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THE CANADIAN THRESHERMAN & FARMER

CANADA'S FARM MACHINERY MAGAZINE
WINNIPEG CANADA

JULY, 1913

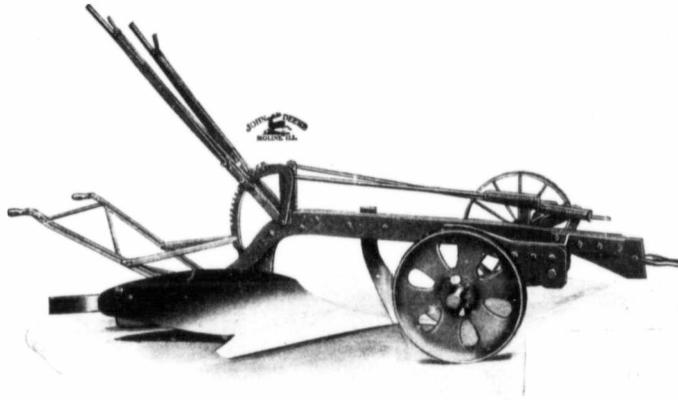


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John Deere Plows are Years Ahead of all others

A John Deere Plow is the product of the largest plow factory in the world with an organization and facilities for building plows that no other plow factory can compare with. This is worth something to you. It is a guarantee that you are getting the best there is in plow construction—the most value for your money.

There is a John Deere Plow that is built just to suit your requirements. Why not own the original, not an imitation? Write for Plow Catalogues.

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WINNIPEG REGINA SASKATOON CALGARY LETHBRIDGE EDMONTON

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Dain Hay Making Tools Will Make Your Hay

Worth More



Dain New-Idea Rake

Cutting down expenses is one way of making larger profits.

The less your hay crop costs you in harvesting the more profit you will make.

Farm labor is scarce and expensive.

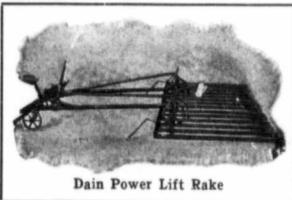
THE GREAT DAIN LINE provides tools for every operation connected with hay making, from cutting the standing hay to preparing it for the market.

Mowers, Sweep Rakes, Dain Stackers, Side Delivery Rakes, Loaders and Hay Presses

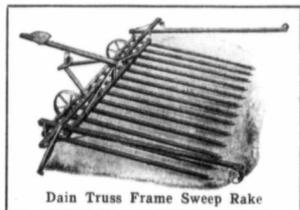
They are made by hay tool specialists. Thirty years of experience back of every machine. They are the most simple, the most time and labor saving, the most durable and dependable.



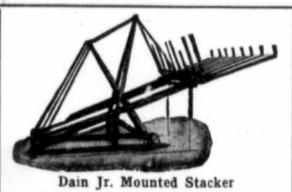
Dain Side Delivery Rake



Dain Power Lift Rake



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They are Money Makers

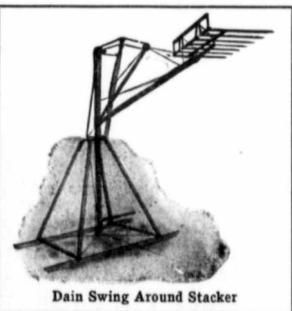
Write Us About Any Hay Tool You are Interested In

If you are coming to the Winnipeg Fair, visit our Sample Rooms, 110-120 Princess Street. Look over our set-up samples.

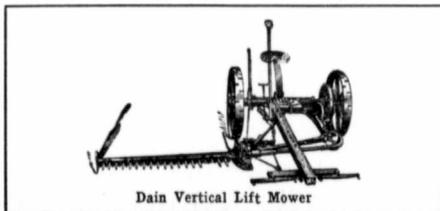
We will be glad to see you and to be at your service



Dain Automatic Stacker



Dain Swing Around Stacker



Dain Vertical Lift Mower



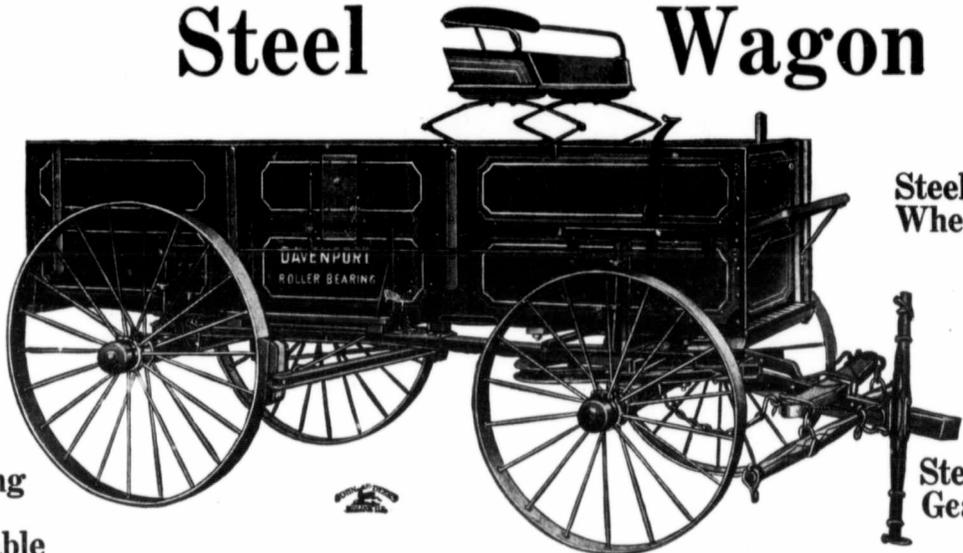
Dain Hay Loader

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WINNIPEG REGINA CALGARY SASKATOON EDMONTON LETHBRIDGE

Davenport Roller Bearing Steel Wagon

Roller Bearings Reduce Draft 30% to 50%

Strong and Durable



Steel Wheels

Steel Gears

Built Like a Bridge

Like the modern steel railway bridge, the Davenport Wagon is built for the heaviest lifetime service. Structural steel I-beams, channels and angles

The tires run flat on the ground and straight ahead—not on their edge as is the case with the ordinary wagon.



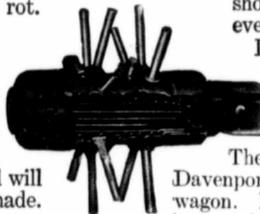
held together by large steel rivets

put in hot make up the front and rear gears.

Davenport Running Gear cannot become loose and rattle. It is not affected by changes in the weather. It does not dry apart or rot. Each gear remains practically one piece.

Strongest Wagon Wheels Made

Steel wheels on the Davenport Wagon are made with a tension. Each spoke carries its share of the load all of the time and not only when it is the under spoke. Davenport Wagon wheels are stronger and will last longer than any other wagon wheels made.



No Bolts or Nuts to come loose
No Tires to Reset
No Cracked Hubs
No Split Felloes
No Broken Axles
No Repair Bills

Light Draft
Strong and Durable

Roller Bearings—Light Draft

That roller bearings reduce draft is generally known. Straight roller

bearings on the Davenport make it the lightest draft wagon on the market.

Even after years of use these roller bearings show no appreciable wear. They are practically everlasting.

It is not necessary to take the wheels off to oil a Davenport. Just push back the cover of the oil cup and squirt in a few drops of oil; the cover closes automatically.

There are many other valuable features on the Davenport Wagon that you will not find on any other wagon. Look this wagon over. You will quickly see its superiority.

The Davenport Roller Bearing Wagon will do more work for you than any other wagon. We have an attractive booklet describing this wagon in detail. Write us and we will be glad to send it.

Have you read "When the Going is Hard?" Tells all about wagon construction. It is worth your while to read it.

JOHN DEERE PLOW COMPANY, LIMITED

WINNIPEG REGINA CALARY SASKATOON EDMONTON LETHBRIDGE



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not alone, because it is the purest and best salt for salting butter. But because it will salt more butter, pound for pound, than any other salt you can use.

The big creameries will tell you this—and show you tests to prove it. The Agricultural Colleges demonstrate this every day.

Every farmer and dairyman—who is getting good prices for butter—is using Windsor Dairy Salt.

It is pure—it makes beautiful butter—it works in quickly—and it is the cheapest in the end. Just try it yourself.

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The largest in our line in Canada

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About Ourselves

THIS issue will greet you at all of the Big Western Canadian Fairs. Through it we wish to extend to you and your friends a most cordial invitation to visit us at our headquarters. We want to know each one of our Readers personally, and scattered as you are all over the Canadian West it is a very difficult matter unless you come to us personally. Our representatives will be on the ground and will be in every case very pleased to see you.

Have you ever stopped to realize just how much of an interest you had in this publication? Our subscribers more or less may not seem very much to you but to us it means a great deal. You are one of over 25,000 spokes in a big wheel known as *The Canadian Thresherman and Farmer*. Without you the wheel is not complete. Did you ever stop to realize just what farm life would mean without a farm paper? Don't you believe that things would be rather dull? It requires your support to keep Canada's agricultural publications in existence, and unless we are very badly mistaken the dollar that you invest in a year's subscription is just about the best investment that you make during the year.

Your farm paper may not always coincide with your views. If it did it would be of very little value to you. What you want to know is not what you think, but what the other fellow thinks. It is his ideas that you can afford to ponder over and pick to pieces. It is only when your son disagrees with you that you can show him the error of his ways and set him right. Hence the farm paper that always thinks as you think is the farm paper from which you get very little.

Don't try to get away with the idea that you can get too much agricultural reading matter. You may not always read every line in every issue, but if you only get away with two or three articles a month you have "brushed up" on far more than a dollar's worth of information.

If you want a real bargain for your money—something that is sold at fifty per cent. below the cost of production—then just hand us that dollar for a year's subscription to this magazine.

Do you know that if the postal authorities would permit, it would be far cheaper for us to give you the magazine free rather than to spend all the money that is necessary to solicit your subscription. It costs us in most cases one dollar to get your subscription, and on top of this your twelve copies cost us to print about two dollars per year. This is exclusive of editorial expense, engraving, salaries, office expense, etc., etc. A year's subscription to this magazine is a big bargain at the price. Now don't fail to come and see us when at the fair. We will be looking for you.



Statuary Easily Cleaned

Among its infinite uses, such as cleaning pots and pans, bathroom accessories, etc., Old Dutch Cleanser is especially valuable on marble statuary.

Removes that yellow tinge, which common soaps only intensify. All dirt, and discolorations, quickly respond to its cleaning qualities. Equally as effective in cleaning jardineres, vases and bric-a-brac. Old Dutch Cleanser halves the work and time—doubles the satisfaction.

Many Other Uses and Full Directions on Large Sifter Can.

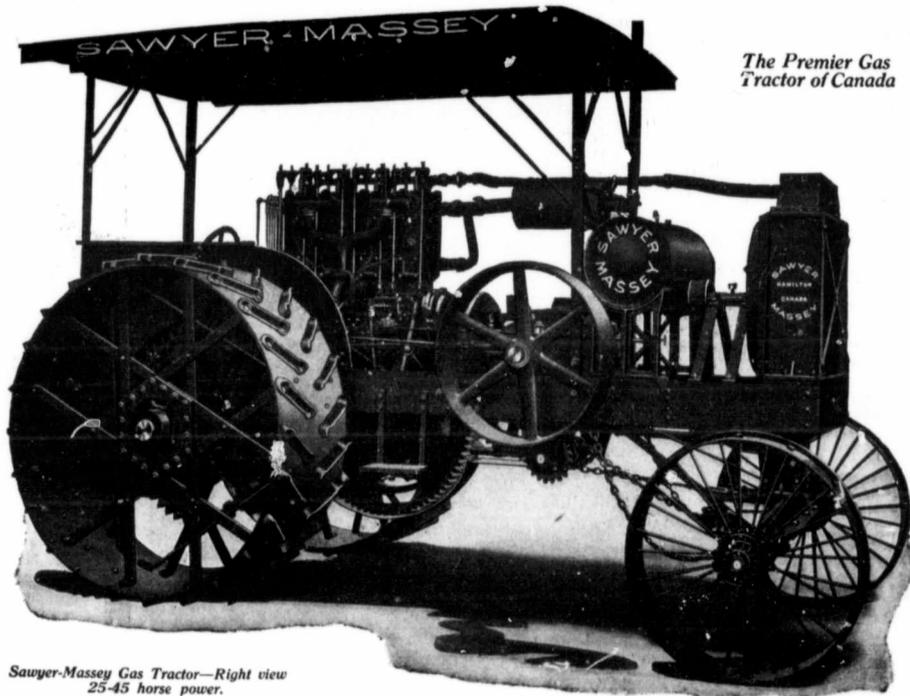
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Gas Tractors



For Plowing and Threshing



*The Premier Gas
Tractor of Canada*

*Sawyer-Massey Gas Tractor—Right view
25-45 horse power.*

Farmers and Threshermen

should examine closely the **SAWYER-MASSEY** Gas Tractor. Note the strong construction and clean cut design which denotes power and efficiency. Note the simplicity, the absolute protection of working parts and the refinement of detail which means ease of operation and freedom from mechanical trouble.

The **SAWYER-MASSEY** Gas Tractor is built throughout for long, honest service. Rated at 25 Nominal and 45 Brake horse power, it develops over 52 Brake horse power in actual service. It is designed by men who have made a long and careful study of agricultural conditions, and it is thoroughly practical and efficient in every way.

The **SAWYER-MASSEY COMPANY** has been building Farm Power Machinery for 77 years. Our machines have stood the test of time and hard service, and have made the name of **SAWYER-MASSEY** the standard for efficiency and honest worth.

The **SAWYER-MASSEY** exhibit at the Winnipeg contest has a large supply of our Illustrated Catalogues and the "**SAWYER-MASSEY CHRONICLE**," a valuable magazine of special interest to threshermen. A copy will be given you on request, or sent by mail if you will write to us.

SAWYER-MASSEY COMPANY, Limited

BUILDERS OF STEAM AND GAS TRACTION ENGINES, THRESHERS, AND ROAD-MAKING MACHINERY.

Head Offices and Factories: **HAMILTON, CANADA.**

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No. 7.

HARVESTING THE GRAIN CROPS

EVER since Ruth went glean- ing in Boaz's field, harvest time has been turned to the poetic. The people who wield the brush are however, not 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 nelds tinged with a border 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 and 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 overwhelmingly large, but it is the stuff from which bread is made and bread is the thing upon which mankind largely exists. It

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, 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

grain can be crushed between the thumb and the finger. The increase seems to be decided and of economic importance up to the time when the grains dent, 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, 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 fibre as the grain ripens, due to the increase in carbohydrate other than fibre. 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



The Mid-day Break for a Bite and a Sup

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, Central Asia, China, Japan, and Texas; in June, Turkey, Tennessee, Virginia, Kentucky, Spain, Southern France, California, Kansas, Utah, and Missouri; in July, Roumania, Austria-

the grains are in the dough, soft enough to be easily dented with the thumb nail and hard enough not to be easily crushed between the fingers. Investigation indicates that there is a continuous 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

(composition) of the grain, climatic conditions which affect the full maturity of the grain may materially modify the quality. The higher percentage of nitrogen in the spring wheat is probably due, in part at least, to 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 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 ripe 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 laying this crosswise of first bundle. In some cases only one bundle is used, treating 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 easily be 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-

chinese, generally called the "binder." They are manufactured in a number of styles, but in their essential features, they are practically all 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

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 alongside to receive it. The grain is either immediately carried to a threshing machine or first put in stacks and subsequently threshed.

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 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 grain in the early dough, without materially injuring the chemical composition or the yield of grain, and that the yield and quality of the straw may be increased provided the sheaves are immediately shocked and capped to permit slow curing and ripening. Cutting in the hard (stage dough) and slow curing in round shocks is generally desirable, but

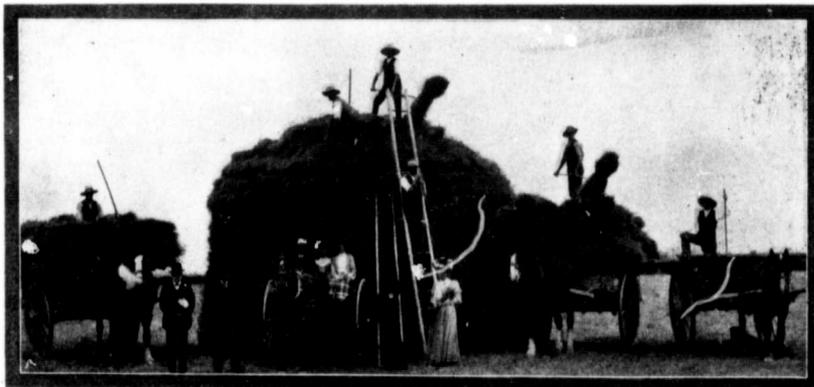


The Old Horse-tread Threshing Mill

binding harvester; (3) The leader; 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 regularly against the sickle and deposit it on the platform, a divider to separate the

an elevator consisting of two endless canvasses 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 size of the bundle is therefore determined by regulating the pressure required to trip the binder. Binders are made which cut different widths



To keep it in Prime Condition until Wanted

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 to operate automatically, rakes which serve a double purpose of bringing the grain on to the platform and removing it from the platform ma-

chine, generally called the "binder." They are manufactured in a number of styles, but in their essential features, they are practically all 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

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when weeds abound or for other reasons rapid curing is necessary, long shocks are better. Oats may be cut for hay while the grain is in the milk stage with mowing 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 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.

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 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 im-

provement 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 much higher price which can be obtained for straight rye straw as compared with tangled straw, threshing machines have been devised for

factory, and many still preferred to bind the sheaves by hand. Now, the twine binder, since there is no need to distinguish from the wire binder which has long 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 which the knot is tied, and as a thorough understanding of the principles on which the binding

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.

"This should be sufficient to give a general idea of the manner in which the important parts of the binding device operates 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 difference, 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 all right.

"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 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. If it occurs between the knotter and the tension it is due to too much



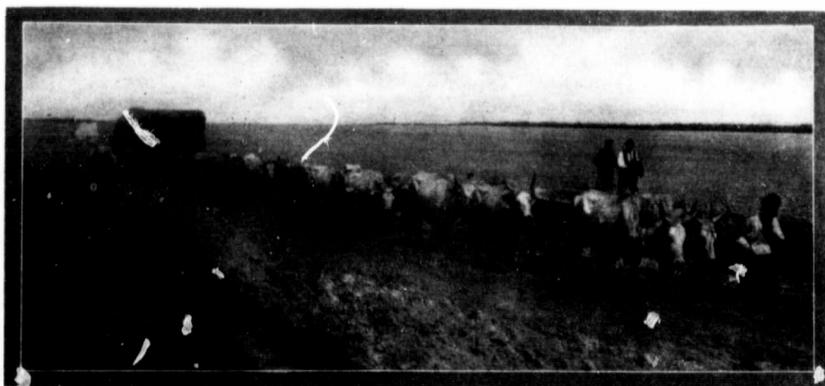
Harvesting with Oxen on the South Downs of England

keeping the straw straight during the operation, and some of the machines have 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

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



Threshing Machine on the move to its next Job

crops of today 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 declare 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 satis-

factory, and many still preferred to bind the sheaves by hand. Now, the twine binder, since there is no need to distinguish from the wire binder which has long 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 which the knot is tied, and as a thorough understanding of the principles on which the binding



"Everything Begins and Ends with the Soil"

The CANADIAN THRESHERMAN & FARMER

CANADA'S LEADING AGRICULTURAL MAGAZINE

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

Advertising rates furnished on application

OUR "WELL-FIXED" POOR

THE "NIGHTMARE OF POVERTY" is dreaded worse than death by men who seem to have been built to withstand the crack of doom. "Poverty," however, will respond to many interpretations, but the one we are now concerned with is that in which we find the victim loaded and fettered with "this world's goods," not one dime's worth of which can he freely negotiate or be said to enjoy. His possessions may be anything else, but they certainly are not riches to body, mind or estate.

"THERE ARE NO PAUPERS IN CANADA," is an impression that has been well advertised at home and abroad. If it means that we have no parochial institutions for housing the indigent such as have grown up with the life of older countries, the statement is probably correct, but when it means men who are content to live on a line of credit because their property is unproductive or "not negotiable," then not only are the poor "always with us" but we have them of a far more impossible type than any class of those humble people who may live from hand to mouth but can

"Look the whole world in the face For they owe not any man."

THE BANKS AND THEIR LITTLE WAYS have recently come in for a great deal of free lance criticism. We also have had our little say about the banks, but as time goes on and one travels afield, the fact becomes more and more apparent, that the vagaries of our financial institutions are not responsible for all the stringency nor even for the greater part of it. There is a worse bug-bear in our political economy than any steps the banks are taking to protect themselves and it is the insatiable greed of those land-owners who have buried their last dollar in land that is raising neither cattle nor crop, or are endeavoring to cultivate more of it than their means or their managing capacity are equal to. The day-laborer getting his ten dollars a week in ready money is a prince to this fellow and a live wire in any community.

"THERE'S POOR PAY IN FARMING NOWADAYS," we are told in shoals of letters and by demagogues whose business in life seems to be anything but farming, while it is their ostensible occupation. The pay that there is in poor farming is really what is occasioning the wail of complaint and, candidly, poor farming is the rule in the West, while a real good farmer whose business instinct is as keen as his sense of Soil Cultivation is the exception in practically every municipality. It is not ignorance nor want of experience either that is at the bottom of it, but simply greed, land-lust. It may be and it often is downright laziness but still more frequently bad management or want of concentration.

THIS IS NOT A MATTER OF OPINION—it is a statement of fact about a condition of things that can be seen anywhere and everywhere as distinctly as anything that has material form can be seen. It is a sorry state of things but it conveys the melancholy satisfaction that the "poor results" we hear so much about are not due to anything against which the farmer is helpless to help himself. It is a homely illustration of the old puritan's confession: "No man can work me damage but myself. The evil that I sustain I carry about with me, and I am never a real sufferer except by my own fault."

NO MAN WHO IS HONEST WITH HIMSELF will refuse to subscribe to that statement. It has been the experience of every human creature all down the ages. The kindest thing we can do for ourselves and the best service we can render the state is to frankly acknowledge the soft impeachment and get down to the single purpose of handling only what we can manage. Great possibilities have been placed in the keeping of every man, but all-mightiness is not any man's prerogative, and the most pitiable sight on earth is to see a man squirming in the muck of his own limitations.

THIS IS A VERY THREAD-BARE SUBJECT to write about. It is the story that is as old as life on the earth or from that moment when

—"Man's first disobedience and the fruit of that forbidden tree Brought death into the world."

"The great sin of the Church is selfishness," and the one consuming weakness of Canadian life is the same thing. There is nothing in God-made Canada that any man can belittle. There is no spot or condition that men know of in this fine world of ours that He has so magnificently endowed. Any drawbacks that are worth taking notice of or can work "real damage" have been made and are sustained by the greed or incompetence of men. You may split the matter up into as many fine hairs as the microscope can number, but it all comes to the same thing—we are the makers of our own misery.

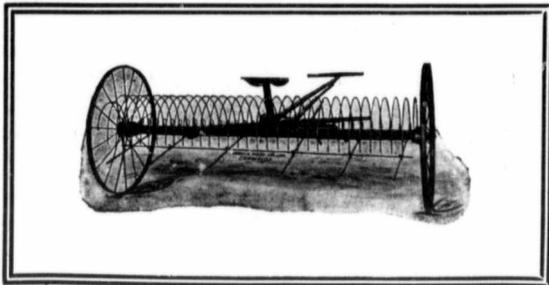
"THERE IS ROOM AT THE TOP" in every business or profession, our aspiring youth are assured, but in agriculture in Western Canada there is lots of room half-way up and indeed many pushing fellows are finding ample breathing space not far from the bottom of the ladder. It cannot be said that ignorance nor even incapacity is to blame for this. The very air is charged with the information that will help any man to a solid fortune—even in much maligned farming. It is not the paucity of means but the inborn obstinacy of men; the poverty of will power of some to use the means; the criminal selfishness of others who have fenced their property to the exclusion of all development.

OUR GUARANTEE

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

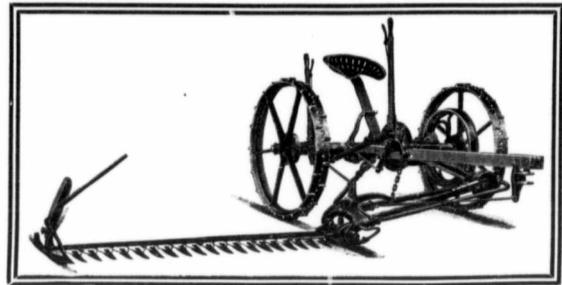
KING

For over 73 years Frost & Wood Implements have been King of the Canadian Harvest Fields and they are still "King"



Frost & Wood Rake

The Champion Rake has no equal for good, clean raking. It has short end axles; and frame is made of best angle steel. The frame is securely rivetted together, no bolts to work loose and cause trouble. Large steel wheels, with wide staggered spokes set in the hubs with wide bearings. These wheels are very substantial and will stand a lot of hard work. Teeth are made of best quality spring steel, carefully shaped and tested. Teeth cannot sink at centre. Angle steel tooth bar prevents this. Teeth keep in line. Metal sockets preserve position; good, clean raking is the result. Built in 9 ft. and 10 ft. sizes.

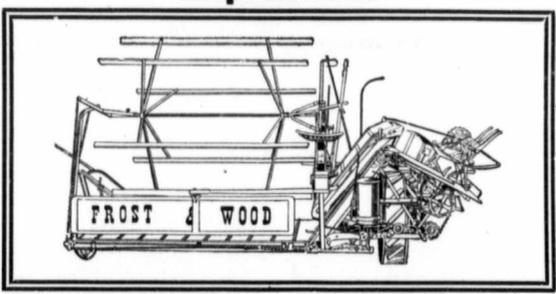


Frost & Wood Mower

Light draft and simplicity of construction are the features of this mower. Read the reason. The small pinion which turns the cross and crank shafts gets its power from the large gear on the main axle. This pinion is placed INSIDE the gear, this allows the Mower to run along quietly without friction, heavy draft, or wearing of gears. Frost & Wood gears fit snug and tight and have adjustments that take up any wear that years of usage may develop. Snug gears mean instant action of the knife as soon as the horses step forward. All power practically goes into making the cut, because the pinion shaft and transmission shafts that lead to the pitman are rigidly held in a one-piece main frame in perfect alignment. Perfect Mower action throughout.

Frost & Wood Implements

We invite enquiries



See the Cockshutt Dealer

Frost & Wood Binders

Easy to operate and easy on the horses; a fast cutter and a grain saver. The long sprocket drive for the knoter, which compresses and ties the sheaf by added leverage instead of by directly increased power, makes the binder run smooth—not jerky on the horses. Three rollers in the top elevator make the force feed. This grain saving force feed arrange-

ment is an exclusive feature on Frost & Wood Binders. The wide range of reel positions make it possible to lay all kinds of grain—long, short, or tangled—evenly on the platform so as to make a nice sheaf. These binders have a simple but sure knoter that always gives satisfaction. Let us send you our binder booklet—or call on our Agent.

Cockshutt Plow Company, Limited

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

You saw this advertisement in this magazine. Don't forget to say so when writing.

TRACTION PLOWING

AS TOLD BY THE MEN WHO DO IT

Tractor Pays and Gives Better Crops

I have at hand your favor of the 16th inst., and am answering it at once.

You got my experience in traction plowing last winter up till the time when the ground froze in the fall of 1911. I will not deal with that again, but will give my experience in 1912.

We own a J. I. Case 25 h.p. plowing engine with contractor tanks complete, and Cockshutt plow, eight-furrows. Our land is very rolling, and that hinders our plowing some of our fields with the engine.

This year the land was so wet we could not use the engine for the spring work, and I was away when the time came to summer fallow, which left no competent engineer, although my brother ran the engine for three days. They had trouble, however, keeping water in the engine, and when I returned, they had almost finished the field, using the horses, so we decided to

finish in that way, and put the engine to breaking, but it turned wet again and we could not use the engine until haying time. We consider that our few days' summer fallowing paid.

We did not get a chance to break until we started threshing, when we were tied up from threshing for two days, so as we were close to the part which we wished to break, I put the engine on to the plows, and started to break at eleven o'clock, and made one round alone, and then another round with my brother steering for me. That afternoon we turned over about ten acres using seven plows, as we found that the engine gave better results with the seven than with the eight, although it pulled the eight quite easily when we needed it.

We were delayed in the morning, and had bad luck all day, only plowing about eight acres.

We got down in the mud, so that the tender was sunk about 6 inches in the mud. We then lost about two hours waiting for coal, and at five o'clock we broke a clutch, and although we could have run with one clutch, I thought it would be best to have it fixed to be ready for threshing the following Monday.

We did no more plowing until we had finished threshing. We had good luck for a time, but the mist which had been hanging all morning settled into a blizzard, so that I had to clean my steam gauge every round to see the pointer, and late in the afternoon the snow had become so deep,

Our engine used 1,600 lbs. of coal per 10-hour day, and about 5 tanks of water, the coal being our chief expense, as I ran the engine myself, and my brother steered for me. We paid a tank man \$2 a day, so our expenses would be \$9 per day, and by allowing ourselves wages, our expenses would be \$21 a day.

Garnet E. Hicks,
Vinga, Man.



Good Work on the Carberry Plains

Yours to hand re traction cultivation. I own a traction outfit,

with the traction engine, as our land on the Carberry plain needs a great deal of packing to hold the moisture. I do not know how it would be on clay land, but on our loamy land it works fine. Nothing could be better than the tractor to cause earlier ripening and from what experience I have had I like it, as you can get so much done in one day. Your grain comes in more regularly, and consequently you can cut right ahead.

I think this is about all the information that I can give you regarding traction work.

Hoping this may be some benefit to you, I am, C. A. Edwards,
Gregg, Man.

Some Good Cost Data

Yours of the 23rd January to hand, and I will comply with your request as close as I can.

I have a 45 h.p. Hart-Parr engine. We break on an average of 17 acres per day, using 59 gallons of kerosene, and 2½ gallons of lubricating oil. The following table gives the average cost per acre for breaking.

3½ gallons kerosene at 19½¢	.....	.67
Lubricating oil	.....	.07
Gasoline	.....	.10
Two men at \$2.50 per day	.....	.29½
30 gallons of water	.....	.....
		1.13

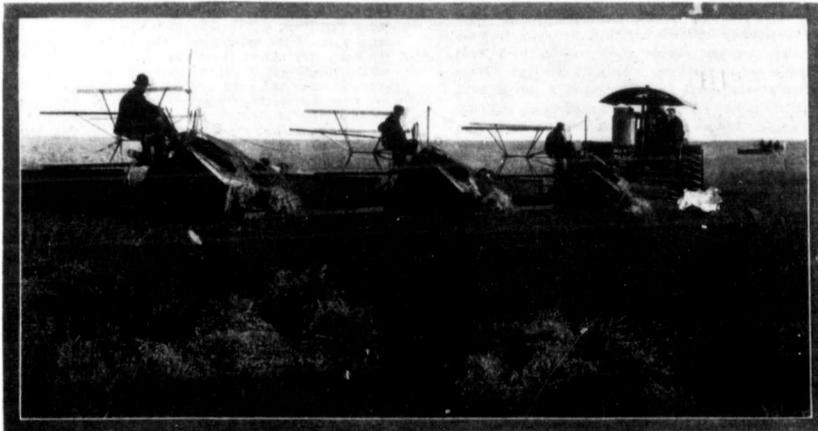
I have two men on the engine all the time, one of them being myself, and I have figured my wages, the same as I was paying my other man.

We pulled seven 14-inch plows, and plowed about 4 inches deep.

We did on an average of 25 acres per day when discing, using 56½ gallons of kerosene per day. The following is the cost per acre when discing.

2½ gallons of kerosene at 19½¢	.....	.47½
Lubricating oil	.....	.07
Gasoline	.....	.08
Two men's labor at \$2.50 per day	.....	.20
		.82½¢

We pulled four discs, two scrubbers and one harrow. We did not have a hitch, so we could not attach any more tools so that



Had a Mouth of Resping because they had Plowed Well

that the plows would not go into the ground even with me standing on them, so we pulled about home. We plowed about twelve acres.

The snow did not go away until two weeks later, but we had moved out to thresh one week later, and threshed until Nov. 30th, so we got no fall plowing done at all.

I consider that traction plowing pays, as we find that land plowed with the engine gives better returns than when plowed with horses, and it is also easier to plow the next time.

We had a very convincing proof of this, this year. We plowed a piece of land just south of our door, and all summer we could see the difference in the crop quite plainly. In fact, we could tell where the engine had plowed, when we were cutting the grain, and it was taller and better filled, and with larger heads.

and consider it one of the best things among my farming outfit. My engine is an International Harvester Co., 25 h.p. type D.

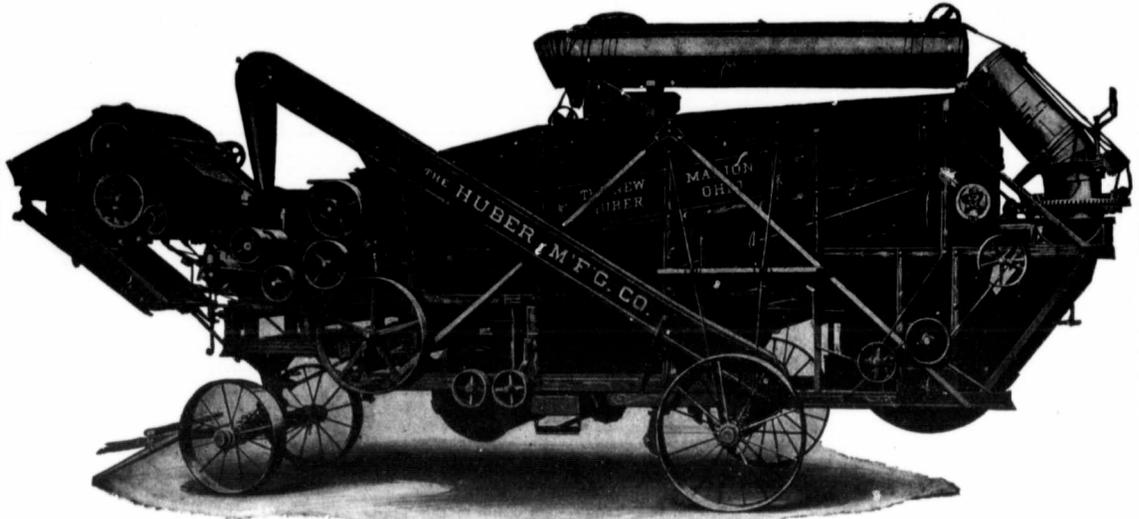
I use from 25 to 35 gallons of gasoline per day of fourteen hours, and from 80 to 100 gallons of water per day.

When threshing I use ten teams, but for working on the land one horse does the work. For plowing all I need is a barrel of water in the forenoon, and some in the afternoon. My engine tank holds nearly enough fuel for two days, so do not have much bother with fuel.

I consider that it costs about \$2 per acre. I have not taken enough pains to figure out exactly what the exact cost would be, as I have not done very much of that kind of work.

I have not done any discing or harrowing, but I consider it a benefit to the land to go over it

Dependable Machinery THE HUBER LINE



YOU can depend on it every time to do the work for which it is recommended; to do it with satisfaction and economy; and not give out on the job. When you buy Hubber machinery, you get a money maker and a trouble preventer.

The big problem is to handle your grain successfully and economically. The solution of this problem is found in the NEW HUBER THRESHER. This machine has been on the market for the past forty years, and has an unex-

celled record for saving and cleaning the grain. When the grain is threshed with a Hubber, the farmer gets full returns from his crop and the thresherman gets full pay for his work and investment. If you raise grain, insist on having it threshed with a Hubber. It will save you a lot of money. If you are a thresherman, use a Hubber outfit. It will make you money and friends. Every year you use it, you will find business easier to get. Your customers one year are sure to want the same

machine the next year.

Get a Hubber Thresher equipped with automatic feeder, grain weigher, stacker, and you have dispensed with most of the drudgery of threshing. You will find it really a pleasure to handle such an outfit. It is a source of much satisfaction to know that you are doing a little better work than any one else in your line.

For the best working of the thresher, of course you must have the power best suited to it. Take the big Hubber

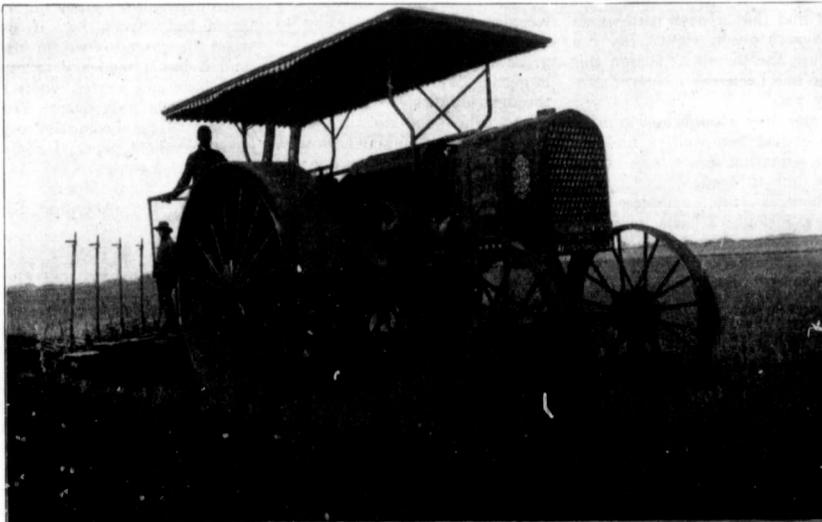
Gas Tractor and use it in connection with the thresher and you have a complete outfit that makes you fearless of competition.

Then when you are not threshing, you have this excellent power plant for any other work you may wish to do. Hitch it to your gang plows and how easily and nicely it will do your plowing for you. No bother before or after your regular day's work. Start your motor going, work it all day or as much of the day as you like, then when you are through just leave it till the next day. You are not tied down by the care of a lot of horses to do your work. The Hubber Tractor makes the farmer as nearly master of his own time as anything we can think of.

When you haven't any threshing or plowing to do, there will be other uses of the tractor suggesting themselves. You will be surprised to note the different things you will be using it for; until in a short time you wonder how you ever farmed without it.

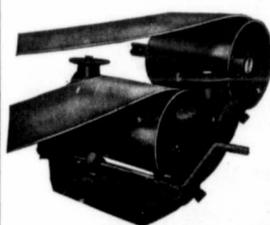
You ought to try to get all the pleasure possible out of your work. Don't be a machine yourself, but get a machine to work for you. That will leave you free a large part of the time to plan more extensive operations; and then your Hubber Tractor will help you to work out those plans.

If you haven't perfected your plans for this season and placed your order for a Hubber Outfit, we suggest that you act quickly and possibly save yourself disappointment in getting the machinery at the time you want to use it. We are in good shape now to give prompt attention to orders. But the demand is going to be big this year and you will not make any mistake by buying early. Hubber machinery is backed up by the most ample guarantee, with a responsible Company back of it.



THE HUBER MANUFACTURING CO.
Canadian Office: WINNIPEG, MANITOBA, Corner Logan and Arlington
Home Office and Factory: MARION, OHIO, U.S.A.

You saw this advertisement in this magazine. Don't forget to say so when writing.



Now is the Time to Buy

THE OLD RELIABLE DEFENDABLE CASWELL
ADJUSTABLE BELT GUIDE.

Holds the belt steady in every wind that blows. As necessary as a self-feeder. Always on the job. Saves the belt. It has been saving time, labor, belts, and money, for thousands of threshermen for over a decade. **LET IT SAVE YOURS.**

THE CASWELL AUTOMATIC BINDER HITCH
Simple. Easily Attached. Cheap.

Each binder steers itself and cuts an even swath all the time on in-curves, out-curves, round corners, square corners, and points, without any attention whatever.

After two years of success everybody says "The best at any price."

CASWELL MFG. CO.

Cherokee, Iowa U.S.A.

"I sold five of your binder hitches this year and the parties that bought them are well satisfied with them, in fact they give better satisfaction than the higher priced hitches."

Carpis, N. Dak., Dec. 11th, 1912.

C. K. CHRISTENSEN.

We also manufacture a full line of Power Farming Equipment including Wagons, Packers, Disc and Sower Hitches, etc. Write us to-day for catalog and prices. Also see your dealer. Dealer business solicited.



You saw this advertisement in this magazine. Don't forget to say so when writing.

they would work satisfactorily. If we had had a hitch however, we could have done more work with very little extra expense.

We do not have any horses except to haul the water and the oil to the field, and I have made an allowance of one cent per gallon, which is the reduction we get on tank lots, and this pays for the draying to the field in barrel lots. The price is 19½¢ per gallon for kerosene.

When harvesting we do about 25 acres per day, using 31¼ gallons of gasoline. The cost being per acre:

1¼ gallons of gasoline at 29½¢	43
Lubricating oil	05
Four men's labor at \$3 per day	48
	\$96

It takes one man on the engine, and one man on each binder. We pulled three 8-foot binders, and did not get in the full time. The grain was wet in the mornings, and it was late before we could start to cut, but we allowed the men full time.

I do not see that a traction engine is detrimental to plowed land,

Yours truly,
Henry Peterson.



Which is Gee and Which is Haw?

In answer to your kind invitation to greet my fellow threshers and benefit each other mutually through the medium of your valuable journal, I am pleased to respond.

In the summer of 1910 I purchased a 22-45 Hart-Parr tractor and set of six plows. The Company sent an expert with the engine and during his stay of three days everything went lovely and I became quite proud of the machine; but as I had had no previous experience with the engine I got into difficulty almost before the expert was out of sight. The speed regulator thumbscrew became loose and the engine started to run away. Report had it that the rig ran over the banks into the Battle River but this was not correct, although I was a very indifferent wheelman and generally turned the wrong way. My steering re-

minded me of an English homesteader, a neighbor of mine who was learning to drive oxen. He was crossing a railway track just ahead of a shunting engine when the oxen stopped on the track. The driver laid down the reins and in a frenzy of excitement began searching through his pockets, coat, pants and vest. A friend also English shouted "You bally fool why don't you drive on?" The driver replied, "I'm looking for my note book to find out which is gee or haw." (right or left).

With such an indifferent driver it was not to be expected that I should get satisfactory results for a time. A little adjustment that would be detected and corrected in a few minutes by an experienced engineer would bother me for hours. It pays to get a good man on your engine and keep him until you understand every part of it thoroughly yourself. However, I got my experience at a greater cost, and now that I understand my engine thoroughly I never suspect that it is built wrong. I try to keep it right and find that it pays better than to try to get it right. My run during the threshing season this year has been the most satisfactory yet.

I use only enough fuel to make the engine run well, I find too rich a mixture is not only expensive but it deadens the power, carbonizes the cylinders and rings, forming a basis for pre-ignition, coats the spark plugs making the ignition weak and uncertain and heats the engine too much, causing the lubricating oil to burn instead of fulfilling its mission.

When I started out an old engineer said to me "Keep your bolts tight." Although I remembered his words I had to learn the force of them by experience. Had I heeded, my repair bill for the past years would have been only a mere trifle, only a few dollars.

I had a Sawyer-Massey 30-60 separator which I lost last season by fire, evidently started from a cigarette in the stack—Moral.—It does not pay to have smokers around a threshing outfit. This machine ran easily and did good

work under favorable conditions, but threw out considerable grain when threshing damp or tough straw. I have an American Abell 36-60 separator at present.

I have used the engine for almost all kinds of farm work—breaking, harvesting, and plowing in one operation, discing and planking, besides a variety of odd jobs.

Yours truly,
Fred W. Aykroyd,
Wainwright, Alta.



Just the Thing

I own a 15-30 Rumely Oil Pull tractor, a Rumely Ideal separator, 34-56, and a John Deere engine gang, and consider it an outfit worthy of praise as being one of the best combinations procurable.

Internal combustion tractors are the coming power for all kinds of traction work, as they have a great many advantages over steam tractors.

One main feature is the less weight contained, according to the power developed, which is a great advantage in many respects, in getting over low, wet land and through hollows, which contain water or hold the moisture, making the bottom soft and spongy, and another real advantage in use upon stubble land in plowing, also for discing and seeding, as they do not pack the soil to any great extent.

I have used my outfit for two seasons. During 1911 the tractor was used mainly for breaking, discing, and threshing, but in 1912 it was put to nearly every use on the farm that it could be used.

I commenced in the spring of 1912 by discing flax stubble for wheat and must say that I had great success, hauling four discs and drag harrows, making about 65 acres per day at a cost of about 28¢ per acre for wages and fuel. After completing discing 160 acres four times, I commenced sowing, hauling three 19 double disc drills and float, making about 90 acres per day at about 35¢ per acre for everything, including wages, fuel, etc., for engine man and team for supplying grain to

the drills, and pickling wheat ready for sowing. I may say that I seeded about 400 acres, after which I commenced breaking, keeping one man and team along with me on the outfit, and averaged between 12 and 15 acres per day for nearly a whole season, after which I cut my crop with the engine hauling 3-8 Deering binders for about 400 acres and the balance of the season I threshed, excepting a week I plowed.

I expect to farm 483 acres during the season of 1913 with the engine entirely, as I have only one team of horses weighing 900 pounds apiece.

My experience with the tractors has proved to me that in the hands of a man who thoroughly understands them, and takes care of them they are a cheaper power than horses, and the small sized tractor can be put to nearly every use on the farm where horses are used. My experience regarding the tractor being detrimental to plowed ground has been to prove that the land if worked on when dry does not show the least bit of bad effects, but if used when the ground is wet in heavy land it has a tendency to cause it to bake and harden where the drive wheels pass over. Trusting this will be of some use to you in your valued paper, I remain,

Yours,
F. G. Moore,
Aberdeen, Sask.



A One Man Outfit

In regard to your inquiry relating my experience in traction engineering, will say that in July, 1912, we purchased a Universal gasoline tractor manufactured by the Minneapolis Threshing Machine Company. We have used the same for breaking, pulling a four-furrow engine gang, which the engine handled with ease. The land here is not gumbo, but is rather heavy and rolling. After breaking we did a little discing and harrowing, pulling two ten-foot discs and two sets of harrows, the same width as discs. In threshing we run a 28-49 Gaar Scott separator and had lots of

A WONDERFUL INVENTION

HERROLINE

THE GASOLINE & OIL IMPROVER

Increases the Mileage of Gasoline. Keeps Spark Plugs, Cylinders and Valves free from Carbon.

HERROLINE is a newly discovered method of refining gasoline, and which, when put into gasoline, will greatly increase the efficiency and power of the same, and will render it safer to use. It is the discovery and invention of W. H. Herron, of Chicago, Ill., and is the only product of its kind known to mechanical science that will increase the efficiency, power and mileage of gasoline in an engine, without doing harm to the motors.

HERROLINE is a very highly condensed form of gasoline caused by chemical reaction, and when put into gasoline will cause a chemical reaction on the same, and will cause it to explode faster and stronger in the cylinder, and as a result, much less gas is required to run the engine.

HERROLINE comes to the motoring and mechanical world at a much needed and opportune time, in these days of high priced, low grade fuel, and with the prices steadily advancing, and the quality rapidly decreasing, and the demand for gasoline increasing daily.

HERROLINE FILLS A MUCH FELT WANT and is being used by hundreds of the largest firms in the United States, and, since its introduction, in Canada, where it is rapidly winning favor and popularity with the motoring and engineering public. Nor did it stop there, for it has found its way into the British Islands and Europe, where it is being used and introduced extensively.

We guarantee that HERROLINE when used as directed, will increase the mileage 50 per cent, and increase the efficiency and power of any gasoline engine, motor cycle, motor boat, stationary gas engine or gasoline or kerosene tractor.

HERROLINE will clean all carbon from the cylinders, valves and spark points, keeping them permanently clean, and is worth its whole cost to any motor for that purpose alone.

It sparks much quicker and causes the engine to pick up speed faster, and to run smoother, and with less vibration and noise.

It increases the efficiency and pulling power of the motorist.

It lessens the danger of explosion of gasoline in receptacles, and loss by evaporation.

It will increase the cost about 2 1/2 c. per gallon in the gasoline and will add about 50 per cent. to the mileage.

HERROLINE will increase the durability and life of any motor or gasoline engine, and increase the joys and pleasures of the motorist, by lessening the grinding vibration and by the smooth, silent flexibility it adds to the motor.

Read the following figures and see what others say.

Experience has proven that the average increase in mileage derived

from the use of HERROLINE is 60 per cent.; therefore if one quart of HERROLINE will treat 160 gallons of gasoline, and the increase is 60 per cent. in mileage, one quart must equal 60 per cent. of 160 gallons of gasoline, which figures out to 96 gallons.

96 gallons gasoline at 30c. per gallon \$28.00
1 quart of HERROLINE costs 3.50
Saving 25.30

No carbon troubles, greater speed and power and less vibration, smoke, odor and noise.

IT IS SAVING MONEY FOR HUNDREDS OF USERS, WHY NOT FOR YOUR CUSTOMERS? REMEMBER

HERROLINE is not a mixture, and does not contain anything harmful to a motor.

WE CHALLENGE ANY CHEMIST TO DISPROVE OUR STATEMENTS

HERROLINE was analyzed by the following experts: J. A. Wesener, Ph. C.M.D., Chemist for the Columbus Laboratories, Chicago, Ill.; W. E. Johnston, Ph. C.M.D., Chemist for the Illinois Tunnel Co., 101 Van Buren St., Chicago, Ill.; G. A. Evans, Ph. C.M.D., 892 Yonge St., Toronto, Canada. Also by Professor Geo. E. Watson, an eminent chemist of South Kensington, London, England. They all agreed that it is a chemical reaction of gasoline of high order, and does not contain Ether, Picric Acid, or anything that would attack the metal of a gasoline engine, and that no presence of acids or harmful ingredients were shown, not even on the most delicate indicators.

DIRECTIONS FOR USE

will be supplied with each shipment

IN EVERY CASE

It is necessary to run the car at least half a mile when changing from the untreated gasoline to the treated, before attempting to adjust the carburetor, in order to allow the mixture to get well down into the same, or it will not take the proper adjustment and the desired results will not be gotten.

Herroline acts instantly on the gasoline, and the effect is permanent.

Price per Imperial Gallon, \$12.50 ; per Imperial Quart, Delivered Free to your Station, \$3.50

Testimonials from all over the World:

Here are a few of considerable interest

MANITOBA

Winnipeg, June 5th, 1913.

Gentlemen:

In reply to your enquiry as to the test we have made with Herroline, beg to state that we tried this out with a touring car, carrying four passengers.

We first used the ordinary gasoline, the same as supplied to garages in the city, and from this we were able to get 23 1/2 miles per gallon. We then used the same quantity of gasoline and half an ounce of Herroline and were able to get 32 1/2 miles. This shows quite a decided gain through the use of Herroline and we feel that we could possibly get better results than this if we had time to make some adjustments. This figures out by the use of Herroline as compared with standard gasoline there is a saving of 38 per cent. in fuel.

Yours very truly,

FORD MOTOR COMPANY OF CANADA, LIMITED,
G. A. Macdonald, Winnipeg, Branch Manager.

Tests in Cadillac Car, as made by Albert Johnson,
Foreman Mechanic, Cadillac Motor Sales Co.

Dear Sirs: Winnipeg, June 2nd, 1913.
We give you particulars of Herroline tests made yesterday.

Cadillac Car

9.6 miles on one half gallon of gasoline only.
11.9 miles on one-half gallon of gasoline with quarter of an ounce of Herroline.

Result.

The above test shows an economy of about 25 per cent. in fuel and with the controls in the same position as when running on Gasoline alone, the car made an additional speed of 4 miles per hour on Herroline.

SASKATCHEWAN

Indian Head, June 14th, 1913.

Referring to the sample of "Herroline" which we ordered from you for purpose of test, we beg to advise that the increase in our mileage in our Ford Cars is extraordinary, as we have recently made a trip of 145 miles on a trifle over four gallons of gasoline.

Our best previous mileage on extra good roads was about 26 miles per gallon, and we consider the showing that we have secured with the aid of Herroline as undoubted evidence of the truth of your claims.

The motor also runs quieter and pulls better than without Herroline.

Kindly advise if you can let us have the agency for this town, and in any event expect to continue its use in our cars.

Thanking you for an early reply, we are,

Yours very truly,

BINGHAM IMPLEMENT CO.
per A. N. Bingham.

ONTARIO

McLaughlin Carriage Co., Limited

Messrs Carleton & Jeffries, Toronto, Ont.

April 25th, 1913

Dear Sirs:

We have made tests of your preparation Herroline and obtained the following results:

On Model 49—the car gained a mileage of 54 per cent.

On Model 31—the car gained a mileage of 30 per cent.

and our driver thought the car's action with your preparation was a little "Snappier."

54 per cent.—Increase in mileage cost, 3 cts.

30 per cent.—Increase in mileage cost, 1 1/2 cts.

Truly yours,

McLAUGHLIN CARRIAGE CO., Ltd.
Per J. Hazelwood.

U.S.A.

The Speedwell Motor Car Co., of Illinois

Improved Gasoline and Oil Co.,
1522 Michigan Avenue, Chicago, Ill.

Chicago, October 14, 1912

Gentlemen:

In regard to your gasoline improver, which we have experimented with for about 30 days, we say that up to date we have increased our mileage between 33 1-3 and 40 per cent.

We are very much pleased with the improver and our customers are also pleased with it. It has not only increased our mileage, but has made our motors quicker on the get-away and considerably quieter.

We also find that the gas burns up and burns the carbon and deposit with it, as in the car which we have experimented with most of the cylinders and combustion chambers are extremely clean.

We should be very glad at any time to furnish you with any further information which you may desire.

Yours very truly,

SPEEDWELL MOTOR CAR CO. OF ILL.,
L. B. Garrison, General Manager.

ENGLAND

Road Test, Royal Automobile Club, London, Eng.

Result of Road Test, made by the Royal Automobile Club with petrol and HERROLINE, under official inspection on 20th Dec., 1912:

Distance travelled, 101.55 miles; Petrol used, 4 gallons of Shell; Mileage per gallon, 25.38 miles; Top mileage, 35.72 miles; Weight of car, 16-20 h.p. Adams Bore and stroke, 88 m-m x 120 m-m; Gearing, 4 to 1, on top.

The car was carefully weighed and examined by the club officials before starting and after completion of test. The car was not tested with pure petrol, as it was known that 18 miles to the gallon is the usual consumption of this class of vehicle.

The test showed an economy of 41 per cent. petrol.

Make a test yourselves. If it is not as we represent we will refund your money. See our Exhibit in Motor Section of the Fairs: Salesmen wanted for City and Country on Commission

Big Money for Dealers
Live Agents Wanted

Triple Tread Manufacturing Co., Ltd.

Sole Distributors
for Canada

Office and Factory: St. James' City Limits

WINNIPEG

Box 1916



"FLOUR CITY TRACTORS"



The design of the "FLOUR CITY" commends it for plowing, seeding, harvesting, threshing and road making. The bevel gear transmission is practically indestructible and a factor in simplicity. The overhead valves are most conducive to perfect ignition, combustion and economy. It is not handicapped by superfluous weight and eliminates the danger in crossing bridges; burns gasoline, kerosene, distillate or naphtha. Get our catalog and details.

power, but did not get along very well with it as we had trouble with the engine. The engine is 20 h.p. on the draw bar and 40 b.h.p., two cylinders opposed, and is good steady running. It takes about two pails of water per day and about 25 gallons of gasoline for breaking 10 acres of prairie. It only requires one man to operate an outfit like this breaking, but of course it needs two for threshing, our engine weighs about eleven tons and is a good engine for plowed land, where a heavy one is no good. We think traction cultivation is a great success and way ahead of farming with horses. We do not think plowing is any harder on our engine than threshing, if not overloaded.

I remain,
Yours truly,
E. G. Sight,
Fiske, Sask.



The Only Thing

In reply to yours of recent date asking for my experience as a traction operator will say that I have been in the business of plowing, discing, seeding, and threshing now for four years and I have been asked by you for my experience but neglected to reply.

My engine is a Rumely 30 h.p. double simple engine, one of the first that the M. Rumely Company put in Alberta, and although not an Alberta special, complies with the Alberta Boiler Act, and one of the best engines on the market. Taking the Alberta special I do not think they can be beat for durability in every respect. They can be run on less coal than any traction I have had any experience with and I have operated a number. I burned about two tons of coal per 12 hour day where several other makes in the neighborhood burned from 3 to 4 tons per day. I used about 3,000 gallons of water per 12 hour day. I hired four men besides myself and two teams. It cost me about \$1.50 per acre to plow and pack 25 acres per day, 40c per acre for seeding where I

seeded by team but when pulling a drill behind my plow I found the most successful with rigging I only used nine 4-inch bottoms with a 22 pan drill which just covered the ground nicely and in this way you are putting your seed in damp ground. I followed this up with a surface packer and I could never tell where the wheels had gone.

I certainly think that traction power, to people farming from a half section or more of land, is the only successful way, as horses are too high priced in the first place and are too slow in the second place. They are also too expensive to feed for the amount of work gotten out of them, and another thing about traction power one can get his grain in just at the right time and done quickly.

I am enclosing a post card of my outfit at work on my place near Barnwell, plowing, harrowing and seeding all in one operation, covering 25 acres per day. Trusting this will be of some value to you, we are,

Yours truly,
James Johnston,
Barnwell, Alta.



Two Men to an Outfit

Re traction farming, will say that I operate a 15-30 Oil Pull, and a five-bottom 14-inch Oliver engine gang in breaking. Last summer I broke and plowed about 525 acres, using from 30 to 40 gallons of kerosene per day, which however, depended on the length of the day, and the kind of soil, or about 3/4 gallons per acre, and about the same amount of water.

I employ one man besides myself, and have one team with the outfit to haul fuel, water, etc.

I estimate it cost \$1.75 per acre for breaking, just for running expenses, and for stubble plowing a little less. For seeding I hitched two six-foot discs to engine draw bar, and let them lap enough to disc a ten foot strip, then I put a cross beam on the seats of the

discs, and let the drill falls rest on this. Of course I fastened them so that they would stay in place.

I attached a harrow between the discs and drill, and also one harrow behind the drill. This will disc-harrow, seed and harrow a ten-foot strip, and it makes a nice load for the engine, and makes a fairly good job where the sod has been worked down before. The above outfit is easily good for twenty acres a day, and it cost about 85c per acre for running expenses.

In regard to discing, I put a short pole in a ten-foot land packer, and attached two six-foot discs, then let them lap so that they would just cut ten feet. Behind it I put two ten-foot harrows. This makes a nice little cultivator that a 15 h.p. engine will take across the field 2 1/2 to 3 miles per hour, and the running expenses should not be over 60c per acre, and the land packer makes a very good hitch.

I do not think a tractor would hurt the plowed fields, if they had large and wide drive wheels and were not too heavy in themselves.

In regard to breaks, repairs and cost of machinery, I think 15 per cent. would cover that as an outfit should at least last ten years, which would be on an average of \$425 a year, and it generally takes three or four years for them to pay for themselves. So one should at least have six years of work out of them after that.

Hoping this will be of benefit to someone, I am,

Yours very truly,
Ole E. Jensen.
Seven Persons, Alta.



A Whole Man for the Tractor

In answer to your inquiry with regard to traction cultivation, I might state that I have a Hart-Parr 22-45 engine. I use fuel oil and gasoline for fuel, and in a 10 hour day use about 40 gallons of fuel oil and 5 gallons of gasoline. I also use about 25 gallons of water per day. I have an engineer, who also attends to the

plows, and a man for steering. I use no horses. The total cost per acre for plowing, discing and harrowing is \$5.00. I do not consider a tractor detrimental to plowed land.

I believe a tractor is much cheaper than horse power as the price of horses is so high, also the wages for men, that it makes farming very costly. I plowed over 600 acres and double discing and harrowed same in the year 1912.

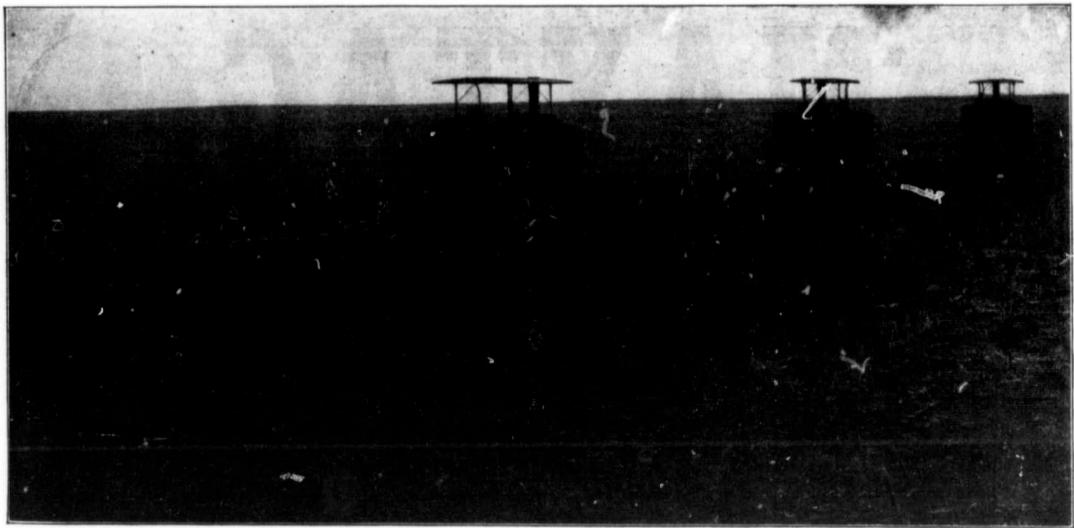
W. J. Burroughs,
Chaplin, Sask.



Good for Any Kind of Field Work

In regard to your letter in reference to our experience in traction cultivation, our experience has been rather too short to converse on the subject very well. Our engine is a Hart-Parr, kerosene and gasoline, 60 brake tractor. We use on an average of 45 gallons of kerosene per day at a cost of 15 cents per gallon and one gallon of gasoline at a cost of 26 cents, amounting to \$7.00; engineer's wages, \$5.00; plowman, \$2.00; total, \$15.00. We can plow from 20 to 25 acres per day or an average of 22 acres. As the engine does not tire like horses we can make a day and a half in twenty-four hours, which is very convenient in the busy time. We use about 35 gallons of water per day, using one horse in the morning to take the water to the field and a team one day per week to draw fuel from the station. We figure that it costs from 75 cents to \$1.00 per acre for plowing stubble, we pull the disc harrow as well at the same time and this makes the cost considerably less. We have not done any seeding with the engine yet, but we are satisfied that we can do any kind of field work where there is a stretch of half a mile; a great deal cheaper than with horses. I do not consider the average weight of a gasoline engine hurts the land in any way.

A. Bruce,
Beausejour, Man



Read The Pleasant Experience of These Proud Owners of Aultman-Taylor Gas Tractors

"The two Aultman-Taylor Gas Tractors which I purchased from you performed the following work last season:

Breaking raw prairie soil	2660 acres.
Double discing and dragging	4480 acres.
Seeding with five seeders	1100 acres.
Cutting with six binders	400 acres.
Threshing with 36 x 56 Separator	14,000 bu. of flax.
	3000 bu. of oats.
	10,000 bu. of wheat.

Fifteen miles of road grading.
The engines are now in fine shape, in fact, were put in the field this spring without any repairs or overhauling whatever. The engines were operated entirely by inexperienced help, while the owners of other makes of gas tractors in this vicinity were paying big prices for expert engineers and did not accomplish as much work per engine as I did. The original valve springs and bearings are in the engines and are good for unlimited future service. In my opinion there is no other engine equal to the Aultman-Taylor.

Yours truly,
M. M. HESS,
Rosetown, Sask., Canada.

"The Aultman-Taylor Gas Tractor which I purchased from you has given me every satisfaction. I know it is the best engine that is built. We have threshed 16,000 bushels of grain in 14 days with 453 gallons of gasoline, using about 541 gals. per day. We never put in a good day's work because we only had five bundle teams, and a 36 x 56 separator. The separator was play for the engine. We have plowed 300 acres all stubble, pulling 8 and 10 plows, plowing 5 to 6 inches deep and the land is very heavy on my farm. We used less than 14 gallons per acre. My son, nineteen years of age, was running the engine, and he did it fine too."

Yours truly,
JACOB SIEMENS,
Rosenfeld, Man., Can.

"The Aultman-Taylor 30-60 Gas Tractor has given me entire satisfaction. I have plowed over 1000 acres with my engine and have only paid for repairs to date the small sum of 50 cents. My son, who is but 16 years of age, has handled the engine for all this work."

Yours truly,
JACOB HERZ,
Glen Ullin, North Dakota.

"The 30-60 Aultman-Taylor Gas Engine which we purchased of you last spring has been very satisfactory, and we can certainly recommend them to any intending purchasers."

Yours truly,
WM. A. DE BORD,
Bladworth, Sask., Can.

"My experience with the Aultman-Taylor Gas Tractor has been perfectly satisfactory. Would be pleased to have you refer any prospects to me, as I am more than pleased with the service this engine has given me. My total expense per acre this fall for plowing, including gasoline, oil, help, etc., was 54 cents per acre. I broke a piece of sod which had lain for three years, pulling nine bottoms, and breaking three and one-half to four inches deep."

Yours truly,
F. A. WICHMANN,
Leonard, North Dakota.

"We plowed and drilled 700 acres of wheat with our Aultman-Taylor Gas Tractor and also used it to pull our separator while threshing 14,600 bushels of Kafir corn. It will pull 21 disc plows and drills to good success. We like the engine fine and think it a good paying investment. We have 800 acres of plowing to do this Spring. It costs us for gasoline and oil per acre to plow, drill and drag, 35 cents, as near as we can figure for a season's run."

Yours truly,
BOYLE BROS.,
Acres, Kansas.

"The Aultman-Taylor 30-60 Gas Tractor simply can't be beat, as I used it last winter 34 days in the coldest weather that we had and I have been using it ever since the wheat was ready to thresh and am still threshing. I have run the rig all alone ever since I started to thresh this season and have saved \$3.50 per day for man and team for hauling water and \$4.00 a day for running the engine. I have saved \$210.00 for help that I would have had to pay out if I had used a steam engine, just since the tenth of July, and that is a pretty good thing."

I have used the engine just 62 days for threshing, and we have not lost five minutes on the engine's account. I also used it for road grading, and it can't be beat. The engine is worth more to me than any engine I ever saw. I also used it to plow my ground, and it certainly is a dandy to plow with. I used eight 14-inch plows, plowing seven inches deep and the engine handled it with ease."

Yours truly,
J. B. MEIROWSKY,
Florence, Kansas.

"I am pleased to say that the Aultman-Taylor Gas Tractor is the best engine I know of. It could pull more plows than any other gasoline engine in this part, and to thresh with, it is a dandy. I find this engine most economical on pull, and all parts are easy to get at for repairs and adjustment. If ever I buy a gas engine again it will be an Aultman-Taylor."

Yours truly,
GUSTAV BRIESE,
Ridpath, Sask., Can.

WHAT THE AULTMAN-TAYLOR 30-60 HAS DONE FOR OTHERS IT WILL DO FOR YOU. HUNDREDS OF FARM POWER USERS THROUGHOUT AMERICA HAVE FOUND THE AULTMAN-TAYLOR GAS TRACTOR THEIR MOST PROFITABLE INVESTMENT. IT WILL PROVE A MIGHTY PROFITABLE INVESTMENT FOR YOU TOO. LET US EXPLAIN FURTHER. SEND FOR CATALOG TO-DAY, OR WRITE FOR FURTHER INFORMATION.

The Aultman & Taylor Machinery Co.

Lock Box No. 64. MANSFIELD, OHIO.

BRANCHES: Minneapolis, Minn., U.S.A. Calgary, Alta. Regina, Sask., Canada



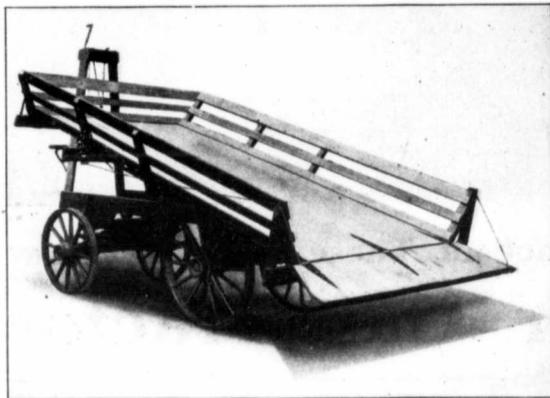
MAYTAG



COMPANY, LIMITED

WINNIPEG, MANITOBA

THE MAYTAG IMPROVED AUTOMATIC DUMP RACK.

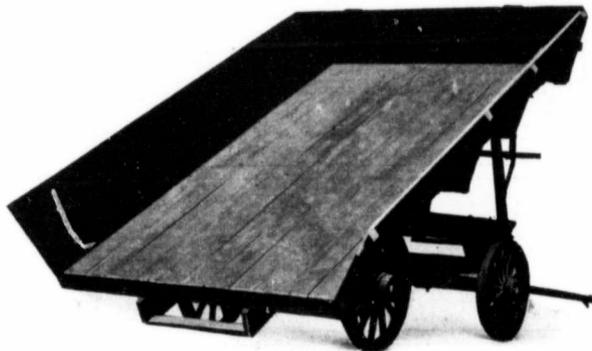


THE MAYTAG IMPROVED AUTOMATIC DUMP RACK

Is, in our opinion, the greatest labor-saving and money-making piece of machinery for sale today. It is easy to load, easier to unload, and any boy that is old enough to drive a team can handle it. Can be used on any make of standard wagon gear, with either low or high wheels. Misunderstandings should always be avoided when possible, so we ask that you read carefully the following: We furnish the bolts, pulleys, wire cable, and all other hardware required, and all of the lumber except about 130 feet of plain boards which are used for the bottom, front end and sides of the rack. Ship-lap, dressed on one side, should be used for the bottom. We will furnish this lumber when specially ordered, but there is no use in your paying freight from Winnipeg, when they can be bought at your home town at practically the same price we would have to pay. The illustrations show the rack on a wagon gear. We do not furnish these. Use the ones you have.

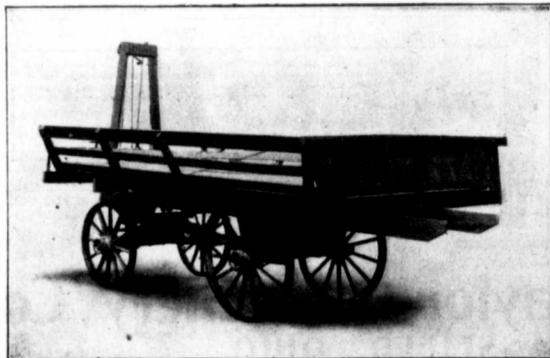
IF YOU OWN A STOOK LOADER

You will see in a minute the advantage of having a set of the racks shown with the automatic end gate, over the old-fashioned hay rack that has been used heretofore. A rack with no end gates requires a man to load the bundles to keep them from falling out behind when rolled in with the stook loader. This end gate works automatically. When the load dumps it opens itself and when the rack goes back in place, closes itself. When the load is pitched on by hand the rack is shown in the center of this page does the work perfectly. These racks are well and strongly built, nothing but the best material being used, and with proper care should last for years. A set of these racks (4 or 5) will keep any separator going. How many teams and men did you need last year? Many tell us just twice as many. When men and teams are scarce and wages high, does it mean anything to be able to cut the number in half? It reduces the number of men so that a full crew is possible. A set of racks, a white wings feeder or extension carrier is a money-making combination that is hard to beat.



NOTE A FEW OF ITS ADVANTAGES

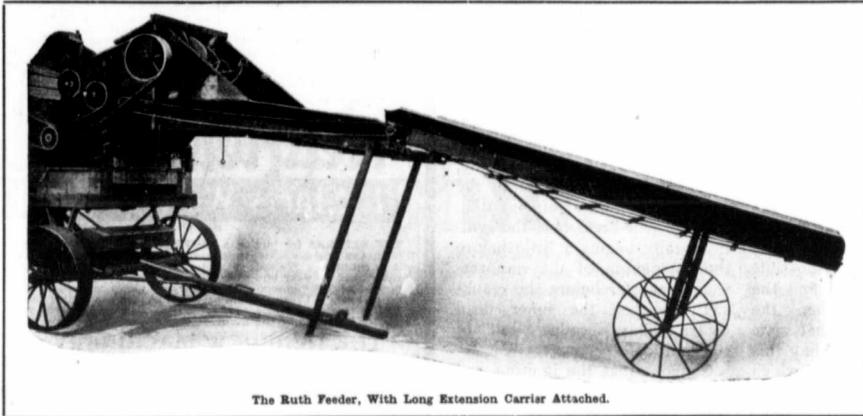
No empty machine while bundle teams are driving to or from the Feeder. The load can be dumped in fifteen seconds and driver does not have to get off the wagon. The end dump is the correct principle. Load slides off and is deposited on ground just as it was loaded on the wagon. No mixing of bundles or dragging part of load. No scattering of foul seeds or wasting of grain as with old style rack, everything is brought to the separator, as the bottom is tight. Very handy for hauling straw from separator to engine—just back under wind stacker, get a load in a few minutes and dump it just where you want it in a few seconds. Just the thing for a farmer to haul hay, straw or fodder. We expect to have an exhibition at the principal fairs this summer. Look us up if you attend and you can see for yourself just what this rack is like. You will see that we have not ro- here to tell you one-half that can be truthfully state- about this piece of machinery. For further particulars, write.



Here is a Combination that is hard to beat

THE RUTH FEEDER

With a Fourteen Foot Extension Carrier Attached

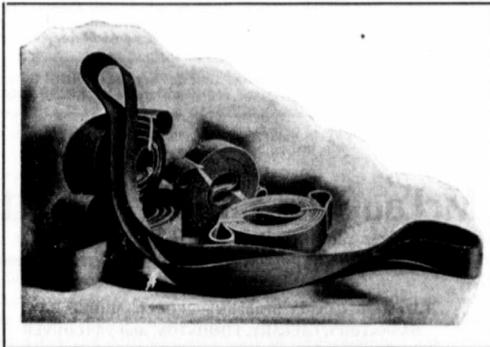


The Ruth Feeder, With Long Extension Carrier Attached.

We make independent extra length carriers, which may be attached to the regular carrier, fourteen feet long, with leg support or two-wheel trucks, quickly attached and driven by a sprocket and chain from the upper shaft of the regular carrier. With it attached there is no loss of grain by littering or trampling under foot. It is especially desirable in feeding loose grain in windy weather.

If you do not want to go to the extra expense of buying a White Wings Attachment, the above Extension Carrier is just what you should have, if you wish to save the wages of several men every day you thresh. This Carrier and a set of our Dump Racks which are shown on the opposite page will save one-half of the teams in the field and also one-half of the pitchers. This Carrier is **FOURTEEN FEET LONG**, so if you haul the grain in from the field in the old fashioned way, a team can drive on each side and pitch the bundles on in any old way and as fast as a man can work, and the RUTH will do the balance. If used in connection with the **DUMP RACKS**, which is much the better way, the load can be dumped on the ground on both sides and as the Carrier is much lower than the regular Feeder Carrier, the bundles can be pitched on easier and quicker, which saves time, and time is money as you all know. Those who have our White Wings Attachments think they are the only thing and those who have been using the Extension Carriers say the same thing, so there you are. As the Extensions cost less than half as much as the White Wings, and fill the bill in stook threshing, we believe they are a proposition that it will pay any man who owns a RUTH FEEDER to look into. Let us hear from you **NOW**.

We are Headquarters for Threshers' Supplies of all Kinds



A few of our specialties are: The Sawyer Endless Drive Belt, which does not shrink or stretch. Canvas Belting in any width, thickness or length. Rubber Endless Drive Belts, best brands on the market. Lace Leather in the side, or cut, put up in one pound boxes. A Speed Indicator. Separator or Wire Cable, Suction Hose, Discharge and Injector Hose. Tank Pumps. Madison-Kipp Oil Pumps, 6 styles. Gas Head-Lights. Carbide. Spark Arresters. Flue Cutters. Success Belt Guide. Boss Cylinder Wrench. Barth Lifting Jacks. **OILS**: A Full Line, all put up under our own name, and Guaranteed. Dark Cylinder, Amber Cylinder, Auto, Gas Engine, Heavy Engine, Red Engine, Harvester, Graphite Harvester, Castor Machine, and a Common Black. Write for Prices.

THE MAYTAG COMPANY, LIMITED, Winnipeg, Manitoba

Course in Gas Engineering

Conducted by D. O. BARRETT

Timing

WHILE the gas engine is not as complicated as a steam plant, including engine, boiler, etc., yet the various parts of the engine bear such a relation to each other that they must act in unison. In other words, the various parts must be in "time" with each other. An engine may have a perfect form of exhaust valve, yet if the valve does not open at the right time in the operation of the engine, it is of little value. This is a point which is sometimes overlooked by gas engine users who may be having some trouble with their engines. They will examine every possible point, yet be unable to find the cause of the trouble, when the whole difficulty may be that some part is out of time. That this matter of time is one which affects the power and the consumption of the engine is recognized by few engineers, and it is important that the subject be carefully understood.

If the intake valve does not open promptly as the engine piston starts forward on the first stroke, it results in too small a charge being drawn in. In some makes of engines, which govern on the fuel supply instead of on the exhaust, the fuel valve, or both the air and fuel valves, are not opened until a portion of the stroke is completed, in order to give a weaker explosion when the engine gets above speed, but even in this type of engine the valves should open promptly at the proper time.

On the other hand, if the air and fuel valves open before the completion of the previous exhaust or sweep-out stroke, a portion of the exhaust is blown out through the air and fuel valves, and of course, they close before a proper sized charge is admitted to the engine. This premature opening of the fuel valve often results in "back firing," or ignition of the fuel from the flame of the exhaust, causing a report in the air and fuel passages. And if the fuel valve opens too late, it may be too late in closing, resulting in a portion of the charge being blown back through the valve on the compression stroke.

But the time of the ignition is perhaps the most important, if any one thing can be fixed on as the most important, when the proper timing of all the parts is necessary to good results. But improper timing of the ignition has perhaps the most disastrous

effect on the engine. The time at which the igniter should operate is when the crank-shaft is just far enough ahead of the inner dead centre on the compression stroke, so that the greatest pressure from the combustion of the charge occurs at the dead centre or just past it. In many engines used for electric light work, where the main result to be secured is not so much low fuel consumption as it is very close regulation in speed, the ignition is adjusted so as to be a little late, giving a little less jump to the piston at the time of ignition. Thus it will seem that the ignition really begins a little before the completion of the compression stroke, or before the crank-shaft reaches the inner dead centre. This is called "lead" of the ignition.

Suppose that the igniting mechanism operates at such an instant that the piston will start on the out stroke before the charge is ignited and starts to expand. As the piston moves out the compression at once begins to decrease and the amount of pressure obtained is therefore less than would be secured if the ignition took place at the proper time. Of course, when regulation is the prime essential and even a very slight variation in speed is undesirable, it is perhaps well to secure this by late ignition, but it must be remembered that late ignition means the same as low compression.

On the other hand, suppose that the igniter operates at such a time that the complete ignition occurs before the crank-shaft reaches the inner dead centre. It will be seen at once that the engine must then work against itself. The tendency of this would be to reverse the engine, but the momentum of the flywheels carries the piston on even against the enormous pressure. Of course, the power of the engine is decreased, because the efficiency of the engine is greatly decreased in overcoming the tendency to reverse. But if early ignition continues for any length of time, it will eventually or totally wreck the engine. As has been explained, at the time of the early ignition the crank-pin is below dead centre, and the engine would naturally tend to reverse. This does not occur, from the fact that the momentum of the fly wheels carries it on. However there is a very heavy torsional strain on the crank shaft, since the piston and con-

Any Reliable Farmer Can Own This Engine and Secure Special Terms by Writing for Them



MR. FARMER:—If you have from six to eight good horses and keep on an average of ten to twenty good pigs and fat hogs the year around and feed them properly with ground feed and chop, your grinding cost you not less than \$50.00 last year. If you fed the whole grain you lost twice that amount. If your time is worth anything you spent from \$25.00 to \$50.00 in time taking your grain to the feed mill. The proper solution is BUY A RENFREW STANDARD ENGINE AND GRAIN GRINDER. It will pay for itself in two years in what it will save, and you can make double the cost price in that length of time by grinding grain for farmers on rainy days and at odd times.

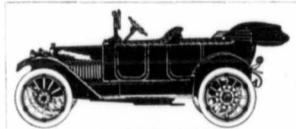
Renfrew Standard

It Starts Without Cranking

THE REASONS for buying a RENFREW STANDARD are that any person on your farm can operate it, it starts without cranking, the speed can be regulated while it is running. We sell it under guarantee of five years, and replace any parts that break or wear out within five years on account of being defective. Ask for booklet and our special long terms and prices to good reliable farmers. If you do not own a Cream Separator, write us for particulars concerning the STANDARD Cream Separator. Address our Calgary Office if you live south of the Lacombe Branch of the C.P.R. in Alberta, otherwise write us as below.

THE RENFREW MACHINERY CO., Limited
Willoughby-Summer Block, Saskatoon, Sask.

You saw this advertisement in this magazine. Don't forget to say so when writing.



McLaughlin-Buick Model 40

THERE IS A REASON WHY

there are more McLaughlin-Buick owners in Western Canada than all other Canadian manufactured automobiles combined. Further—than any four United States (combined) automobiles costing over \$1000.

McLaughlin-Buick has attained this unique position for Reliability, Dependability and all that goes to make for Mechanical Permanence a Commercial Proposition for the Farmer or Merchant. McLaughlin guarantees are familiar bonds known throughout Canada for many years. As Good Today as Ever.

Protect your Safety, Convenience and Pleasure, with a 1913 Model that is up to the minute in every detail; Electric Lights, Electric Starters, Remountable Rims, Non-Skid Tires, Stylish Bodies, and in price that appeals stronger Dollar for Dollar than any other reputable proposition.

FIVE MODELS { Three types of Touring Cars } PRICED from
{ Two types of Roadsters } \$1250 to \$2500

Enough Said. Prove it up at any of our Great Service Stations at all principal points from Coast to Coast.

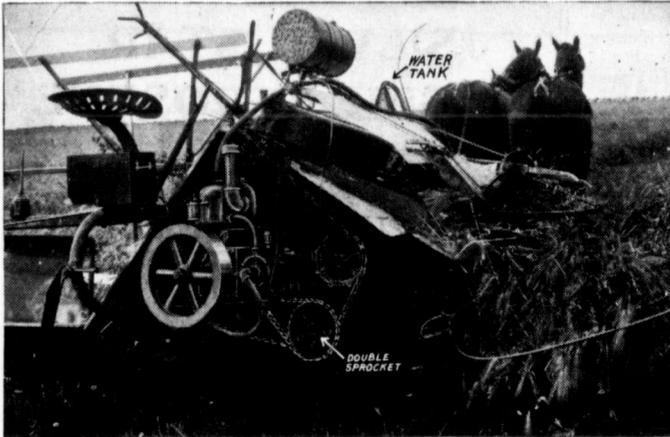
McLaughlin Carriage Co., Ltd.

Showrooms: 204-212 Princess St. Winnipeg Garage: 275-277 Maryland St.

Western Canada Branches—REGINA, MOOSE JAW, SASKATOON, CALGARY, EDMONTON, and VANCOUVER

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Patronize Those Who
Patronize This Magazine



Don't Overpull Your Work Horses During Harvest

Run Your Binder This Year With a Light Weight 4 H.P. CUSHMAN ENGINE

It's the modern way. It gives you more power — more reliable power — smoother, steadier running. Weight only 167 lbs. Two horses with this powerful little engine on your binder are better than 4 horses without the engine.

It Saves a Team

Farm Cushman The Original Binder Engine

Quickly and easily attached. Universal adjustable brackets do the work. Anyone can run this simple 4 H. P. 4 Cycle engine on the binder. Runs the reel and sickle, elevates, binds and delivers the grain. The team simply draws the machine. The sickle continues to run when bull wheel skids. The throttling governor, with the Schebler Carburetor, insures even running, no jerk on engine or binder. No waste of fuel.

Cut your grain when ripe—save it all. C. H. Soucek (Tex.) writes: "Cushman engines on our binders saved a 1200-acre crop. Enabled us to harvest in mud and water. I have raised wheat in Kansas and Oklahoma. The Cushman filled the bill on wet, soft, sandy, hard and rough ground."

E. W. Gasser (Illinois) writes: "With the Cushman I cut 8 to 10 acres more with less horsepower. In tangled grain, when binder choked, I simply stopped the team and the engine cleared the binder."

SEE YOUR DEALER NOW—WRITE US TO-DAY *Don't Wait Till Harvest. We Cannot Guarantee Deliveries in the Rush Season*

This is a personal appeal to you. Hundreds of farmers were disappointed last year, because they did not get their order in early enough. You need a Cushman if you run a binder. Don't wait a week longer—we can take care of you now, but cannot guarantee deliveries in harvest time. Years of careful study and experiment

are in the Cushman. It meets every requirement of a binder on soft, sandy, hard and rough ground. We were pioneers in building a binder engine. Ten-year guarantee. A Cushman will save time and worry—save horses—and may save your crop. See your dealer. Write us at once, if he does not handle the Farm Cushman.

Read This

Remember, the Farm Cushman is an All-Purpose Engine

It is not merely valuable to pump or to run the binder. It is at home any place where you have farm work to do. Hundreds of people are using it to run the grindstone, pump, feed grinder, corn sheller, wood saw, ensilage cutter, separator, wather, electric light plant and other machines. It runs at any speed, throttle governed type. You can change speed at any time without stopping. Whether the job is 1, 2, 3 or 4 H. P., it consumes just that much fuel, no more. There is absolutely no waste. We build larger, heavier, 2-cylinder engines for heavier duties—6 to 20 H. P. for use in the corn belt, for silo filling, baling, heavy grinding and sawing, for everybody who requires more than 4 H. P. All the efficiency of the famous 4 H. P. Farm Cushman, but for heavier and special duties. Tell us what your needs are, then we advise you fully as to engine needed. Don't fail to see the dealer or write us about your binder engine today.

40-page Catalog free. Address

The Cushman Motor Works of Canada Ltd.

208 Chambers of Commerce
Winnipeg, Man.

Horses merely pull the machine, engine runs sickle and reel, elevates, binds, delivers

I think it proper to write a few words of praise about your 4 H. P. Farm Cushman Engine. I honestly think it is the greatest perfect engine I have ever seen run. For power, steady speed, light weight, economy in use of fuel and for an all-purpose farm engine, it cannot be beat. I used it on a Deering 8-foot harvester this fall and averaged 20 acres per day, ten hours in the field, at a cost of less than \$4.00 for the ten days for gasoline and oil. Today I ground 125 bushels of this year's oats in five hours, with it belted to a 4 1/2 inch burr feed mill. The burrs were not sharp, either, as they had ground 300 bushels before this. We have a—3 H. P., a—1 1/2 H. P. and a—8 H. P. engine. The Farm Cushman will do the same amount of work, as any of the above named and on less gasoline, because of the throttle governor it has. IVOR A. MATTSON, Wheelock, North Dakota

You saw this advertisement in this magazine. Don't forget to say so when writing.

necting rod are forcing it on in one direction, while the fly wheels are forcing it in the opposite. This strain, if kept up for any length of time, starts a small check or crack at the junction of the crank shaft with the journal. This crank gradually works all around the shaft and into the check at an angle of about 45 degrees, or, rather, in a curved line. Finally there is a little stock left that this suddenly breaks and leaves the check with a cup shaped depression, into which the broken end shaft fits. As the crack gradually works in farther and farther, the vibration rubs the broken parts smooth and oil follows in. When the final break does occur this oily and smooth surface has the appearance of an old break or a flaw, while the small portion of the fracture which broke last, is the only part which shows a

fresh, rough break. This frequently creates a wrong impression in the mind of the owner of the engine, who at once jumps to the conclusion that, since the break has undoubtedly been of long duration, and as it shows a smooth surface over the larger portion of the fracture, the shaft must have been welded into the cheek and the weld imperfectly done. Accordingly, he demands of the manufacturers a new shaft free of charge, as well as that the rest of the engine, which may have been damaged more or less, be repaired, without cost to him.

As a matter of fact, practically all of the reliable gas engine builders, especially those building engines larger than 5 h.p., use a crank shaft which is forged from one solid billet of steel, and the crank portion is solid. The stock between the crank cheeks is then cut away and the shafts and

crank-pin are turned to the proper size, so that there is no welding in any part of the crank shaft. These breaks sometimes occur several years after the installation of the engine, long after any effects in the construction of the shaft would have developed. The accompanying illustration shows the rough-turned and the finished crank, also the usual form of break.

But there is another result which accompanies either early or late ignition or the wrong timing of the valves, and that is high fuel consumption. Early ignition destroys the effect of a large part of the latest power in the charge. Late ignition, like low compression, does not secure all the power possible from each charge, since there is a relation between the maximum pressure secured after ignition and the pressure at time of ignition, so

that the lower the pressure at time of exploding, the less is the power developed. Early or late closing of the air and fuel valves, also results in losing a part of the power possible to secure. And as all gas engines which do not get the maximum benefit from each charge require more fuel than is otherwise necessary, it will be understood that any of the conditions previously mentioned affect the consumption of fuel per horse power developed.

But what are some of the causes of early ignition in gas engines, and how is one to tell when ignition occurs at the proper time? Indicating the engine is the only way by which the exact time for the ignition mechanism to operate can be told, but there are ways to tell very closely without indicating the engine. It is very difficult to tell, except by the use of the indicator,

whether an engine which is run with a tube igniter is firing properly or not, unless the time of ignition is exceedingly early or late. If very early, the engine will make a pounding noise. If very late the power developed will be very little and by experimenting with various lengths of tubes, something may be learned about the time of ignition.

An engine which has an electric igniter operates the igniting mechanism, while the crank is at a certain point below dead centre. It is well when the engine is new and in proper condition to mark in some way to show the position of the crank at this time. One way to do is to mark on the fly-wheel, and another close to it on some part near the wheel. If this cannot be done easily the piston may be marked, or a plumbline may be dropped from the centre of the flywheel shaft and a point marked on the rim of the wheel where the line meets it. Many makers of engines have some special way of marking this on their engines, so as to avoid the necessity of the purchaser doing so. By having some guide when the engine is new, it enables the operator to tell at any time whether the engine is igniting properly.

As to the causes for early or late ignition, first, the engine may be out of adjustment. All igniting mechanisms wear in time and require some readjustment. Sometimes they are changed accidentally by some person taking off a portion of the engine and not putting it back correctly. Often a side shaft is taken off and when put back the gears are not meshed with the same teeth together. A difference of even one tooth will throw the whole engine out of time. Sometimes a deposit of carbon on the head of a screw or bolt, or some sharp corner of the cylinder becomes heated to such a point as to ignite the charge prematurely. In such cases if the battery is disconnected the engine will ignite charges just the same, as long as the heated part continues to be sufficiently hot.

Sometimes in an engine with a make-and-break igniter new points are put in and their length is not gauged properly or adjustments are not made to take care of the different length of points, thus changing the time of ignition. Or the points may wear gradually, and by so doing change the time of ignition. All engines have parts which wear gradually and these points are sometimes not noticed by the owners. Many people who have had a crank-shaft broken from early ignition will tell the manufacturer that the time of ignition has never been changed since they got the engine.

They seem to think that since nothing has been done to the engine the time of ignition must be the same as when it was new. As a matter of fact their very statement that they have not adjusted the engine shows that it can not be in the same condition as when shipped, because wear has taken place and changed it. "Letting the engine alone and doing nothing to it" has ruined more than one machine, and the efforts of the gas engine manufacturers are being continually devoted to trying to educate the purchaser up to the realization of the fact that no engine can be "let alone" with impunity. No one expects a horse to be let alone and yet do satisfactory work. And a good gas engine is in some respects like a good horse. It runs best when cared for best. No part of the engine can be neglected without resulting in trouble.

But the fact that any part of an engine is in proper condition itself does not imply that it is in proper time. One of the mystifying things about a gas engine, at least to the person who is unfamiliar with their operation, is to see some part jump up and down perhaps three or four times and then stop, and pretty soon jump up and down again with apparently no reason for its doing so. Some operators of engines do not have enough judgment, or even enough curiosity, to learn why such a part moves as it does. The gas engine operator must never lose sight of the fact that gas engines are largely automatic and that there is a reason why each part not only moves as it does, but when it does, and any operator who has the foresight to know that he should understand the action of the engine thoroughly will study these features, and thus will save himself many an hour which would otherwise be consumed in looking for the cause of an engine shutting down or waiting for a new crank shaft or other parts to come from the factory.



Bill Nye, the American humorist, once promised to take a lady friend for a drive. Unfortunately on the appointed day he could only obtain a carriage—with an old and rather gaunt horse. However, Mr. Nye drove up to the house, and waited for his friend. She kept him waiting for nearly an hour, and then declined, on seeing the horse, to go driving. "Why, that horse might die of old age any moment, Mr. Nye." "I am very sorry he looks so old now," said the humorist. "But I can assure you that when I arrived that animal was a prancing young colt!"

SILVER STAR ENGINE KEROSENE

— The best fuel for —

OIL-BURNING ENGINES

*Recommended by the Hart-Parr and Rumely Companies,
and used by all Oil-Tractors in all Motor Contests,
at Winnipeg Industrial Exhibition.*

PREMIER MOTOR GASOLINE STANDARD GAS ENGINE OIL POLARINE

*Carried in Stock at 300 Tank and Warehouse Stations in
Manitoba, Saskatchewan and Alberta*

*For prices at our Branch Stations nearest you, write
to any office or*

THE IMPERIAL OIL COMPANY Limited

Main Office: Winnipeg

Regina, Moose Jaw, Saskatoon, Edmonton, Calgary, Lethbridge

Prices on Distillate Fuel Oil quoted on application

You saw this advertisement in this magazine. Don't forget to say so when writing.



275,577 is the number of a motor that left our factory one bright morning not long ago. It was a wonderful motor—the result of a big and unmatched experience. And the thousand or more motors we are building every day are exactly like it.

More than 275,000 Fords now in service—convincing evidence of their wonderful merit. Runabout, \$675; Touring Car, \$750; Town Car, \$1000—f.o.b. Walkerville with all equipment. Get interesting "Ford Times"—from Dept. G., Walkerville factory. Ford Motor Company of Canada, Limited.

You saw this advertisement in this magazine. Don't forget to say so when writing.

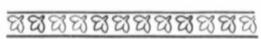
For RELIABILITY, EFFICIENCY, ECONOMY, Get a
"PIONEER" Gasoline Road Roller
 Manufactured by BARFORD & PERKINS, Peterborough, England.



Manufacturers of
 Water Ballast Road Rollers
 since 1840.



10-Ton Size as Illustrated
 will roll 3 miles on 1 gal.
 of Gas. or Coal Oil.
 Eight Sizes, from 1½ to
 15 tons.



See us at WINNIPEG EXHIBITION, Auto Section
 Lists and Terms from E. O. HERBERT, 81 Walnut Street. Phone 3181

You saw this advertisement in this magazine. Don't forget to say so when writing.

Questions and Answers
 For Gas Engine Operators

Ques. What may be said of low compression?
Ans. Low compression means absence of a sufficient quantity of gas mixture to give a good power effect. When little or no compression manifests itself as a resistance to cranking, it is certain that the operation of the engine will be defective, provided it can be started at all. If the engine should lose compression after it has started, it will misfire and slow down.

Ques. State the causes of low compression?
Ans. This condition results from a leak in the combustion chamber, due to: 1, a sticking (automatic) inlet valve; 2, pitted or corroded exhaust valve; 3, a weak spring on the exhaust valve; 4, loose or open compression cock; 5, leaky piston; 6, defective gasket in the cylinder head; 7, worn or loose thread at the insertion of the spark plug; 8, broken valve or valve stem; 9, worn or scratched cylinder wall, and 10, a valve stem that is so long that it touches the end of the push rod when the engine is cold.

Ques. State a few causes of pre-ignition?
Ans. An incandescent particle or overheated cylinder will cause an engine to pre-ignite. Sometimes the rotor arm of the time wears at the contact point, leaving a path of metallic particles on the ring containing the stationary contacts, thus causing the current to flow to the stationary contact via this path and causing ignition to occur before the proper time.

Ques. What indicates a leaky piston or a broken ring?
Ans. A leaky piston causes a hiss inside the cylinder—sharp hiss indicates a broken ring.

Ques. What should be done in case of low compression?
Ans. All the joints and cylinder gaskets should be examined for leaks.

Ques. Mention some conditions that will cause a loss of power without misfiring.
Ans. The chief cause for an engine to fail to deliver its full power with good ignition is poor compression. A fuel mixture either too weak or too strong will reduce the power of the engine. If the bearings be too tight, there will be a loss of power due to the

Ques. What other method may be employed to test for a missing cylinder?
Ans. A missing cylinder may also be found by low temperature of its spark plug and exhaust pipe, if the missing be long continued.

Ques. What causes the inlet valve to stick?
Ans. Usually an incrustation of gummed oil.

Ques. How may leaks at the openings into the cylinder be detected?
Ans. The escape of compression around the spark plug, relief cock, or other opening into the cylinder may be detected by the application of a little soapy water; if there be a leak it will be indicated by the formation of bubbles.

Ques. "My uncle," she said, "was once a town councillor." Never mind, darling," he replied, "I love



The above cut is that of Mr. S. C. Olson, who has recently assumed the position of Branch manager for Rumely Product Co., at Winnipeg. Mr. Olson is an old timer in the thresher business, having passed considerable time in the services of J. I. Case Threshing Machine Co. and The Nichols & Shepard Company. Mr. Olson succeeds Mr. W. J. Thorpe who has accepted a position with The Moline Plow Company at Lincoln, Nebraska.

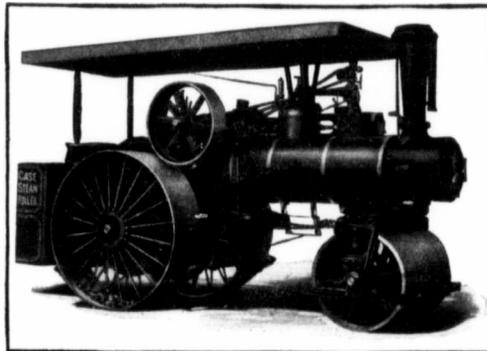
"Do you assimilate your food, aunty?"
 "No, I doesn't, sah. I buys it open an honest, sah."

A Powerful Factor in the CASE ROAD

CASE ROAD MACHINERY, by Saving Labor and by Making Possible Faster, More Economical Work, has done much to advance the Cause of Good Roads as well as the Prosperity of those engaged in the building of Public High-ways.

Case Road Machinery makes possible Quicker, More Thorough and Permanent Work than was ever possible with Animal Power. At the same time, by reducing the expense, it lessens the cost to the Community.

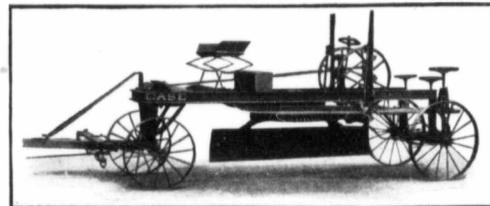
Every Labor-Saving Machine that can be Economically employed in Road Building is found in the Case Line of Road Building Machinery. Contractors, Municipalities, High-Way Commissioners and every one interested in Road Building should write for a 1913 Case catalog of Road Building Machinery. It lists all of the Most Practical Road Building Equipment and saves you the expense of Costly Investigation to determine what we have already determined for you.



CASE Ten-Ton Road Roller

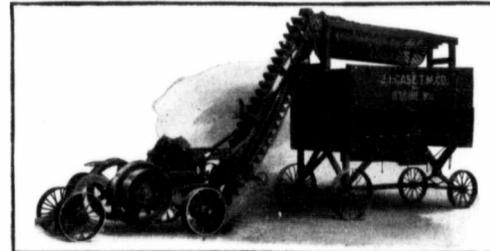
The most practical road roller ever constructed. Its utility is not confined to road building entirely. Unlike ordinary steam rollers it can be used for Hauling, Driving Stone Crushers and Concrete Mixers, Drawing Graders and for general power purposes. It is also convertible into a regular traction engine by the substitution of parts which we furnish for that purpose—so the Case Road Roller need never be idle. Its construction is fully described in our road machinery catalog. Write for a copy today.

The Penny you spend to write for a Case Road Machinery Catalog may save you many Dollars both in First Cost of Equipment and in Cost of Operation after you get it.



CASE-Perfection Reversible Road Grader

The Case-Perfection Reversible Road Grader is designed both for the use of the individual Farmer and Land-owner and for Contractors, Municipalities and others engaged in road building. It embodies many new improvements in construction, designed to prevent racking and vibration and to give a wider range of adjustment and manipulation of the blade. The Case-Perfection Road Grader No. 1 has a full circle ring, thus allowing the blade to be set in any position and at any angle desired. These graders are made in three sizes. For Traction Power, Horse Power and a third model that can be used to good advantage in grading and leveling roads, cutting irrigation ditches, digging trenches and a great deal of other arduous work ordinarily done by hand on the farm. Let us send you our special catalog and literature that describes more fully the advantages of Case-Perfection graders.

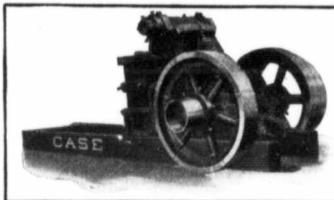


CASE Rock Crusher—Size B, Stone Screen and Bin

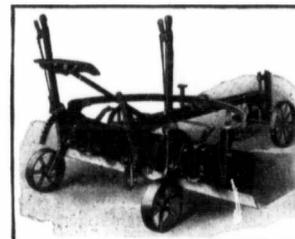
Great Strength and Durability characterize the construction of the Case Rock Crusher. Every requirement of the hard rough service a Rock Crusher is subjected to has been anticipated in the designing and building of this machine. Every piece of material entering into its construction is tested in our Chemical and Physical Laboratories. Each part is carefully inspected before assembling and each finished machine is given a practical and severe test before shipment. Every little detail even down to the manner of mounting on the trucks has been carefully figured out. This machine has a jaw opening 20 inches long and about 10 inches wide. Its capacity is 15 to 25 tons per hour. To be used in conjunction with Case Stone Crushers in high grade road construction we have the Case Stone Screens which separate the stone as it comes from the Crusher into various sizes and holds it in readiness to be quickly deposited into the hauling wagons without any labor except turning down the spout of the bin containing the desired size of the stone. This apparatus is fully described in our Road Machinery Catalog.

Cause of Good Roads MACHINERY

CASE Rock Crusher on Skids—Size A



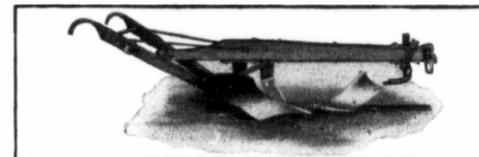
The Case size "A" Rock Crusher is identical in principle and construction with the larger size "B" except that it is mounted on skids, and has a smaller capacity. The capacity of this machine is 10 to 15 tons per hour. The jaw opening is 15 inches long and about half as wide. This machine is also described fully in our Road Machinery catalog which will be sent free upon request.



CASE-Shelby Road-Grader and Leveler

A small grader designed for farm use. One man and one team can operate it easily. It is very useful and handy in keeping roads, drive-ways, and lanes in good condition and for general leveling and grading work around the farm.

No farm is too small to use one to advantage. Being built entirely of steel, it lasts for years. **Price, Only \$50.00**



CASE Railroad and Township Grading Plows

Case Railroad and Township Grading Plows cut a narrow, deep furrow and are light of draft. Their strength is unusual.

The beams are made of the best White Oak—heavily ironed on both upper and lower sides. Heavy wrought Steel Standards are used with large plate on top and securely braced.

We use only the best quality of Plow Steel in the Mold-Boards, Shares and Cutters, all of which are double shinned. Cutters are reversible and very strong. Mold-Boards are alike and interchangeable. Made in two sizes and either right or left handed.



CASE "Two-in-One" Engine Tender and Sprinkler

We make a four-wheeled Engine Tender in two sizes that is a very practical outfit for Road Builders. The large size holds about sixteen barrels and the small size twelve barrels.

The sprinkler attachment saves the expense of buying a Sprinkler. The outfit includes a Case Pump with a capacity of two barrels a minute that is easily worked by one man. There's a Fuel Hopper of ample size with a place for Hose on one side and a Slip tongue on the other. Prices and complete information sent to those interested.

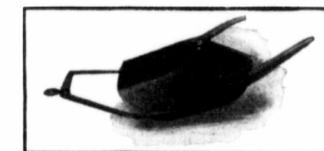
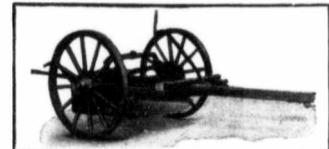
CASE Road Rooter

The Case Road Rooter is designed for breaking up Rocky Roads, Country Pikes, Cobblestone and Macadam Roads. They are built exceptionally strong so they can be drawn by traction engines and will stand the strain and rough usage where a plow would fail. Made with Steel or Cast Beam, fitted with double reversible points with adjustable Shoes and Iron Handle.



CASE Wheel and Drag Scraper

A great deal of Care and Thought has been expended in selecting our line of Scrapers and those we list have been required to demonstrate their Superiority both in Mechanical Construction and in Actual Work on the Road. Both our Wheel and Drag Scrapers are built in various sizes suited to all Classes and Conditions of Work. The detailed Construction of our Scrapers is described and their superior features carefully explained and illustrated in the Case Road-Machinery Catalog. Mailed upon receipt of request to all interested in this class of Equipment.

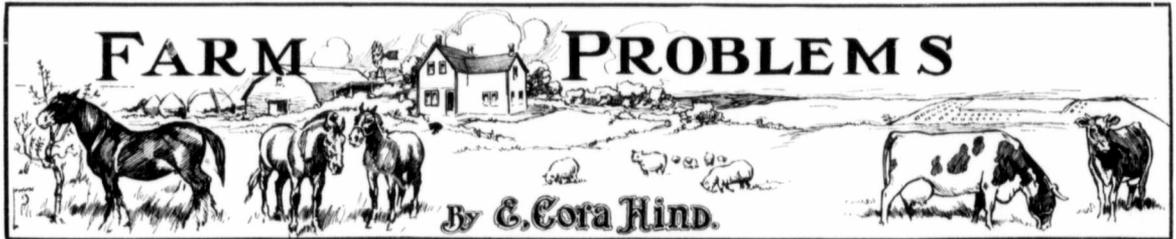


CASE Steel Drag Scraper

The Penny you spend to write for a Case Road Machinery Catalog may save you many Dollars both in First Cost of Equipment and in Cost of Operation after you get it.

J.I. CASE T. M. COMPANY INC.
CANADIAN BRANCHES, TORONTO, WINNIPEG

741-791 STATE ST., RACINE, WIS., U. S. A.
SASKATOON, REGINA & CALGARY



Dry Farming

FOR several reasons this is the time when Dry Farming should particularly occupy the attention of Western farmers. One of the delegates to the congress at Lethbridge last year put the matter happily when he said that dry farming was simply better farming, and that is actually the case. Some of the reasons for this being the time when dry farming should be specially considered are: The

Hon. W. R. Motherwell, Minister of Agriculture for Saskatchewan, who is now president of the congress, has recently returned from a meeting of the board of governors at Tulsa, Oklahoma, and states that the exposition in connection with the congress will be of much greater magnitude even than was the one at Lethbridge in 1912, and he urges that not only municipalities and provinces, but that the individual farmer take an interest and

co-operate with the nearest agricultural society in order that the exhibits sent forward may be the very best the country can produce. In passing it may be remarked that the province of Saskatchewan has voted \$7,000 of provincial funds towards the putting in of the exhibit. Of course, many farmers have already got work underway for crops. There are, however, no doubt many farmers who without any special preparation could put up an excellent exhibit, and if they have not thought about the matter previously, they should begin to think about it now. Saskatchewan succeeded in carrying off the prize for the best exhibit last year against very strong competition, and there is no reason in the world why any one of the three western provinces should not carry it off this

year. Manitoba and Northern Alberta I believe, rather think that it reflects on their climate and weather conditions to exhibit at a dry farming exhibition, but this is folly, because Northern Alberta and Southern Manitoba have districts where the rainfall is certainly within the prescribed limit, and, inasmuch as many of the methods of cultivation, West, there is, no reason why any of our provinces should turn up their noses at a dry farming congress.

There was more land left for summer-fallow than is the case this season, which of course is occasioned by the small amount of fall plowing which it was possible to do last year. The farmer who has no sheep to eat down the weeds on his fallow has the advantage this year, as the growth of weeds on land left for fallow is not as heavy as usual, owing to the late spring and the dry weather. It is presumed that all farmers who profess to do good work will have plowed their

success of the dry farming methods carried on by Mr. Angus McKay on the Indian Head Experimental Farm during the past 19 years. A full account of that work of course, has appeared frequently, and I think almost every journal published it in full after the Dry Farming Congress last October. However, it will do no harm to repeat here that during the 19 years not a single crop failure was recorded. The highest yield was 49 bushels to the acre, the lowest 17. During this

period the rainfall varied from 3.9 inches to 20.22 inches. This did not include the snow fall. It is a very remarkable record, and is much better than that of the farm of Senator Barnes of Utah. On this farm, the heaviest crop of wheat raised during the 19 years was 28.9. Oddly enough, this was reaped in the year of the lowest rainfall. The rainfall on this farm varied from 10.33 inches to 18.46. It will be noted from this that while the rainfall was never



An Object Lesson in Concentrated Effort on Intensive Farming

Dry farming, or farming for the conservation of moisture, is yearly becoming more popular and covering wider areas. Anyone who has been out in the country during the past month must have noted the superior quality of the crops on summer-fallow, and summer-fallow is a dry farming method. Even in the districts where we have had the smallest rainfall this season, the crops on the summer-fallow are green and vigorous and are of considerably better color than those on either fall or spring plowing, showing that the conserved moisture has been sufficient to carry the crop along even where there has been practically little rain. This should be a stimulus also to the man who is making a fallow at the present time for next year. There has possibly never been a year when

fallows in June, but the plowing, while it is important and should be deep and thorough, is really only the beginning of things. The cultivation and the packing which follows are most important. Whatever else happens, no farmer should omit the harrowing of a fallow soon after every rain storm, as it is possible to get the harrows on without clogging.

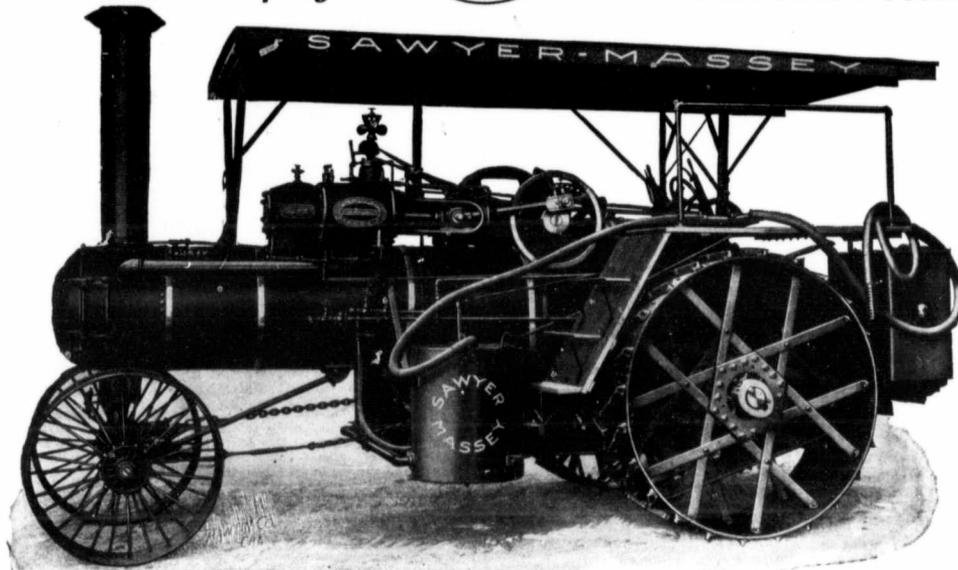
There is no royal road to making a summer-fallow, but neither is any labor wasted thereon, and the stunted crops on spring plowing, and stubble which are everywhere to be seen this year, should carry their lessons with them. In the June number of the Nineteenth Century, there is a very interesting article on rainless wheat, by William McDonald, of the Agricultural Department of South Africa. He quotes at length the

quite as heavy as it was at Indian Head, neither was it quite as light. Mr. McDonald remarks in the course of his paper "it may be said that the practice of growing crops on only part of the arable land and maintaining the other in clean fallows, meant a good deal of extra labor." This is so, but it also means a certain crop in seasons of drought. It may be said that the continuous cultivation of moisture saving fallows will eventually burn out the vegetable matter in the soil. This is true, but the remedy is at hand. On worn out fallow you can always grow green legumes, filling the soil with nitrogen, and so establish a humus bank. These two saving banks, the moisture bank and the humus bank. These two saving farmer against the severest drought and make possible the



The Premier Company

The Premier Goods



Sawyer-Massey Class "C" Compound Steam Tractor

SAWYER-MASSEY Tractors meet every requirement of the largest user of farm power. Our Class "C" Compound Steam Tractor is built in 27 and 32 Horse-Power sizes, developing 82 and 100 Horse-Power respectively. Also built in 22, 25 and 35 Horse-Power Simple, developing 68, 76 and 115 Horse-Power.

SAWYER-MASSEY Tractors are built for heavy service, and are designed to give the greatest possible efficiency. In power, strength, accessibility, fuel and water economy, balance, and ease of operation, they represent the highest development of the Steam Tractor. They will give satisfactory service under all conditions, and are a profitable investment for every Thresherman or Farmer.

Sawyer-Massey "Great West"

The SAWYER-MASSEY "Great West" is the thresher for the large farm and the bumper crop. It will thresh the largest harvest quickly and economically, and save time, grain and money on every job.

Every part of the "Great West" is of the best material and tested thoroughly. Frame, cylinder, grate,

SAWYER-MASSEY "Daisy"
is a medium size machine intended for use where great capacity is not necessary. It is built in two sizes:
29 inch cylinder x 44 inch body.
32 inch cylinder x 50 inch body.
SAWYER-MASSEY "Eclipse"
is a highly efficient Thresher for use with small steam or gasoline Engine. It is built in one size, and will turn out 500 to 700 bushels a day.
30 inch cylinder x 35 inch body.
SAWYER-MASSEY "Monitor" Clover Huller
threshes cleanly all kinds of clover, and is fast becoming a necessary part of every Thresherman's outfit.

agitators, and all other important parts were designed after long investigation and many tests of various styles, and are built to give the highest possible efficiency and strength. The "Great West" is the Premier Thresher of Canada, and has given unflinching satisfaction wherever used.

Built in five sizes ranging from 25 inch cylinder x 42 inch body to 40 inch cylinder x 64 inch body.

We have an attractive proposition for Dealers in Foreign Countries, and invite correspondence.

Write for Catalogue

SAWYER-MASSEY COMPANY, Limited

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

Head Offices and Factories :: :: HAMILTON, CANADA

Branches and Warehouses: Winnipeg, Manitoba; Regina, Saskatchewan

SAWYER-MASSEY

permanent fertility of dry lands."

These methods faithfully followed would mean that there would never be a crop failure from drought in the Canadian West, for there has never been a year without sufficient moisture to raise a crop if that moisture had been properly conserved and concentrated.

Saving Devices

My attention has been called recently to a device for saving wheat which shells at the time of cutting, or breaks off at the head and is thereby lost. This device has been in use in Dakota a couple of years, and has worked very successfully, and now a company has been formed to handle it in the Canadian West. I have looked into the device and it seems to me to be simple and easily worked. It can be made to fit any standard binder. It consists of a roller head, attached to the deck of the binder in such a manner that the roller head is about one half above the deck and about one half below deck, with an opening between the end of the deck and the roller. As the sheafs pass over the deck, all the shelled grain or seeds drop through the opening between the end of the deck and the roller head and are caught up by a conveying shield made of galvanized iron set at an angle so that the grain slides easily over it into the collapsible pan which is attached to the bundle carrier supports underneath the deck. The pan is made collapsible, the bottom being of galvanized iron and the sides of canvas, so that should it strike a stone or lump of earth it folds up, preventing any hindrance to the movement of the binder. When the pan is full, it can be very easily slipped out and emptied, and re-adjusted. The very fact that a device of this kind has been patented shows that at last the Western farmer is waking up to the necessity of stopping the leaks in his farming, if there is to be any profit. Those who have used the attachment, and among them are Professor Dynes, of the North Dakota Agricultural College, state that the saving in actual grain is very large. To my mind, there are three important things in connection with this device. First of all, the actual saving of grain, which otherwise would fall to the ground and in the shape of a volunteer crop the following year, would be a menace in addition to the original loss. Then again, the grain which shells when being cut, is undoubtedly the earliest ripe. Very often it is among the finest and largest of the grain, and from grain collected in this way, it might be quite easy to establish an early

ripening strain, something always to be desired in the Canadian West, but to me by far the most important work done by this device would be the collection of the seeds of noxious weeds. Any one who has been in the harvest fields of Western Canada knows the extent to which the ripe weed seeds are scattered by the binders. If they could be gathered up by this device, the farmer could either have them burned or ground for hog feed, but in any event they would not be spread over his land ready to germinate and stifle the next crop. Of course, this is not the place for advertising the names of implement dealers, but if any of my readers are interested in this matter, and will write me personally, I will be glad to put them into communication with the men who have undertaken to have this device manufactured in Canada. I understand that it will be comparatively inexpensive, and I know the men who are behind it are absolutely reliable.

The Popular Cook Book

The cook book, with its varied recipes and the assistance it gives housewives is comparatively a very modern product. In the old days the woman of each home cooked and baked with the knowledge gained only by individual experience. The desire for greater variety and for more economy led to exchanges of recipes and methods of cooking and this in turn led the assembling of large numbers of these recipes in what are now termed cook books. The most widely used and most popular cook book in Western Canada is the Blue Ribbon Cook Book. It was compiled by experts of national reputation whose time for more than one year was occupied in preparing it. The Blue Ribbon Cook Book is a cook book for Western women and was in fact prepared especially with the needs of western women in view. There are scores of thousands of Blue Ribbon Cook Books now in use in Western Canada. When one housewife gets it her friends invariably want one and so recognition of its value spreads. Its oilcloth cover, which is so easily kept clean, is one of its unique features. This popular cook book is issued by Blue Ribbon Ltd., of Winnipeg, whose Blue Ribbon Tea and other Blue Ribbon pure foods are so widely used in the West. Any western housewife can secure a Blue Ribbon Cook Book by sending one of the Blue Ribbon advertisements from this paper with twenty-five cents to Blue Ribbon Ltd., Winnipeg.

Would You Like to Have \$20.00 TO \$35.00 More a Day for Threshing?

You can save this amount by using HART-BROWN WING CARRIERS, and HART UNIVERSAL THRESHER RACKS.



HART-BROWN WING CARRIER Attaches to ANY Separator with ANY Feeder.

No alterations or re-building necessary.

The carrier attaches to the main sills and main frame of separator; no weight on feeder. By using this machine, you can thresh more grain in a given length of time, as the delivery is so arranged that practically every bundle goes to the band knives straight and evenly, eliminating slugging and choking and the consequent delays.

"Would Not Attempt to Thresh Without Them"



Gentlemen:—
 In answer to your inquiry as to my experience with the Hart-Brown Wing Carriers and Dump Racks would say, that after two seasons experience with same, I am well satisfied especially with the improved carriers, as they have few parts, are strongly built, therefore nothing to get out of order.
 I have used them in all kinds of grain and find they save me about twenty dollars a day for help and will enable the machine to run steadier, therefore, do better work as there is no slugging.
 The Dump Racks I consider a great improvement over other dumping racks as they do not waste so much grain unloading.
 I can recommend both wing carriers and racks to any thresher man for they are of mutual benefit to both he and the farmer.
 I myself, would not attempt to thresh without them.
 Wishing you success, I remain,
 Yours very truly,
 D. HAN KIN.
 Rouleau, Sask., April 1, 1913.

HART UNIVERSAL THRESHER RACKS



In short, threshing, a big saving can be made by using the racks with the carriers. One Hart Universal and driver will do as much work as two ordinary racks, two drivers and one field pitcher.

If you want to build the rack, we will furnish the hardware and parts.

Let us tell you how you can save from \$20.00 to \$35.00 a day.

WRITE TODAY FOR CATALOG AND FULL PARTICULARS, STATING KIND OF SEPARATOR AND FEEDER YOU USE.

ADDRESS

Haug Bros. & Nellerhoe Co., Ltd.
 WINNIPEG, MAN., CAN. - - REGINA, SASK., CAN.
 General Distributing Agents for Canada

OR

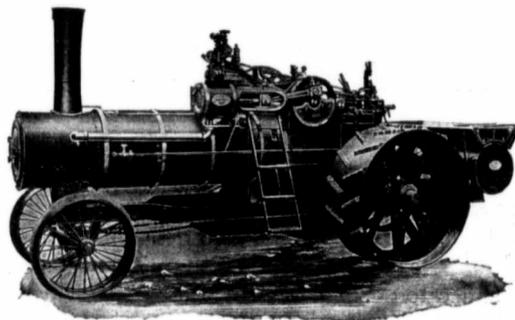
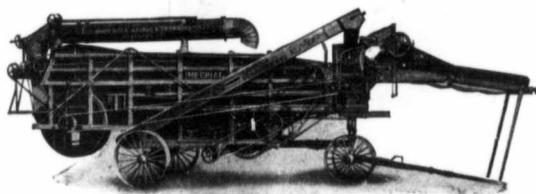
Hart Grain Weigher Co.
 PEORIA, ILL., U.S.A.

You saw this advertisement in this magazine. Don't forget to say so when writing.

BELL ENGINES AND THRESHERS

Our 26 and 30 h.p. Rear Mount Plowing Engine. 175 lbs. steam pressure under Alberta Specifications. No Brackets attached to boiler with Stud Bolts or Cap Screws. Engine and Gearing mounted on separate Steel Frame. No strain on the boiler. Gearing, open hearth Cast Steel, guaranteed against breakage until worn out. Made to plow without lost time through breaks or boiler troubles. Enquire about it.

Visit our display of New Machinery at Winnipeg, Brandon, or Saskatoon Exhibitions. We will be pleased to show you our goods and discuss their merits with you. Our new type of Rear Mount Engine is especially worth your while coming to see for yourself.



Imperial Separators. Sizes: 28 x 42, 32 x 54, 36 x 60. Improved for 1913. Good in all kinds of grain. A wonder in Flax. Hand-ome, Speedy and Durable. Write for further information.

We have an unusually fine lot of Rebuilt Engines and Separators of various sizes and makes at our Winnipeg warehouse. We took special pains to make a thorough job of the rebuilding, and they are not only good, but look good. As our warehouse is only a few minutes walk from the Winnipeg Exhibition Grounds, this rebuilt machinery can be easily inspected. If you are looking for a GOOD, CHEAP outfit, we can please you.

The Robt. Bell Engine and Thresher Co. Limited

Branches : Winnipeg, Man.; Saskatoon, Sask.

Factory: Seaforth, Ont.

You saw this advertisement in this magazine. Don't forget to say so when writing.

Harvesting the Grain Crops

Continued from page 9

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 clean. 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 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."



The above illustration is that of Mr. John Vasbinder, Western manager for George White & Sons Co. Limited, with headquarters at Brandon, Manitoba. Mr. Vasbinder came to Brandon in 1906 to introduce the "White" line of engines and threshers. From 1906, year after year the company enjoyed a steadily increasing business, until in 1912, the business was seven times as

large as it was in 1906. The business has now grown to such an extent that an assistant is necessary who has been engaged in the person of Mr. G. E. White one of the junior members of the firm. Mr. White will have charge of the collection department.

The "First Quality Line" is already well known to our readers and under Mr. Vasbinder's able management its activities are destined to be considerably increased.



Bacon and Eggs

He liked showing off did young Brown, and he thought that the occasion of his dining with some friends at a restaurant would be a good occasion for exhibiting his talent.

"Waitah," he cried, in a swaggering voice, bring me some verulam and ova."

The waiter departed to execute this order, but there was a significant gleam in his eye.

About fifteen minutes later he returned with a plate of bacon and eggs.

"Bacon and eggs, sir!" he exclaimed. "In ordinary English it would be a shilling, but in classical language it will be half-a-crown. Let the punishment fit the crime," as we used to say at Oxford! Anything else, sir?"

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THE FIRST QUALITY LINE

THRESHING MACHINERY

FIFTY YEARS' experience in building threshing machinery is an enviable record. To you, as Thresherman, it however means far more than a mere record. It means that when you buy "The First Quality Line" you get a line of machinery that has passed through every stage of development in Canadian Threshing Machinery. It means that every part has been tried and proven in the field and that all of the experimenting has been done before you buy it. It means that, first of all, you get machinery built for service. Day in and day out it will go into the field and do the work that it was intended to do. It is also built to suit any and all conditions, no matter where they are nor how severe the work. "Quality" has been our motto for fifty years. Quality in material, quality in service rendered, quality in work performed. That is why we call it "The First Quality Line."



THE WHITE REAR MOUNT STEAM TRACTOR

The Story of the White Engine

All material is carefully inspected, and must come up to a standard established, and which has made the White Engine—the power end of the "First Quality Line"—a leader, and an engine that is wanted by all who know it.

All boilers are tested by hydraulic and steam pressure before leaving the factory, and tested so that our test cards show the boilers are capable of carrying more pressure than allowed by Government inspectors.

The barrel of the White Boiler is in one piece, the longitudinal seams being double riveted.

The dome is reinforced and is of sufficient capacity to supply dry steam to the cylinder.

The fire box is large enough to insure proper combustion, and the tubes are proportioned in a way that they extract all the heat from the fire box before the burnt gases escape to the smoke stack.

The boiler is open bottom, not warm bottom.

A two-inch steel ring is used at the bottom of fire box, and also at fire and clinker door, instead of the old-fashioned flange that gave so much trouble.

The crown sheet is stayed to the shell with screw stays, which is recognized as the best method of staying by all engineers.

The heating surface and size of cylinders are proportioned to give results, and a fusible plug is fitted in the top of the crown sheet.

On the plowing engines, the cylinder, pillow block, countershaft and rear axle, and all connections to boiler are fastened securely by wing sheets that are riveted to the boiler—consequently any portion or piece of the engine can be removed while the boiler is under pressure.

For straw-burning, fire box is equipped with heavy metal baffle plate which become white hot, keeping the fire box at an even temperature, insuring perfect combustion and even evaporation.

Coal grates are furnished on all engines, and by removing the grate plates, and substituting the fire door, which is also furnished, coal can be used as economical as in any other boiler.

Boilers are lagged with wood covered with genuine Russian Iron.

The White Engine has always been noted as a road tractor, and will give satisfaction in any work it can be put to.

The engine is single side crank of the simplest type.

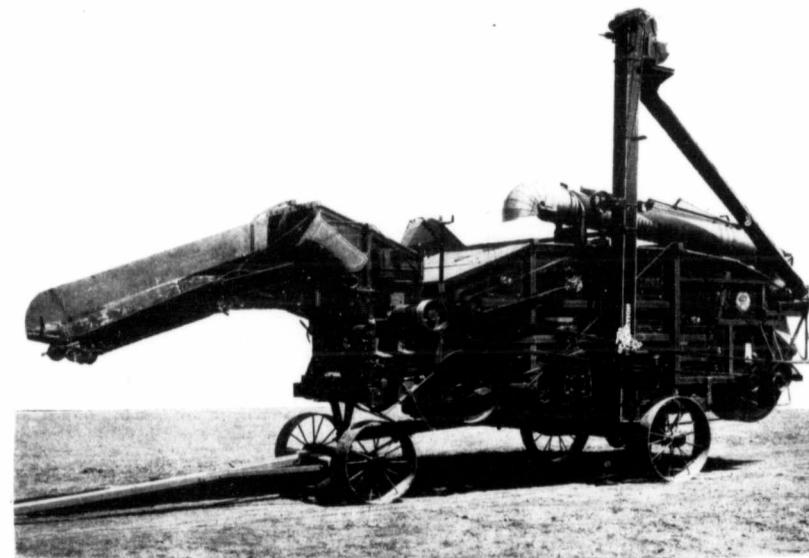
All White Engines are fitted with a Gould Valve, which is acknowledged by all to be the best balanced valve on the market.

The cross-head has adjustable shoes and can be kept tight in the guides without any trouble.

THE FRICTION QUADRANT—We have done away with notches, using the balance quadrant that will hold itself at any point.

THE WHITE GOVERNOR—This is something that we want to call your attention to. It is a governor that is made in such a way that the speed can be changed from the platform of the engine by the operator from 100 R.P.M. up to any speed required.

TRACTION WHEELS—It may be said that a traction for pulling purposes is only as good as its wheels, in the same way as a horse is just as good as its feet. The rims are very heavy steel, the grousers chilled malleable iron spokes, are extra heavy, and the wheel is so built that it is close to impossible to have any difficulty.



THE WHITE SPECIAL "CHALLENGE" THRESHER

The Story of the Challenge Separator

We want to go through the "Challenge" machine with you.

The "Challenge" machine is fitted with an extra heavy twelve bar cylinder of the double bar pattern, the inside bar being 1 3/4 x 7/16 inches in thickness; outside bar being 1 3/4 x 7/8 inches in thickness.

Double bars being of unequal thickness have a greater tendency to hold teeth firm than if both bars were of the same thickness, as will be understood.

The "White" Self-Oiling Box, does not require constant attention with an oil can and a pail of water, but will run without being attended to more than once a day, and a number of our customers say they run two or three days without this box being looked at.

Every new "Challenge Separator" is double-belted, and is double-driven, having a Pitman from crank shaft to rock shaft on each side. This is a positive drive and ensures uniform speed and perfect separation.

The cast-iron sides, or frame, that carry the cylinder, are made taper, tapering from the width of the cylinder to the full width of the machine where the straw enters the drum cylinder, or beater. By this arrangement the straw is the full width of the machine when passing into the drum cylinder, increasing the separating space at this point from thirty to forty per cent; for no matter what width body or length of drum cylinder, or beater, is, a separator that has straight sides carrying the threshing cylinder has only separating space the width of cylinder until the straw passes the drum cylinder, and the percentage gained by taper sides used in the "White Challenge" is lost in all straight-side machines.

The decks are made of white ash and basswood. All stringers are covered with hard iron, and on each deck are risers.

Behind the drum cylinder is a sectional apron made of hard maple slats, arranged so that they can be raised or lowered from the top of the machine. This apron being sectional, should the straw on the deck be uneven, the slats raise in accordance with the unevenness of the straw, and shooting is not possible.

A picker in the form of a steel drum fitted with long curved teeth is placed at the rear of front straw deck—this spreads evenly over the deck any bunches of straw that may pass the second cylinder. The lifting forks working through a thin sheet of straw make separation perfect in any condition of crop.

The grain deck is made out of hard maple, white ash and white pine, covered with No. 20 steel, and cannot wear out.

The fanning mill is strongly built and does not extend sufficiently below the sill of the machine so as to be struck by obstacles, as the machine is drawn from place to place. The fan is overshot, which, with the arrangement of wind boards as placed in the "Challenge" machine, enables the operator to get the best results, as the wind can be distributed on the shoe to suit whatever grain is being cleaned at the time. A slat chaffer extends over the shoe, under which is, unless otherwise ordered, in stacker machines, a Ditch Sieve, and in ordinary raddle-carrier machines ordinary sieves. This arrangement of sieves and chaffers has given the "Challenge" machine the name of cleaning grain fit for the market. This is not an idle boast but a reality.

The main points of a threshing machine are a cylinder that will thresh everything clean from the head, separation that is perfect, then a shoe that will clean fit for the market. The "Challenge" has them all.

No element of chance enters into the purchase of
The First Quality Line

The George White & Sons Company Limited
LONDON, Ont. BRANDON Man. MOOSE JAW, Sask.
See Our Exhibits at all the Leading Fairs in Western Canada

The modern Thresherman must have everything up-to-date. That is why you need
The First Quality Line

Good Roads in Western Canada

BY A. C. EMMETT

The writer of these articles (which will be continued from month to month throughout the year) has had a wide and severely practical experience and is specially engaged on the "Good Roads" movement.

It is interesting to note the movement in favor of placing the construction of roads under the control of the Highway Commissioner. In taking this step the municipalities in the neighborhood of Winnipeg are insuring the provision of a far more satisfactory type of road, and one likely to be of a much more permanent nature than

shoulders for the upkeep of the roads.

Farmers Grade Own Roads

A new invention that promises to revolutionize the work of dragging dirt roads has been perfected by Hugh T. Taylor, a farmer living near Buhl, Idaho, and takes the shape of a neat, light and compact road grader that gives promise of taking the

receiving considerable attention from Reeves of municipalities and members of the Provincial Legislature during the present season in view of the fact that so many municipalities are contemplating the construction of a better class of road than has heretofore been made. The following extract of changes made in the Minnesota, U.S.A., road law will therefore be of interest as they provide an excellent scheme for the raising of funds necessary for road improvements:

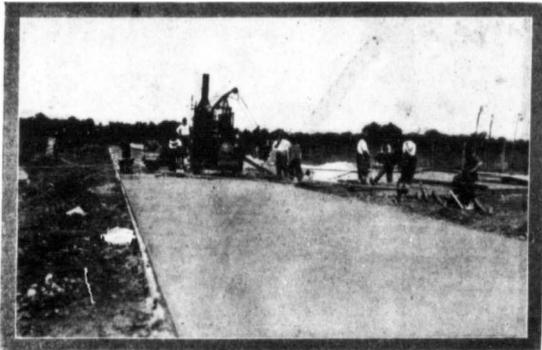
Among other things, they include a one-mill road tax payment of all road taxes in cash, each county to get at least one per cent of state fund each year, 20 per cent of state fund to be used in each county for maintenance, and county roads to comply with State Highway Commission rules. Under the law counties may use one-fourth of apportioned state funds for county roads, and the state may pay up to 80 per cent of the cost of state roads in counties of lowest valuations, 50 per cent being the rule in richer counties. The district overseers' office is abolished and one overseer is created for each town. Village roads may be made part of state roads and receive aid. The highway commission is given power to designate state roads after counties have refused to do so. County boards are given the right

the state fund from \$250,000 a year to \$1,000,000 beginning next year. With this the Elwell law permits the raising of funds for ten years ahead at one time, to be paid in ten annual installments.

Work in Saskatchewan

Saskatchewan has appropriated \$1,200,000 for highway improvement work during 1913. This is merely a continuation of the work commenced in 1905, and each year since then the government has expended from \$200,000 to \$700,000 a year on roads and bridges. The work has been carried out under the supervision of a board of highway commissioners, and assistance is granted through them to municipalities under certain carefully defined conditions. This assistance is confined to the building of bridges and trunk roads. The old statute labor system is discouraged as being uneconomical and inefficient.

In view of the scarcity of gravel and stone in many parts of Saskatchewan extensive experiments have been carried out at provincial expense to ascertain the best means of constructing clay roads. It has been found that Saskatchewan clays burned at comparatively low temperatures produce an excellent surface material for graded roads. Owing to the reddish color of this burned clay these roads are known as "the red roads of



Following the Wind of the Red River, Fort Garry Municipality Concrete Road under Construction

anything that has been the rule in the past. Good roads involve the expenditure of a comparatively large sum for the first construction, but the after maintenance and upkeep is considerably less if the roads are not neglected.

Patchwork road building and repairing is about the most expensive and unsatisfactory method of expending public money that can be found. Roads constructed under such a system are never in good condition and there is a continual drain on the public funds for the repairing and filling in of bad spots. As a matter of fact such a system of road building is about equal as far as results are concerned to pouring water in a sieve.

The issue of municipal bonds for road building purposes will likely prove to be the one factor that will develop quicker than any other means the construction of good roads throughout the provinces, and it will be found that where these bonds are issued for twenty or twenty-five year periods and a first-class road constructed in the first place, that by the time the bond issue matures that it will have been a cheaper method of making and keeping roads than the old system of patchwork road building and the taxpayers will have had less of a burden on their

place of the King road drag. The machine is built of steel and weighs, fully equipped, but 110 pounds. It consists of an 18-inch disk, which throws the outer side of a rut or chuck-hole into the wagon track, and a 3 1/2 foot weighted scraper or drag immediately behind, which levels off the soft earth and mud for the next wagon to roll out. In this way the rut or hole is prevented from becoming deeper and deeper until it reaches the quagmire stage. A farmer having a Taylor chuck-hole filler attached to the rear of his wagon thus repairs the road as he goes along, a round trip to and from town leveling off both wagon tracks and keeping the road in constant condition.

The inventor is disposing of numbers of these machines to the road commissioners of various counties at \$25 each. The machine is left at the railroad station of a country town, and a farmer attaches it to the rear of his wagon and carries it as far as he chooses, leaving it at a cross-roads for a driver coming in the opposite direction to drag back to town. In this way all the roads radiating from a town receive from time to time a much-needed dragging at little expense to the public treasury.

Minnesota Road Law Changes

The methods of raising funds for road improvements have been



Road Completed and covered with Layer of Dirt to keep Moist while Setting

of condemnation to procure road materials. County road levies are limited to 3 mills and town levies to 15 mills. An appropriation is made of \$150,000 a year for revenue fund for highway commission and assistant engineers to supervise road building. The third Tuesday in June is set aside as Good Roads Day. The one-mill tax will raise

Saskatchewan." Their cost, where underdrainage is not necessary, has been found to be from \$2,000 to \$2,500 a mile. This includes the cost of burning the surface clay. Where tile drainage of the grade is essential, the cost is increased by from \$1,000 to \$1,500 a mile. It is claimed that these roads stand up well under prairie conditions.

The Only Flax Feeder on the Market

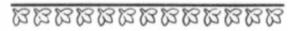
Attaches to any Separator. Is made of **Steel** and is backed by our **Iron Clad** warrant, that you get feeder satisfaction or your money.

It simmers itself right down to a matter of investigation, puts it up to you to **know** where you are "at" before placing your order.

An Ounce of "Prevention" is worth a Pound of "Cure"



The Garden City Feeder has Two governors, one to keep the cylinder clear when starting or stopping, and the other to Prevent any Variation in the speed of the machine: You don't have to knock out the motion of Anything, in order to get the governor to work.



A separator fed by a Garden City Feeder maintains a Uniform Speed. No "Ups" or "Downs," just one steady hum all the time, that's the way a separator Should run, and Must run, in order to do Good and Fast work; that's why Every Thresherman Needs a "Garden City."



The Garden City Feeder

At work on the Rumely Separator of Smith Bros. at Sedly, Sask., fall 1912. Taking care of FLAX as fast as FOUR men can supply it. The PROOF of the Feeder is the Feeding. Smith Bros. were obliged to throw off a—Feeder that had been used but ONE SEASON, because it could not feed FLAX.

This is Our Ironclad Warrant

The GARDEN CITY FEEDER is positively warranted to feed any separator to its full capacity, with any kind of grain in any condition, without slugging the cylinder, breaking any concaves or spokes, winding on any part, littering underneath the feeder, or causing any burned belts; and to deliver all bundles to the cylinder END FIRST, regardless of how they are piled upon the carrier.

No other guarantee covers so many points. No other guarantee means one-half so much. No other feeder can make good on that guarantee. Every claim can be tried out on YOUR separator. NO "IFS" or "ANDS" about it. NO EXCEPTIONS, NO CLAIMS THAT CANNOT BE DEMONSTRATED, NO "CRAWFISHING," just "PLAIN TALK" that means exactly what it says. That's the guarantee printed in every order for a Garden City Feeder; that's the guarantee that PROTECTS YOU. If the Garden City Feeder fails to "MAKE GOOD" on it, your money or notes will be immediately returned to you.

Wouldn't You Like to Try One?

It will Pay You to do so.

Remember that the Garden City Wing Feeder is a Great Money Saver.

Call and See it at all the Big Fairs. Make our Tent your Headquarters. We will be glad to meet you

THE GARDEN CITY FEEDER CO., LTD.

REGINA



SASK.

The Fate of the THRESHING Hangs by the Belt

Get the very best that natural products and human skill can make. The best is far cheaper than the next best or the lowest priced belt you can buy. You have got THE BEST and are assured against breakages and slipping if you get either a



LION BRAND

Rubber Belt

or a



MAPLE LEAF

Endless Thresher Belt

Any Thresher Company can supply you with our belts. In fact the majority use them exclusively. Don't accept a substitute, you will regret it just when you most need belt service. If you have any difficulty in getting our goods, write direct to the

GUTTA PERCHA AND RUBBER LIMITED

WINNIPEG Not in any Trust or Combine. CALGARY

Another class of road that is being experimented with in Saskatchewan consists of a specially prepared clay grade covered with asphalt. If suitable to the conditions, such a road should prove popular in the smaller towns and villages.

Macadam or Concrete

Crushed stone or macadam roads do not wear well under heavy traffic conditions in any place where automobiles form a considerable percentage of the vehicles traveling upon them. The loaded vehicles grind up the surface to some extent and the rapidly moving automobiles sweep the dust from the road, which blows away in fine particles, soon leaving a rough and rutty surface which is expensive to repair and again unsatisfactory in wear after repairs have been made.

Concrete roads do, however, give a very satisfactory amount of wear, roads that have been down two or three or more years still being in excellent condition where very little has been expended in keeping them in repair. The first of the concrete roads laid in Wayne county, U.S.A., are not as good as those laid after the policy was adopted of reinforcing the blocks at the edges

where they join with steel reinforcement, which prevents a chipping of the edges which produces a rough traffic surface.

A gravel road, however, if it is well laid and given good care is the best possible kind of road for all but a few weeks or months during the year, and then it is not bad, nor is the upkeep expensive if the road is not neglected from the start.

A Review of the Work of the Experimental Farms

For more than a quarter of a century the Dominion Experimental Farms have been carrying on experiments to find out the best kinds of crops and animals and the best ways of handling them for profit. This has been going on not only at the Central Farm at Ottawa, but also in the maritime provinces, the prairie provinces and in British Columbia. The benefits that have resulted to the Canadian farmer from this work are undoubtedly very great but still thousands of earnest men are not receiving the full advantage of what is being done for them. Perhaps many do not receive the reports and

bulletins containing the information, while others receive these publications regularly but do not find the time to study out the lessons from them. In order to help especially this class of busy men and women, there has been issued by direction of the Hon. Martin Burrell, Minister of Agriculture, a special bulletin containing the outstanding conclusions that have been reached during the 25 years that the Experimental Farms were under the directorship of Dr. Wm. Saunders, recently retired.

This review, which has been prepared by Mr. J. B. Spenser, B.S.A., editor of the Publications Branch, tells of lessons that have been learned concerning fertilizers, cereals, fodder crops, farm field work, live stock, horticulture, arboriculture, chemistry, poultry, weeds and plant pests. In addition many of the recent developments of the farm system are enumerated. It is shown that not only have farms and stations been increased in recent years to fourteen but great advancement is being made in all of the older farms. This review, which is tastefully gotten up, has been issued for free distribution by the Publications Branch of the Department of Agriculture at Ottawa.

"The most considerate wife I ever heard of," said the philosopher, "was a woman who used to date all her letters a week or so ahead, to allow her husband time to post them."

YOU CAN BE SAVED

FROM ALL WASHDAY DRUGGERY

IF YOU USE THE
I.X.L. VACUUM WASHER

Price, \$3.50

Washes Anything and Everything from a Horse-Blanket and Overalls to the Finest Laces with No Injury

Coupon Below Saves You \$2.00

Washes a Full Tub of Clothes in 3 Minutes Perfectly
Not Only Washes But Rinses and Blues

SENT UNDER MONEY-BACK GUARANTEE
Canadian Thresherman 7-13 COUPON

Cut out and mail coupon and your name and address with \$1.50 to Dominion Utilities Manufacturing Co., Ltd., 483 Bloor Street, Winnipeg, Man., and you will receive One I.X.L. VACUUM WASHER. All charges prepaid except in Canada on condition that your money is to be refunded if the Washer does not do all that is claimed.

Mention this magazine when writing advertisers

FOR SALE AT ONCE:

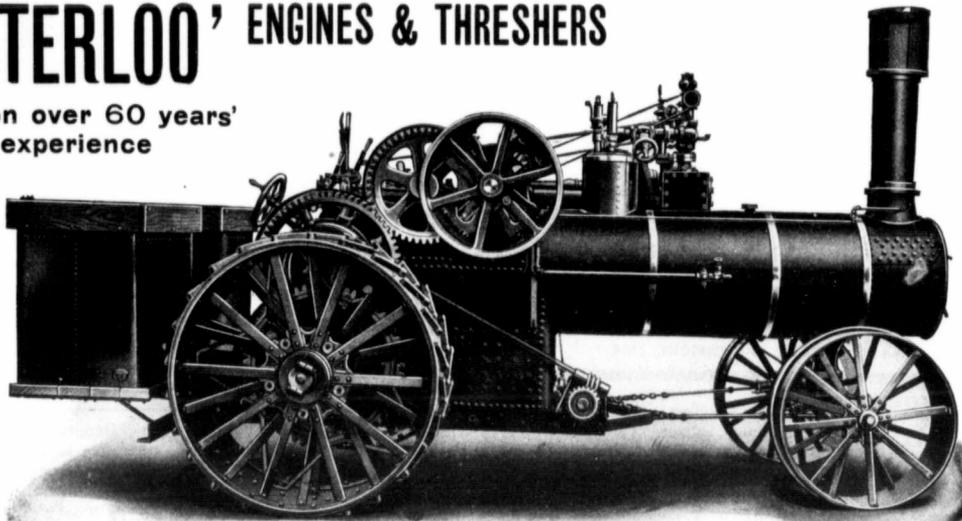
30 H.P. Undermounted Avery Plowing Engine, equipped with extension rins-water tanks, Syphon and Fuel Bunker in good condition. Cockshutt Engine Gang nearly new, 12 bottoms. 42-70 inch Avery Separator run two seasons and in good condition, fully equipped. This is a bargain for quick sale, as owner is retiring and leaving country and for anyone wishing to see same, an automobile will take you out. Apply East End Machine Shop, Melita, Man. Per N. A. Brown.

'WATERLOO' ENGINES & THRESHERS

Built on over 60 years' experience

Made in Canada

Sold on its Merits



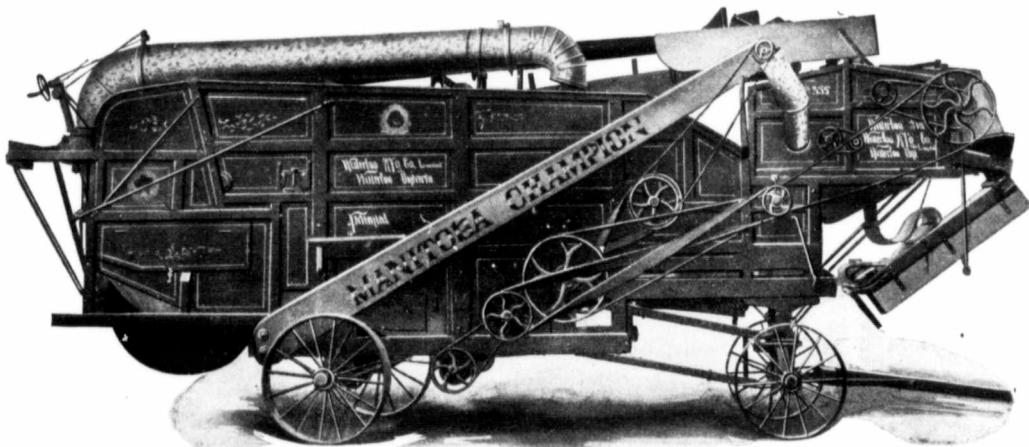
27-h.p. Special "REAR MOUNTED" Plowing Engine

Boiler conforms to every Government requirement, commanding 175 lbs. Steam Pressure. Locomotive "Link" Valve Gear ensures the most economical and efficient handling of steam in the cylinder. You owe it to yourself to investigate carefully the merits of WATERLOO MACHINERY. It has features that will interest you, and save you money. Drop us a postal and let us send you our Catalogue on complete line of Engines and Threshers.

EXHIBITION VISITORS:

We extend a Cordial Invitation to visitors at the Fairs to call and see our Exhibit of Machinery. Our Complete Line will be shown at the following Fairs: Winnipeg, July 8-16; Brandon, July 15-25; Regina, July 28-August 2; Saskatoon, August 5-8.

Waterloo "CHAMPION" and "MANITOBA" CHAMPION Separators



The "CHAMPION" is made in sizes: 28-42; 33-52 and 35-56. The "MANITOBA CHAMPION" 36-56 and 40-62.

"WATERLOO" Threshing Machinery has won its place in the hearts of Canadian Farmers and Threshermen solely on its merits. A "Waterloo" Separator can be relied upon for thoroughly threshing and saving all the grain. It is especially adapted for gasoline engine power: easy to drive; and with its popularity as an efficient grain saver, merits careful inspection.

Our Line of Steam Traction Engines is complete: 16 to 27 h.p. "Rear Mounted" for Plowing purposes. If you have not had our 1913 Catalogue, drop us a postal, and a copy will be mailed promptly.

WE CARRY A FULL LINE OF THRESHERS' SUPPLIES.

THE WATERLOO MANUFACTURING COMPANY, Limited

WESTERN HEADQUARTERS: Quinte Avenue, Portage la Prairie, Manitoba

Branch Warehouse: REGINA, Sask. Head Office and Factory: WATERLOO, Ont.

You saw this advertisement in this magazine. Don't forget to say so when writing.



Buy the Red Belt with the Green Edge--that's the GANDY

Twenty thousand American threshermen say to you, "Buy the Red Belt with the Green Edge." They know, from years of use in the practical field, that the GANDY Stitche-Cotton-Duck Belt is the belt best adapted to the peculiar requirements of the thresher field. Cheaper and more durable than leather.

If your nearest supply house hasn't the GANDY, remember that we always keep thousands of them in stock and can ship the same day the order is received. Send a postcard today for free sample and complete information on "The Gandy Thresher Belt."

THE GANDY BELTING COMPANY

733 W. PRATT STREET, BALTIMORE, Md.

New York Office: 88-90 READE STREET

You saw this advertisement in this magazine. Don't forget to say so when writing.

THE accompanying illustration is Messrs. Barford & Perkins, Limited, of Peterborough, England, latest pattern 10 ton Gasoline Roller (designed by E. O. Herbert, of Winnipeg). It is fitted with a 4-cylinder 40 horse power governed engine with high tension ignition, dispensing with batteries altogether. The governor is set for speeds of 4½ and 2½ miles per hour, which, of course, can be adjusted to almost any speed, fast or slow.

Its chief features are its adaptability to any kind of work to which a roller can be put, and in addition, two tractor wheels can be supplied when necessary to take the place of the hind roller, and you then have a powerful hauling engine. The transfer from hauling to rolling and vice versa is a simple and quick operation. By just raising the hind part of the machine, take out the roller—by disconnecting 4 bolts—and run your tractor wheels in the roller's place, put in your 4 bolts again and you have your very capable traction engine. I have no hesitation in saying that this engine would have quite sufficient power to haul at least six wagons of stone or asphalt.

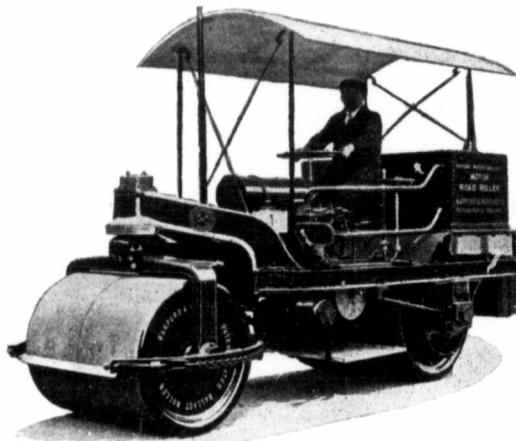
This type of roller is especially adapted for work on hot asphalt or binder, tar, macadam, etc., as well as lawns, drives and roadways.

Two kinds of rollers are in stock (both of course, permit of water ballast, which would increase the weight of this particular machine about 2 tons) the "Square Edge" and the "Bevel Edge." The former is better for asphalt rolling where it is necessary to roll close to the "sets" of new car lines and against curbs, etc. The "Bevel Edge" is more adaptable for rolling turf as it has not got the tendency to cut the sod so much as is the case with the "Square Edge."

Two water tanks are provided on these machines of about 200 gallon capacity, one for cooling

"The Latest Type 1913-14 Gasoline Roller."

By E. O. H.



purposes and the other for supplying water to both rollers through a spray fitted over each wheel. This is necessary to prevent the hot material from adhering to the roller, and leaves a very much cleaner surface on the work. The spray water tank is placed in front of the cooling tank, or rather runs around it inside. This you see in very cold or frosty weather the water used for spraying cannot so easily freeze up, as naturally the "engine" water will get hot and thus form a heater to the inside tank.

The lubrication of the engines is perfect. being of the positive force feed type which transmits the oil to the cylinder walls and all bearings.

Another useful purpose to which this machine can be used is for grinding feed, stone crushing etc., and in fact, any work in general deputed to an ordinary

stationary gasoline engine, as a driving pulley is sent out with each engine for which provision is made on the countershaft, and by just slipping a gear she is out of traction and ready for any solid stationary work.

The writer has had considerable experience with this class of machine both in operating and overhauling, and the one he is operating at the present time has not even had her crank shaft, or any other, bearings adjusted during the three seasons she has been working, and they do not, after her solid hard work—which included a fair amount of stone hauling—pulling heavy loads—show any kind of wear on all her most vital parts. To sum up, and to the prospective purchaser, I would say: **Initial Cost is less than that of a steam roller of same weight; Running Expenses, about one-third that of steam;**

General Maintenance, with due care exercised, practically "Nil"; **Economy** is stamped on every machine of this design.

The writer will be pleased to give any further information regarding this very excellent "servant" of "Good Road Making," and would freely explain any point in this short note that he has not made sufficiently clear to the reader—by just sending a line to the "Canadian Thresherman and Farmer." I may add these rollers are built in almost all sizes ranging from 1½ to 14 tons weight with both single and double hind rollers for water ballast, etc.

E. O. Herbert,
81 Walnut Street,
Winnipeg.

June, 1913.



Not Cricket

The cricket season at Plosham-on-the-Plosh was in full swing. The captain of the local team, on the occasion of the first match of the season, asked his would-be son-in-law to umpire.

The play proceeded, and when the captain was just getting nicely set, he was struck on the pad by a ball.

"How's that?" was the triumphant yell from all parts of the field.

The would-be son-in-law battled with his conscience for some time.

"Out!" he said at last.

After the match the captain drew the umpire aside.

"Young man," said he, "one night, when you play a love-match with my daughter, I shall give you 'out'; but it will be 'leg behind,' instead of 'leg before'!"



The Visitor: "How old are you, Tom?"

The Boy: "Aw! Ma says I'm too young to eat the things I like, an' I'm too old to cry when I don't get 'em."

The "Dreadnoughts" of the Prairies The "Marshall" British "Colonial" Tractors

For PLOWING, THRESHING AND HAULING, ROAD GRADING, Etc.

BUILT LIKE A BATTLESHIP. :: RUNS LIKE A WATCH

The "MARSHALL" Engineering Specialities are known in every corner of the earth and known to be good, sound, and above all, Reliable.

MADE IN 2 SIZES—
16 H.P. Draw Bar
30-35 Brake H.P.
and
32 H.P. Draw Bar
and 60-70 Brake H.P.

ECONOMICAL
DURABLE
RELIABLE
GUARANTEED
OF
FINEST MATERIAL
AND
BEST WORKMANSHIP

WANT FEW REPAIRS



The above represents a 32 H.P. Draw Bar and 60-70 Brake H.P. "CASS" F. Tractor, with two travelling speeds.

HAVE STOCKS OF TWO SIZES ON HAND

HAVE COMPLETE LINE OF REPAIR PARTS

HAVE SKILLED MECHANICAL ENGINEERS FROM WORKS IN GAINSBOROUGH, ENGLAND

CUSTOMERS MAY RELY UPON PROMPT SERVICE AND CAREFUL ATTENTION

REFERENCES TO THOROUGHLY SATISFIED USERS. HAVE MANY TESTIMONIALS



The above shows a 32 H.P. Draw Bar and 60-70 Brake H.P. Tractor. One Speed.

Send for Illustrated Catalog with full description--and--DO IT NOW

MARSHALL, SONS & CO. (Canada) Ltd.

ENGINEERS

SASKATOON

::

CANADA

We shall be pleased to see our many Friends and Customers at the Brandon, Regina and Saskatoon Fairs

The "MARSHALL" Works at Gainsborough were established in 1848, and now employ over 5000 men. Works cover 40 acres, and they have produced about 152,000 Engines, Boilers, Threshing Machines, etc.

Better Farming in Manitoba

Manitoba Going Strong For Cow Testing

TO the list of valuable bulletins issued by the Manitoba Agricultural College on the Authority of Hon. George Lawrence, Minister of Agriculture, has just been added one on "Cow-Testing." The bulletin has been prepared by J. W. Mitchell, Professor of Dairy Husbandry, and E. H. Farrell, instructor in Milk Testing, in a manner calculated to present in concise form certain points in connection with this important branch of the College work which are worthy of special emphasis.

The primary object of cow-testing is to determine the value for dairy purposes of each individual cow in a herd in order that the farmer may be able to weed out the unprofitable milkers and build up his herd to the highest profitable production. This is done by selling the poor cows and buying others or by rearing calves from those cows which show the highest record and desirability as dairy animals. Cow-testing further enables the dairyman to feed intelligently, gauging the capacity limit of each cow to use food economically.

The farmer is recommended to set a standard for his cows—6,000 pounds of average milk or its equivalent of richer milk; either that or from 215 to 230 pounds of butter or 250 to 275 pounds of butter per annum. By working up to this standard, which is modest enough, he will soon aim for a higher one.

The profits in dairying lie in producing milk and milk-fat as economically and in as large quantities as possible, products that will command the highest price on the market. Herd improvement, suitable foods and care and comfortable housing are the essentials to this end, and cow-testing is the means by which the cow which earns her keep is distinguished from the one which is only boarding and not paying her board-bill at that.

The Dairy Department of the Manitoba Agricultural College introduced the cow-testing work in 1910, since which it has been carried on continuously with very noticeable results. An outfit for weighing and sampling the output of his herd is given free to every farmer who applies for it. This outfit consists of a spring balance, a case of sample bottles, a samp-

ling dipper, report forms and printed instructions.

"The work is neither laborious nor difficult to understand" says the bulletin, "In fact it is a great labor saver, since it enables us to weed out and build up our herds, and keep only cows that give profitable returns for the time expended on them and the food fed.

"The work of the farmer consists in weighing the milk of each cow in the herd, morning and evening of each of three days in the month, ten days apart—say on the fifth, fifteenth and twenty-fifth of the month—and taking a sample at each weighing and putting it into the bottle set apart for the individual cow. This is all the farmer has to do.

"At the end of the month the samples, accompanied by the report form, are sent in to the Testing Station to be tested to determine the percentage of fat in them.

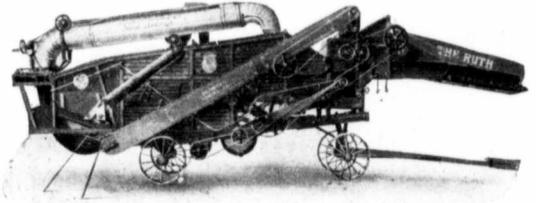
"The bottles are then cleaned and returned, ready to use during the next month, and accompanied by a new report form. Each time the bottles are sent out there is a preservative put into them to keep the samples sweet during the month.

"From the three days' weighings, made by the farmer, and the test of the composite samples, we estimate the number of pounds of milk and butter-fat to credit each cow with for the month, record these data on the report form and, after thus completing it, return it to the farmer to be placed on file. Where this work is carried on from month to month, during a cow's milking period, the farmer knows practically the number of pounds of milk and fat to credit her with for the year, and is thus placed in a position to begin the building up of his herd by systematic weeding, breeding, care and feeding."

The bulletin just published carries several interesting illustrations, including Holstein, Ayrshire and grade cows with high production records; there is also an illustration of the testing outfit supplied by the College and one showing how the weighing and recording of weights may be conveniently and quickly done by the farmer.

Tables of actual records at the Agricultural College are included and let in light on many interesting points. These tables cover the following:

Year's record of a herd built up through several years of per-



A Light Weight Outfit For Smaller Jobs

¶ You're wasting money every time you thresh out a small job with a big separator or a big power. ¶ If you have many small jobs to take care of, get an outfit to match your work.

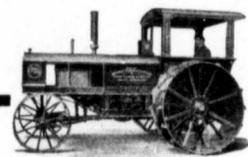
Canadian-Rumely Ideal Jr. Separator and



—This is an excellent combination that has made a lot of friends in Canada. ¶ The "Ideal Jr." is an exact counterpart of the big, famous Canadian-Rumely Ideal Separator and is the answer to the call for a small machine. ¶ It is low down, handy and a clean thresher that gets *all* the grain. ¶ Our 15-30 Gas-Pull is light and easily handled and is very economical on fuel: will run any separator up to 32' under fair conditions, besides all other kinds of belt work, road-work and field work. ¶ For the small jobs or

For the Individual Farmer's Use

this outfit can't be beaten. ¶ We can fix you up with this money-making outfit and can deliver the goods in just as big a hurry as you wish from our Canadian factory or from any of our Canadian branches shown below. ¶ Space doesn't allow us to tell you much here and we want you to know all about this outfit so write for our books on both machines. Write the branch nearest you



Rumely Products Company

(INCORPORATED)

Power-Farming Machinery

La Porte

Calgary, Alta.
Edmonton, Alta.
Vancouver, B.C.
Brandon, Man.
Winnipeg, Man.



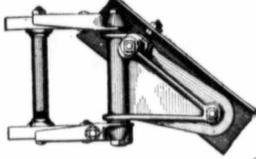
Indiana

Toronto, Ont.
Estevan, Sask.
Regina, Sask.
Saskatoon, Sask.
Yorkton, Sask.

You saw this advertisement in this magazine. Don't forget to say so when writing.



Mogul Engine Gang Plows

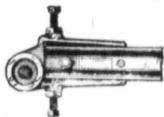


The beams are connected to the 4-inch angle which forms a part of the frame, by means of a heavy casting, and two bolts. One of the holes in this casting is slotted, so that by loosening both bolts, and adjusting the nuts on the bolt which extends through the perpendicular leg of the angle the beams can be put into absolutely perfect alignment and with but little trouble.

This cut also shows the cone couplings upon which the beams and bottoms hinge. By means of this cone coupling all lost motion resultant from wear can be quickly taken up. The spreader is also adjustable.

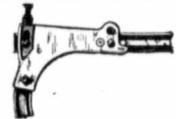


This shows the standard pivoting on bolt in end of beam, after wood break pin has given way. By this means you are saved a trip to town and a long wait for a new bottom, which would be the case on plows not so equipped.



Beams Coupling and Set Screws for regulating the Wing of the Share.

P & O Mogul Engine Gang Plows didn't just happen to make good. They were designed with a full knowledge of the requirements of the different conditions under which they were to be used. That's why they have made good in every test and that's why they have won so many plowing contests. We have shown on this page some of the features which have placed it as we confidently believe, and as hundreds of users testify—at the very head of the list of successful engine plows. We are willing, even anxious that you should consult any man who has operated a Mogul, as to its efficiency. Write for our booklet on Engine Plows.



Probably one of the most popular features on the Mogul is the Pin Break Feature. A heavy wooden pin, inserted in holes in lugs on the bottom upon the top side of the beam, holding the bottom securely in position under normal conditions. When a root or rock is encountered and the strain becomes so great as to endanger the bottom, the pin shears off and allows the bottom to swing upward, and clear of the obstruction. It is then only the work of a few moments to put in another pin and proceed with the plowing.



After the plows have been set in perfect alignment by method already described, the spacing blocks are adjusted and serve to keep the bottoms in line, insuring a uniform width of furrow.

The Yoke at the end of the Standard for regulating suction. The Bottoms can be regulated to a 1-64 of an inch.



MADE BY
PARLIN & ORENDORFF CO.
CANTON, ILL., U.S.A.

International Harvester Corporation of Canada Ltd.
SALES AGENTS FOR CANADA

You saw this advertisement in this magazine. Don't forget to say so when writing.

sistent and intelligent work, including cow-testing, feeding, care and breeding.

Records of two Manitoba herds, showing the improvement in them since the owners took up cow-testing work in 1910.

Comparison of the calculated with the actual monthly yield of milk per cow.

Table showing the necessity for sampling and testing a cow's milk through her lactation period.

Table showing the necessity for weighing a cow's milk throughout her lactation period.

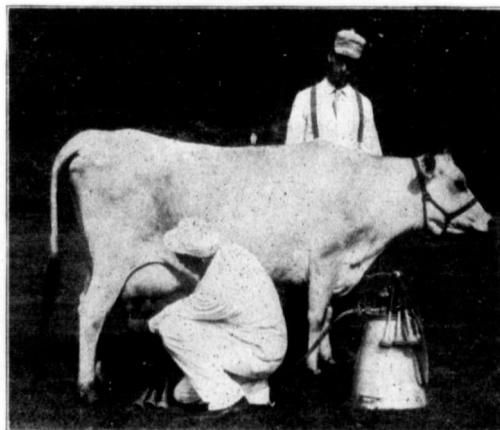
There was a farmer down East who had taken up cow-testing and at the end of two or three years he said: "I've been doin' this here cow-testin' for a long time and the blame old cows are no better'n when I begun!" It is no use knowing your cows if you don't utilize the knowledge. There are many appreciative letters on file at the Manitoba Agricultural College from farmers who took up the work and did make use of the knowledge thus gained.

The bulletin closes with a cordial invitation for any Manitoba farmer interested to correspond with the Dairy Department, Manitoba Agricultural College,

Winnipeg. He is promised surprises if he begins the work of cow-testing; there is no question about the benefits that will follow the use of the valuable information, gained with so little effort, regarding the individual perform-

Axioms of Better Farming, Better Homes and Home Surroundings

The various cars which comprised the Better Farming



A "paying guest" who pays regularly.

ances of the cows which make up his present herd.



"You say he died from a single blow administered by himself?"
"But how did he do it?"
"Blew out the gas."

Demonstration Specials which the Provincial Department of Agriculture sent out this year over the C.P.R. and C.N.R. lines in Manitoba were fitted up with interesting exhibits. Many decorated cards were displayed here and there, each carrying its

message in pithy language. Here are a few of the axioms that were to be read in the displays of the Canadian Northern Special:

Good plowing spells good crops.

Sow grasses and stop soil drifting.

Idle weeds are fast in growing. No drains, no roads.

Feed the plant and the plant will feed you.

Corn fodder cleans the land and fills the milk-pail.

The first weeds are the worst weeds.

Don't look for bigger work than home-building. There is none.

Making poor butter means a hole in your purse. Sew up the rip.

Poor cows are "noxious weeds" of the dairy herd. Get rid of them by weighing and testing their milk.

To get a good garden try a hoe and a rake.

The country's best asset—well ordered, well kept, healthful, happy homes. To gain this asset is women's work.

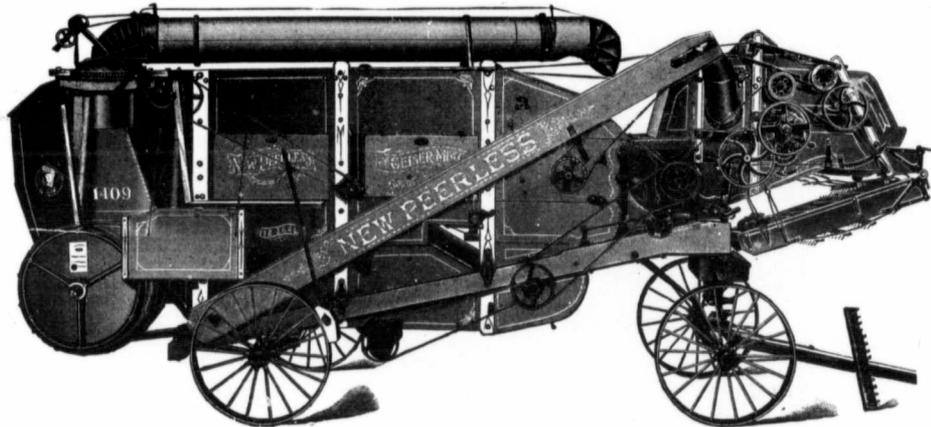
To get a good lawn, mow it. Choice of wrong varieties is responsible for many garden failures.

The hen that lays is the hen that pays.

Continued on page 73

A HARD PAIR TO BEAT

The Diamond Junior 20-36 Gas Tractor
The Geiser Sieveless Separator



THE GEISER SIEVELESS SEPARATOR

Geiser Sieveless Separators

The modern up-to-date machines, manufactured in the following sizes: 25-29, 27-39, 26-46, 30-46, 33-50, 36-56, 36-60, 40-60.

Special sizes for gasoline engine power.

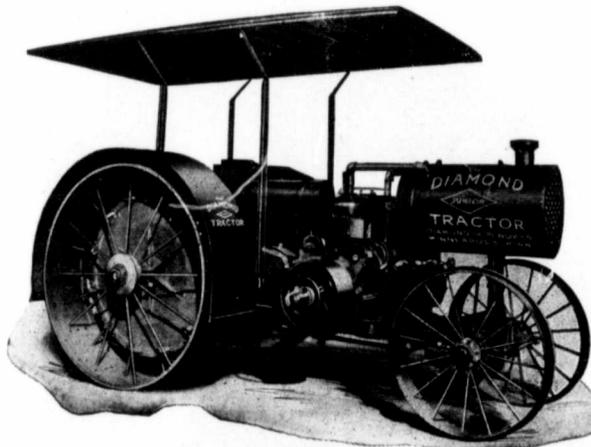
Leading features: "Sieveless," the grain plate and roller system and automatic blast.

This new process has revolutionized the whole process of threshing and cleaning grain. It eliminates the entire nest of

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

The popular demand

today among the farmers of Western Canada is for a medium-sized oil tractor. The old style heavy type of machine served its purpose very well, where the only requirement was for power to pull a breaking gang, but when it came to general purpose FARM WORK it was found to be entirely too cumbersome.



THE DIAMOND 20-36 GAS TRACTOR

The Diamond Junior Gas Tractor

is a general purpose machine in every particular. It is of the four cylinder type weighing 8000 pounds. It is the ideal tractor for medium-sized farms as it can be used in breaking, plowing, seeding, harvesting, threshing and hauling. It is essentially a one man tractor, assuring that the work will be done promptly at the proper time independent of any hard help. It is built of the best possible material thus insuring durability. It involves the latest and best in engineering construction and design. It is the latest thing in tractors.

See our Exhibit at the Winnipeg Fair

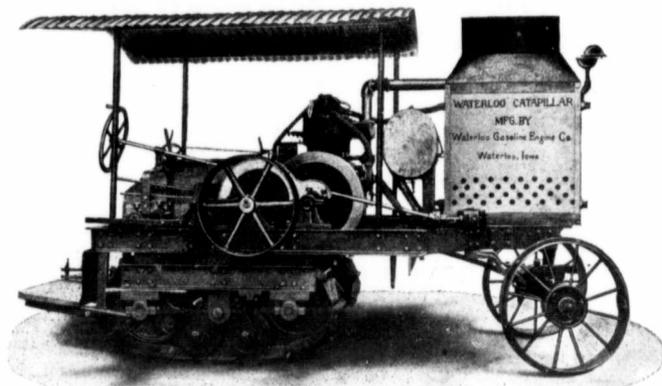
BURRIDGE COOPER CO. LIMITED

303 Owena Street, Winnipeg, Man.

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THE WATERLOO BOY CATERPILLAR

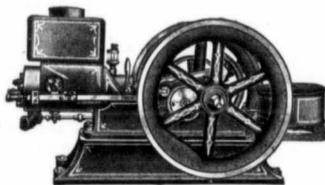
Is the "Champion Light-Weight" Tractor



The Tractor with the least weight and greatest power of all tractors that are effective on practically any condition of land. It is one of the strongest engines built—easily managed with four-cylinder, four-cycle, water-cooled motor, using either gasoline or kerosene, which develops 30 H.P. at the belt and will do the work of 12 horses at the draw bar.

CAPACITY AND PRICE MAKES IT THE IDEAL TRACTOR FOR THE QUARTER-SECTION FARMER

CHEAPER POWER FOR EVERY PURPOSE



The **WATERLOO BOY GASOLINE ENGINE** will run all day without attention, furnish exactly the power you need, maintain a uniform speed and save you money every hour it works.

Use either Kerosene or Gasoline for fuel—equipped for both at no extra charge.

The recent award of **GOLD MEDAL** at Budapest, Hungary, in open competition with the best engines of all countries is clinching proof that the **WATERLOO BOY LEADS THE WORLD** in Construction, Power, Service and Durability.

Has many important exclusive features: Speed; Lever works like throttle on a locomotive; old reliable fly-ball governor; automatic feed regulation, open jacket, starts easy in winter, interchangeable parts, etc.

Lowest in price because made in largest quantities, at low manufacturing cost. **GUARANTEED 5 YEARS.** Book free. Write today.



OUR POWER WASHER

The machine that responds to every demand. Washer and wringer are both controlled by one lever. Will wash and wring at same time. Wringer is reversible and can be easily changed from one motion to the other.

**NO WEAK PARTS
NOTHING TO WEAR,
SLIP OR BREAK**

The drive gearing operates much the same as an automobile clutch. It is of great strength—made to render breakage practically impossible.



For the small farmer there is nothing so good as **THE**

WARWICK "STAR" THRESHER

This machine will handle any kind of grain in any condition. Attached to a small gas engine it affords protection to your grain crop. Don't wait for the big outfit to come your way, but get threshed and get your grain to the elevator before the heavy fall rains set in. Complete with windstacker.

Write for Complete Details on these Greatest of all Time and Labor Savers ever designed, to

BURRIDGE COOPER CO., Ltd. - Winnipeg

The Labor Problem Solved

EVERY season in Western Canada we hear the cry that there is a shortage in farm labor. This is a proposition that we will always have to contend with more or less, at least until such time as the country is more thickly settled and our farms become smaller. We are not sufficiently good prophets to be able to say just when this will happen.

The past ten or fifteen years has witnessed a most remarkable development in farm machinery. The farmer of today who is financially able to purchase machinery can farm from twenty to thirty times as much land as he could have in the old days.

Up to a certain point the problem is an easy one. The tillage proposition has been well taken care of, but when it comes to harvesting the crop the farmer is up against a situation that is oftentimes very puzzling.

Just imagine the farmer with six or seven hundred acres of wheat and the farm labor market drained dry. It is discouraging to say the least, and is moreover a very serious situation.

It has taken the manufacturer of farm implements longer to meet this situation than any other, but within the last few years some of the more wide awake among them have developed some very remarkable machines.

In the first place, the self feeder, perfected as it is today, will handle an unusual amount of grain and will handle it right. That end of the problem was solved some time ago, but the big problem was to get this grain to the machine in a way that was economical, speedy and sure.

Some few years ago a fertile brain conceived the idea that it was a waste of time and energy to pitch sheaves from the load to the thresher. During the time the work was being done a team, rack, and wagon were standing idle. Many serious accidents were also the result of the stook team becoming frightened while standing at the machine.

The result of all this was a dump rack that would automatically unload the grain onto the ground. The advantages of such a rack may be summed up as follows:

1. There is no empty machine while the bundle teams are driving to or from the self feeder.
2. The load can be dumped in 15 seconds and the driver does not have to get off from the wagon.

3. It saves half the number of teams when used in connection with an extension or a wing feeder.
4. It reduces the number of men so that a thresherman can always have a full crew.
5. The rack is constructed with a tight bottom which saves all the grain and there is furthermore no scattering of foul seed.
6. It is a necessity for hauling straw from the wind stacker to the engine.
7. It is just the thing for the farmer to haul and dump hay, straw and fodder.

Now let us look on the matter from another standpoint.

Supposing you have a Wing feeder or an Extension carrier and a set of five Dump racks. By doing it you will save at least one half of the pitchers—say four at \$2.50 a day. Next you save half of the teams used in the field, say five at \$4.00 a day. \$30 a day for forty days equals \$1,200 saved 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 cents per bushel, for forty days, will give you \$800, which added to the \$1,200 makes an even \$2,000 cash gain in your receipts. Now go a little further. Now subtract from the \$2,000 the cost of a Wing feeder \$375 and you still have \$1,625. Next subtract the cost of the five dump racks from the \$1,625 and you still have in the neighborhood of \$1,400 left. Once more subtract the cost of your old feeder which is about \$350 and you still have a clear balance of around \$1,200. In case you use an extension carrier the cost will not be so high and your net profit greater.

Now considering the advantage of a set of dump racks both from the standpoint of labor saved and actual money earned, there is really no machine on the market today designed for the farmer or thresherman that should appeal so strongly as this class of implement. It is a grain saver, a time saver, and a money maker. Get a set of dump racks and be happy.

The Maytag Automatic Dump Rack has gone a step farther in the dump rack proposition in that it is adapted for use with a sheaf loader, which is another machine that has proven a boon in the handling of the grain crop. Thousands of these dump racks have been sold in Western Canada during the past two years. With a sheaf loader it is neces-

sary to have a dump rack that is boxed in on all sides and ends, otherwise it requires an extra man to take care of the side that is open.

The Maytag dump rack has an automatic end which lowers as the rack is dumped and returns to

its original position when the rack is again brought down on the wagon bed.

Such an outfit is worthy of your careful consideration. In fact, under existing conditions in Western Canada, it is really a necessity.

"NETS"

A Cool Story for a Hot Day at the Fair
By ATHOL FORBES

THE clock in the snug of the "Ship and Anchor" had struck eleven, and the landlady by way of emphasis and relief had repeated the strokes with some vigour and the poker on the oven door, but Captain Cutting still sat on and drank his hot rum and water. The potman, who had been sleepy up to that moment, sounded eleven resonant blows on an empty tumbler, and added a chime of his own composition with the aid of three wine-glasses and a spoon.

"Charlie, tell the gentlemen, closing time," said Mrs. Maltby.

"Tell 'em yourself," replied the potman, remembering the risk of past interventions to remind skippers of the closing hour.

"Take a week's notice!" said the landlady.

"Thanks. I'll have it 'ot. Won't you take something yourself ma'am?"

"Insolence!" was her reply as she swept through the bar to the snug. "You go at the end of the week, see if you don't!"

The potman took a vicious sweep at the counter with his mopping-up rag, so that Mrs. Maltby had to dodge his elbow in negotiating the doorway. "Don't mind me," he said, and started whistling, which invariably exasperated his mistress.

"Gentlemen," began Mrs. Maltby, "the clock 'as struck eleven, and I don't want to be rude, but you must go."

The captain tried to look hurt, so did his mate, Mr. Harvey.

"And to-morrow is your wedding day, Captain Cutting," she went on with a touch of bitterness, "and I don't want to say nothink about that; but it would have looked better if you had gone to some other house to-night instead of mine." She appeared to swallow something in her throat.

"There are lots of us that say the Captain 'as behaved badly to you Mrs. Maltby."

"Don't talk to me, Mr. Murray!" and she tossed her head while the skipper turned a face upon his mate that gave promise

of fierce things in store for his subordinate.

Two sea-captains rose to their feet, shook hands with Cutting, and solemnly walked out. Others mumbled words meant for the world in general, and no one in particular, and wandered out into the night. The chief engineer of a steam drifter lighted his pipe, and then went into the bar with the intention of beginning another evening, which led to a scene with Charlie.

Captain Cutting still lingered, not through love of drink, but from a mistaken sense of the traditional honour of the sea service which required that he should be the last man to leave the ship.

"And to think to-morrow is your wedding day!" There was a tragic tone in her voice and a world of reproach in her face as Mrs. Maltby uttered these words: "If only Kate King could see you now!"

"There might still be a chance for Mary Ann Maltby," said Cutting, suddenly assuming a sober pose.

"I wouldn't marry you—no, not if you was to offer me the Crystal Castle to live in; not if you was to go down on your bended knees and take the temperance pledge and—"

"Ere, steady. Draw it mild," suggested the potman, as his mistress paused for a moment, in order to give her imagination further play.

"Charlie, you go to bed at once, immediately!" cried the infuriated landlady. "Ow dare you?"

"Yes, you go to bed," growled Cutting, in what were meant to be soothing tones.

"No 'e won't. Don't you think you are going to interminate me." Mrs. Maltby had broken through all restraint. During the evening she had sat in her own room with a pain at her heart as she thought of the fickle lover who was to marry Kate King in the morning; now her feelings had got the mastery, and the skipper of the Rising Sun had a graphic sketch of his character which, allowing for

Stop and Think!

What a difference it makes to you which thresher you buy and operate.

If the farmer knows that one machine is different from all the others and that it saves more of his grain, he wants that machine to do his threshing.

If you don't have that machine and the other fellow does, the other fellow gets the job.

The Red River Special is the only thresher that Beats Out the Grain like you would do with a pitchfork.

The farmer knows it.

The Red River Special is the only thresher which has the Man Behind the Gun.

The farmer knows it.

The Red River Special saves more of the farmer's grain than any other thresher.

The farmer knows it.

It Saves the Farmer's Thresh Bill.

The farmer knows it.

If your competitor has a Red River Special and you do not,—

The farmer knows it.

He is going to hire the Red River Special to do this threshing.

Will you get the job or will you let it go to the other fellow?

Don't you want the best jobs?

Won't it pay you to have the thresher that gets the best jobs?

If you have the best thresher and get the best jobs, won't you have more money in your pocket at the end of the season?



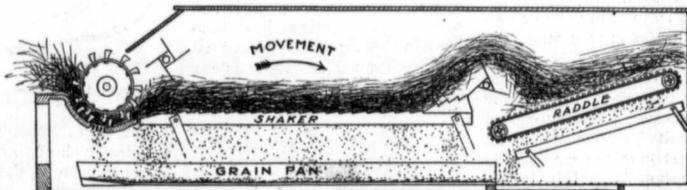
This is the way to Separate by hand with a pitchfork



This is the way the RED RIVER SPECIAL Separates IT BEATS IT OUT—like you do with the pitchfork



This is the way the Lazy Man tries to Separate with a pitchfork



This is the way OTHER KINDS try to separate THEY DON'T BEAT OUT THE GRAIN

The Red River Special is the only thresher which takes the grain all out of the straw by force. All others try to separate by depending upon the grain dropping out.

The Red River Special is the only thresher which has these great separating features:—The Big Cylinder, the Man Behind the Gun, the Uplifting Shakers, which beat out the grain, and the Graduated Adjustable Chaffer.

The Red River Special is built by a Company which confines all its thought, energy and facilities to the building of Threshers, and Steam and Oil-Gas Tractors.

It has no other irons in the fire.

If you start in with the Red River Special Line, you will stick to it.

LET US HEAR FROM YOU.

NICHOLS & SHEPARD COMPANY

BATTLE CREEK

:::

:::

MICHIGAN

Sole Builders of the Red River Special Line of Red River Special Threshers, Steam Traction Engines, Oil-Gas Tractors, Universal Self Feeders, Stackers, Weighers and Supplies.

Regina, Saskatchewan.

Winnipeg, Manitoba.

PRACTICAL TALKS TO THRESHERMEN

CONDUCTED BY PROFESSOR P. S. ROSE

Talk No. LXXI

Note.—The term "gas engine" in these lessons will be used indiscriminately in speaking about all internal combustion engines.

ALL of the fuels used in internal combustion engines are known as hydrocarbons because they consist principally of the two chemical elements, carbon and hydrogen. These two elements, when united with oxygen in the right proportions, liberate a great quantity of heat that is utilized to produce pressure on the piston. The processes by which the transformation from gasoline, kerosene or alcohol into work is effected are many and complicated. They involve both chemistry and mechanics and a complete understanding requires much study. We shall not attempt to go very deeply into these mysteries, but a little insight is necessary in order to understand even the fundamentals of gas engine operation.

The oxygen that supports combustion is derived from the air, of which it constitutes about one-fifth. The other four-fifths is nitrogen, an inert gas that is not affected during the process of burning except that it rises in temperature. Oxygen, on the other hand, when it combines with either carbon or hydrogen goes to form an entirely new chemical substances. For example, when it unites with carbon it may do so in either one or two ways, either as carbon monoxide or carbon dioxide. The former consists of one atom of oxygen with one of carbon, while the latter consists of two atoms of oxygen united to one of carbon. In the first case the combustion of the carbon is said to be incomplete because the carbon is only partly satisfied. Chemists describe the action that takes place by means of a diagram like



Fig. 156

figure 156, in which the atom carbon is shown to have two arms, each of which will grasp an atom of oxygen if the proper conditions exist. If there is not enough oxygen present to provide two atoms for each atom of carbon, then the carbon atom will reach out with only one arm. When carbon burns to carbon monoxide, it is only half satisfied with oxygen, consequently, if more

oxygen is admitted the monoxide gas will, if ignited, change to dioxide when the carbon will be completely satisfied.

Both of these gases are colorless. Carbon monoxide gas is very poisonous while carbon dioxide is harmless. When carbon burns to the monoxide from only about one-third as much heat is liberated as when it burns to carbon dioxide. For this reason steam engineers test the flue gases frequently to find out if the fuel in the furnaces is burning properly. If enough air is admitted to the fire, carbon monoxide will not be formed, but if too little, the coal will burn to carbon monoxide and the result is a loss of about two-thirds of the heat of the coal so transformed.

Gas engineers take advantage of this circumstance and build producer gas machines in which coal is piled in a deep bed. Then they let in only a small amount of air, after the fire is well started, and the coal is burned to carbon monoxide gas. During the process some other gases will be formed or liberated and the whole product is called producer gas. Producers are not used to operate gas tractors, although some experimenting has been done in this direction and at least one such machine was made a few years ago in England. The time may come when traction gas producers will be used on tractors. It is one of a number of possibilities.

But, to continue with the story of combustion; the hydrogen of the fuel must also have oxygen, but it combines with oxygen always, forming what is the chemical symbol for water. Of course, when water is formed in the cylinder of a gas engine it is in the form of highly superheated steam and remains as steam until it passes away into the atmosphere with the exhaust. On very cold days in winter it can be seen in the exhaust as a white vapor.

From the foregoing it will be seen that the products of combustion, when the charge is right, consist of carbon dioxide gas and watery vapor, together with the nitrogen that went into the cylinder with the air. The nitrogen does not change except to become highly heated by the burning of the charge and yet it plays an important part since it makes up fully four-fifths of all the exhaust gases. In the first place, it absorbs a great por-

tion of the heat liberated and prevents excessive temperature; second, it expands, together with the other gases and helps drive the piston. It is, in fact, the body of the charge and is the principal medium through which the heat of combustion is transmitted.

When the charge burns in the cylinder, the entire mass of gas is raised to a very high temperature—somewhat around three thousand degrees Fahrenheit. According to the laws of gases the great increase in temperature causes the gas to increase in volume, but since it is imprisoned within cast iron walls it cannot expand readily, and so the pressure rises to about two hundred and fifty to three hundred pounds to the square inch. This pressure, acting on the head of the piston, pushes it out quickly and the pressure of the gases falls until at the end of the stroke the pressure has fallen to thirty or forty pounds to the square inch. The exhaust valve then opens and the gases escape into the atmosphere.



Fig. 157.—Indicator Diagram of Gas Engine, slightly exaggerated

The entire changes in pressure are clearly shown in the diagram figure 157, during the four strokes of the cycle. The straight horizontal line represents atmospheric pressure. The lower line which drops slightly below, represents the charging stroke and shows that when the piston is drawing in a charge the pressure in the cylinder is a little below that of the atmosphere. The next line above shows that the charge is compressed on the next stroke. The line slopes sharply upward until the pressure reaches about sixty or sixty-five pounds, then it shoots straight up on account of the increase of pressure due to the burning of the charge. The next line to the right, marked the expansion line, shows that the pressure falls rapidly during the power stroke of the piston and when the exhaust valve opens it drops rapidly almost to the atmosphere. On the exhaust stroke of the piston the pressures are very slightly above that of the atmosphere. The diagram is a slightly ex-

aggerated indicator diagram from a four cycle gas engine working on the Otto cycle such as most tractors and automobiles have adopted.

Vertical distances on the diagram represent pressures at various parts of the stroke while the length of the diagram represents, to some scale, the stroke of the piston. If the diagram were taken from an engine with an indicator having a hundred pound spring, then one inch in height would represent one hundred pounds. The area of the diagram represents the work done during a single stroke of the piston, and the amount in foot pounds can be determined if we know the stroke of the piston and the scale of the spring.

At first sight it may seem strange that work can be represented by an area but when we consider that work is the product of two factors, force and distance, and that area is also the product of two factors, length and breadth, it all becomes clear enough. For example, if we can represent length and breadth by a diagram, that is, with a closed figure, there is no reason why we can't represent two other factors such as force and distance by a similar figure. The first figure represents area, and the second work, for work as we understand the term in mechanics is always the product of two factors, force and distance.

A Child of Parts

Ten months old, large and lusty, the Smiths' first baby was the apple of their eyes. His name was John, but they called him "Johnnie" for long, and there never was such an infant in the whole wide world.

"He is a genius!" cried Mrs. Smith. "I feel it!"

"He will become an inventor," said Mr. Smith, "for he is so original."

"Or an actor," sighed Mrs. Smith, "for he is so beautiful!"

"Or a musician," guessed Mr. Smith, "for his voice reminds me of the music of Mendelssohn."

"Or a soldier," suggested Mrs. Smith. "He is so active!"

"Or a great politician!" exclaimed Mr. Smith, with enthusiasm.

"But why a politician?" queried the wife, in rather disappointed tones.

"Because, my dear," came the reply, "he crawls out of everything so easily!"

A Good Belt Saves Power Lessens Cost of Threshing

When the Threshing outfit is running at top speed, and time and daylight are valuable, a stop costs money.

The Belt breaking, slipping, or stretching, means an idle gang on full pay while repairs or adjustments are made—a big item.

The Goodyear Thresher Belt will not slip. Its heavy rubber surface grips the pulleys with the close, clinging contact that carries *all* the power. No waste—no leakage of power with this belting. Goodyear Thresher Belting Grips.

It is worth while to think of this when buying your Belts. Goodyear Belting is pliable under any weather condition—does not stiffen with frost, or harden and crack with heat.

GOODYEAR BELTS CANNOT STRETCH. Hard long-fibre cotton, impregnated with rubber under tremendous pressure, is "cured" while stretched to safety limit in a special machine, and any "stretch" in service is therefore impossible.

GOODYEAR THRESHER BELTS ARE DURABLE. The finished Belt has a rubber covering which water cannot penetrate. The inner fabric is completely protected from the elements. Water cannot get into the fabric and start rot. The seam cannot open—it is sealed with pure rubber fused onto the outer covering.

GOODYEAR Thresher Belting

Every Belt
Stitched

Specify
Goodyear Belting
on your
new Thresher

GOODYEAR THRESHER BELTS HAVE ENORMOUS STRENGTH.—Layer upon layer of hard cotton fibre, every strand separated and penetrated by rubber, and the whole hydraulically compressed into a solid and inseparable mass—the prodigious strength of pure cotton with the pliability and tenacity of rubber. The splicing is carefully made. It will last the life of the belt.

Threshermen by their repeat orders prove that Goodyear Thresher Belts live up to our claims. Not one was returned last year.

We have a free book on the choosing of a Belt. It will interest you. Send to our nearest branch for a copy.

111

The GOODYEAR TIRE & RUBBER CO. of Canada
LIMITED

Head Office, TORONTO Factory, Bowmanville

Branches at Victoria, Edmonton, Vancouver, Calgary, Regina, Winnipeg, Hamilton, Montreal, St. John

All kinds of Rubber Belting, Hose, Packing, Bicycle and Motor Cycle Tires, Truck Tires and No-Rim-Cut Tires

You saw this advertisement in this magazine. Don't forget to say so when writing.



The Thresherman's Question Drawer

ANSWERS TO CORRESPONDENTS

Q. O.R.M. What is it or what is the cause of air, or rather gas, forming in the water feed pump and the pipes and heater? Suction is in perfect shape, no leak anywhere, and sometimes it seems quite difficult for the pump to feed the boiler; check valves are in perfect working order, and so is the inlet to boiler pipes not obstructed; screen at end of suction hose has been frequently cleaned; it is a cross-head pump.

A. If there is no water in the feed pipe, there is apt to be steam or air. This will be the condition of any feed pipe. Air in a suction pipe will have to be pumped out before water will come in. The air cannot be pumped into the boiler against a pressure with the ordinary feed pump, as the clearance of such pumps is too great. To pump the air out of the suction pipe, an opening to the atmosphere must be made in the discharge pipe. After the air is all pumped out, the water will flow from the opening; this will indicate that the pump's clearance is filled with water and after the water has started through the pump, any air that is in the discharge pipe or heater is forced into the boiler. If air continues to flow from the relief cock on the discharge pipe, this will indicate that there is a leak in the suction pipe. There are only two things that could make a cross-head pump fail. One is leakage and the other stoppage. The leak may be in the stuffing box, the valves or the pump barrel and suction pipe. The stoppage will be only in the suction pipe, as a stoppage in the discharge pipe could not stop the pump, if it does not leak. The water will go somewhere when it gets into the pump. If it cannot go into the boiler, it will force an outlet elsewhere.

What you say in your question would indicate that the pump is in perfect condition, and should work without any trouble. You must be mistaken in at least one point, and either one will make the pump fail. See that the valves are tight, also the stuffing box, and test the suction pipe for leaks and stoppage. Sometimes the hose gets out of order. We have known the inside lining of the hose to get loose and collapse, which did not show from the outside. This will make a pump fail and is hard to locate. From

your description of the case, we rather think your trouble is a leak. To test the system for leaks, take the valves out, replacing the valve caps, plug up the end of the suction pipe or hose and then turn on the boiler pressure. This will tell you all about the leaks. Then open the end of the suction pipe or hose and turn on the pressure again to test it for stoppage. If both these tests show favorable, there is likely nothing that could make a cross-head pump fail but the valves. And if they are free to act, without binding in their operation, and if the seats do not leak, the pump is bound to work. The valves may be tested under pressure, by only having but one in at a time, or water can be poured in on top of the valve; if it does not let the water run through, it is likely all right.

The foregoing may help you to find your trouble.

Q. O.M. 1. Could a double simple engine be converted into a tandem compound, and where could such an apparatus be obtained when the company who manufacture the engine are not equipped with same? Is it hard to convert such an engine as described above? What per cent of saving will there be in fuel and water and how much gain in power will there be in compounding the following engines: Double simple 6 x 10 and double simple 7 x 10? How much larger must the compound cylinder be?

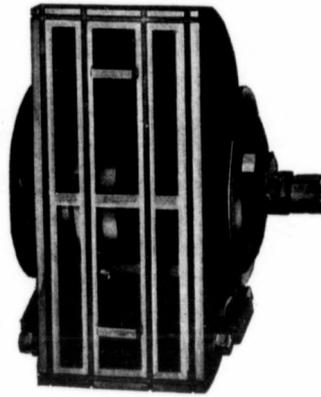
2. Could a person build a machine for his own use and copy it off and have some parts of it the same as a machine that formerly had been built, whether it be protected by patents or not?

3. How much breaking strain will a 2 7/16 inch steel shaft stand in pounds? How much more breaking and bending strain will a 2-in. pipe stand than a 1 1/2-in. pipe? How much more will a 1 1/2-inch pipe stand than a 1 1/4-inch pipe, and 1 1/4-in. than 1-in. pipe? How much more breaking and bending strain will an XX double extra strong pipe stand than an X extra strong pipe? Will a steel pipe stand more breaking and bending strain than a wrought iron pipe?

4. Where could I obtain the tools to thread a taper bolt?

5. Could a person make an

YOU INTEND TO! DO IT NOW



and you will not be sorry. It's time to place your order for a

Baker Valve

DON'T DELAY. They increase power of Engine from 20% to 30%. Save fuel, oil and water. No more wear on valve gearing and eccentric, and can reverse engine under full head of steam with perfect ease. Will also relieve you of trouble with engine priming. We will prove it.

Will be on Exhibit at all Fairs.

Agents Wanted.

BAKER VALVE COMPANY

100 James Street

Winnipeg, Man.

You saw this advertisement in this magazine. Don't forget to say so when writing.

HORSELESS HARVESTING



A Harvest Scene. Possible only by use of THE

Hansmann Binder Hitch

The **HANSMANN BINDER HITCH** is the only Binder Hitch that attaches to all makes of harvesters. It has been in actual service for several seasons, and there is no guess work as to whether or not it will operate successfully.

The **HANSMANN BINDER HITCH** is the Pioneer Binder Hitch. The farmer has too much at stake to take chances on experiments. Harvesting the **HANSMANN WAY** is the safest and cheapest method.

Consult your Dealer. Write home office for Illustrated Catalog.

IMPORTANT NOTICE

The Hansmann Binder Hitch is a patented article. It is manufactured and sold under Canadian patents No. 120,550, No. 127,096, No. 136,038, No. 136,037.

CAUTION TO FARMERS

All parties are warned not to buy or use any binder hitch that infringes the Hansmann Patents under penalty of vigorous prosecution. Either the user or seller of an infringing device is himself an infringer and just as much liable for damages as the manufacturer.

The HANSMANN MANUFACTURING CO.

Long Prairie, Minnesota, U.S.A.

You saw this advertisement in this magazine. Don't forget to say so when writing.

Remember to Renew Your Subscription

MADISON KIPP OIL PUMPS

Are Saving Money for many Engine Owners. Are you one of those Engine Owners? If not

- ☞ WRITE for our Catalog today and learn how you can cut your oil bills in two.
- ☞ Madison Kipp Oil Pumps are force feed and will force the oil to any part of your engine without wasting a drop.
- ☞ No starting or stopping, nothing to get out of order and cause you trouble, no attention needed except filling.



Canadian Agents:
THE MAYTAG COMPANY,
Winnipeg, Man.

MADISON KIPP LUBRICATOR COMPANY
MADISON :: :: WISCONSIN

You saw this advertisement in this magazine. Don't forget to say so when writing.

accurate key seat by using a chisel and hammer?

6. Will a square shaft produce more strength than a round shaft in machines, it being keyless? Why are they not in general use?

A. 1. It will not be practicable to change a double simple to a tandem compound. You had better dispose of your engine and get a new compound. For some kinds of service, the compound will save approximately 20 per cent.

The low pressure cylinder is made larger than the high pressure cylinder to the extent of $2\frac{1}{2}$ to $2\frac{3}{4}$ times measured by the area of the pistons.

2. You would likely not interfere with any of their patents, as they are largely on appliances which you had better purchase from them as you could not afford to fix up to make one.

3. We cannot figure the breaking strain of the several cases without the conditions, the shaft and pipe which are to be used.

4. Taper bolt dies are not kept in stock but can be made on special orders.

5. A good mechanic can cut a satisfactory key seat with a chisel, hammer and file.

6. A square shaft of the same general size will be stronger than a round one. The reason the

square one is not in general use is that the shaft is more expensive to finish and also the hole in the gear or pulley which is to be fitted on it. The bearings have to be turned round from the square, which is also an additional expense. The square shaft makes a good transmission for a sliding gear, and where there is lack of room and heavy duty the square shaft is preferred. The square corners afford more wearing surface than a key or even two keys.

Q. F.H. 1. I have been told that a kerosene engine will develop more power than a gasoline engine of the same size in stroke and bore. Is this true? If it is, would it be to any advantage to put a kerosene mixer on a 15 h.p. gasoline tractor?

2. Would the valves be all right for using kerosene?

3. Where should the spark be set to produce the most power on an engine running about 350 to 400 r.p.m. using gas and kerosene?

A. This is true with some engines that are especially built for the purpose. Kerosene used in a regular gasoline carburetor will not work without using water with kerosene. Kerosene can be

used in the regular gasoline carburetor or mixer and in addition to this another mixer must be used to introduce water, as the kerosene and water both have to go into the cylinder together. This is due to the kerosene having a lower flashing point and without the water the compression would be too high and would cause preignition. The amount of water to be used is governed by the sound of the engine. Without the water, the mixture of kerosene and air will ignite automatically; that is, it will ignite by its own heat before it is fully compressed and long before it gets to the end of the compression stroke, and enough water should be introduced to keep down this preignition. If too much water is used, it will kill the power. The operator will soon find the place to set the needle valve for the water as well as for the kerosene. The power is about the same when kerosene or gasoline is used in a regular gasoline engine.

2. There is no difference in the valves for using gasoline or kerosene.

3. The ignition should be set as early as possible. To find the correct place, advance the ignition till it causes a thump in the cylinder, then retard it until it

quits the pounding, and this is the place where it will develop the most power. When the speed of the engine is changed, the ignition should be changed. The higher the speed, the more the ignition should be advanced.

☞

Q. M.C.G. 1. A. tells B. that 200 lbs. cold water test on a boiler is as much as 400 lbs. steam pressure; that is to say, a steam boiler tested under 200 lbs. cold water pressure will safely carry 400 lbs. steam pressure. B. claims a boiler put under 200 lbs. cold water test should not carry a steam pressure over 150 lbs. gauge pressure. Now, which is right?

2. In refuelling a boiler, using retipped flues, should the tipped end be put in fire box end or smoke box? This applies to direct flue boilers.

3. What is your opinion of the correspondence school of gas traction engineering by mail, and will a person benefit by a course through mail?

4. A 20 h.p. traction engine was shut down for boiler repairs, and the fire was drawn under 100 lbs. pressure and water was drawn in until pressure was down to 40 lbs.; then, about ten stay bolts in fire box leaked, also

all stays around fire door. Do you think this was injurious to the boiler? The stay bolts were all caked and a pressure of 140 lbs. was carried afterwards with an occasional leak at a few stay bolts.

5. Why don't the Advance Thresher Co., build their engines with a variable cutoff?

A. 1. There is no difference in the strength of a boiler whether cold water or steam is used to make the pressure. The reason cold water is used is that if the boiler is too weak to withstand the pressure, the water will simply burst the boiler and as soon as a small place is opened, the pressure will be released. But if the boiler starts to yield to steam pressure, an explosion will follow, due to the expansion of the steam. The water in the boiler while steam is on is of the same temperature as is the steam, and as soon as it is released it at once turns into steam, which helps to throw the parts of the boiler far from their former resting place. A. is wrong in this matter. B. is in the right direction, but does not go quite far enough. We believe the best practice is to make the working pressure one half of the cold water test. If the boiler cannot hold more than 200 lbs. cold water pressure, and if it begins to show signs of weakness at that pressure, 100 lbs. steam pressure is all it should be expected to carry. If 100 lbs. steam pressure is all that is needed, there is no use to run the water pressure above 200 lbs. and thus put an unnecessary strain on the boiler. But when putting the test pressure on, the boiler should be watched throughout and if it shows signs of weakness before the desired pressure is reached, the pressure should not be run any higher, and the operator should be satisfied with one-half of that pressure. This should be done at least once a year on old boilers, and if it is done by one skilled in the art, there is little or no danger of an explosion. Yet, a defective safety valve may cause the explosion of a boiler with a good margin of strength.

2. The pieced part of the flue should go to the smoke box end, as the service is lighter there.

3. Correspondence schools of all kinds are good. As to the benefit one gets out of a course of this kind all depends on the student.

4. These leaks may have been in the boiler before the pressure was reduced. You do not state in what length of time the pressure was reduced. It is not good for a boiler to cool it off suddenly, yet a strong boiler should stand a reduction of steam by forcing water in by means of an injector. There is, however,

a feature about running cold water into a boiler without any fire in it that is quite different in effect than when there is fire. With fire, the cold water is heated and circulated, but without fire, the cold water runs to the bottom of the boiler and never circulates; thus it chills that part of the boiler while the other part is hot, causing an unequal expansion and the strain thus set up may cause a weakened boiler to spring a leak.

5. You refer to the Marsh gear, which is designed to be set at the economical point for average conditions of traction engine work.



Q. A.S. 1. How do you babbitt wrist pin brass boxes on a cylinder single side crank engine; they are worn pretty badly and I have got too many liners in them anyway. I want to babbitt them; I think they are better. Explain how to line them also.

2. I have a crank of about 1/2 inch long in the flue sheet. I think the best way to fix it is to tap it and plug it with brass wire. Tell me what size tap to use and what gauge of wire to use.

3. Is 3-16 of an inch enough to allow for beads on flues?

A. 1. The common way to babbitt in a connecting rod box is to drill 1/4 inch holes in the worn part to keep the babbitt from slipping around. The holes should be about 1/4 of an inch deep and about 1/2 to 3/4 of an inch from centre to centre. If the box is quite thin, a better plan is to tin the surface with solder and have the box heated to almost or about the temperature at which solder melts; then pour the babbitt metal in and it will be thoroughly soldered to the brass box. If the box is a heavy one, the soldering scheme will be better than the drilling of the holes, yet it is not so essential as on a very thin box. To line the box up before pouring, put it in the connecting rod and place it on the crank pin, holding it up so that an even thickness will run on each end and on top and bottom. Place a shim of wood or metal between the two parts of the box so that they will be separated and so that it may be taken off the crank pin. Now dress the box out so that it will run freely on the pin and chip oil grooves. Run the engine with a load at first to wear the box to a bearing.

2. It is very doubtful if you can make a permanent job of a cracked flue sheet. If the crack stands open so that the calking is not practicable, a lot of plugs may help for a while. Plugs 1/4 inch in diameter ought to be about the right size. Brass or copper will do for the plugs.

Increase your Profits for 1913

YOU HAVE AN ENGINE THAT REPRESENTS A GOOD INVESTMENT, why not make it pay greater dividends by decreasing the expense of operation and upkeep of your engine. The direct cause of a part of this expense is the Common "D" Slide Valve.

**"Replace it
with a Gould
Balance Valve"**



And you increase the Capacity of your engine, Eliminate that expensive wear on valve gear and save Fuel, Water and Oil.

This is what our customers say:

Gentlemen:—No traction engine should try to run without one of your balanced valves in. It gives the engine more power and makes it perfectly easy to operate. I could not hardly reverse my engine with the common slide valve and when I put your valve in, I could do it with two fingers. My engine runs perfectly easy; no pull on valve gear; no trouble with engine priming. It makes a saving of two tanks of water a day and three-fourths of a ton of coal and the ease of operating the engine alone, saving nothing about the saving of fuel and water, is worth the price of it every year. I recommend it to every engineer I see, and I think that nearly all the engines in this neighborhood have them now. Yours very truly,
Sunny Slope, Alberta, Nov. 18th, 1912. E. E. BIRNELL.

Gentlemen:—I have used your valve on my engine for about two years and have tried it under all conditions. I have more power, use less water and coal, and so far as handling is concerned, it makes an engine handle 100 per cent better, and is so easy on your valve gear. I would not be without it if it cost twice as much as it does. Would advise any one to buy one and after they have used it a year, don't think they would ever be without one. Yours very truly,
Clavet, Sask., Dec. 2nd, 1912. M. S. DU BOIS.

Write for descriptive catalog and copy of the evidence.

ADDRESS—
GOULD BALANCE VALVE COMPANY
KELLOGG, IOWA, U.S.A.

You saw this advertisement in this magazine. Don't forget to say so when writing.



Steam or Gas Tractors

Equipped with

PICKERING
THE GOVERNOR WITHOUT JOINTS

give greatest efficiency

FITTED TO EVERY BUILD OF
ENGINE

Patent Ball Ranger Speed Changer Supplied on all Genuine Pickering Governors. Will increase speed 50% or more. PICKERING

The Pickering Governor Co.

PORTLAND

CONN., U.S.A.



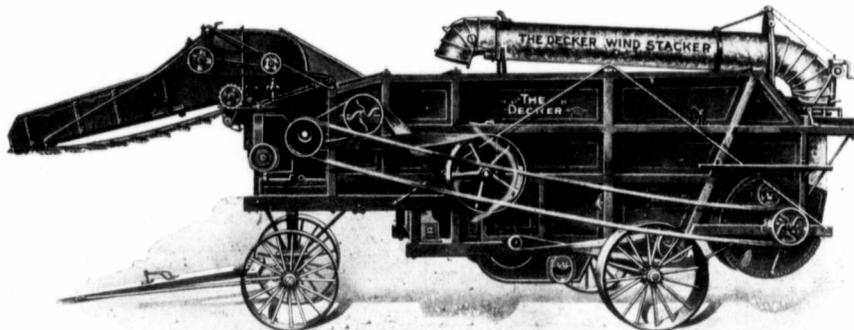
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Sawyer-Massey Co.

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IN A COMBINE!

THIRTY-EIGHT YEARS' EXPERIENCE



Manufacturing the famous "Decker" line of Threshing Machinery. Engines in sizes as follows:

18, 20, 22 and 25 h.p.:
Boilers command 175 lbs. steam pressure. "Decker" Valve Gear, superior to all devices used for the purpose, heavy gear suitable for hard work. Plowing Engines a speciality.

"DECKER" SEPARATORS

Made in the following sizes: 24-46, 28-50, 32-54, 36-60

Well adapted for gas power, being easy to drive. A marvel of simplicity: efficient in separation and convenient to handle. Wind Stackers, Feeders, Baggers and full line of thresher supplies

Write for Catalogue

Write for Catalogue

THE MACDONALD THRESHER CO. Limited

Western Branch: Winnipeg, Man.

Box 1296

Head Office and Factory: Stratford, Ontario, Canada.

See our Exhibit at all of the leading Fairs

After the soft metal is put in it can be calked from time to time, as it may leak.

3. 3-16 of an inch is the correct amount to allow for a bead on a boiler tube.

Q. G.W.H. .1. In regard to these two engines; one a fire box and the other a return flue boiler, both rated 16 h.p. one fire box boiler and the other return flue; which would be the strongest in the belt and which is most saving in water and fuel? The one is 8½ bore and 10 inch stroke, band wheel 40 inches, the other is 8 inch bore, 12 inch stroke, band wheel 40 inches. Both run at the same speed.

2. Could you inform me about easy steaming? Some engines, it is claimed, are very hard to get steam on in the morning when cold watered, and that they have not enough fire box for the size of the engine. Fuel is getting to be quite an object with the farmers now-a-days.

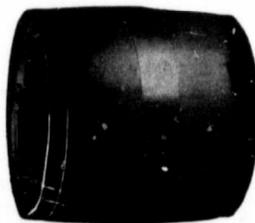
A. 1. While both of these engines are called 16 h.p yet the 8 x 12 has about 8 per cent more cylinder capacity than has the 8½ x 10, both running the same speed at the same pressure and cut-off. In this case, the 8 x 12 will deliver more power if both engines are equally well designed and other conditions the same. If the load is small for these en-

gines, there will be little difference in the economy, but if the load is too great, the larger engine will be the most economical as the valve gear can be hooked up farther on the larger engine.

2. As to steaming qualities, you do not give any dimensions; but you can be sure the boiler with the greater amount of heating surface will be the easier steamer and the most economical

on the fuel. You can readily determine which boiler has the greater amount of heating surface. In the case of the return flue boiler, the circumference of the fire flue multiplied by the length will give the surface thereof. The same method for the small flues, which all added together, with the area of the heated part of the flue sheets, will give the heating surface of the

boiler. In the case of the fire box boiler the tubes are calculated as above and the fire box sheets are measured for area and this added to the surface of the tubes together with the tube sheets, will give the heating surface of the boiler. The boiler which has the greater amount of heating surface is the easier fired and will give the most power, besides being more economical on fuel.



OUR GUARANTEE

You have been th'inking about buying a Paper Drive Pulley but have wondered if they are all we claim—do they pull better—do they wear better—will they stand wetting—can the paper be renewed—do they really save the drive belt—can they be fitted to any make of machine?

YES! THESE THINGS AND MORE TOO—One operator tells us his pulley is worth \$3.00 a day during threshing season.

Why not let us ship you a Pulley on trial?—If after using it 10 days or 2 weeks you are not entirely satisfied, box it up and ship it back, freight charges prepaid, and we will return your money.—that's only fair.—but we think you will be well satisfied.

Just fill in this order blank—now—before you are too late for the season's delivery

The Rockwood Manufacturing Company

1928 English Ave., Indianapolis, Ind., U.S.A.

Ship me 1 Rockwood Paper Cylinder Pulley of size given below, for which I enclose check for \$5.00. Balance to be paid C.O.D.

Pulley Diameter _____ Face Width _____ Bore _____
 Machine made by _____ Year bought _____ Size _____
 Ship by (express freight) to _____ Town _____ State _____
 Signed (Name) _____ Date _____

"Old Reliable" Outfits

For Constant, Satisfactory Service



Canadian
Advance
Separators

Canadian
Advance
Steamers

The Grain Crop this year will be a big one and there will be no time to waste in repairing an uncertain outfit after you get started

All kinds and conditions of grain are rapidly handled by the Advance; threshed clean and ready for the market.

The big cylinder teeth and the extra large grate surface make thorough threshing possible while running at high speed.

The "kicker" forks employed in the Advance keep the straw cleaned away from the cylinder and grates; it has no chance to "wind up" or become clogged—this is a big item when it is necessary to "speed-up," especially.

The wide range of adjustment in both the upper and lower wind-boards, cleaning-fan slides and sieves cleans the grain thoroughly.

The fact that threshermen appreciate these features of the Advance is brought out in letters received from satisfied customers who tell us of wonderful successes in the field.

Go into one of our Branches and look the Advance over; get one of our new books on the Advance Separator—just off the press.

How are you fixed for reliable power?



Don't allow a poor engine to tie you up just at the busiest time of your threshing (when hours mean dollars) because there will be some monstrous jobs to be taken care of this fall.

Canadian Advance Compound or single cylinder steam engines are the result of a great many years' experience and are built right in every way.

They are built to burn either coal or wood and can be quickly converted into straw-burners when desired; with any fuel they furnish a maximum of power at a minimum of fuel expense.

Our tandem-compounds have two independent valves mounted upon a single stem and a steam-chest for each cylinder, the valves are double-ported and have the same characteristics as the valves used in the simple engines. This makes a powerful and economical compound.

Both styles of our engines are built in several sizes, suitable for all threshing needs as well as all farm power.

We are in position to make quick deliveries from our branches.

Get better acquainted with the Advance Line!

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Power Farming Machinery

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Canadian Factory is Located at Toronto, Ont.

CALGARY, Alta.
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781



“There’s Only One OilPull—Rumely, La Porte”

The perfection reached in the OilPull Tractor has given it such prominence in the field of oil-burning tractors that, unconsciously, perhaps, the term “OilPull” has been applied to **any** oil-fuel tractor. But there’s only one OilPull—Rumely, LaPorte.

The name “OilPull” is registered in the U.S. Patent Office. It belongs exclusively to the Rumely Tractor.

None but the Rumely OilPull burns cheap kerosene and the lighter crude oils **all the time.**

This flexibility is an exclusive feature of the OilPull—made possible by the Secor-Higgins Oil-Fuel System, which is patented and controlled by the M. Rumely Co.

The Rumely OilPull Tractors at the 1912 Winnipeg Motor Contest scored higher in economy, overload capacity and total

number of points than any other internal-combustion tractor.

When threshing, running electric generators or doing any other belt work, the speed variation in the OilPull is actually less than 2 per cent. from normal.

The OilPull has established itself as representing maximum oil-tractor efficiency at minimum expense.

Behind it is the sixty years’ experience of the M. Rumely Co. in building power-farming machinery.

A postal will bring to you our Oil-Pull Book with detailed description



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Power-Farming Machinery

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POULTRY

Chat on the Work in General

EACH year the poulterer better understands the care of poultry, knows their wants, and has discovered how to keep them comfortable. Comfortable hens are the ones that do the laying.

About thirty years ago, when poultry farming first began to grow as a business, a cry arose that it would not be long before there would be such a surplus of stock that prices would go tumbling, but, notwithstanding that there are ten successful plants today to every one there was thirty years ago, the demand is not half reached. With the increase of the supply came the increase of demand, and today we are no nearer meeting the demand than we were ever before.

But there is a change in the market that must not be lost sight of. Almost anything in the poultry line sells but the choicest prices alone are given for the "fancy" goods. That word "fancy" implies more than appearance. It means, also, quality. Poultry and egg buyers are becoming particular, but they are willing to pay for their goods. If not take white; and if they prefer they want brown eggs they will white, brown ones are no temptation. If they want yellow-skinned fowls, there is no use trying to sell them white-skinned birds. The market today demands choice, plump, fresh stock. Have you got it? If so, the market is waiting for you.

We have today quite a number of breeds, and all, to a certain extent, are practical. But they will not fill all purposes. Therefore it is necessary for a man to select only such breeds as will best serve his customers.

Of the entire list of breeds, none meet the demands of Americans so much as do our American varieties, and in this class the most popular are the Wyandottes, the Plymouth Rocks, with the Rhode Island Reds closely following. Also our American strain of Light Brahmas and the Leghorns. The Brahma belong to

the Asiatic class as a breed, but the Light Brahma as bred by our people is so different from that bred in England, that one would hardly suppose them to be of the same family. It is also so of the White Leghorns. The Leghorns belong to the Mediterranean class, but there is such a change in the present day Leghorn to the bird introduced years ago, that we feel we own the breed.

It is important to keep the poultry house scrupulously clean. Untidy, filthy houses soon show the results in scaly-legged fowls. Many otherwise good birds are sacrificed on account of the appearance of their legs. A man's methods are always judged by the appearance of his fowls, and scaly legs is one of the results. This unsightly ailment can readily be spread in a flock. A single afflicted bird on the roost is apt to transmit the trouble to the others. It can also be carried to the young, in the spring of the year, by using such hens as sitters.

Overcrowding the flocks of young has also its dangerous results, chief among which is feather-pulling. The careful poulterer avoids large families, and keeps his birds busy. It is the crowded, idle birds that are ever ready to get into some mischief.

Green ducks are shipped to markets undrawn, and with heads on. They are picked down one-half of the neck, and to the first wing joint.

The Muscovy duck has to be from two to four weeks older than the Pekin before it can be dressed, and is sometimes four months old when killed.

In the East, the lowest price in the duck market are from the first of July to the first of September, and from September to November the price always goes up from two to five cents a pound.

There is considerable demand in the large cities for live ducks. The Jews will not buy dressed poultry of any kind. Their religion teaches them that the rabbit should do the killing. Market-men claim that this ruling makes a good market for many birds that would otherwise be worthless. Quite a lot of poultry is also

THE REAL MAGNET

of every WESTERN FAIR in 1913—the Magnet that will prove the greatest "drawing" card to every person interested in making money out of Dairy Cattle will be the



"MAGNET" Cream Separator

This is the Separator without a single kink or corner that will occasion trouble either in running or in cleaning. Its "points" are all strong points because they are simple illustrations of the wonderful simplicity and smoothness of a machine that is absolutely correct in every mechanical detail of construction. Its ROCK-BOTTOM STEADINESS is unequalled by any other machine. Its SQUARE GEAR is in marked contrast to the "wobbling worm" of other machines AND HUMAN GENIUS HAS NOT YET DISCOVERED A MORE CERTAIN AND EXHAUSTIVE METHOD OF TAKING THE LAST PARTICLE OF BUTTER FAT FROM THE MILK

Our Slogan is "TO SATISFY"—and we will do it at all costs. We will prove every point we claim for the superiority of the "Magnet" on your farm—at our expense

The Petrie Mfg. Co., Ltd.

Head Office and Factory: HAMILTON, ONT.
Winnipeg, Calgary, Regina, Vancouver, Montreal, St. John, N.B. Edmonton, Alta.

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Brandon Creamery & Supply Company BRANDON, MAN.

Cream Shippers We Pay Full Prices

Ship your cream to us and realize its full value to the last cent. We furnish tags free, and supply cans without charge until you are satisfied with our treatment. By our fair and square methods, we have kept some of the biggest shippers in the West dealing with us for years.

CASH PAYMENT goes out promptly for every can of cream received. We return cans in 48 hours and pay all charges. WRITE US and let us prove that it will be to your interest to ship here.

The Brandon Creamery & Supply Company
BRANDON MANITOBA

Tie This Tag to Your Cans

You saw this advertisement in this magazine. Don't forget to say so when writing.

Patronize those who patronize this Magazine

sold to the Chinese, and at good prices. It is estimated that they consume as many as do the Jews.

The origin of the Indian Runner ducks is unknown. It is claimed that they were introduced into England about thirty years ago. It is said that they will lay nearly 200 eggs in a year. One breeder gives food comparison with Pekins average as follows: Food needed for 100 Pekin ducks for one month, amounts to about 2,250 pounds; food for 100 Indian Runner ducks, same period, 1,500 pounds. Time required to reach maturity, Pekins, six to nine months; Indians, four to five months. The Pekins are the larger ducks.

Common field peas are an excellent egg-producing food, owing to the large amount of nitrogenous substances contained in them.

The effect of meat rations was tested at the West Virginia Experiment Station, where one pen of fowls received a ration largely of corn and other starchy grains, while another pen was fed partly on meat and fresh bone. The meat-fed fowls laid 7,555 eggs, while the grain-fed birds laid 3,431, or less than one-half as many as those receiving the nitrogenous ration. The eggs from the meat-fed fowls were larger, much firmer, rather better and produced far more vigorous chickens than those of the others. Both lots of fowls remained in a healthy, vigorous condition.

The Hebrews use goose oil instead of lard, and we don't blame them one bit. The writer raises a few geese each year for his own use, and the Queen of the kitchen the other day fried some white potatoes with the grease, and a finer flavor we never had.

The Embden is a uniformly pure white goose, with prominent blue eyes, flesh colored beak, bright orange legs, remarkably strong neck, and its feathers incline to curl from the shoulders to the head. They are very hardy and well adapted to our climate. When not allowed to become too heavy, they are good layers, and their flesh is tender and juicy when properly cooked.

A traveller says that in China eggs can be purchased all the year round at from two or three cents per dozen. The bulk of the supply is sent to Australia. Packing labor in Hong Kong costs about four dollars per month, and freight to Sydney is six dollars per ton. These eggs are sold at six cents per dozen, and which allows a good profit.

A very good block for decapitating fowls is made by driving two spikes or nails along one side of a heavy block or wood, far enough apart to allow the fowl's neck to slip between them. This

holds it in place and makes it easy to complete the work at one blow.

An expert says that the one great mistake in raising capons is in marketing them too early and not having them fat enough. After caponizing keep them growing until they reach full size, which will take from ten to twelve months. Then fat them. This can be done in two weeks by shutting them in a small, dark coup and feeding three times a day all the will eat of cornmeal and middlings mixed up with milk.

The French are naturally an economical people, and after their fowls are killed and dressed are by no means through with the treatment of the subject. The waste products are scrupulously saved. The feathers are carefully collected and sorted, and when well dried are sold to dealers. The intestines are boiled, the fat skimmed off, minced as food to poultry, and the liquid fed to pigs. The combs and kidneys are sold to pastry cooks, the first for decorating purposes, and the latter for pies. The head, neck and feet are sold to hotels and restaurants for flavoring sauces or are boiled down to make chicken jelly.

The French poulterer kills his fowls by dislocating the neck with a swift back chuck, given close to the head. At once dressing begins so that it may be completed before the body cools. The legs and wings are tucked close to the body, which is placed breast downward against a board. A moist cloth is spread on the back to impart a fine grain appearance to the flesh. A weight is next applied thereon to secure the required market flatness and when thoroughly cold the birds are removed, packed carefully and closely, in crates or cases, as they are intended for the home or foreign market.

For fattening poultry, the French poulterer favors the epinette plan. This consists of rows of cages, with a separate compartment for each bird. These cages measure twenty inches square and open at the top, no place being allowed for movement. The bottom of the cage is in open work, and below a movable board strewn with ashes or sawdust to receive the droppings. In front is placed a trough for food and an earthen vessel for water. The cellar or fattening house is kept warm, and the light gradually diminished till total darkness is secured on the fifth day. Only when being fed is daylight readmitted, and many prefer to employ a lamp.

While bumblefoot is generally caused by fowls jumping from some high point and striking a stone or some other obstacle, it can also come from a fowl treading heavily on such an object.

You need a new DE LAVAL Separator NOW

1st If you are still using some gravity or setting process of creaming—

Because your waste is greatest and quality of product poorest in mid-summer, when the milk supply is greatest.

Because time is of greatest value on the farm at this season and the time and labor-saving of the good separator counts for most.

Because the skim-milk is poorest without a separator in hot weather and often more harmful than helpful to calves and young stock.

Because the work of an improved De Laval Cream Separator is as perfect and its product as superior with one kind of weather as with another.

2nd If you have a very old De Laval or an inferior separator of any kind—

Because the losses of the poor separator from incomplete skimming and the tainted product of the difficult to clean and unsanitary separator mean most when the bulk of milk is greatest.

Because of the great economy of time at this season in having a separator of ample capacity to do the work so much more quickly

Because an improved De Laval separator is so much simpler and more easily handled and cared for than any other, and you cannot afford to waste time these busy days "fussing" with a machine that ought to have been thrown on the junk-pile long ago.

Because the De Laval Separator of to-day is just as superior to other separators as the best of other separators to gravity setting, and every feature of De Laval superiority counts for most during the hot mid-summer months.



These are all facts capable of prompt and easy demonstration, whether you have a poor separator or none at all. The New De Laval catalog, to be had for the asking, helps to make them plain. Every De Laval local Agent stands eager to do so with a machine itself, with no obligation on your part to buy unless he does—and that to your own satisfaction.

WHY DELAY? Why put off so important a step as the use of the best cream separator, which you need more RIGHT NOW than at any other time?

DE LAVAL DAIRY SUPPLY Co. Ltd.
MONTREAL PETERBORO WINNIPEG VANCOUVER

You saw this advertisement in this magazine. Don't forget to say so when writing.

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

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HAIL INSURANCE!

The State Farmers' Mutual Hail Insurance Co. of Waseca, Minnesota have a big surplus of funds and are in excellent standing as a business concern. Expense ratio is under 30 per cent. Eighteen years in business, have always paid losses in full and never pro-rated. Company carries the risk to extent of \$10 per acre. No increase in rates during continuance of policy—Assets \$500,000—See the Waseca agent in your district or write

SMITH & HOME, Portage la Prairie
Provincial Managers of
State Farmers' Mutual Hail Insurance Company, Waseca, Minn.

You saw this advertisement in this magazine. Don't forget to say so when writing.

Remember to renew your Subscription

WANTED—By the Health Authorities—The Fly

Was Last Seen in Bad Company Carrying a Million Disease-Germs and is Now at Large

BH CLARENCE M. WEED

WE have learned that the housefly is a dangerous pest because it carries the germs of typhoid fever and other human diseases. So there has been a great awakening of interest in fighting this fly. "Swat the fly" and "clean up the breeding-places" have been the war-cries heard all over the land.

More recently we have learned that a cousin of the house-fly is even more dangerous. It is sometimes called the biting house-fly, but more commonly the stable-fly. It looks so much like the house-fly that Dr. L. O. Howard suggests "a good way to distinguish between the two flies is to allow them to walk over your hand." If it bites it is a stable-fly, if it does not bite it is probably a house-



The house-fly
Greatly magnified

fly. But you will not want to try this when you learn that if it bites it may leave the germs of some of the most deadly diseases in your blood. You will rather be content to swat it, being sure that whichever it is it ought to be killed.

How to Tell Them Apart

The house and stable flies resemble each other very closely, but can be distinguished by a careful examination. The house-fly is not able to bite, and it does not suck blood. Both sexes of the stable-fly can bite, and do suck blood.

When the house-fly is at rest and you look down on it you cannot see the proboscis, or beaklike mouth, projecting in front of the head. When the stable-fly is at rest in the same position you can see the proboscis projecting out in front.

In the house-fly the vein running through the middle of the wing turns abruptly upward near its outer end. In the stable-fly this vein is more nearly straight. The top of the abdomen of the stable-fly has clove-brown dots, especially in the case of the female flies. The illustrations show the appearance of the two flies magnified about three diameters.

Last summer stable-flies became unusually abundant in northern Texas, swarming on domestic animals in such numbers as to be a veritable plague.

An investigation showed that the outbreak extended over practically all the region where grains were largely grown last year. The pests bred in the rotting straw left after threshing. The losses in cattle killed and weakened by



The stable-fly
Greatly magnified

disease and worry, in reduced milk-supply, and in loss of flesh of cattle were enormous.

The life story of the stable-fly has recently been worked out very carefully as follows: The mother fly lays masses of eggs in rotting straw or other material; she may lay fifty to a hundred or more such eggs each day. In two or three days each egg hatches into a whitish maggot that begins to feed on the decaying straw. In warm weather this maggot will be fully grown as a maggot in two or three weeks.

Then its outer skin becomes hard and brown as the maggot larva changes to a pupa. This pupa stage is a quiet one in which the insect takes no food and is unable to move about. After a week or ten days the pupa changes again, this time to a full-grown stable-fly, that soon starts out on its blood-sucking career.

The time from the laying of the egg to the maturing of the fly averages about one month. It varies, however, with the weather. In a hot season growth is much more rapid than in a cold one.

The stable-fly breeds by preference in rotting vegetation. It is attracted to manure-piles, preferring those in which much straw is mixed. Small piles of rotting straw or other vegetation or of



Fig. 2—Cross-section of Minnesota fly-trap

manure should not be left in neglected fields or corners. If spread out it will dry so that the maggots cannot live in it.

Most insects are destructive in their earlier stages, but these flies do most damage when full grown. They bite through the skin and suck the blood of warm-blooded animals, including man. After piercing the skin the fly gorges itself with blood, commonly stay-

.. The .. Dominion Exhibition

**BRANDON, MANITOBA
JULY 15 to JULY 25, 1913**

Will be held on the most beautiful Fair Grounds in Canada. The Directors have expended \$150,000.00 in new Buildings and larger grounds.

\$50,000.00 in Premiums.

\$20,000.00 for Speed

**\$25,000.00 for Attractions. Aeroplane Flights.
Parachute Drops, Pyrotechnical Displays and Music**

This is Canada's Greatest Exhibition

The Premium List includes classes for all Breeds of Live Stock, Poultry, Dairy Products, Domestic Manufactures, Horticulture, Fine Arts and Ladies' Work

Machinery and Farm Implements

Outside space for Large Machinery, Display Building for Small Machinery, applications for space should be filed at once.

The Premium List is one of the most liberal and the classification the best yet issued. We refund 50% of freight on all Car Lots of Live Stock. Transfer Track delivers Live Stock to Exhibition Barns.

Reduced rates from all parts of Canada. Special one day Excursions. For Dates and Routes, see Railway Advertisement.

**Manitoba Amateur Athletic Meet Saturday,
July 19th.**

Commercial Travellers' Day, Monday, July 21

Entries Close July 1st. Write for Prize List.

Exhibitors are requested to make their entries by July 1st. A Catalog of Entries and a Program of Judging will be issued.

Brandon Municipal Electric Railway and Canadian Northern Railway to and from the Grounds.

This may be the last Dominion Exhibition.

Don't Miss It. Make an Exhibit and attend.

**P. PAYNE, Esq.,
President.**

**J. S. GIBSON,
Vice-President.**

**W. I. SAMLE,
Secretary.**

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INSURE YOUR CROPS

WITH

The Canada Hail Insurance Company

GUARANTEED BY THE LONDON MUTUAL FIRE INSURANCE COMPANY OF CANADA

Combined assets over One Million Dollars. Our Policy Contract guarantees positive protection to Policyholders

FULL DOMINION
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LOWEST POSSIBLE RATES

LOSSES PAID IN FULL

PROMPT SETTLEMENTS

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Rates based under the Graduated or Classification System

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Apply General Agents: Matthews, Wrightson & Co. (Canada) Limited

722-8 Union Bank Building, Winnipeg, Man.

The London Mutual Fire Insurance Company of Canada

CONTINUOUS OPERATION FOR 54 YEARS

ESTABLISHED 1859

A GENERAL FIRE INSURANCE BUSINESS TRANSACTED

OUR FARM POLICIES contain many features which are very advantageous to the assured, the most important being the blanketing of all contents of a house or barn under one item. The only property on a farm which we ask for specific insurance on, being live stock.

AUTOMOBILE INSURANCE—This policy covers against loss or damage by fire and/or explosion and self-ignition to the body, machinery and equipment of automobile while in the Dominion of Canada. Insurance covers cars while en route or while kept in private garage, barn or stable. Permission given to keep automobile in any public garage for a stated period free of charge.

CONSULT ANY OF OUR 500 AGENTS IN WESTERN CANADA. OR APPLY TO

General Agents: Matthews, Wrightson & Company (Canada) Limited, 722-8 Union Bank Building, Winnipeg

You saw this advertisement in this magazine. Don't forget to say so when writing.

ing in position until full-fed for the time, unless brushed off. In such a case it flies to another animal. In this way the fly may carry disease-germs quickly from the blood of one creature to the blood of another.

After a full meal the fly usually rests a few hours on a leaf or board, digesting it, before it is ready for another attack. They seem to take two meals a day when they can get them, and they are generally successful.

It has been believed for years that this fly is an active agent in spreading the germs of anthrax and glanders. Lately it has been convicted of being the carrier of the dreaded infantile paralysis which has long baffled the doctors by the mystery of its appearance and the sudden deadliness with which it comes.

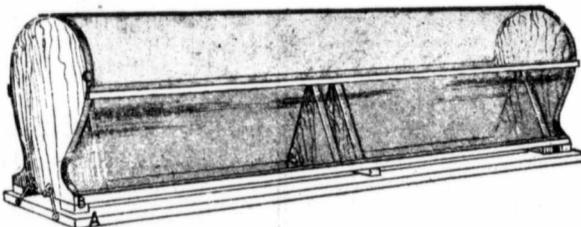
Infantile Paralysis is Spread by Flies

When infantile paralysis is not fatal it is very likely to leave its victim paralyzed for life. It is one of the most dreaded human diseases.

Careful studies of the records of the disease show that it is more frequent after midsummer than before. Its period of appearance is about the same as that of the greatest abundance of the stable-

flies. This fact led two scientists at Harvard University, Messrs. Rosenau and Brues, to experiment with the possibility of this insect carrying the virus of the disease.

By means of small monkeys kept in cages into which the stable-flies were introduced, they showed that the flies do carry the virus, so that their bites may really be deadly if they have previously bitten a human being or



an animal affected by the disease. Their conclusions were corroborated by similar experiments conducted in Washington, D.C., by experts of the Marine Hospital Service. According to statistics, this paralysis is especially a rural disease. Children and adults in the country are more commonly attacked than those in the city.

The fly pest is best controlled by means of traps. One of the best fly-traps has been described

by the Minnesota Experiment Station. It is shown in the sketch below, and is made of boards and ordinary wire screening. It is described by F. L. Washburn in these words:

"The upper oval part (C) serves as a receptacle which the flies enter through the opening in the top of the middle portion (B) made of screen and shaped like the roof of a house. Under this is the baseboard (A) upon which

rests two bait-pans. All three parts are held together by the hooks at each end, as shown. The space between baseboard and middle portion (between A and B) is about half an inch, and between this and the bait-pans, through which space flies enter pans, is about one-fourth of an inch space. Figure 2 on page 54 shows a cross-section of the trap, the arrows indicating how the flies enter the bait-pan and then as-

cent through the opening above into the large receptacle.

One of these traps caught 12,000 flies in a day. A different trap on a similar principle in a stable window is said to have caught thirty-seven and one-third quarts of flies at the first catch. Another trap in a stable window caught five quarts of flies, ninety per cent of which were these deadly stable-flies. Entire families of flies are guilty of vagrancy and ought to be put in these screen jails. They are also wanted by the health authorities for spreading disease-germs. They are wanted now, and the traps which have been mentioned in this issue will serve as special agents to bring these vagrants to time.



A Brand New "Jag"

In a Georgia town where prohibition prevails a man was arrested three times in one day charged with being drunk on the streets.

"Where did you get the whiskey?" asked the mayor.

"I didn't drink no whiskey," was the reply.

"Well, then, what did you drink?"

"Nuthin' in the world, yer honor, 'cept cane juice, liver regulator, hair tonic an' red ink!"

Farming a Half Section of Land

The First Three Years' Program for a Half-Section of Land

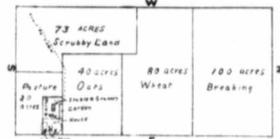
By H. HUDSON

Continued from page 34 June

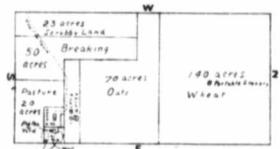
Cash Account for Second Year

	Dr.	Cr.
By cash in hand		815.60
To bran, 1600 lbs. at \$1 per 100 lbs.	16	
To tools, shares, repairs	50	
To binder twine, 300 lbs. at 10c.	30	
To machine oil	1.50	
To barley for feed 90 bus. at 30c.	27	
To man, stooking 8 days at \$2.50	20	
To threshing, wheat 2000 bus. at 8c.	160	
To threshing, oats 2600 bus. at 6c.	156	
To team and harness	700	
To brush breaker plow	30	
To two sows	45	
To lumber for poultry house and pig pen	110	
To pig wire	8	
To school taxes	24	
By two teams and two men on outfit, 25 days at \$9.50		237.50
By hay sold, 6 tons at \$6		36
By wheat sold, 1000 bus. at 80c.		800
By wheat sold, 720 bus. at 90c.		648
By oats sold, 1600 bus. at 30c.		480
By interest on money in bank		24
To man for driving stook team, 25 days at \$2.50	62.50	
To household expenses	300	
To second payment on land	832	
To interest on land payments	436.80	
To sundries	50	
By oats sold 350 bus. at 30c.		105
To boy during winter, 30 days at 30c.	9	
To balance, cash in hand	78.30	
	\$3146.10	3146.10

drill at the rate of two bushels to the acre. This is done during the latter part of May. Both the oat and barley fields are harrowed after the drill. The potatoes are planted and the garden seed is sown. Breaking is then begun and the brush breaker is put into use. An average of one and a

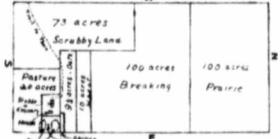


half acres is plowed per day, which continues, more or less, till July 5th. Fifty acres are broken that season. The scrub is built into piles to dry and the stones are hauled off the breaking. Discing is started and about July 21st he commences to put up hay. He buys a five-foot cut mower and a ten-foot steel rake, then with the help of his man they put up fifty loads of hay. The hay is cut on some vacant land about a mile and a half from the stable. They both work on the road for a couple of days to pay off the land tax. The barley is then ready to cut, so the farmer buys an eight-foot binder and commences his harvest about August 12th. In a few days the wheat is ripe and the oats are ready about two weeks later. He finishes cutting his oats about September 1st, and a few days later the stooking is all done.

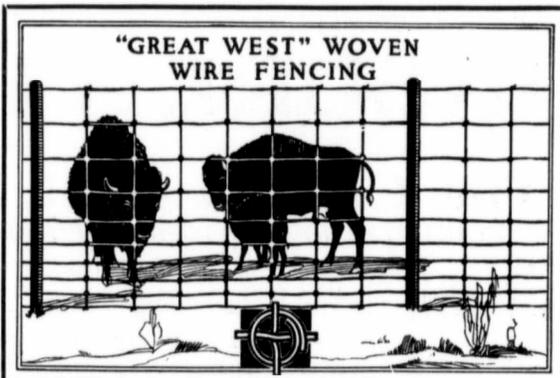


Some lumber is bought and a portable granary is built 14 feet by 14 feet by 7 feet to the plates, which will hold about 11,000 bushels of grain. The farmer threshes from the stook and the grain turns out on an average about 22 bushels of wheat to the acre, 50 bushels of oats and 35 bushels of barley. He loads two cars of oats, about 1,400 bushels in each car, from the machine. A car of wheat is also loaded. The rest of the grain is stored in the granaries. The hired man drives a stook wagon on the threshing outfit and puts in 25 days' work. The farmer stops at home and

The land is workable and the snow partially gone by April 6th. A man is hired on a seven months' agreement and the farmer pickles his wheat and commences seeding. The man follows the drill with two horses on three sections of harrows. All the hundred and forty acres of plowed land are drilled. Then seeding is stopped for a while, while seventy acres are being plowed and harrowed. The seed oats are then pickled and sown. The same amount of seed is sown to the acre as in the



other years. The remaining ten acres are then plowed and harrowed. The farmer buys some well cleaned Mensury barley and after pickling, sows it with the

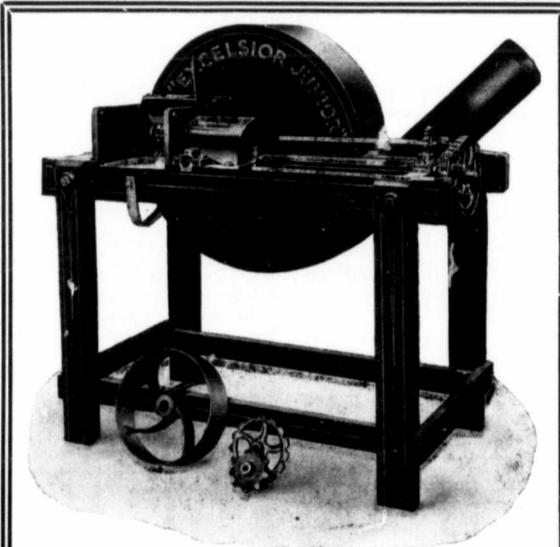


Economy is not governed by the price you pay but by the **VALUE** you receive and the results obtained. For every dollar spent on "Great West" Wire Fence you will get a dollar's value, and be more than repaid by results. Send for Illustrated Catalogue.

THE GREAT WEST WIRE FENCE CO. LIMITED
76-82 LOMBARD STREET, WINNIPEG, MAN.

Distributing Agencies—Edmonton, Alta. Race, Hunt & Giddy; Calgary, Alta. Reynolds & Jackson; Saskatoon, Sask.: Plasterers' & Builders' Supplies Ltd.

You saw this advertisement in this magazine. Don't forget to say so when writing.



Excelsior Junior Blower Feed Cutter

Just right for the farmer with from 5 to 15 head of stock. Carries feed to any part of the barn and will elevate up to 20 feet. 4 to 6 H.P. Gasoline Engine, Windmill or Sweep Horse Power will run it, cutting and elevating half to three-quarters ton per hour. Equipped with two best English Steel concave knives. Has a 9-inch throat and connection for 8-inch stove pipe, to be had at any hardware store. Furnished with 12-inch pulley. Write for free Catalogue.

- WE SELL:**
- Channel Steel Harrows
 - Wood Boss Harrows
 - Harrow Carts
 - Pulverisers
 - Lawn Goods
 - Turnip Seed Sowers
 - Warehouse Trucks
 - Double Trees and Neck
 - Fole and Cordwood Saws
 - Wheel Barrows
 - Root Pulpers
 - Grain Grinders
 - Horse Powers
 - Straw Cutters
 - HEIDER EVERSERS and
 - JANESVILLE FLOWS

John Watson Mfg. Co. WINNIPEG CANADA

You saw this advertisement in this magazine. Don't forget to say so when writing.

does some fall plowing. By the freeze up on November 5th, all the breaking has been well-diced and harrowed, the piles of scrub are burned and 110 acres of stubble land are plowed. He and his man help the neighbors to haul grain and then the man is allowed to go. Two weeks are spent brushing, and then the farmer hauls home a dozen loads of wood before March 1st. He then prepares for spring, ships a car of wheat, buys a pickler and gets his horses and implements into good shape for the busy season. During the winter he sells twenty tons of hay and also fourteen of his spring pigs, which average about 200 lbs. each. The most practical means of working this farm have been outlined. As years pass by he will develop a more intensive diversified system of farming. Cultivated grasses will be grown for feed and a rotation of crops will be established. Good cattle will be bought and fine stock raised from his grade mares. The following is his cash account and inventory at the end of the third year.

Cash Account for Third Year.

	Dr.	Cr.
By cash in hand		78.30
To man, 7 mos. at \$35	245	
To mower	58	
To rake	36	
To binder	189	
To lumber for granary	60	
To barley for seed, 20 bus. at 35c	7	
To binder twine, 550 bus. at 10c	55	
To machine oil	2	
To bran, 2400 lbs. at \$1 per 100 lb.	24	
To threshing wheat, 3080 bus. at 8c	246.40	
To threshing oats, 3500 bus. at 6c	210	
To threshing barley, 350 bus. at 7c	24.50	
To tools, shares, repairs	50	
To school taxes	24	
To household expenses	280	
To third payment on land	832	
To interest on land payments	232.96	
To boy during winter, 30 days at 30c	9	
To sundries	50	
By one man and team on outfit, 25 days at \$4.50		112.50
By oats sold, 2800 bus. at 28c		784
By wheat sold, 1000 bus. at 75c		750
By pigs sold, 14 at \$10 each		140
By hay sold, 20 tons at \$6		120
By wheat sold, 1000 bus. at 80c		800
By wheat sold, 670 bus. at 80c		536
To balance, cash in hand	679.94	
To pickler for grain	15	
	\$3320.80	3320.80

Inventory Assets.

Land—320 acres at \$25 per acre	\$8000.00
Horses—4 at \$200	800
Horse—2 Clyde grades at \$315	630
Cow—	30
Pigs—2 sows at \$25, 16 pigs at \$10	210
Poultry—100 at 40c	40
Harness—3 sets at \$32	96
Farm machinery	600
Grain—wheat, oats, barley	515
Fodder—hay, etc.	78
Fuel	36
Provisions	50
Household goods	150
By Cash	679.94
Total Assets	\$11,914.94

"There's Only One OilPull—Rumely, La Porte."



Are You Prepared For The Heavy Runs Coming This Fall

With "bumper crops" in sight---there'll be big threshing jobs.

Already big, powerful OilPulls and shining, new Rumely Separators are being delivered into the field in answer to the popular call for bigger, more powerful machines of the dependable sort; the kind that satisfy both the thresherman and his customer.

OilPull (30-60) has been a big factor in opening up the Canadian Northwest on account of the wonderful power developed from the cheapest of kerosene and crude oils; it has also gained much favor among threshermen and is prepared to make some worthy records this fall in the grain fields.

OilPull has that steady, forceful power due to the SECOR-HIGGINS PATENTED CARBURETOR which regulates, automatically, both the fuel-mixture and the fuel-supply; changing instantly upon the slightest variation in the load. OilPull cannot race; it will never balk.

The Canadian Rumely-Ideal Separator is built in Toronto to meet Canadian threshing conditions. It is already well known as a get-all-the-grain separator; is speedy and clean in its work, and has big, generous straw racks and grain pans. Cylinder and concaves are kept well cleared all the time making fast work possible.

Any man who ever operated a Rumely-Ideal can tell you of its exceptional threshing qualities. Let us send you our new books on the OilPull and the Rumely-Ideal Separators. Write any one of our Branches.

Rumely Products Co.

(INCORPORATED)

Power Farming Machinery

TORONTO, Ont.

ESTEVAN, Sask.

REGINA, Sask.

SASKATOON, Sask.

YORKTON, Sask.

La Porte



Indiana

CALGARY, Alta.

EDMONTON, Alta.

VANCOUVER, B.C.

BRANDON, Man.

WINNIPEG, Man.

AD-752

Liabilities.

Payments on the land	2496.00
Six months interest on fourth payment	87.36
Total Liabilities	\$2583.36
Assets	\$11,914.94
Liabilities	2,583.36
Net Worth	\$9331.58



Harrow While You Plow

In this day and generation it is the aim of every farmer whose ambition it is to get along and make some money to perform his different farm operations in the shortest possible time. It is especially true in Western Canada where climatic conditions render the season unusually short.

If it were possible for the farmer to plow, seed, harrow and disc all in one operation, and do it economically it would be the ideal way. This however is not

always possible, as it requires a complete tractor equipment, and not all of our farmers are financially able to carry such a burden. However when you cannot have a whole loaf it is well to be content with a half, and in this connection we would like to call the attention of our readers to the Christiansen Harrow Attachment.

This is an attachment for use behind gang plows, whereby the harrowing and plowing can be done with the one operation.

It is a well known fact that no time is the soil in as good a condition to harrow as when it is first plowed. The furrow slice, when exposed to the atmosphere and not levelled off, permits of an unusual evaporation of the soil moisture. In fact when the furrow slice is left exposed in this way several tons of water will evaporate per acre in a few hours.

The Christiansen Harrow Attachment prevents this and at the same time performs a tillage operation that later on requires considerable time and power. The Christiansen Harrow Attachment requires practically no extra horse power and is so attached that it does not influence the draft of the plow.

The machine itself is no experiment, having been in use for several years both in Canada and across the line. It will be thoroughly demonstrated at the Brandon Plowing Match, which is to be held at Brandon.

The Christiansen Harrow Co. also manufacture a full and complete line of drag harrows both for horse and engine use. Their engine harrow, which is designed to attach behind an engine gang plow, is unique in its construction in this class of tool.

Bridging The Gulf Between Producer and Consumer of Food Stuffs

By JOHN H. McCULLOUGH, Manitoba Agricultural College.

NO more important question can confront our present day economists than that of narrowing and bridging successfully, the great gulf which lies between the producer and consumer of food-stuffs.

The great cry of the consumer, ever since the success of specialization in the production of food-stuffs was first promulgated, has been to annihilate the existing class, commonly termed "parasitic middlemen." Indeed, a great many of our social reformers believe that the fact that there is a gap between producer and consumer is a social anomaly, an injustice to the producers and consumers, the classes which make successful industry possible.

Let us take a brief retrospect of industrial conditions, in order to ascertain how and why this greatly to be deplored gulf was formed.

In the early days, before any division of labor had been thought of; when a man's personal subsistence was his chief anxiety, there existed no social problems beyond that of the feeding and clothing of the individual by the individual. The primitive farmer grew his own vegetables and cereals. He made his flour from the cereals by hand, pounding the grain to powder between large stones. He killed his own cattle to provide himself and his family with beef; raised his own sheep, from which he obtained the wool, which, when woven, furnished the necessary clothing for himself and his family. Thus it can be seen that in those inclement days there existed no gulf between producer and consumer; the two were synonymous.

As civilization developed, however, it was discovered that a certain individual could manufacture or produce a certain article more efficiently, and at less cost, than his neighbors, and so he eventually became the sole or chief producer of that article, exchanging the product of his brain and brawn for other goods which he considered of equal value. Simultaneous with the adoption of this crude form of specialization by our early ancestors, we have the inception of the middleman. The present gap is the result of a gradual evolution. The individual has been replaced by companies; the hand loom has been supplanted by the most intricate machinery; exchange is

promoted by the various agencies, which, collectively, constitute the middlemen of the present day. The middlemen; then, are the influence most potent in determining the width of this gulf.

To the pessimistic economist the present gulf seems inevitable; a social condition consistent with present day progressiveness; in short, a necessary evil. Such a view, however, cannot be accepted, or even approved of, by the majority of our economists. Such a condition which the pessimist thinks tolerable, even compatible to the producer and consumer, is not ethically commendable in our advanced ideas

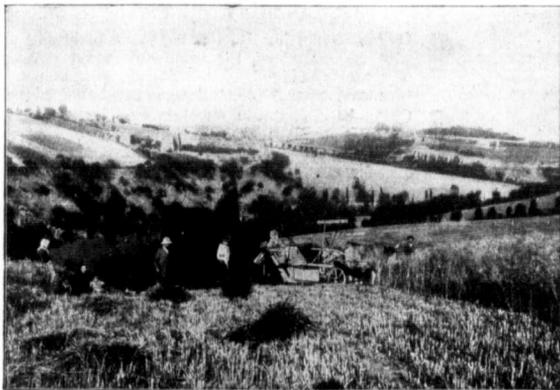
reached such a stage, that they are regarded by many as a menace to economical trade, and indeed, their present demands induce one to believe that this supposition is correct. Thus, while it would not be logical to advocate the elimination of the gap between producer and consumer, the question of bridging it can be considered, and this bridge can best be constructed by the modification and control of the class which constitute the gap.

Foremost among the conditions which tend to increase this gulf is the international restriction or tariff wall. Primarily introduced

the price in Protectionist France. We find that in France the price of the best Canadian wheat is one dollar, seven and a half cents per bushel, while in Great Britain, with her unrestricted markets, it costs only one dollar and five cents per bushel. This difference is a concrete tribute to the efficiency of free trade, and shows, that for the many food-stuffs derived from wheat, France must necessarily pay more than Great Britain. There is no doubt but that many articles of food could be produced in Canada just as cheaply as they could be in other countries, but the high tariff wall prohibits competition from outside sources, enabling our home manufacturers to hold their prices up.

Canada, according to protectionist doctrines would, without her tariff wall, be at the mercy of competitive nations, who would flood our markets with their surplus, and at the same time erect an impassable barrier to our products. The protectionist affirms, that, under reciprocity with the United States, for instance, the farmers of Canada would be participating in an international exchange of products which would be decidedly favorable to the United States. The fallacy of this argument is soon obvious. By a reciprocal agreement with the United States we have thrown open to us the vast and varied productions of a country which is marvelously rich in natural and potential resources; country from which we now import, notwithstanding the existing tariff wall, goods to the value of millions of dollars, which in return we supply their markets with the grain of our Western prairies. In this way the two adjacent countries would interact to their mutual advantage, the south supplying the north with products which the north can never produce, while the north supplies the south with the finest quality of wheat and other cereals, which the south requires; and for which it is willing to pay. With the adoption of reciprocity then, we reduce the price of imported food-stuffs to a great extent, thereby materially narrowing the gulf between producer and consumer.

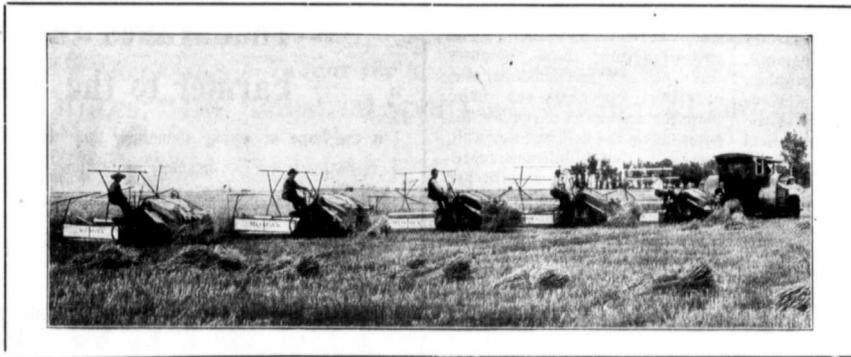
Most of our food-stuffs, from the time they leave their source of production till they are finally bought by the consumer are



In Sunny France where no Land is Wasted

of sociology. It is all very well for individuals of such tendencies to assert that the profits made by the middlemen are only commensurate with the importance of the function they perform, and that the middlemen are therefore entitled to high compensation for their genius and initiative. But, if they were to examine present day statistics, showing the exact profits made by the middlemen, the incongruity of the comparison between existing conditions and his assertions would render his conviction ludicrous. On the other hand, it must be admitted that the middleman is a necessity in modern methods of industry. To have an industry carried on in a satisfactory manner we must have specialization, and with specialization we must necessarily have the middlemen. Without them trade would stagnate. The middlemen, however, have developed to such an extent, and their influence has

to check the importation of certain goods from other countries, this unjustifiable form of protection is making the cost of many food-stuffs much higher to Canadians than would otherwise be the case. There cannot be any satisfactory explanation given as to why food-stuffs, coming over the international boundary between the United States and Canada, should have their value enhanced by an illegitimate tax which affects most seriously those people who are at least able to bear this increased price. Any form of protection which asserts itself in the form of a tax on food-stuffs, which we are importing for our own consumption, is economically unsound, and disastrous in its operation. As a striking example of the benefits of free trade, and incidentally, of the evils of protection, let us consider the cost of wheat in Great Britain at the present time, as compared with



Doing Farm Work at a Profit to the Dealer

It is our business to provide farmers with machines and tools that will **do farm work.**

More than that, the machines we sell must do farm work **at a profit** to the farmer.

Whatever measure of success has come to us is due to our constant holding of these two principles above every other consideration in the conduct of our business.

We sell machines that do farm work at a profit to the farmer.

Take for example IHC Oil Tractors. The farm work they do consists of furnishing power for plowing, diskings, hauling, seeding, rolling, harvesting, threshing and harrowing. Besides this distinctively farm work they are widely used for road grading and building, rock crushing, concrete mixing, well drilling, pile driving, and for many other such uses where a self-moving power outfit is desired.

They do this work at a profit because we make them efficient and reliable. A 15-30 IHC Oil Tractor plowing outfit will plow a strip five to seven feet wide at each trip down the field. How many horses and men would it take to accomplish that result? You can easily figure for yourself the saving in time and money that results from the use of an IHC Tractor, because there is an equal saving in practically every operation performed by the tractor.

The shrewdness and common sense which have made you a successful thresherman or farmer will guide you in determining when to

buy a tractor and will decide for you which tractor it will pay you best to buy.

It may help you to decide right to know that IHC Tractors, like all other IHC machines, are built primarily to make a profit for the user, and it will surely help you to decide on an IHC Tractor to know that we can show proof after proof of their efficiency and reliability, probably right among the neighbors whose conditions are the same as yours and in whose judgment you have confidence.

IHC Oil Tractors are built in all approved sizes from 6-12 to 30-60 h.p. They operate on kerosene and gasoline. They are amply protected from dirt and grit. They furnish more than their rated horse power, and there are many other good reasons why it will pay you to buy an IHC Oil Tractor.

If you need a tractor you are losing money every day you neglect to buy one. If you do not know whether you need one or not, or if you think you do but are not sure what kind and size will pay you best, drop us a line and we will put you on the right track.

International Harvester Company of Canada, Limited

WESTERN BRANCH HOUSES

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

handled by a swarm of middlemen, each extracting a considerable profit with the obvious result that the article is exceedingly high. If the profits which each middleman extracted were legitimate, then this lamentable imposition on the consumer would not exist, and the farmer or market gardener, for instance, would have no reason to complain of the low price he receives for his produce. Looking at the matter, however, from a statistical standpoint; we find that this extensive profit extracting by the numerous middlemen, in the passage of food from the farm or garden to the table, is, for the most part, illegitimate. Take, as an example of this practice, a barrel of apples in its course from the orchard in Ontario to the consumer in Winnipeg. The grower in Ontario receives seventy cents for the barrel of apples. The barrel cost him forty-five cents, and picking, packing, and carriage cost him, approximately, forty cents, so that a barrel of apples, F.O.B. at the Ontario shipping point, represents a dollar and fifty-five cents. It costs seventy-nine and a fraction cents to ship this barrel of apples from Ontario to Winnipeg, a distance of, approximately, thirteen hundred and twenty miles. The retail price of apples in Winnipeg on December the 27th was five dollars and twenty-five cents. The cost of getting this barrel of apples then, from the car in Winnipeg to the Winnipeg consumer, was two dollars and ninety cents a barrel, or a percentage of distribution cost of fifty-five and four-tenths in getting this barrel from the wholesaler to the consumer.

This unwarranted handling and profit-taking is typical, not only in the case of fruit, but of almost all household necessities. During the last few months there has been a general declamation of the residents of large cities, both in the United States and Canada, against the unjust levies made by the middlemen, with the result that many investigations have taken place, which have led us to believe that the citizens of large cities are justified in combating vigorously this wholesale penalizing of common necessities by the innumerable middlemen. To anyone who has given the question of cheaper food any consideration, it must be apparent that a drastic charge is absolutely necessary in order to eliminate, or at least, appreciably mitigate, such unjust sequestrations.

The conditions with which the farmer or market gardener, living in close proximity to Winnipeg has to contend, show clearly how unduly wide the commercial gulf is in certain parts of Western Canada. The farmer's price for

potatoes, F.O.B. cars at Stonewall, Manitoba, is thirty cents a bushel. The freight per bushel to Winnipeg, a distance of twenty miles, is a fraction over three cents. When the purchaser in Winnipeg buys those potatoes from the grocer, they cost him sixty-five cents a bushel. The cost of getting these potatoes from the car to the consumer was over thirty-one cents, or more than the farmer received for his potatoes on the cars at Stonewall, therefore, the middlemen represent forty-eight and a third per cent of the cost of distribution; or, in other words, the middlemen make the cost of potatoes to the consumer, more than twice the price received by the producer.

In a similar manner the middlemen intervene between the producers and consumers of all kinds of garden truck; the market gardener of Kildonan or St. Vital receiving a mere pittance for his produce, while the consumer, on the other hand, has to pay an unreasonable price for the same produce when bought from the ultimate seller.

These figures are taken from actual conditions existing in the city of Winnipeg this winter, and, with reasonable allowances for local fluctuations, can be regarded as typical of most of our Western cities.

Various theories have been advanced as adequate solutions to the problems which exist in our cities as regards cheaper food, and the majority of these advocate co-operation, both on the part of the producer and consumer, and when we consider how the gulf between producer and consumer in Denmark has been so adequately bridged by a system of co-operation, there can be no hesitation in advocating it as a remedy for many of our conditions which cause this gulf. Mr. McNeil, chief of the Dominion fruit department, whose opinion should be authoritative on the matter, has stated that, by such co-operation, apples imported from Ontario should sell in Winnipeg at about three dollars a barrel. In Winnipeg last winter, the Million for Manitoba League conducted, as an experiment, an open market. The result was an unqualified success. By this method the market gardener or farmer is brought into direct contact with the consumer, with the result that the producer is able to sell his produce at a price consistent with the amount of labor expended in the production of the article, while the consumer is able to procure the article at a price which is far below that asked by the middleman. This experiment demonstrated that a system of open markets such as those existing in many of the cities of

The One Thing

That Takes the Farmer to the Fair

is the hope of seeing something that will help him in his
business of farming

At Every Important
Agricultural Show of 1913

The STEWART SHEAF LOADER



will be the "drawing-card" above all others that has brought serious men together since the self-binder was exhibited to the farming world.

This is the Machine that is Guaranteed to Reduce your Harvesting Expenses—To get your grain crop threshed in time—To leave a cleaner field than is possible by any other means, and to save you all the worry, uncertainty and ruinous waste of hiring a mob of inexperienced "hands" at harvest time.

THE MEN BEHIND IT

or their responsible deputies will be there also—to respond to the most searching inquiry as to its actual performance; to demonstrate these with the machine itself where local facilities enable them to do so, and to challenge any competitor or sceptic who would question any claim we make for the machine.

If You Can't be at the Fair

Remember that the factory and permanent address is

The Stewart Sheaf Loader Co. Ltd.

804 TRUST AND LOAN BUILDING, WINNIPEG

You saw this advertisement in this magazine. Don't forget to say so when writing.

La Compagnie Desjardins Famous Small Threshing Machines

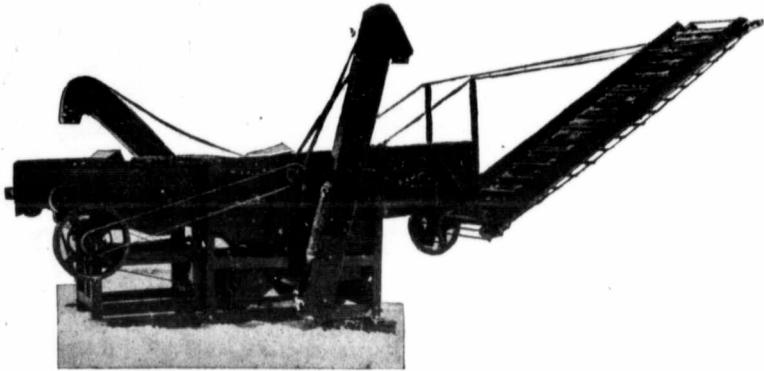
"THE CALL OF THE WEST" Sold by

A. STANLEY JONES :: North Battleford, Saskatchewan

General Sales Agent for Saskatchewan and Manitoba

Offices: "The Industrial Spur East" Phone 223 and 220

Prices from \$425.00 to \$680.00 including engine, separator and all belts, carriage paid to any point in SASKATCHEWAN. It can all be mounted on one good wagon complete. Capacity from 400 of wheat to 600 or 700, and of oats from 700 to 1500 and more according to size taken. The \$680.00 outfit will easily thresh 600 of wheat and as much as 1500 of oats if in average grain and fed properly, although only sold to thresh 600 to 800 of grain. If you have any size farm your usual threshing bill will be more than your payment on this machine. La Compagnie Desjardins have made these machines since 1864 and were the original makers of the Champion, but owing to the makers of other machines calling their Champions we have called ours by what it proved to be last year—



"THE CALL OF THE WEST"

We make every bit of it. Don't buy any other machine or any sort of small outfit till you have had my prices. Outfits on show in running order at North Battleford. Drop a card RIGHT NOW.

You saw this advertisement in this magazine. Don't forget to say so when writing.

Great Britain, would be going a long way towards bridging the gulf which is so noticeably wide in our cities. Another alternative, which has been strongly recommended by representative newspapers, is the establishment of adequate cold storage facilities, by the city and provincial governments jointly. The inauguration of such plants by our cities, would, no doubt, materially reduce prices of vegetables and dairy products during the winter months. These three remedies, co-operation, open markets, and adequate cold storage facilities, if instituted, would be greatly instrumental in reducing the present high cost of food-stuffs, and would have a two-fold result, that of giving the producer more for his labor, thereby encouraging more extensive production, and bringing the products of the farm and market garden within the reach of those who, under the present conditions, are unable to buy even some of the most simple necessities during the winter months.

Another great factor, which, in its relation to the present subject, must necessarily, call for discussion, is that of transportation. From time to time there have been agitations of the public seeking to mitigate the existing

harsh freight rates which the railways invariably charge, and although every commission appointed to investigate these high freight rates has been met with mystifying arguments diplomatically arranged by the legal representatives of the railways, the public still remain unconvinced and dissatisfied. The railways claim that their rates are as low as they can be to allow a working profit to the company, but the truth of this statement is challenged by a comparison of freight rates in this country with those of the United States, which shows, that, on the average, we pay about one quarter more, while the running expenses are lower. Again, with all respect for this attitude maintained by the railways, we find that their rates are not at all uniform, or, in other words, the railway companies are guilty of discrimination. For instance, we can ship a car load of cattle from any part of Ontario to any point in the West at an eighty-one cent rate, regardless of a greater or less distance, while, if it is necessary to reship for fifty or a hundred miles in the West, the charge is, roughly speaking, almost one-fifth more than the former rate. In other words, the railways haul a car around Lake Superior at approxi-

mately ten cents a mile, while on the prairies the shipper has to pay almost one and one fifth times that amount. Here we have evidence of our inconsistency which is far from hypothetical, and difficult to justify. If the hauling of freight around the Lakes is profitable at a certain rate, there can be no reason given as to why the same freight cannot be hauled at the same or even lower, rate, in the settled districts.

The remedy for this condition is simple, and consists in the appointment of a body of select men, who are given plenary power to investigate conditions as they exist, with special reference to freight rates, whose reports and recommendations will be given the widest publicity, and whose recommendations shall find expression in law.

Existing in close league with the railways we have trusts, combines, monopolies, and mergers, which, although in reality are middlemen, have, on account of the enormous capital at their disposal, a powerful influence in depressing or inflating the prices of food-stuffs. This abuse of capital leads to complications in the markets which invariably have the result of causing prices to soar, and these illegal practices

are responsible for the feeling of resentment which the public rightly entertain against them. According to the conviction of James J. Hill, combines are a necessity in modern conditions. Indeed, he goes so far as to say that it is as useless to propose doing without them as it would be to go back to the horse car, or to insist that the shoemaker at his bench should make the entire amount of footwear used by all the people of the United States. This statement, however, invites some criticism. So far as the people are concerned, they do not derive one iota of benefit from such consolidations and extracting of profits whereby individual competition and enterprise is prohibited. Granting that wisely conducted trusts could lessen the cost of production by making large savings in freight rates, in running the best plants at full capacity, in the more advantageous distribution of material and orders so as to save labor; in the most effective use of the ability of experts and of superintendents by giving to each the opportunity to spend his full time on work for which he is best equipped; in doing away with competitive advertising; with useless duplication of selling agents and of other classes of a labor force, and

in many other ways, the fact remains that in nearly all cases the trust manufacturers do not attempt to lower their selling price to an extent corresponding to the saving in the cost of production; but their tendency has been to increase the price, in this way assisting in the widening of the gulf between producer and consumer, the bridging of which this article deals with.

Weapons ready to hand in defending our communities against trusts, combines, monopolies, and mergers, are the already existing state laws embodied in the Sherman anti-trust statutes of the United States, and the Canadian method of restriction of a similar nature. As these already exist, what we require is a steady, unflinching prosecution of all offenders, irrespective of their wealth or political influence. There are numerous other agencies which tend to increase the gulf between producer and consumer, some of these being quite avoidable, while others are unavoidable. We might suggest the preventing of waste in producing. This is very noticeable, especially in the farming industry, and has the result of supplanting the aforementioned larger agencies in raising the cost of food-stuffs.

Another avoidable cause of high prices is speculation. Speculation in many cases causes a depreciation of bank deposits, which causes a scarcity of money, with consequent restriction of trade. This incidentally gives rise to the building up of the credit system, which means bad debts, which, in turn, require compensation by increasing the cost of goods. Speculation is, of course, hard to restrict, but such a measure as Land Value Taxation, for instance, would, in the cities especially, discourage extensive speculation, and so modify this evil to a great extent.

Under unavoidable causes we might mention the increased output of gold, which fact, lowering the value of this commodity of exchange, induces the purchaser to give more gold for an article than he would under normal conditions. In the production and handling of all food-stuffs we are subject to losses, which may be caused in many ways, such as by destructive climatic conditions or accidents of transportation, which must be compensated for, and it follows, as a logical sequence, that this loss must be made up in an increased price, levied by the party who sustains the loss.

The irregularity of supply and demand has also a decided tendency to make prices vary, and so widening the gulf. Where capital is required to hold produce throughout the year, ac-

ording to the uniformity of the consumers' demand, there must necessarily be a large amount of interest paid on this capital, with a resulting leap in price at the time when the capitalist buys this produce, in order that he may receive adequate profit. This is very noticeable in the marketing of wheat every fall. Although this condition is not destined to be a permanent evil, yet, considering the position of the majority of our farmers from a financial standpoint today, we must classify it as practically unavoidable.

It has been the purpose of this article to enumerate some of the main factors which militate against a natural movement of our food-stuffs from their source of production to the consumer. Tabulated statistics have been purposely avoided. Instead, some of the glaring irregularities have been exposed by a simple statement of the facts, taken from reliable authorities.

Most of the arguments presented have been of an analytical and destructive nature, but it has been the effort of the writer to offer sound remedies to counteract the illegitimate influence which is excited on the market by middlemen, and in conclusion these amendments are again enumerated in a concise form:

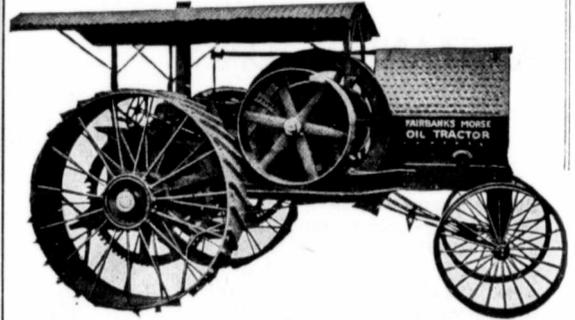
- First; The lowering of the existing tariff wall.
- Secondly;
 - a. The adoption of co-operation by producers and consumers.
 - b. Open city markets.
 - c. Adequate cold storage facilities.
- Thirdly; The increasing of the power which the present railway commission already possess, in order to combat excessive discrimination, such as is now practiced in the West.
- Fourthly; The unflinching prosecution of all combinations of a predatory nature, such as trusts, combines, monopolies and mergers.
- Fifthly; The advocacy of business-like methods to prevent loss in producing.
- Sixthly; The restriction of speculation by a system of Land Value Taxation as a preventive of the credit system and resulting high prices.



Lawyer (to witness from the country, after much cross-examination): "You're a nice fellow, aren't you?"

Witness: "I am, and if I wasn't on my oath, I'd say the same thing of you."

The Tractor That's Best for the Needs of the West



FAIRBANKS-MORSE OIL TRACTOR

Uses Cheap Fuel Oil in Place of Expensive Gasoline Gives Perfect Results and Runs at Much Lower Expense. Fully Guaranteed. Write for FREE Catalogue.

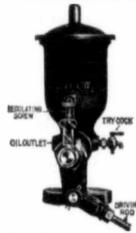
WE MANUFACTURE

Fairbanks-Morse Oil Tractors, 15-30, 20-40 and 30-60 H.P. Gasoline Engines (all types), Portable and Stationary, 1 to 500 H.P. Marine Engines, 2 and 4 Cycle, 1 to 4 Cylinders. Binder Engines, adapted to all makes of Binders. Hand and Power Pumps for every purpose. Truck and Pitless Waggon Scales.

The Canadian Fairbanks-Morse Co., Limited
WINNIPEG - REGINA - SASKATOON - CALGARY
Montreal - St. John - Ottawa - Toronto - Vancouver - Victoria

You saw this advertisement in this magazine. Don't forget to say so when writing.

Yes, The Weather Is Hot But, Cold Weather Is Coming



It is well to keep this fact in mind when you are contemplating buying an oil pump.

THE PRACTICAL FORCE-FEED OIL PUMP

"THE GREAT COLD WEATHER LUBRICATOR"

IS GUARANTEED to handle any grade of oil, and do its work equally as well in extreme cold weather as in hot weather. There is nothing to freeze—no draining to be done.

Furthermore, when placing an order for a Practical Oil Pump, you may depend upon it that you are getting a pump that is a pump and not a mechanical toy. IT HAS NO RATCHET WHEEL, pawls, springs, eccentrics or anything of that sort to cause trouble. Only two pieces do the pumping and made adjustable for wear. Nothing could be more simple—entire pump can be taken apart and put together in ten minutes—a monkey-wrench the only tool needed.

GUARANTEED to furnish plenty of oil for, and properly lubricate a traction engine of any make or size, single, double, or compound.

Sold with or without sight-feed attachment. Write for catalogue, prices, and full information

McCULLOUGH MANUFACTURING CO., Minneapolis, Minn., U.S.A.

CRANE & ORDWAY CO.

WINNIPEG, MAN.

Distributing Agents for Western Canada.

You saw this advertisement in this magazine. Don't forget to say so when writing.

Remember to renew your Subscription

**Kill Flies Early
One Destroyed Now Prevents
Countless Millions Later**

"One dead fly in the spring is worth a million in the summer," say scientists. "A mature fly in April may be the ancestor of over six billion flies by the first of September, according to a careful scientific calculation. The young flies killed in April have had few offspring and that is the time they should be annihilated. The killing of all the winter flies would do away with the great work required in the summer."

Now that house-cleaning time is upon us and doors and windows are left wide open, we are subject to the pests in numbers. One of the easiest ways of preventing discomfort and fly infection is to spread a sheet of old-fashioned Tanglefoot in the window. Pull down the shades and leave the sheet of Tanglefoot in the edge of the sunlight where the flies will be attracted. This is a most effective method, as the sticky coating on the paper not only kills the fly, but covers it with a varnish which will also destroy the germ on the fly.

The use of poisons is risky, especially where there are children. So many fatalities have been reported from their use that in several states their sale is forbidden except by registered pharmacists.

In regions infested by fleas, a small piece of liver laid in the center of a sheet of Tanglefoot will effectually rid one of these pests.

There are a number of different species of flies, but the one known as the house fly, or musca domestica, is most frequently found in the house. These flies usually breed in manure piles, garbage cans, etc. Coming from these places to your dining room table, it is easily seen how sickness and disease are carried.

Don't let a single fly escape. Use Tanglefoot liberally wherever you see a fly, and you will avoid discomfort and ill-health throughout the summer.



One of Nature's Gentlemen

Outside his shop the butcher was parading up and down, when he was accosted by a wild-eyed, angry little man.

"You keep beefsteak?" snapped the new-comer hurriedly.

"Yes, sir," answered the man of meat humbly.

"And is beefsteak good for a black eye?" came the next question.

"The best thing in the world, sir."

"Then send two pounds to Mr. Riley up in Jones Street. I'm

going to blacken both his optics. Good evening!"



Twenty minutes later a torn, dishevelled, weary man, minus



The only building material that has not increased in price is

CANADA Portland CEMENT

It makes concrete that you can depend upon for satisfactory results, whether you use it for a silo or a garden walk.

High quality and low price are made possible by efficient organization and manufacturing economies due to a large and growing demand.

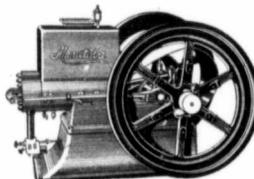
See that every bag of cement you buy bears the "Canada" label—it is your guarantee of satisfaction.

Canada Cement Company Limited, Montreal
Write for a free copy of the book "What the Farmer Can Do With Concrete."

You saw this advertisement in this magazine. Don't forget to say so when writing.

Manitoba ENGINES

PASS EVERY TEST!



When you're thinking of buying an engine, don't forget that the cost of operation is far more important than price. Consider the cost of running, how much for repairs, how much time and attention needed, and **ABOVE ALL**, "Will it run just as well in midwinter!"

A **MANITOBA Engine** will run as cheaply as any ever built, will cost far less for repairs than an inferior machine, requires very little attention, and **ABOVE ALL**, will run just as well in zero weather as in July. The **MANITOBA** is the right kind of engine. It runs smoothly, quietly, has the power, gives no trouble, is economical, and makes good generally. Our engine catalogue is yours for the asking and it's worth having because it tells the facts. Write for a copy today.

WE MANUFACTURE:
Gasoline Engines, 1½ to 25 H.P. Wood and Iron Pumps. Grain Grinders, 6 to 12 inches.
Wood Saws, all sizes. Pumping and Power Windmills, 8 to 14 feet.

"Made in the West for Western Needs."

MANITOBA ENGINES LIMITED

BRANDON, MAN. SASKATOON, SASK. CALGARY, ALTA.

You saw this advertisement in this magazine. Don't forget to say so when writing.

his collar and tie, appeared before the butcher. His nose was battered, and his eyes were blackened. 'Twas the same man.

"Have you sent Riley's beefsteak yet?" he gasped. "Not yet," came the reply. "Then give it to me. Mr. Riley's a gentleman; he said I could have it."

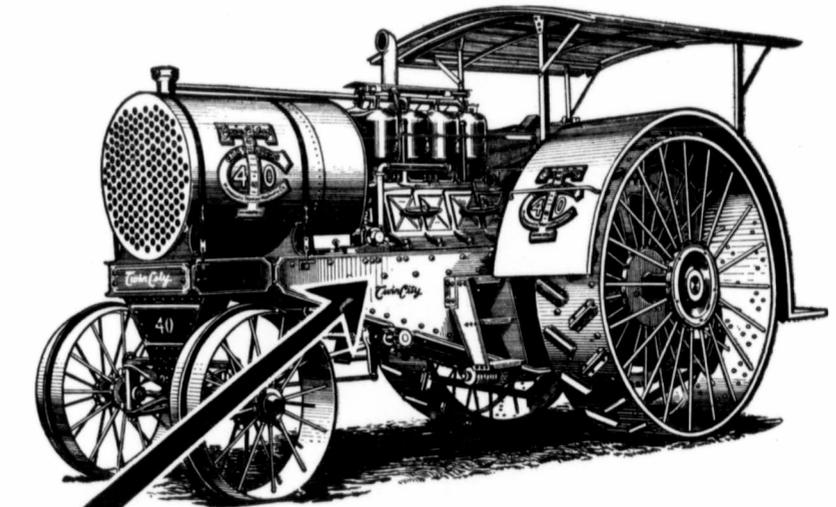
Abortion and Barrenness in Animals

There is no Specific for Either Trouble

Notwithstanding a widely prevalent opinion to the contrary, skilled veterinarians are agreed that there is no specific for either abortion or barrenness, nor can there ever be one for the latter condition, seeing that it is due to one or another of a host of different causes, for which no drug or combination of drugs can possibly be effectual. For example, in many instances barrenness is due to a closed condition of the mouth of the womb, and for that condition it is absolutely necessary to operate by opening the mouth of the womb before service. In other cases there may be a "persistent hymen," or a fold of membrane closing the vaginal passage and preventing conception. An operation is necessary to obviate such a condition. Again, contagious abortion germs may be, and often are, the cause of barrenness, and no specific treatment or remedy has thus far been discovered for this, although the greatest scientists of the bacteriological and pathological professions are working on the problem and hope to succeed ere long. Any one advertising cures or dopes can readily obtain flattering testimonials. The dope is used; the animal conceives or carries her calf, and the dope gets the credit, while nature did the work.

Here is an example of this in the experience of a veterinarian: A cow failed for years to conceive, although she came in heat regularly and was regularly bred. The owner tried every advertised dope for the trouble; then appealed to the veterinarian, and he at once sent the owner some phosphate of soda powders, with which drug he was experimenting at the time. He also sent him full directions for use. The powders reached the owner of the cow. He laid them on his desk and walked out to the barn to tell the men that they had come and were to be used; but learned that just a minute before the cow had been bred. The cow conceived from the service, and the owner wrote to the veterinarian as follows: "Your new powders are a marvelous discovery. The fact that they arrived on my farm was sufficient. The cow conceived before we could use the dope." Now supposing the powders had been used. What a testimonial it would have been!

It is just that sort of coincidence that gives the proprietary dope men their reputation and profit. We hear little or nothing of the thousands of failures they



That Steel Frame

is the sturdiest piece of construction ever put into a traction engine. It is made of steel ship channels and steel plates—"built like a bridge"—riveted, not bolted together, and braced with steel angles. It's impossible for even the most excessive vibrations of the engine to loosen it, impossible for the severest pulling strains to break it. This rigidity reduces wear on the bearings and gears by preventing vibration from the motor.

And yet even with its unusual strength and steel construction it is a lighter tractor per horse power than any other tractor. Uses less of its power to pull its own weight—has a greater pulling power.

Twin City Tractors

Two Sizes—25 and 40 Tractive H.P. Burn Kerosene or Gasoline

The general design—motor in centre of frame, three point suspension, rear wheels turning on a live axle, gives the Twin City Tractor a durability and a well balanced steadiness of motion not found in any other type of construction; permits easy

"travelling" over both rough and smooth ground.

It has many other qualities which are worth your most careful consideration. They are explained in our Tractor Book 10-J. Write for it.

Minneapolis Steel & Machinery Co. of Canada, Ltd.

Caddy self-steering device operates on Twin City Tractor

REGINA
SASKATCHEWAN

We also conduct a Tractor School

You saw this advertisement in this magazine. Don't forget to say so when writing.

are aware of, but their few successes, or apparent successes, are advertised world-wide. In just the same way one hears of the man who suddenly has made a "killing" on the Board of Trade or in the bucket shop; but not a word about the host of the down-and-out speculators and gamblers, who wear fringes on their trousers and eat "hot dog" in the saloon.

Don't criticise. It is the peculiar faculty of fools to describe the faults of others, at the same time forgetting their own.

**FARM LIGHTING PLANTS
ELECTRIC AND GAS LIGHTING**

Dynamos Motors Storage Batteries

Write for information. We will estimate the cost of installation and cost of upkeep for you. Several plants to choose from.

Thomson Electric Company
372 PORTAGE AVE. WINNIPEG, MAN.

Mention this magazine when writing advertisers.

BIBLE HELPS

Earnest Bible Students may harmonize the Scriptures by reading our Booklet "About Hell." Based on the latest authorities. The last word on this important subject, with other valuable information. Price ten cents. (To the poor free).

INTERNATIONAL BIBLE STUDENTS
ASSOCIATION
59 Alloway Avenue, Winnipeg

Mention this magazine when writing advertisers.

Heider

Heider mowers are best by every test. Used by thousands of farmers because they are mechanically perfect. Made of best material. Work better and last longer than any other. The Horse Wagon Evener will lay loader makes hay easy. Can be used on any wagon. Wages, manure spreader, grain drill or implement with pole. We also manufacture complete line of plow eveners for 2, 4, 6 or 8 horses. Write on doubletree, singletree, neck yokes, etc.

Ask Your Dealer for Heider eveners or don't experiment with a substitute. Write for our Free catalogue. Address: HEIDER MFG. CO., 725 Main St. Carroll, Iowa.

Eveners

Mention this magazine when writing advertisers.

The Automobile

Too many men look on the auto as a fearfully complicated piece of mechanism, always out of order and expensive to keep in running condition. As a practical repairman, I can say that no other machine has stood as much abuse and stood it so well as the automobile. Really, a good machine properly treated is as cheap in operation as a horse and buggy and much more convenient.

In taking care of a machine one should always let it alone till it needs attention, especially true is this of the carburetor and magneto. The latter may only need oiling once every 500 or 1,000 miles, while the less the amateur monkeys with it the better. About every two weeks it is wise to run a small quantity of kerosene through the engine; this loosens all carbon formations.

In regard to tires: Be sure and purchase sufficiently large tires in the beginning; then keep them inflated to the pressure which the manufacturers have stamped on the outside, keep all grease and oil off and never wash the tires with gasoline. The man at the wheel plays an important part in tire economy, and, by careful driving, can reduce the expenses to a point where the average farmer can well afford to enjoy the pleasures to be derived from the auto. R.O.K.

Take a Day Off

Mr. Farmer, because you have the best business in the world, why do you never take a day off and go fishing and rest and have some fun? You'll come home and do more and be in better condition to be decent to your family. You seem to be in a terrible hurry to live your life out and go die! Why? Why? and three times why? You say you can't get time for anything but work. You know you are not telling the truth. You can do whatever you want to do if you really want to do it bad enough. How many times during the summer do you say to your family: "Come on all hands, we'll go to the lake and have a time?" Will your children recall their childhood days with joy and smiles and laughter or will it be with a shudder at the remembrance of a grouchy father, getting all the day's work possible out of every member of his family?

The most prosperous farmers seem to be the ones whom you see taking a day off now and then

The Hired Help Takes the Cream Off The Harvest

BECAUSE you've got to take what's going—when it's going. What's going is, for the greater part, inexperienced, inefficient, but very expensive service—when it's going. And you can reckon with greater certainty on the winds of heaven than you can on the disposition and drift of the average hired hand when your crop is ready to thresh. No advertisement can tell you so well about what this means as your own experience does. You cannot help it unless you have a

Stewart Sheaf Loader

The Stewart Sheaf Loader in two brief seasons has meant to several hundreds of farmers who used it instead of hand-pitchers, just the difference between a dead loss and a splendid profit in their harvest. These men are delighted to testify as to the wonderful results of the Loader. We continue to receive congratulatory letters and can provide many scores of affidavits of well known farmers substantiating the last thing we claim for the Stewart Sheaf Loader. You can see them and see their accounts, too.



Elmer Graham, Dominion City, Man.: "It has not cost me anything for repairs, and again efficiency in this, its second season."

Elizabeth Farm Co. Tilly, Alta., says: "Actual saving of \$34 to \$38 a day—8 men and 3 teams less required." James Glenn & Sons, Milestone, Sask., says: "We worked your Loader 2 days and it saved us \$22 a day, making a saving of \$638 in the 29 days. It more than paid for itself in one fall and the machine is nearly as good as when we got it."

The Stewart Sheaf Loader Co., Ltd. 804 TRUST AND LOAN BUILDING WINNIPEG

You saw this advertisement in this magazine. Don't forget to say so when writing.

and sometimes oftener. Happiness does not mean a big bank account, it means, get some comforts out of life every single day, contentment, having time to help others when in distress of any kind. Don't live for yourself alone. For, when you are old and older you will receive what you have given out all along your pathway. If you have given out nothing then you will get nothing, and that is all that will be coming to you. So don't complain or murmur. The fault is entirely yours, believe that. You can not hide your light. By telling yourself and others that you have done "heaps" for others and have always done your best does not make it so. The facts remain that you have or have not lived a selfish life or otherwise.

"To work mightily" is a good thing, but right in conjunction with this is another just as good. "Play mightily."



The goose had been carved, and everybody had tasted it. It was excellent. The negro minister, who was the guest of honor, could not restrain his enthusiasm. "Dat's as fine a goose as I evah see, Bruddah Williams," he said to his host. "Whar did you git such a fine goose?"

"Well, now, pahson," replied the carver of the goose, exhibiting great dignity and reticence, "when you preaches a speshul good sermon, I never axes you whar you got it. I hopes you will show me de same consideration."

Father's Taking Way
The sad-faced young man came down the garden-path, sombre and sorrowful. The sweet girl watched him with anxious eyes. "He took it—well," came the reply.

"Oh, I'm so glad, George!" she cried excitedly, throwing herself into his arms.

"Are you?" replied George, holding her limply. "Well, I can't say that I am, dearest. At first your father refused to listen to me."

"But didn't you tell him you had five hundred pounds in the bank?" she exclaimed.

"I did," came the dejected answer, "when all else failed."

"And what did he do then?" "Do?" echoed the young man wearily. "Why, he borrowed it!"

Nets

Continued from page 42

a few embellishments, was a remarkably true one. The fact was Cutting had a large capacity for loving every woman, and a small capacity for loving one.

"I cannot marry all the women in Garleston, Yarmouth and Sunderland and Hartlepool. Be reasonable, Mary Ann. I swear I would marry you to-morrow if I could, but the law won't allow it.



"Nets"

Don't blame me, blame the law—that's a good girl."

He patted her on the back, and the potman discreetly withdrew. Then the demon of jealousy whispered to the discarded woman, and she listened. There was still a chance—the game was once more in her hands. Suddenly she staggered and gave signs of fainting. A pair of strong arms steadied and supported her.

"Charles, bring some brandy; your mistress 'as swooned,"! .wlded the skipper.

The lady struggled feebly to get free from the captain, then fainted again with a prolonged sigh.

"No, let me die," she moaned. "Let me die 'ere in your arms."

The potman arriving at that moment, coughed loudly, entered the snug, and then went out and knocked at the door loudly. Bidden to come in, he placed a fresh bottle of brandy on the table, then went outside to give a policeman a tip about the Ascot Cup.

Cutting helped his fainting companion moderately, and himself liberally. Mrs. Maltby smiled. It looked as if the skipper would be missing at eight next morning, the hour of the wedding. Kate King's temperament was not of the kind that expresses itself in patient endurance. If he were late there would be a row, and then all kinds of things might happen. Mrs. Maltby slowly

recovered from her swoon to find that half a bottle of "three-star" had disappeared. Mrs. Maltby's senses as a landlady reasserted themselves. The skipper was now drunk, and when he was drunk he was obstinate.

"You can't go to your ship to-night," she said. "Wouldn't be safe on the quayside all by yourself alone. You can stay here and sleep with Charlie."

"No," grunted the skipper, must get aboard the brig."



"Nets"

Charlie added his arguments to Mrs. Maltby's entreaties, but all to no purpose; Cutting was firm.

"Let him go," said Charles. "E won't turn up to no wedding' at eight o'clock. I'll eat my head if he does."

Certainly everything pointed to the probability of an absent bridegroom when the clock would strike the hour for the ceremony.

The skipper rose with great dignity, patted fondly the back of an armchair and bade it "cheer up!" He made rather heavy weather of the passage, and muttered something about a head wind; but, assisted by Charles, he found himself in the High Street. The first object of his attention was the town clock. He closed one eye to get the right focus, then he removed his hat and breathed heavily. "Well, I'm—I'm—I'm—yes," he muttered, at a loss for words. "Leggo the anchor!" he shouted, and lurched heavily against the lamp-post.

"Now then, wot's up now?" inquired the policeman.

"Who the blazes put that revolving light on the town clock? Why was not notice given of new lights? What does Trinity House mean by it? Now I've got to anchor."

The policeman explained, then seriously argued. The skipper poured a torrent of scorn upon his efforts, and proceeded to indict the general intelligence of the force. A kindly offer to see him safe on board the brig was declin-

ed, and, as the officer had to meet the inspector, he did not press the matter. Cutting, having got the direction of the riverside, went off into the darkness at a pace that surprised the policeman and caused him to ponder on the strange powers of men under the influence of drink.

No sooner had her guest left the "Ship and Anchor" than Mrs. Maltby's kindly heart began to accuse her. "Charles," she called. "Put on your coat and go after the Captain," she ordered.

"It's no good. 'E won't come back once he's made up his mind," was the potman's comment.

"I don't want 'im back. I'm afraid he will walk overboard in the dark. Go, Charles, there's a good boy. Oh! do be quick."

Charles put on his jacket—his cap never by any chance left his head and set out with an air of desperate resignation.

"Be sure you find him" urged his mistress. Don't come back until you 'ave found him."

The night was dark and a thick haze from the sea had spread over the river and quayside, and Charles soon found that it required all his faculties to determine where he was. Twice he was saved from walking into the river by hearing the whispering swish of the running tide. A light glimmered for a brief moment and went out. Again the light was repeated, and then he recognized a voice angrily declaiming.

"Is that Captain Cutting?" he shouted.

"Yes; come in," was the gruff reply. "I'm trying to find my ship. I've struck half a box of matches over the job. How can they expect a man to find his blooming ship in the dark unless he's a tom cat? eh? Got any matches? Well, strike another. Why, that's a revolving light, too! Strikes me the whole show is revolving."

They did not find the brig. Charles found a herring boat that sailed on that tide. He made the skipper a comfortable bed among



L. P. WINSLOW

Recently appointed Manager Ontario Wind Engine and Pump Co., Winnipeg

the nets, covered him up with some more, and felt that he had done his duty to him and the mistress of the "Ship and Anchor." When eight o'clock came the vicar and bride waited in vain for the bridegroom; and eight miles east of Garleston the silvery scaled and somewhat rotund figure of Cutting rolled out of the nets and startled a crew out of their wits. Mrs. Mary Ann Maltby, of the "Ship and Anchor" still has hopes.



It Was Cheaper

The Vicar's Daughter: "I'm glad to find you've turned over a new leaf, Muggles, and don't waste your money at the public house."

Muggles: "Yes, miss, I have it in by the barrel now, and that do come cheaper!"

30 H.P. UNDERMOUNTED AVERY PLOWING ENGINE equipped with extension rims, water tanks, siphon and fuel bunkers in good condition. Cockshutt Plow, nearly new, 12 bottom 42-70 inch Avery Separator, run two seasons and in good condition, fully equipped. This is a bargain for quick sale, a owner is retiring and leaving country, and for anyone wishing to see same, an automobile will take you out. Apply, East End Machine Shops, Melita, Man.

Guaranteed Investments are the Best

Safe as GOVERNMENT BONDS and more profitable. Our Booklet explains fully. Send for it.

STEWART & WALKER, LTD.
202 Sterling Bank Winnipeg

COUPON

Messrs. STEWART & WALKER, Limited
Sterling Bank Building, Winnipeg, Man.
Gentlemen—Kindly send me Booklet on Investments.
Yours truly,

Name _____
Address _____

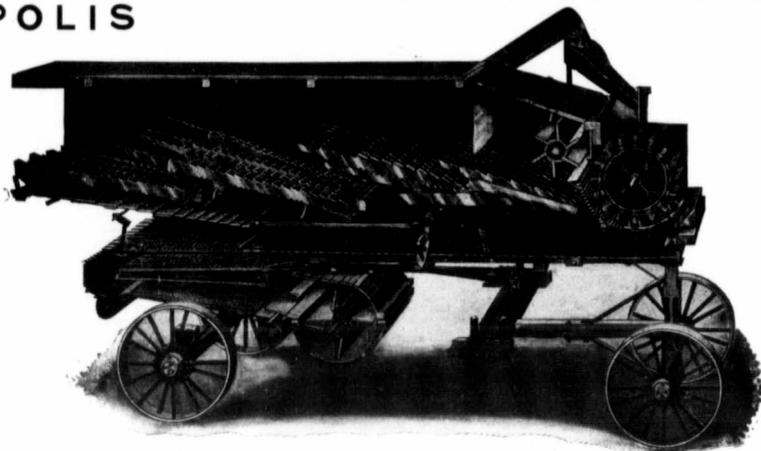
You saw this advertisement in this magazine. Don't forget to say so when writing.

"The Great Minneapolis Line"

THE LINE OF EVER INCREASING POPULARITY

MINNEAPOLIS

SUPERIORITY



INTERIOR VIEW OF MINNEAPOLIS STANDARD SEPARATOR.

Extra Large Grate Surface, adjustable, independent of Concaves.

DOUBLE CHAFFER (Top Chaffer raised or lowered while machine is in motion).

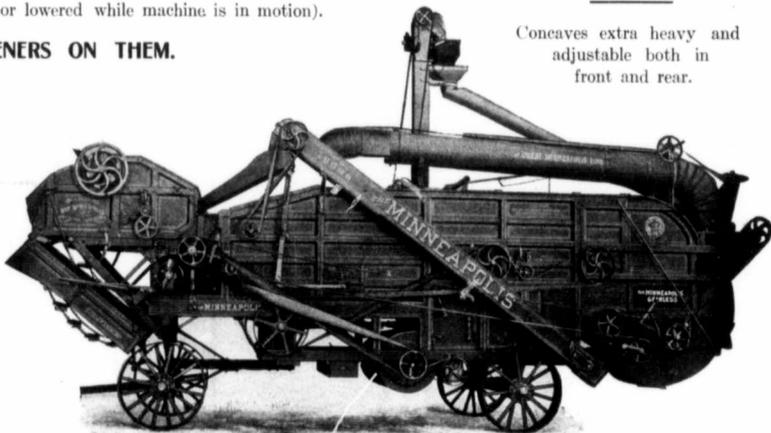
FEW BELTS WITH GOOD TIGHTENERS ON THEM.

INVESTIGATE BEFORE INVESTING.

The Best Recommendation is a Customer Well Pleased

OUR CUSTOMERS ARE OUR REFERENCES.

Your Success is Assured when you order a Minneapolis



MINNEAPOLIS STANDARD SEPARATOR GEARLESS STACKER SELF-FEEDER AND WEIGHER.

**A Fast Thresher
A Perfect Cleaner
and
It Saves the Grain**

Large 16 Double Bar Cylinder with 2 1/2 inch Cylinder shaft.

Tool Steel Teeth

(guaranteed not to break, bend or come loose in threshing grain or seeds.)

Self-Oiling Cylinder Cups

(Oil once a week)

Concaves extra heavy and adjustable both in front and rear.

WHY NOT DO IT NOW ?

We also manufacture and sell a complete line of STEAM ENGINES, FARM MOTORS, ENGINE GANG PLOWS and all necessary attachments and supplies used by Threshermen or Power Farmers.

THE MINNEAPOLIS THRESHING MACHINE CO.
West Minneapolis, Hopkins P.O., Minn., U.S.A.

Gentlemen:

Please mail to me free, printed matter as checked below:

Large General Catalog.

Threshers' Account Book.

Wall hanger of the Great Minneapolis Line in colors.

I will be in the market for.....

about.....1913.

Name

Town

C. T. F. Province

Try Minneapolis Quality

There's None Better

The Minneapolis Threshing Machine Co.

HOME OFFICE AND FACTORY

West Minneapolis (Hopkins P.O.), Minn., U.S.A.

REGINA - WINNIPEG - CALGARY - EDMONTON

CALL ON US AT OUR EXHIBITS AT THE WINNIPEG, REGINA AND BRANDON FAIRS.

You saw this advertisement in this magazine. Don't forget to say so when writing.

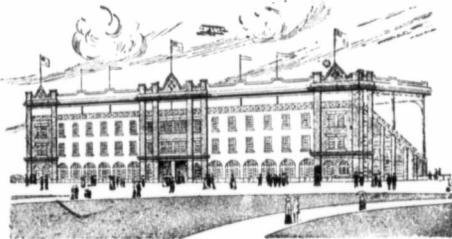
The Dominion Fair at Brandon

FOR over thirty years Brandon's success in holding a real Agricultural Exhibition has been unparalleled among Western Canadian cities and centres of farming interest. With everything in its favor—geographically the heart of the very best grain and stock raising interest anywhere out West, the configuration and disposition of its fair grounds it is par excellence the spot for the most ambitious effort that might be made in Canada.

It is therefore quite in keeping with the fitness of things that Brandon should have been selected by the Dominion Government for the purposes of the Dominion Exposition of 1913. Further confidence has been established by the uniformly sportsmanlike atti-

same, and launched what has become a household word in the West, the Brandon Summer Fair. The first Summer Fair justified the action of the Directors in abandoning the fall dates. Every year the result has been a better Fair than that of the previous years.

During all these years the Directors have been careful to build on a sound foundation, always guarding the interests of Exhibitors and doing everything possible to provide accommodation for exhibit, exhibitors and visitors. The Fair grounds consist of 106 acres and are conceded to be one of the most beautiful Exhibition Parks in Canada. An idea of the value of this property may be better understood when it is known that the assessment



tude of the citizens through their executive towards an institution of the kind. The management of Brandon Fair has never failed to win the warmest appreciation of visitors and exhibitors alike and its financial success has never been a matter of anxiety. The public spirit of the citizens has been solidly behind it from its modest beginning.

This was away back in 1882 when the Brandon Electoral Division Agricultural Society was organized. The first few of those early exhibitions were held without buildings and less than \$200 in premiums were offered, this being contributed by subscription and donations. A little later Government and Municipal Grants were secured and with liberal donations from citizens and farmers, 40 acres were purchased and a few buildings erected and the exhibition commenced to expand until it became necessary to enlarge the grounds.

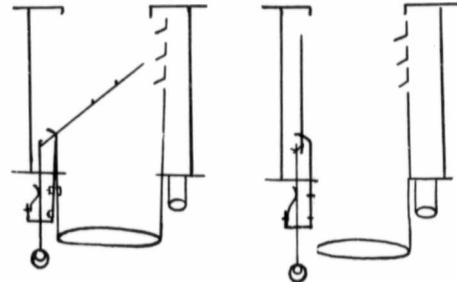
In 1892 the Western Agricultural and Arts Association was formed. This new Association took over the assets of the parent society, added 50 acres to the

value is placed at \$475,000. The grounds are situated almost in the heart of the city and the fine park property is one of Brandon's Beauty Spots, the pride of every citizen.

The work of preparing for the Great Dominion Fair of 1913 commenced immediately after the close of the 1912 Fair. The old grand stand was levelled and a large gang put to work to build a new Race Track, which is pronounced by experts to be one of the best half-mile tracks in Canada. A handsome New Grand Stand, a cut of which appears in this paper, was commenced last fall and is now completed. The stand is of concrete and steel with a seating capacity of 5,000. It is equipped with individual chairs, Directors' Box and 46 Private Boxes. Additional horse, cattle, sheep and swine stables have been erected. A new Cattle Barn 150 x 112 of Brock and Steel is the best Exhibition Cattle Barn on the Continent. A new Poultry Building 150 x 100; New Display Building and Dairy Building. All Live Stock Buildings are grouped and a transfer track extends across

Mr. Thresher! You Need This Adjustable SPARK TRAP

It is the cheapest insurance you can buy. It is adjustable, self-cleaning and gives a feeling of safety. No thresher can afford to be without one.



Ninety-nine per cent. of fires around threshing machines are caused by sparks, yet every Engineer knows that he can't steam his engine with the smoke-box full of ashes. Yet that is the result when you use the devices now sold to stop sparks. This device will stop and get rid of practically every dangerous spark from any steam engine that exhausts through the smoke stack with any kind of fuel, under ordinary conditions, without insuring in any way the draught or steaming qualities of the engine. Why pay a big insurance policy when for \$12.00 you can buy something that will last the life of your engine and make you good and safe from fire. Fill in the coupon below and order now:

C. W. WILLEY, Box 2, Birnie, P. O., Man.
 Enclosed find the sum of \$12.00 for which ship me by express one of your adjustable Spark Arresters.
 The diameter of the top of my smoke stack is inches.
 My express office is on (what R.R.)
 My P. O. is
 My name is

You saw this advertisement in this magazine. Don't forget to say so when writing.

SPARK ARRESTER

One that gets all the sparks without clogging or interfering with the draft. Fits any engine. Screens adapted to any fuel.



ACETYLENE GAS HEADLIGHT

Turns night into day. Bracket to fit any make of engine. Throws light 400 feet. Operating expense about 1c. per hour.

FLUE CUTTER

You need this tool to get ready for your Spring Plowing. Is adjustable in length and size. Cuts the flue without burring the end. Try it.

Estate of E. M. POPE, Watertown, S. Dakota, U. S. A.

Send for Catalogue and Price List to

THE MAYTAG COMPANY, LIMITED, Winnipeg, Man

You saw this advertisement in this magazine. Don't forget to say so when writing.

GENUINE GREGG EVENERS

SIMPLEST AND STRONGEST MADE



MADE for two, three, four and five horses abreast, for Wagons, Manure Spreaders, Gang, Sulky and Disc Plows; also five and six Horse Tandem for Gang and Sulky Plows. These are made of one-quarter inch heavy wood stock than similar eveners now on the market. Ironing extra heavy.

Look for the name **Genuine Gregg** on every Evener. Ask your hardware or implement dealer. Write for Catalogue "T."

GREGG MFG. CO. Ltd., Winnipeg, Man. IF IT COMES FROM GREGG IT MUST BE WELL MADE

You saw this advertisement in this magazine. Don't forget to say so when writing.

Success Business College

Insure success by a business training. Get it at the best Business College—the College that has made the greatest success of its business. This is the **SUCCESS BUSINESS COLLEGE** with Schools at Winnipeg, Regina, Moose Jaw, Weyburn, Calgary, Lethbridge and Vancouver. We use 309 typewriters. Send to the nearest school for free prospectus—beautifully illustrated.

\$50 Pays for 4 Months Course

Don't put it off. Act now.

F. G. GARbutt
President

the West side of the Fair grounds for transferring all Live Stock Exhibits. The expenditure of new buildings and larger grounds totals over \$150,000.

The Dominion Fair Prize List is a credit to the Association. The Premiums are exceedingly liberal and the classification almost perfect and should draw out a record exhibit in every department; \$50,000 is offered in Premiums, \$20,000 for Speed Events and \$25,000 for attractions. The Railways have granted exceptionally low rates much less than single fare and quarter for the round trip. In addition to this, about thirty special excursions will be run from points from which the round trip can be made in one day.

The Directors have worked like heroes to prepare for this event and the public are assured that every nail will be driven and all paint will be dry when the Great Fair opens on July 15th. One pleasing feature about the Brandon Fair is the fact that every citizen and every farmer for miles around are right behind the Directors and Management who have the implicit confidence of the General Public. For Dominion Fair, 50 per cent of freight charges on car lots of Live Stock are refunded. The refund is based from the original point of shipment and permits an exhibitor to show at any other Fair and still get the refund. This we regard as a very fair deal. Accommodation has been provided for 700 horses, 600 cattle, 700 sheep and swine, with ample accommodation for mercantile displays, machinery, implements, fine arts, dairy, horticulture, etc.

It is more than probable that this will be the last Dominion Fair that will be held. Let it be one to be remembered on account of its magnitude. We urge every Stockman, Manufacturer and Mercantile Firm to be represented as an advertising proposition, and express the hope that every private individual who can spare the time will do honor to an occasion which merits the heartiest support of every Canadian Citizen.

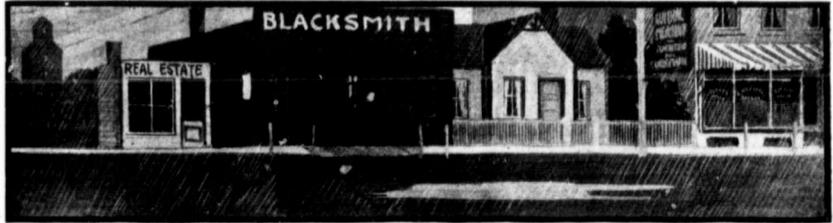
His Company

A society woman wrote to an army officer:

"Mrs. Smyth requests the pleasure of Captain Bunker's company at a reception on July 16th."

Next day she received this note of acceptance:

"With the exception of three men who have the measles, and one who is in the guard-house, Captain Bunker's company accepts Mrs. Smyth's kind invitation for the 16th."



"He's Hailed Out-and not a Cent of Insurance"

THE CENTRAL CANADA INSURANCE COMPANY

Best Service at Lowest Possible Cost

INSURANCE AGENCIES LIMITED
General Agents
Jos Cornell
General Manager

THE EAST-SCOTLAND INSURANCE COMPANY
THE ALBERTA-CANADIAN INSURANCE COMPANY

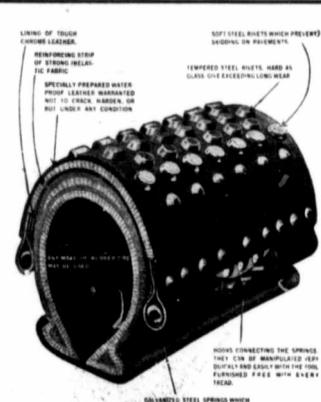
THE man who takes precautions beforehand doesn't have to sit around brooding over his losses or accept help from his wiser friends and neighbors. Even the man who meets trouble bravely and with a smiling face is less to be admired than the one who disarms adversity in advance, protecting his possessions by adequate sound insurance. We offer

FIRE INSURANCE
HAIL INSURANCE
LIVE STOCK INSURANCE

written under policies free from hampering conditions. Our record, system and methods have merited and won the confidence of Western farmers, with the result that the volume of business we handle shows a great increase year after year.

Write any of the Companies shown above for information as to our rates and policies, see one of our 1,600 Local Agents, or address

Insurance Agencies Limited
BRANDON WINNIPEG REGINA
SASKATOON CALGARY EDMONTON



Automobile Users -- Make your Tires Puncture-Proof, Skid-Proof and Wear-Proof by Fitting with WOODWORTH TREADS

Woodworth Treads are steel-studded leather protectors held on the tires by a patented coil spring adjustment that keeps them always perfectly adjusted. They cannot get loose or chafe or injure the tires. We agree to replace at our expense any tire injured by Woodworth Treads when used according to instructions.

Woodworth Treads protect the tires not only from punctures, but from cut-bruises and similar injuries and from the action of oil, light and air, so that they last almost indefinitely. The treads themselves average from 3,000 to 5,000 miles on ordinary roads; on dirt roads they often last from 8,000 to 10,000 m. i. s.

They fit all makes of tires. Anyone can put them on without taking the tires off the rims.

Get a set of Woodworth Treads and be safe from tire troubles and always ready for slippery places.

They will prolong the life of your tires enough to save more than double their cost. Send for full description and free booklet, entitled "Preservation of Tires".

LEATHER TIRE GOODS COMPANY
NIAGARA FALLS, ONTARIO.

THE STAMPEDE AT WINNIPEG

ONE of the outstanding incidents of 1913 will be "The Stampede" which will be held at Winnipeg August 9th to 16th inclusive. It has been designated the "World's Greatest Frontier Celebration" and as it is a genuine contest (open to all comers) for the World's Championships, it is entitled to this supreme place among exhibitions of the kind.

The largest prizes ever offered cowboys, cowgirls, ropers and rough riders have had the expected influence in bringing together according to the entries made some time ago and still in-

complete, the greatest assemblage of horsemen and horsewomen of the plains which have ever been seen in single array. The "Stampede" is not a show in any sense of the word, and is not to be confounded with the "Wild West" performances and circus outfits which travel over the country.

To "The Stampede" come the champion cowboys, cowgirls, riders, ropers, vacqueros, cattle men from North and South America, not only cow punchers from the range but also the champion ropers and trick riders from every known Wild West Show, bringing together a notable galaxy of from one to three hundred contestants, each one a champion in his own locality. To prove the mettle of these men and women a remarkable herd of outlaw bucking horses, unriden bronchos, Wild Texas and Mexican steers

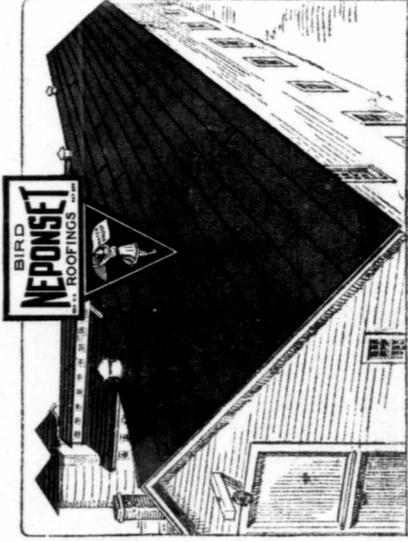


CHARLIE TIPTON, of Canon City, Colo., on the famous bucking horse, Starbuck. Tipton will be a keen rival for Championship honors at the Winnipeg Stampede, August 9th to 16th.

Canada, and is awaiting the decision of the judges.

"The Stampede" at Calgary last year was the greatest event that Western city ever saw. It attracted over 60,000 outside visitors from Canada and the Western States, the far South, and special Pullman trains and special cars were run to "The Stampede" from as far as Chicago, New York and Montreal. Owing to the fact that it attracts the World's Champions in their lines from their various daily callings, it is obvious that such an event as "The Stampede" cannot be put on with the regularity of an ordinary show, and for a similar reason no real counterpart of "The Stampede" is to be found.

"The Stampede" can be held but once a year and there can only be one Stampede in the World. For months Winnipeg



Not a Leak in 13 Years

From a section where the climate is hard on roofing comes this letter:

"John Turner built a lumber shed 13 years ago and roofed it with

NEPONSET PAROID ROOFING

The building is now partly pulled down and the rest has escaped. There are no parts where the water stands after a rain, but the water evaporates without going through the roofing. No attention has been given to the repair of this roofing for 13 years.

The economical roofing is the one that you know will last. Actual records prove that NEPONSET Paroid Roofing is the real rival of best shingles in long wear. It costs less to lay and lasts longer in addition gives fine protection against NEPONSET Paroid Roofing on the Puget Sound alone. Farmers are buying it for their biggest and best barns.

Send for this name, NEPONSET Paroid, the roofing with the record. Make sure that you get it. Sold only by regularly authorized NEPONSET dealers—leading hardware and lumber merchants.

Send for Blue Print Barn Plans—FREE

They are the kind of plans that appeal to every Canadian farmer.

NEPONSET Roofings are made in Canada.

F. W. BIRD & SON, 489A, Heintzman Building, Hamilton, Ontario

Winnipeg

St. John, N. B.

Vancouver, B. C.



The Hecla in the Cellar means Winter Comfort in the Home

Specify

Hecla Furnace

for the New House; Warm Air Heating, with scientifically designed (Hecla) Furnace and properly installed distribution system—

The Best, Healthiest and Cheapest Heat

Send for this Little Book!

Comfort and Health: it will tell you an interesting story, whether you are building, or merely living in a house that hasn't THE HECLA.

"The Hecla Means One Ton in Seven"



CLARE & BROCKEST LTD.
WINNIPEG CANADA

has been preparing for the event. The huge arena is being built at the Exhibition Grounds, and when it is completed, tiers of bleachers will completely encircle the half mile track. Within is the ten foot braced woven fence, going clear around, the inside of the arena allowing an open way of over eight acres extent upon which the pitched battles of the Range world will be fought. Winnipeg expects to entertain the largest crowd, in the history of a city that knows crowds every day. As Louis W. Hill, Chairman of the Board of Directors of the Great Northern Railway, says: "The Stampede at Winnipeg will be the biggest thing on the American Continent in 1913, and will be the greatest advertisement the Canadian Northwest has ever had."

"The Stampede" owes its organization and financial responsibility to the enterprise and patriotism of a group of Cattle Barons of Canada. A group of men including such names as James Ryan, Senior, and W. H. Fares, the biggest firm of horse dealers in Canada and the latter a partner in the Great Canadian Meat Packing firm of Gordon, Ironside & Fares; A. P. Day, of Medicine Hat, one of the wealthiest citizens of that city and one of the foremost ranchers of Alberta, and last, but not least, Guy Weadick, Manager of "The Stampede." These cattle barons who back "The Stampede" realize that the Old West that they knew, the West of the Wild and Woolly Days is slowly dying out. The trails once ridden by the Cow Puncher are now being crossed by barb wire fences. The Steam Plow has cut up the Range land and the locomotive sweeps across the prairie on bright steel rails, while the painted Indian has settled down to a life of ease on the Treaty Money of his Paternal Government. The hearts of these men are in the West, they want to show to the newer and younger generation a sample of the Old Life before it has gone forever. They are anxious to exhibit the West that has dealt so kindly with them. The old time hospitality of the West also plays an important part in the Celebration.

Men who are known all over the Cattle Country of the American Continent will be at "The Stampede." Many of them have gone down in the history of the Range Land for their wild recklessness in the days gone by. Wild songs are still sung about "Turkey Track," Toney Day. "Turkey Track" is now a respectable citizen of Southern Alberta and will be one of the men in the pageant; to use his own words, "I know 'em all and I can't miss it."

Lured by the double attraction of "The Stampede" and the interest which every one now has in Western Canada, no one who can possibly get to Winnipeg, August 9th to 16th will miss "The Stampede." Special trains are coming from everywhere. Sportsmen and prominent citizens from all parts of the world will be in line. Leading men in the official life of the United States and Canada will be there. Last year at Calgary, "The Stampede" was under the personal patronage of H.R.H. The Duke of Connaught, and with his charming daughter, Princess Patricia, were two of the most keenly interested visitors of the spectacle. Probably the most treasured possession which Manager Weadick of "The Stampede" has at the present time are the Autographed Photographs of his royal guests and the memory of the delight and interest which they took in every event of "The Stampede."

The railways, hotels and citizens of Winnipeg are preparing to entertain 150,000 visitors "Stampede Week." 60,000 can find seats at one time around the arena of the Tournament.

Give the Colt a Chance

France has gotten millions of dollars of American money just because her farmers have had more faith in feed than we. The Frenchman has no magical power over the forces of heredity nor superior insight into their laws. He produces superior horses because he is a better feeder. He is of course careful in his selection of breeding animals, but we have for years been buying the prize winning horses of France. We ought on that account to be producing better horses than they are in France. But the prize winners at our fairs are still imported animals. Their secret is the feeding.

The first year of a colt's life is the most important one in determining size and quality. In succeeding years feed has a constantly decreasing value. No degree of high feeding after maturity will make up for insufficient feeding during the growing period of life. It is the failure to comprehend this principle in animal life, and to take advantage of it that very largely explains the inferiority of the American horse.

When out looking for Percheron stallions a short time ago I came across a two-year-old that had the appearance of an ordinarily well developed three-year-old. I said to the owner that he looked like an imported colt of that age. He replied that he had been fed

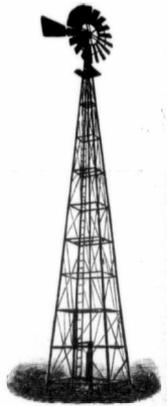
Ontario Wind Engine & Pump Company's
LINES ARE SUPREME



Buy Service
Not Cast Iron

When you buy an Engine you want power; a Well Drill, water; a Feed Mill, ground feed; a Windmill, something that will stand and give you service; the Tank that is tight; a Water System guaranteed to supply water.

Our business is the manufacturing of these lines. It has taken time, money and brains to produce what we are listing in this ad. It will pay you to get our catalogue.



If your dealer does not handle our lines, write the
Ontario Wind Engine & Pump Co., Ltd.

AT
MONTREAL TORONTO WINNIPEG OR CALGARY

Desmond Model "U"

is the Standard by which the Efficiency and Value of any Injector Device is Measured



It is the injector that can be relied upon to give perfect service under the most varied conditions. Made with a two-piece body with parts connected by a union nut. When loosened, connections can be turned in any direction desired. When connections are made, the nut is tightened and the injector is ready for work. It will fit any space, can be fixed in any position or adapted to any special condition and connected with either side of the boiler. The piping and valves can be arranged to suit your requirements—not merely to fit injection. All tubes screw into the body and cannot fall out or get damaged when cap is removed; nor can they get out of alignment. The Model "U" is FLEXIBLE and will meet every demand that can be made on an injector. It starts low at from 20 to 25 lbs. and works high to 175 lbs.



Special high pressure injectors, working up to 235 lbs., can be furnished when desired. The Model "U" lifts water 25 feet; handles water at 130 deg. and delivers to the boiler at almost 212 deg.

Absolutely automatic, it will not "back" or "break" under any circumstances. The drip cock of the Model "U" permits draining the injector and piping in freezing weather and makes convenient place for drawing hot water when in operation.

Desmond Stephan Mfg. Co. Crane & Ordway Co. Ltd.
Urbana, Ohio Sales Agents for Canada
Winnipeg Canada

You saw this advertisement in this magazine. Don't forget to say so when writing.

like they feed them in France. I learned that he had been given not only his mother's milk and all the grain he would eat from the time he would eat grain, but from two months on to the present time he had also been fed the milk of a good cow. This of course would be too expensive a ration for the average farm colt, but it showed what feed would do, as this two-year-old was almost as large as a full brother two years older.

There are thousands of 1400 to 1600 pound horses of good draft breeding owned by the readers of this paper that with the help of fifty bushels more of oats, given each during the first two years of

oats and wheat bran should be relied upon very largely as the grains.

When the hay or pasture is a legume, half the grain ration may be of corn. While the colt is yet nursing, the grain ration may be made up of equal weights of corn, oats and bran. If the mother is worked, keep the colt in a comfortable box stall where the air is good and where it can get to feed at will. For two weeks after she has been put to work she should not be kept away from the colt more than three hours at a time. Care should also be taken not to have her over-heated when she is brought to the colt. These precautions will avert serious diges-



The Hackney Blood. Great Action in One so New to Life

their lives, might have been 200 pounds larger. And that extra oats so fed would have brought more than one dollar a bushel. There is no other animal that will pay as much for its feed as a well-bred draft colt, and it is the last quart fed that will bring the largest returns. There is no danger of over-feeding a young colt, if the right kinds of feed are used, and they are given regularly. Colts should begin to eat grain at one month of age, and may profitably be fed all they will eat from that on for the first year of their lives.

For colts there is no better single grain than oats. But a variety of grains is still better, and oats is not absolutely necessary for the successful feeding of a colt. The kinds of grain that should be used depend upon the pasturage and hay employed. Alfalfa is the hay par excellence for the young colt. Where this is not available, hay from some of the clovers should be used. There is no entirely satisfactory substitute for these legume hays. When none of them are available

tive disturbances. Keep the stall clean so that fermenting manure will not pollute the atmosphere with ammonia.

In very hot weather, after the colt is three months old, it should have access to water. Both the colt and its mother will be benefited by liberty in a pasture at night and whenever the mother is not at work. During fly time, however, a dark stable during the heat of the day will be a protection. There is no mystery about developing a colt. Just give it plenty of good feed and good conditions under which to grow.—H. P. Miller.

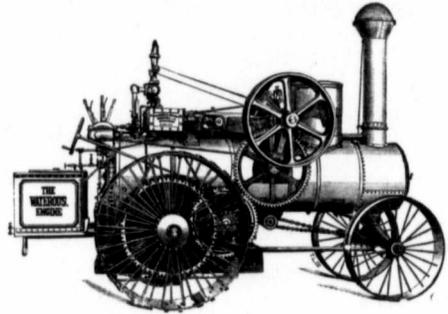


Let this sorter sink into your soul: Many Egyptian mummies have had no fun for five thousand years.

SALESMEN.

Experienced men for country business. Men of some means preferred.
Apply—
STEWART & WALKER, LTD.
Sterling Bank Building.

Rebuilt Threshing Machinery



SPECIAL ATTENTION REQUESTED

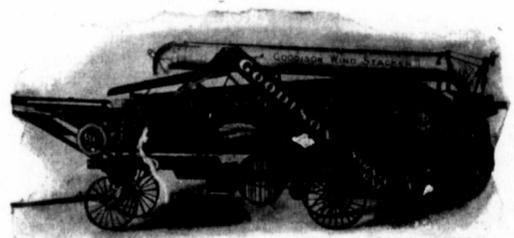
to the following list of Rebuilt Threshing Engines and Threshers. All Machines have been thoroughly repaired in our own repair shop, and worn parts replaced. Threshers are rebelted with new belts and all machines put in first-class running order, and are offered at **ROCK BOTTOM BARGAIN PRICES** to clear out the stock.

THIS IS THE YEAR TO PURCHASE A REBUILT THRESHING OUTFIT

PLAIN STEAM ENGINES.	
1-17 H.P. Waterous Engine with Locomotive Return Tubular Boiler.....	\$600.00
1-18 H.P. Abel Engine with Locomotive Boiler.....	650.00
PLAIN GASOLINE ENGINES.	
1-20 H.P. Waterous Portable Gasoline Engine, (good as new).....	900.00
1-20 H.P. Waterous Portable Gasoline Engine, (good as new).....	900.00
STEAM TRACTION ENGINES.	
1-18 H.P. Waterous Single Cylinder Locomotive Return Tubular Boiler.....	750.00
1-18 H.P. American Advance with Locomotive Boiler.....	750.00
1-18 H.P. Waterous Double Cylinder Locomotive Boiler.....	1000.00
1-22 H.P. Waterous Double Cylinder Locomotive Boiler.....	1500.00
1-22 H.P. Waterous Double Cylinder Locomotive Boiler.....	1500.00
1-22 H.P. Waterous Double Cylinder Locomotive Boiler.....	1500.00
1-25 H.P. Waterous Single Cylinder Locomotive Return Tubular Boiler.....	1300.00
1-26 H.P. Waterous Double Cylinder Locomotive Boiler.....	1600.00
1-30 H.P. Waterous Double Cylinder Locomotive Boiler rear mounted 30° face rear road wheels.....	1800.00
1-30 H.P. Waterous Double Cylinder Locomotive Boiler, rear mounted 30° face rear road wheels.....	1800.00
THRESHERS.	
1-28 x 42 McCloskey Thresher, Goodison Side Fan Blower Hawkeys Feeder, Wagon Loader.....	700.00
1-28 x 42 McCloskey Thresher, Goodison Side Fan Blower Perfection Weigher.....	650.00
1-32 x 50 McCloskey Thresher, Fosteron Side Fan Blower Hawkeys Feeder, Perfection Weigher.....	725.00
1-36 x 50 American Peerless Thresher 18" Straw Carriers, Peerless Feeder, Short Weigher and Bagger.....	450.00
1-36 x 60 McCloskey Thresher, Goodison Side Fan Blower, Rich Self-Feeder, Perfection Weigher.....	750.00
1-40 x 60 McCloskey Thresher, Goodison Side Fan Blower, Perfection Weigher.....	675.00

COMPLETE THRESHING OUTFIT.	
1-26 H.P. Waterous Double Cylinder Traction Engine.....	
1-40 x 60 McCloskey Thresher, Goodison Side Fan Blower, Rich Feeder, Perfection Weigher Price f.o.b. rms Cayley, Alberta, as it is, price on application.	
SUNDRIES.	
1- New Perfection Wagon Elevator.....	40.00
1-Power Jack wood frame.....	5.00
1-Set McCloskey Thresher Trucks.....	25.00
1-No. 1 Willford Three Roll Chopper (good as new).....	225.00

WRITE FOR FURTHER INFORMATION.



The Waterous Engine Works Co. Ltd.

Winnipeg, Manitoba

You saw this advertisement in this magazine. Don't forget to say so when writing.

Quality is What Counts

However, you get both quality and price when you buy

REX MOTOR SPIRIT

This is a new product designed to take the place of engine gasoline for gasoline tractors or motor trucks. Goes further than ordinary gasoline and is practically carbon proof. Here is what one firm says:



INTERNATIONAL HARVESTER CO. OF AMERICA
 WINNIPEG, MAN., June 25th, 1912
 Canadian Oil Companies, Ltd., Winnipeg, Man.
 Gentlemen—We have used your Rex Motor Spirit in starting our engines around
 warehouse and found that it started the engine as readily as gasoline.
 Yours very truly, INTERNATIONAL HARVESTER CO.
 Per E. Clark, Supt.

Our Prices will Surprise You. May We Send Them? Address Office Nearest You.

Canadian Oil Companies, Ltd. WINNIPEG, REGINA, CALGARY, NELSON

You saw this advertisement in this magazine. Don't forget to say so when writing.

Axioms of Better Farming

Continued from page 39

Let poultry keeping be a branch of your farm work.

Plant a few strawberries and have fresh fruit for your table.

Most diseases can be prevented by fresh air, sunshine, pure food, good cooking and clean homes.

Evergreens must carry a good ball of earth when being transplanted.

Beatify the farmstead so that the young people will become attached to it.

Grain growing fills the pocket but robs the land.

Spare the harrow and spoil the crops.

Good drains cost less than one crop failure.

Boost the country by good roads.

Fanning mills help to eradicate weeds.

Alfalfa—Why not grow a few acres? Yields three tons per acre. Worth \$20.00 a ton.

Clean your seed and reap the dollars.

Why Boys Leave the Farm

Here are two answers to the question that is being so frequently asked, "Why do boys leave the farm?"

Boys leave the farm because farm life is not made attractive enough for them. The home farm is conducted in such a way that they get no idea of farming beyond hard work in all kinds of weather, without apparent appreciation and without recompense. No one could expect a boy to re-

main on the farm where there is no really enjoyable home life—nothing to lighten severe labor, nothing to relieve grinding drudgery. The wise farmer, instead of being merely the boss of his boys, will take them into his confidence, will establish a companionship with them, will remember that he was once a boy himself, and will try to look at life from the boys' point of view, and make life worth living to them as they see life. He will himself take pride in what he does because it is worth doing, and doing well, and he will try to develop in his boys this pride in doing good jobs well. Pride in what one does relieves the drudgery and dissipates the grind of

farm life. Boys hunger for appreciation. When they do a good job, the wise man will not forget a word of praise—not fulsome, over-done praise, but wise, helpful appreciation. It will make the boy feel that he amounts to something, is worth something to the home farm.

The boys need social diversion. Make the home life such that when the boys want to have a regular rip-roaring good time they will want to come home to have it, and for the time being let the old folks be kids again and enter heartily into the youthful life, with its hopes and aspirations.

Another reason why boys leave

the farm is because they want to demonstrate their capacity to do things for themselves. They want a chance to show that they can be self-supporting. Why would it not be a good plan to give them this chance right on the farm? Let them have an acre or two of ground and see what they can do with it, and in which, they can take a legitimate pride. Give them a pig or a calf or a colt that they can call their own, that will be really their own, so that when it is sold they actually get the money for it, and learn in this way the reward that comes from taking care of things, and in this way also lay the beginning of the foundation of the business life.

Farquhar Rake Separator Complete with Fairbanks-Morse Oil Engine



Priced to meet the Present Money Stringency

Every farmer can own his own complete threshing outfit by buying the famous FARQUHAR RAKE SEPARATOR with FAIRBANKS-MORSE OIL ENGINE as shown above. As a light running machine it is far in advance of anything now on the market, being of the latest improved type, strong, durable, with few belts and little gearing. Does work above criticism, handling all kinds of grain to perfection. Sizes 22x28 and 26x32. Write our nearest office for catalogue and prices.

We also handle the matchless Farquhar Vibrator Separator for big crops and custom threshing, in 3 styles, 20 to 40 ac.

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED
 WINNIPEG REGINA SASKATOON CALGARY
 Montreal St. John Ottawa Toronto Vancouver Victoria

You saw this advertisement in this magazine. Don't forget to say so when writing.

The average boy does not hate work. He hates drudgery; he hates the dull grind, with no reward in sight. Give his notions of independence and of pride in what he does a chance to grow on the home farm; realize that he has the beginnings of a man in him, and take as much pains to develop his manliness as is now taken to get all the labor possible out of him, and one of the causes for boys leaving the farm will be abolished.

With the telephone, the automobile and cheap transportation, most of the advantages of city life are now brought to the farm, or at least they may be brought there. Let the boys share in these to the full. Let them feel that they are in a sort of partnership in all farm operations, that, in a measure, proprietorship is theirs, and they will learn to love the farm.

Always work and never play
Take the boy's content away.
Always play and never work
Makes of him a useless shirk.
Mixing both work and play
Makes of him a man some day—
A man induced by Nature's charm
To live upon and love the farm.

Importance of Pedigree

What is a pedigree worth? This depends upon circumstances and conditions. Some animals properly pedigreed are not worth much outside their pedigree history. Such animals should be avoided by the purchaser. Some method of inspection should be adopted by registration associations whereby such animals could be disqualified and cancelled from registration.

In the sale of animals, there is too much imposition practiced upon the purchaser by the seller in not making prompt delivery of the pedigree and guarantee of certificate of registry and transfer. A pedigree is not always evidence of registration or eligibility to registration. The matter of purity of blood, reliable pedigree and a correct personal family history of the animal in question, should be made more exacting in all sales and purchases.

The selling of animals as pure-bred, pedigreed, registered, etc., without the delivery of the papers substantiating these statements, should be treated by the purchaser as only a partial delivery, and one-half the purchase price should be held back until the registry evidence is fully delivered. This can all be transacted through the bank of the purchaser by the deposit of balance subject to proper delivery of papers. If such precautionary steps were universally adopted by purchasers, there would be less com-

plaints of delayed pedigrees, and suits brought to force pedigree delivery. It would prevent a lot of fraudulent, pure-bred transactions that frequently cause an inestimable amount of trouble in communities where breeding animals are used, under the representation of being pedigreed that cannot be and never are pedigreed.

Again, such a system put into practice would correct the business methods of careless, indolent owners of pedigreed animals, who think after making a sale and giving a promise of pedigree and transfer that any time will do. It should be the business of all live stock breeders and dealers to have the necessary papers of transfer ready so as to comply with the conditions of sale when the sale is made.

There is no business in existence that demands so much accuracy, system and promptness in its successful operation as the pure-bred live stock business. Each animal has a personality in pedigree history that is his own, and no substitution or omission in any respect can be used in his representation when he passes into the hands of a purchaser. Lack of prompt fulfillment of pedigree or registration evidence is the surest means that any breeder can employ to discredit himself and his business.

A Spelling Mistake

A school concert of all things! Four little girls were dressed to represent the word "Star," and each had one letter of that word pinned on her snowy-white dress. Each letter began the verse of a touching little song.

"Now, my dears," said the mistress, "form yourselves in position, and wait until the curtain goes up."

The little girls did as they were told, and while the piano played the accompaniment the curtain went up.

Instead of applause to greet the little girls, howls from the audience met them.

"Rats!" was the word they spelt, not "Star."

Short and stout, the Christmas visitor was amusing the children of the house by a display of ambidexterity. He wrote easily with either hand, and, after completing a difficult drawing with his left hand, he said, "There is nothing I can do with my right hand that I cannot do with my left." "There is," retorted Minnie, aged eight, "just try and put your left hand in your right hand trousers pocket."



You want Remington-UMC—the Remington quality—freedom from all the nagging little annoyances that uncertain shells can throw into a good day's sport. Arrow or Nitro Club smokeless loads. Slightly higher in price—absolutely reliable.

Let us send you a booklet explaining simply the technical care in the making which we believe is responsible for Remington-UMC success. Send your name and address on a postcard today.

Remington Arms-Union Metallic Cartridge Co., Windsor, Ontario

You saw this advertisement in this magazine. Don't forget to say so when writing.

TO THE FARMER:—WHO appreciates a really high-grade engine, an engine that is used and endorsed by some of the most progressive farmers of Western Canada.

We offer you our own big engine at prices that cannot be duplicated elsewhere in this country.

We want you to note carefully some of these features.

There are no Tin Tanks to this engine. Cylinders and Bases are not cast in one piece. We put the Gasoline in the base of our engine; costs us more but it is safer than the unsightly Tin tanks that are liable to leakage.

The Cylinder Base and Sub-Base are all separate, and are machined accurately, because with the Cylinder and Base cast in one piece, in case of an accident to cylinder, it means a repair would cost you as much as a new engine.

Both Intake and Exhaust valves are water cooled, no chance of pre-ignition as in the Air Cooled Head.

Our Engine is so governed that it cuts out on both fuel and spark, on the idle stroke, which is the reason they run so economically.

Positive Pump Feed with overflow. Speed Changer, of 35 per cent while engine is running. Relief valve for starting.

Automatic Intake Valve Lock that locks the intake valve, so that no fuel is wasted in the exhaust: this is a very important feature, and should be on every engine.

Every Engine is perfectly balanced, you do not have to nail it down to keep it from jumping around and pounding the boxings out.

A Surplus of 10 per cent H.P. guaranteed over rating. The only high-grade engine sold in Canada direct to the farmer. "Built up to a standard not down to a price."

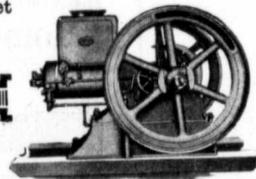
We have just mentioned a few of the important features in this engine. You should know more about it, about our plan of letting you test this engine at your own work for 30 days, and then letting you be the judge as to whether you should keep it.

If you have not a copy of our Engine, Grain Grinder, Wood Saw and Farm Supplies Catalogue, just write "Engines and Farm Supplies," on a postal card today. Sign your name and address.

C. S. JUDSON Co., Ltd.

181 Market Street

Winnipeg Man.



You saw this advertisement in this magazine. Don't forget to say so when writing.

YOU WILL NEED A MORRIS IMPROVED BEADING TOOL



this season and we advise you to place your order NOW. You will wish a hundred times that you had one in your tool box when you get into the field and fuses begin leaking. Any man can use one without injuring fuses. We fully guarantee them. On exhibit at all Fairs.

AGENTS WANTED

Sold in Canada by the **BAKER VALVE CO., 100 James St., Winnipeg, Man.**

Dear Sir:—
The beading tool I purchased from you has given me entire satisfaction. I used it in reducing my engine, I consider that by using your Improved Beader on this job only, that I saved three times its purchase price. Every man that owns a boiler should own a Morris Improved Beading Tool. I would not part with it for \$100 if I could not get another.
Chatsworth, Ill., March 24, 1913.
Yours truly,
CHAS. H. SCHROEN.

You saw this advertisement in this magazine. Don't forget to say so when writing.

Pipe This

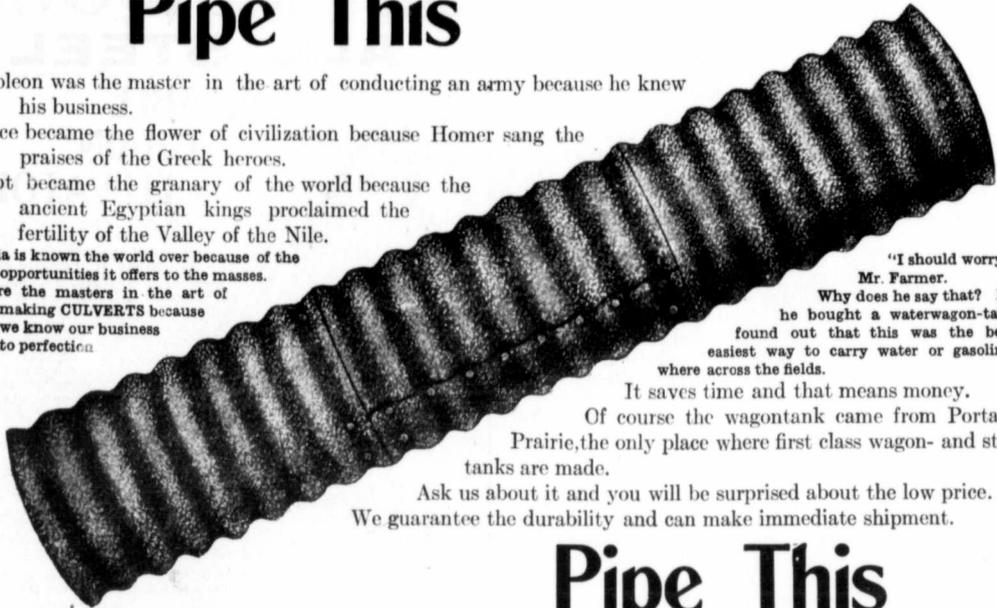
Napoleon was the master in the art of conducting an army because he knew his business.

Greece became the flower of civilization because Homer sang the praises of the Greek heroes.

Egypt became the granary of the world because the ancient Egyptian kings proclaimed the fertility of the Valley of the Nile.

Canada is known the world over because of the opportunities it offers to the masses.

WE are the masters in the art of making CULVERTS because we know our business to perfection.



"I should worry," says Mr. Farmer.

Why does he say that? Because he bought a waterwagon-tank and found out that this was the best and easiest way to carry water or gasoline anywhere across the fields.

It saves time and that means money.

Of course the wagon-tank came from Portage La Prairie, the only place where first class wagon- and storage-tanks are made.

Ask us about it and you will be surprised about the low price.

We guarantee the durability and can make immediate shipment.

Pipe This

Canadian Corrugated Pipe Co., Ltd., Portage La Prairie, Manitoba

You saw this advertisement in this magazine. Don't forget to say so when writing.

THERE are some people who naturally expect the worst.

Kind old Nature goes on year after year raising crops and providing light, heat, and rain, in quantities nearly approximating the necessary amounts. People and nations live and flourish under her regime, and the seasons roll around with reassuring regularity.

But these gloomy souls are suspicious of liberality of their common parent. They are watching for her to quit her job; or they have an intuition that an angry God is preparing to chastise the easy-going old lady for some terrible sin of omission or transgression of His laws. Unworthy, fearful children of a serene, omnipotent goddess! The world has been coming to an end ever since the Deluge.

Prophets we have always with us, and every disaster, famine, war, or pestilence, has furnished material for forebodings to these doom-singers. Of course, this branch of the prophet business has always been particularly profitable. There will forever be a certain class of people who love to sit at somebody else's feet and have their feelings harrowed; who prefer to quake delightfully at threats of hell-fire than to be lulled with visions of celestial bliss.

Fortunately, the mind of man

Millenniums That Have Been Postponed

Every now and then folks await world's end, only to discover they have one more chance.

is not generally of this cast. He is more apt to think of himself as immortal, rather than as a being whose days are literally numbered.

Early Christians believed that this world would terminate with the end of the first century after Christ. Then, with the easy adaptability characteristic of prophets, the centenary of Christ's ascension was appointed for the dread event. But the year rolled around and the sun rose and set uneventfully. We cannot question the sincerity of these predictions; to be harassed early Christians they were both a comfort and a stimulus.

It was the last belief of those primitive enthusiasts that the end of the world would come with the downfall of the hated Roman power. But emperor after emperor went to his last rest without any appreciable effect on the heavens. Finally the walls of the city itself tottered and fell. And though the mighty crash reverberated through all the kingdoms of the

earth, the old planet itself wasn't parred an inch from its orbit.

Then the "thousand years" theory was started, and as the year 1000 drew to a close, the whole of Christendom was plunged into absolute terror. The rumor spread that Christ was to settle on Mount Zion, and thither an immense army flocked to meet Him, first surrendering all their earthly belongings to the church. People stopped work, and a famine was only diverted by the necessity of immediate food.

There were several famous millenniums postponed during the Middle Ages, notably on the occasions of the great eclipse of 1654 and the comet of 1679. One of the most amusing was that predicted by Stoeffler, in the year 1533. He declared that the end was coming through a second deluge.

Many people decided to adopt the same method as did Noah; a wealthy Parisian built a raft and stored it with provisions to last six months. A small village

many miles from any water took up a collection of all the cash in the vicinity and devoted it to building a vessel. Finally the appointed day came, and at seven in the morning Stoeffler began to preach his last sermon. He advanced twenty-two arguments to prove the truth of his theory, which might have been considered an unnecessary amount of oratory, as sixty minutes of waiting would have proved their verity or falsity beyond a shadow of a doubt.

The last moment came. The clock tolled the hour. The prophet cried triumphantly, "It comes! It comes."

Behold, the Cloud!

But it didn't come. The people ceased their lamentations presently, and everybody waited to see who would make the first move. As Stoeffler was anxiously looking through the church door for help, either from divine hands or from some commonplace diversion, he spied a small cloud. He seized upon it eagerly, and shouted: "Behold, it cometh from the clouds of the sky."

But as it didn't come even from this direction, his followers lost patience, and, rushing up to him, thumped him so hard that his last day, at least, appeared very imminent.

The last hundred years has

been prolific in false prophets and doomsdays that failed to arrive. There are many people living who remember the most famous postponed millennium of recent times. We can all of us recall stories our parents or grandparents have told us of long sojourns between two feather-beds to ease the shock; of ascension robes, made probably by some believer of the household, ostentatiously donned on the fatal day, and sheepishly removed at its close.

This "last day" was in 1844, and the date was set by William Miller, head of the "Millerites," and founder of the Second Adventists. Miller was a native of Massachusetts. He devoted a number of years of his life to the close study of the Bible, and finally became convinced that he had discovered the correct key for the interpretation of the Scriptures. He believed that this revelation came just in time, for, according to his figuring, the final day of judgment was due in twelve years.

Immediately he set out to warn a heedless world of its doom. With him he carried his charts and drawings, and multitudes flocked to the town halls and school-houses to listen and be convinced. The excitement was tremendous. His converts amounted to thousands, and as the "great day for atonement" approached, the most extensive preparations were made, according to the amount of faith and credulity of his disciples.

Some dressed in ascension robes and refused food. Others put on their best attire, and packing their valuables in valises, attached them to their persons with ropes and straps so that they might not go penniless into the next world.

As the great cataclysm soon appeared to be indefinitely deferred, Miller's church was rent with schism, but, until his death in 1849, he was the leader of more than fifty thousand followers.

The world repeated its old trick of refusing to quit business on September 24, 1909, greatly to the chagrin of a colony of members of the Later Reign of the Apostolic Church, who were gathered at West Duxbury, Massachusetts, for the event. These people expected only a limited destruction, as they had had it revealed to them that the spot they had selected would be immune. The crust of the earth about them would peel off, and roll up the wicked in it. Those surviving would thereafter live in the greatest felicity on the undercrust.

Another New England church was disappointed in the same respect only a few days previous

to the setback received by the Later Reigners. At Shiloh, Maine, the "Holy Ghost and Us Society" waited in the greatest confidence in their hundred-and-fifty-thousand-dollar tabernacle for the great catastrophe at 10:20 a. m., on September 15. They had painted the entire edifice, and bought a great rug so that the place would look nice for the last rites.

The members of this society expected a general disarrangement of the firmament, and that in the general confusion that they would be transported to the realms of eternal bliss.

Not Yet, Brethren.

As the appointed day passed without disturbance, a message was received from "Elijah" Frank W. Sandford, the founder, that a special revelation had come to him that the end had been mercifully postponed until October, to enable him to transport the faithful to Jerusalem.

He also ordered all his disciples to learn to swim so that they would be prepared, and now all the believers take a dip in the river each day.

Lee J. Spangler was a groceryman of York, Pennsylvania, who became troubled with the gift of prophecy. At the tender age of twelve he went into a trance, in which he had a vision of the last terrible day in October, 1908. He considerably concealed from all his friends the fate that was hanging over them, and planned his life like any ordinary mortal until he felt that he was in the very shadow of the great disaster.

When he decided that Nyack, New York, was the best place from which to witness the big upheaval, he gathered his followers about him there and started in proselyting. On the eve of the grand crash, he told his chief high-priestess that he was going up to meet God, and bidding her a touching farewell, he disappeared into the night.

Then the followers decked themselves in white, repaired to the cemetery, and held their services. The chief high-priestess pointed out how Prophet Spangler, in the second verse of the sixth chapter of Revelations, had discovered that Theodore Roosevelt was described therein, he having ridden a white horse up San Juan Hill, conquered and been crowned, and, therefore, it was perfectly plain that the end of the world would arrive within the next few minutes.

The night grew colder, and hope for the worst died out. They all went home, and the "prophet," who was later discovered living quietly at the home of his wife, eventually went back into the butter-and-egg business.

The "MEADOWS" ALL STEEL PORTABLE GRAIN ELEVATOR

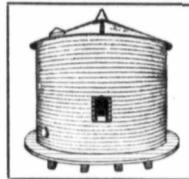


Both elevator and receiving hopper are entirely of steel and only the best of heavy sheet steel is used. The Hopper is absolutely grain tight and has a large capacity. It is the only successful feeder ever devised for a small grain elevator. Both top and bottom ends of Elevator are solid castings heavily ribbed. The top casting has 4-inch slot for adjustment of chains, making it possible to take up 8 inches of chain, so that it will never be necessary to take out a link on account of wear.

Top and Bottom Sections are both 9 feet long. Middle Sections 4 and 8 feet long. The Sections are coupled together with cast coupling and the Elevator can be easily and quickly taken apart by removing 4 bolts and can be put together just as easily and as quickly. The Capacity is practically unlimited—the greater the speed and Horse Power the greater the capacity. The "Meadows" is positively the

**BEST SINGLE LEGGED STEEL ELEVATOR BUILT.
HENRY RUSTAD, 325 WILLIAM AVENUE, WINNIPEG**

You saw this advertisement in this magazine. Don't forget to say so when writing.



The Combined Efforts
of
Users and
-Builders-

HAVE PRODUCED OUR

Portable Corrugated Granaries

THE THOROUGHbred WITH A REAL PEDIGREE

Imitators have tried to make something claimed to be "just as good," but they lack the experience in real service that has made ours

Prove Best by Years of Use

Owners make no apologies. They know from daily acquaintance that they have the only best.

Make money for yourself by using it. Full descriptive literature sent free on request.

WRITE TODAY

Winnipeg Ceiling & Roofing Co.

P. O. Box 2186 F

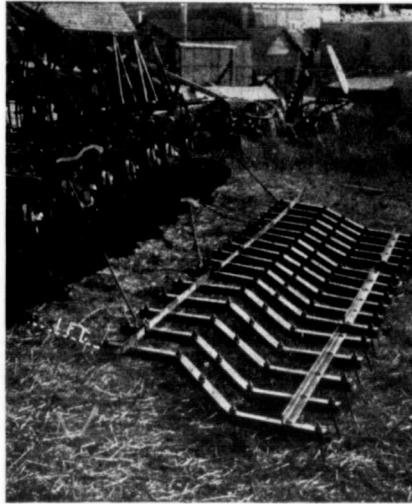
LIMITED

Winnipeg, Man.

You saw this advertisement in this magazine. Don't forget to say so when writing.

CHRISTIANSEN Harrow Attachment

Our Champion Plow Attachment in use. Leads in every contest. Fits all plows. There are more of these attachments in use than all other makes combined. Note extremely light draft.



This is one way—the only effective way of hitching. There isn't a single "dead head" in any operation. It is a big saver of time because there is nothing that has to be gone over again.

Our Christiansen Acme Packer attached to gang plow. Has many obvious as well as hidden features. It is a soil packer, properly attached, marvellously easy on draft.



Mechanically Correct.—A Success in Every Way
CHRISTIANSEN HARROW ATTACHMENT CO., Winnipeg, Man.

You saw this advertisement in this magazine. Don't forget to say so when writing.

The final day was picturesquely predicted by Fred Stutzke, of New York, some ten years ago. He gathered quite a little band about him.

Mr. Stutzke said: "The north pole has now almost reached the sun. By tomorrow it will touch it. Then the pole will begin to melt, the waters will rush down and cover the earth, and the wicked will perish. The elect will enter upon the perfect thousand years.

"For ages the ice has been piling up steadily around the north pole. It has raised the pole steadily, century by century; and, finally, all the ice in half the world has been gathered up there in a great pyramid, the top of which has at last been crowded up into the sun itself."

But the pole safely passed the sun on the day set, and recent explorations in that part of the world do not tend to show any such conditions as described by Mr. Stutzke, so that it may be assumed that we can safely dismiss any apprehensions of danger in that quarter from our minds.

And yet—and yet—

A hen near Dickson, Tennessee, according to the veracious newspaper correspondent in that place, recently laid an egg upon

the shell of which were plainly waterlined the words: "Prepare for the judgment. It is at hand!"

A luminous ring was recently seen around the sun by several reputable citizens of Wilkes-Barre.

In London the Rev. M. Baxter has declared that the day of judgment is set for May 2, 1929, or April 9, 1931.

The Church of the Millennium sets October, 1914, and a Rochester, New York, prophet, 1941.

So let us not scoff too loudly. We are not yet out of the woods. Wait until 1914, at least.

What Books Have Done For Liberty

In old days of the struggle for freedom many a grand speech might die away within the walls where it was uttered; now, by the aid of the printing press, reverberated through all the nations, it may go thrilling and thrilling through the world, and come rolling back to the speaker in millions of echoes. The spoken word may reach 3,000; the printed page may be read by 300,000,000.

Only think of what cruelties, of which thought curdles the blood,

and the memory inflames the cheek, our fathers had humbly to endure. Think of the horrible crimes and ghastly secrets of monastic dungeons, of baronial castles. It is the printing press which has poured daylight into these dungeons, smashed those implements of torture, burst the portcullis which defied the battering ram, and crushed down the walls which withstood the cannonade. It has made nations strong and free. It has shaken the thrones of tyranny and quenched the fires of persecution, and sent the menacing spectres of ignorance and hatred to gibber in their congenial night.

But notice, thirdly, how the printing press has given voice to the incarnate conscience of mankind. Take but one illustration—and one from our own days—the last struggle with the curse of slavery on the American continent. One brave American reformer—W Lloyd Garrison—a youth, little more than a boy, was inspired to convince the millions of his fellow countrymen of the sinfulness and shamefulness of treating men as chattels. He stood utterly alone; intellect disowned him; mobs assaulted him; malignity searched him with candles; he was starving on bread and water; God honoured him

as He honoured Luther, by making every bad man his enemy. Yet, in thirty-five years, from a mean garret on a third storey, his bed on the office floor, only a negro boy to help him, in daily dread of assassination, he won the gigantic victory of right over might. And why? Solely because the light which fell through the ink-bespattered window upon the dingy wall fell upon a printing press. In truth the printing press has added more power to Man's intellect than the telescope to his vision, or the lever to his arm.

"And Freedom rear'd in that august sunrise

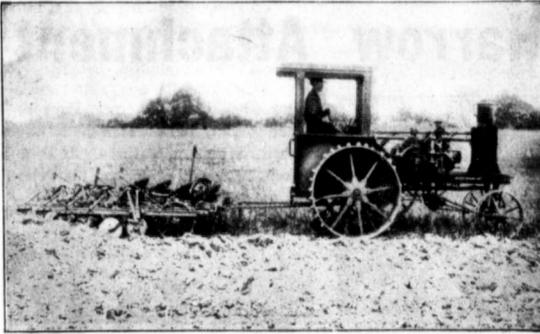
Her beautiful bold brow,
White robes and gowns, before
her burning eyes
Melted like snow.

Her words did gather thunder;
Yet no sword of wrath her
right arm whirled
But one poor poet's scroll, and
with his word she shook the
world.

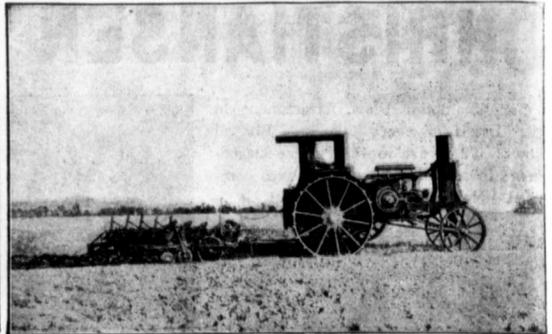
Remember only that, to enjoy
their blessedness, you must."



"What's the matter, Willie?"
said Mrs. Brown to her small son,
who was crying. "My kite won't
fly," sobbed Willie, "and I made
it out of fly-paper, too."



Avery 12-25 "Light-Weight" Tractor and 4 bottom "Self-Lift" Plow.



Avery 20-35 H.P. "Light-Weight" Tractor and 5 bottom "Self-Lift" Plow.

Plow with an Avery "Self-Lift" Engine Gang and Save a Man

The Plow that Completely Outclasses all Hand Lever Engine Gang Plows

You don't cut grain any more with a cradle. You don't sow your seed by hand. You don't plant corn with a hoe. You have quit doing all these kinds of work by hand and do it with automatic machinery.

It's just as much out of date to lift and lower the plows on an Engine Gang by hand as to cut grain, sow seed or plant corn by hand, for you can now get an Engine Gang with an Automatic "Power Lift—Self Drop" Device that will do all the work.

Saves Expense - Saves Hard Work - Saves Time

This Avery "Self-Lift" Plow does away with the plowman. One man can handle both the Engine and the Plow. You save the wages and board of a man with this plow.

And this Avery "Self-Lift" Plow also saves all the hard back-breaking work of lifting and lowering each plow by hand levers at the end of each furrow. All you have to do is to pull a cord and the plows are raised by power taken from the plow wheels. Turn the outfit around, pull the cord again and they drop back into the ground.

You don't need to stop or slack up at the ends with this plow as you do with the hand lever style. Simply pull the cord and keep right on going. This means more ground plowed per day.

Does a Better Job of Plowing

With a hand lever plow the ends are usually left ragged because of the difficulty of raising and lowering the plows quick enough, but with the Avery "Self-Lift" Plow the plows are all automatically raised and lowered in a straight line leaving clean, even ends.

This, together with the fine adjustments for suck, depth and winging the plows makes it possible for the Avery "Self-Lift" Engine Gang to do a fine job of work.

The Only Real "Self-Lift" Engine Gang

This plow is carefully covered by patents Nos. 819,223; 900,919; 933,858; and 936,767. It's the only leverless plow. There's no other plow like it.

The Power to Pull It

Avery "Self-Lift" Plows are built in sizes 3, 4, 5, 6, 8 and 10 gang. You can get an Avery Gas or Oil Tractor in sizes 12-25 H.P., 20-35 H.P., or 40-80 H.P. or an Avery Undermounted Steam Engine in sizes 18, 20, 22, 30 or 40 H.P.

If you want a Gas or Oil Tractor, the Avery "Light-Weight" Tractors are the simplest Tractors built, are light in weight and burn either gasoline or kerosine economically.

If you want a Steam Engine, there's no other engine built with the Under-mounted Design which is the only real design of an engine for plowing purposes.

Get all the facts.

Learn all about Avery "Self-Lift" Engine Plows, "Light-Weight" Gas and Oil Tractors and Undermounted Steam Engines. They have the most Up-to-Date and Improved Design of any make of machines and are no experiment. Call at our nearest Branch House or write, telephone, or telegraph us for quick action in getting all the facts in your hands.

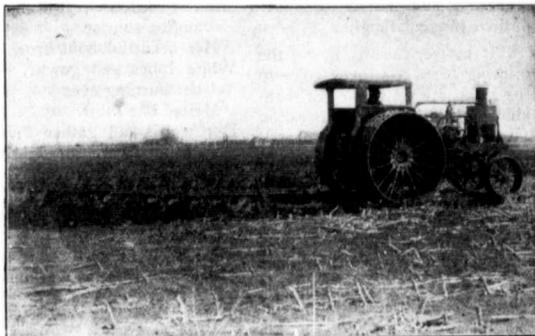
AVERY COMPANY

675 Iowa Street

Peoria, Illinois

Haug Bros. & Nellerhoe Co., Ltd., Winnipeg, Regina, Calgary

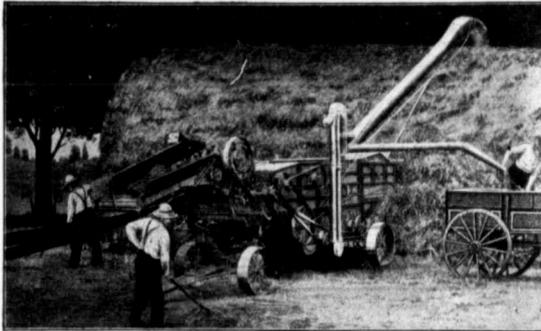
WESTERN CANADIAN DISTRIBUTORS



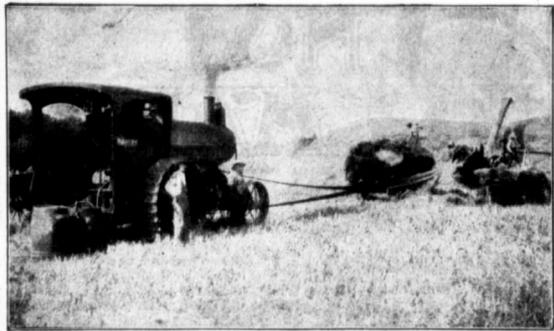
Avery 40-80 H.P. "Light-Weight" Tractor and 10 bottom "Self-Lift" Plow.



Avery Undermounted Steam Engine and "Self-Lift" Plow.



Avery "Yellow-Fellow-Grain Saver" Separator.



Threshing with an Avery Undermounted Steam Engine and "Yellow-Fellow-Grain Saver" Separator.

Thresh with an Avery "Yellow-Fellow" Separator and Save the Grain

The Best Proven Grain Saver Built

A claim means nothing without the facts to back it up. Many companies make strong grain saving claims for their separators but give you no facts to prove it.

There's only one way to absolutely prove what a separator will do in grain saving and that is to thresh on canvas. We wanted to back up our claims with positive facts, so we sent out a man to make tests on Avery separators right out in the field.

The results were wonderful. In 27 Field Tests the average saving was 99 9-10 per cent. Just think of it. No other separator has made any such a proven record of grain saving as this. And the proof is the only thing that counts—it's easy enough to claim that any machine will save the grain. These tests absolutely prove that an Avery "Yellow-Fellow" does. You know it for a positive fact when you get an Avery.

Why an Avery "Yellow-Fellow" saves the grain

THE GRATES.—Behind the cylinder in an Avery Separator is an Adjustable Grate. It can be raised up close to the cylinder in threshing dry grain and then lowered so that it will not clog up if the grain is wet or rotten. Underneath the grate is a moving grate on the front end of the straw rack through which the beater constantly pounds the grain. These grates are different than on any other machine. They separate out a large percentage of the grain before it reaches the straw rack.

THE I.X.L. SEPARATING DEVICE.—Behind the beater is the wonderful I.X.L. Grain Saving Separating Device. This is the best device ever made for separating the loose grain out of the straw. The fingers tear up the bunches and draw the straw out into a thin layer so that the kernels can easily drop through.

THE STRAW RACKS.—Then the straw racks with toothed fish backs take the straw and by a strong upward and backward motion toss it and shake it thoroughly.

These grates, I.X.L. Separating device and Racks make up the best combination of separating parts found in any machine for beating the grain down through the racks, spreading the straw out and shaking it up from beneath. An Avery separator is built to save the grain and the canvas tests prove that it does it.

Backed up by the strongest Grain Saving Guarantee Behind any Machine

Back of these canvas tests and these facts about the construction of the separating parts in an Avery Separator is a Grain Saving Guarantee that puts the Avery Company right square behind the work of every Avery Separator. We guarantee an Avery Separator as follows:

"The Separating device will shake out 99 52-100 per cent or more of the loose grain that is in the straw, the grain to be dry and in fit condition to thresh. When desired we will submit the machine to test."

There's no joker in this guarantee. No impossible conditions. A plain straightforward guarantee in every way. Compare it with any other and you will find that there's no other guarantee offered that comes anywhere near equalling it.

Get a Complete Avery Outfit

Get a Grain Saving Avery "Yellow-Fellow" Separator and your choice of an Avery single or double cylinder steam engine or a gas or oil tractor to drive it.

With one of these Avery Outfits you'll have a rig that's a Job Taker and Money Maker, Grain Saver and Grain Cleaner.

Call on us at any of our Branch Houses, or telephone, telegraph or write us and get all the Facts about an Avery Outfit.

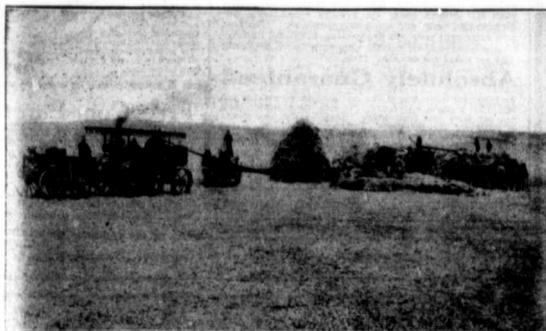
EVERY COMPANY

675 Iowa Street,

Peoria, Illinois

Haug, Bros & Nellerhoe Co., Ltd., Winnipeg, Regina, Calgary

WESTERN CANADIAN DISTRIBUTORS



Threshing with an Avery Single Cylinder Steam Engine and "Yellow-Fellow-Grain Saver" Separator.



Threshing with an Avery Gas or Oil Tractor and "Yellow-Fellow-Grain Saver" Separator.



NO. 1 HARD

Winnipeg, June 30, 1913.

Following a little break on the opening day of June, the wheat market rapidly advanced, and by the middle of the month, July wheat sold over the dollar mark, only to recede gradually for the balance of the month. It was a speculative advance not based on foreign demand, and frequently July contract wheat was five to eight cents above export basis. The decline was only such as might be expected. Moreover, the unusually severe drought over the two Dakotas and Southern Manitoba was generally broken in the last half of June.

Kansas wheat is now being threshed and marketed. Earlier estimates have been cut down, and now a crop around 80,000,000 bushels is expected. Other Western States East of the Rockies report a crop above the average, while Oregon and Washington report crops lean and spotted. Russia expects only an average crop; Hungary a fair crop but small acreage; lower Europe has rather poor prospects, but France, Germany and the United Kingdom report a promising outlook except on oats. India has had good weather, and Australia has fine prospects and an increased acreage of wheat.

In the United States it is anticipated that the total wheat crop will run about the same as last year's phenomenal crop, the winter wheat crop being 100,000,000 bushels greater and the Spring wheat crop 100,000,000 bushels less, but this Spring wheat crop may yet deteriorate. Due to money tightness, speculation has not affected American markets as much as ours, where a quiet corner has been run in both May and July options.

In gauging markets, statistics have a great value. A noticeable feature is the large amount of Canadian grain still held in bond at Duluth-Superior, namely, 887,650 bushels wheat, 134,660 bushels oats, 34,117 bushels barley, and 1,202,405 bushels flax. Holders are evidently awaiting the outcome in the Tariff Legislation.

Due also to inflated wheat markets and tight money, our own terminal stocks are very heavy, and on June 27th were as follows:

1913		1912	
bus.		bus.	
Wheat,	6,334,264	4,970,172	
Oats,	4,217,088	2,906,007	
Barley,	587,328	394,370	
Flax	4,854,278	466,940	

Note the huge stocks of flax at the Canadian and American Terminals. The big stocks of wheat are partly due to exporters, taking advantage of inflated prices for the July option here, selling their hedges out here, and buying back abroad their European sales. Farmers holding grain in store Terminals, or grain just shipped, should put some study on the figures given above. No longer need a farmer think wheat is sure to go up, because a few hundred square miles in his district have suffered from drought. Canadian crop prospects are fair to good, Ontario reporting rather poorer than usual, while Saskatchewan, Alberta and all but a few sections of Southern Manitoba injured by drought, report excellent prospects. The big percentage of Marquis wheat sown means a fairly early harvest.

Grain inspections to June 28th are worthy of notice.

Wheat	135,211,500 bus.
Oats	53,492,400 bus.
Barley	13,942,500 bus.
Flax	20,056,950 bus.

The crop movement for the last forty days has been heavier than had been anticipated, and now the old crop must be pretty well out.

Canadian millers state that since the manipulation in our May and July options started about the end of March last, they have been unable to work much new export business in flour, our high grade contract wheats having gone too high to permit them grind same to meet American competition.

A survey of all conditions leads to the conclusion that the balance of old crop will likely go out at present or slightly lower prices unless the new Spring wheat crops now so promising, suffer some considerably widespread damage.

COARSE GRAINS

In sympathy with wheat, our oats advanced and fell again about as much, during June. The demand was only fair, but our oats seem cheap compared with American oats and corn. Stocks of oats at terminals have increased considerably. In the last week of June, American oats and

FARMERS! SHIP YOUR GRAIN

TO THE

CANADIAN ELEVATOR CO. LTD.

GRAIN COMMISSION MERCHANTS, WINNIPEG

It is as much our business to give satisfaction as to secure grain shipments. We watch the grading of each car and allow liberal advances on all bills of lading.

You saw this advertisement in this magazine. Don't forget to say so when writing.

Now Your Crop is Doing Well

you will be also planning the marketing of same. We thank numerous patrons for sending us the biggest business a new Grain Commission House ever received in its first year, and with increased facilities we confidently expect to give our patrons the same excellent service the coming season, and bespeak trial shipments from new shippers. There are many ways in which experienced and aggressive men can assist you in marketing your grain to advantage. Write us early for prices and further particulars.

(A. M. Blackburn)
(D. K. Mills)

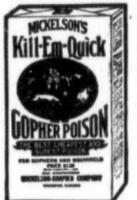
BLACKBURN & MILLS

531 Grain Exchange Winnipeg, Man.

TELEPHONE MAIN 46
Licensed Reference: The Royal Bank of Canada Bonded

You saw this advertisement in this magazine. Don't forget to say so when writing.

2,000 Gophers Can Be Killed For 75 Cents!



A 75-cent box of Kill-Em-Quick contains enough *deadly doses* to kill 2000 gophers. And there are that many on every small farm in gopher-infested regions. Besides, every pair raises from twenty to thirty-six young ones per year. Kill-Em-Quick kills gophers for less than one cent per acre. It is *guaranteed*. If it fails, you get your money back promptly.

Mickelson's Kill-Em-Quick

has a peculiar odor and taste that *attract* gophers, they eat it, and it is so deadly that the merest atom *kills* a gopher. No other poison compares with it. Others must be greatly weakened, are bitter, and are *not* eaten by gophers. Besides, you are never *sure* you are getting the pure, undiluted poison. It's different with Kill-Em-Quick. *You get what you pay for.* It is

Absolutely Guaranteed

An hour after spreading it you can go into your fields and find dead gophers all around. It kills them before they can get back into their holes. They leave tender shoots of grain for Kill-Em-Quick. You ought to use it. Get a Kill-Em-Quick is made in the 7 and 1 1/2 sizes. Get it from your druggist or sent direct, prepaid, on receipt of price. Guarantee with every box. ANTON MICKELSON, FARM.

Mickelson-Shapiro Co.
Department C Winnipeg, Manitoba

FREE

—this attractive, handy leather coin purse—the finest you ever saw in every box of Kill-Em-Quick there is one coupon. Send two with the one in this advertisement and purse will be sent you. Get two boxes Kill-Em-Quick at once. Clip coupons in this advertisement, send all three to us and get this coin purse free.

Free Coin Purse

This coupon and two coupons from Mickelson's Kill-Em-Quick entitle you to one leather coin purse free. Send no money—just this coupon and two coupons from Kill-Em-Quick packages.

Mickelson-Shapiro Co.
Dept. C. Winnipeg, Manitoba

You saw this advertisement in this magazine. Don't forget to say so when writing.

If you want to write any manufacturer re his goods or re any goods and you do not know the maker, send letter to

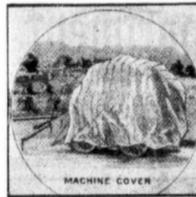
E. H. HEATH & COMPANY, LIMITED, WINNIPEG

and your inquiry will be duly forwarded.

FREE TO THRESHERMEN Our Large Catalog of Supplies. Write for it Today.



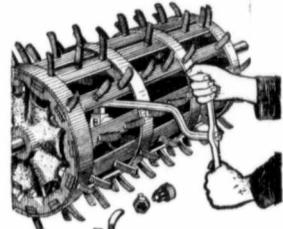
Our "Veteran" is the best, strongest and heaviest canvas belt on the market. Fully guaranteed.



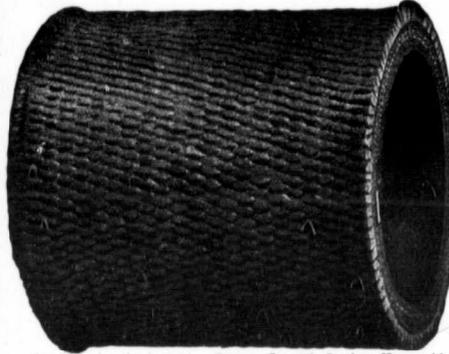
Our prices on Canvas Covers are very low. Get them at once.



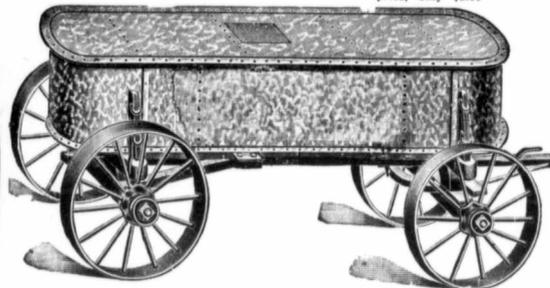
Washington's Superior Pulley Covering consists of canvas and a specially prepared cement. Is more durable than a leather covering. Put up in outfits of 3 different sizes.



Tiger Adjustable Ratchet Cylinder Wrench. Quickly pays for itself. Fully warranted. Our price, only \$2.00



Our price for the best 2-in. Canvas Covered Suction Hose with woven jacket is only 60c. per foot. Plain 2-in. Suction Hose, only 37c. per foot.



Headquarters for Galvanized Steel Thresher Tanks. Write for Catalogs giving full description and prices.

Send for Catalog Do it Now It means Dollars in Your Pocket

Windsor Supply Co., Windsor, Ont.

corn suffered some drought damage, but the general rainfall on the last day of June has relieved this anxiety. No great change in our oats need be expected, and bulges should be met with sales.

Barley has been in unusually good demand for this time of the year, and fair prices will likely continue. Tariff Legislation in the United States should be closely followed by barley growers.

FLAX

A glance at foregoing figures but leaves one wondering that flax prices have held steady recently. It seems on rock bottom, and this grain should gradually advance, especially if freer money comes, helping building operations. The October flax at \$1.22 looks very cheap indeed. Flax is now on a good export basis, but the foreign demand is limited and Canadian offerings large.

Traction Engine Lubricators

We desire to call our readers' attention to the advertisement, which will be found on another page, of the Practical Force-Feed Oil Pumps manufactured by the McCullough Mfg. Co., Minneapolis, Minn., U.S.A.

For many years the problem of lubricating traction engines has been a difficult one, especially during the cold weather. The Practical Pumps are sold under a positive guarantee that they

will handle any grade of cylinder oil, no matter how cold the weather may be and without the use of a warming chamber.

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We are told by the manufacturers that their sales are increasing rapidly from year to year, in fact, the sales of the first four months of the present year show an increase of 35 per cent over the same period last year. This alone would seem to prove conclusively that the claims of the manufacturers have been fully substantiated.

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He Never Spoke Again

The following story is told of a ventriloquist, now famous; but at the time of this incident he was so poor that he used to walk between the places where he was to appear. On one of these tours he picked up a miserable little dog because it looked so much like he felt. The story will explain what became of the dog.

The first house he came to was an inn, and, of course, he wanted a drink. He had no money, but went in anyhow, to see what he could do.

The proprietor said, "Well, what will you take?" He said: "I'll take a little whisky." And then, turning to the dog, he asked: "What will you have?" The answer came very promptly: "I'll take a ham sandwich." The publican was so surprised he almost fainted. He looked at the dog for a moment, and then asked: "What did you say?" The dog replied: "I said I'd take a ham sandwich." Mine host thought it wonderful that a dog should be able to talk, and asked who had trained him, how long it had taken, and wound up with: "How much will you take for him?" "Oh," replied Mr. Ventriloquist, "I wouldn't sell him at any price, but I am a little hard up and if you will lend me ten pounds I will leave him with you until I bring back the money." "All right," was the reply; "I just want him for a little while, so I can show him to some people I know around here." So everything was settled, the money

paid, the dog left with the proprietor, and as the ventriloquist went out he turned and waved his hand to the dog and said: "Well, good-by, Jack, I'll come back soon." The dog looked at him, and said: "You mean, despicable man, to sell me for ten pounds, after all I've done for you! So help me Moses, I'll never speak another word as long as I live," and he didn't.



Willie: "Pa, can't I have some —"

Pa: "See here, you've got a plateful of food before you."

Willie: Yes, pa, but—"

Pa: "Well, keep your mouth shut and eat it."

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Womans' Department

Conducted by PEARL RICHMOND HAMILTON

A HOUSEHOLD FORUM FOR THE DISCUSSION OF EVERYTHING THAT PERTAINS TO THE HOME



The Pattern

Man's life is laid in the loom of Time,
To a pater he does not see
While the weaver works and the shuttles fly
Till the dawn of eternity.
Some shuttles are filled with silver thread
And some with threads of gold;
While often but the darkest hue
Is all that they can hold.
But the weaver watches the skillful eye
Each shuttle fly to and fro
And sees the pattern so deftly wrought
As the loom moves sure and slow.
God surely planned the pattern
Each thread, the dark and fair
Is chosen by His master skill
And placed in the web with care.
He only knows its beauty
And guides the shuttle which hold
The threads so unattractive
As well as the threads of gold.

Not till each loom is silent
And the shuttles cease to fly,
Shall God unroll the pattern
And explain the reason why
The dark threads were as needful
In the weaver's skillful hand
As the threads of gold and silver
For the pattern which he planned.—
From Lillian Laurie's Page.

OUR WINNIPEG PRESS WOMEN.

By Pearl Richmond Hamilton.

During the month of June a convention of Canadian women writers was held at Edmonton. This organization is known as the Canadian Woman's Press Club. A peculiar turn of circumstances made it necessary for me to remain home. Inasmuch as all of the other women editors of the Western magazines were there, I am sure our readers will learn much of interest concerning the convention. One morning while wondering how I could give our readers a bit of information about the work our press women are doing, the idea occurred to me that "the stay at home" member might after all do her share. Accordingly I went down to the Industrial Building where the Press club members have a room of their own. There they meet every week to talk over their work and enjoy a social hour together. Nearly every week a prominent man or woman from abroad or from another part of our own country is in the city and is invited to meet with us. In this way we come in touch with affairs in other members—a little of the work that each member has done during the past year.

parts of the world especially women's work.
At present there is in the room an exhibition of the work of the Winnipeg think well worth giving our readers. Our western women are fortunate in having for the writers of the women's departments, writer, who are earnest, sympathetic and interested in the life of Canadian women. I know the writers personally and they are worthy of the confidence our western women so sincerely placed in them. The Western Home Monthly, Farmers' Advocate, Nor' West Farmer, Grain Growers' Guide, Free Press, Telegram, Tribune, all have in the women's departments material that comes from experience and study with the honest purpose that the women readers will be helped and encour-

She supplies a weekly letter by wire of from 300 to 500 words to the Toronto Weekly and contributes bimonthly on Field and Market for Canadian Finance. Each week she writes for Town Topics under the name of The Woman About Town. In this department she writes reviews of books from the MacMillan & Co., and Musson Co., as well as news and ideas of the affairs of Winnipeg and the West. Miss Hind also contributes The Woman's Quiet Hour to the Western Home Monthly every month and Farm Problems to The Canadian Thresherman and Farmer monthly. She is a correspondent for the Canadian Agency in London which supplies news to the Provincial papers in Great Britain. Besides this great amount of regular work, Miss Hind does considerable free lance

a line of work heretofore handled only by men.
Mrs. A. V. Thomas who edits the department for women and girls in the Weekly Free Press is regarded as a friend in nearly every western home. Under the pen name of Lillian Laurie she touches the very heart of women's affairs and her readers regard her advice and help as most practical. Her correspondence department brings her letters from hundreds of women who ask her assistance on every problem pertaining to women and in many cases she has by her contributions from the pen saved lives. She not only helps with her pen but she is a gifted speaker and pleads for reforms in conditions concerning women, before large audiences at conventions and other gatherings throughout the western provinces. She is a very popular speaker and presents her arguments in a most convincing manner.



Lots of "Pin Money" in Ducks.

aged, and when a reader requests personal help she is never neglected. Thus these magazines that come into western homes bring messages from true friends. The names that are most familiar to western women who read the magazines and newspapers are E. Cora Hind and Mrs. A. V. Thomas (Lillian Laurie). These two women have had a great deal of experience in the affairs of Western Canada and write from actual knowledge gained by living with and knowing Western Canadian women. Miss E. Cora Hind is the only woman commercial editor on the American continent and in the British Empire. This is a distinction that Western Canada must appreciate. In her position as commercial and agricultural editor of the Manitoba Free Press she edits regularly the commercial market page and western farm page. Besides the great amount of work this position requires she is special correspondent to the Montreal Financial Times and Canadian Farm.

writing and prepares special articles for the Monetary Times, Industrial Canada and other periodicals. A little book entitled Red River Jottings convinces us that she can write stories in interesting style. A glance at some of her contributions to the periodicals mentioned reveals the fact that she is thoroughly familiar with her subjects. She gives the market news, foreign crop conditions, stock reports—and compiles annually the total amount of crop and stock results in Western Canada comparing them with previous years.
In her free lance work the article on The Story of the Building of the Big Ditch descriptive of the Southern Alberta Land Co.'s Irrigation System, is a remarkable piece of work to be contributed by a woman. It is full of interesting information gleaned from a three days motor ride over the works. Miss Hind occupies an important position in the journalistic profession and convinces us that women can handle successfully

Mrs. Thomas contributes to several magazines. In this exhibition of work I read in one of the magazines an interesting story delineating the character of a Canadian Indian showing the Indian's wrath because the white man had made him weaker. Mrs. Thomas (Lillian Laurie) is a real benefactor to Canadian women and her work is genuine all the way through.
Mrs. Genevieve Lipssett-Skinner is another writer who is read in scores of Canadian homes as well as abroad. She is the editor of the women's department of the Winnipeg Telegram, and as organizer she has built up a most important feature of charitable work known as Sunshine. Through this department she brings the fortunate in touch with the unfortunate in a sympathetic way and thus helps many who are sick, discouraged and helpless.
Mrs. Lipssett-Skinner spent a part of last year in Great Britain lecturing. She was the first woman appointed by the government to be sent to Great Britain to induce a larger number of women and children to come to Canada. As special commissioner, she promoted successfully the emigration of a great many women. Besides her work on the Winnipeg Telegram, Mrs. Lipssett-Skinner writes for Saturday Night, and the Calgary Herald and last year she syndicated letters. I quote here from a London periodical the first paragraph of an interesting article from her pen.
"London at First Hand.
"Plays, places, politics, personalities, fashions and fancies—in fact a thousand things of interest are on tap in London constantly, waiting to be told about. The kaleidoscopic panorama of events moves so rapidly that the hand of the recording angel must indeed be tried if that worthy citizen of the hereafter attempts to retail his accounts of activities in the capital of the world. Despite the multiplicity of appropriate

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themes for discourse I have tried to quarantine a few of timely and general interest." Then follows a most interesting article on London life. Mrs. Lipsett-Skinner is a worker in many clubs that promote social and charitable reforms.

Mrs. Florence is the editor of the Winnipeg Tribune's women's department. Under the pen name of Nina Glencross she, too, helps her readers over the monotonous grind of drudgery. Her work encourages and brightens one's life with hope and trust. In this particular exhibition her contribution was a page for Mother's Day. I quote this from her excellent department.

Mother's Day.

"So I say on this annual anniversary honor the dear aged mother. Time may have scattered snow flakes on her brow, pillowed deep furrows in her cheeks but she is still sweet and beautiful when the world despises and forsakes you, when it leaves you by the wayside to die unnoticed, the dear good mother will gather you into her feeble arms and carry you home and tell you all your virtues, until you almost forget your soul is disgraced by vice. Love her tenderly and cheer her declining years with devotion." Mrs. Dennis (Nina Glencross) makes the home-life a special feature of her work.

A part of the exhibition that interested me very much was the work of those who edit the woman's work in our sister magazines.

The editor of the woman's page in the Nor-West Farmer is Kenneth M. Haig (Agnes Grey). She has the knack of giving a great deal in few words. She reviews the important affairs of the day concerning women, and her department is remarkable for its unusual amount of important information. She has the ability to condense news. Miss Haig is also the editor of the woman's department of the Winnipeg Daily Free Press. Under the headings of Interviews, Women's Interests in Matters Great and Small, Wage Earning Girls, Styles, Women's Affairs and Editorials she conducts a successful department that is full of genuine interest. Her "Over the Tea cups" by Alison Craig is bright and instructive and it promotes advancement in women's affairs. We regard "K. Haig" as one of the brightest members of the Winnipeg branch of the Press Club.

The Farmers' Advocate has Miss Clendenan for its woman's editor. She contributes weekly: I am sure that the Home Journal, Hope's Quiet Hour, and The Ingle Nook contain words of cheer and hopefulness for every subscriber's home. Miss Clendenan is sincere in her work and her department is influential in making our western homes happier and better. "Hope's Quiet Hour" has created many a hopeful hour. Miss Clendenan is the Secretary of the Winnipeg Press Club. She also conducts The Advocate Scouts.

Miss Florence Beynon conducts the woman's department in The Grain Growers' Guide. I read her page with a great deal of interest as it is bright, original and ambitious. An article entitled "Yesterday-Today-and-Tomorrow," reveals the secret of her success. "Yesterday the woman's page contained recipes, today it is the science of the home—tomorrow it will contain material on broader questions." Miss Beynon's department seems to encourage us to see great things in the future for women. Her children's department in the Guide is full of good ideas for children and I think is one of our best children's departments.

The Prairie Chicken page in the Telegram by Miss Fryer teems with child life and interest. Stories, drawings and letters make the reader feel that this is a real children's page.

The children's page in the Free Press, conducted by Mrs. Florence Randal Livesay brings us all into the very heart of childhood, for Mrs. Livesay has two little children of her own and is therefore a real mother who understands the desires and pleasures of all Canadian children. She composes poems that go straight to the child-soul. A little poem that she composed for a Christmas booklet which was in this exhibition is one of the most beautiful poems I have ever read. I should like to quote it but I think I must not steal it. Sometime

perhaps she will allow me to quote it.

Mrs. Florence Livesay is a well-known writer. She contributes to several magazines under the names of Kilmeny and Y. Savile. I shall quote from Canada Monthly one of her poems that was in this exhibition:

"The children build their castles in the sand;

Ours are in Spain.
The sea engulfs the shifting land,

We build again,
The children build their castles in the sand;

We, in the air
Ah—we and they both understand,

The sea is there!"
We have two editors in this club—Miss Nan Moulton and Mrs. Bertha Stavert.

Miss Moulton is the editor of The Western Municipal News. In this exhibition I looked through a number of the magazines and was surprised to find these topics edited by a woman—Good Roads, Municipal Accounting, Civic Government, Consolidated Schools, Fire Commissioner for Saskatchewan, Municipal Calendar for June and July. This is the official organ of Manitoba municipalities. Miss Moulton contributes to Canada Monthly and other magazines. She is a woman of large experience having lived in South Africa for some time and other parts of the world. As editor of a municipal periodical, she has ventured into a new field for women.

Mrs. Stavert as editor of Country Life has shown what a woman can do as head of a farm publication.

Mrs. Valoung contributes to Country Life, The Farmers' Advocate, and The Western Home Monthly. Her contributions on Poultry and Gardening are valuable because they come from actual experience. In this exhibition two stories from her pen gave us an interesting account of Western experience.

Mrs. Perry—Anne Anderson—edits Every Woman's Page in the Winnipeg Saturday Post. She also, under the name of Philistia writes Feminine Philosophy, Fancies and Frivolities. During last summer she edited the Woman's page in the Telegram. Mrs. Perry also contributes to the Dominion.

An interesting feature of this exhibition of work was the illustrated articles by Mrs. Florence Gratiot Bale. Her illustrated articles are now appearing in several magazines and since they are about Canada they are valuable to Canadian interests. One article in The Dominion on Historic St. Boniface was most interesting. Mrs. Bale has this year published a beautiful calendar of Canadian views.

Other contributions to this exhibition were by Miss Grace Cornell—society editor of the Free Press, Mrs. Sturdy, Miss Steiner, and the theatrical press agents—Mrs. C. P. Walker and Miss Boardman.

Mrs. C. P. Walker is the Matinee Girl in Town Topics and her articles in this exhibition were interesting because they described her experiences abroad last year. As Press Agent for the Walker Theatre, Mrs. Walker is a busy and active woman. She is loved by every member of our club and is one of our most popular members. She contributes theatrical criticisms to Town Topics, Winnipeg Saturday Post, Free Press, Telegram and Tribune.

Mrs. Dobbs under free lance work had a story entitled a Christmas Blossom.

One of our new members contributes to the Ladies' Home Journal, The New Century, The New Adult Bible Class, The Golden Now and other periodicals. Her name is Martina Gardner Owen. She has some work under the pen name of Mita Elliot. Her work reveals a keen insight into child life. Two articles in this exhibition—"Sympathy or Sarcasm in American Motherhood" and "Mother's Day Exercises in Primary Teacher" were intensely interesting. In The Housekeeper I read an intense interest in an article from her pen entitled "My Wings are my Crutches." Our crutches hinder us in our life—they are fears and discouragements, our wings inspire us to dare to fling into a mighty effort—endeavor to cross our Alps and reach our heart's desire. There are gray wings—lovely stories; strong wings—white bits of thought that tower in our lives; soft wings—home love. She says: "There was a

time when my father needed me at home while dazzling visions of fame lured me to the market place. I never revolted against the monotony of the kitchen. I was never over-tired by the burden of the day. I floated softly about my tasks on wings." In conclusion she says: "Why have I drawn aside the curtains and shown you my collection of wings and crutches? Because I saw a little child in your arms this morning, and I thought that if you knew you might enrich him with wings instead of hampering him with crutches."

On the table in our room were books published this year by our author members. The Black Creek Stopping Place by the author who is known and loved in nearly every Canadian home, as well as in homes of other lands—Mrs. Nellie L. McClung. If any reader is ready to give up—is blue and despondent—Nellie L. McClung's books will prove the best tonic one can take. Even her husband says, "Everything goes all right five minutes after she comes home."

Margaret Bemister had two books in this exhibition—one is entitled "Thirty Indian Legends" drawn from original sources and the other is "Stories from Prairie and Mountain." The story of "What the Old Gate Saw" makes Old Fort Garry most interesting. These are both splendid books for children as well as interesting to grown people.

Mrs. Valance Patriarche had a new book in this exhibit entitled "Rosy of Willow Beach." One critic said it was written for simple minds. But Mrs. Patriarche cannot be outwitted by critics and she answers him in this rhyme: "May simple minded people
My simple volume read
Simply making royalties
To meet my simple need."

Mrs. Patriarche is at her best in short sketches which she contributes to McClure, The Canadian Writer's Syndicate, Toronto Star, Free Press and Town Topics.

And so this exhibition reveals a bit of work that our Winnipeg writers are doing at the present time. They are all sincere and eager to be of real help to

western women and are genuine friends. The President of the Winnipeg Press Club, Mrs. Sharman, herself a gifted writer, encourages the club in every possible way to do their best and she has provided excellent programmes all year that have helped in many ways and have made possible the advancement of valuable information through our western Canada from the pens of our press women. I trust the readers will all know them better. I might add by way of encouragement to the girls in the country that nearly all of these writers live on farms during their girlhood. Make the most of your present environment.

Home Economics

Patriotism

By Mrs. Young of Manitow.

This excellent paper was read at the Manitow meeting of Home Economics Society

Mrs. H. W. Dayton—President of the Manitoba Home Economics Society of Manitow—informed this department of a very splendid kind of work the Oak Lake society has done. A widow in Oak Lake who supports her family of five children by washing had only tubs and wash board and the old fashioned way of washing was very hard for her. The Oak Lake Home Economics Society bought her a washing machine and other labor saving devices that will relieve her of many a tired hour, and she will be able to accomplish more and better work. I do not know when a report has touched me so sympathetically. The purchase of the labor-saving devices was most kindly, but the spirit that prompted it was a genuine sisterly act that must have meant more than words can express to that hard-working sister. To feel that the women of her town really cared for her so much that they wanted to make life easier for her was a tonic that will add years to her life. This surely is real sisterhood.



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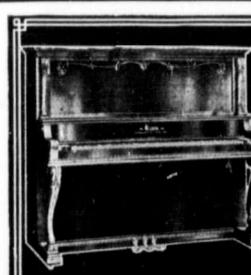
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The common little ways of being kind.

If you are dreaming of a future goal, When, crowned with glory, men shall own your power,

Be careful that you let no struggling soul Go by unaided in the present hour.

If you are moved to pity for the earth, And long to aid it, do not look so high,

And pass some poor, dumb creature faint with thirst—

All life is equal in the eternal eye. If you would help to make the wrong things right,

Begin at home, there lies a life-time's toil.

Weed your own garden fair for all men's sight,

Before you plan to till another's soil. God chooses His own leaders in the world,

And from the rest He asks but willing hands,

As marbled mountains into place are hurled.

While patient tides may only shape the sands."

This department will appreciate any paper that has been read at a home economics meeting. It will help other societies. We shall be pleased to publish any that are sent in. May we have one on canning fruit? Any suggestions from our home economics members will be greatly appreciated. We want to help in this great work in Manitoba. This also applies to the Homemakers' Clubs of Saskatchewan.

P.R.H. Medical inspection of schools is being promoted by the home economics societies in Manitoba.

SWAN LAKE.

There was a record attendance at the Swan Lake H. E. on the afternoon of Thursday, May 22nd, when Miss Kennedy of the Agricultural College, Winnipeg, gave her promised demonstration on "Dressmaking."

Three of the ladies on the May programme surrendered their turn so that the proceedings should not be unduly lengthened, but as the meeting was held so near Empire Day, it was decided that part of the programme, which was under the direction of the Misses V. L. Gordon and Christilaw, should be given, and after the usual business the president introduced Miss Kennedy to the members and the following items were much enjoyed: Recitation, "What shall we bring from the Motherland" by Amorena Vermere; Chorus, "Oh Canada," by School Children; Recitation, "Children of the Empire," by Wilma Couch; Chorus, "Land of our birth" by School Children.

Miss Kennedy opened her address by emphasizing the need for the thorough and systematic study of each subject which was taken up by the H. E. societies. In dressmaking each part should be well thought out, and the directions studied before any attempt was made to cut out from the pattern. Miss Kennedy also spoke very plainly on the necessity for every child to learn to sew properly.

In studying the art of dressmaking the best article to begin upon was a house dress, which should be simple, washable, durable, light in weight, comfortable, skirt and waist joined, short and becoming. Although a house dress is one of the most simple that can be made, any worker who could make one well, would be capable of so altering or adapting from the original pattern as to be able to make any dress desired. Miss Kennedy then laid down certain rules which should always be followed in the art of dressmaking—

That: When it is found necessary to shorten the skirt, never attempt to do so by turning up the bottom hem; shape the skirt up from below the hip measure in the waist line, taking in the seams until the desired length is found.

And: Mark the centre front and back, top and bottom with a few running stitches and be sure to have all seams running in straight lines from the waist to the bottom of the skirt to insure a good 'set.'

And: Do not be afraid of over bast-

ing. Basting is most important and should be carefully done before any real work is commenced on the gown.

After thoroughly demonstrating the making of a house dress, Miss Kennedy gave practical directions for drafting a pattern of a dress or coat by using a corset bust, placing the pattern material on it, and fitting and moulding it perfectly. This was one of the most interesting parts of the demonstration and was thoroughly enjoyed; and it was so clearly and fully explained that it could be easily understood. A hearty vote of thanks to Miss Kennedy for her splendid demonstration was moved by Mrs. Gardner, seconded by Mrs. Flack, and unanimously approved.

Then followed the second part of programme. Solo, "My heart is over the sea," by Mrs. T. W. Simpson; Flag Drill, by nine school girls; Duet, "God bless our King and Country," by the Misses V. L. Gordon and Christilaw. The National Anthem was then sung and lunch served.

(Mrs. W. E. Gardner kindly acted as Cor. Sec. during the unavoidable absence of Mrs. Langridge).

CARMAN.

The Minnedosa Home Economics Society held their May meeting in the new Rest Room, which had been thrown open to the ladies of the vicinity since the April meeting. The Rest Room is a nice cheerful room, and we hope will prove successful. When the afternoon tea had been served the meeting was opened, and the usual business attended to. There was some discussion after the reading of a copy of resolutions, drawn up by the Provincial Advisory Board during their meeting at Brandon. This provided some excellent ideas for future work.

The chief feature of the programme was an address by the Rev. W. McCormick on the poet Browning and his work. This was listened to with close attention, and we hope will lead to a deeper study of this too neglected author, whose poetry has a robustness and reverence that would compare with advantage with many more favorite authors.

The part of the address dealing with Robert Browning's private life was particularly interesting, as was also a short analysis of his poetry.

A practical and helpful paper on gardening, which had been clipped from an old agricultural paper, was handed in by one of the members, and read by the president. This gave some useful suggestions.

The meeting closed with "God save the King."

E. M. Ewens, Bethany, Manitoba, sec.-treas.

A very interesting meeting of the Dufferin Home Economics Society was held on May 23rd, when Miss Kennedy, Professor of Household Art of the M.A.C., gave a talk on House Furnishing.

She said the underlying principles of house furnishing are simplicity, sincerity, cheerfulness and restfulness. She used harmonizing papers, draperies and other materials to demonstrate with. One could almost see the beautiful rooms that Miss Kennedy pictured, and I am sure that some of the ladies who had the opportunity of hearing this excellent talk will endeavor to create some of these restful rooms.

A light lunch was served at the conclusion of Miss Kennedy's talk.

There is a great movement on for "Better Babies" in the States. Many of the State fairs are offering prizes for the healthiest children—those most perfect in form and intellect. This is an excellent movement. May the Home Economics do something along this line?

I quote this from the Woman's Magazine: "To rear the healthiest babies in the world is the aim of the Iowa Congress of Mothers. State fairs have been held and prizes have long been given for fine calves and baby pigs. Why not decorate healthy human babies with blue ribbons? The women of Iowa hold annually a State fair, and give prizes to the baby who is—not the most beautiful, but the most robust. It is an educational fair, too, for mothers who haven't yet learned how to rear healthy children get, there, "straight tips" from physicians who are baby specialists. It's a fine idea—one

that makes for the betterment of the entire human race.

Mothers' Corner

"Every noble life leaves the fibre of it interwoven with the work of the world." —Ruskin.

"A smile may brighten the failing heart, A word may soften pain's keenest smart, A touch may lead us from sin apart, How easily each is given."

"To make a trouble of a trouble makes the trouble double."

"Man's life's a book of history; The leaves thereof are days, The letters mercies closely joined, The title is God's grace."

"Whatever you are—be noble, Whatever you do—do well, Whenever you speak, speak kindly, Wherever you dwell—give joy."

"The grand essentials to happiness in this life are—something to do, something to love, something to hope for."

"When you cannot do as you like, the best thing is to like what you have to do."

"No artist's work is so high, so noble, so grand, so enduring, so important for all time, as the making of character in a child."

"Deem it not a pleasant thing A pleasant word to speak, The face you wear, the thoughts you bring, A heart may heal or break."

"Not to the swift the race, Not to the strong the fight, Not to the righteous perfect grace, Not to the wise the light."

But often faltering feet Come nearest to the goal, And they who walk in darkness meet The sunrise of the soul."

We appreciate the letters our readers write to this department. Last month I quoted from Wright's "Their Yesterdays." I am pleased to publish the following splendid criticism sent by one of our readers. It comes straight from the heart. I hope more of our readers will write "heart to heart" letters. The booklet "Helps for Expectant Mothers" will be sent free to any wife who writes for it. P.R.H.

Dear Editor of home page:—I see you ask our opinion on H. B. Wright regarding the down-to-date woman as he terms us. I wonder if he thinks we women are machines for men just to work and raise children for them. We have no right to our own personality at all one would think. Does not a woman marry for more than just to raise children? I think they marry for love—not one sided love but because they think that this man of hers loves her as himself and of course the children come after. But we find a great deal of the world is wrong. Man has narrowed up woman's sphere, and it has been so, so long that men have grown selfish and want to keep them in a narrow groove. They have made all the laws favoring themselves; a woman must work all her life and in the end can only have what man likes to give her. We are all of so little importance with some. So that is how I see it; some of us were married for the convenience we are to them; to make a home comfortable for them and then they think they have done it all because they are the money makers. They don't give the women credit for the part she does in helping to keep things going too. Now if men and women were on an equal all this would be different. If women were honored as well as men, homes would be happier. I think I have wandered a little, but it all comes down to one point. I think God knew what he was about when he made woman quite as well as

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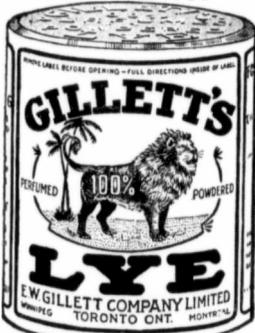
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man, for did He not say, "It is not good for man to be alone, and he would make a help meet. Now don't you think this help should extend farther than the four walls of a house? I think women need to step out and ask for the vote to help put down some of the existing evils, such as the Liquor Traffic that is such a curse to many a home—and the white slave traffic that tricks and traps into slavery about sixty thousand girls a year. Is not that dreadful? I firmly believe men could make and enforce laws to put down such business, but it is the men who patronize it and seemingly don't care whose girls are there so long as it doesn't touch their own. I don't think theirs are safe even, so when men have made such blunders of the ruling of the world, it surely proves they need the help of women to straighten things up again for they were given a clean sheet to start with and things are anything but clean now—and a woman that is a woman at heart does not like to hear her own sex ridiculed—and then classed as bad girls—it is a slur on womankind. When in reality it is man himself that is the worst, but they will blame woman for everything. Now in New Zealand where women have voted for about twenty years, they say they have the largest marriage rate and biggest birth rate in the world. I think it says also the lowest infant mortality rate so I think that entirely contradicts H. B. Wright's theory of the up-to-date woman. There are other places I have read of where women have improved home-life by helping the men vote. When they have the vote they are of more account to the Legislature. When women don't vote they are simply of no importance, as politicians favor those who can vote even if it is a man who is too drunk to write his name. What help is there given to poor women miles from a town or a doctor—or sometimes even a neighbor in sickness or confinement? It seems cruel to think of what some women suffer. Then H. B. Wright also condemns women's clubs. Are they not for the good of the home and consequently the children? So if the whole problem is reasoned sensibly I think we are convinced that women need the vote. Yours truly, For Women's Rights.

Infant Colic

"Dear Editor: I wish to ask for advice in regard to nursing baby. She is three weeks old and I want to train her so that I can lay her down after each nursing, but she soon begins to cry and cry so that I can't bear to hear it. Then when I take her up and hold her over my shoulder, she hunches up several times. She cries most all the time she is awake but sleeps three and four hours at a time when I finally get her quieted down. Ought I to let her cry and cry when she seems so distressed?"

"It seems all I can do is to take her up and hold her and try to quiet her. I give her warm water between times. Sometimes a bit of soda in it."

"Would you advise waking her every two hours to nurse, or let her sleep un-

til she wakes of herself, in the daytime of course Yours truly,

Mrs. H. S., Jr."

When the cry of an infant is clearly one of pain no time should be lost in trying to give relief. Young children are subject to colic.

Give a tablespoonful of water before nursing her and if she seems in pain afterwards give half a soda mint dissolved in warm water, warm her hands and feet and lay her, stomach down on a warm hot water bag. As she grows older this trouble is likely to decrease. Unless regularity is observed in her feeding hours she will become over-hungry and take more food than she needs and is apt also to take it too fast, thus favoring colic conditions. It is better to accustom her to regular feedings. She will soon learn to waken at the right time.

Mrs. E. E. F.: The best cure for constipation is to drink quantities of cold water at regular intervals throughout the day, and plenty of exercise. A tablespoonful of olive oil before each meal is excellent.

Whooping Cough

Roach's Embrocation—an old English remedy—is the best remedy I know for whooping cough. It will cure nearly all cases in a short time if the directions are followed carefully. Rub the chest with it for fifteen minutes every night for fourteen nights. A tight binder pinned around the abdomen will lessen the severity of the coughing spells.

Blister on the Heel

A blister on the heel, caused by new shoes, is one of the most distressing of the "little aches," and if not attended to within a reasonable length of time causes no end of annoyance and pain. The next time you are troubled in this way, just make a cap for the heel of the foot from ordinary paper (a sheet of moderate thin writing paper is good for the purpose) and you will experience almost instant relief. It is a simple remedy, but the relief is great.

The following is an answer to a mother who was bothered too much with other children.

A certain amount of charitable kindness toward a sick and overworked neighbor's children is surely Christian like and good, but there should be a limit for the sake of all concerned. It is not well to assume too much of others' responsibilities. If I were you I think I would tell these neighbor's children when I wanted them to go home, and I should also tell the mother that I liked to have them come for an hour or two hours or whatever time you set, but that I liked my children to play by themselves part of the time. I should be firm about it, too, sending them home the instant there is any mischief done, or any act that you do not approve of. I shouldn't have too much fear of the family's becoming offended. If they appear not to like it I should utterly ignore their attitude, maintaining my kindness and courtesy and even neighborliness toward them—also my firmness.

I believe in children having company and in helping care for a neighbor's children in time of sickness or trouble. I think it's a good thing for them to "come over" once or twice every day, but I'd make it something to look forward to, and not have it a steady institution.

Let the children come at such times as your work will admit of your keeping sort of a general supervision over them, and shut down on their coming at other times, also on their accompanying your children on errands. As a general thing, a child performs an errand better if he goes alone.

This is my opinion. We shall be glad to hear from others who have had a like experience.

Eggs in Potato Cups

Season mashed potatoes with salt, pepper, butter and milk and form into mounds, about half a cupful of potato to each mound. With a teaspoon form a deep dent in the center of each mound, put in a tiny bit of butter, then break in an egg, being careful to keep the yolk whole. Sprinkle salt and pepper on top and set in the oven until the

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egg is cooked and the potato slightly browned. Serve hot with crisp slices of fried bacon.

Silver Cake

Whites of four eggs beaten to a stiff froth, a heaping cup of sugar, one-third of a cup of butter, one-half cup of milk, two cups of flour, two teaspoonfuls of baking powder, and one of lemon extract.

Molasses Cookies

One cup of molasses, one cup of sugar, one cup of lard, one cup of hot water in which a teaspoonful of soda has been dissolved, one teaspoonful of salt and a tablespoonful of ginger. Roll out thin and bake quickly.

Sugar Cookies

Beat one cup of butter to a cream and then add one and a half cups of sugar, two eggs, half a cup of milk, and flour to make a stiff dough. Two teaspoonfuls of baking powder should be well sifted into the flour. The dough can be divided and different flavoring given each part; to one part of the dough a tablespoonful of caraway seed can be added for the delicious seed cakes.

Golden Cream

1 quart milk. 6 Eggs. 5 tablespoons of Sugar (powdered) 1 tablespoon of prepared corn. 6 tablespoons of sugar (granulated) Flavor, lemon or vanilla. Boil the milk (keeping out sufficient to dissolve the corn starch). When boiling, stir in the yolks of the eggs, beaten with the granulated sugar, add the dissolved Corn Starch, boil five minutes. Turn it into a deep pudding dish, and pour over it the whites of the eggs beaten to a stiff froth, mixing with them the powdered sugar. Set it in the oven and brown lightly. Flavor the top with vanilla and the bottom with lemon. Serve cold. Very nice in warm weather.

Baked Corn Meal Pudding Without Eggs

1 cup syrup. 1 large cup of corn meal. 3 pints milk. 1 large tablespoon of ground ginger. 1 cup of finely chopped suet. 2 pinches of salt. Put corn meal and syrup in a baking bowl, and beat them well together. Then add a quart of the milk boiling hot, the salt and ginger next, then the suet; beat well for a few minutes until all is thoroughly mixed. Butter an earthen pudding dish, and turn the pudding in. Let it stand until it thickens, and just as you are putting it into the oven take the remaining pint of milk (cold), pour it over the pudding gently, but do not stir, as this makes a jelly. Bake three hours. Serve warm with hard sauce. Butter, size of an egg, can replace the suet.

Tennessee Cream Pie

1/2 cups syrup. 1 cup of water. 2 tablespoons of prepared corn. 2 ounces of butter. 1 lemon. Whites of 2 eggs, or half a cup of whipped cream. Boil syrup and water 5 minutes. Then add corn starch, mixed with a little cold water first. Also the grated rind of half a lemon, and the juice of a whole one. Boil 10 minutes more, after which turn in the butter and beat a few minutes. Cool 5 minutes. Pour the mixture into a deep pie tin lined with good puff paste, and bake. Cool 5 minutes, and cover with a meringue or whipped cream. Meringue—Whites of 2 eggs (chilled) beaten very stiff, and 2 scant tablespoonfuls of powdered sugar. Spread over the top of the pie, and set back in oven and brown lightly. (Cook pie filling in a double boiler).

Fruit Gems

One-half cup of sugar. Two-thirds of a cup of syrup. Two-thirds of a cup of butter. 2 cups of flour. 1 level teaspoon of baking soda. 1 teaspoon of ground cinnamon.

One-half teaspoon of grated nutmeg. One-third of a teaspoon of salt. One-half cup of chopped figs or dates. 2 eggs.

One-half cup of minced nuts. Cream the butter and beat in the sugar and syrup. Sift together flour, soda, cinnamon, salt and nutmeg. Beat the eggs lightly, and add them to the creamed mixture. Mix the nuts and figs or dates with the spiced flour. Put all together and beat 5 minutes. Drop them on buttered tins by spoonfuls a little apart, and bake in a moderate oven.

These gems will keep fresh a long time in a covered cake box.

C. B. "Divinity"

1 cup of syrup. 4 cups brown sugar. Two-thirds of a cup of water. 1 cup of chopped nuts. 1 teaspoonful vanilla extract. Whites of 2 eggs. Put syrup, sugar and water in a saucepan, and boil until it forms a soft ball when tested in cold water. Remove from the fire. Have the salt and eggs beaten dry, and add to the mixture, beating continually until quite thick. Add the nuts and vanilla; then turn into buttered pans. Mark in cubes when cold. Chocolate may be added, and should be melted in the water in the beginning. One ounce is sufficient. Next month will be our "Canning" number. One reader sends in a request for a recipe for preserved ginger.

PATTERN DEPARTMENT

Any of these patterns supplied by the Pattern Department of the E. H. Heath Co., for 10c, or stamps. Please order by number and state the month in which pattern appeared.



No. 747. Design for Embroidering a Round Neck Blouse, with Border for the Sleeves.

The scalloped edges, the ovals and dots that form the border are designed to be padded and buttonholed. The sprays of leaves to be worked solidly with the stems outlined and the circles in the design for the front either as eyelets or solidly.

To pad the scallops, work chain stitch between the lines, heavier at the centres and lighter at the points; or cut a skein of thread, apply two or more strands over the design, keeping within the lines. Tack here and there in couching style and draw the threads together at the points of the scallops. Button-hole closely over the foundation.

To make the dots as eyelets, run a thread round the outline, pierce with a stiletto and work closely over and over.

To outline, take short stitches, keeping the needle toward the right and work upward.

To make the sprays of leaves solidly, pad by darning backward and forward between the lines and cover closely with over and over stitches worked in the opposite direction from the padding. To make the dots solidly, pad by darning backward and forward in one direction and work closely over and over in the opposite direction.

Use embroidery cotton in weight adapted to the material.

Advertisement for D.R. DINGWALL LIMITED JEWELERS & SILVERSMITHS WINNIPEG. Features an illustration of hands holding a jewelry box and a diamond. Text includes 'SUMMER JEWELLERY', 'BLOUSE SETS, CUFF LINKS, SOFT COLLAR FASTENERS, BAR PINS', and contact information for C.T. & F.

Advertisement for 'The War on Flies' featuring 'Tanglefoot'. Includes an illustration of a fly and a person using the product. Text: 'Meet the Fly Invasion With Tanglefoot'.

Advertisement for 'Tanglefoot' fly traps. Text: 'Every summer ten million families find freedom from flies through the use of Tanglefoot. It is the most effective fly destroyer yet devised. In thirty years nothing has proved so sure, so cleanly, so safe to use. Kills the Germ. Poisons Are Dangerous. Countless Unborn Flies. Kills Fleas, Too.' Includes the Tanglefoot logo and 'Original' branding.

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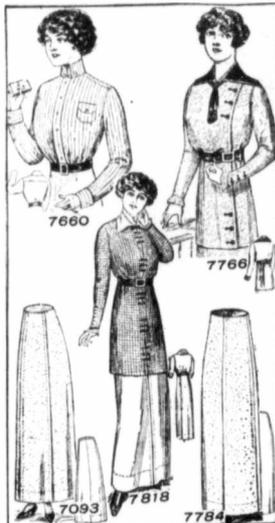
7871 Child's One-Piece Kimono, 1, 2 and 4 years.
 With Short or Long Sleeves, with or without Seam at Back.
 7861 Infant's Dress and Barrow-Coat, One Size.
 7883 Boy's Russian Blouse Suit, 2 to 6 years.
 With straight Trousers, Square or High Neck, Short or Long Sleeves.
 7870 Boy's Blouse, 4 to 10 years.
 With Short or Long Sleeves, Neck-Band or Sailor or Round Collar, with or without Yoke on Back
 7819 Child's Overalls, 2 to 6 years.



7889 Fancy Blouse for Misses and Small Women, 14, 16 and 18 years.
 With Long or Elbow Sleeves.
 7887 Fancy Blouse, 34 to 42 bust.
 With Long or Three-Quarter Sleeves.
 7834 Tucked Semi-Princesse Dress for Misses and Small Women, 14, 16 and 18 years.
 7888 Two-Piece Skirt, 22 to 32 waist.
 With Fullness at Side Seams Laid in Plaits with Overlapped Edges Below, with High or Natural Waist Line.
 7507 Four-Piece Skirt, 22 to 32 waist.
 With High or Natural Waist Line.
 The above patterns will be mailed to any address by the Fashion Department of this paper, on receipt of ten cents for each.



7866 Middy Blouse, 36 to 42 bust.
 To be worn Over or Under the Skirt, made with or without Applied Yoke and Shield that can be made Low or High, with Long, Elbow or Short Sleeves.
 7812A Blouse Coat in Balkan Style 34 to 40 bust.
 With three-Quarter Bell or Long Plain Sleeves, Straight or Diagonal Closing, Peplum that can be made with Square or Round Front Edges.
 7873 Semi-Princesse Gown, 34 to 44 bust
 With Three-Piece Skirt in Cutaway or Straight Outline, Three-Quarter or Long Sleeves, Square or Pointed Collar, with or without Chemisette.
 7860 Girl's Dress, 10, 12 and 14 years.
 437 Embroidery Design.
 With three-Piece Skirt, with Set-In Sleeves in Elbow or Full Length, with Collar and Square or Round at Back.
 7829 Girl's Dress, 4 to 8 years.
 Closing at Back, with Elbow or Long Sleeves.



7660 Mannish Shirt Waist for Misses and Small Women, 16 and 18 years
 With Box Plait or Hemmed Edges, High or Low Collar, Rolled-Over or Plain Cuffs, with or without Pocket and Yoke.
 7766 Russian Blouse Waist, 34 to 40 bust.
 With Fancy Collar or Square Neck, with Long or Elbow Sleeves.
 7818 Semi-Princesse Gown, 34 to 42 bust.
 With 4 or 5 Gored Skirt, with or without Peplum, and Straight or Cutaway Fronts
 7093 Six Gored Skirt for Misses and Small Women, 14, 16 and 18 years.
 With High or Natural Waist Line.
 7784 Four Gored Skirt, 22 to 34 waist.
 With High or Natural Waist Line.



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Come and see us when you visit the Great Stampede in August.

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W. H. EVANSON, Treasurer

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You saw this advertisement in this magazine. Don't forget to say so when writing.

"It is too big a risk!" The morning light was struggling through the stained-glass window of the doctor's consulting-room. In the patient's chair by the side of the large, flat desk at which the doctor sat with a worried look on his face lounged a dark, evil-looking, dissipated individual. In low voices they chatted.

"Yes, it is far too big a risk. I dare not—and besides—"

With a hasty movement the man in the chair broke in:—

"All risks are big, but you can accomplish nothing in this world unless you are prepared to take them."

"What you say may be quite true," replied the doctor; "but I am afraid—mortally afraid. Like most medical men who appear brave, at heart I am a hopeless coward. I can condemn a man to death with a stout look, and shiver all over with nervous apprehension immediately that door closes behind him."

"The stout look is all I am asking for. Look at the matter calmly. The facts are these. I have a cousin. He is hale and hearty. Boasts that he has never known a day's illness. He will suddenly develop an unknown malady—I will see to that."

The doctor shivered.

An Incurable Disease

Complete Story by ROLAND DUNSTER

With even voice the other went on:—

He will come to you to have his case diagnosed. I will also see to that. Now, what earthly risk are you running in pronouncing his complaint to be fatal, and in your opinion incurable? Why, even the biggest men in Harley Street make mistakes."

"True. In the cause of humanity. No great advance in surgery or medicine is possible without experiments," responded the doctor, nervously clasping his hands together.

"Humanity!" repeated the other, with a sneering laugh. "In the cause of their own reputations. Think how many poor devils have been cut up for neither rhyme nor reason. Cause of humanity, you call it. Cause of humbug!"

"Be that as it may, viewing it in the worst possible light, it is surely a more noble cause than the one you are now asking me to promote."

"Now stop for a moment. Is it? Are we not digging right at the root of the very tree upon which such theories or principles hang! I mean the tree of knowledge. Let me put it in this way. I come to you with an idea. It is not a new one, I admit, but I don't believe it has ever been proved. Is it worth nothing to know whether a man can be killed by suggestion? In any case it is not going to be fruitless research for you. Here is the money—not two or five guineas surreptitiously left on your consulting table, but one thousand pounds, in crisp, ear-stimulating Bank of England fimsies."

The doctor sighed. His face looked tired and worn.

"I dare not do it," he said, half-heartedly.

The other man picked up his hat and his stick which lay on the floor at his feet.

"So be it," he said: "But don't forget settling day is next Wednesday."

"Oh, why did I ever buy those accursed land shares? What do I know about Canadian allotments?"

To this outburst the other man responded nothing. He was studying the name of the manufacturer in the inside of his hat. He held it at an angle which hid the evil smile upon his face, and the wicked glint in his shifty eyes, but he was studying the mental struggle of the doctor.

"Well, I must go," he said, making a step towards the door.

The medical man stood up. His breath was coming in quick gasps.

"One moment," he said. "What if I agree to what you want and the—the experiment fails?"

"I have offered to pay you cash down. That means I trust you to do your best. If you fail I shall want to know the reason why."

The doctor shivered, in spite of the fact that a huge fire spluttered and hissed in the grate.

"But even in that eventuality you will have had your money," wound up the other.

"What if he refuses to come to me?"

"He will not refuse. I will see to that. Besides he trusts you."

The sneer which accompanied the latter part of the sentence

caused the medical man to wince. All his better nature was in revolt against this scheming adventurer, but he was between the devil and the deep sea. An unfortunate speculation on the Stock Exchange, the purchase of a large block of shares said to be good for a rise of five points by an outside stockbroker whose life he had saved by a very delicate operation, and who had given him the tip, as he expressed it, out of gratitude, was followed by a huge unexpected slump caused by a panic in "Wall Street." All his hard-earned savings were swept away at one fell swoop, and a liability stared him in the face which he had no means of meeting.

The dark-eyed man watched with passive countenance the mental fight.

"Better ruin," thought the doctor, "than dishonour." Then, "I can't do it," he said.

"Very well," responded the other. "I wish you good morning," and, crossing the room, he opened the exit door.

Just then from some room at the top of the house there came a peevish cry of a little child.

The sound struck the doctor like a blow between the eyes. What would happen to his motherless children when his home was sold up? What would happen to his niece, who had so ungrudgingly looked after them.

"One moment," he exclaimed, as the back of his visitor disappeared through the doorway.

At the call the man reappeared. "What is the matter now?" he demanded.

"Give me the money. I'll do it," said the doctor, sitting down at his desk and bowing his head in his hands.

A sudden flash of triumph passed over the face of the other. Without a word he cautiously closed the door, and took from his pocket a bundle of notes. These he carefully counted. Rolling them together he tossed them on to the desk.

"There is the fee. It is a good one. Paid for once in advance. As I said before, see to it you do not fail."

For a moment or two the doctor remained in his despondent attitude. When he looked up the room was empty—the tempter had gone. He stretched out his hand to pick up the notes, and then drew back. He felt at that moment as if the touch of them would burn his hands.

II.

Once outside the house the other man looked hurriedly up and down the street, hesitating as if which way to turn. Then he strode off at a brisk pace. At a corner outside a public-house he was joined by a rather seedy-

looking individual, who had the appearance of a gentleman's servant out of employment. The cut of his clothes was good, but they sat badly on him.

"Well?" demanded this individual.

"It was a stiff job, but I've got him. He will do it, so it is up to you to bring your trusting master to the scratch."

The shifty eyes of the newcomer twinkled.

"Good!" he exclaimed. "You are a marvel. You can rely on me. In fact, things are already going well. He asked me last night if I knew anything about the efficacy of some pills he saw advertised in the newspaper."

"And you responded?"

"You bet I did. I told him he had been looking bad—real bad—for weeks."

"What did he say?"

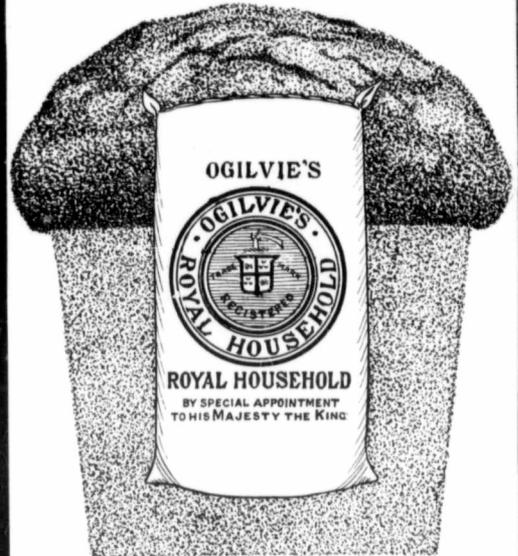
"He laughed. He is a tough nut."

"Well stick to it, and report progress to me. The usual address. I must be off now." And with a casual nod he departed.

"He's a sport, is Gentleman Bert!" muttered the servant, as he looked after the retreating figure with admiration in his eyes.

It is the practice in some parts of Scotland for the man to be called more often after his farm than by the name he receives at the christening font. James Stanley was generally known throughout his lifetime as "Old Stockando," and the epitaph, "he was a dour yin," would have been fitting in the eyes of the people who knew him. He certainly ruled his family with a rod of iron. He brought up his three sons in a strict atmosphere. They feared, but they did not love him. "Hoo can a boy love the man that rears him?" he had been heard to explain when someone had ventured to suggest that he played the Spartan father too well. The result of all his hardness could not, in the light of later events, be voted a success. James, the eldest son, had emigrated without a parting word, to Australia. The old man did not live long enough to witness the success which business brought to the second, Tom, who had been the wildest of the trio, but who had ultimately settled down and achieved a considerable fortune by dint of hard, persevering work. The third son, William, had been a dunce at school, but has drifted into the ministry, that haven of the brooding youth who thinks solitary thoughts. "Old Stockando" had been a proud man the day he saw his youngest son "wagging his heid in a pu'pit." He thought that perhaps, after all, Providence had approved of his methods of upbringing. Heredity pro-

THE PRIZE LOAF



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A COLD HOUSE cannot help being a damp house. Muscular rheumatism, la grippe, pneumonia and neuralgia are often caused by continued exposure to a cold, damp atmosphere. Install a McClary's Sunshine furnace in your home this summer and next winter you can defy the zero days. A Sunshine furnace will make your home worth living in—warm, cozy, comfortable and healthful.

The Cost of a Sunshine

The cost of a McClary's Sunshine furnace is no more, or as much, as you have often paid for an agricultural implement. Yet no agricultural implement is one half so important to your health and to the welfare of your family. A Sunshine furnace is the cheapest protection against winter sickness that you can invest your money in.

Requires Little Attention

As far as taking care of a Sunshine furnace, it's almost no trouble at all. It only takes a minute to open the wide, double feed doors and throw in two or three shovels of coal—or a big chunk of wood if you have any you wish to burn up.

Then it requires only another minute to fill up the water pan, which is conveniently and correctly placed over the feed doors. By so locating the water pan, the moisture, as it is evaporated, takes the short, direct route to the rooms and the proper humidity of the atmosphere is obtained.

No old-fashioned, back-breaking shaking to McClary's Sunshine, either. You simply "rock" a handle, to and fro, about six times, and the ashes fall into the ash pan. Then to take out the ash pan and empty is a small chore. Taking care of a Sunshine furnace requires less work than one ordinary heating stove.

And, mind you, when rocking down the ashes, no dust escapes to go up into the house and settle on and injure the furnishings. It all goes up a sure-acting dust flue, and thence up the chimney. McClary's experienced furnace builders have simply thought of every little, as well as every big thing, to make the Sunshine the cleanest, most convenient, healthful, durable and economical furnace in the world.

Fire Under Control From Upstairs

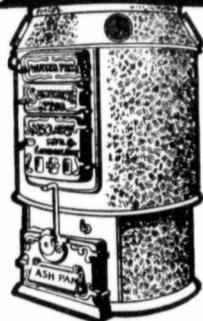
The fire, for instance, is always under control without going down cellar. By merely pulling up a chain from, say the hall on the ground floor, you can make the fire burn up briskly in a few minutes. If too warm another chain will check the fire. The only time you need go down to the Sunshine is to put in two or three shovels of coal night and morning.

Very Economical on Fuel

McClary's Sunshine is very economical on fuel. Hundreds of Sunshine owners say the Sunshine burns fully a third less coal than other furnaces they have used. Certainly, it will heat your house to your satisfaction! We, the largest stove and furnace makers in the British Empire, guarantee it.

Our installation experts will also help you and the McClary agent in your locality to plan the arrangement of your heating system. They will also co-operate in other ways to insure the proper installation of your Sunshine furnace.

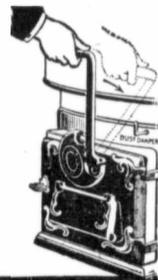
Drop a line to our nearest office for a Sunshine furnace booklet. It contains particulars about many other features of the Sunshine furnace that we could not cover in this advertisement.



Big Double Feed Doors



Filling Water Pan



"Rocking Down" the Ashes

McClary's Sunshine Furnace

LONDON TORONTO MONTREAL WINNIPEG VANCOUVER
ST. JOHN, N.B. HAMILTON CALGARY SASKATOON EDMONTON

You saw this advertisement in this magazine. Don't forget to say so when writing.

duces strange contradictions. The son of the wild Tom, who had married a travelling actress whose charms had first flashed upon him in his native village, turned out a quiet, well-behaved youth. It was a source of constant wonder to the Reverend William Stanley why this boy had so early shown evidence of development towards all in life he detested.

Many an argument had the upbringing of these respective sons raised between the brothers. Generations come and go, but, like the wag of the pendulum, the arguments of man swing to and fro in a narrow space with the same steady monotony. The Reverend William came to the

conclusion that in his son Bertie heredity was playing a sorry trick. Why should the offspring of a God-fearing, steady-living man and a douce, domesticated woman betray at an early stage such degenerate tendencies, while that of his wild-oats-sowing brother and a pleasure-loving woman mocked his efforts? In the silence of his study such thoughts had often disturbed the even flow of his sermon for the following Sunday. At the age of eighteen the climax came. Bertie Stanley disappeared in circumstances which almost brought his father with shame to the grave. For years his whereabouts was unknown, then, from time to time, vague stories reached his native place,

but they were never to his credit. He had earned, it was said, the title of "Gentleman Bert" from the fact that he was able to live by his wits, debonair and careless. If there was a smart way of doing a crooked thing, he knew it. Always on the outlook for what he called the "gilded mug," it is easy to understand the feelings which possessed him when he learned accidentally in Australia that his father's eldest brother had just died, that he had turned out a very wealthy sheep farmer, and, having never married, had left all his money to his brother Tom, or, failing him, to his brother William, failing him to Tom's son, and failing him to the son of William. It was in-

deed a strange stroke of fate that James Stanley's solicitor should impart all this news to the nephew of his dead client, without the individual betraying his identity in the slightest.

The news had really taken Gentleman Bert's breath away. In a flash he realized that Leonard Stanley, the son of Tom, was all that now stood between him and this colossal fortune. One life barring his way to unbounded riches! All the way home from the Antipodes in the steamer it was his one absorbing thought. Casual conversation in the smoking-room one evening gave him an idea. The talk had turned on Christian Science; one speaker had expressed his opinion that

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Any person who is the sole head of a family or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six month's residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price \$2.00 per acre. Duties—Must reside six months in each of six years from date of homesteaded entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

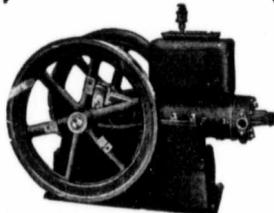
A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price \$5.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. CORY,

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WANTED — SALESMEN AND SALES-WOMEN—Hundreds of good positions now open paying from \$1,000.00 to \$5,000.00 a year. No former experience required to get one of them. We will teach you to be a high grade Traveling Salesman or Saleswoman by mail in eight weeks and assist you to secure a good position where you can earn good wages while you are learning Practical Salesmanship. Write today for full particulars and testimonials from hundreds of men and women we have recently placed in good positions; also list of good positions open. Address Dept. 279, **NATIONAL SALESMEN'S TRAINING ASSOCIATION**, 806 Kent Building, Toronto, Ont. Mention this magazine when writing advertisers

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most men could be killed by their imagination. Gentleman Bert was well aware that his clean-living cousin was what the insurance companies would designate a first-class life. He sat silent and listened to the argument. If it were true that a man could, by suggestion, be convinced that he was ill, surely if the same methods were employed, backed up by medical opinion, the experiment ought to be even more successful. The trouble was to find the doctor. A lucky chance helped him. He ran across an old acquaintance who lamented to him that he had repaid a medical man for saving his life by putting him on to a "bad egg" on the Stock Exchange. His quick mind soon saw the possibilities in that direction.

It was therefore with a smile of satisfaction that Gentleman Bert left his cousin's valet, with whom he had made a nervous bargain.

III.

It was six o'clock. The doctor ticked off the last entry in his daily diary with a tired air. Shutting the book he sighed. He looked thoroughly worn out. Rising from his desk, he stretched his arms above his head yawning as he did so. Suddenly the door opened. His man-servant hesitatingly stood for a moment with his hand upon the door-handle.

"There is a gentleman waiting to see you, sir. He says he has no appointment, but he asked me to give you this card."

With a tired air, mechanically, the doctor took the orthodox pasteboard and carelessly perused it. Suddenly he started.

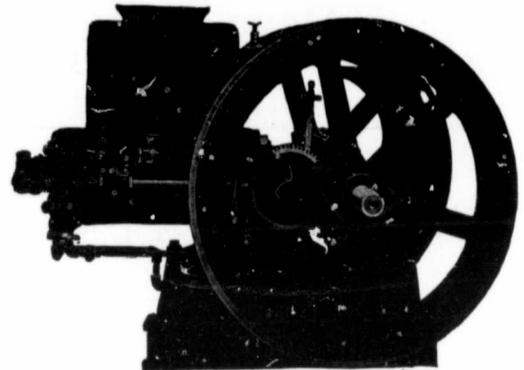
"Mr. Leonard Stanley," he repeated, audibly. "One moment! Yes! I'll see him."

The man turned to go. "Stop!" went on the doctor. "Don't show him in till I ring."

"Very good, sir." The servant noiselessly closed the door.

Gentleman Bert had kept his word much sooner than the medical man had anticipated. He was suddenly possessed with the necessity of pulling himself together. Never in all his experience had he been so over whelmed with nervous dread. The thought of the coming consultation, the ignoble, despicable part he had promised to play, set his heart thumping. He clenched his hands in his endeavor to still his unwonted beat. Crossing the room to a cupboard he took therefrom a decanter, and poured himself out a dose of brandy, which he raised to his lips with shaking fingers. Nervously he studied his face in an antique glass which hung over the mantelpiece. Then, hastily surveying the room, he came to the conclusion that the light was too brilliant. He switched off two of the electric

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It is absolutely **FREE** to subscribers who take advantage of this offer

The Weekly Free Press and Prairie Farmer
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Both including Pipe for the nominal sum of **\$1.25**

The lowest price at which these two papers will be offered this year is **\$1.25**. It makes no difference whether you take the pipe or not, the price is the same. While the supply of these pipes lasts they will be given away free to all who subscribe. Better get your order in early and be sure of a good smoke.

Weekly Free Press and Prairie Farmer.
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Find enclosed \$1.25, for which send the "Weekly Free Press and Prairie Farmer" one year, and the "Canadian Thresherman and Farmer" one year, together with pipe, to the following address:

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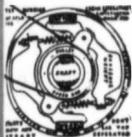
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THEY have mud guards, wood rims, Dunlop style tires, roller chain, New Departure coaster brake, large rubber pedals, pump & tools. Retail Price - - \$35.00 Mail Order Price - \$26.50

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In three months than in that many years as an apprentice. Students work right in machine shops, traction engine houses and auto garages. Repair and drive gas and steam engines and automobiles. An Engine Course may be taken with either the Traction Engine or Auto Course without extra tuition. Small tuition fees. Low cost of living. Airport garage and machine shops in the country. No entrance examinations. Send for catalogue. S. L. DUNCAN, Pres., Highland Park College, Des Moines, Iowa



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lamps. Then, with a final effort, he pulled himself together like a man summoning up all his energy, for a great ordeal. Another momentary pause, and he pressed his finger to the bell-punch.

Afar off he could hear its answering brrr. Never before had that familiar sound brought this cold sweat to his forehead. He had barely time to seat himself at his table before the door swung on its hinges, and the voice of his servant announced:—"Mr. Leonard Stanley."

From force of habit he rose up.

A tall athletic figure traversed the room with buoyant stride.

The doctor felt his hand gripped with a force that belied the invalid, and heard a cheerful voice exclaim:—

"I did not write to you for an appointment. I thought under the circumstances it was better not to, but"—with a laugh—"I darsay you have heard of me." Turning round as he concluded the sentence he surveyed the room. "So this is where you deal out your death sentences? It reminds me of Collier's picture, but all the same it does not look like fitting quarters for an executioner. You have a pretty taste, sir."

The whole tone of the young man's voice was friendly, but what struck the doctor's practised ear was the ring of health in its timbre.

How could he upset that cheerful disposition with a may-be disastrous, death-dealing lie?

"You wanted to see me?" he managed to say. His tongue seemed to be sticking to the roof of his mouth.

"Yes. The fact of the matter is I am suffering from an incurable disease."

The doctor could scarcely believe his ears. A wild apprehension gripped his heart. Had this young man discovered his nefarious bargain? Or was the whole ghastly business a plot to ruin him?

"An incurable disease!" he repeated. "What makes you imagine that?"

"Oh, there is no imagination about it!" was the ready response. "It keeps me from sleeping at night and haunts me by day. You are the one man in London who can put me right."

For one brief moment: the doctor eyed him.

"Well! Take off your coat and waistcoat and let me examine you," he said, mystified by the young man's manner, but concluding that he must act professionally.

"What for?" was the reply. Then noting the puzzled air of the doctor, he added: "Oh, I see what it is. You are trying to

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If you, like many Canadian sportsmen, prefer American shotgun shells, when buying be sure to get the kind which are made in America, and not shells bearing an American name and label, but which are not loaded there. All Winchester loaded shells are made at the works of the Winchester Repeating Arms Co., New Haven, Conn., U. S. A., under the same skillful management and by the same up-to-date and careful system of manufacture which have made Winchester rifles the best and most generally used sporting arms in the world. Winchester—the W brand—of loaded shells may cost a few cents more over the counter, but any difference in price is more than made up by their superior quality and general dependability. They are



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Don't Break Your Back To Baste Your Bird

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It bakes, roasts, broils and toasts to perfection, and it does not heat up the kitchen.

Made with 1, 2 and 3 burners. Stocks carried at all chief points.

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Royalite Oil is the best kerosene for all stoves and lamps.



Well Drilling Machines



Over 700,000 and either deep or shallow wells in any kind of soil or rock. Not acted on by wheels or cranes or horse styles, for drilling simple, durable. With engines, strong, simple, durable. Any mechanic can operate them. Send for catalogue.

WILLIAMS BROS. ITHACA, N. Y.

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Imperial Bank OF CANADA

Established 1875

Capital Authorized	\$10,000,000
Capital Paid Up	6,788,169
Reserve Fund	7,000,000
Total Assets	73,000,000

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Manufacturers of the Celebrated **MONITOR WELL AUGERS AND DRILLS**

Write for prices and illustrated catalogue.

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sum me up. You are taking no risks. I daresay you are right. In all probability I should do the same were I in your place."

With a laugh he doffed coat and waistcoat.

"Lie down here," said the doctor, motioning towards a couch.

The young man stretched himself his full length, while the doctor took his stethoscope. Then he hurriedly sounded him.

"Not a flaw—sound throughout," was his inward thought.

"Take a deep breath," he requested, more from force of habit than any doubt as to the result.

Then he placed his hand upon his heart. It's steady beat, regular in its throbs, was in direct contract to the raging tumult he could feel thumping in his own bosom.

"That will do," he said. "Get up."

The young man regained his feet with alacrity.

"And the verdict is?" he asked, with an air of unconcern.

"What possessed you with the idea that you are suffering from an incurable disease? Tell me your symptoms," asked the doctor, after a brief pause. His mind was in an uproar. It all seemed so absurd. How could he tell this healthy, strong, robust young man that he was doomed to die? Even if he did so, what a futile effort towards its accomplishments it would be.

"My symptoms! Loss of sleep, loss of appetite—an overpowering desire to know the worst."

"Why did you remark a short time ago that I was the only man who could cure you?"

"I think you will agree that it is so. You are her guardian, so to speak."

The doctor puckered his brows. "What are you talking about?" he demanded.

"Ah! I see what it is. You cannot sum up my case; and yet there are more people smitten with my complaint than any other malady on earth."

"What is your name for your malady?" the doctor asked the question with surprise in his voice. "This affair was beyond him.

"Love, sir! Love! That is the incurable disease I am a victim of. I worship your niece Mabel. Hasn't she told you? I came here to ask your permission to marry her."

The doctor was staggered. He rubbed his eyes, as if to make sure he was not dreaming. But so do the tragedies of real life sometimes turn suddenly to the broadest comedy.

"To marry my niece!" he repeated. "What did you say your name was? Leonard Stanley? Ah, yes! Now I know. You are the friend of John Faraday,

UNION BANK OF CANADA

Established 1868

Head Office Winnipeg

Paid-up Capital	\$5,000,000
Reserve and Undivided Profits	3,375,000
Total Assets, over	70,000,000

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Winnipeg Branch, D. M. NEEVE, Manager. **F. K. WILSON, Asst.-Manag.**
F. J. BOULTON, Manager Portage Ave. Branch, corner Garry (adjoining Post Office)

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REGISTERED TRADE MARK

JOSEPH RODGERS & SONS, Limited SHEFFIELD, ENGL.

Avoid imitations of our CUTLERY by Seeing that THIS EXACT MARK is on Each Blade.

SOLE AGENTS FOR CANADA

JAMES HUTTON & CO., MONTREAL

You saw this advertisement in this magazine. Don't forget to say so when writing.

Insure Your Crops

Here is a practical insurance that costs little and will last a lifetime. Our

"METALLIC" PORTABLE GRANARY

is absolutely fire, rust, and gopher proof. Your grain is safe from all harm and you can hold it until prices are right. With a "Metallic" Portable Granary you run no risks of losing the hard-earned profits of a year. It costs little and protects much.

Write us for particulars and prices

The Metallic Roofing Co. Limited
Manufacturers WINNIPEG

Western Canada Factory:
797 Notre Dame Ave.,
WINNIPEG, MAN.

Mention this magazine when writing advertisers

DON'T WAIT

but order early
your supply of

Drewry's Bock Beer

The Spring
Tonic for which
there is always
a big demand.

Mention this magazine when writing advertisers

CHEW MAPLE SUGAR TOBACCO

MILD, SWEET, MELLOW AND JUICY

Manufactured by

ROCK CITY TOBACCO CO.

Quebec

Winnipeg

who married her girl chum Lucy. She has often spoken of you. I might have guessed." His voice seemed to him to sound afar off. He was astonished beyond measure. When he thought of the construction he had placed on the young man's call, at this unexpected development a great relief surged all over him. He felt as if he had just awakened from some horrible nightmare. He shut his eyes tight and inwardly thanked Providence for saving him from sliding over that moral precipice up which there is no reclimbing.

"Your news is the greatest surprise of my life," he exclaimed.

"I trust it is not an unpleasant one," was the manly rejoinder. "I have known Mabel for six months. I know what she has been to you and your children."

The young man's words immediately brought to the doctor the upsetting remembrance of his present financial plight. Was there no way out?

"I should be the last to stand in the way of her happiness," he remarked, quietly; "but I am afraid that ever since she took charge of my motherless bairns can she be dispensed with less than now."

The doctor rose up, crossed the rug, and stood for a moment as if lost in thought. The young man patiently waited for him to go on, noticing that he looked tired.

"The fact of the matter is, I am in a devil of a hole financially. All this"—with a wave of his hand—"looks like being sold up. Who is to look after the kiddies then?"

Leonard Stanley listened quietly as the doctor unfolded to him the cause of his embarrassment. There was a smile upon his face when he had finished. Placing his hand upon the elder man's arm, he remarked:

"You have examined my physical state. Would you care to do the same to my bank-book? A thousand pounds! Don't let that worry you for a moment. You will have the money tomorrow."

"I could not think of it," began the doctor.

"Hush! Not a word. Pay me back when you like, fix the interest at what you like. Say you consent to my marrying Mabel and call it quits if you like. I shall be satisfied either way."

The next morning Gentleman Bert received a registered envelope. It contained one thousand pounds in notes and a plain card bearing the words, "I cannot do it." With a frown he held up two or three of the notes to the light. Then with the remark, "And they were such a pretty fake!" he replaced them in the envelope and hurled the whole package into the fire.

Increase Your HARVEST PROFITS

You can do it by doing away with all losses due to exposure to weather or gophers.

Our "Metallic" Portable Granary

offers you a safe and convenient place to store your grain. It is fire, rust, and weather proof.

It can be put up anywhere you wish and moved at your desire. You are independent of the railways and can afford to wait for proper prices.

It will increase your profits all around for "It costs little and protects much."

Write for Particulars and Prices

The Metallic Roofing Co., Limited
Manufacturers, WINNIPEG

Western Canada Factory:

797 Notre Dame Ave., WINNIPEG

You saw this advertisement in this magazine. Don't forget to say so when writing.

CHALLENGE



THE ACME OF COMFORT
is assured to every wearer of
"CHALLENGE"
Collars and Cuffs

They have the same dull finish, texture and fit as the best linen collar, and won't wilt or crack. "Challenge" Collars can be cleaned with a rub from a wet cloth. Always smart—always dressy. If your dealer doesn't sell "Challenge" Brand, send us 25c for collar or 50c for pair of cuffs. You'll be delighted. New style book sent free on request.

THE ARLINGTON COLLAR CO. OF CANADA LTD.
64-66 Fraser Ave., Toronto, Can.
P-15

GOLLARS

You saw this advertisement in this magazine. Don't forget to say so when writing.



CANADIAN NORTHERN RAILWAY



SUMMER SERVICE OVER THE GREAT LAKES

TO

Eastern Canada and United States

VIA DULUTH

The Longest Trip on the Largest and Finest Steamers on the Lakes. One day longer at the same cost.

Leave Winnipeg daily, 6 p.m. and 7.40 a.m.; arrive Duluth 8.25 a.m. and 10.40 p.m.

All Rail connection via Chicago or the "Soo."

VIA PORT ARTHUR

Connects all Steamer Lines. Train runs down to the dock.

All Docks and Hotels adjacent to Canadian Northern Station.

Leaves Winnipeg daily, 6 p.m.

PATRONIZE THE POPULAR TRAINS

The **Alberta Express**, between Winnipeg, Saskatoon and Edmonton. The **Capital Cities Express**, between Winnipeg, Brandon, Regina, Saskatoon, Prince Albert.

REDUCED FARE SUMMER EXCURSIONS

For full information apply to any Canadian Northern Agent, or write

R. CREELMAN, General Passenger Agent, Winnipeg.

You saw this advertisement in this magazine. Don't forget to say so when writing.

Family Group Photos a Specialty

AT

STEELE & CO., LTD.

MAIN ST. AND BANNATYNE AVE.

WINNIPEG

You saw this advertisement in this magazine. Don't forget to say so when writing.

THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

**Gombault's
Caustic Balsam**
IT HAS NO EQUAL

For the Human Body
It penetrates, soothing and healing, and for all kinds of Sores, Bruises, or Wounds, Felons, Itches, Cancers, Boils, Corns and Bunions. CAUSTIC BALSAM has no equal as a Liniment.

A Perfectly Safe and Reliable Remedy for
Sore Throat
Chest Cold
Backache
Neuralgia
Sprains
Strains
Lumbago
Diphtheria
Sore Lunge
Rheumatism
and all Stiff Joints

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

REMOVES THE SORENESS—STRENGTHENS MUSCLES
Cornhill, Tex.—“One bottle Caustic Balsam did my rheumatism more good than \$100.00 paid to doctor’s bills.”
OTTO A. BETER.
Bottle \$1.00 per bottle. Sold by druggists, or sent by us express prepaid. Write for booklet to The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

Mention this magazine when writing advertisers.

Enough to Make a Cat Laugh



A Real Ghost

“I confess that the subject of physical research makes no great appeal to me,” Sir William Henry Perkin, the inventor of coal-tar dyes, told some friends in New York recently. “Personally, in the course of a fairly long career, I have heard at first hand but one ghost story. Its hero was a man whom I may as well call Snooks.

“Snooks, visiting at a country house, was put in the haunted chamber for the night. He said that he did not feel the slightest uneasiness, but nevertheless, just as a matter of precaution, he took to bed with him a revolver of the latest American pattern.

“He slept peacefully enough until the clock struck two, when he awoke with an unpleasant feeling of oppression. He raised his head and peered about him. The room was wanly illuminated by the full moon, and in that weird, bluish light he thought he discerned a small, white hand clasping the rail at the foot of the bed. “Who’s there?” he asked tremulously.

“There was no reply. The small, white hand did not move. “Who’s there?” he repeated. ‘Answer me or I’ll shoot.’

“Again there was no reply. “Snooks cautiously raised himself, took careful aim and fired. “From that night on he’s limped. Shot off two of his own toes.”

No Casualty

Mate: “When he fired the pistol at you, what did you do, captain?”

Captain: “I moved to one side and the bullet sped harmlessly by and buried itself in the thick part of the mate’s head.”

Corrected

Wife: “I really believe you married me simply because I have money.”

Hub: “You’re wrong. I married you because I thought you’d let me have some of it.”

FIRE INSURANCE

The Liverpool-Manitoba Assurance Co.

All Policies Guaranteed by
THE LIVERPOOL AND LONDON AND GLOBE INSURANCE COMPANY, LTD.
Northwest Branch - WINNIPEG, Canada
Agents wanted in unrepresented districts. S. N. RICHARDS, Local Manager

You saw this advertisement in this magazine. Don't forget to say so when writing.

The Occidental Fire Insurance Co.

Head Office: WAWANESA, MAN.
A. NAISMITH, President R. M. MATHESON, Vice-President
A. F. KEMPTON, Sec. and Mgr. C. D. KERR, Treasurer
Subscribed Capital \$500,000.00
Security to Policy-holders 640,817.29

Full Deposit with Dominion Government
Agents wanted in unrepresented districts

You saw this advertisement in this magazine. Don't forget to say so when writing.

Alex. Naismith, Pres. S.H. Henderson, Vice-Pres. C. D. Kerr, Treasurer

The WAWANESA MUTUAL INSURANCE COMPANY

HEAD OFFICE: WAWANESA, MAN.
A. F. KEMPTON, Secretary-Manager
Amount of Insurance in force Dec. 31st, 1912 \$54,606,660.00
Assets over Liabilities \$587,557.67

THE NUMBER OF FARMERS INSURED, 31st Dec. 1912, 23,261
The Largest Farmers Mutual Fire Insurance Company in Canada. Agents wanted in unrepresented districts

You saw this advertisement in this magazine. Don't forget to say so when writing.

INSURANCE—INSURANCE

FRED W. PACE F. J. HARRISON F. ORANT MILLAR
PACE, HARRISON & MILLAR
Keewayden Building Portage Ave., East

General Agents:
NATIONAL FIRE INSURANCE COMPANY of Hartford, Conn. Assets Exceed \$12,000,000.00
GENERAL FIRE ASSURANCE COMPANY of Paris, France. Assets Exceed 7,500,000.00

Adjustment and payment of losses arranged from our office. Liberal contracts to live agents. WRITE FOR AGENCY.

You saw this advertisement in this magazine. Don't forget to say so when writing.

**Mackenzie, Brown, Thom & McMorran
Mackenzie, Brown, MacDonald & Bastedo**
Barristers, Solicitors, &c.
Regina, Saskatchewan, Canada

Norman Mackenzie, K.C. Hon. George W. Brown Douglas J. Thom
T. Sydney McMorran Hector V. MacDonald Frank L. Bastedo
General Solicitors in Canada for the National Thresher Manufacturers' Association of America
General Solicitors in Canada for the American Collectors' Association.
General Solicitors in Saskatchewan for Fifteen Canadian and American Thresher and Implement Companies.

You saw this advertisement in this magazine. Don't forget to say so when writing.

National Trust Company, Ltd.

TORONTO, WINNIPEG, EDMONTON, MONTREAL, REGINA, SASKATOON
Capital and Reserve, \$2,800,000.00
The strain and worry of managing Estates will all be borne for you by this Company.
A PRIVATE Executor may die or become incapable of acting before the completion of the Trust. A Trust Company is PERMANENT and will survive the longest Trusts.
This Company's financial strength and expert staff ensure responsible and capable administration.

We act as Trustee, Executor, Administrator, Guardian, Liquidator, Assignee, Financial Agent
SAFE DEPOSIT VAULTS SAVINGS DEPARTMENT MONEY TO LOAN
D. H. COOPER, Manager, Winnipeg Branch, 323-326 Main Street.
C. Y. STAINER, Secretary.

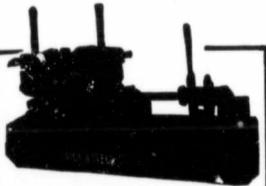
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The "Eagle" Steel Scrub Cutter

(Built in 3 sizes.)
No. 1 cuts 4 feet swath for use with 4 to 6 horses.
No. 2 cuts 5½ feet swath for use with tractor of 20-25 h. p.
No. 3 cuts 6½ feet swath for use with the heaviest tractor.
The best solution of the problem of cleaning scrub land in a cheap, rapid and satisfactory manner, saving at least 75% of the cost of hand labor.

The Eagle Manufacturing Company
Dauphin, Man.

You saw this advertisement in this magazine. Don't forget to say so when writing.



\$1500 to \$5000 Per Year

have been made by hundreds of people operating the "American" Drilling Machines. 40 years' experience, 50 regular styles and sizes and the output of the world's largest manufacturers of this kind of machinery make

"AMERICAN" MACHINES STANDARD

Made in types for every kind of earth and rock drilling or mineral prospecting, equipped with any power, or operated with your traction engine. Our new 196 page Catalog Free.

THE AMERICAN WELL WORKS

General Office and Works:
AURORA ILL., U.S.A.

Chicago Office: First Nat. Bk., 217 E. Wabash

Mention this magazine when writing advertisers

PATENTS TRADE MARKS AND DESIGNS

Write for booklet, circulars, terms, etc.
FETHERSTONHAUGH & CO.
FRED. B. FETHERSTONHAUGH, E. C. M. E.
GERALD S. ROXBURGH, E. A. SC.

Portage Avenue, WINNIPEG, 209-10 Bank of Nova Scotia

Mention this magazine when writing advertisers

ERZINGER'S No. 2 CUT PLUG

Leads them all. It's the Best Dollar Tobacco sold anywhere.

JOHN ERZINGER
Molineux Bldg. - 293 Portage Ave. Phone 69 Phone 2677

Mention this magazine when writing advertisers

WESTERN CANADIAN IMPLEMENT DIRECTORY

EXPLANATION.—First find the Implement Wanted and the Number opposite will be the Number of the Concern, in the first column, that handles it.

- 1-AULTMAN & TAYLOR MACHINERY CO., Regina, Calgary, Saskatoon.
2-BEATTY BROS., Brandon.
3-BELL ROBT. ENGINE & THRESHER CO., Winnipeg.
4-BRANDON PUMP & WIND MILL WORKS, Brandon.
5-BRITISH CANADIAN AGRIC. TRACTORS, Saskatoon.
6-BUFFALO FITTS CO., Moose Jaw.
7-BURRIDGE-COOPER CO., Winnipeg.
7-1-Canadian Armstrong Pump Co., Saskatoon.
71a-Canadian Corrugated Pipe Co., Fortage la Prairie.
71-1-CANADIAN CUSHMAN CO., Winnipeg.
8-CANADIAN FAIRBANKS CO., Winnipeg, Calgary, Saskatoon, Vancouver.
9-CANADIAN HOLT CO., Calgary.
10-CANADIAN MOLINE PLOW CO., Winnipeg.
11-CANADIAN RUBBER CO., Winnipeg, Vancouver.
12-CANADIAN STOVER CO., Brandon.
13-CANADIAN SWENSONS CO., Winnipeg.
14-CASE, J. I. T. M. Co., Winnipeg, Regina, Calgary, Saskatoon.
15-COCKSHUTT PLOW CO., Winnipeg, Regina, Calgary, Edmonton.
16-CRANE & ORDWAY, Winnipeg.
17-DEERE, JNO. PLOW CO., Winnipeg, Regina, Calgary, Edmonton, Saskatoon, Lethbridge.
18-DE LAVAL SEPARATOR CO., Winnipeg.
19-DOMINION SPECIALTY CO., Winnipeg.
20-DUIS GEO. & CO., Winnipeg.
201-EMERSON BRANTINGHAM IMPLEMENT CO., Winnipeg, Regina, Calgary, Saskatoon.
21-EMPIRE CREAM SEPARATOR CO., Winnipeg.
214-GARDEN CITY FEEDER CO., Regina.
22-GAS TRACTION CO., Winnipeg, Saskatoon, Calgary.
23-GENERAL SUPPLY CO., Winnipeg.
24-GOODYEAR TIRE & RUBBER CO., Winnipeg, Regina, Calgary.
244-GOULD, SHAPLEY & MUIR, Winnipeg, Regina.
25-GRAY-CAMPBELL CO., Winnipeg, Brandon, Moose Jaw, Calgary.
261-HACKNEY MFG. CO., Winnipeg.
26-HAGG BROS., & NELLERMOE CO., Winnipeg, Calgary, Regina.
27-HARMER IMPLEMENT CO., Winnipeg.
28-HART PARR CO., P. la Prairie, Regina, Calgary, Saskatoon.
29-HOPE IMPLEMENT CO., Winnipeg.
301-HUBER MFG. CO., Winnipeg.
30-INT. HARVESTOR CO., Winnipeg, Regina, Calgary, Edmonton, Saskatoon, Brandon.
31-LISTER R. A. & CO., Winnipeg.
32-LOUEN HARDWARE & SPECIALTY CO., Winnipeg.
33-MANITOBA ENGINES LTD., Brandon.
34-MASSEY-HARRIS CO., Winnipeg, Regina, Calgary, Edmonton, Saskatoon.
35-MAYTAG CO., Winnipeg.
36-MCLAUGHLIN CARRIAGE CO., Winnipeg.
37-McRAE ALEX., Winnipeg.
38-MELOTT CREAM SEPARATOR CO., Winnipeg.
39-MINNEAPOLIS STEEL AND MACH. CO., Regina.
401-MINNEAPOLIS THRESHING MACHINE CO., Winnipeg, Regina, Calgary.
40-MOODY MATHEW & SONS, Winnipeg.
41-NEEPAWA MFG CO., Neepawa, Regina, Winnipeg.
42-NICHOLS & SHEPARD CO., Regina, Winnipeg.
43-ARMSTRONG MANUFACTURING CO., Saskatoon.
44-PETRIE MFG. CO., Winnipeg, Regina, Calgary, Vancouver, Edmonton.
45-PIONEER TRACTOR CO., Calgary.
46-RAYMOND MFG. CO., Winnipeg.
47-REEVES & CO., Regina.
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49-RIESBURY PUMP CO., LTD., Brandon.
50-RUMELY M. CO., Winnipeg, Calgary, Saskatoon, Regina.

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52-SHAPLES SEPARATOR CO., Winnipeg.
53-STEVENS BRUSH CUTTER CO., Didsbury.
54-STEWART SHEAF LOADER CO., Winnipeg.
55-TUDHOPE-ANDERSON CO., Winnipeg, Regina, Calgary.
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631-WINNIPEG CEILING & ROOFING CO., Winnipeg.
64-V. WINNIPEG RUBBER CO., Winnipeg.
65-WATSON JNO MFG. CO. Winnipeg.
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62-WESTERN STEEL & IRON CO., Winnipeg.
63-WHITE GEO. & SONS, Brandon.
631-WINNIPEG CEILING & ROOFING CO., Winnipeg.
64-V. WINNIPEG RUBBER CO., Winnipeg.
BUGGIES AND CUTTERS.
Armstrong Buggies and Cutters... 15
Harrie Buggies and Cutters... 61
Brookville Buggies and Cutters... 17
Dominion Carriages (Transfer Agent)... 6
Emerson... 261
Gray Buggies and Cutters... 25
Hawkeye Buggies... 35
McLaughlin Buggies and Cutters... 36
Reinder Buggies... 17
Tudhope Buggies and Cutters... 55
CREAM SEPARATORS.
Blue Bell... 30
Champion... 35
Dairy Maid... 20
Empire... 21
Magnat... 44
Massey-Harris... 34
Mellotte... 31
National... 46
Sharpley... 15
Standard... 48
CULTIVATORS AND STUMP PULLERS.
Climax Stump Cultivators... 15
Deere No. 2 Tractor... 17
Deering Cultivator... 30
Deere No. 2 Tractor... 17
Emerson... 201
Flury's Cultivator... 17
Frost & Wood Scourer... 64
Hilborn Stump Puller... 64
K. A. (2 Horse) Cultivator... 21
McCormick Cultivator... 30
Massey-Harris Corn Cultivator... 35
Parly Scuffer... 49
Verity Cultivator... 34
DISC AND DRAG HARROWS.
Ajax Drag... 17
Bissell Disc... 17
Boas Drag... 60-62
Cant. a Disc... 33
Case, J. I. Disc and Drag... 27
Cockshutt Disc and Drag... 15
Deere King Boss Drag... 17
Deere Steel Boss... 17
Deering Disc... 30
Defflaner Jr. Disc... 62
Economy Disc... 10
Evans Disc and Drag... 56
Evans Disc... 10
Flury's Side Channel Drag... 17
Flury's Sliced Drag... 17
Hilborn Disc... 64
Fuller and Johnston... 61
Grand Detour Drag and Disc... 60
Hoover Wheel Disc... 49
International Diamond and Lever... 30
Massey-Harris Disc and Drag... 34
McCormick Disc... 30
Moline Flexible Drag and Lever... 10
Nixon Disc and Drag... 64
Parly Disc and Drag... 49
Scotch Diamond Drag... 5
Superior Wheel Disc... 30
Universal Drag... 17
Universal Tongue Trucks for Disc Harrows... 17
Watson Drag and Disc... 61
Wilkinson Drag and Disc... 61
Windsor Disc... 15
FEED AND ENRIAGE CUTTERS AND PULVERS.
Cockshutt Feed Cutters... 15
Cockshutt Pulver... 15
Flury's Feed Cutter... 17
Hilborn Feed Cutter and Grinder... 7
Massey-Harris Feed Cutter... 34
Watson's Feed Cutter... 60
Watson's Root Pulper... 60
FEED GRINDERS.
Brandon... 6
Challenge... 60
Cyclone... 9 & 27
Deary... 27
Diamond... 55
Flury's... 17
Gould Shapley... 15
Manitoba... 37
Maple Leaf... 44
Metzger... 43
Scientific... 60
Stover Ideal... 10
Tender... 60
Victor... 60
Watson's Ideal... 60
GARDEN IMPLEMENTS, INCUBATORS AND POULTRY SUPPLIES.
Chatham Incubator... 25
Cyphers' Incubator... 60
Fountain Air Sprayer... 53
Iron Age (Garden Implements)... 61
Maxwell... 55
Planet Jr. Garden Tools... 41-55
CLEANERS, FANNING-MILLS AND PICKLERS.
Acme Pickler... 6
Automatic... 19
Chatham Fanning Mills... 25
Foster Fanning... 29
Hero Fanning Mill... 29
Hero Pickler... 29
Jensen... 29
Webber Grain Cleaner... 10
Wonder Fanning Mill... 15
GASOLINE ENGINES.
Aultman & Taylor (Gas Tractor)... 1
Avery... 26
Brandon... 62
Buffalo Pitts, (Tractor)... 6
Caterpillar... 6
Case Tractor... 6
Cushman... 71
Fairbanks (Stationary, Portable Tractor)... 7
Flour City (Tractor)... 43
Gardner... 7
Gas Pull (Tractor)... 22
Gas Tractor ("Big 4, 30")... 22
Gibson (Stationary, Portable Tractor)... 7
Gilson... 48
Jackey Auto Flow... 251
Hart Par Tractor... 28
Holt Caterpillar... 9
Huber (Gas Tractor)... 9
Ideal... 242
International... 30
International (Tractor)... 30
Manitoba... 33
Minneapolis... 30
Master Workman... 60
Nichols & Shepard (Tractor)... 42
Ohio (Tractor)... 57
"Oil Pull" Rumely (Tractor)... 57
Pioneer (Tractor)... 45
Renfrew Standard... 48
Renfrew... 201
Rustin Procter (Tractor)... 5
Sawyer-Massey (Tractor)... 61
Sticker... 43
Stover (Stationary, Portable Tractor)... 12
Tender... 58
Universal (Gas Tractor)... 301
Waterloo Boy... 7
HARVESTING MACHINES.
Champion... 30
Deering... 30
Frost & Wood... 15
Massey-Harris... 34
Massey-Harris Reaper... 34
McCormick... 30
Noxon... 55
HAY LOADERS, HAY PRESSES, HAY TOOLS, MOWERS, RAKES, SWEEP RAKES, HAY STACKERS AND REEF' LOADERS.
Admiral Hay Press... 15
B.T. ... 17
Buffalo Hay Press... 51
Canton Hay Press... 30
Champion Hay Rake... 30
Champion Mower... 30
Champion Side Delivery Rake... 30
Dain Hay Loader and Stacker... 17
Dain Hay Press... 17
Dain Side Delivery Rake... 17
Deere Hay Loader... 17
Deering Hay Stacker... 30
Deering Sweep... 30
Deering Mower... 30
Emerson Hay Loader... 201
Emerson Mower... 201
Emerson Rakes... 201
Frost & Wood Mower... 15
Tender... 15
Frost and Wood Champion Hay Loader... 15
International... 15
International Sweep Rake... 30
International Hay Press... 30
Jackey Hay Press... 30
Keystone Hay Loader... 30
Louden Hay Tools... 34
Massey-Harris Mower... 34
Massey-Harris Sweep Rake... 34
Massey-Harris Hay Toller and Loader... 34
Massey-Harris Side Delivery Rake... 34
McCormick Hay Stacker... 30
McCormick Side Delivery Rake... 30
McCormick Sweep & Hay Rake... 30
Noxon Mowers & Rakes... 55
Noxon Hay Press... 30
Stewart Sheaf Loader... 34
Success Hay Loader... 10
Tiger Steel Rake... 15

- ROSE POWERS AND JACKS, SAW MILLS, WOOD SAWS AND TREAD POWERS.
Caters Wood Saws and Jacks... 4
Cockshutt Horse Power... 15
Flury's Horse Power and Jacks... 17
Flury's Wood Saws and Tread Powers... 15
Gear Scott Saw Mills... 50
Gaiser Saw Mills and Horse Powers... 7
Gould Shapley & Muir Wood Saws... 15
Horse Powers, Tread Powers Bevel Jacks... 15
LAND ROLLERS AND PULVERIZERS.
Acme Pulverizers... 17
Canton Lead Roller... 30
Canton Packer... 30
Campbell Rub-Surface Packer... 30
Cockshutt... 15
Cockshutt Pulverizer... 15
Cockshutt Combined Pulverizer and Sub-Soil Packers... 15
Deere Land Roller... 17
Emerson Roller Pulverizer... 201
Flury's Pulverizer... 17
Fulton Sub-Surface Packer... 10
Hilborn Land Roller... 55
Hilborn Pulverizer... 64
Moline Roller Pulverizer... 34
Verity Land Roller... 34
Verity Pulverizer... 34
Watson's Flexible Pulverizer... 60
Watson's Land Roller... 60
Western... 61
MANURE SPREADERS AND LITTER CARRIERS.
B.T. ... 2
4 Clover Leaf... 30
Corn King... 30
Cushman... 30
Hawkeye... 35
Kemp... 15
Mand... 32
Louden... 32
Massey-Harris... 34
National... 34
Success... 17
GANG PLOWS, ETC.
Canton... 30
Case, J. I., Engine Gang... 27
Case, J. I., Engine Gang... 30
Cockshutt... 15
Cockshutt Engine Gang... 15
Deere Engine Gang... 17
Emerson... 55
Emerson Engine Gang... 30
Gear Engine Gr. g... 7
Grand Detour... 60
Jennette Engine Gang... 30
Massey-Harris Engine Gang... 30
Moline... 10
Moline Engine Gang... 10
Oliver Engine Gang... 20
Paris... 49
Parly Engine Gang... 48
Railroad Grading & Rooter Plows... 58
Verity... 34
PORTABLE GRAIN ELEVATORS.
Canadian Corrugated Pipe Co... 71a
Cyclone... 15
Gopher... 27
North Star... 27
Puzzart... 27
Winnipeg Ceiling & Roofing Co... 631
Wizard... 27
POTATO AND BEET MACHINERY.
Aspinwall Potato Planters and Sprayers... 15
Aspinwall Arrangers and Cutters... 15
Deere Potato Diggers and Beet Tools... 17
Dowden Potato Harrow... 17
Egan Potato Sprayer... 43
Evans Potato Planter... 30
Eureka Potato Planter... 17
Hilborn Potato Digger... 17
Moline Knott Potato Digger... 10
Spillatree Sprayer... 17
RIDING ATTACHMENTS, HARROW CARTS, WHEEL BARROWS AND HAND CARTS.
Cockshutt Wheel Harrow... 15
Cockshutt Harrow Cart... 15
Deere Harrow Cart... 17
Eclipse Hay Harrow Cart... 27
Tender... 15
Flury's Wheel Harrow... 17
Fuller & Johnstone Harrow Cart... 61
Kramer Rotary Harrow... 17
Naylor Harrow Attachment... 27
P. & O. Harrow Cart... 30
Parly Harrow Cart... 30
Racine Rotary Harrow... 14
Success Harrow Cart... 10
Verity Wheel Harrow... 34
Watson's Wheel Harrow... 60
ROAD SCRAPERS AND ROAD MACHINES.
Cockshutt Scrapers... 15
Good Roads Machinery... 59
Indiana Road Machines... 55
Reuber Harrow Cart... 35
Standard Reversible Grader... 17
Toronto Pressed Steel Scrapers... 61
Sawyer & Massey Reversible Grader... 51
SEEDING MACHINES.
Cockshutt... 15
Deering... 30
Frost and Wood Champion... 15
Hoosier... 30
Kontack... 30
Massey-Harris... 30
McCormick... 30
Monitor... 10
Superior... 30
Sylvester... 55
Van Brunt... 17
THRESHING MACHINERY, SELF FEEDERS, WIND STACKERS AND ATTACHMENTS.
Advance... 50
American... 50
Aultman & Taylor... 30
Avery... 26
Cotton... 21
Case J. I... 14
Cuddy Steering Device... 62
Dakota Weigher (Ask Any Thresher Co.)... 50
Dreadnought Engine Guide... 50
Gaiser... 9
Goodson... 35-38
Garden City Feeder... 214
Hawkeye Feeder... 35
Hartley Weigher... 58-47
Hilborn... 294
Minnesota... 301
Newport Wing Carrier (Ask any Thresher Co.)... 50
Moody... 40
Neepawa... 41
Nichols & Shepard... 42
Parson's Feeder... 35
Parly Weigher... 35
Puzzart... 35
Thresher Co... 35
Flourishing Governors (Ask any Thresher Co.)... 20
Reeves... 30
Rumely... 35
Sawyer... 51
Sawyer Massey... 51
Waterloo... 58
Western... 59
Whiteford John Deere... 56
White Geo. & Sons... 63
White Wings Feeder... 35
THRESHER'S SUPPLIES.
Brown Wing Carrier (Ask Any Thresher Co.)... 50
Canadian Fairbanks... 8
General Supply Co... 21
Crane & Ordway... 17
Diamond Stephan... 17
Emerson... 17
Goodyear Tire & Rubber Co... 24
Thresher Supplies Carried in Western Canada by all the Thresher Cos... 17
Madison Kipp Lubricators... 35
Massey-Harris... 35
Maytag Co... 35
Ohio Injection Co. (Ask any Thresher Co.)... 17
Penberthy Insecta & Grass Gos Handled by all Leading Jobbers and Thresher Companies... 64
Winnipeg Rubber... 64
WAGONS AND SLEIGHS.
Adam's Farm Trucks... 15
Lorain... 15
Gears... 15
Adam's Wagons & Sleighs... 15
Metal Wood... 15
Avery Wagons & Grain Trucks... 28
Bain Wagons & Sleighs... 39
Canadian Cement Wagon... 30
Chatham Wagon... 10-94
Cockshutt Metal Wheel Truck... 15
Columbus Wagon... 17
Davenport Wagon... 17
Electric Steel Wheel Trucks... 27
Fish Bros. (Kaslo) Wagon... 55
Genuine R. G. Mandt Wagon... 10
Grand Detour... 60
Gray Light Farm Sleigh... 25
Hamilton Wagon... 30
Hamburg American Wagon... 64-80
Metal Wheel Truck... 17
Millburg Wagon... 36
New Deal Wagon & Sleigh... 17
New Deal Farm Truck... 17
Northern John Deere Wagon... 17
Northern Sheet Metal Wheel Truck 10 Dominion Wagon & Sleigh... 30
Petrol Wagon & Sleigh... 36
Rushford Wagon... 36
Stone & Gravel Spreading Wagon... 58
T. G. Mandt Sleigh... 10
Weber Wagon... 30
Winona Wagon... 36
WELL DRILLING MACHINERY.
Austin... 7
Armstrong... 71
Brandon... 6
Spicer... 8
Standard... 48
WIND MILLS, TANKS AND PUMPS.
Caters Pumps... 4
Caters Star Windmill... 4
Canadian Air Motor... 43
Chicago Aerometer... 27-7
Florence Pump... 44
Gould Shapley & Muir Wind Mills and Pumps... 241
Hayes Pumps... 35
London Pumps... 34
Moline... 35
Manitoba Tanks... 33
Ontario Pumps... 48
Riesbury Pumps... 49

- 601-EMERSON MFG. CO., Winnipeg.
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See Those Lugs!

They're HART-PARR "HOLD-FAST" LUGS

They enable the HART-PARR "27" to work where
No Other Tractor Can

Naturally, when you buy a tractor, you want one that can go into your fields, do your work and stick to the job, rain, storm or sunshine. One that will stay on top of the ground and not mire, even in extremely soft soil.

The small, light Hart-Parr "27" is the one tractor that best fulfils all these requirements. A wet season cannot put it out of commission. Soft soil holds no terrors for it. It will work in fields so soft that other tractors cannot venture upon without miring.

The combination of famous Hart-Parr wave form driver lugs and wonderful Hart-Parr "Hold Fast" extension lugs, alone makes this possible.

No doubt, you have heard of the unequalled efficiency of our wave form driver lugs. They give 31 per cent greater surface contact than smooth tired drivers with wedge shaped lugs. But Hart-Parr "Hold Fast" extension lugs are something new and a remarkable improvement over anything ever designed for the purpose. They take the place of cumbersome and costly extension rims. But don't think of them merely as a substitute for the latter. They are not only cheaper but vastly more efficient. They cost fully one-third less than extension rims, and give 25 per cent greater grip on the soil. When a wet spell comes along, they enable you to finish all your field work many days sooner than you otherwise could, because they positively prevent miring in soft soil. They soon pay for themselves in the time they save you.

They Grip the Ground Like a Horse's Toe **HART-PARR** Simple and easy to put on or take off.
-OIL TRACTORS-

Hart-Parr "Hold Fast" lugs strike the ground like the toe of a horse's hoof. They hold it with a bull-dog grip, prevent slippage, pull out of the ground straight away, without tearing or rooting it up, and are self cleaning. They do not in the least injure or pack the soil, and are equally efficient in virgin sod or on plowed ground.

Made of Tough, Durable Steel

Hart-Parr "Hold Fast" lugs are made of flat steel bars of unusual toughness and durability. They are 15 inches long, 7 inches wide and 3/4 inch thick, with the lower edge bent at an angle of about 135 degrees from the blade. When fastened in place, they extend 7 1/2 inches over the outer edge of the drive wheels and project 2 3/4 inches above the crest of the driver lugs. They are made to last, will not break off nor twist out of shape and cannot clog in the stickiest mud.

To put on or detach Hart-Parr "Hold Fast" lugs, is a comparatively simple operation and the work of only a few minutes. Each lug fits into the hollow between two driver lugs, with the blade resting against the side of the driver lug. A single large bolt and nut keep the "Hold Fast" lug securely and firmly in place. It cannot jar loose and fall off. To detach it, you simply unscrew the nut, pull out the bolt and the job is done.

Only one of many Fine Features

Every detail and every part of the small, light Hart-Parr Oil Tractor is just as simple and efficient as these "Hold Fast" lugs. In fact, the design and construction throughout is strikingly original, simple and efficient. We build this tractor almost entirely of steel made to special formula and in our own modern steel foundry. No other tractor concern operates its own steel foundry. We have reduced the number of manufactured parts in this tractor to 300. All other tractors contain from 800 to 1,500. Take the drive wheels for example. They are solid steel castings—not built up nor pieced. Casting them solid does away with several hundred small parts and insures lightest weight, yet greatest strength. One of these wheels, under test, withstood a pile driver blow of 216,000 pounds without showing a crack or break. This same margin of strength and safety we build into every part—frame, gears and all. The reason Hart-Parr Oil Tractors are superior to all others is because we build them so from the foundation up. And remember, we make a size for every farm, large or small. One of them will exactly meet your power requirements.

A "Self Lift" Plow, too

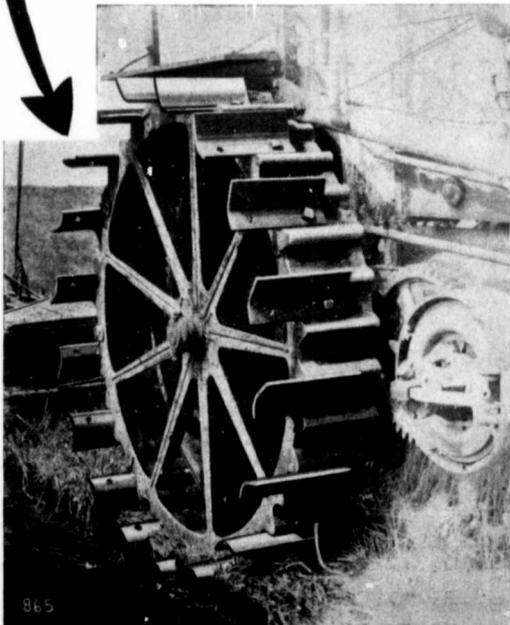
We are prepared to furnish the Hart-Parr "Self Lift" plow in 4 and 6 bottom sizes. The Hart-Parr "Self Lift" measures up to standard Hart-Parr quality. The 4 bottom size is for use with the Hart-Parr "27." It is simple in design, powerfully built, contains 1-3rd less parts and weighs 33 per cent less than any other "Self Lift." In combination with the Hart-Parr "27," it forms a strictly One-Man Outfit. You can operate both tractor and plow right from the engine platform. Other special features of this plow are large clearance, three point support over entire frame, independent hand lift and self lift attachments and special spring beam couplers.

GET OUR LITERATURE

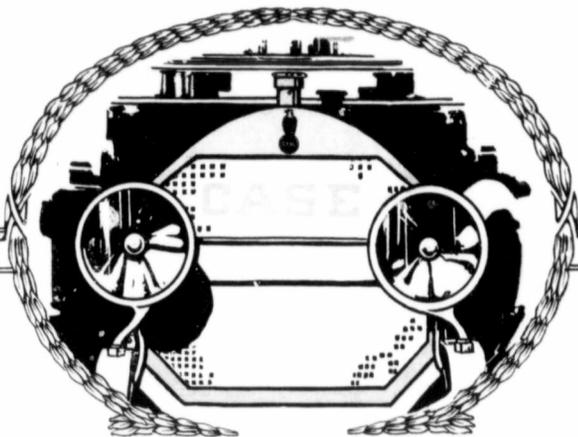
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Cut shows how "Hold Fast" lugs grip the ground and pull out straight away without tearing up soil.



CONSIDER THE MAKER WHEN YOU BUY YOUR CAR

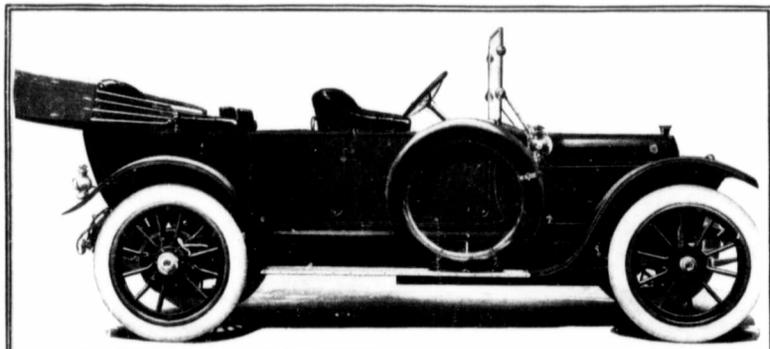
Every man who buys an Automobile is told that the Car he buys will stand up under Use. It would be a short-sighted Buyer that wouldn't exact that assurance from the maker.

And yet, many a man has bought a Car only to find that it did not "wear"—that he has paid out his money for Furnishings, Paint and Accessories that make a fine Appearance, things that cost the Maker less than Honest Worth in the Vital Parts of the Car.

The wise Automobile Buyer gives quite as much consideration to the "Name" and "Reputation" of the Manufacturer back of the Car as he does to the visible parts of the Car—because he knows that Durability in the Vital Parts—those things most important to his Enjoyment and Profit from his Investment—are hidden away where he can't see them. Time and laboratory tests only can prove their excellence.

It's worth a great deal to you to see the "Case" name and the Famous Case Trade-mark on the Car you buy. They stand for Seventy Years' Experience in building Honest, Reliable Machinery and a 70-Year Reputation for Fair Dealing. It's your Best and Safest Guarantee that you'll not be disappointed in those Vital Things for which you have to take the Maker's Word when you buy an Automobile.

The Case 1913 Models range in price from \$1500 for the Thirty Horse Power, Two-passenger Roadster and Five-passenger Touring, to \$2200 for the "Case Forty," Five-passenger; \$2400 The "Case Forty," Seven-passenger Touring—Electric Lighted with Electric Self-Starter and all of the Luxurious Appointments of Cars a great deal more expensive. All prices F. O. B. factory. All models fully described in our Automobile Catalog. Write for a copy.



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