That's your little stunt. I'll look after the rest of it."

Bertie had never been one to bestow kisses, and her only sign of deep feeling now lay in the tremble of her voice. She drew her hand away, and putting her arm about her mother's neck patted her cheek. "Cassie's doing well," she said abruptly, "and the girls are fine. They brace right up to the situation and— and everybody's nice to us. I guess a dozen of the church ladies called yesterday to know how you were—and Captain Haney came down to-day on purpose to find out how you were."

The sufferer's eyes opened wide and looked at her daughter keenly. "Bert, he's with you!"

"Yes, he drove me out here," answered the girl quietly, but her face grew pale. "Is that so awful?"

The mother broke into a whimper. "Oh, darling, I don't know what to think. I'm afraid to leave this to you—it's an awful temptation to a girl. Don't do it! I guess I've decided against it. He ain't the kind of man you ought to marry."

"Sh! mother, he'll hear you." The girl spoke solemnly. "Now see here, mother, there are lots of worse men than Mart Haney—"

"But he's so old—for you."

"He's no boy, that's a fact, but he isn't old—we went all over that. The new fact in the case is this—he's sold out up there—cleared out his saloon business, and I all for me. Think o' that—and I hadn't given him a word of encouragement either. Now that speaks well for him, don't you think?"

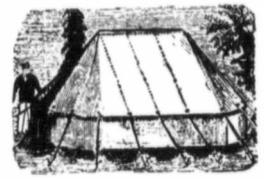
The mother nodded. "Yes—it surely does, but then—"

The girl went on. "Well, now, it ain't as though I hated him—for I don't—I like him, I've always liked him—he's treated me right from the very start, and he didn't come down to hurry me or crowd me at all, and so he says. Well, I told him I wouldn't answer yet a while."

The mother lay in silence for a few moments, and then with closed eyes, streaming with hot tears, she again prayed silently to God to guide her girl in the right path. When she opened her eyes the tall form of Captain Haney towered over her, so handsome, so full of quiet power that he seemed able to do anything. His face was strangely sweet as he said: "You must not fret about anything another minute. You've but to lie quiet and get strong." He put his broad, soft, warm and muscular hand down upon her two folded ones and added: "Let me do fer ye as I would fer me own mother. It will not commit ye to a thing." He seemed to understand her

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Conducted for the benefit of Dealers, Threshermen and Farmers who have anything to sell or exchange. Three cents a word for each insertion.

WANTED—One good Hart-Parr plowing engine. State price and terms.—Jos. Pantel, Somerset, Man.

SOUTH AFRICAN SCRIP FOR SALE—Cash and terms with good acceptable security to farmers in Alberta and Saskatchewan.—Address A. D. Mabry, Saskatoon, Sask.

FOR SALE—South African Scrip. Two years' terms to farmers with acceptable security.—Romer-Fowle & Co., Prince Albert, Sask.

FOR SALE—One Avery Steam Plow, 1906 make, with ten breaker and stubble bottoms and steam lift, complete, and hold 1 cone. Manitoba. For further information address—Walter M. Grimes, Nokomis, Ill., U. S. A.

WANTED—Second-hand Cockboat engine plow, 8 or 10 furrows. Quote lowest price F. O. B. railway, Jas. W. Mitchell, Arrow River, Man.

WANTED—Position as Engineer for season of 1910. Steam Traction preferred. Also one which will be plowing after threshing. An holder of Diploma from Heath School of Traction Engineering, have had two full seasons experience and one driving. Please state make, and H.P. of engine and wages. Address to—W. M. L., c/o Box 167, Bonaville, Man.

EXPERIENCE ENGINEER desires position. I am an experienced Traction Engineer, Plowman, and Threshermen, and hold 1 cone of Diploma from Heath School of Traction Engineering, and Alberta. When replying please state make and size of outfit, and wages offered. Address—Chas. A. D. Scott, Coulterville, Man.

COLLECTOR—First class, open for engagement Sept. 1st, at present on home leave. If you want an A1 man write at once to Box No. 3079, Winnipeg, Man. Salary required \$100.00 per month.

ENGINEER wants position on a plowing engine or a stationary for the season of 1910. Have had two years' experience; am also a graduate of the Heath School of Engineering. Can furnish references. Chas. McMan, Summersby, Sask.

WANTED—Position as assistant engineer on ploughing outfit for the coming season. Am experienced in steam ploughing, can do repair work and also handle blacksmith's tools. Can furnish best of references as a fireman and assistant engineer. When writing please give name of engine. G. A. Webster, Calmout, Sask.

YOUNG MAN used to gasoline engines wants position on gasoline tractor this summer. State make of engine and wages to Box 3079, Canadian Thresherman and Farmer, Winnipeg.

FOR SALE—One Gould Balance valve for 22 or 25 H. P. Gaar-Scott engine. J. Reynolds, Yellow Grass, Sask.

ENGINEER—Wants position on plowing outfit coming season in Manitoba, Saskatchewan, or Alberta. Saskatchewan extra position on steam or gas engine. Do own repairing. References furnished.—Edward Winchester, Melita, Man.

WANTED—Position as engineer on steam plowing outfit for the coming season in Manitoba or Saskatchewan, or Traction Eng'g work of any kind. R. J. Fargest, McLean, Sask.

FIREMAN—First class Fireman wants position on a plowing outfit this plowing season. I am a graduate of the Heath School of Traction Engineering and I know how to fire properly and save coal. Wages \$2.50 for firing or \$3.50 for firing and handling plows both. Write at once stating make of engine and when plowing begins to E. K. Siemens, Rosendahl, Man.—Box 61.

EXPERIENCED Practical Engineer, Fireman and Traction Plowman desires position. Licensed for Saskatchewan and Alberta, also Graduated Student of the Heath School of Traction Engineering. Apply H. L. Bushell, 448 Elgin Ave., Winnipeg.

CERTIFIED ENGINEER and Mechanic with fifteen years' experience wishes position on steam or gasoline plowing engine. Can do own repairing. Apply D. Mark, Manokwa, Alta.

ACOOK and Caker seeks place on big farm, ranch or other place where good wages appreciated. Wages moderate. State wages. Address F. M. Burns, 295 Thompson St., Winnipeg.

FOR SALE—30 H. P. Flour City gasoline traction engine, price \$2400.00, plowed 400 acres. As good as new. For terms, etc., write to Glennie & Kodger, Macdonald, Man.

Brother, accidentally discovered root will cure both tobacco habit and indigestion. Gladly send particulars. H. Stokes, Mohawk, Florida.

WELL DRILLING OUTFIT FOR SALE A Sparta No. 3 Hydraulic Jetting machine with a 6 horse power Fairbanks-Morse upright gasoline engine attached. All complete and in good working order. Geo. Taylor, Breslay, Sask.

FOR SALE—A 18 horse Advance traction engine (straw burner) and 36x56 New Challenge separator, in fair condition. Very cheap if taken at once. Jacob P. Elias, Hochfeld, Winkler, Minn.

THRESHER wants position on a steam plowing outfit for coming season in Alberta or Saskatchewan. References furnished. For information reply to Box 82, Broadway, Sask.

HARDY Ontario Nursery Stock, apples, plums, small fruits, hardy roses and ornamentals. Agents wanted immediately on vacant territory. Thos. W. Bowman & Sons Limited, Ridgeville, Ont.

WANTED—Position on steam plowing outfit, firing preferred, experienced. Frank Campbell, Stoughton, Man.

WANTED—A job running engine through plowing season. Will also engine on through threshing season if desired. Can do own blacksmithing, fix work on engine a specialty, graduate of Heath School of Traction Engineering, also have papers to operate in Saskatchewan. Address G. Y. Box 3079, Winnipeg.

ENGINE OWNERS write me for terms on re-fueling and stay bolt repairing. I can save you money. I am also open for engagement during the plowing season. Chas. Fenwick, Licensed Engineer, Wapella, Sask.

POSITION WANTED by practical and experienced man as engineer on plowing outfit for the month of May and June. Have had a number of years' practical experience with different makes of traction engines in the States, also in Canada. Anyone tired of coasting and not getting any money is invited to call or write, address Jos. H. Polley, Elbow, Sask.

ENGINEER wants position on breaking outfit this season. Holds certificate for 50 horse power in Saskatchewan. References given, strictly temperate. Apply Mark Ketteringham, Box 43, Foxwarren, Man.

WANTED—Position as engineer on plowing engine. Can begin work at once. Fully experienced in Western Canada. References furnished. Joseph Richers, 73 Parr St., Winnipeg.

EXPERIENCED Practical Machinist desires position as Threshing Engineer in Manitoba. Apply W. B. c. Canadian Thresherman and Farmer.

WANTED—Position as fireman during plowing and threshing season of 1910. Two years' experience. Can operate engine if necessary. References. Reply stating wages to Russell Aigue, 255 Dorothy St., Winnipeg.

WANTED—Position as Engineer, experienced. First class references. Ready to start at once. Saskatchewan or Alberta preferred. Apply Box A, Winnipeg, Man.

Steam Traction Engineer wishes a position on a ploughing outfit for coming season. One season's experience threshing. Am also a pupil of the Heath School of Traction Engineering by correspondence. Canadian. Total abtainer. Can secure references. Percival Huggard, Winnipeg, Manitoba.

WANTED—Position as engineer on steam plowing outfit, 7 year's experience in Ontario and one in Saskatchewan. Hold a provincial certificate for Saskatchewan. Will take engine through threshing if desired. Address E. F. Sharpe, Maple View, Ontario.

WANTED—Position as Engineer on a steam traction outfit. Fully experienced. Can furnish references. Address E. F. Feitch, Clava, Man.

FOR SALE—Two Parlin and Orndorff 6 bottom engine gangs nearly new, breaker bottom. Price \$75.00 each. Address—E. L. Zureher, Sperring, Man.

FOR SALE One No. 2 Austin Well Drill Outfit with 4 inch cable 350 feet long, weight 5,000. One 6 horse power upright Fairbank and Morse engine, with Wizard Magnet attached loaded on low truck. All in first class order. Address Defoliary, Box 188.

FOR SALE 20 H. P. J. I. Case Simple Traction Engine run 75 days, J. I. Case 32x54 separator with feeder and blower, weigher bagger, 150 ft. in. drive belt, steel tank, and 1 wood tank and calborer. Many terms of payment. Reference, Harrison Bros., Holmfeld. Apply to Henry Blackwell, Jr., Holmfeld, Man.

FOR SALE Gaar-Scott Threshing outfit, 22 H.P. engine, Separator 38 x 60 with wire stacker, 16 inch bagger, self feeder, complete in everyway. Owner is retiring and desires to sell at once. Terms of payment. References furnished. Apply to Manitoba Bridge and Iron Works, Winnipeg, Man.

FOR SALE Good second-hand Portable Steam Engine, 26 h. p. double cylinder separator and plows. Terms and price would be made most interesting to threshermen. Calvin Young, Mapleton, Minn. Apply to Manitoba Bridge and Iron Works, Winnipeg, Man.

FOR SALE One American Advance Separator, 36 x 56, with all latest attachments. One 15 inch Vessott Grider; One 2 wheeled Engine Tender; Many row John Deere Engine Gangs. The above property for sale cheap. F. W. Hunter, Stone-wall, Man.

FOR SALE Two four bottom moline engine gangs with beaker bottoms and extra shares, price \$190.—J. Hansford, Fairlight, Sask.

FOR SALE 1—12 H. P. Compounded Case portable Engine No. 11374. 1—12 H. P. Compounded Case portable Engine No. 13426. 1—15 H. P. Simple Case portable engine No. 15833. 1—15 H. P. Simple Case portable engine No. 15833. 1—15 H. P. Simple Case traction engine No. 13228. 1—20 H. P. Simple Case traction engine No. 9332. 1—20 H. P. Simple Case traction engine No. 30994. 1—20 H. P. Simple Case traction engine No. 10623. 1—16 H. P. Stevens & Burns portable engine. 1—18 H. P. John Abell engine, portable.

A few rebuilt Case Steel Separators in all sizes. For prices, terms and condition of any of above write us. Our rebuilt engines are bargains. J. I. CASE THRESHING MACHINE CO., Winnipeg, Man.

BARGAINS Give these bargains your attention. Four Case Portable Engines at \$1,500; two Minneapolis Tractors, \$600, 18 and 20 H. P.; one Advance Traction \$600. 1 Case 30 H. P. Traction Engine \$500.00. Several good Separators to suit the above engines, see our farmers' list separator. All our engines fitted with Gould Balance valves. Write us about them. THE GEO. WHITE & SONS CO., LTD. BRANDON, MAN.

FOR SALE One 15 H.P. Case Traction Engine, with or without 34 wheel separator, for sale or exchange with a Gasoline Traction Engine.—WILLIAM BRAYSHAY, Kellie P. O. Man.

FOR SALE One 36 x 56 Great West Separator, with feeder and wind stacker. This separator has been run for 20 days and is practically as good as new. Address: A. FORATH, Raymore, Sask. G.T.P.R.

FOR SALE Two 25 H. P. Simple J. I. Case engines. One 15 H. P. Simple J. I. Case engine. One 25 x 54 Wood Case separator, with wind stacker, self feeder and weigher. J. I. CASE THRESHING MACHINE CO., Calgary, Alberta.

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1 J. I. Case Steel Separator, complete with all attachments. 42 x 62. Run forty days. 1 Advance 30 x 54 separator, Battle Creek with Hawkeye Foston Wind Stacker. HAUG BROS. & NELLERMOE CO. LTD., Winnipeg, Man.

FOR SALE Two Rebuilt Threshing Outfits: 22 H. P. Port Huron Compound Traction Engine No. 9571, equipped with steel gearing and all plowing attachments. Price F.O.B. Winnipeg, Man. for full outfit \$2,500.00. 21 H.P. Port Huron Compound Traction Engine No. 5203, steel gearing, all plowing attachments. 36 x 60 Port Huron Rusher Separator No. 6569, with all attachments. Price F.O.B. Winnipeg, Man. for full outfit \$2,300.00. 36 x 60 Port Huron Rusher Separator No. 6680, with all attachments. Price F.O.B. Winnipeg, Man. for full outfit \$2,300.00. These outfits have been thoroughly rebuilt, painted and varnished, and ready for immediate shipment. We guarantee them the same as we do new machines of the same make. CANADIAN PORT HURON CO., LTD., WINNIPEG, MAN.

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 repaired and look exactly like new. If you write us at once we are almost sure to have the size you want. We also have a thoroughly Rebuilt Saw Mill Outfit consisting of 25 H.P. Saw Mill Engine and Port Huron Mill with carriage and track complete. Can hardly be distinguished from new goods. Will be sold at a bargain. SAWYER-MASSEY COMPANY, LIMITED, Winnipeg, Man.

FOR SALE One 25 h. p. direct bus, Simple, heavy gear traction engine. One 21 h. p. Compound, return flue, traction engine. One 18 h. p. Simple, return flue traction engine, and one 25 h. p. Compound, return flue traction engine.

We also have several other makes of our own and other makes. Also have several rebuilt separators of our own and other makes. GAAR-SCOTT & CO., WINNIPEG

REBUILT MACHINERY ON HAND AT BRANDON. 1—34 H. P. C. C. By Northwest Traction engine. 2—30 H. P. C. C. By Northwest Traction engine. 2—25 H. P. Northwest Traction engines. 1—25 H. P. New Giant Traction engine. 2—20 H. P. New Giant Traction Engines. 2—18 H. P. New Giant Traction engines. 2—21 H. P. Port Huron Traction Engine. 1—20 H. P. Sawyer & Massey Traction engine. 1—20 H. P. J. I. Case Traction engine. 1—25 H. P. J. I. Case Traction engine. 1—17 H. P. Sawyer & Massey Portable engine.

3-size 74 40x64 Northwest Separators with N. W. Feeder, Windstacker and Dakota Perfection Weigher.

1—size 6 36x56 Northwest Separator with Parsons Feeder, N. W. Windstacker, and Dakota Perfection Weigher.

1—size 31 32x52 Northwest Separator with N. W. Windstacker, Parsons feeder and Dakota Perfection Weigher.

1—36x60 Port Huron Separator with all attachments just as it stands. (not rebuilt).

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All the above engines and separators, except last three mentioned Separators, are or will be thoroughly rebuilt and repainted and warranted to be in first class shape and working order, and will be sold cheap.

Write for particulars.

NORTHWEST THRESHER COMPANY Brandon, Manitoba.

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FOR SALE Rebuilt Gasoline Engines for sale by 2nd hand Department Canadian Fairbanks Co., Limited. An opportunity to get a good engine at a low price.

- 1 Horse Power Fairbanks-Morse Vertical
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12 Horse Power Fairbanks-Morse Horizontal
15 Horse Power Fairbanks-Morse Horizontal
15 Horse Power Howe Horizontal engines
15 Horse Power Howe Horizontal engines
1 Horse Power stationary slide valve steam engine
8 in. Stover Grain Grinder with Ragger

Send for special price on above machines, and full particulars. Quotations made subject to prior sale. SECOND HAND DEPARTMENT THE CANADIAN FAIRBANKS COMPANY, LIMITED, 92-94 Arthur St., Winnipeg, Man.

mood—perhaps he had overheard her plea. "Here's the doctor—so put the whole thing by for the present. I ask nothing till you are well."

If this was policy on his part it was successful, for the poor tortured mother's heart was touched and her nerves soothed by his voice as well as by the touch of his hand, and when they left the house she was in peaceful sleep, and the doctor's report was reassuring. "But she must have rest," he said positively, "and freedom from care."

"She shall have it," said Haney with equal decision.

All this bluff kindness on his part, in addition to his graceful, powerful form, profoundly affected the girl. Her heart went out toward him in tenderness and trust, and as they were on the way home she turned to him and said:

"You're good to me—and you were good to mother—you needn't wait till tomorrow for my answer. I'll do as you want—but not now—next spring, maybe."

He put his arm about her and kissed her, his eyes dim with gratitude.

"You're the sweet child! You've made Mart Haney over new—so you have!"

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3—AMERICAN SEEDING MACH- INE CO., Winnipeg.	2a—STUART, JAMES, ELECTRIC CO., Winnipeg.	Scientific..... 44	Canton Packer..... 33	American-Bell..... 1
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5—BELL B. & SONS, Winnipeg.	64—SYLVESTER MFG. CO., Brandon.	Thomas..... 49	Cockshutt Land Roller..... 19	Avery..... 28
6—BELL ROBT. ENGINE & THRESHER CO., Winnipeg.	65—WATERLOO MFG. CO., Winnipeg.	Venot..... 33	Cockshutt Pulverizer..... 27	Belle City Thresher..... 33
7—BRANDON MACHINE WORKS Brandon.	66—VULCAN IRON WORKS, Win- nipeg.	Watson's Ideal..... 69	Dale Land Roller..... 61	Bell, Holo..... 5
8—BRANDON PUMP & WIND- MILL WORKS, Brandon.	67—TUDHOPE-ANDERSON CO. CO., Winnipeg, Regina, Calgary.	GARDEN IMPLEMENTS, INCUBA- TORS AND POULTRY SUPPLIES.	Deere Land Roller..... 21	Brandon Feeder..... 5
9—BRANDON & ROBERTSON, Brandon.	68—VIRDEN MFG. CO., Virden.	Chatham Incubator..... 27	Floury's Pulverizer..... 21	Brandon Cornell Engine..... 6
10—BURRIDGE-COOPER CO., Winnipeg.	69—WATERLOO MFG. CO., Win- nipeg, Regina.	Cyphers' Incubator..... 60	Fulton Sub-Surface Packer..... 62	Buffalo Pitts..... 33
11—CANADIAN FAIRBANKS CO., Winnipeg, Vancouver.	70—WATSON'S ENGINE WORKS, Winnipeg.	Fountain Air Sprayer..... 53	Hamilton Pulverizer..... 27	Case, J. L..... 17
12—CANADIAN MOLINE FLOW CO., Winnipeg.	71—WHITE, GEO. & SONS, Brandon.	Iron Age (Garden Impite), 10-53 and Maxwell..... 64	Hilborn Land Roller..... 64	Dakota Weigher (ask any Thresher Co.)..... 17
13—CANADIAN PORT HURON CO., Winnipeg.	72—WINNIPEG RUBBER CO., Winnipeg.	Planet Jr. Garden Tools..... 41-55	Moline Parallel Pulverizer..... 64	Forston Wind Stackers..... 31
14—CANADIAN RUBBER CO., Winnipeg, Vancouver.			Verity Land Roller..... 39	Gaar-Scott..... 26
15—CANADIAN STEOVER CO., Winnipeg.			Verity Pulverizer..... 39	Geiser..... 9
16—CARBEIRY IRON & WOOD WORKS, Carberry.			Watson's Flexible Pulverizer..... 69	Goodison..... 33-68
17—CARBERRY STACKER CO., Carberry.			Watson's Land Roller..... 69	Hawkeye Feeder..... 18-51
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21—CRANE & ORDWY, Winnipeg.				Nicola & Shepard..... 46
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30—HARMER IMPLEMENT CO., Winnipeg.				Sylvester Auto-Thresher..... 63
31—HART-PARR CO., Portage la Prairie.				Waterloo..... 6
32—HELGESEN, H. T., Winnipeg.				Waterloo..... 68
33—HERO IMPLEMENT CO., Win- nipeg.				White, Geo. & Sons..... 65
34—INTERNATIONAL HARVEST- ER CO., Winnipeg, Regina, Cal- gary, Edmonton, Saskatoon.				Whitewings Feeder..... 51
35—LOUEN HDWE & SPECIAL- TY CO., Winnipeg.				
36—MANITOBA HAYES PUMP CO. LTD., Morden.				
37—MANITOBA IRON WORKS, Winnipeg.				
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50—PARSONS-HAWKEYE MFG. CO., Winnipeg.				
51—PETE MFG. CO., Winnipeg, Calgary, Vancouver.				
52—RAYMOND MFG. CO., Win- nipeg.				
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60—STEELE-BRIGGS SEED CO., Winnipeg.				

# THRESHING WITH A HART-PARR

## THE MODERN FARM HORSE

### Is To Thresh With Pleasure and Profit



MOOSE JAW, SASK., CAN.

**THE HART-PARR** is built for power. Every detail of its construction is made to serve that end. It is rated considerably lower than the actual horse power developed; hence there is always an abundance of power in the belt and at the draw bar. Considered as a threshing engine its superiority over the steam tractor is at once apparent. Being oil-cooled it is entirely independent of the water supply, which dispenses with from one to two teams and as many men.

If you have ever run a steam tractor, wouldn't the fact that the following were not on your trouble list appeal to you?

Leaky Flues  
Frozen Water Pipes  
Washing Boilers

Danger from Boiler Explosions  
Bad fuel, poor fires  
Burnt-out Grate Bars

Leaky Stay Bolts  
Clogged Injectors  
Choked Pumps

None of the above trouble the Hart-Parr owner at threshing time. It is always ready. It is always ahead of the crew, and the minute it stops, expense stops. Uses kerosene as well as gasoline and will reduce the fuel bills from 30 per cent. to fifty per cent. When moving from place to place it will draw the separator over fields and roads that a steam tractor dare not move over alone.

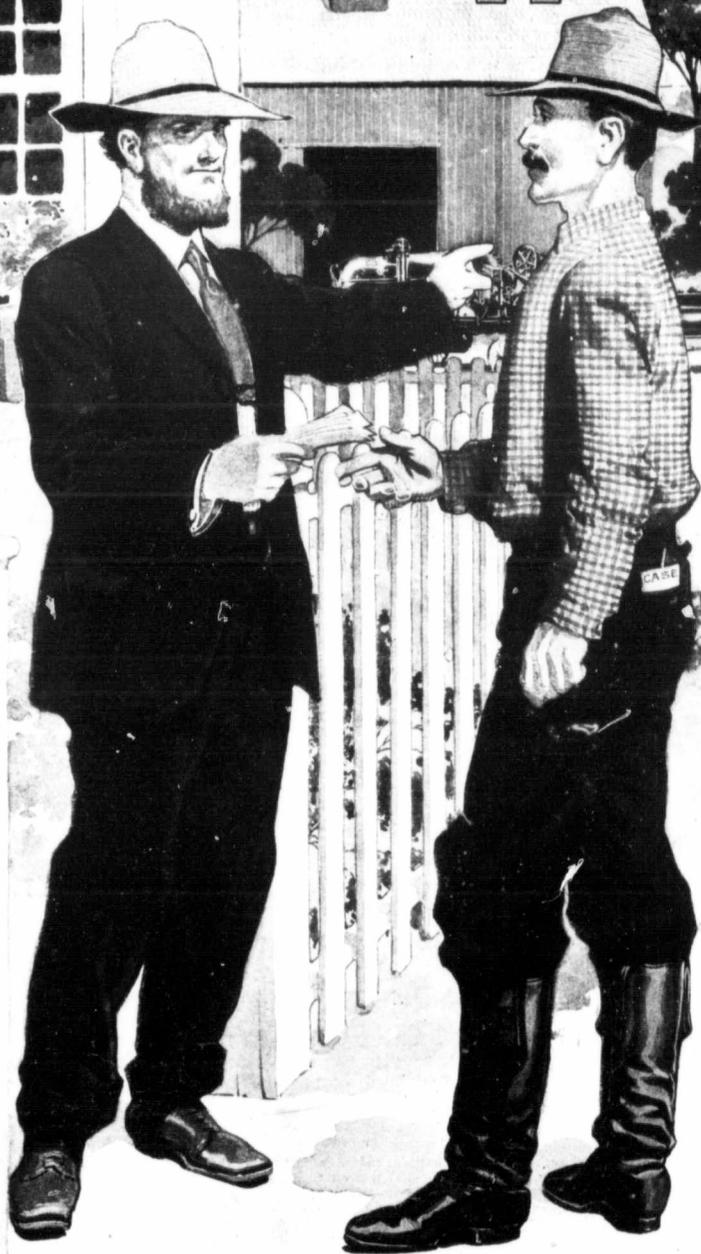
We will not enter the Motor Contest at Winnipeg in July. We believe such contests are harmful and misleading rather than beneficial, because they give the farmer no idea as to the reliability and durability of a tractor, and these are the points of most vital interest to him. Furthermore, the rules of the contest have been so arranged that a kerosene tractor is practically shut out of it because it cannot show its great economy over a gasoline tractor. The rules would oblige us to use high grade kerosene costing 18c per gallon, while we could buy kerosene distillate, a fuel equally as good, for 11c net per gallon in Winnipeg, and nearly all our customers in Canada are using kerosene distillate costing 11c or 12c net per gallon in Winnipeg; and the Hart-Parr Tractor is the only one thus far developed that can use this cheap distillate for fuel. But we will give an exhibit daily during the contest, with a Hart-Parr Tractor doing breaking work and using 11c distillate for fuel.

# HART-PARR Co.

No. 30 MAIN STREET  
PORTAGE-LA-PRAIRIE, MANITOBA

The Chapin Company, Calgary, Alta., Sales Agents for Alberta.

66  
**CASE** "OUTFITS"  
Make  Opportunities



Grain Grower: "Henry,  
that CASE rig sure  
saves the grain"  
Henry: "That's what  
they tell me  
everywhere"



**J. I. CASE THRESHING MACHINE CO.**

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