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THE CANADIAN THRESHERMAN AND FARMER

CANADA'S FARM MACHINERY MAGAZINE

WINNIPEG CANADA

OCTOBER - 1910

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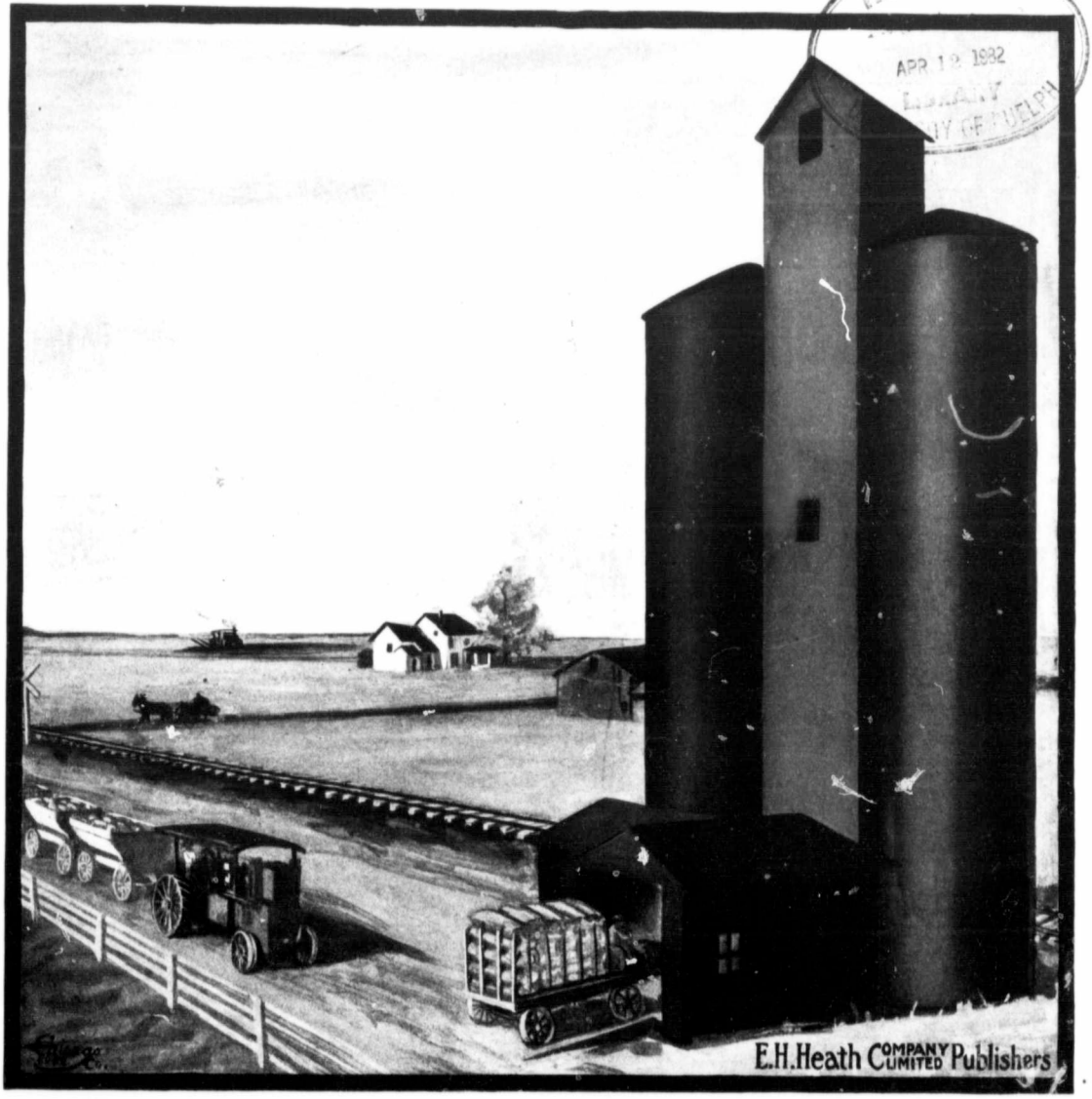
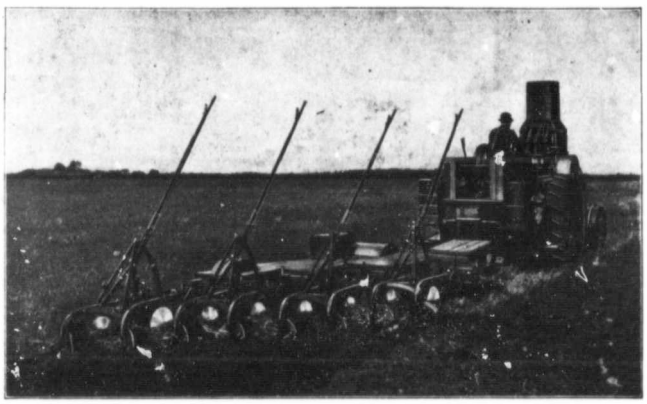


E.H. Heath COMPANY CUMITED Publishers

The Small Sizes of John Deere Engine Gangs

ARE EASILY HANDLED IN LIMITED AREAS

There are Sizes to Meet all Requirements



FOUR, SIX, EIGHT, TEN, TWELVE OR FOURTEEN BOTTOMS
Plows Assembled in Pairs, One Lever for Each Pair. Frame Mounted on Wheels.

You don't have to own a big ranch to get the benefits of engine plowing.

The four and six-bottom **John Deere Engine Gangs** are adapted for use with small oil or low power steam tractors, and make engine plowing practical for those who farm more limited areas.

One of these plows will give you all the advantages the big rancher has in the way of saving expense for plowing.

The outfit shown in the illustration is accomplishing more than four men could do with teams and single bottom plows.

The plows of the gang take care of themselves except when it is necessary to raise and lower them in turning. Flies and hot weather do not worry the engine, neither does it get tired and have to rest. Such an outfit works all day, every day.

John Deere Engine Gangs have strong, bridge-like steel frames to which the plows are attached in pairs. Each pair is free to move up or down so the bottoms rise to pass obstructions, then immediately drop to work. Any kind of plowing can be done because the beams will carry any style of stubble or breaker bottom.

If you are a thresherman, you can double the earning power of your engine by getting one of our engine gangs. Remember **John Deere Engine Gangs** are sold complete ready to hitch to any style of tractor.

WRITE FOR CIRCULARS ***WRITE FOR CATALOGUE***

Light Draft John Deere Gang Plow

HOW TO SELECT A PLOW. THE RULE OF FOUR.

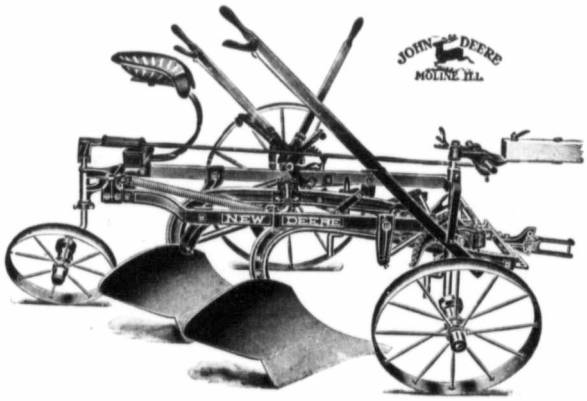
Plow quality does not improve with age.

An inferior plow does poorer work, is harder to pull, and costs more for repairs every year it is in use.

Because certain things about a plow cannot be changed for the better **after** you buy it, care and study **before** buying, is important.

Judging the real worth of a plow is not difficult if four things are kept in mind:

First—Quality of work.
Second—Ease of management.
Third—Lightness of draft.
Fourth—Strength and durability



WHY THESE FOUR QUALITIES—THE TEST.

First—Nothing takes the place of good work. Unless a plow does perfect work you cannot afford to own it, no matter what the price.

Second—Have regard for your own comfort—that pays. Get a plow that is easy to ride, and that can be operated with little effort on your part.

Third—Never work horses harder than necessary. Horseflesh and horsefeed cost money. An extra one-eighth horse-power added to the draft will cost you the price of a plow—very soon.

Fourth—Repairs are expensive. A good plow lasts longer than a poor one.

The Light Draft New Deere—Why it Pulls Easy

Consider five things when judging the draft of a plow. **First**—the shape of the bottom. **Second**—Material out of which it is made. **Third**—Equal weight on all the wheels. **Fourth**—Proper adjustments. **Fifth**—Staunchness of the plow.

WRITE FOR LITERATURE, PRICES AND TERMS

JOHN DEERE PLOW COMPANY, LTD.

WINNIPEG REGINA SASKATOON CALGARY EDMONTON

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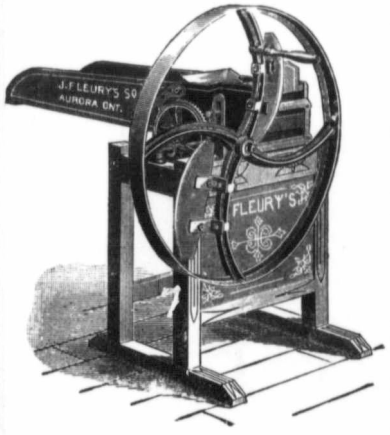
FLEURY'S GRINDER

Our Grinder line consists of the famous RAPID EASY and GOOD LUCK GRINDERS.



FLEURY'S STRAW CUTTER

Seven different styles and sizes for hand, belt and horse power; with or without carrier or blower.

THE

FLEURY

Grinders
Straw Cutters
Wood Saws

and

Horse Powers

ARE

HIGH GRADE

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EVERY RESPECT

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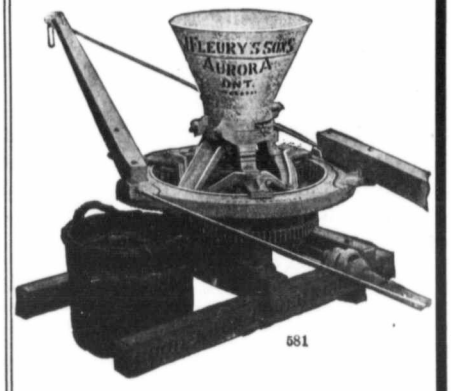
FULL EXPLANATIONS



Good Luck Power and Grinder

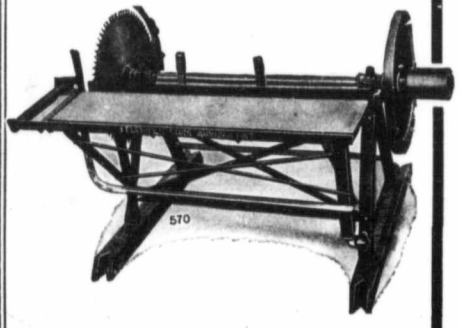
Specially Adapted to Farmers' Work

Construction and Finish PERFECT.

THOUSANDS in use and giving highest satisfaction.

The best is cheapest; an INFERIOR machine is DEAR at ANY PRICE.

YOU want only the best.



Circular Saw Machine No. 3

Length between saw and fly-wheel 4 feet 4½ inches. Size of pulley, which has fully turned face, 5 inch diameter by 7 inch face. Saw of any diameter from 22 to 30 inches can be supplied.

JOHN DEERE PLOW CO. LTD.

WINNIPEG **REGINA** **CALGARY** **EDMONTON** **SASKATOON**

PRIZE WINNERS

The following are extracts from three prize winning letters of "threshing experiences" published in The Canadian Thresherman and Farmer, Winnipeg, Vol. XV., Sept. 1910.

These go to enlarge the big list of bright men that place their dependence in Sawyer-Massey Engines and Threshers and the success that surely comes to owners of the S-M Brand.

By Ed. Harris, Curlew, Alta.

My season's run commenced on September 20th with a 25 h.p. Sawyer-Massey engine and a 34-inch cylinder Great-West separator which makes a very complete and smooth running combination.

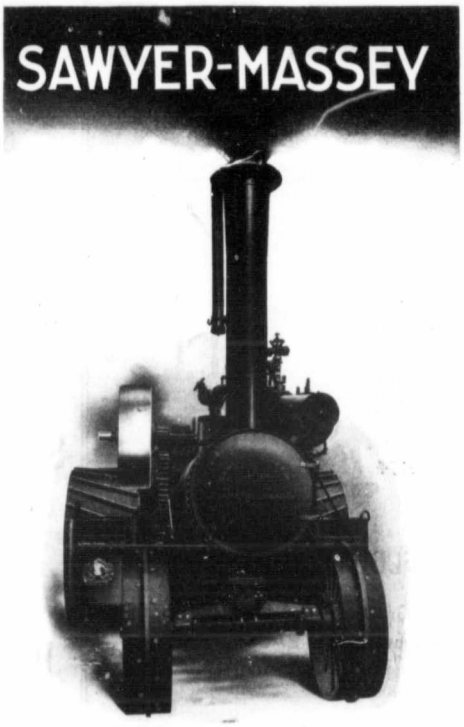
We had very little trouble with our outfit in so far as the machinery was concerned, but lost a good deal of time through lack of men.

By Herbert N. Ellis, Edgely, Sask.

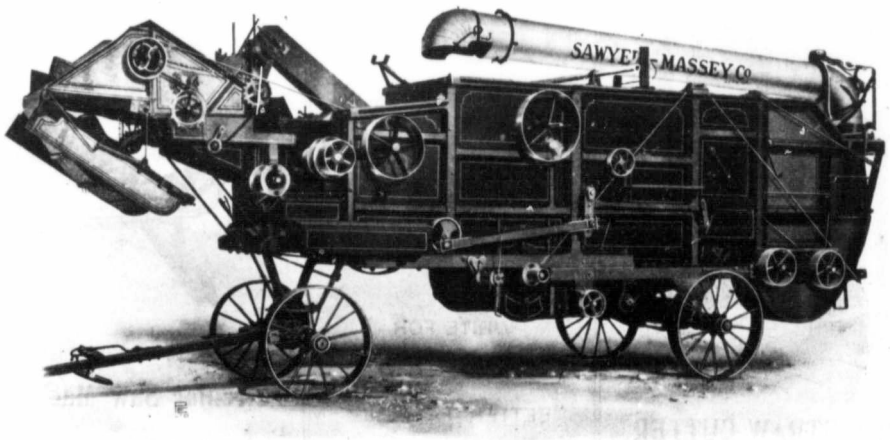
Last fall I purchased a new rig, Sawyer-Massey 30 h.p., a 36-60 Great-West separator, which has given good satisfaction, doing very clean threshing. In fact those that I have threshed for have already made a bargain with me for this year which is certainly the best recommendation a thresherman can have. We had a good season and our threshing was well concentrated.

FINDS STEAM THE BEST—By Louis Ferris, Holland, Man.

Our first rig was a new 32-50 Great-West separator and a 25 h.p. gasoline engine, which latter proved afterwards not to be enough power, so we sent it back. We shut down and went and got a new 22 h.p. Sawyer-Massey Engine and have had satisfaction ever since.



ENGINES



View of the Sawyer-Massey "Great-West," showing Blower, and Feeder (Woods Model) folded.

Ask our Winnipeg Office for latest Catalogue describing the big line of Combination Plowing and Threshing Engines and Threshers, free.

Sawyer-Massey Company, Limited

The Largest Engine and Thresher Manufactory in Canada.

HAMILTON **WINNIPEG**

A MAGAZINE FOR THE FARM AND HOME

THE CANADIAN THRESHERMAN AND FARMER

Vol. XV. WINNIPEG, CANADA, OCTOBER, 1910. No. 10.

Farm Machinery and What it Means to the Farmer

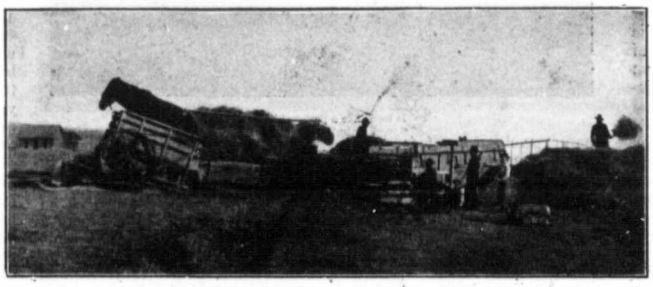
A Series of Essays by Students of The Manitoba Agricultural College.

By J. H. Bridge.

A survey of the last century reveals it as an age of some great men and of many marvellous achievements but the achievements exceed the giants of the age in number and surpass them in grandeur. All the restless activity of a Napoleon or the iron policy of a Bismarck have not wrought upon, modern life as has the improvement of farm machinery. The great inventions and their adaptation to the needs of humanity are the real glories of the nineteenth century. And nowhere in all the varied field of human activity has more progress been made or more benefit been derived than in the realm of agriculture.

In 1800 not a single cast iron plow was in existence. The plow then in use was a clumsy homemade wooden affair very heavy in draft and performing its functions in a very slow and unsatisfactory manner. Cultivation was laboriously performed with the hoe. The seed was scattered by hand. The crop was cut with a sickle and threshed with a flail. Now the plowman uses a neat, factory-made cast-iron sulky plow which quickly and competely inverts the soil and upon which he can comfortably ride. We cultivate our crops with a four-horse cultivator, sow our seed with a twenty shoe drill, reap the crop with a self binder cutting six or eight feet at a swath, and thrash our grain with a modern threshing machine which has a capacity of from 1,500 to 3,000 bus. per day.

From the wide spread introduction of these labor saving devices many important advantages have been reaped. The cost of producing food-stuff has been lowered, the quantity produced has been increased and the quality of the product improved. More capital has been available on the farm and the farmer's social and mental status has been raised. It has relieved the laborer of much drudgery, made his work and his hours of service shorter, stimulated his mental faculties, given an equilibrium of effort to mind and body and made agriculturists in general more efficient workers, broader men and better citizens.

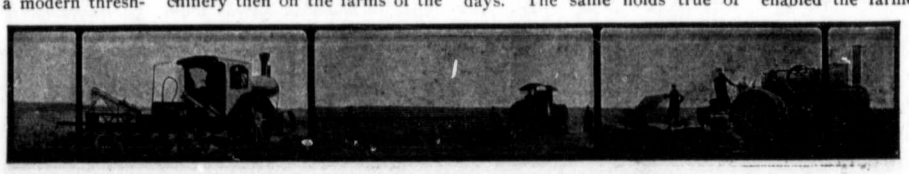


This kind of an outfit is still to be found in some sections

The amount of capital invested in farm machinery is not generally realized. According to the returns of the census of 1900 the value of the farm machinery then on the farms of the United States was $761,261,550. The Canadian census of 1901 shows that the value of farm machinery on Canadian farms was $107,630,565. There were 471,833 farms in Canada so there was an average of $228.10 invested in farm machinery on each Canadian farm, or an average investment of $3.57 per cultivated acre. The capital invested in Canada in machinery other than farm machinery was $112,732,811. That is, the capital invested in our agricultural machinery is almost equal to the total capital invested in machinery in all our other industries put together.

The use of so much machinery has had a very marked effect on the cost of producing farm products. One man with a modern plow and a four-horse team can plow as much in one day as could formerly be plowed by the same force in four or five days. The same holds true of our mowers, binders and threshing machines. One man with a self binder and four horses can cut and bind as much grain in one day as twenty men could using the sickle and binding by hand. Geo H. Holmes of the United States Department of Agriculture in a report on the prices of farm machinery states that "It is one of the marvels of the age that the amount of human labor now required to produce a bushel of wheat, from beginning to end, is on the average only ten minutes, whereas in 1830 the time required was three hours and three minutes. Thus the cost of labor in producing one bushel of wheat has been reduced from seventeen and three quarter cents to three and one-third cents." That is to say the introduction of labor saving machinery has so reduced the amount of labor necessary to produce a bushel of wheat that it is now not one-fifth of what it was eighty years ago.

The introduction of improved farm machinery has increased the quantity of agricultural products produced in two ways. It has produced extensive farming and intensified farming. In the West where land is cheap, machinery has enabled the farmer to go in for cereal production on a large scale. In the East where the population is more dense and land has consequently a higher value, machinery has enabled the farmer to carry on



intensified farming. The result is that in the East we have little cereal production but a great deal of truck farming and market gardening. In both cases the amount produced has been increased and the farmer has reaped larger profits. This is brought out very clearly if we study the history of agriculture in the United States.

During the early years of the nineteenth century about eighty per cent. of the male workers of the United States were employed upon the farms at that time, production was limited by the primiture methods there in vogue that people who wished to enjoy an abundance of food and the other simple comforts of life were compelled to live on the farm when they could be assured of a proper supply. The farmers were unable to produce food enough to feed a large urban population and the manufacturing industries were limited not only by a lack of food to sustain cities but by the lack of a market for factory products. For the agricultural communities, not being able to produce a surplus for sale were unable to buy manufactured products. During the past century, however, farm implements and machines have come into use which have so increased the efficiency of labor that the last census shows that about thirty-five per cent. of the male workers of the nation now produce the food of the nation and furnish an enormous surplus which is disposed of in the European and other markets.

It is often claimed that it was the improved methods of transportation and not the improved farm machinery which caused the increase in the amount of food stuffs produced. When we consider the records of history this does not appear to be the case. Railway construction in the United States began in 1828 and from that time until 1846 an average of about three hundred miles per year was built. During this period the railways did not stimulate the production of wheat for from 1800 to 1846 the export of flour from the United States amounted to an average of about a million barrels per year. At no time did it show any material increase and the exports of wheat were actually less from 1830 to 1840 than for the first decade of the century.

The reaper was first placed on the market successfully for the harvest of 1845. In 1847 the export of wheat and flour was five times as great as the yearly average for the preceding forty years. Between 1849 and 1859 the wheat crop increased seventy per cent. and in 1880, thirty-five years after the introduction of the reaper the export of wheat and flour amounted to thirty-five times the yearly average for the forty years preceding its introduction. Railway construction which had averaged only three hundred miles per year prior to the introduction of the reaper made remarkable gains in 1847 and 1849 and progressed at a rate of about two thousand miles per year between 1850-60. Thus it would seem that it was not the railways which caused greater production of farm produce, but that the greater production of these products, due to the introduction of farm machinery, provided work for the railways and made possible their rapid extension and development.

It looks like a pose but it isn't.

The quality of our agricultural products has been greatly improved by the use of improved farm machinery. With a modern seed drill the crop is sown in a short time and at a uniform depth, consequently it matures evenly and will be ripe before there is danger of it being damaged by frost. With a self-binder it can be quickly cut and as soon as dry it can be threshed from the stook. By using modern hay making machinery it is possible to cut, cure and stack a field of hay in one day, thus avoiding, to a very large extent, all loss from weathering, which under the old regine was often very great. The modern threshing machine makes a more complete separation of the grain from the straw, delivers a clean product and does not cause so much injury to the grain as did the old method of threshing with a flail or by driving cattle over the grain.

The character of the farmer, and his position in the social world has been greatly improved by the introduction of labor saving machinery. He has learned to farm with his head, to realize that success by mere brute force is impossible and that drudgery is merely labor without thought. Under the old reign the farmer slaved from early morning until late at night. His tools were primitive, crude and clumsy and so the work was always laborious. His whole life was an unbroken succession of weary days filled with grievous toil and unrelieved by any time for thought, rest or reading. Now while comfortably seated upon his plow, binder or other farm implements he can drive his team and still have time to look about him or to think of other things besides the immediate work he has in hand. His working hours are shortened and the work is never so laborious, so when the day's work is finished he is not completely exhausted but will feel like sitting down and reading along any line in which he may be interested. As he is selling his products in the European markets in competition with the farmers of other countries he naturally becomes interested in those countries and will study their climates and physical conditions, the crops which they produce and the different systems of farming in vogue there. By this he is enabled to plan his work so that he will be able to dispose of his products at a time when there will be an active demand for them, or perhaps he will find that he could make greater profits by introducing some new system of tillage or some new variety or species of grain. In this way his intellect is quickened, his knowledge is increased, his outlook is broadened, his reasoning power is developed, he rises in his own and his fellow citizen's estimation and becomes a valuable asset to his community and to the nation.

Labor saving machinery has placed the farmers of all countries in competition on the markets of Europe. The governments of these countries now realize that the true prosperity of their country depends upon its farmers being able to place the maximum amount of produce on those markets at a minimum cost, and to promote this they are setting aside large grants of money for the carrying on of scientific enquiry and research along agricultural lines. They are also establishing agricultural colleges and schools where the most up-to-date information concerning agricultural subjects is taught to the young men and women who intend to follow agriculture as their life work.

Besides raising the farmer in the social and educational scale farm machinery has made the farmer a great deal more independent. He does not now require so many laborers and that which he formerly expended in the hire of labor he can now devote to the purchase of machinery. This will not consume food neither does it sulk and throw up the job at the most inopportune moment, nor strike for higher pay. Thanks to the farm machinery, the farmer of today is a man of comparative independence and leisure and is not seriously worried over labor problems.

But the farmer is not the only one who has profited. The agricultural laborer is in a better position today than ever before.

His work is lighter, his day is shorter and his pay is greater than at any former time. Benefits have also been derived by that great class of laborers not directly connected with agriculture. Many of the foods which are today looked upon as the absolute necessities of life were considered luxuries before the introduction of improved farm machinery. Wheaten bread is today one of the staple foods of almost every person in America but a century ago it was found only on the tables of the wealthy, at that time corn meal and potatoes or other vegetables formed the food for the laboring classes.

To conclude—Due to the introduction of improved machinery, agriculture has made more advancement during the last century than during the preceding four thousand years. There is today an automatic labor saving machine for almost every agricultural process. Laborious toil for the tiller of the soil is almost a thing of the past and the term horny-handed tiller of the soil has no real meaning in an up-to-date agricultural community. The importance of the farm machine upon the farm can hardly be over estimated, for under present conditions success or failure in farming operations depends largely upon the careful selection and judicious use of farm machinery.

By H. Ewart Walker.

To one whose privilege it has been to travel from country to country throughout the world, and to notice the various means in vogue for carrying out the ordinary farm operations—from the antiquated to the most modern implements—the vast importance of the farm machine upon the farm must have made a great impression upon him, and have been the cause of many an unconcious comparison being made. In taking up a pen to write upon this subject one feels that it is only possible to touch upon its very verge, and indeed the extent of the theme is almost overwhelming.

In looking around our western lands it is obvious, to a thinking person, the premier place occupied by the agricultural machinery in bringing under control, and in developing, the vast prairies, which at no very long past date practically knew only the Indian and the buffalo. The expressions which escape from the lips of a visitor from the older countries, whether a scientist, editor, or whatever sphere he may represent, upon seeing the implements used by the Canadian farmer, are certainly striking.

As we peruse the history of the farm machine and not its evolution, we find that, to all practical purposes, it is only during the last sixty years that any development has been made. As with most other industries the change from hand to machine methods has been a very gradual process, and the path of development of the farm machine has not always been a smooth one. Various instances might be quoted to show the action taken by the laborers in the old countries, who wished to show their hatred for the various innovations as they were made. Some of their devices were even dangerous to the persons operating the machines. To note one, which while not very serious, yet nevertheless caused considerable trouble one might go back to the early days of the horse mowing and reaping machines in Britain. It was a common occurrence to find iron stakes driven into the ground among the crop, and when the knives struck one of these it meant the machine was put strictly out of business. Much space might be taken up quoting like instances, but we will let this one suffice.

In America, the lack of labor was chiefly the cause of the rapid development and improvements, and the numerous inventions in farm machinery. Because of this deficiency inventors in the States, were induced to turn their attention to the construction of labor saving machinery for the farm. In this, they met with less discouragement, as far as the laborers were concerned, than did the inventors in the old countries. This was owing to the fact that the scarcity of labor was acute enough to remove from the laborers any fears they might have felt as to the loss of position, due to the introduction of machinery, and there is no doubt whatever that the modern farm machine has a place as a labor saving device, and that it fulfils a very important duty in the profession of farming. To endeavor to see the vast importance of the farm machine upon the farm, it is perhaps best to measure it by the influence which it has had upon the farmer and the farm. Though many in number, these influences can all be classed under two divisions or heads, first the economical, and second the technical, and it is in tracing out the relations of the various influences to their respective heads, that one can see, in a general way, why the farm machine is considered to be such an important factor in the farm life.

This is where the Tractor makes good.

The side which most naturally appeals to us, is the economic one, as it is the most evident. If figures were quoted it would be conclusively proven that the farmers in 1899 were one hundred per cent better off than they were in 1849. That is to say, that an advance in the general economic welfare of over one hundred per cent. was made within a period of fifty years. In the world today, the production of food and fibre absorbs about three-quarters of the male workers. In the United States during the early decades of the nineteenth century, about eighty per cent. of the male workers of the nation were employed on the farm. During the past century, however, farm implements and machines have come into use which have so increased the efficiency of labor that about thirty-five per cent. of the male workers, produce the food and fibre of the nation and furnish an enormous surplus which is exported to other countries. If we assume, what is certainly true, that the farmer is to be considered as a manufacturer, not as a miner, and that his profits are a function of his investment, we may safely infer a greatly improved economic condition with the introduction and use of farm machinery.

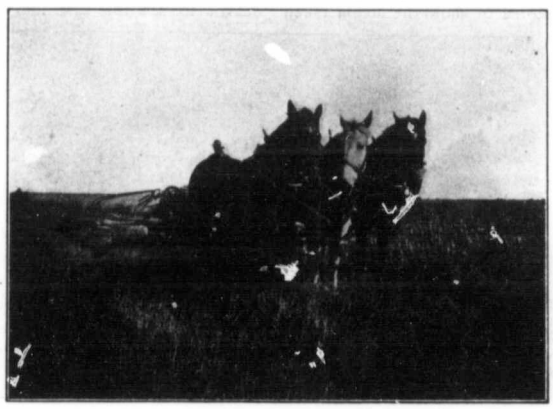
Let us glance, in the first place, at the conditions which existed before the introduction of farm machinery. There were many disadvantages under which the various crops were grown before any extensive use was made of machinery, and the tillage by hand was slow, very laborious and generally speaking of a very imperfect character. The first tillage implements which were of a very crude nature were much less efficient than the hand tools. The first motive power used on the farm was the oxen, and these supplied the necessary power, and as the necessity of fast motion and accuracy was not felt, owing to the simplicity of the implements used, they served their purpose well in the earlier period. The hours of labor under this system were very long and it was a common occurrence for the laborers to work sixteen hours a day in the field. The amount of labor employed was also proportionally large, when compared on a basis of acreage, with the standard of the present day, and it is estimated that it required five times as much hand labor per acre as is now used. For many reasons the quality of the finished produce was of an inferior character, as for instance, it was practically impos-

sible to sow the seed deep enough to get the proper amount of moisture in many seasons, and it took so long to harvest the crop, that quite a considerable amount of it had to be cut long before it had reached the state of maturity. Under this hard system it is easily seen that the conditions under which agriculture was followed were in many respects very detrimental to the financial side.

A great change took place with the introduction of farm machinery, in the strictest application of the term. The slower moving and less accurate oxen were replaced by the farmers' best friend, the horse, and the hours of labor were considerably shortened, and in general the methods of farming became much more accurate. To take a brief consideration of the influence of machinery on the methods of farming, is to just touch upon the edge of a most interesting and instructive study. In the matter of tillage, machinery allowed the soil to be disturbed to a much greater depth and with a greater uniformity; the surface cultivation was carried out at a quicker speed; the sowing of the seed at any depth was made possible, the grain in this manner being able to germinate evenly and give a good crop of a uniform sample, and the seeding was done more expeditiously; and when the crop was ready for harvesting it permitted rapid cutting, and the great gain of time in the threshing of all cereal grains was a considerable boom to the farmer. If we consider the modern threshing machine along with the olden time flail and compare their work, it becomes immediately self-evident that the machinery of the farm is vastly important because it has made possible, among other things, the speedy and very accurate separation of the grain from the chaff and straw. The great demand at the present time for farm labor, is apt to make us forget that only twenty per cent. of the labor used formerly per acre is now required, but one must consider the fact that there is a great increase in the acreage under cultivation.

The cultivation of larger areas has been made possible by the continued introduction of machinery and this has naturally resulted in the production of foodstuffs that it is possible to sell at a much lower price, the cost of production being considerably lower. It is not that foodstuffs have decreased in value, but machinery improvements have prevented, for the most part, their rise to a price at which it would be unprofitable to use them. From this review of the influences of the introduction of farm machinery on the economic side of farm life, it is seen to be very important, for it has been the means of making possible much more economic production, by causing greater speed and accuracy, coupled with greater efficiency.

To also take a very brief glance at the ethical influences of farm machinery, is in many respects as important as to consider the economical side, for though money is very desirable, yet there are many things that go to make the life of the average man that money cannot purchase. Under this head, we find a great change in the status of the agriculturist, and the great advance from the crudest tools to the almost perfect modern implements, has produced a marked effect upon the life of the farmer. He is no longer the brother to the clod he turns, but has a position in the world equal to any other profession, and we find him holding positions of trust and responsibility, and representing us in parliament, a place it will be seen he will occupy to a much larger extent as the years roll by. The farmer is now a man well trained intellectually, and this is absolutely necessary as he now is not so much a laborer as he is a skilled machinist. It is considerably easier to sit on a machine and "watch the wheels go round," than to work all day with bended back at one of the laborious tasks of old, when considered from a physical point of view. This same elevation of position, however, calls into play a much keener mental apparatus for his position now is how to get the best out of the particular machine, not how to get the most out of his own muscles. The modern machines are much easier handled and they have, as already stated, shortened the hours of labor considerably, thus giving the farmer time to plan his business and to think out wisely any necessary improvements to his farm. It is almost impossible to realize how one could successfully run such an intricate concern as a farm, when the farmer had to sow broadcast, cut with the scythe, and spend practically the whole of the winter swinging the flail upon the barn floor.



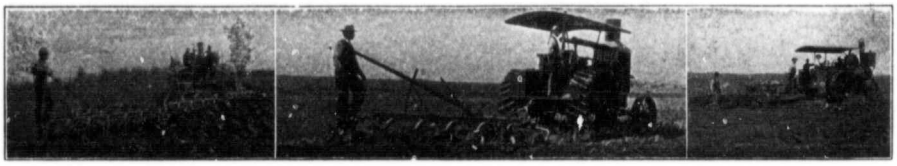
Giving them their wind

The effect upon the hired man is a point upon which most of us have little thoughtful sympathy. Under present conditions the farm laborer is able to demand anywhere between two and five times as much in wages as he did in by gone days. In the countries where hand labor is still employed to a large degree we find low wages being paid and the men are required to work all day from early morning till late at night. The curtailing of the hours of labor and the rise in wages enables the farm laborers of the more progressive countries to take a part in the developing of these countries which would be impossible under the old system.

From what has been said, it is seen that the introduction of machinery has had a tremendous effect upon the life of the farmer and upon the productiveness of his farm. It has increased the social standing of the men, and while demanding a keener knowledge, it has also made possible a means to an education, principally by the time saved, which can be more profitably used, and the increased amount of money gained. Whatever the social conditions of a people may be at any given time, they are largely the product of wealth and intelligence, and by supplying the means whereby it is possible that these may be obtained, the farm machine has been the most important factor on the farm, and it is due, to a very great extent, to the great advancement made along these lines that our western country is making such rapid development, a development unequalled in the history of the world.

By J. Cochrane Smith

Whilst it is fully recognized that the human being is a most complex and wonderful creation, yet there are limitations to human ability and endurance, and some two hundred years ago commerce and commercial enterprises were unable to extend or develop as they would otherwise have done on account of this very limitation. In order to enable production and manufacture to get beyond this point, human labor had to be replaced by something which could do a greater amount of work in the same or less time and keep on doing it for a longer period. To this end machinery of every kind has been invented and in the initial stages of its existence machines were made which replaced one or two individuals, their only advantage being in the fact that they could be run for a longer period without flagging. These were gradually replaced by machines which took the place of greater numbers as they more nearly reached perfection, so that today we have numerous machines which not only do the work of hundreds of people but have even an ad-



vantage over hand labor in the uniformity of their product and the speed with which they turn it out.

Machinery is used in every manufacture in the world today, if even of the least importance, and machines of more or less complex construction are found in every factory, so in the manufacture of the worlds subsistory necessities, in Nature's great factory, the farm we find machines of every size and description, simple and complex, large and small, with functions ranging in number from one to ten, and in diversity from churning to threshing.

Machines were made to save labor and in no profession in the world has the inventive genius saved more labor and permitted humanity to reap more beneficial results than in that of Agriculture. There is a Latin proverb which says "Omne ex ovum" meaning to translate freely, that everything comes from an egg and we might aptly transpose this also freely to read "Omne agricola" or everything comes from the farmer, for such is undoubtedly the case.

Humanity can do without its flounces and furbelows its suites and settees, its books and magazines, its liquors and luxuries, but without its daily bread it not only cannot do, but would cease to exist. And where do the necessities of life come from, though perhaps in a rudimentary form? They come from the farm, and the consequent deduction is that humanity cannot exist without the farmer. This being the case it stands to reason that whatever benefits the farmer, benefits humanity as a whole, and though this point might not seem quite clear, yet if we follow the natural sequence of things we will find that such is the case. If in any particular season Nature is universally bountiful and abundant crops of grain gladden the farmer's heart, the supply of grain in the world will probably exceed the demand, the price will consequently decline and what is the result? If the miller pays less for the grain he charges less for the flour or meal, and if the baker pays less for the flour he charges less for the bread, and bread of one kind or another is the staple nourisher of life all over the universe.

So is humanity benefited, and in the same way might we prove that whatever benefits the farmer is of prime importance to the world at large. Thus whatever economizes and cheapens the cost of production for the farmer, cheapens the cost of living to the individual, whatever increases the quality of the farmers product, places a higher quality of that product on the tables of the world, in short, the farmer and the farm are and ever will be so closely interwoven with not only the natural but the universal fabric that those things which interest the farmer must of necessity be of vital moment to the latter. But this is an old and well-recognized fact, and such being the case it follows, that whatever would tend to reduce the cost of living, would receive the attention of the foremost inventors of every age, men who recognized that in so doing they were not only embodying and immortalizing their genius for all time, but were also filling, in a fuller, truer fashion than the charitable millionaire, the role of the public benefactor and philanthropist.

Effective but slow

It is on this account that the farm machinery of the present day has reached such a uniformly high standard, and that year after year new triumphs of inventive genius are added to the already long list of agricultural machines. It is through them that at the present day our production is increased while its cost is diminished, one labor is economized and its drudgery minimized and through them also that the sunny side of our sphere of life is broadened whilst the restricting influences attendant upon want and discomfort are reduced to zero.

The surface or commercial value of afrm machinery has long been recognized and understood even by the average individual, and whilst this is its initial purpose, yet underneath the surface there lies a value which is too seldom realized and, even when realized, rarely, if ever, to its fullest extent; and that value is educational. Yes—in any and every one of our ordinary farm machines there lies an education deeper than that to be obtained from the average mechanical book or lecture, an education in every sense of the word, mental, moral and physical; mental in the understanding of them, moral in the control of them and physical in the operation of them.

When we remember that the machinery of the farm represents the very life of some of the world's greatest men, their brain power, their genius and their labor; when we pause to consider that at the present time men are spending their lives in inventing and improving it and their time in furthering its cause, we will begin to understand wherein the education of the farm machine lies and also to what depths it may lead us. When we realize that every part of the plow, the binder or the seeder represents the thought and toil of a human being who may have ere now passed to another sphere of labor, we can read in the evolution of the machine the history of the machinist and through him the evolution of the people and the country.

The development of a country does not, as is sometimes thought, depend upon the development of machinery suitable for its conditions, but the development of machinery depends upon the development of the country, for where no necessity, such as increased acreage or scarcity of labor exists, no inventive effort is brought to bear. Thus in the machine may be read the history not only of the mechanical and agricultural, but also of the commercial, the social and in fact the universal status and development.

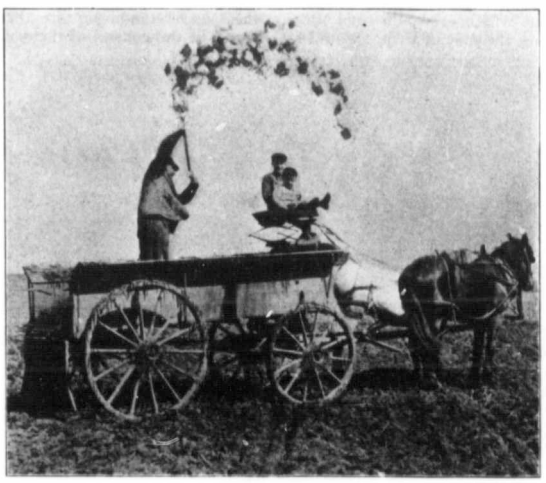
The farm machine as it stands, represents for more than a combination of wheels, cogs, and levers, it represents the labor of many, the saving of much, the economizing of time and money, the advance of commerce and civilization. Take for instance the binder of today, if we trace back its history for the past fifty years we see that its development has been little short of marvellous. Connected with the various parts we find the names of numerous famous men, all of whom have played a greater or lesser part in the development of this machine. The names of Salmon and Bell will go down to posterity as the originators of the cutting-bar and Bell again achieved lasting distinction in the invention of the reel and side-delivery device; Hussey was the first to try the guarded cutting-bar; Palmer and Williams originated the automatic rake and last but not least Spaulding and Appleby immortalized themselves by the production of the sizing, packing and tying mechanism now in vogue. Besides these we have other handy and important details which have been added by a multitude of inventors who cannot all be mentioned.

We study the history of our statesmen, the works of our poets and dramatists, the theories of our scientists but in comparison with the men already mentioned, the doings of these seem but microscopic. When we compare them we find that the actual worth of the work of those men whose names are household words, suffers by comparison with that of the inventors of our farm machinery.

Can it be said with truth that the Premiers of the past have done more for our Dominion than Appleby whose name will go down to posterity as the man who created the knotting apparatus of the self-binder, that Wordsworth has done more for humanity than Stevenson, the inventor of the disc drill; that Shakespeare has been of more benefit to the world than John Deere whose name is inseparably associated with the development of the plow or that Dalton, who propounded the atomic theory, has handed down to future generations anything of as much worth as have the Pitt Brothers, with whom the essential features of the modern separator originated. To the scholar and the scientist such a comparison will doubtless seem odious but, though it cannot be denied that such men as Shakespeare, Wordsworth and Dalton have been of benefit to the world in a certain sense and in a particular sphere, yet when we come down to hard facts we find it is not such as they who have solved the hardest problems or probed deepest into the questions of life. This has been left to the men behind the machine, men who have benefited humanity and helped to bring the solution of the important problem of the economy of human living to its advanced state and accepted in a serious and true sense the greater responsibilities of life. It matters not in what manner they have accomplished this or what particular invention their genius can lay claim to, if they have lowered the cost of the poor man's loaf by one half cent, if they have lightened the drudgery of the laboring class by shortening their working day but one-half hour, their's is a greater, more lasting honor than that of those who have bequeathed to us the song and story, the diatribe or the drama, even though the names of the lesser are household words whilst those of the greater are known to comparatively few; but such is life.

It is a recognized fact that American inventors have surpassed all others in their ability to devise machinery and the reason for this is that these men have been familiar from boyhood, yes—from childhood, with the care and operation of farm machinery. The usual troubles and deficiencies of each machine, the causes of the trouble or inefficient work, all are brought home to them at an early age and on account of the unpleasantness attendant upon improper working, there will always be with the neat worker an endeavor to overcome it by careful operation or failing this by alteration to obviate the trouble or increase the efficiency. Everyone cannot be of a mechanical turn of mind nor can we all be expert mechanics but if we are to farm at all we must needs use farm machinery of some sort or another for it is required in every phase of agriculture, and as in every walk of life we need the rudiments of a commercial education as the alphabet and the three R's, so in agricultural education we need to know the A B C of the farm machine. No one would think of asking a man to write a letter without first knowing the alphabet, and in the same way no one should think of asking a man to run a machine without first knowing the alphabet of its construction and operation. No science is needed to bring about such an education, the boy on the farm can be educated by the parent through careful explanation of the various parts and familiarizing him with their use, then when he goes out to run some particular machine he has some foundation on which to work and some idea of how to right anything that may go wrong.

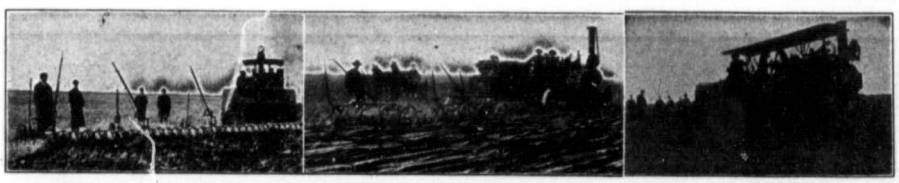
Teach him that there is something in farm machinery beyond the visible component parts, that underneath the combination of these parts and the operation of the whole lies, in the first place, the science of farm mechanics and in the second the science of agriculture. We hold up the arts and sciences of a so-called more refined and in reality more useless nature to the aims and ambitions of the school-boy and student but it is even more necessary, especially in this western country, that we implant in him aims and aspirations which call into requisition the aforementioned sciences. For, like law and medicine, theology and literature, for mechanics has a place in the world of study and the first session of this study is to be found in the farm machine on the farm. Surely if it is necessary that we have a certain educational standing before entering upon any of the commoner professions, then it is necessary that before entering upon agriculture we should have an educational standing in the study of the farm machine and for it we do not have to go to school or college to book or bulletin, these are for the more advanced stages of life and the more advanced specialists in the work, but to the average individual be he man or boy, careful intelligent study of the farm machine on its home, the farm will reveal that in it there lies a greater store of knowledge of fuller education than ever was dreamt of, that in it is embodied the thought of experienced men, the outcome of the work of many lives and also that within it there yet lies room for improvement which can only be accomplished by a combination of genius and careful study. The majority of the men interested in the farm machinery of our western country and who represent the most famous lines of farm machinery in the world, did not reach their present position through book or college. The school they attended was the school of experience and their college, individual study and observation, their books, chronicles of hard work. They are, for the most part past masters in the operation of farm machinery, men who were once boys on the farm in the same position and with less favorable opportunities than thousands of the young men of the present day, and yet the positions they now hold, the power they now wield in the West, and that is increasing year by year, is solely due to a careful and intelligent study of that most interesting of utilities, the farm machine on the farm. Rank upon rank there stands behind farm machinery, men of every nation from the inventor to the factory hand, the creator to the producer, bonded in a common brotherhood with one aim, one motto—the advancement of the farm machine and attendant upon this the minimizing of labor, the increase of production at a cost reduction, in short a universal improvement, in the fullest, truest sense of the word, through the medium of the farm machine.



Slow and out-of-date.

By J. H. B.

We must discuss this subject from economical and social standpoints, namely the importance in the saving of time and energy and in the social development of rural life. The latter

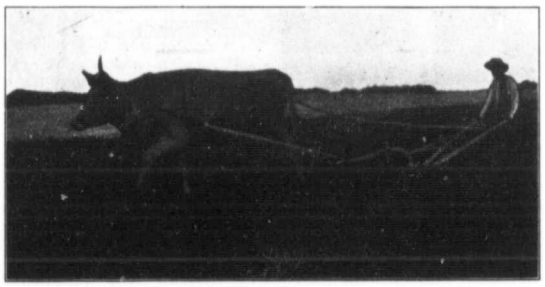


is the real point at issue. The importance of the farm machine can be measured only by the influence it exerts upon the social development of the people engaged in agricultural pursuits. It is a case of cause and effect, and from a clear understanding of the subject we shall note first, the economic importance of the farm machine, generally and specifically, and secondly the effect socially on the farming people.

A farm is a definite portion of land more or less under cultivation and owned or managed from one centre. Any machine that economize labor on or about the farm is a farm machine. The importance of the farm machine really cannot be estimated, because without some form of machinery no farm work has ever been done; for in so far as we may call a walking plow a machine so far also may we so speak of the hoe and the spade. Thus as fifty years ago the average farmer worked out his destiny with the aid of the hoe, the spade, brush drag, cradle and the flail, the modern farmer calls into use his fourteen inch gang plow, his twenty-six foot harrow, ten foot drill, eight foot binder and his 32-60 separator. Consequently the expenditure in time and energy required to produce a bushel of grain fifty years ago was vastly greater than is required today.

In 1855 it took 4 hours and thirty-four minutes to produce one bushel of corn and three hours, three minutes to produce one bushel of wheat, while today these are produced in forty-one minutes and ten minutes respectively. This wonderful reduction in time and energy represents the life work of such men as Deere, Verity, McCormick, Deering, Scot, Rumely, Sawyer, etc., men who put their whole life's energy into designing machinery that would do the farm work better and cheaper than the farmer himself could do it. Besides the above mentioned men, hundreds of others have been working along other lines of agricultural machinery, in fact the market today is flooded with farm implements designed for every conceivable purpose.

Because of this the problem of buying machinery for the farm may well command the serious attention of every farmer. It is a lamentable fact, however, that many farmers give little thought to the real importance or value of the machine. Some buy a machine, regardless of cost or conditions, simply because the agent confidently assures them it will pay for itself, while others again do without machines that would save them ten, twenty, and sometimes fifty per cent. on the investment. Too many farmers do not rightly connect the amount invested in a machine with the amount of work it will do for them. The farmer must needs be a strict business man buying his implements from an economical standpoint, for every implement will pay for itself provided the investor has sufficient work for it. But to attempt to farm one thousand acres of land using only walking plows would be about as poor economy as to buy a gasoline tractor to plow the potato patch. When investing in machinery one must take into consideration several things: first, the initial outlay, average life of the machine and interest on amount invested; secondly, the cost of operation, repairs and annual depreciation; and lastly, the amount of work he has for it to do. To offset this must be placed the value of the time and labor saved, and the extra quality and quantity of the product.



The Aboriginee

However, with the economic value of each machine we will treat later and for the present time our attention to the importance of care and handling of machinery as a whole.

Though machinery has made this western country what it is, and has placed the farmers on the way to prosperity yet more money is annually lost through this same channel than in any other way. On the average farm there is about $1,000 invested in machienry. This, with the usual care and handling, lack of cover while idle, will have become useless at the end of five years, necessitating a new outfit. At the end of ten years with interest at six per cent., the total investment is $2,905. If the first outfit had been kept under cover when not in use, kept in repair and carefully handled in season and out it would have lasted ten years. A shed to hold this can be built for $200, thus total investment is $1,200 and amounts to $1,954 at end of ten years. This gives a saving of $950 in ten years simply by better care of machines. Besides this the shed is still good for five or ten years.

By careful handling the life of the machine is doubled. This is worth looking into, especially today when the expenses are so near the total receipts, nearer than they have been for many years. Every article for the farm outside of machinery has advanced in price as much as 15 per cent. and even 75 per cent. during the last ten years. Machinery is practically the same price as it was twenty years ago in spite of the fact that raw material has increased so greatly. Pig iron costs 140 per cent. more than it did in 1896, copper 180 per cent. more while lumber, coke and castings have advanced, 80 per cent., 56 per cent. and 37 per cent. respectively. The manufacturers have maintained an even price, by better methods of manufacture, better system, lesser profit and larger sales, but these can do no more, and the manufacturers are contemplating an advance of 10 and 15 per cent. in the sale price of their stock. This, of course, the farmer must pay, and he must make up for it by getting more out of his machine and exercising greater care and judgment when investing in machines.

Machinery plays such a large part in the farm work that it seems hard to say which one implement is most important yet if we look down the line of machinery we cannot help but see that the plow is king of Agriculture. Without that exact mathematical curve of the mouldboard the plow would not be worth one quarter what it is today. That turn which causes the complete inversion of the furrow slice and each compound soil granule to be broken into finer particles, giving that texture to the soil so desirable for plant growth for conservation of moisture and for the formation of plant food. No other machine can do the work of the plow, but the question before the farmer is what plow will do the work best. The essential features of the plow are draught, economy and efficiency. From a knowledge of his soil the farmer will know whether great or less pulverization is required. The bolder the mouldboard the greater pulverization, as the furrow is inverted. As to the economical side of the question the following figures will be suggestive:

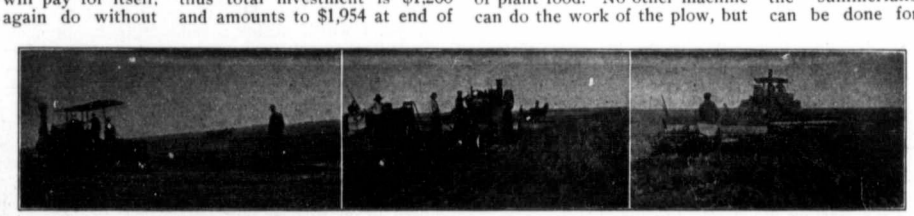
With walking plow. One man, one day, $2; two horses one day, $2. Total $4. Plows 2½ acres at cost of $1.60 per acre.

With gang plow. One man one day, $2; four horses one day, $4. Total $6. Plows five acres at a cost of $1.20 per acre.

The former represents an investment of about $530 or interest of $30 per year, while the latter totals to nearly $1,100 and a yearly interest of over $60, but does the work at 40 cents per acre less than can be done with the former.

The third feature is the draught of the plow. Many experiments have shown the draught of the plow in sandy loam to be about 5.5 pound per square inch of cut that is a cross section of a furrow slice 4 inches deep and 12 inches wide gives a surface of 48 square inches or a draught of 48x5.5=264 pounds, and as a horse is supposed to pull 1/10 of his weight for 10 hours, this would be the day's work of two horses each weighing 1320 pounds. In heavy clay loam the draught is 9.72 pounds per square inch, or using the above example, a total draught of 466 pounds. It can be seen then that the intending purchaser must take into account the nature of his soil, the kind of tillage required and the amount of horse power at his disposal. Of the other implements of tillage the most important are the drag harrow, disk harrow, the soil packer and the drill.

The drag harrow is the oldest of implements, but only during recent years has it been allowed to take its real postion in relation to other implements, and as a means of conserving soil moisture. The harrow is at work throughout the season after every plowing, it smooths and fines the surface soil, preventing too rapid evaporation of soil water. When the crops are coming along during the spring, frequent harrowing till the grain is several inches high, destroys weeds and saves the soil water. Harrowing is the cheapest way of keeping down the weeds of the summerfallow, harrowing can be done for one-third the



cost of disk harrowing and one-twelfth the cost of plowing.

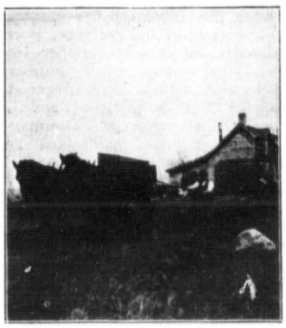
The work of the disc harrow is very similar to that of the drag harrow, but is more severe and will work where the drag harrow would not touch at all. For working up the surface of the stubble field in spring or fall, or for finding the surface of new soils, the disc harrow is unexcelled. The average cost of discing is about 35 cents per acre, and seems to come in about half way between the harrow and the plow in usefulness where the soil does not really need plowing but the surface is too compact to be worked with the harrow, there is the work for the disc harrow.

The next implement of importance in preparing the seed bed is the soil packer. As the plow leaves the furrow slice open and loose, out of contact with the under soil, there is danger of much loss from the soil of moisture, this defect is remedied by going over with the packer which compacts the soil and puts the furrow slice back into contact with the under soil.

The proper use of the drag harrow, the disc harrow and the subsurface packer means very much to the year's crop; indeed the Campbell system of dry farming means nothing more nor less than the intelligent use of these three implements. Innumerable instances are on record where fields treated according to the Campbell system have yielded forty and forty-five bushels of wheat to the acre while fields just across the road given ordinary treatment have yielded only eight and ten bushel per acre. The only difference being the proper use of the farm machine on one hand and improper, or last of, use on the other hand. The Campbell system is very little more than giving the soil the right tillage at the right time to best conserve soil moisture.

It would pay many farmers to buy an extra four horse team and hire an extra man so that the fields might be disked early in the spring and prevent the formation of the crust that aids so materially in the loss of soil moisture, to give the fields a few extra strokes of the harrow, harrow the grain till it is several inches high an extra stroke of the harrow on the summerfallow, and keep a disc in the wake of the binder all harvest time. The average yearly investment would be about $400. It is not going too far to say that the fields so treated would yield 8 bushels per acre more every year. Two hundred acres of wheat at this rate would give an increased revenue of $1,000. It is not impossible. The average yield of wheat for Manitoba is about 19 bushels. It should be double that and better cultivation for conservation of moisture will do more to accomplish that than any other two things.

One other implement that has much to do with the starting of our grain crops is the grain drill, a machine that has gone far towards furthering agricultural interest. The purpose of the drill is to place the grain into the soil at a proper and uniform depth. Its work is not to pulverize as some seem to think but to put the seed, where it has the best possible environment for quick, strong germination, giving the young plant every possible advantage. This same unhandicapped beginning often means the difference of a grade or two in the fall, when a few days save the crop from injury by frost. The importance



The First Furrow

of the drill can be seen by comparing its work to the work of the cyclone or broadcast seeder. In the latter method much grain is lost altogether and a very uneven germination results, due to uneven covering of the seed.

Nothing can be done to the crop after it is several inches high but the yield is influenced to the extent of at least 80 per cent. by proper use of the drill, packer, harrow and plow, and such use would relieve many of the present day farmers of much of their worry and fretting between seed time and harvest.

Between seed time and harvest comes the haying season in which modern machinery plays an all important part with the five foot mower, the ten foot rake, the swing and the hoist, a few men can handle many tons of hay in a day. What a man and team can mow in a day of the average prairie meadow three men and two teams can stack in the same time. Because of this, men are enabled to cut the hay in large quantities when it is just at the right degree of maturity, and stack it when it has cured to perfection. A man can mow about 15 acres of hayland in a day and this will yield about 20 tons. Three men and two teams can stack it in a day giving a total cost of $15 or at a rate of .75 cents per ton.

Where this hay is too distance from market to be hauled by the load it can be shipped in carload lots by baleing. The hay press was designed for this purpose and puts the hay up into 100 pound bales at a cost of $2 per ton. This can be readily handled and shipped any distance at a very low initial cost.

Other implements deserving mention in connection with haying time, are the side-delivery rake, hay tedder, hay loader and hay strings. In caring for brome grass and alfalfa it is always well to go over the swath with the hay tedder shortly after the mower, shaking it out thoroughly and permitting quick and even curing. The side delivery rake leaves the hay in long even rolls that are very readily picked up by the hay loader and piled on the wagon. A load is picked up in a short time and the hay slings or hay fork very soon lifts the load off the wagon and drops it into the hay loft.

All the work of the haying season is completed with one-twentieth the labor and in much less time than formally. Furthermore it would be impossible to supply the amount of hay required today by the great cities were there no machines. Such then is the importance of haying machinery in supplying at a reasonable cost, and in good quality and condition an article very much needed at the centres of population.

We come now to consider the self binder, and as we called the plow king we may on the same grounds crown the self-binder as queen of agriculture. In olden times the production of grain was limited due to the fact that one man could not harvest in the fall season as large an area as he could sow in one day in the spring. Hence with the invention of a machine that would handle as much grain in the harvest time as could be sown in the spring season began real agricultural development, all other inventions have come in the wake of the self-binder. Man found a broader field of operation and as each year rolled by more acres of crop called for more comprehensive machinery.

A Positive Waste of Time

The binder represents an investment of $175. For binders receiving no shelter during the idle season and ordinary usage when at work, the average life is five years. Two binders in ten years which makes a total investment of $550, or a yearly investment of $55. If the binder is properly housed and cared for an average yearly investment of its life is doubled and we have only $25. Many do not seem to realize that rushing the harvest at the expense of binder is poor economy, for the extra time required to oil all over four times a day instead of twice, to keep all nuts and bolts light and repair immediately any damaged part, is very little, practically nothing. This extra care and a shed during the idle season will save over $30 annually on this implement alone, to say nothing of the satisfaction of having a machine that is always in good running order.

Before the harvest is fairly over the threshing machine is brought out. It is very different to the one used by our grandfathers. By the old way it cost about 20 cents per bushel to thresh wheat while the machines today do it at about 7 cents. Today it is possible for nearly every farmer to have his crop threshed out before severe winter weather sets in, and gives the farmer time to prepare much of his land for the next season's crop. The aim of every farmer is to get his crop threshed as soon as possible for several reasons. Because early threshing yields better grades, enables him to get more of his land ready for next season, helps him in his fight against the spread of noxious weeds. Because of all this many farmers have bought machines of their own. In many cases this was the wise thing to do, in too many others it meant the loss of the farm. It is the same old story, the failure to connect the cost of the machine with what it would do for them.

An outfit of the average size represents an outlay of about $3,000. The life of the machine receiving good care is about 10 years, $3,000 at 6 per cent. for 10 years totals to $5,388 or an average yearly investment of $538. The repairs, etc., bring this to $600 per year. Thus before a farmer invests in an outfit he should have enough work for it so that he could save the equivalent of $600 every year. If he has each year seven or eight thousand bushels of wheat, then it would pay him to invest in an outfit. But taking into consideration the superior quality of grain he would have by being threshed early in the season, being able to do more work on his land, and be in far better position to stamp out noxious weeds, he could probably afford to buy an outfit if he only threshed each year for himself five or six thousand bushels. It is a difficult problem to solve but one should not fail to take into consideration the actual cost when thinking of the many advantages.

The implements so far mentioned are those of fundamental importance. The plow and the binder are the nuclous of agricultural development, the others help to round out and complete the process giving us the West as we have it today its freedom, its wealth and its ideals.

But on every farm should be found a few other implements that are real money savers and real labor savers. Namely, the cream separator, the gasoline engines and manure spreader.

Continued on page 63.

BEST FOR STUBBLE AS WELL AS BREAKING

On hundreds of farms in every Western Province our plows proved themselves ideal for stubble work, being strong, yet light in draft, costing our customers much less for repairs, and the quality of the plowing has had no equal in all Canada. The "suck" of the bottoms can be adjusted to a hair's breadth by using the set screw on the top of each standard. This is very useful and important when the land varies in hardness. Cockshutt Engine Gangs have been purchased by the Dominion Experimental Farms both at Brandon and Lethbridge, where they are doing perfect work in stubble.

More Cockshutt Engine Gangs sold in Western Canada this season than any other make

COCKSHUTT
ENGINE GANG

Our stubble shares are heavier than those of any other manufacturer. Our stubble standards are so shaped as to form an arch with the straight beams, so that when the land is trashy, there is always good clearance. The gauge wheels, which run directly in front of and protect each bottom, are of large diameter and wide tire and are made solid in the centre to prevent clogging. The gauge wheels are also fitted with scrapers.

These gauge wheels can be raised or lowered to suit the different height of the stubble and breaker standards, or can be transferred forward to make room for swivel rolling colters—adjustments which will be found very advantageous.

More Cockshutt Engine Gangs in use in Western Canada than all other makes combined

Under all varying conditions in stubble plowing, you can depend upon the Cockshutt Engine Gang turning furrows of uniform depth and width, leaving the land level and the straw well covered. If you would like to have more direct evidence about the superiority of the Cockshutt Engine Gang, write us for our new book "Horseless Plowing," showing a large number of splendid illustrations of our plows in use in stubble on different farms throughout the West and some of the most convincing letters written by farmers who have bought ours after having had experience with other makes of Engine Gangs.

COCKSHUTT PLOW COMPANY LIMITED WINNIPEG

BRANDON REGINA SASKATOON CALGARY EDMONTON

OCT.

The Canadian Thresherman and Farmer

CANADA'S FARM MACHINERY MAGAZINE

PUBLISHED MONTHLY BY
E. H. HEATH COMPANY
LIMITED
WINNIPEG - CANADA

Members Western Canada Press Association

Authorized by the Postmaster General, Ottawa, Canada, for transmission as Second Class Matter.

E. H. HEATH
PRESIDENT AND MANAGER

E. W. HAMILTON
SECRETARY

F. C. BRAY
TREASURER

"Everything begins and ends with the soil."

1910

THIS IS THE MOST IMPORTANT PAGE IN THIS ISSUE OF THIS MAGAZINE. READ IT CAREFULLY

OUR GUARANTEE

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

ON another page of this issue will be found the announcement of our Big Prize Contest for 1910 and 1911.

During the past two years we have put on guessing contests for the benefit of our subscribers, but never before have we thrown open to the farming public of Western Canada anything like the contest that we are putting on this year.

At the head stands a beautiful automobile. We believe away down deep in practically every farmer's heart in Western Canada, there is a longing and a desire to own an automobile. To a great many the cost of such a machine seems exceptionally large. A thousand, twelve hundred, or fifteen hundred dollars invested in what is at first sight a luxury, does not always coincide with the average farmer's idea of economy, and consequently the matter is passed up to be taken up again at some future time when the farmer feels that he has money enough and to spare.

The automobile is rapidly becoming more than a luxury. It is fast getting to that point where the farmer can buy one and use it with more than profit to himself. He can make its cost out of the service that it renders him and the comfort that it affords is all to the good. In other words, he can take his profit out in the good times that he and his family will enjoy with such a machine.

This is one reason why we have chosen an automobile to head our guessing contest and when you consider the fact that it only costs one dollar to take a chance on this, it is certainly a rosy proposition, letting alone the fact that you get The Canadian Thresherman and Farmer for one year, which in itself is worth five dollars.

But this is not all. In the course of a few weeks, or by the time the contest opens, November first, 1910, we will have received from our press a reward booklet that will contain in the neighborhood of one hundred premiums any of which can be secured at the cost of only a few hours' work on your part and a great many of them can be secured with one year's subscription to the Canadian Thresherman and Farmer, be it new or renewal. These rewards are given in addition to the estimates.

We have secured from the Dominion Grain Inspector's Office 12 lbs. of No. 2 Northern Wheat. This 12 lbs. of wheat has been weighed as carefully as the scales in the office of the Dominion Weights and Measures can weigh it, and placed in a bottle. The officials in charge of the Dominion Weights and Measures Office have sealed this bottle of wheat and at the same time have certified to its weight. The bottle has been deposited in a vault with the National Trust Company and it will remain there until the 30th of June 1911.

Anyone who subscribes to The Canadian Thresherman and Farmer between the 1st of November 1910 and the 30th of June 1911 will be entitled to a guess on the number of kernels in the above mentioned 12 lbs. of wheat and the one who guesses nearest to it first will be the lucky winner of a beautiful twelve hundred dollar automobile.

We do not see how we can do any more for you. We want ten thousand new readers for The Canadian Thresherman and Farmer in 1911 and we want everyone of our old ones to come back. If we could see you and talk the matter over with you in a personal way, we believe that we could convince you that it was to your advantage and profit to subscribe for our magazine regardless of any premiums that we may offer and since we cannot do this we are putting forth these extra inducements, so that you will make it your business to get into line, and while it is not absolutely necessary that you subscribe immediately, nevertheless there is no getting away from the fact that your chances are increases by doing so.

The gentleman who won the Avery farm tractor that we gave away in our 1909 and 1910 contest subscribed on the 14th of February, and although there were a great many guesses in before his, he happened to be the one who came the nearest to it first.

Those of our readers who have followed the contest in the past two years should be able to form a pretty accurate guess and even though your subscription is paid up for sometime in advance it would not be bad policy for you to get into line right away for this automobile, and you can have your subscription extended from the time that it expires.

SUBSCRIPTION RATES

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

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

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

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

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

Advertising rates furnished on application.

We would like to have each and every one of our readers send for a copy of our reward book, as you can secure a number of valuable premiums at no cost to you and with very little work. These premiums are not the cheap kind as are ordinarily given away with newspaper subscriptions, but are all staple goods carefully selected from the stock of some of the best stores in Winnipeg. By buying them in large quantities we are enabled to arrange the prices so that they should be very satisfactory to our subscribers. We do not want to sell any of these goods. We want to give them to you and we know that after you have seen our offers that you will be very favorably impressed.

There may be a feeling among some of our readers that these guessing contests are not absolutely on the square and if such an impression has found a place in the minds of any of our readers, we wish to take this occasion to correct it. Everything possible is done to protect the number of kernels in the bottle of wheat that we have selected. Absolutely no one knows or will know until after this wheat is counted by a competent board of judges what the number of kernels will be. Every guess as it comes in is carefully recorded in a guess book and before any award is made, each and every guess is carefully checked with the original subscription, so that there can be no possibility of a mistake.

We are practically the only publication in Western Canada that discontinues our subscriptions when they expire.

The man who subscribes can feel absolutely sure in his own mind that if at the time his subscription expires he does not want our publication it will not be forced upon him.

As a last thought we would urge upon you not to let your subscription expire. We dislike very much to drop any of our old readers, but under the policy that we have assumed, it is necessary for us to drop those who do not renew.

HERE'S THE ENGINE THAT DOES IT—

PULLS THE LOAD
DOES THE WORK WELL
SAVES YOU MONEY
AND —
DONT BREAK DOWN

STRASBURG LAND & DEVELOPMENT COMPANY

CHICAGO OFFICE
1400 MARQUETTE BUILDING

E. M. KIDDER, SEC. AND GEN. MGR.

Strasburg, Colorado, July 30, 1910.

Mr. T. L. Parke,
Mgr. The M. Rumely Engine & Thresher Co.,
Denver, Colo.

Dear Sir.

The 30 H. P. Rumely Steam Plowing Engine we purchased of your Company last Spring (1910) has given us good satisfaction. We used in connection with your engine the John Deere Co. 10 gang 14" bottoms; O. P. Mould Plows; a 12 ft. Corrugated Roller and a 16 ft. Harrow.

We did not begin plowing till after the 20th of April and all our ground was first breaking of Buffalo grass sod. We plowed 40 days and broke about 950 acres, an average of about 23-1/2 acres a day. The average depth of plowing was from 4-1/2" to 5" and we packed soil with Corrugated Roller and Harrowed same at time of plowing, by attaching Roller and Harrow behind the Engine, which left ground in excellent condition to consume the moisture.

We kept a daily card record of the work showing the time of starting and stopping. Hours worked and lost and cause of lost time; number of acres plowed; number of pounds of coal used and kind; number tanks of water used; oil, repairs and help and the cost of each. An average cost per acre for the season for plowing, packing and harrowing was $1.16

The season has been decidedly against us as a drouth set in about the 1st of June, which permitted no plowing later.

Profiting by experience we have had this year, we believe we can another season easily average 30 acres a day at a cost below $1.00 an acre.

We heartily endorse the Rumely Steam Plow Engine for plowing purposes and appreciate the fair treatment we have received from your Company.

Yours very truly,

E. M. Kidder, Gen'l Mgr.
Strasburg L & D Co.

WARRANTY

WE guarantee against breakage, for a period of one year following date of purchase, all gearing and shafting, including ***Crankshaft,*** on our plowing engines.

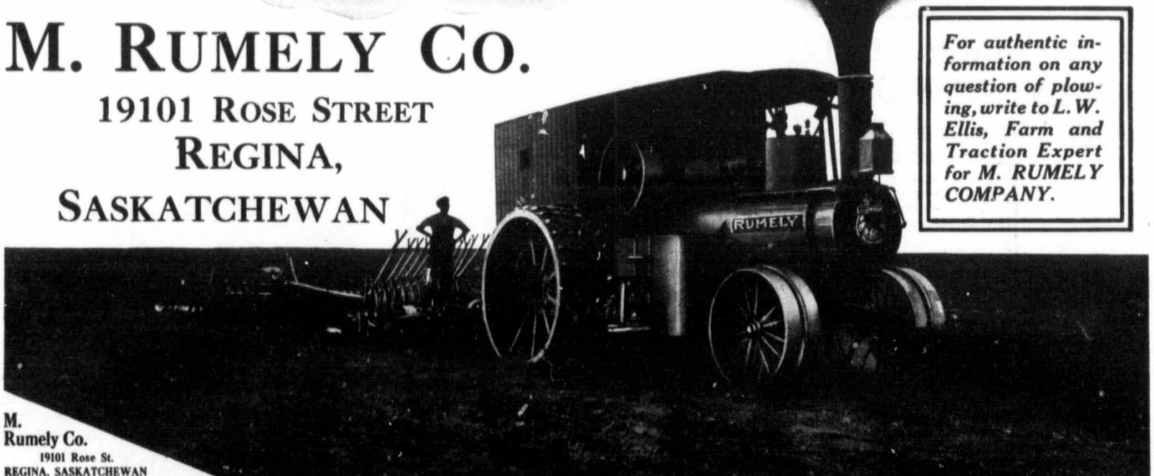
We guarantee to replace, free of charge, at the factory for the United States, at Regina for Canada, any gearing or shafting, including the ***Crankshaft,*** broken during the usual use of the engine, on receipt of broken parts during period named.

M. RUMELY CO.

M. RUMELY CO.

19101 ROSE STREET
REGINA,
SASKATCHEWAN

For authentic information on any question of plowing, write to L. W. Ellis, Farm and Traction Expert for M. RUMELY COMPANY.



M.
Rumely Co.
19101 Rose St.
REGINA, SASKATCHEWAN

Please send me your Steam Plowing Engine catalog.

Name____________________

Town____________________

County__________ State__________

I own__________ acres in__________

Will you do custom plowing? ____________________

GASOLINE TRACTION ENGINES
A DEPARTMENT FOR THE USER

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

The Modern Farm Horse and Its Importance as a Machine on the Farm

By O. E. Qually.

In the present era of advanced agriculture when the supply of horses is so far below the demand, and these one-time necessary adjuncts to the average farm, are consequnetly selling at enormous prices and other forms of power are reaching such a state of perfection, that they equal and often excel the horse in usefulness and economy, farmers naturally turn their attention to some form of motive power which will efficiently fill its place. Steam was the first appliance utilized to carry out work which had hitherto been done by the horse. The change from steam to gasoline has been gradual owing to the imperfections of the latter; but as they have been improved and enlarged, we now see that gasoline engines are equal in every case and often superior to the steam. We find that the steam has never become practical enough to entirely replace the horse power and other forms of power owing to many inconveniences. The steam engine to run successfully must have the best of fuel and water and with the ever increasing cost of good coal and the comparative difficulties in securing at all times a plentiful supply of good water, which elements constitute a series of drawbacks to its more extended use.

Very few now think of using steam or horse power for wood sawing, elevator work, or crushing and besides these there are other places where the gasoline engine is used extensively such as, in the operation of cream separators and other machinery where low power is required and steam or horse power would be unpractical. The gasoline engines ten years ago as compared with the gasoline engines of today might be spoken of as only being in their infancy. The world at large realizes this, but it is only in the last year or two that the farmer has awakened to the fact that the gasoline engine is a most powerful and economical laborer. The gasoline engine has not yet attained the superiority over steam that steam has attained over the old horse power, nor will there ever be such a difference between them; but where fuel or water is scarce, gas engines are preferable, and even with normal conditions the gasoline engines have proven that they can plow and do other work more economically than that run by steam. Gas engines will never replace horses entirely, but they will take the place of a large number. For instance, where a farmer has four hundred and eighty acres of land to cultivate, instead of keeping sixteen to eighteen horses for the purpose he could do with half that number provided he had a gas engine tractor.

There were many changes to be made in steam engines and equipment before they became practical for farm use. The gears and material had to be changed considerably in many before they were strong enough to stand the strains they were subjected to, and the plows also had to be improved and it is only recently that plows have been made which are entirely satisfactory for engine use. The gas engine makers have profited by this experience and so have perfected their engines more rapidly. Of the many different makers of engines on the market at the present time there are only the two different types namely the "Two Cycle" and the "Four Cycle." The "Four Cycle" has proved itself the more economical in fuel consumption and has a greater variety of speed although heavier in weight has been the one most in use. In the past, engines have been sold which were apparently constructed in a manner entirely adequate to meet all demands put upon them, but these when subjected to severe and sudden strains have generally been found to be deficient in some respects. At the present date there are many makers of engines on the market that have proven to the farmer that they are money and labor savors and as such should be acquired. To make a success of any thing a person must understand the article he intends making a success with, and so with a gas engine, a person must understand every part of the mechanism and not lay the blame on the engine when it will not start or run properly. The gasoline engine is only an ordinary machine and if the respective parts are not properly performing their functions, like every other machine, it will not work properly, or to its full capacity or it may not even work at all as is too often the case. Some think that the necessary education to successfully operate a gasoline engine is of high order and cannot easily be obtained. This is not the case but a person should make a study of every part of the engine. The seven most important points to be considered in a gasoline engine are:— 1. Amount of gasoline. 2. Quality of gasoline. 3. Compression and time of ignition. 4. Time of exhaust part opening. 5. Lubrication of engine. 6. The fit of the bearings. 7. The cooling system. A steam engineer would think a man light in the head if he were to try to start an engine on an empty boiler or try to work the engine to full capacity with valves set wrong or with imperfect lubrication. This may seem strange as a comparison with gasoline engines; but companies will tell you that their experts are called upon every day to fix an engine when the only trouble may be that there is no gasoline, or the gasoline pump is not working, wrong time of ignition or no ignition at all, etc., when a person has a thorough knowledge of all the working parts of the engine, the delays will be few and of short duration. Only the best gas engine cylinder oil should be used, not machine or steam engine cylinder oil because steam engine cylinder oil costs more than the other, is it a sign that it is better for the opposite is true. The waste products of the steam engine cylinder oil are taken away by the exhaust steam, but in the gasoline engine this is impossible so an oil that will not carbonize under high temperatures is required and the gas engine cylinder oil is made specially for that purpose. If too much oil is used the same thing will happen as if you were to use machine or steam engine cylinder oil viz.

Continuerd on page 22

HOW MANY TIMES AN EVENING DO YOU HAVE TO DO THIS?

When reading in an evening, you, quite likely, have noticed that to obtain a good, bright light, with no odor, soot nor smoke, from a kerosene lamp, it becomes necessary to frequently adjust the wick by turning the thumb wheel. When doing this, you are merely regulating the

Fuel and Air Supply

to suit the conditions that affect combustion. The same is true when burning kerosene in an engine. However, the changes in loads, atmosphere and temperature are so frequent and the changes so great that the human hand is not quick enough nor deft enough to properly regulate the fuel supply.

The Only Oil Burning Engine RUMELY OILPULL TRACTOR *in the Great Motor Contest*

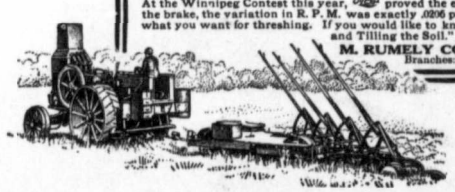
embodies the only known method by which positive, efficient, *automatic* regulation can be secured. This is through the principles that are embodied in the Secor system of oil combustion.

Automatic Regulation

OILPULL is the only engine on the market that will automatically control, not only the intake of oil, but regulate the quantity and proportion of water and air in accordance with the needs of the engine—*that proportions every explosion to meet the new need.*

At the Winnipeg Contest this year, OILPULL proved the efficiency of its fuel supply regulation. On the brake, the variation in R. P. M. was exactly .0206 per cent. Steady, even power—that's just what you want for threshing. If you would like to know more about OILPULL write for "Toiling and Tilling the Soil."

M. RUMELY CO., 19106 Rose Street, Regina, Sask.
Branches: Winnipeg, Calgary, Saskatoon



M. Rumely Co. 19106 Rose St. Regina, Sask.

Please send me a copy of "Toiling and Tilling the Soil."

Name _____
Town _____
County _____ State _____
I own _____ acres of land
I plow _____ acres of land
I own _____ Engine
I own _____ horse

THESE CERTIFICATES SIGNIFY SUPERIORITY

At the Agricultural Motor Competition at Winnipeg, an effort was made by disinterested parties to settle definitely which of the various tractors now on the market was best suited for the use of farmers. The basis upon which the matter was decided was, Which can give the most service for the least money?

The two fundamental tests for determining this are:

1st. The brake test, which shows how much power can be delivered at the wheel for threshing, grinding, etc.

2nd. The draw-bar test, which shows the pulling power available for hauling and plowing.

The first test showed that the 15, 20, and 45-horse power International tractors averaged 10.86-horse power hours per gallon of fuel. The other nine competing motors averaged only 7.61-horse power hours on the same tests.

The second test showed that the three International tractors in the plowing contest averaged 73.9 per cent of their brake horse power at the draw-bar. The six other motors which managed to finish the contest delivered an average of only 56.2 per cent. This means an average of 31.5 per cent greater efficiency at the draw-bar for the International as compared with the average of competing tractors.

Analyzed to dollars and cents: The 45-horse power International gasoline tractor plowed 2.54 acres per hour, using only 2.11 gallons per acre to pull ten 14-inch plows.

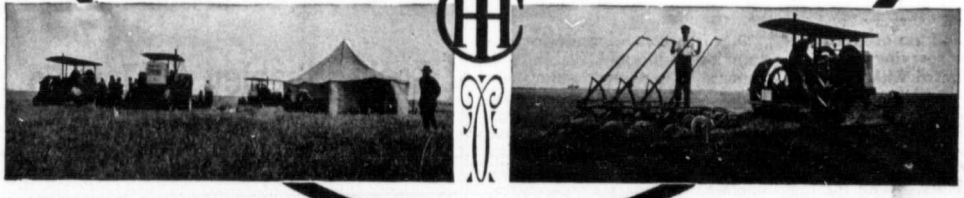
We can furnish duplicates of these prize winning tractors. Ask the I H C local dealer.

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

INTERNATIONAL HARVESTER COMPANY OF AMERICA

(INCORPORATED)

CHICAGO U S A



Course in Gas Engineering

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

Carburation and Carbureters.

As all of the internal combustion engines with which the farmer has to deal use liquid hydrocarbon and as the internal combustion fuel must be in the nature of a gas before it can be utilized in the engine, it is plain to be seen that it will necessitate an apparatus whereby the gas can be manufactured from the liquid fuel as required by the engine. The most convenient form of gas for engines is that which is made by carbureting.

One of the great steps in the development of the modern internal combustion engine has been the design of satisfactory apparatus to carburet air just before it enters the combustion chamber. The idea of carburation is not a new one, but the improvement in the forms which have been produced for the purpose has drawn a distinct line between the early and the more modern forms. In fact it is not too much to say that the successful work of the automobile engine and of all other engines of the same class is principally dependent upon the certainty, reliability, and satisfactory working of the carburating device.

The carburating apparatus will serve to saturate atmospheric air with any liquid hydrocarbon.

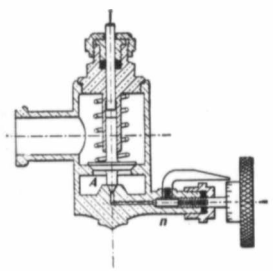


Fig. 6.

There will, therefore, be carbureters for gasoline, for kerosene and for alcohol, divided only as required by the varying characteristics of the liquid. In general the process of carburation is to saturate the atmospheric air with the liquid fuel in a finely divided or atomized state like a mist. This general principle of atomization has long been used in medicine and surgery and is familiar in the form of the apparatus used in spraying perfumes. The air saturated with a mist of hydocarbon will subsequently undergo a further mixture with an additional supply of air such as may be required for its full and complete combustion in the working cylinder. With the less volatile hydrocarbons the process of carburating the air cannot be satisfactorily carried on at the ordinary temperatures of the external air. The carbureter for such liquids will have both the principle of atomization and the subsequent vaporization by heat. When the engine is working, the vaporization can be effected by waste heat from the hot exhaust-gas. In starting the motor, however, when all is cold, the vaporization requires an outside source of heat in lamp or torch or otherwise.

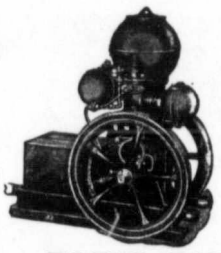
The first principle in carburation, historically, is the evaporation of the volatile hydrocarbon at atmospheric temperatures, from the surface of its own liquid. Such carburation may be called surface carburation, and the evaporation may then be from the cool surface, or the volatility of the liquid may be increased by heating. This system required that a current of air to be carburated moves over the surface of the liquid.

The second system may be called the principle of mechanical ebulluition. The current of air to be saturated is made to pass through the liquid mass, so that it bubbles up through the liquid and escapes at the surface. By this bubbling the liquid is mechanically agitated and a certain proportion of it is entrained with the air in a finely divided state or mist.

The third principle is that of the spray carbureter. These are true atomizers in which the jet of liquid fuel is thrown up into the current of moving air by the fact that the air on its way to the cylinder on the aspiring stroke of the engine has a pressure less than atmosphere. A small orifice or nozzle opening into the suction-pipe delivers the liquid fuel into that moving current, and by the mechanical action of this current the mist or cloud of liquid particles is distributed through the moving current which it saturates.

It will be seen in the latter treatment that the form of the apparatus utilizing this third principle for the less volatile hydrocarbons will require that the spray be made into a gas by heat. With gasoline, as a rule, it is not necessary to vaporize the mist. The first two principles are practically out of competition with the third, which is the modern form.

A carbureter is a device for transforming liquid fuel into a vapor by passing the air either over or through the body of the liquid, and carrying off a portion of the liquid in the form of vapor with the air. Carbureters usually operate at ordinary temperatures, but for fuels that have a low specific gravity the air or the fuel and sometimes both, are heated.



The Manitoba Gasoline Engines

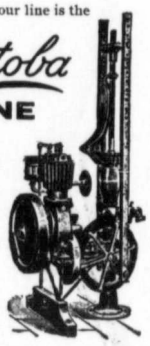
Never fail to satisfy. Are made in every size for all kinds of work. Are **Simple, Reliable and Durable. Hopper-cooled and Frost Proof.**

The latest addition to our line is the

Manitoba

FARM PUMP ENGINE

A 1½ h.p. air-cooled combination engine and pump jack. Can be attached to any iron pump in two minutes. Just the thing needed on every farm. Will pump your water, run your cream separator, churn, fanning mill, grindstone, etc. Always ready for business. Works just as well in mid-winter as in summer.



Write to-day for special engine catalog C. We also manufacture power and pumping windmills, grain grinders, steel saw frames, pumps, etc.

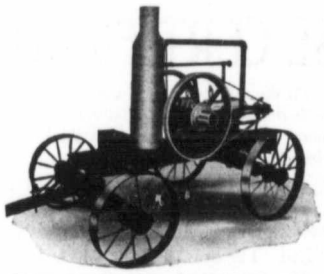
THE MANITOBA WINDMILL & PUMP CO. LTD.

BOX 301 BRANDON, MAN.

The "IDEAL" GASOLINE ENGINE ...

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

FARMERS AND THRESHERMEN



and there is not a job on the farm where power is required which it will not adapt itself to perfectly. This unique engine is made (**Stationary or Mounted**) from from 1½ to 50 horse power; is guaranteed in every detail to be constructed of the very best quality material and by skilled conscientious workmen.

Write for Catalogue and details of the Fuel Saving of the "IDEAL"

Most Reasonable in Price

THE

"IDEAL" Grain Grinder

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

We are also makers of **Gasoline Plowing Engines** from 20 to 35 h.p.

Goold, Shapley & Muir Co., Ltd.

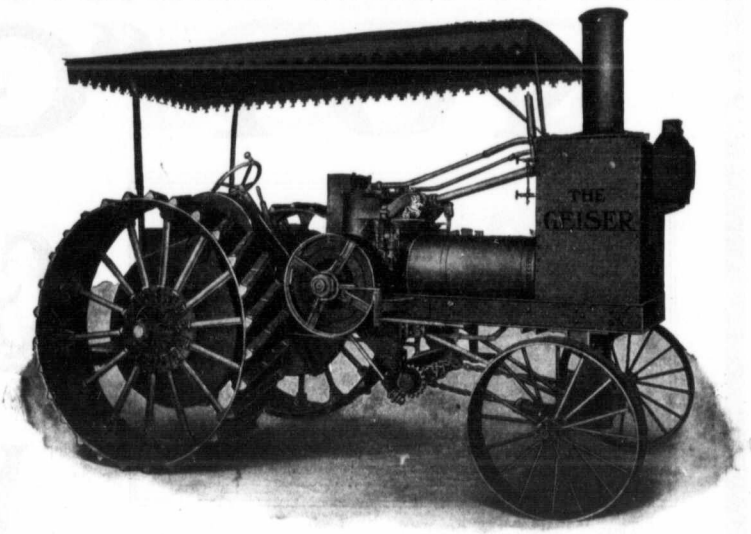
230 Princess Street, Winnipeg, Man.

FACTORY: BRANTFORD

Patronize those who patronize this Paper.

GEISER GASOLINE PLOWING TRACTION ENGINE

4 CYLINDER, 50 B.H.P.
Traction Gearing all Steel Enclosed and Dust Proof
Intake and Exhaust Valves Mechanically Operated
Drop Forged Connecting Rods
Jump Spark Ignition
Transmission Gears Run in Oil Baths and are Hardened Steel and Dust Proof
Forced Feed Lubrication Throttle Governor



Our line includes—

Geiser Peerless Sleveless Separators

Traction, Portable and Stationary Gasoline Engines

Saw Mills, Well Drilling Machinery

For Catalog and Information, Address

Burridge-Cooper Co., Limited

156 Lombard St., WINNIPEG, MAN.

Branch Office: 2159 Smith St., REGINA, SASK.

This mixture of gas and air is usually too rich in fuel to be explosive, and a further addition of air in the engine cylinder is required before it is suited to the work.

A vaporizer is an appliance for transforming into vapor, just the quantity of gasoline that is required for one impulse of the engine and no more, and it differs from the carbureter in not having a supply of vapor constantly on hand. Either the proper quantity of fuel is caused to flow directly into the path of the entering air, or the air is passed over a pipe connecting with a small gasoline reservoir and a current of the fuel is induced into the path of then entering air.

Jets are what the name implies, a jet of liquid usually controlled by a small pump. The pump throws a jet of the liquid into the air pipe so that it strikes the side of the pipe and breaks into a spray, or, as in certain classes of kerosene engines, into a compartment of the compression space and against the side. Jets are some times classed as vaporizers, but placing them in a class by themselves makes them much more convenient to refer to.

Carbureters may be divided into two classes, surface carbureters and filtering carbureters.

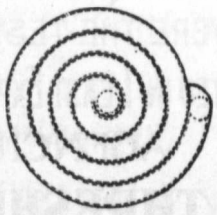


Fig. 4.

In Fig. 4 is shown an examle of a surface carbureter. The carbureter is constructed in the form of a spiral in order that the air passage through it may be a long one. The bottom of the carbureter is covered with gasoline to the height of xy, and the wicking ww absorbs the liquid so that a large surface of fuel is exposed to the air as it passes through. According to Mr. Gardner Hiscox, the height of the gasoline should be not over 3 inches and the total height of the carbureter not over 8 inches. The air enters the spiral through the clack valve v. and passes to the engine through the pipe e.

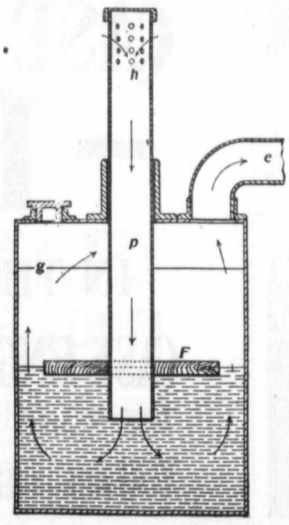


Fig. 5.

A filtering carbureter is shown in Fig. 5. The air enters the carbureter through the holes h and passes downward through the pipe p to the gasoline, whence it bubbles up carrying with it particles of vapor. A float f carries the pipe p in order that the lower end may be constantly at the same distance below the surface of the liquid. In passing upward, the carbureted air goes through the wire gauze g so any drops of

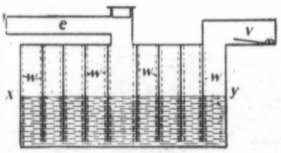


Fig. 4.

the fuel that may be held in suspension will be caught and left behind. The mixture passes to the engine through the pipe e.

A good example of a vaporizer is shown in Fig. 6. Gasoline enters the vaporizer through the needle valve n and air through an opening leading to the space a. The double-seated valve a is lifted at each induction stroke of the engine, the larger seat opening a passage for the mixture while the smaller seat on lifting opens the passage for the gasoline. As the air is warmed previously to coming in contact with the fuel, it vaporizes readily, and the proportions of gasoline vapor and air may be regulated by the needle valve.

A Correction

In our August issue in the report of the Winnipeg Motor Contest were some errors in labelling the J. I. Case engines. The 12-horse power engine should have been labelled 75-horse power; the the 25-horse power should have been laballed 75-horse power; the 32-horse power should have been labelled 110-horse power.

We are very sorry that this mistake occurred and we trust that our readers will harp back to that number and make the necessary mental corrections.

Our Wheat Guessing Contest

As explained in the July issue the number of kernels counted in the bottle of wheat was 146,272. Anyone who sent in estimates between 139,757 and 146,785 was entitled to a prize. If you put in an estimate between these numbers and have not received a prize notify us immediately.

IT'S A RISKY and EXPENSIVE BUSINESS for any thresherman to be without a

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We tell you how and why this tool will pay for itself in a single season, and illustrate some of the most common uses in our colored booklet.

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NOT "GAS" BUT FACTS

STUDY THE FIGURES AND LEARN WHY

CASE STEAM ENGINES

AT 1910 WINNIPEG MOTOR CONTEST

WON HIGHEST POINTS

IN ALL CLASSES

THE FOLLOWING ARE ACTUAL RESULTS THAT SHOULD INTEREST YOU

	COAL USED PER HORSE POWER HOUR IN 2 HOUR BRAKE TEST	NUMBER OF ACRES PLOWED	ACRES PLOWED PER HOUR	DRAW-BAR HORSE-POWER DELIVERED	COAL USED PER DRAW-BAR HORSE-POWER HOUR	WATER USED PER ACRE GALLONS	COAL USED PER ACRE POUNDS	TOTAL POINTS ALLOWED BY JUDGES (POSSIBLE 400)
ENTRY NO. 13	4.16	6.06	2.14	34.74	9.12	136.7	147.2	269.3
CASE 75 H.P. No.14	3.58	20.17	2.93	47.34	7.47	92.6	120.6	297.0
ENTRY NO. 15	3.62	12.16	3.63	65.36	8.34	107.6	149.6	291.9
ENTRY NO. 17	4.06	24.07	3.79	56.08	8.17	93.22	120.8	280.8
CASE 110 H.P. No.16	3.04	33.08	3.99	74.92	5.29	82.01	99.2	356.1

THE ABOVE FIGURES SHOW CONCLUSIVELY THAT

CASE ENGINES ARE UNAPPROACHABLE IN -ECONOMY-

IN THE USE OF FUEL AND WATER

CASE ENGINES ARE PLOWING ENGINES AND BUILT TO PULL

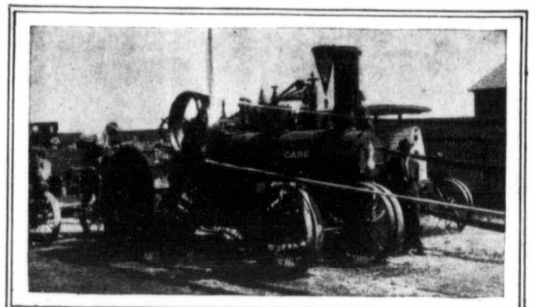
THE MORE SEVERE THE TESTS. THE MORE EVIDENT THIS BECOMES

YOU ARE INTERESTED IN LEAST EXPENSIVE PLOWING—SEND FOR CATALOG Nº 67 AT ONCE

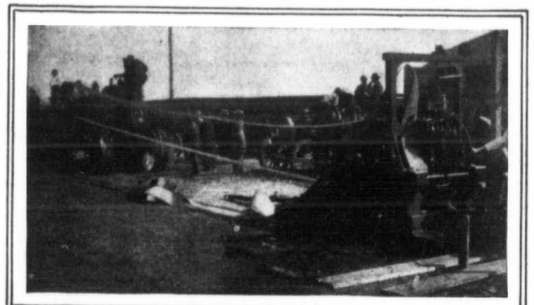
AGENCIES EVERYWHERE

J.I. CASE THREADING MACHINE CO. INCORPORATED

·RACINE·WIS·U·S·A·

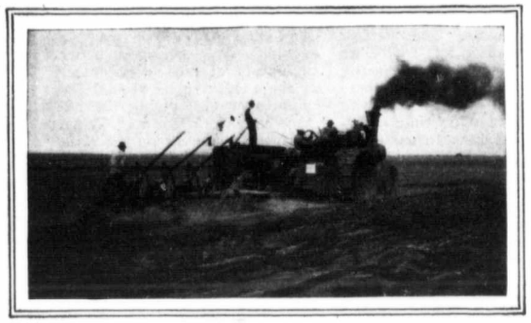


This 36 H. P *CASE* Engine was the only entry in Class No. 1. This little engine developed SIXTY HORSE POWER in the Maximum Brake Test—eleven per cent more than the strongest gasoline engine, although it WEIGHS LESS. This engine developed twenty-two per cent more power than one engine, in Class C. which weighed FIFTY-THREE per cent more.

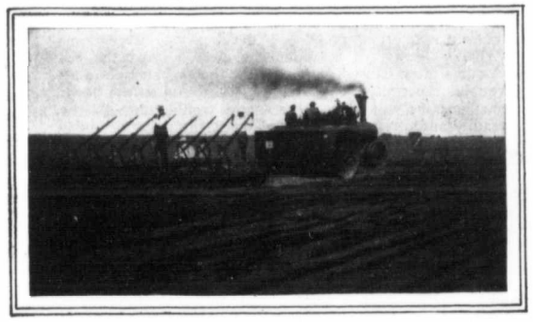


This *CASE* 75 H. P. Engine, entered in Class No. 2, was disqualified for developing OVER NINETY HORSE POWER in the Maximum Brake Test. Except for this it would have been entitled to FIRST PLACE IN ITS CLASS. In the Economy Brake Test it used only 3.58 pounds of coal per horse-power-hour, whereas its nearest competitor used sixteen per cent more.

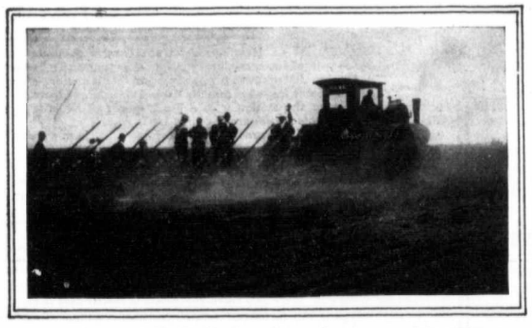
This *CASE* 110 H. P. Engine entered in Class No. 3, WON THE GOLD MEDAL FOR THE SECOND TIME AGAINST ALL COMPETITORS. It won the HIGHEST NUMBER OF POINTS OF ANY ENGINE in any class. It used only 3.04 pounds of coal per horse-power-hour in the Brake test, whereas its nearest competitor in this class used nineteen per cent more.



This little engine (36 H. P.) showed remarkable power in pulling plows. Four plows were considered a fair load and were used in the contest, but the test showed that it would easily have pulled more. Afterwards, in an unofficial test on the same ground, it pulled EIGHT FOURTEEN-INCH BOTTOMS with ease. Cut shows engine taking water on the move during the contest.



The Case 75 H. P. Engine plowing used LESS WATER and LESS COAL per acre than any other in ANY CLASS except the Case 110 H. P. Engine. This engine plowed THIRTY-SEVEN PER CENT MORE ACRES per hour than its nearest competitor, and moreover said competitor used twenty-two per cent more fuel per acre.



The Case 110 H. P. Engine always has been a WINNER for plowing or any kind of severe work. This Engine plowed ten per cent more acres per hour than its NEAREST COMPETITOR, WHICH USED FIFTY-ONE PER CENT MORE FUEL PER ACRE. Cut shows Engine taking water on the move. Stops are unnecessary.

The Modern Farm Horse and Its Importance as a Machine on the Farm.

Continued from page 16

—the piston rings will be burnt into the piston and as a result loss of compression pounding of the piston and the valves sticking on their seats. If too little is used the rings will wear owing to undue friction.

To secure good compression the inlet and exhaust valves should work freely and fit tightly on their seats. The operator can tell if there are any other leaks in the compression by turning the fly wheel. If there are any, steps should be taken to remedy them. The time of ignition should be watched closely and should take place just before the engine passes centre but varies accordingly to the speed of the engine; if too late it will have to explode oftener because it does not get the full benefit of the expansion stroke, on the other hand if too early the engine will work against itself or die down entirely. A good plan is to make the time of ignition when the engine is new as the wear on the engine parts will change the time of ignition.

Weak batteries, loose wires on binding parts, poor insulation on insulated electrode of engine or spark plug and wires coming in contact are often cases of poor ignition.

Poor gasoline has often caused a lot of trouble especially in starting as poor gasoline will not vaporize as readily and often has to be warmed before the engine can be made to start. Water and dirt in the gasoline also cause trouble that can be avoided by straining the gasoline through chamois skin or a very fine wire sieve. By seeing that there is at all times a plentiful supply of good clean gasoline in the tank and that the gasoline pump is working right a great deal of the gasoline engine troubles can be avoided. The exhaust valve should open just before the piston gets to the end of its expansion stroke. The time of opening can best be determined by loosening the connection and then putting the engine to work. When the place has been found where the engine is strongest stop it and secure connection firmly. Gas engines when working often get too hot and will in many cases get so hot as to slow down and stop. This can be overcome by securing a better circulation of oil, water or air as the case may be around the cylinder or else giving the engine less work to do. When bearings on the engine get worn they should be tightened up and kept in shape in the same way as on any other machine. Stationary engines have given considerable trouble to farmers because of neglect of these few precautions and improper installation. For these reasons they have not been approved of by farmers and users as much as they would have been if this were not the case. If possible a stationary engine should be fastened on something solid as a cement foundation because it pays well to have a good foundation on account of the life of the engine and the power the engine develops. Everything should be clean around the engine with the exhaust leading outside of the room as the burnt gases cause trouble due to the engine not getting a proper mixture of fresh air and gasoline.

As regards the storage of the gas engine tractor it should have a well built, clean, capacious shed standing high off the ground and admitting sufficient light, the object being to allow the engineer to work intelligently and without any unnecessary inconvenience. In the selection of a gas engine tractor the purchaser should be guided by several important considerations among which figure prominently: 1. The particular kind of soil in his locality, for example, a heavy engine on heavy clay soil would be impracticable as it tends to pack the soil that is already packed too much. On the other hand in localities where the soil is light this may be just what is desired. 2. The economy of first cost. 3. Economy of operation which includes the amount of oil used for horse power and the repairs. 4. Durability. 5. Simplicity of design and accessibility of all working parts. 6. Enough size to suit the requirements; and I may mention here that in the majority of cases gasoline engines are bought too small to suit the requirements as the farmers do not realize the difference between the horse power capacity of a steam engine and that of a gasoline engine. 7. Easily started in both hot and cold weather. 8. Repairs easily obtainable because delays caused by parts breaking are generally very expensive. 9. A good cooling system. 10. A governor that will give a uniform speed when running and some quick method of changing the speed, as different speeds are often required. 11. the engine should be made so that the gasoline tank can easily and quickly be filled with gasoline. 12. A sparking device that can be quickly and easily examined or cleaned. Due largely to the high prices paid for the farm products in these latter years the farmer does not pay the attention that he should to the eradification of noxious weeds. Now prevention is much better than cure and with the gas tractor the farmer is placed in such a position where he can attend to the eli

THE DESMOND

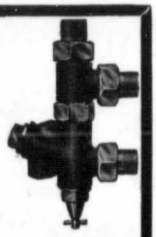
MODEL "U" INJECTOR

THE BEST FOR THE THRESHERMAN

FIVE Injectors in ONE and as many more as you desire.

Any Model "U" fits any old connection

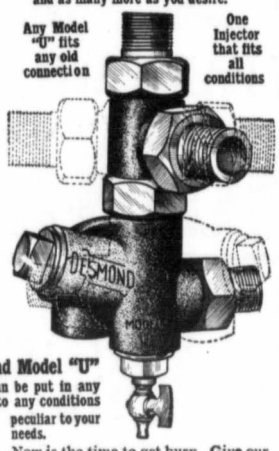
One Injector that fits all conditions



it is "flexible." One New Desmond Model "U" Injector will answer your Injector needs in every way, shape and manner.

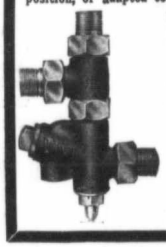
All tubes screw into the body and cannot fall out or be lost or damaged when the cap is removed. Neither can they get out of aligument.

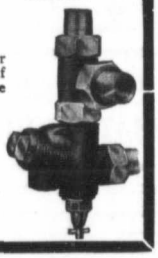
The piping and valves can be arranged to suit YOUR needs and YOUR convenience; not to fit the Injector.



The New Desmond Model "U" starts low, at from 20 to 25 lbs. It works high, from 175 to 190lbs. lifts water 25 feet, handles water at 130 degrees, and delivers it to the boiler at almost 212 degrees. It is absolutely automatic. It will not 'buck' or 'break' under the most severe and continued jars. We rigidly test every Injector and guarantee it fully to work under all conditions.

The New Desmond Model "U" will fit any space, can be put in any position, or adapted to any conditions peculiar to your needs.





Now is the time to get busy. Give our new Desmoud Model "U" a trial. If your dealer cannot supply you, write direct to us.

DESMOND-STEPHAN MFG. CO.

URBANA, OHIO.

FROM STATION TO FARM-ENOUGH FUEL FOR A WEEK OF STEADY PLOWING.

Now, when you are trying to get at the comparative cost of fuels, don't take the retail or "gallon can" price, but figure on the way that you will buy it when you own a tractor—the wholesale way. The wise farmer buys his fuel for his tractor in large quantities—at wholesale prices. He comes to the station with a big wagon and hauls it home in barrels. This is where he effects an *economy* of one kind.

There's another kind of *economy* in tractors and that is in owning a

The Only Oil Burning Engine RUMELY OilPull TRACTOR *in the Great Motor Contest*

which burns kerosene, the cheapest, safest, most concentrated fuel known, at all loads, in any weather, under any and all conditions.

Kerosene never was so cheap as it is today, gasoline was never so high. Gasoline used to be a by-product. It's kerosene that is a by-product now. There are millions and millions of barrels of kerosene annually put in storage for lack of a market, while the demand for gasoline, which is already greater than the production, daily gets greater and greater.

Now, when looking into the *economy* of buying a tractor, consider carefully the fuel question and remember OilPull is the *only successful kerosene tractor that is built for severe and heavy duties and has a positive automatic control.* Let us tell you more about it. Just ask for our literature.

M. RUMELY CO., 19107 Rose Street, Regina, Sask.
Branches: Winnipeg, Calgary, Saskatoon

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Please send me a copy of "Tolling and Tilling the Soil."

Name _____

Town _____

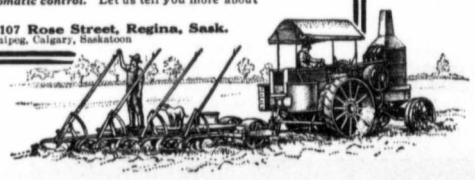
County _____ State _____

I own _____ acres of land.

I plow _____ acres of land.

I own _____ Engine.

I own _____ horses.



YOU SAY: I want an engine that wont shirk work—that will stand-up-to-the-grind day after day without costing me a fortune for repairs, or hiring an expert to keep it going. I want an engine that will do my breaking and plowing deep and cheap—that will draw harrows, discs, drills and binders just as well as horses do and without injuriously packing the soil—that will drive my complete separator continuously, steadily, safely. In short, I want an All-Purpose Farm Tractor—economical in fuel, light in weight, but strong in construction—one that delivers the necessary power for any work—an engine that will always produce Maximum Results at Minimum Expense.

THEY SAY: We want you to note carefully what some users say about the "GAS TRACTION ENGINE": "We plowed 850 acres this fall—the engine worked perfectly, pulling 10 plows in hard ground." "The first gas engine ever built—it doesn't take three or four experts to run a GAS TRACTION ENGINE." "We threshed 56 days this fall—70,000 bushels—the engine ran perfectly." "The self-steering device is a wonder and is perfect in every way. I wouldn't have an engine without it." "The engine works to perfection and is very economical of fuel." "Is so good I want another just like it."

GAS TRACTION ENGINE

WE SAY: BUY the Self-Steering Gas Traction Engine—the engine that won the Gold Medal at the Great Winnipeg Plowing Contest. Its record in every branch of farm work show it to be the most economical, most reliable, the simplest, most thoroughly constructed of farm tractors. Its magnificent success at the Winnipeg Plowing Contest, the severest tests before the most competent judges in America, proves our claims, and our claims are backed by our guarantee.

WHAT WE GUARANTEE: We not only guarantee the horse-power—the material and workmanship—but the amount of fuel it will use per acre—the number of breaking plows it will pull—the stubble plows it will pull and the size separator it will steadily and continuously drive. If you are satisfied with that kind of guarantee write us to-day—get an engine, put it in your field and apply the test.

Send for Our Book: "The Passing of the Horse."

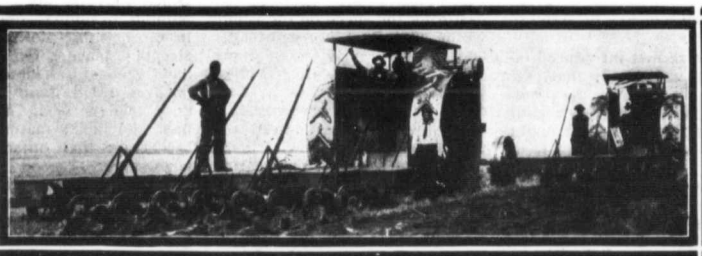
GAS TRACTION COMPANY, WINNIPEG, MAN.

mination of these pests with less trouble. Oats are usually grown on the oldest as well as the dirtiest of land where wheat and flax are the main crop. If the oats are fed whole a great part of them is passed through whole besides numerous weed seeds and these when deposited on clean land will sprout and grow. So in a few years the farmer has to deal with the noxious weed question. Crushing the oats will help but does not obliterate this trouble entirely. A farmer as a rule can get clean seed of wheat or flax and with the help of the gas tractor a farmer can grow clean wheat until the land is worn out if need be. Allowing the cost of plowing by horse power and by tractor to be equal the farmer should favor the gas tractor because engines have demonstrated the fact that they can plow cheaper than horses. Some makes breaking an acre of ground with one gallon of gasoline. The cost, of course, would vary a great deal according to the different conditions such as the condition of the soil, kind of soil, depth of plowing, season of the year and last but not least on the efficiency of the operator. One man can operate an outfit that will do the work of twelve to twenty horses if the equipment is fixed up properly.

When winter comes on there is no more to worry about and the farmer can turn his attention to other ways of making money or recreation if he so desires. The keen interest taken by the farmer and the manufacturer in the motor contests shows the rapidity that gas engine tractors are coming into favor.

The automobile alone has taken the place of thousands of horses and many of these are on the farm and have proven where endurance, speed and convenience are required it is far ahead of the horse.

Not nearly all the advantages of gas engines have been enumerated in this article, but enough has been said to convince the farmer that it is to his interest to use gas power on the farm and it can truly be said that the gasoline engine should be called the "Modern Farm Horse."



The "Flour City"

Is The Engine You Want

If modern design and careful construction, coupled with ease and economy of operation, mean anything to you in a Farm Tractor, the "FLOUR CITY" is the engine you want. It has shown its superiority by **Twice Winning the Gold Medal** at the International Motor Contest at Winnipeg.

Built in two sizes—30 and 40 H.P.—has High Drive Wheels—Best Accessories—made on honor throughout, and gives lasting satisfaction to every buyer.

Write for Catalog and record of its Achievements in all classes of farm work.

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Free Reward List.

Don't fail to write for copy of The Canadian Thresherman & Farmer Free Reward list for 1910-11. These free rewards include kitchen cabinets, sewing machines, fountain pens, watches, washing machines, kodaks, morris chairs, pipes, knives, books and many other articles, all of which are given for sending in one or more subscriptions for The Canadian Thresherman & Farmer. Write for copy of this booklet to-day. Sent free on request.

The men who I have seen succeed in life have always been cheerful and hopeful men, who went about their business with a smile on their faces and took the changes and chances of this mortal life like men, facing rough and smooth alike as it came.—Charles Kingsley.

STYLE B-FORCE FEED

ZERO WEATHER WILL SOON BE HERE

A MADISON-KIPP OIL PUMP LIKES COLD WEATHER

The present Madison-Kipp construction is the result of years of actual experience in oil pump manufacture. The pawls are all drop forgings, forged from open hearth steel and hardened in the most modern hardening ovens. The plungers are a special grade of steel, case hardened as hard as the hardest glass and after hardening are ground as smooth as a mirror.

Our style B force feed lubricator is especially recommended for use in temperatures where the oil will not remain in a liquid state,

OVER 50,000 PUMPS IN ACTUAL USE

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

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

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

See the Announcement in this issue of our 1910-11 Wheat Guessing Contest.

Sheep Husbandry in its relation to Western Agriculture

By W. W. Thomson, Asst. Managing Director, Agricultural Societies of Manitoba

The fact that in the near future the Sheep Breeders' Association of both Manitoba and Saskatchewan purpose holding sales of sheep at several of the important agricultural centers of their respective provinces, to afford those farmers not at present engaging in sheep raising an opportunity of securing desirable breeding stock and to so lay the foundation of a good flock of sheep, marks this as an opportune time to emphasize the importance of this side of farming and to point out the many reasons why, it is desirable that more attention should be given to the sheep industry in Western Canada.

Sheep were first introduced into the west in 1833. In that year Governor Simpson of the Hudson's Bay Co. organized a joint stock company which brought 251 sheep from the State of Kentucky to the settlers in the Red River Colony. These sheep were later crossed with pure bred rams brought from England and from that time on the colonists maintained small flocks of sheep which supplied them with meat for their tables and wool for the manufacture of blankets and home-spun cloth.

Following the great inrush of settlers in the early eighties the number of sheep in the West increased rapidly until in 1895 there were over 35,500 sheep in the Province of Manitoba and a considerable number in what was then known as the North West Territories. Of late years, however, there has been a gradual falling off in the number of sheep kept. This has been largely due to the predatory attacks of prairie wolves and sheep-killing dogs, combined with the high cost of fencing and the scarcity of competent shepherds.

A change, however, is now in sight. The usual method of farming in the West, the cultivation of the largest possible area with the least possible amount of labour; our wide, open, wind-swept fields, and the natural fertility of our soil have all been favorable for the introduction and spread of noxious weeds. These have now become so numerous that our leading agriculturists, realizing the menace to the prosperity of the farming community and seeing a remedy for this deplorable condition in the maintenance of larger flocks of sheep are now making efforts to induce a larger percentage of our agricultural population to engage in the sheep raising industry.

It is a universally admitted fact that sheep raising farmers have both cleaner and more productive farms than those not raising sheep on their farms. The variety loving habits of these animals in the matter of diet render them most useful in combating the noxious weed pests. While it cannot be truthfully said that sheep prefer a diet of weeds to an abundance of fine succulent grass, they will however, even when on good pasture, vary their diet by nipping off the tender shoots and bloom of many weed plants. When on scanty pasture they feed readily on such plants as wild mustard, ox-eye daisy, yarrow, annual and penenial sow thistle, rag weed, foxtail and blue weed. In fact it is estimated that fully ninety per cent of our troublesome weeds are readily eaten by sheep.

In cleaning infested areas the best results are obtained by pasturing the sheep on the young weeds while they are still tender and juicy. Wild oats, penny cress, blue burr, cockle and other troublesome weeds can be kept down by allowing sheep to pasture on them just after the weeds begin to grow. Some good authorities recommend that the flock should be shut up in pens over night and turned into the weed infested fields in the morning when their appetites are keen, later they may be driven to more attractive pastures.

In the fall after the crop has been removed, the sheep should be allowed to run on the stubble. Then they will obtain excellent pasture from the waste grain and at the same time they will destroy many winter annuals and other weeds which germinate late in the season. With careful and intelligent management cropped lands can, in a few years, be entirely cleaned of the most pernicious weeds by pasturing with sheep in the manner described and excellent services will also be rendered in the cleaning up of permanent pastures, or private roads, fence corners and other waste places.

Apart from their value as farm scavengers there is no branch of agriculture which affords larger or more rapid returns for the capital invested than a good flock of sheep. The initial cost is small, the price of ewes usually ranging from $10 to $15 depending on the age and breeding of the animal and a good ram can generally be bought for from $25 to $40.

The cost of housing a flock is small. All that is required in this connection being a shelter which provides good ventilation without draughts, abundance of light, a tight roof and a dry sleeping place. On the other hand the natural increase of the flock is rapid, twin lambs and even triplets being not uncommon and lambs mature at a far earlier age than other classes of farm stock. A good lamb usually sells for from $5 to $7 in the fall and in addition to this there is the revenue derived from the fleece which in the West is generally about $1.25 per head or enough to pay for any grain and roots fed during the winter.

Western Canada offers special advantages to the sheep raiser. Sheep originally belonged to the uplands when they were able to obtain pure air and the maximum sunlight. Under domestication they prefer dry, airy fields and nowhere do these conditions more universally prevail than on the prairies of the West. Sheep with us are practically free from disease. Both in the bright sunny summers and the clear cold winters sheep do well. Their warm coats protect them sufficiently from the cold and the pure air and sunshine keep their lungs and consequently their whole system in order. The cold weather of our winters has an additional benefit for it has been found that the fleece of sheep that have been reared in the West for several generations becomes both longer and denser than the fleece of animals of similar breeding that have been raised where winters are milder.

There is always a keen demand for mutton on the markets of the West. Thousands of carcases are brought in from the East each year and occasionally shipments are received from New Zealand. Dressed mutton is now quoted at from 15 to 22 cents per pound on the Winnipeg market, choice lambs are bringing from $6.50 to $7.00 per cwt and mature sheep from $5.25 to $5.50. These are not exceptional prices but a trifle lower than they were at this time last year and a little higher than for the corresponding date in 1908. The prospective sheep raiser may rest assured that he will always be able to dispose of his surplus stock at remunerated prices.

In view of the fact that only a limited amount of capital is necessary to purchase and house a flock of sheep; that the climate and topography of this country is particularly suited to the raising of this class of farm animals, that there is a large and growing demand for mutton on our home markets, and above all when we consider the special adaptability of these animals for combating the spread of noxious weeds and cleaning up weed-infested areas, no one can question the advisability of engaging in this industry which is undoubtedly destined to become a prime factor in Western Agriculture.

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with two five-gallon cans, one for kerosene and one for gasoline and that you gave him $2.00, one to pay for the kerosene and one to pay for the gasoline.

When the boy returns, we'll wager that his kerosene can is full—five gallons of it and that he had quite a bit of change left from the dollar.

But, about the gasoline can. It's more than probable that the store didn't have it. If they did, it's a pretty sure thing there was no change from the dollar and that you found the can was a long ways from being full.

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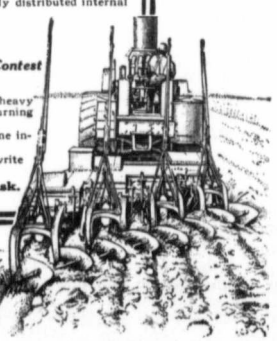

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The Reeves Plow attached to the engine by its pivotal connection makes an ideal plowing outfit—controlled at will by the engineer. Don't make a mistake—get a Reeves Flexible Frame Engine Gang Plow and be in line for a profitable run of work in fall plowing. The Reeves plow is unlike others—many of which are simply dragged on the ground by chains, like a lifeless log, capable of movement only as it is pulled by the chain or rope attaching it to the engine.

The Reeves Flexible Frame Engine Gang Plow—either style, hand or steam lift—will do more and better work than any other Engine Gang Plow made. They cost more than others, but then you know the best is the cheapest—the Reeves is the best.

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Poultry on the Farm.

By J. R. Cote.

Does poultry pay? This question has long been answered by actual experiments and every farmer who has some poultry around the yard knows it does pay to keep them; but, does every farmer get all the profit he can get out of his birds? Do you personally, by intelligent breeding, feeding and housing get the money you should get out of your birds?

There is no question as to the truth of my statement when I say that there is more money in 20 hens than in a good cow, and this you can prove to yourself every day in the year. The only cause for your getting poor results is in the handling.

First of all, the breed has something to do. You cannot expect to have good results from a lot of rainbow colored mongrels which have a claim to every breed and color of poultry in existence, why they cannot be classed in any other variety but plain chickens. Then again, if your birds came from good stock, is the breeding so that you have kept up the stamina?

The results to be obtained with poultry is worth your consideration, and the farmer who neglects the opportunity of making money through taking care of his chickens, is neglecting one of the best and perhaps the easiest crop on the farm.

How do you feed your chickens? Simply throw them some grain whenever you think about it? Or do you let them pick up their own living? How are they watered? Are they allowed to drink around the manure piles or run dry until they can find some water in some dirty holes? How about grit? Do you supply them with grit and oyster shell? Or do you allow them to go to roost with a crop of different composition and force them to digest the food the best way they can without any profit to them and to you.

Those are as many questions as you should answer if you want to find out the reasons why your poultry is not bringing you the returns that it should.

I will tell you briefly that if you wish to have good layers next winter, you must take care of the growing pullets now and to do that you should follow as near as possible the instructions I am going to give you, which is nothing else but what I am following on my own plant. Now, when my chicks are about 8 weeks old, I separate them, I place the pullets by themselves and the cockerels by themselves and I give them all the range I can. It should be easy for any farmer to have a poultry building divided into compartments with outside runs. Then every other day let one of the flocks go out and enjoy full run of the farm. In that fashion neither the pullets nor the cockerels will feel the confinement. I feed my birds a mash in the morning about nine o'clock. The mash is composed of equal parts of bran, cornmeal and ground oats and I simply mix it up without making it sticky, you want to have it crumbly. Then I give them enough so they will have a good feed, but not enough so they will load up and go to sleep in a corner. I want them to be looking for some more, that's about the dose I give them. Then at night I give them corn or wheat; the best plan is to alternate, one night wheat and then next day corn and so on, repeating every other day. Feed the grain into deep litter of straw or chaff or leaves or anything you like so long as you will make them work for the food.

Now I see that they have before them all the time a good supply of the oyster shell. I always use the Belle Brand Oyster Shell as they are the best and they contain a lot of carbonate of lime which is just as necessary to growing and especially more to laying hens as food is.

See that your birds have lots of green food, grass is not sufficient and if you have plenty of cabbages or beats or lettuce, chop some up fine and give it to them and see how they will relish it. If they don't pick it up, mix it up with the mash and it will do them good. Green food is a necessity to growing chickens and if you wish your pullets to lay early and keep it during the winter, you have to build them up so that they cannot help it but they have to follow nature and lay and keep it up during the time of the year when eggs are at a good price. Don't imagine that you are going to let your pullets grow as they can and then feed them condition powder or some other strong preparation and make them lay. All those powders advertised cannot harm your birds as they are mostly sand and pepper, and practically worthless. There is only one course to follow and that is to start now while the

STEADY AS A ROCK

BECAUSE it has **square gear** construction, made **twice as strong** as is required to do the work and that is the only way to make durable a fast **running machine** like a cream separator.

Because it has a **special skimmer** in **one peice, easily cleaned,** which takes out **all the butter fat,** besides separates all the impurities from the milk and cream. **Because** its **large steel bowl** is supported at **both ends** (MAGNET patent), which keeps it in balance. **Because its brake** (MAGNET patent), circles the bowl, stops in eight seconds and prevents wear on machine after separation is finished. **Because its frame is strong** and **rigid,** and so firmly put together that it will skim perfectly on the **rough ground or any floor. Because all parts are covered, no danger of accident** in operating. **Because all parts** in the machine are designed mechanically correct, and built of the best material by workmen who are specially **trained** to turn out perfect work. **Because** it is the only Cream Separator that will continue to take out all the butter fat, no matter how long it is run—be it **one or fifty years.**

The proof is in your own hands. Try your machine by getting your milk in your dairy and you will find out that the "MAGNET" continues to take all the butter fat as it did at first. If you have a cheap machine you will find it is wasting your money every day because it has lost its grip and does not skim as it did at first. Buy a "MAGNET" and stop that waste.

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Construction

The "Taggart" Portable Grain Elevator is built any height, standard 18-ft. leg.

Grain is elevated by cups and conveyor by worm screw.

Mounted on skids, but can be operated on a wagon or truck.

Hopper swings back out of the way for wagon.

Leg swings down when moving and rests on frame.

Spout can be swung in any direction, or up or down.

Will save it's cost in one Season

It is a back saver, time saver, money saver.

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This cut shows Elevator mounted on truck, with leg up and hopper ready to receive grain. Write for prices and terms. Agents wanted.

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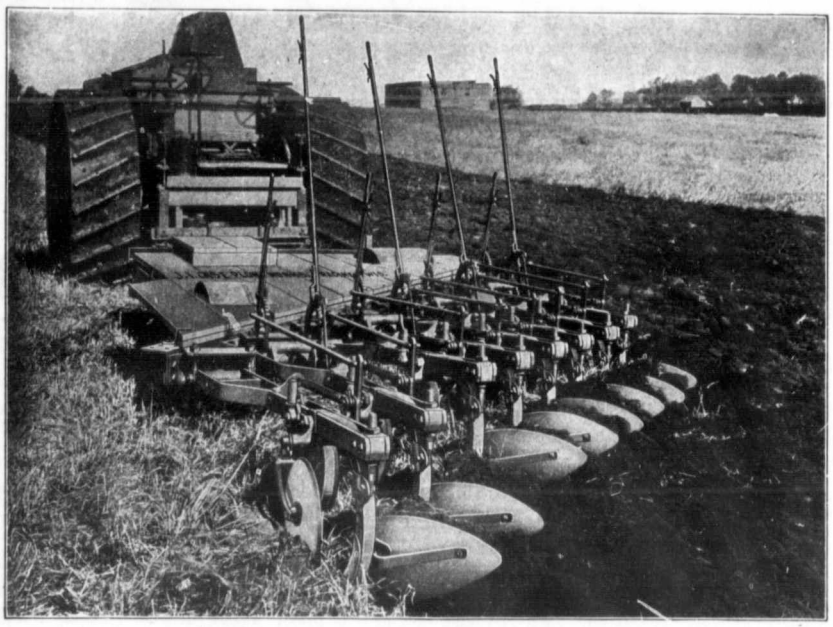

J. I. Case Engine Gang, made with 4, 6, 8, 10, 12, or 14 plowsof 14 inch cut, either breaker or old ground shape.

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Durability.
Adaptability.
Ease of Handling.

Durability. J. I. Case Engine Gang frames are made of heavy bridge steel, securely riveted and carried on four wide tire wheels. Beams are of heavy double bars, with heavy connections to frame. Standards are of heavy curved channel steel.

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EACH plow is fitted with a gauge wheel to help carry it over obstructions and regulating depth. Plows are adjustable to line of draft by screw bolt connections to frame. Curved plow standards give ample clearance for trash and stubble.

Ease of Handling. Platform is large and roomy. Two plows are raised with one lever, aided by powerful lift springs, so that all plows may be quickly raised at end of field.

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HARMER IMPLEMENT CO., CANADIAN :: :: SALES AGENTS **J. I. CASE PLOW WORKS**

WINNIPEG, MAN. RACINE, WIS.

pullets are growing and supply them with plenty of rich good feed, good range, oyster shell or lime of some sort, and you will have no use for any condition powder.

A second point and an important one is the housing. Please do not crowd your chickens into some stuffy, hot corner. Give them plenty of fresh air and lots of room. So long as they have a roof to protect them from the rain, you need not bother about the sides for a summer, and in winter time. I don't honestly think there is an inch of ground in the whole of Canada where hens cannot lay all through if they are properly fed and if they have been properly fed through the summer.

Watch for lice. Never allow your chicks to get lousy or at least to remain lousy. If lice gets the best of you, you might as well give it up. You cannot get good results from a flock of scratching, lousy birds. The only way is to dust them well. Of course, lice powder costs money; they will charge you 25 or 50 cents for a small box and to dust the birds properly it would cost quite a sum. So I will tell you how to make some of the best lice powder. Be careful of the material needed. Take one gallon of gasoline and mix with it, say a pint of crude carbolt acid. Then add to that all the plaster of paris necessary to make a thick paste and let it stand over night and the next morning the gasoline will be all evaporated and you will have a pinkish powder which is death to lice, and mind you, for 50 cents or thereabout you will have enough powder to start a wholesale business and supply the province. Say, by the way, be careful not to work that stuff where there is a lamp or stove or be careful not to smoke or allow any fire to come to the gasoline or you might never have a chance to see whether the powder will kill the lice or not, but it might cause you some disagreeable surprise. But with a little common sense and ordinary care anybody can make that powder and get good results. Then simply dust the birds with that powder, working it well into the feathers, say at night. Then if during the afternoon you have painted the roosts with coal oil, it would surprise me if you had not killed all the vermine which were eating your profit by sucking the blood from the poor birds. If after a few days you see they scratch some more, give them another dose and it will end it.

If you follow the above instructions you will make money, and with time you will be one of the advocates of more poultry on the farm, but better birds, better care and with that it is bound to bring in better profits.

Anybody desiring any special information regarding poultry matters will have a personal reply from the writer if they address their letter to Chatham, Ont.

Preserving Eggs.

By J. R. Cote.

I often get an inquiry from some of my readers asking me if I know of some good method by which the eggs can be preserved or packed away for winter use.

I know of two recipes which were sold at $2 and $5 each and some now are even making money by selling the recipe at 50 cents. The recipe is not patented, so I can well give them to my readers and they can make what they can out of it. I have never tested them personally, but I have eaten of eggs preserved by the first method after being stored away six months, and it would have been impossible to tell the difference between the eggs we had for our meal and fresh laid eggs.

The first of the recipe is called the sulphur process. The best of all preservatives is sulphur, but as it will not dissolve in water, we must convert it into gas by mixing it with oxygen, forming what is known as sulphurous acid (now mind you not sulphuric acid) gas, which is done by burning it. To preserve eggs, place them in a tight box with a sliding lid, such as starch commonly comes in. Place a tablespoonful of sulphur on an oyster shell or other suitable receptacle and set it on fire. As soon as it begins to burn, close the lid tightly and leave it for half an hour. Now take out the eggs and pack them in perfectly dry oats in a box or barrel, filling it full enough that when closed it may be turned over without any change in the position of the eggs, and once a week turn the box over. If the oats have also been treated with sulphur it will be better. Eggs treated as above directed and kept in a cool place will remain fresh for months.

By the second recipe which is called the "Havana method" millions of dozens of eggs have been kept for months and sold as fresh eggs at the end of that time. Where cold storage are not within reach it is still very extensively used by those in the secret, and this secret has been sold by its inventor at $5 and he made a few thousand dollars with the sale of its secret, and I know of somebody who is selling hundreds of the receipts even now at fifty cents each.

Here is the recipe which is worth money. Take twenty-four gallons of water and put in it 12 pounds of unslaked lime and four pounds of salt. Stir it well several times a day, and then let it stand until perfectly clear. Then draw off twenty gallons of the clear lime and salt water. Then take five ounces each of baking soda, cream tartar, saltpeter and borax, and one ounce of alum. Pulverize these and dissolve in one gallon of boiling water, which should be poured into the twenty gallons of lime and salt water. This will fill a whisky barrel half full, and the barrel holds about one hundred and fifty dozen eggs. Let

the water stand one inch above the eggs. Put a cloth over the eggs and pour the settlings of lime over it. Do not let the cloth hang over the edges of the barrel. If the water evaporates, add more, as the eggs must be kept covered with the preserving fluid.

If you wish to preserve a small quantity of eggs, all you have to do is to mix less of the ingredients in proportion with the quantity you desire to pack away, and can assure you that eggs treated that way and kept in a cool place will defy any fault finding between them and truly fresh laid eggs.

The Development of the Sheep Industry in Canada.

For a number of years it has been evident and it is now a matter of common knowledge that the sheep industry in Canada, particularly as regards the general production of market sheep and of high class wool, has been in an increasing decadent condition. Not only has the number of sheep owned in the country been gradually lessening but the interest in sheepgrowing has itself been on the wane. The census of sheep in Canada reveals the fact that the Dominion as regards the number of sheep kept compares not at all favorably with other great agricultural countries of the world. Indeed, as compared with them it has permitted sheep-raising to become a somewhat insignificant phase of its agriculture, notwithstanding its great adaptability both as regards soil and climate for the growing of mutton and wool. In 1909 according to agricultural returns there were in the United Kingdom, 31,838,833 head of sheep; in the Argentine, 67,211,754 head; in Australia, 77,043,266 head; in New Zealand, 23,480,707 head while the latest returns for Canada place the number at not more than 2,705,390 head. In view of the fact that sheep have not only a direct and primary value through the actual financial returns which they make to their owners, but because they represent as well in themselves a peculiarly important asset in agriculture owing to their ability to increase soil fertility and to check and destroy the growth of weeds upon the land, the situation which the above figures appears to be a rather critical one and one which may well receive careful consideration.

The reasons for the decline in the sheep industry in Canada have been the subject of much comment in various ways and while these need not be discussed in this note it may be well to state that the Live Stock Branch has had its attention very urgently directed toward the present unsatisfactory status of the business and in recognition of its importance to the country generally, has now decided that the time is ripe for the Canadian Government to consider a comprehensive policy and to undertake definite and extended measures likely to operate toward the encouragement, improvement and development of the industry as a whole.

As a preliminary to the adoption of any settled policy and in order that the Live Stock Commissioner may inform himself thoroughly as to the details of the sheep and wool trade in Great Britain and the United States and as to conditions as they actually prevail in Canada, the Minister of Agriculture has authorized the appointment of a committee of two competent men to investigate the sheep situation in general in the three countries named. At the same time, it is the expectation that, without an actual visit, they will gather as much information as possible concerning the trade of the other great sheep producing countries in so far as it may be of interest in the development of the industry in Canada. It has been thought advisable to have this Committee consist of, in the first place, a wool expert whose special training has made him familiar with all the technical and practical phases of wool markets and woollen manufacture in the United Kingdom and Canada and in the second place, a capable Canadian sheep breeder whose experience has given him a somewhat extended knowledge of sheep farming in this country. These gentlemen have already been appointed and are at present pursuing their investigations in Great Britain. The personnel of the Committee consists of Mr. W. T. Ritch of Manchester, England and of Mr. W. A. Dryden of Brooklyn, Canada.

Mr. Ritch, though perhaps unknown to the members of the Sheep Breeders' Association has had familiar and honourable relationship with tradespeople in Canada for a period of years, having represented while in this country, certain English cloth manufacturers whose interests he served efficiently and acceptably. Mr. Ritch's experience has made him thoroughly familiar with the woollen industry in England and Scotland, with the wool markets and manufacturing districts of that country and has besides given him a general knowledge of the woollen trade including that in staple and shoddy articles and in the manufactured product both of England and America. He has visited also in a business capacity Australia and New Zealand and has made careful observations concerning the growing and marketing of wool in these two countries. Combined with his technical knowledge, Mr. Ritch has acquired a practical understanding of the growing and handling of wool on the farm and together with this has evidenced an enthusiastic and intelligent comprehension of what may be expected from the development of the sheep industry in Canada, thus commending himself to the attention of the Commissioner in connection with the appointment to the Committee. It is felt that Mr. Ritch will be able to place such information at the disposal of the Minister, his officers and of all interested in sheep breeding in this country as is likely to be particularly valuable in the furtherance of the scheme for the upbuilding of the industry which is now in contemplation.

The other member of the Committee, Mr. W. A. Dryden, of Brooklyn, Ontario, is very well known to the Stock Breeders of Canada. The present owner of Maple Shade has fallen heir to many of the qualities which gave his father so large an influence in his own province and, although as yet a comparatively young man, has acquired a knowledge of the stackman's art which has already brought him to the fore amongst Canadian breeders. Mr. Dryden's Collegiate and Agricultural education has been such as to bring him into demand in a more or less public way and, in recent years, he had been about Canada a good deal in connection with judging and other work under the supervision of the Live Stock Branch. Mr. Dryden's judgment is practical and his recognized popularity speaks well for the confidence which may be expected from his fellow breeders in his ability to perform, with credit to himself and them, the work which he has now undertaken. In combining the services upon this Committee of a practical sheep man with that of a technical expert the Department has reason to believe that the problems of production and of marketing, both as regards wool and mutton, will be studied and discussed in such close relationship that the results of the inquiry will most successfully serve the purpose for which it is undertaken.

After consultation with the Live Stock Commissioner the members of the Committee have, of course, been allowed the liberty of depending largely upon their own initiative in planning their route and in evolving the details of their investigations. The general production will, however, be somewhat as follows: Mr. Ritch preceded Mr. Dryden to England in order to attend a number of important wool fairs, in progress during August and Septemebr. There he will be in close association with wool merchants and with men interested or engaged in the woollen trade in its several branches and will thus be enabled to discuss with them in all its phases the various details in the industry in connection with both home and foreign matters.

Both members of the Committee are arranging to be present at the big late summer and autumn sheep sales which are annually held in the latter part of August, during September and in October. They will visit Smithfield and the larger meat markets of London and of other important cities. It is possible also that they will be present

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" Chicago, First National Bank.
" Boston, National Shawmut Bank.
" St. Paul, Second National Bank.
" Minneapolis, First National Bank.
" Duluth, First National Bank.

Winnipeg Branch: N. C. Leslie, Manager

at the annual ram sales at Kelso and at one or two other leading centres. This will bring them into intimate touch with sheep breeders, mutton raisers, dealers, butchers and provision men in all the important localities. It will give them an insight into conditions and methods as they prevail upon the farms throughout the country. It will direct their attention to the systems of marketing in operation in every stage of the business. It will furnish them with information concerning prices, profits and as to the extent and nature of the trade, and, in short, give them a knowledge of the great Sheep Industry of the United Kingdom and of the import trade in dead mutton and lamb. It is hoped that the investigations in Great Britain will put the Branch in possession of such information and of such facts and statistics as may enable it to intelligently assist in building up a great Canadian business in the raising of sheep and also in finding a place for the Canadian products of wool and mutton in the commerce of the world.

Returning to Canada, the investigators will visit all the provinces and interview prominent sheep men and manufacturers in order to familiarize themselves with the difficulties, drawbacks and defects in connection with conditions as they now prevail, and which have hitherto operated to retard the advancement of the sheep industry in the country. It is expected that they will gather information as to the injury inflicted on our agriculture through the decline of interest in sheep raising, that they will take note of the localities, where the growing of sheep could be most easily and profitably encouraged and that, bringing to bear the suggestions gleaned from their general inquiry upon the various phases of the situation as they find it in Canada, they will draft recommendations for the guidance of the Commissioner in farming in the very near future, such a policy as will prove in the best interests of the industry.

If time permits, Mr. Ritch and Mr. Dryden will also visit the United States. In many States of the Union, as compared with Canada, almost uniform conditions prevail, particularly as regards the advantages that are possible and which may be derived from an extensive sheep trade. Many single States own more sheep than are to be found in the whole of the Dominion and although to the south of the line there may be some discouraging features in the general situation, nevertheless there may be much in the way of suggestion to be learned from that country. Further, trade relationships between the two countries must always be more or less intimate and as the United States, notwithstanding a severe duty, imports annually from Canada a goodly quantity of wool, it would seem to be of direct advantage to have some specific information concerning the status of the trade in the former country and also as to its availability as a future market.

Canada has undoubtedly wonderful possibilities and large opportunities in connection with the development of its sheep population. The present investigations have been undertaken as preliminary to the adoption of a permanent scheme for the encouragement and upbuilding of the industry. In the belief that Canadian agriculture must of necessity suffer severely while sheep remain so few in number in the country. The Minister and his officers will not be satisfied until statistics show a return of at least ten times the present estimate and until sheep raising has established itself as a recognized factor in promoting the national prosperity.

PUT YOUR FEET IN A PAIR AT OUR RISK!

STEEL SHOES

Will Surprise and Delight You With Their Lightness, Neatness and Comfort —Their Almost Unbelievable Durability

We want you to slip your feet into a pair of Steel Shoes—to feel and see and know how much **lighter, neater, stronger,** more **comfortable** they are than any other work shoes in existence. Hence we are making this special **Free Examination Offer,** merely asking a deposit of the price, while you are "sizing up" the shoes. If they fail to convince you **immediately** you can notify us to send for them at our expense and we will refund your money.

Must Sell Themselves

Let them tell their own story. It's no sale unless, of your own accord, you decide that you **must have them.**

We ask no favors for Steel Shoes. Compare them with the best all-leather work shoes you can find. Give them the most rigid inspection **inside and out.**

Better Than the Best All-Leather Work Shoes

Steel Shoes are the strongest and easiest working shoes made.

There's more good **wear in one pair** of Steel Shoes than in **three to six pairs** of the best all leather work shoes. The leather is waterproof. The Steel Soles are **wear-proof and rust-resisting.**

They are lighter than all leather work shoes.

Need no breaking in. Comfortable from the first moment you put them on.

Impossible to get out of shape. They keep the feet dry. They retain their flexibility in spite of mud, slush or water. They cure corns and bunions, prevent colds and rheumatism—save doctors' bills and medicines.

Thousands of Farmers Shout Their Praises

The enthusiasm of users knows no bounds. People can't say enough for their comfort, economy, lightness and astonishing durability. The introduction of Steel Shoes in a neighborhood always arouses such interest that an avalanche of orders follows.

Here is the way Steel Shoes are made: The uppers are made of a superior quality of leather, as **water-proof as leather can be tanned.** Wonderfully soft and pliable—**never gets stiff!** The soles and sides are made out of one piece of special light, thin, springy, rust-resisting Steel. Soles and heels are studded with adjustable Steel Rivets, which prevent the bottoms from wearing out. Rivets easily replaced when partly worn. 50 extra rivets cost only 30 cents and should keep the shoes in good repair for at least two years! No other repairs ever needed. The uppers are tightly joined to the steel by small rivets of rust-resisting metal, so that no water can get between.

The soles are lined with soft, springy, comfortable Hair Cushions, which absorb perspiration and odors and add to ease of walking. (63)

Overwhelmed by the World-Wide Demand

The success of Steel Shoes is almost startling. Within three years we have established Steel Shoe factories in Racine, Wis.; Toronto, Canada, and Northampton, England. These great factories, running at full capacity, can scarcely keep up with the demand from all over the world. The public is rapidly learning that Steel Shoes are

GOOD FOR THE FEET! GOOD FOR THE HEALTH! GOOD FOR THE BANK ACCOUNT!

These shoes are better for the feet, better for the health, better for the pocketbook than heavy work shoes or rubber boots.

YOU ACTUALLY SAVE $5 TO $10 A YEAR

by wearing Steel Shoes. Figure it out for yourself. One pair will outlast 3 to 6 pairs of ordinary work shoes. They save all repair bills and keep your feet in perfect condition.

Free Examination

And your money Back Promptly if it Looks Better Than the Shoes!

You owe it to yourself to investigate. Get a pair of Steel Shoes for Free Examination by sending the price, which will be returned if you and your own feet are not convinced of their merits.

FREE!

Send for Book, **"The Sole of Steel,"** or order Steel Shoes direct from this ad.

For Men—Sizes 5 to 12

6, 9, 12 and 16 Inches High

Steel Shoes, 6 inches high, $2.50 per pair.

Steel Shoes, 6 inches high, better grade of leather, $3.00 per pair.

Steel Shoes, 6 inches high, extra grade of leather, black or tan color, $3.50 per pair.

Steel Shoes, 9 inches high, $4.00 per pair.

Steel Shoes, 9 inches high, extra grade of leather, black or tan color, $5.00 per pair.

Steel Shoes, 12 inches high, extra grade of leather, black or tan color, $6.00 per pair.

Steel Shoes, 16 inches high, extra grade of leather, black or tan color, $7.00 per pair.

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Boys' Steel Shoes, 6 inches high, $2.50 per pair.

Boys' Steel Shoes, 9 inches high, extra grade of leather, **black ortan color,** $3.50 per pair.

Why Wait? Send Now!

No risk! No bother! No obligation! Don't hesitate! Act while this offer is open! Simply state size of shoe you wear, enclose the price and get the shoes for Free Examination.

For **general field work** we strongly recommend our 6-inch high Steel Shoes at $3.50 per pair or the 9-inch at $5.00 per pair. For all classes of use requiring high-cut shoes our 12 or 16-inch high Steel Shoes are absolutely indispensable.

N. M. RUTHSTEIN, Sec. and Treas.
Main Factory, Racine, Wis., U.S.A.

STEEL SHOE CO., Dept. 459, Toronto, Canada
Great Britain Factory, Northampton, Eng.

A Farmer's Gold Mine.

Under the above caption the Massey-Harris Company Limited have put out a very interesting booklet on the Manure Spreader. It is full of valuable information for any farmer who gives any thought to taking care of the manure crop. Incidentally it gives a very good description of the Massey-Harris Manure Spreader.

A copy of this booklet can be obtained from any Massey-Harris agent.

Man is a born listener and when he can't buy a parrot he gets married.

FIELD COMPETITIONS IN ALBERTA

Competitions for fields of seed grain have been held by twelve Agricultural Societies in the Province of Alberta this year. The judging of these competitions is conducted by the Seed Branch of the Dominion Department of Agriculture. Complete reports have now been received from the various judges which are briefly summarized as follows:

Bowden Agricultural Society.

Judge, W. C. McKillican, District officer of the Seed Branch.

The Bowden Society held competitions in wheat and oats. In wheat there were four entries and the prize winners were:

1st J. C. Rasmussen, Bowden, Turkey Red Variety, score .. 92½
2nd Ed. Walton, Bowden, Turkey Red Variety, score 91
3rd Wm. Wilson, Bowden, Turkey Red Variety, score 85

The other competitor was Anderson Bros. with a field of Preston. The absence of noxious weeds was noted in the competition and there was less mixing of varieties than in some other districts. A little smut was observed due to neglect in treating seed.

In the oat competition there were only two entries:

1st W. J. Cranston, Bowden, Sensation variety, score 80
2nd Jas. Black, Bowden, Sensation variety, score 74

Owing to the erroneous idea that oats did not need to be treated for smut there is considerable smut.

Cardston Agricultural Society.

Judge: W. C. McKillican, District officer of the Seed Branch.

At Cardston there were competitions in winter wheat, spring wheat, and oats. The winter wheat competition was a particularly strong one, having twelve entries, many of them of high merit. The following in particular are worthy of comment:

1st D. E. Harris, Cardston, Turkey Red variety, score 91½
2nd J. A. Johansen, Cardston, Turkey Red variety, score 90
3rd R. W. Pilling, Cardston, Turkey Red variety, score 89½
A. C. A. Cazier, Cardston, Turkey Red variety, score 89
Albert Brown, Leavitt, Turkey Red variety, score 88½
A. J. Stoddart, Cardston, Turkey Red variety, score 88

Other exhibitors were: Wm. Duce; W. E. Bullock, R. G. Irwin, of Boundry Creek; R. A. Pilling of Kimball, Isaac Carlson, and S. M. Woolf.

Considering the exceptionally dry season the crop of winter wheat at Cardston is remarkably good. The most noticeable fault is that practically all the Turkey Red wheat is quite mixed with Bald varieties of inferior quality.

In the spring wheat competition there were four competitors:

1st D. E. Harris, Cardston, Preston variety, score 86
2nd Androse Woolford, Cardston, Preston variety, score 84
3rd C. B. Tanner, Cardston, Preston variety, score 80

There were three fields entered in the competition for oats:

1st C. B. Tanner, Cardston, Banner variety, score 86½
2nd D. E. Harris, Cardston, Banner variety, score 82
3rd L. N. Scott, Cardston, Banner variety, score 70

The spring wheat crops on the whole are rather light through the Cardston district but the competitors in this competition have made a fairly creditable showing. Most of the fields have been grown on summer fallow.

Innisfail Agricultural Society.

Judge: W. H. Fairfield, Superintendent Experimental Farm, Lethbridge, Alta.

The Innisfail Agricultural Society held competitions in wheat and oats. The number of entries in the wheat competition was five.

The following are the prize winners:

1st S. W. Fead, Innisfail, Turkey Red variety, score 90
2nd G. M. Stevenson, Innisfail, Turkey Red variety, score .. 86
3rd Albert Lougheed, Bowden, Turkey Red variety, score 85

Other competitors were: E. W. Mackenzie-Grieve and H. B. Moore. The fields in this competition were comparatively free from the noxious weeds but there is room for improvement in the purity of the varieties.

In the oat competition there were four entries:

1st A. Lougheed, Bowden, Sensation variety, score 80
2nd A. B. McGorman, Innisfail, Banner variety, score 78
3rd J. A. Simpson, Innisfail, Banner variety, score 76

The field of the other competitors, J. E. Kitley was disqualified for barley and mustard. The competition as a whole showed considerable mixing of other grains with the oats.

Lacombe Agricultural Society.

Judge: W. H. Fairfield of Lethbridge.

There were five competitors in the wheat competition at Lacombe. The prizes were awarded as follows:

1st P. R. Talbot, Lacombe, Turkey Red variety, score 87½
2nd J. M. Southward, Lacombe, Turkey Red variety, score.... 87
3rd B. F. Bailey, Lacombe, Turkey Red variety, score 80

Other competitors were Albert Redel and A. Hume.

A fairly good yield will be harvested from these fields. There is room for some improvement in the purity of the variety.

In the oat competition at Lacombe there were six competitors and the prize winners were:

1st P. A. Switzer, Lacombe, Abundance variety, score 90
2nd E. W. Simpson, Lacombe, Banner variety, 2 86
3rd J. M. Southward, Lacmobe, 2 85

Other competitors were: Jas. H. Grose of Clive, A. F. McGill, Clive, and H. J. Northcott. Some very heavy yielding fields were in this competition particularly the first prize field. They are comparatively free from weeds but there is room for improvement in the purity of the varieties.

Leduc Agricultural Society.

Judge: Albert Lougheed of Bowden.

Seven competitors entered in the wheat competition at Leduc. The prize winners were:

1st S. W. Shankel, Leduc, Turkey Red variety, score 81
2nd H. Grubert, Leduc, Turkey Red variety, score 80
3rd A. J. Martyn, Leduc, Turkey Red variety, score 73

Other competitors were: Thos. Hull, Jas. Gregg, Andrew Fjell, and F. J. McRae.

Weeds are getting a strong hold through this district. There is also a considerable amount of impurities in the wheat. However, the land is well cultivated and as a result of thorough treatment of the seed there is very little smut.

There were ten competitors in the oat competition, with the following results:

1st Jas. Stubbs, Leduc, Abundance variety, score 83½
2nd F. J. McRae, Leduc, Abundance variety, score 70½
3rd Jas. Dalgarno, Conjuring Creek, Abundance variety, score 69½

The other competitors were: Jas. Gregg, Conjuring Creek; H. Grubert, Leduc; J. J. Alpaugh, Conjuring Creek; Frank Barchert, Saron; Frank Halley, Glidehurst; A. J. Martyn, Leduc; and Thos. Hull, Leduc.

Weeds are the chief trouble in this competition. Wild Buckwheat and Ball Mustard are quite prevalent. The first and second prize crops and some of the others will give a very good yield.

Lethbridge Agriclutural Society

Judge: Hugh Mackintosh of MacLeod.

The Lethbridge Agricultural Society held competitions in winter wheat, spring wheat, and oats. The number of competitors is rather small, there being only two in each class. In the winter wheat the prizes were awarded as follows:

1st Ben. James, Lethbridge, Turkey Red variety, score 96
2nd Pawson Bros., Coaldale, Turkey Red variety, score 87½

The spring wheat is as follows:

1st Pawson Bros., Coaldale, Red Fife variety, score 92½
2nd J. Davidson, Coaldale, 2 92

These crops all were very free from noxious weeds and the average purity was better than in a greater part of the province.

In oats the awards were:

1st Pawson Bros., Coaldale, Banner variety, score 95½
2nd G. Russell, Lethbridge, Scottish Chief variety, score 94½

These excellent crops of oats are grown on new land and on irrigated farms. They are both reasonably pure from weeds and from other grains.

Lloydminster Agricultural Society.

Judge: Albert Lougheed of Bowden.

The Lloydminster Society had a competition in wheat only but had the distinction of having the largest number of competitors of any in the Province. There were twenty fields entered in the competition. The prize winners were:

Send Your Name
for our
Fall Bulb Catalogue

(Mailed in August)

Tulips, Scillas Siberica, Hyacinths, Narcissi, Chinese Sacred Lily, Lillies, etc., etc.

And your name will also be added to our list for regular Seed Catalogue, mailed in January.

Steele Briggs Seed Co., Limited
Winnipeg, Canada

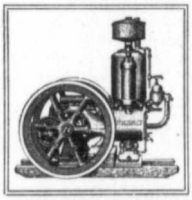
SHOOTING OUTFIT No. 47C

PRICE
$17.00
with Express Charges Paid

The above outfit consists of a fine quality double-barrel breech-loading gun, 12 gauge, with Damascus barrels Greener cross-bolt and patent fore end. The left barrel is choke bored for long range shooting. With it go a complete reloading outfit, including loader, rimmer, de-capper and re-capper, powder and shot measure and shell extractor, also 25 loaded shells any sized shot desired. We guarantee satisfaction or money refunded. Remember we prepay the express charges to your nearest railroad point.

The Hingston-Smith Arms Co., Ltd.
Firearms and Sporting Goods *Winnipeg*

THE POWER FOR FALL PLOWING AND THRESHING
is the celebrated
"Flour City" Gasoline Tractor
Twice Gold Medal Winner.



The Engine for General Work around the farm for Fall and Winter is the famous
"STICKNEY"
—for eight years the leader. Why? Because it has more points of merit than others and gives no trouble to its owner.

The Canadian Airmotor Power Mill is still the cheapest of all Powers for the farmers.

Our Lines of Well Drills and Augers are the largest in Canada. They are in great demand and are big money makers. An excellent line for an enterprising man to take up just now. Catalogues describing the above on application also our Grinders, Saws, Pumps, Tanks, Troughs and Aylmer Scales. Write us to-day.

ONTARIO WIND ENGINE & PUMP CO., LTD.
Winnipeg, Toronto, Calgary

Farmers!
We handle your Grain on a Strictly Commission basis. Consign your Grain to us and get the very best prlce.

WILEY & CO., Limited
(Licensed and Bonded) 220 GRAIN EXCHANGE, WINNIPEG
We also handle Option Orders

Parsons Hawkeye Mfg. Co.

SEE THEM EVERY WAY YOU LOOK

SUCCESS BELT GUIDES.

CANVAS AND RUBBER DRIVE BELTS.

GLARE GAS HEADLIGHTS.

MYERS' NEW TANK PUMPS.

SUCTION AND DISCHARGE HOSE.

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HAWKEYE DETACHABLE MANURE SPREADERS.

MADISON-KIPP OIL PUMPS.

WATERLOO GAS ENGINES.

PASTIME WASHING MACHINES.

ACME PORTABLE GRAIN ELEVATORS.

NOTHING BUT THE BEST GOODS AND THE PRICES ARE RIGHT

Parsons Hawkeye Mfg. Co.

WINNIPEG, CANADA

1st W. M. Kiduff, Lloydminster, Stanley variety, score 84
2nd Rackham & Smith, Lloydminster, Preston variety, score .. 83½
3rd J. Gillyean, Lloydminster, Red Fife variety, score 83
4th F. E. Rowbottom, Fartown, score 82½

The other competitors were: W. Garford, Marshall; Jas. Almond; Hugh Hill; J. A. George, J. T. Hill, Jos. Hoggson, Frank George, Harper & Son, C. O. Slowe, J. B. Freer, Wm. Maine, Drew Bros., W. G. Hunt, H. Hume, E. A. Bird, Harold Smith, B. F. Boden, all of Lloydminster.

The Preston variety is the one most largely grown around Lloydminster. There are also a number of fields of Red Fife and one each of Stanley and Huron. There were fewer noxious weeds in this district than in any other visited by this judge.

MacLeod Agricultural Society.

Judge: Thos. H. Woolford of Cardston.

The MacLeod Society offered prizes for winter wheat, spring wheat, and oats. In the winter wheat competition there were nine entries. The following were the best fields.

1st H. G. Long, Macleod, Turkey Red variety, score 93½
2nd R. Latinga, Macleod, Turkey Red variety, score 93
3rd W. J. Glass, Macleod, Turkey Red variety, score 92¾
T. J. Stapleton, Macleod, Turkey Red variety, score 92½
J. Maloney, Macleod, Turkey Red variety, score 90¼
P. Stapleton, Macleod, Turkey Red variety, score 90

Other exhibitors were: C. Grier, W. A. Day, and D. L. Mudiman.

The crops in this competition were exceptionally good as regards freedom from weeds and other varieties, and smut. The yield is also good considering the unfavorable year. All these crops were grown on new land or summer fallow.

In the spring wheat competition there were ten competitors with the following results:

1st Geo. Wells, Macleod, Red Fife variety, score 88
2nd J. R. Jacob, Macleod, White Fife variety, score 87
3rd W. H. Wilkinson, Red Fife variety, score 86

Other exhibitors were Hugh Mackintosh, Colin Campbell, A. R. McFadden, Purdy Bros, E. O. Wintermute, J. A. Struthers, and Ed. Westhaver.

Spring crops are rather light throughout this district on account of the extreme drought. Wild oats are also gaining ground. The showing however is very creditable considering the very unfavorable season.

In the oat competition there was only one entry:

1st John Maloney, Macleod, Banner variety, score..... 78

Medicine Hat Agricultural Society.

Judge: Hugh Mackintosh of Macleod.

The Medicine Hat Agricultural Society held a competition for wheat. There were six entries and the awards were:

1st G. H. Lait, Gros Ventre, Red Fife variety, score 90¼
2nd C. Putman, Gros Ventre, Turkey Red variety, score 89½
3rd J. Robinson, Jophesburg, Red Fife variety, score 88¾

Other competitors were: W. Putman, Gros Ventre; A. Wooley, Medicine Hat; G. Grieve, Medicine Hat.

Considering the extreme drought that has prevailed it is remarkable that as good a showing could have been made by these farmers. All the crops were grown on summer fallow.

Raymond Agricultural Society.

Judge: Thos. H. Woolford of Cardston.

There were three entries in the winter wheat competition at Raymond:

1st Henry Holmes, Raymond, Turkey Red variety, score 92½
2nd Brimhall Bros., Raymond, Turkey Red variety, score 90¾
3rd Smith Bros., Raymond, Turkey Red variety, score 89¾

The judge remarked on the large heads noticeable in these crops and the entire absence of smut. Tumbling Mustard is rather prevalent through the district and was the chief objection.

In the spring wheat competition there were three entries:

1st J. G. Stevenson, Raymond, Red Fife variety, score 85½
2nd J. F. Salmon, Raymond, Red Fife variety, score 80
3rd Wm. Spackman, Stirling, Red Fife variety, score 77

Spring wheat crops are rather light. They are however early in maturing.

In the oat competition there were two entries:

1st Henry Holmes, Raymond, Banner variety, score 83
2nd Wm. Spackman, Stirling, Swedish Giant, score 75

Sedgewick Agricultural Society.

Judge: W. C. McKillican, District Officer of the Seed Branch.

The Sedgewick Society had competitions in wheat and oats, and had the largest number of competing fields of any Society in the Province. There were fourteen in wheat and eight in oats, making a total of twenty-two. The prize winners in the wheat competition were:

1st E. N. Swisher, Bellshill, Red Fife variety, score 92½
2nd Wm. Lowe, Sedgewick, Red Fife variety, score 89
3rd D. McNabb, Sedgewick, Kharkoff variety, score 88½

The other competitors were Fred Fisher, Lougheed; D. McIvor, A. M. McKee, Arthur Bejaul, . L. Sparrow, W. J. Grey, Lougheed; P. D. Sinclair, W. I. Sharpe, Geo. Sinclair, Jas. A. Russell, D. A. Bickell, all of

Continued on page 59

ABSORBINE

Cures Strained Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Sores, Wire Cuts, Bruises and Swellings, Lameness, and Allays Pain Quickly without Blistering, removing the hair, or laying the horse up. Pleasant to use. $2.00 per bottle at dealers or delivered. Horse Book 5 D free.

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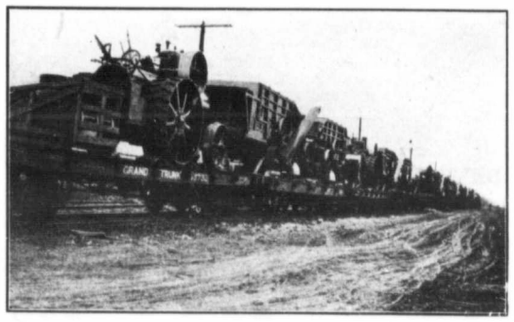
COCK O' THE NORTH

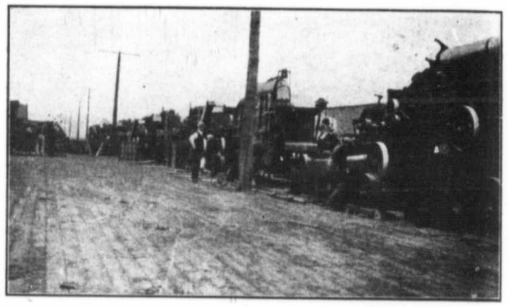
TRACTION AND THRESHING MACHINERY ON ITS WAY TO THE USER

TRACTION MACHINERY IN THE HANDS OF THE USER

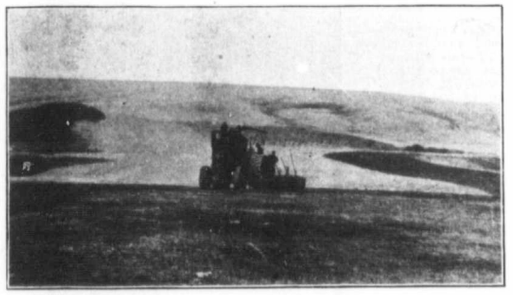
In every case whether it be in the factory at the wareroom, en transit or in actual use in the field you will always find Cock o' The North Traction and Threshing Machinery "The biggest of the bunch." It is always in front and away in the lead. "It is Cock o' the Walk."



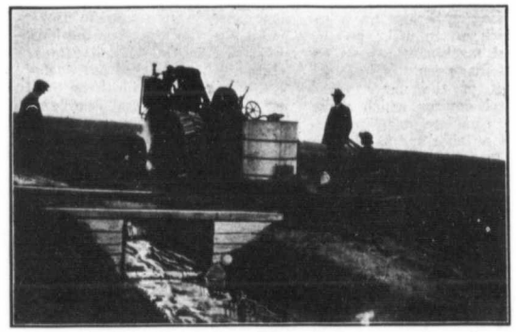
A bird's eye view of a special through train load exclusively made up of American-Abell machinery, shipped from our factory and arriving at Winnipeg on 16th August. This photo is a snap-shot taken in the C. P. R. yards at Winnipeg on their arrival. These photos give some slight idea of the increased demand for our popular special plowing engines and the famous "Cock o' the North" line of threshing outfit.



This cut shows our loading platform at Winnipeg. The picture gives a rough idea of the facilities at our disposal for carefully and expeditiously handling the enormous business that is passing through our hands at this world-renowned distributing point. We doubt whether any shipper of heavy freight handles the bulk of materials in any line that is represented by the output of the "Cock o' the North" line of American-Abell Engine and Thresher Company at Winnipeg.



On the banks of Knee Creek, "Westview Ranch," farm of D. I. Pope and Son, Carbon, Alta. (65 miles n e. of Calgary), showing an American-Abell 26 h. p. Plow Engine converting this famous stock-ranch into a modern grain-growing farm.



Taking water from the great C.P.R. irrigating canal ditch 25 miles east of Calgary. See affidavit of Dixon. This engine has more efficiency than any plowing engine working in Western Canada.

American-Abell E. & T. Co. Ltd.,
Calgary, Alberta.

Gentlemen:—I have run one of your 26 H. P. engines for five days for H. C. Gardiner, of Delroy, Alta., breaking prairie sod that has not had any rain for the season and made what I call an exceptional record. I have run plow engines of different makes for seven years previous to this year and consider this the best engine I ever run.

I make the above affidavit which you have my consent to use if it is of any benefit to you.

(Sgd) W. R. Dixon.

This photograph is the best camera picture we could obtain, under exceedingly cramped conditions, of 17 cars of machinery shipped from our warehouse in Winnipeg on the 8th of August. We make many shipments of ten cars or over a day and the grand aggregate at the end of season is an impressive sight even to men who are themselves accustomed to handle a large bulk of Western traffic.

Provost, June 1st, '10.
The American-Abell Engine & Thresher Co., Edmonton, Alberta.

H. S. Bowden, Esq.

Dear Sir:—In reference to the 26 H. P. engine which we purchased from you last summer, would say that she is a first class plowing or threshing engine.

We are pulling 8 fourteen-inch plows and could pull ten if we had them. She handles eight with ease in heavy gumbo. We have broken this season about seven hundred acres and have not had to spend one dollar in repairs. As a steamer she is all that could be desired.

Yours truly,
(Sgd) L. H. & G. A. Mieklejohn.

Scott, Sask, June 7th, 1910.
American-Abell E. & T. Co. Ltd., Regina, Sask.

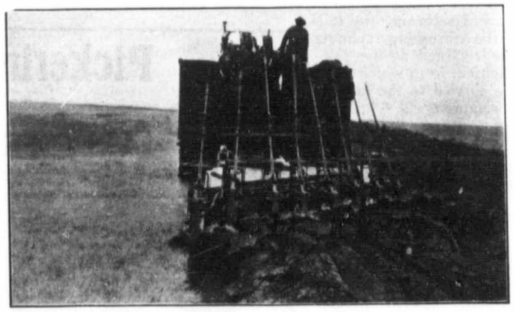
Dear Sirs:—I have been somewhat slow in writing you in regard to our 32-horse power engine purchased from you this spring, thinking I would give her a thorough trial before crowing over the fact that we have others to beat. To say that we are pleased and satisfied with her is putting it mildly because she will sure plow. We are hauling ten plows where we could just as well handle twelve. Thirty or thirty-five acres per day is a walk-away. We have just finished one section and will begin the next tomorrow.

Steam plowing is no experiment if you have the power we have, with everything as handy, especially the gear pump, coal bunkers and water tanks on this engine.

We make two miles without stopping, then only to take coal and water which only takes a few minutes. The two syphons for unloading water make it easy for the water man.

You need not be afraid to put this engine in the field with them all. I think she is rightly named "The Cock o' the North Line."

Yours respectfully, The Ann Arbor Saskatchewan Realty Co.
Per (Sgd) C. B. Smith,
Manager.



A 32 h. p. American-Abell Plow Engine at work on the farm of W. A. Kilgour, Moose Jaw, Sask.

Gleichen, April 28, '10.
American-Abell E. & T. Co. Ltd., Calgary, Alberta.

Gentlemen:—Enclosed find our marked cheque for $625.00 being payment in full for the Drummond engine we purchased from your Mr. Cooper last March. In addition to this we have paid the freight from Toronto to Strathmore.

You have asked us to let you know of any defects we might find on this engine, but we wish to say that there is none, except that the steering device worked a little stiff at first but has since loosened up, and is now alright.

We have given this engine as hard a test as an engine ever received as the land we are plowing is very tough and hilly, but we have hauled ten 14-inch plows, 4 inches deep up a hill that would raise 25 ft. to the 100, without any apparent extra effort on the part of the engine.

The bull gear is alright as it takes that quiver out of the counter shaft which is always there on engines where the cogs of the bull gear go right across.

The power feed pump solves a long felt want with plowing engines, and we have decided to take off the duplex steam pump as we have never used it.

In our 15 years' experience with engines we have never seen as easy a steamer as this one; we also find her very light on fuel and water, as we have gone two miles plowing with the ten plows and we only used the coal that was in the chute. The engine is in every way satisfactory to us and we consider we have an engine that will do the work she is built for.

Wishing the Company the success they deserve for turning out the first successful plowing engine we consider that has been built.

Yours truly, Klaus & Goldsmith.

We Have Told You What We Do. We Have Shown You What We Can Do. It is up to You to do The Rest

WRITE US FOR CATALOG

American-Abell Engine and Thresher Company, Limited.

TORONTO REGINA WINNIPEG CALGARY EDMONTON

We Represent **THE ADVANCE THRESHER CO., BATTLE CREEK, MICH., AND THE MINNEAPOLIS THRESHING MACHINE CO., HOPKINS, MINN.**

Practical Talks to Threshermen

Conducted by PROFESSOR P. S. ROSE

TALK No. XXXVIII.

The early experimental work on threshing machines was done in Scotland, but in this as in most other great inventions, no one country or one individual is entitled to all the credit. While the correct fundamental principles of threshing were worked out across the sea, it remained for American inventors to perfect all the numberless small details which go to make up the successful machine that we are today familiar with. In fact, the perfecting of the many small mechanical devices which make up any complete machine requires more labor and as high an order of genius as it does to conceive the original crude idea. Indeed, in talking with some of these later day inventors and listening to their tales of unexpected difficulties met with and the experimental work which they performed before achieving final success, I am inclined to think their task was the harder. Some of these difficulties will be taken up and discussed in subsequent lessons when we begin studying the various details of the complete machine.

It is not definitely known whether the first threshers used in this country were made here or imported from Europe. In any event they were rather crude, simple affairs.

It is reported that as early as 1825 there were some simple threshers used in the United States, but it was not until three years later that the subject appears to have attracted the attention of inventors very seriously. About that time a man named Samuel Lane of Hollowell, Maine, took out a patent on a traveling thresher fitted with harvesting attachments. Another patent was issued to the same inventor four years later, but neither proved commercially successful and are mentioned herein merely to fix the date of the active improvement in this line of machinery.

The first inventors of note, whose work influenced all subsequent development, were two brothers, Hiram A. Pitts and John A. Pitts of Winthrop, Maine.

Their first invention in 1830 was an improvement on a tread power which afterward became quite popular throughout the New England states for operating the old-fashioned "ground hog," "bull threshers," "bob tails," "chaff pilers," etc., as the old open cylinder machines were variously called. These machines were simple affairs which merely threshed the grain out of the straw without doing any separating. All the chaff and grain fell at the rear of the machine where it was afterward cleaned in a fanning mill after the coarser stuff had been removed by hand labor with the use of forks.

It was while operating one of these old "ground hogs" that Hiram Pitts conceived the idea of combining it with an ordinary fanning mill. This had been done some years before in Europe but it was the first time the idea was tried in the United States. This idea was worked out in detail by the Pitts brothers during a period of several years and in 1837 they were granted a patent. This was the beginning of the "endless apron," or "great belt" separators as they came to be known. This machine contained most of the fundamental features of the present day machines. It was provided with a "beater" and "picker." The endless apron ended at the "picker." Both beater and picker were armed with spikes and resembled those in use at the present time. The purpose of the picker was to throw the straw from the machine. This machine was also provided with a tailings elevator, but instead of returning the tailings to the threshing cylinder they were retained at the sides of the machine, from which point they were carried to the fanning mill for refanning.

From this time to the present day there has been constant improvement in the threshing and separating devices of grain separators. The Pitts brothers blazed the way for all other inventors of this class of machinery. Both brothers continued in the business until they died. Hiram A. Pitts finally went to Chicago and engaged in the manufacture of the old "Chicago Pitts" separator, which became well and favorably known all through the grain growing section of the country. John A. Pitts finally went to Buffalo and engaged in the manufacture of the Buffalo Pitts machines. This company became incorporated in 1877 and in 1880 began the manufacture of threshing engines.

The Chicago Pitts concern went out of business many years ago, but the Buffalo Pitts Company is too well known to all of my readers to need any further comment. Hiram Pitts died in 1860 and John Pitts in 1880.

The most important and, I may add, almost epoch making improvement in separating machinery was the introduction of the vibrating principle. There was not very much difficulty, even at this early date, in getting the grain out of the heads, but to get all of it out of the straw

All Leading Jobbers and Threshing Engine Manufacturers

Throughout the country carry complete stocks of

The GANDY ENDLESS THRESHER BELTS

No matter where you are located you can obtain them readily. You are guaranteed immediate shipment of any regular size. Made by the inventors of The Gandy Stitched Cotton Duck Belting, and used throughout the United States. The first canvas thresher belt on the market as well as the best. Guaranteed absolutely as to material and workmanship.

Write for free booklet: "Experiences with the Gandy Belt," giving full information.

But write *now* before you forget.

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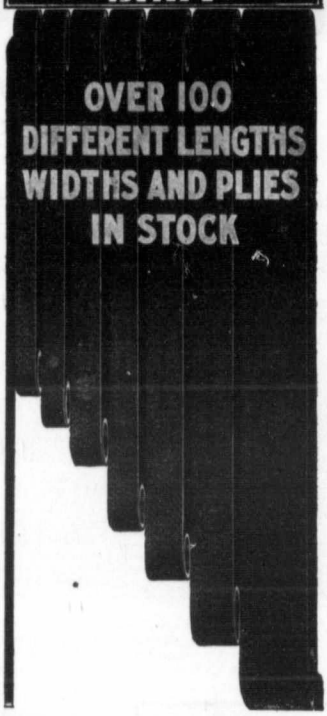
OVER 100 DIFFERENT LENGTHS WIDTHS AND PLIES IN STOCK



Pickering Governors made for Every Build of Engine

A Record Breaker for Output and Reduced Operating Expenses

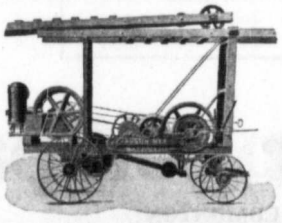
Did you ever figure your Expenses for stopping to fix up that Governor that was causing all your trouble and then the fixing did not last?

PATENT BALL RANGER SPEED CHANGER SUPPLIED ON ALL GENUINE PICKERING GOVERNORS

If you have Governor troubles write

The Pickering Governor Co.
PORTLAND CONN., U.S.A.

Austin Well Drilling and Prospecting Machinery

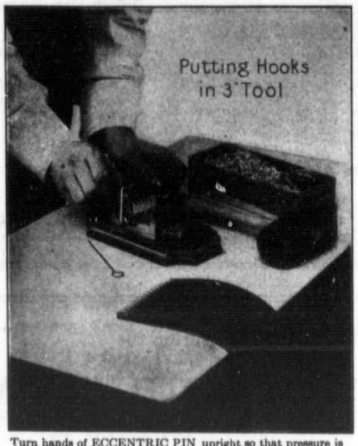


Rock Drilling Hydraulic Jetting or Hydraulic Rotary Machines to drill any depth in any formation. Operated by Steam or Gasoline Engines or Horse Power.

WRITE FOR ILLUSTRATED CATALOGUE NO. 15
Our Line Includes Steam and Gasoline Traction Engines, Sieveless Separators and Supplies
Burridge Cooper Co. Ltd., 156 Lombard Street, Winnipeg

Something New For Every Thresherman

Clipper Belt Lacing Outfit



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

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

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

"Dreadnought"

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

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

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

Dealers wanted in every locality.

THE GENERAL SUPPLY CO. OF CANADA, Limited

Woods Western Bldg., Market St. E., Winnipeg

was a problem. It was comparatively easy to get the most of it.

The European machines with a series of pickers accomplished this. So did the early Pitts machine with their inclined belt and pickers, but the trade demanded perfection and this was the problem inventors spent sleepless nights over.

To save all the grain—that was the problem. The Pitts experimented some with a vibrating device in the early "thirties" in connection with the old "ground-hog" threshers, but it remained for later experimenters to prove that this was the correct principle.

The pioneers in the development of this principle were John Cox and Cyrus Roberts. About the same time that most adventurous spirits were wending their toilsome way across the Great Plains to California they were building "ground hog" threshers at Belleville, Illinois.

In experimenting with a separating device to be applied to these machines they hit upon the idea of an inclined platform, built of lumber, with side boards attached. The bottom of the platform was bored full of holes and was given a longtitudinal motion by means of a crank and pitman. This aided the "forkers" at the rear of the machine and effected partial separation, but of course it was not wholly successful. This principle was developed during the next ten years and in 1852 Mr. Roberts took out a patent on the device. Later on, the machine was further perfected, the fanning mill was added and a really first rate machine was constructed which went on the market as the Cox and Roberts thresher.

The principle involved in this machine was not fully recognized as being the correct one until some years later, when in 1858 the Nichols & Shepard Co., of Battle Creek, Michigan, began manufacturing them, the original firm of Cox and Roberts having gone out of business.

In the original Nichols & Shepard machine there was but one shaker and the plan was to allow the straw to pass back from the cylinder upon a series of fingers which lifted and tossed the straw, somewhat as a man might toss the straw with a fork —these fingers having a sudden up and down motion. With only one shaker the machine had considerable end shake but this was largely overcome by putting in another shaker operated by a crank having its "throw" opposite to the first one. This machine was christened by Mr. John Nichols "The Vibrator." From this time on he gave it his undivided attention and in many ways perfected the mechanism.

In 1867 the Aultman & Taylor Co., of Mansfield, Ohio, through a Mr. Taylor, obtained an interest in the vibrator patents and also began the manufacture of a vibrator machine.

Up to this time two types of threshers had been evolved. The endless apron thresher and the vibrator. The former was modified to some extent by Westinghouse and Wemple, who substituted a raddle working over square tumblers which gave the straw a vertical as well as a horizontal motion. Others made the raddle travel over eccentric rollers which served the same purpose.

Both types of threshers had considerable merit, but in the end the vibrator principle with many modifications and improvements triumphed, and practically all threshers at the present day make use of the principle.

It required many years of close study after this before ultimate success was obtained. In fact, it was not until some time in the "nineties," more than sixty years after the first patents were issued in this country, that we see what might be called a perfect thresher. Previous to this time experimentation and change were the order of the day. In the nineties, however, we may say, that for the first time the grain thresher became standardized. Weighers, feeders, blowers, etc., were perfected during this decade and the perfected machine as we know it today came into being. There have been some improvements since and there will undoubtedly be more in the future, but the heavy work is done.

In our next lesson we will take up a discussion of some of the details of the separator as we know it today. In this brief account of its birth and growth we have omitted the names of many men and companies that contributed very largely to the detvelopment of the perfected machine, and have only mentioned a few whose efforts stand out pre-eminently.

In a series of lessons like these it is not the purpose of the writer to go very deeply into the history of the subject, but rather to take up the subject from the operator's point of view. However, a brief glimpse into the history of the separator seemed advisable at this point. As the lessons progress we hope to be able to enliven the story by personal reminiscences of some of the men who have been active in the development of the machine.

Take away some men's money and there would be precious little left.

A promoter is a man who counts his chickens before they are hatched.

Don't pay a man to be good—he will never earn his salary.

There is a lot of time wasted by folks in trying to be miserable.

It's wasting time to try to explain why you failed. Get busy and make good.

Strange, isn't it, that little girls always smile and little boys always grin?

The Thresherman's Question Drawer

Answers to Correspondents

G.R. **Q.** When engine is being laid up for the winter is it best to take off cylinder head and steam chest cover and oil cylinder and valve seat, or can you oil them well enough by turning on lubricator heavily and running engine with cylinder cocks open for a few minutes?

A. A good plan to oil the cylinder and valve is to run the engine slowly and turn the lubricator on as fast as it will run; keep this up about the last five minutes you run the engine.

Then drain the cylinder and steam chest thoroughly, and there is no harm which will come to it. If, however, the engine must stand idle for a great length of time, the cylinder head and steam chest cover can be taken off and cylinder oil applied to the cylinder and valve face. Cover the exposed surface of the cylinder and valve face with oil, then turn the engine by hand until the oil is carried under the piston and valve so the whole surface of the cylinder and valve seat may be covered. Then replace the cylinder head and steam chest cover, and it will keep from rust a long time.

R.P. **Q.** How would you babbitt the crosshead shoes to raise them in line with the line through the cylinder?

A. To babbitt the crosshead shoes, first see that the guides are in line with the cylinder, then block the crosshead up so that the piston rod is in line with the guides. This can be done by placing the crosshead to the far end of the guides, then by measuring from the lower guide to the rod at both ends you can get it in line. Do not try to get the rod centered with the top and bottom guides, but simply in line with either the top or the bottom. The metal can be then run in, and after dressing it off proceed to test it by watching the running of the piston rod at the stuffing box. If the rod runs through the stuffing box without any vertical or cross motion, the guides are in their proper place. If the rod moves in an upward direction at the stuffing box as the crosshead approaches the stuffing box, this will indicate that the guides are too high; but if the rod moves in a downward direction while the crosshead approaches the box, this indicates that the guides are too low. The same rule will apply to any side motion which the rod might have. A close observer can readily determine which way to move the guides by the motion of the rod.

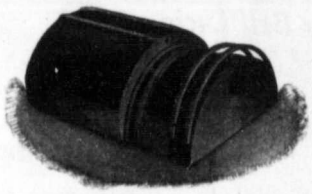
A.B. **Q.** What is the matter with my governor? It is a Water's, 1½ inch. I cannot make it run the engine slow enough when doing light work, such as sawing wood. The stem seems to be long enough, as I can screw the valve down to bottom of seat. Should the valve have a solid bottom or an open one? This valve is open at the bottom. It will let the engine run from three to four hundred revolutions per minute. It will hold the engine when doing heavy work, but does not govern it well.

A. The plan of changing the speed with a Water's governor is the changing the valve. When a slow speed is required the valve is screwed down into the seat, thereby cutting off the steam with but little movement of the balls and springs. The valve opens but little in this case and there is not much power in the engine. When the governor valve is set to run the engine faster the valve is set to open farther, thus having to move the balls and spring farther. To get better results at a low speed the better plan is to put a smaller pulley on the governor; the valve can then be set to open farther.

G.Y. **Q.** The flywheel on my engine runs out sidewise. I was told that I could get it true by refitting the flywheel key, but am unable to get the key out. Can the wheel be straightened any other way?

A. You can pene the arms to make it true. By this we mean to stretch the surface of one side of the arms which will bend them. While the engine is running, hold a piece of chalk against each side of the rim of the wheel, thus marking the projecting part of the rim. Now turn the mark on the side next to the boiler down, or at a convenient place so as to get a pry between the boiler and the flywheel at the middle of the chalk mark. This will put the wheel on a strain in the direction in which it should go. Now strike the arms close to the hub, in line with the chalk mark, with a pene hammer, so as to stretch that side of the arms; then go to the other side and pene the other half of the arms in line with the chalk mark on that side. The stretching of the arms on both sides will tend to get the wheel true. Give it a moderate amount the first time and rub the chalk mark off and remark it, keeping close watch as to the effect it is having. The wheel is so easily bent in this way, that one is liable to give it too much the first time. If it is bent too much it can easily be sprung back with the pry or it can be bent back by peneing on the other side of the arms.

The Gould Balance Valve



The only successful Balance Valve placed on a traction engine.
Guaranteed to increase the power from 18 to 30%.
Warranted for five years.
Over 500 different styles and makes of valves in stock.
No measurements required.
Shipment can be made promptly on receipt of order
Agents Wanted.

Geo. White & Sons Co., London, Ont., Manufacturers in Canada.

Gould Balance Valve Company, Kellogg, Iowa, U.S A.

We Are Manufacturing the

IMPROVED STRAW FUEL MACHINE

This machine takes the straw in at one end and is conveyed to rollers and is rolled into bundles 4 ft. long and anywhere from 2 to 6 ins. in diam. Instead of the farmers burning their straw in stacks they can have it all rolled and have all the fuel they want. No need of hauling fuel miles when they have it on there own farms.

Dixon Bros'. Foundry and Machine Works

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12 GAUGE
Repeating Field Shotgun

THE Marlin

Weighs only about 6½ lbs. and is the lightest and quickest handling 12 gauge repeating shotgun in the world. It is perfectly balanced, built extra light, but strong, of extra quality material. It has Circassian walnut stock; highly-polished, smooth-working mechanism; and the Special Smokeless Steel barrel for exceptional shooting ability.

In this 12 Gauge Field gun and the other 12 and 16 gauge *Marlin* shotguns, the solid top and side ejection protect mechanism from inclement weather, twigs, leaves and dirt. Keep powder from being blown back in your face; allow for six quick repeat shots. They have fewer parts, built simpler and stronger than in other repeaters; the safety locking devices, automatic recoil block, closed-in breechbolt, take-down construction and other up-to-date features make Marlins the best "pump" guns in the world.

Send today for the free 136 page catalog describing the full *Marlin* line. Enclose 2 stamps for postage.

The Marlin Firearms Co.
105 Willow Street New Haven, Conn.

Sawyer Drive Belt

Is Not The Same

As Any Other Belt

It lasts longer. The Lap NEVER comes apart. It never gets Stiff in Cold Weather. Dont cost a bit more.

Write for Book "L"

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CLEVELAND, OHIO.

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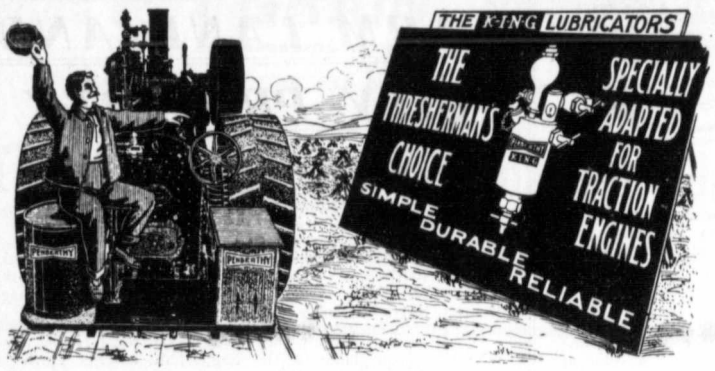

The Kind of a Lubricator You Need This Season

BECAUSE It is specially designed for Traction and Portable Threshing Engines. Easy to attach—easy to operate—simple and reliable. Will work in cold weather.

THE SIGHT FEED Features will appeal to you because it is just what you have always wanted. It is an up-drop oil feed and the glass is where you can see it, at the top ofthe cup. The glass will not break easily and can be quickly removed by unscrewing the cap above it.

THE DRAIN VALVE Cannot Jar off as it can unscrew only far enough to allow the water to run out.

THE FILLER PLUG Is fastened to the cup by means of a chain.

THE CUP Is made of the best steam metal and is guaranteed to give you the best of satisfaction. Remember the name KING and specify it when you buy Lubricators.

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THE PENBERTHY INJECTOR Co., Windsor, Ont.

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M.L. Q. At a recent assemblage of engineers in our vicinity the question arose as to the difference in pressure at different parts of the boiler; i.e., any square inch in the dome and any square inch in the bottom of the boiler when the steam guage registers 100 lbs. pressure.

A. There will be more pressure in the bottom of the boiler due to the height of the water. At 100 lbs. of steam (gauge pressure) the temperature of the water would be about 337.8 degrees. At this temperature the water will weigh about 0.347 lbs. per square inch of one foot in height. For example, if the water is four feet high in the boiler, the weight of the water per square inch would be 4x0.347 or 1.388 lbs., which added to the 100 lbs. of steam would be about 101⅜ bs. pressure on the bottom of the boiler when there is 100 lbs. above the water line.

M.C. Q. How can I set or change a pop valve with two hexagon nuts at top?

2. In a cylinder used six years is it better to buy new rings or have some made large at shop? The cylinder is cast to engine frame, which is fastened to boiler with cap screws and it is almost out of question to remove it here for reboring.

3. Will you give directions for operating a Moore steam pump and kind of packing to use?

A. You will find on the valve a bolt head and jamb nut. Loosen the nut and screw the bolt down for more pressure and then make tight the jamb nut. About one-sixth of a turn of the bolt will affect the valve five pounds.

2. The use of an engine six years should not wear the cylinder so large that it would necessitate having rings made larger than standard size. In case of a cylinder which is larger than standard size, larger rings may be ordered by making a guage and sending it to the factory. Cut a piece of one-fourth inch round iron to a length that will fit the cylinder. The ends should be rounded over and the piece should be bent so as to just fit the cylinder. This can be sent through the mail and will be more satisfactory than trying to give the exact size by the fraction of an inch.

3. In starting a steam pump turn the exhaust into the atmosphere and open the pet cock on the valve chamber of the pump, to exhaust the air in the pump and suction pipe. After the water flows from the pet cock, close same and then turn the exhaust steam into feed water by valve provided for the purpose. The water piston packing is rubber rings especially prepared for the purpose and are furnished by a pump maker or party which furnished the engine. Any kind of ordinary packing will do for the stuffing boxes.

A Pioneer in the Roofing Business.

One of the pioneers in the prepared roofing business is the Brantford Roofing Company, Limited, and to this company must be given a large share of the credit for the success of the prepared roofing industry in Canada. The high-quality of this company's products—the great satisfaction they have given—has created a feeling of public confidence in the merits of prepared roofing, and has won an enormous trade for Brantford Roofing in particular.

The Brantford Roofiing Company devote their entire energies to the manufacture of Asphalt Roofings exclusively, and as they have had many years of experience in the roofing business, this speaks volumes for their belief in the superiority of Asphalt as a roofing material.

This company state that the Asphalt they use is an exceptionally high-grade of Asphalt, which has been refined until it has become 99 per cent. pure. They also have their long-fibred pure wool felt made according to their own rigid specifications, as they say the ordinary commercial felt is not nearly good enough for the purpose. In addition to a thorough Asphalt saturation the felt is given a heavy coating of Asphalt into which is firmly embedded crushed feldspar asbestos fibre, mica and other materials noted for their fireproofing and waterproofing qualities.

At their immense factory at Brantford, Canada, the Brantford Roofing Company make nine different styles of Asphalt Roofing, and two thicknesses of saturated felt for sheathing or exterior surfacing. This line of surfaced goods can be used in any climate, and on pitch or flat roofs, or on the sides of buildings, and has been very successful in resisting the action of weather, acids and gaseous vapors, as well as a complete protection against flying firebrands and burning cinders.

Like other progressive manufacturers, the Brantford Roofing Company are liberal advertisers, and their advertisements, many of which appear in this publication, are always interesting and instructive.

It is usually a widow who talks about her ideal husband.

We meet gentlemen who are simply lazy men with money.

A woman can look pleased when she isn't, and a man can't.

A man has a right to growl if his wife treats him like a dog.

Hardness of heart is responsible for some men's financial success.

Saskatchewan.

By A. Frank Mantle.

Over a considerable area of Saskatchewan, one of the pressing problems of the farmer is: How to ripen a crop of wheat ahead of early fall frosts? At the time of writing the period of possible damage is not wholly past, but it is certain that no very large area of this year's wheat crop in Saskatchewan can be seriously damaged by frost. It might be thought, therefore, that nothing was to be gained by discussing this question at this time. Such is not the case, though; there may, and we believe there will, come a time when the early fall frost will be almost unknown, even as it is almost unknown in southern Manitoba to-day, but for the next decade or two it is likely that the districts that have been frozen before will be subject to the same temperatures again. The West has now been permitted to take off two successive crops without loss from this cause, so according to the law of averages and likelihood, some districts will be visited by early frosts next August. The question, then, is whether the farmer living in such districts can do anything to hasten the maturing of his crops in order to have them out of harm's way, and if so what?

Much can be done along two lines in this matter, and the farmer who does nothing towards hastening the maturing of his crops while he lives in a district subject to frost, is in a somewhat similar position to the man who is in contact with small-pox yet refuses to be vaccinated. He is neglecting to do his part and forgetting that the help of the gods is usually given to those who help themselves.

In the matter of seed much can be done. The right variety should be chosen first, an early ripening strain of that variety may be built up, the vigor of the seed may be increased by allowing the crop from which next year's supply is to be drawn to fully mature before being cut, and, to some extent at least, the early germination of the seed may be hastened or retarded by using formalin or bluestone in the treatment of the seed for smut.

The selection of the right variety of seed for early ripening is, of course, the fundamental point. But that does not mean of necessity that the variety that will ripen in the least number of days is the proper one to choose. Yield and quality are factors that must also be considered. Given a reasonable amount of latitude—say one or two weeks—there is always the possibility that an early ripening strain may be built up if a variety meets requirements as to yield and quality, but is not quite up to the mark in early maturity. We have an excellent example of this in the case of wheat at the present time. Red Fife was a wheat that always filled the bill as regards yield and quality but, in many districts of northern and eastern Saskatchewan, failed to ripen ahead of the August frosts. Preston and some kindred varieties were brought out and, because of their earlier maturing property, eagerly seized upon by the farmers of these districts. Time revealed that these wheats were not up to the standard for this country in quality and that the reputation of Western Canadian wheat on the British market was likely to suffer in proportion as they were extensively grown and mixed in the market with Red Fife.

Now, two solutions of the difficulty are presented to the farmer. A new variety which promises to combine the quality of Red Fife with the earliness of Preston has been originated by the scientific plant breeders in the employ of the Dominion government at Ottawa, and will soon be available for extensive growing. This wheat is known as Marquis. Then, at Ottawa also, and at Saskatoon as well, earlier ripening strains of Red Fife which yet have all the famed quality of that variety have been developed by selection. It is claimed for these strains—and their claims are under test at the experimental farms this season—that they are from one to two weeks earlier than the common Red Fife and as early as Preston or others of the hybrid varieties.

Thus it will readily be seen that much has been done in the matter of developing an earlier ripening wheat, and the farmer who fails to avail himself of this work is taking chances which he need not take.

A small but important point to remember in connection with seed grain is to allow the field from which next year's seed supply is to be derived to fully ripen before being harvested. If this source of supply is a large field which it would be dangerous to leave too long, leave ten or twenty acres or as much as will yield a third more grain than seed requirements. The maturity of seed affects its vitality; its vitality affects its even and rapid germination; and this in turn means the

FARM LAND AND CITY PROPERTY FOR SALE.

We own and control the sale of some 5,000 acres of improved and unimproved farms in the vicinity of Elm Creek, situated south west of Winnpieg some 45 miles and in the famous Red River Valley also lands in the New Drainage District, North of Gladstone.

In Saskatchewan we are the owners of some 15,000 acres of select farm land in the Eagle Lake district north of Kindersley which is a divisional point on the C. N. R. The G.T.P. Bigger to Calgary branch is under construction and passes just to the North of our lands. These lands are without stone or scrub and are a steam plow proposition. For full details of price and other particulars apply to the Red River Loan & Land Co.

We are the owners of the beautiful sub-division "College View" 34-35 St. James. This sub-division runs north from Portage Ave. facing on Hampton and Berry Streets, the lots having a frontage of 25 ft. x 130 in depth. Price $300 to $225. Easy terms.

Red River Loan & Land Co.

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THOMAS GUINAN, President E. C. COMPLIN, Manager

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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.

_____ 1910.

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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FRED. W. PACE, Superintendent

lengthening or shortening of the growing period.

It may seem like getting down to fine points when we consider the action in this connection of formalin or bluestones. Certainly this is a small matter, but the sum of all the small matters is a large matter. The fact is that formalin is in its nature a stimulant and grain that is treated with it is likely to germinate more rapidly than untreated grain will. On the other hand bluestone is narcotic in its nature and grain treated with it is more sluggish in germination. The difference might be but one or two days, but every little helps.

Turning from the question of seed and its selection and treatment to that of the soil and its cultivation, we find that fully as much can be done to hasten maturity by governing cultivation to the end in view, as by selecting and treating seed. We now know that shallow as against deep cultivation and the liberal use of the harrow before, and the surface packer after, seeding all materially assist in this work. The deeply plowed and insufficiently packed summerfallow is the one on which the crop never knows when to stop growing. Also it does not know enough to quit growing straw and start filling a long head. The man who would acquire a reputation for beating out the fall frosts must be an expert on providing the ideal seed-bed for his grain crops, which is a fairly shallow mulch of mellow soil on a firmly packed and moist sub-soil. With this object in view, the most natural way of attaining it is to plow as seldom as weeds and rubbish will permit, but to plow deeply and pack religiously when plowing must be done. This means a deep cistern for the storage of moisture and plenty of room for root development. Thorough surface cultivation with disk, cultivator, drag, and surface packer between these infrequent plowings will provide the conditions of cultivation shown by experience to be most favorable to early ripening.

Alberta.

By G. H. Hutton.

The dry weather this year has caused the uneven ripening of many fields throughout the Province and as a consequence there is bound to be a great variation in the vitality of seed produced in the same field. The plant gives its attention to reproducing its kind but as weather conditions have prevented the full realization of the ideal of the plant much seed will be unable to give the young plant within it that start in life next spring which will guarantee the maximum crop. Since every farmer is interested in securing maximum crops as frequently as possible the question of good seed is one of importance. Good seed is the first essential to big yields. How can good seed be secured? In answer to this question it may be said that there are two chief means by which a farmer may secure good seed—by purchase and by production. Many firms interest themselves in distributing seed of more or less merit. Under the direction of the Canadian Seed Growers Association a number of western farmers are producing a high grade quality of seed and offering it to the market. But, even with the numerous advantages for the purchase of seed there remains the vast majority who must produce all, or nearly all, the seed they will use. Any practical plan by which the general vitality of seed may be increased should be generally followed this year on account of the lack of uniformity in maturing. The ripest and best parts of the field could be stacked, threshed and binned separately, and then with the aid of "fanning mill selection" later on, the general average of seed can be raised without any great effort. Effort given to the production of good seed will be found to pay well for the good seed will multiply that effort many times. It is effort put out at interest that will return some 30, some 60 and some 100 fold. I believe that the selection of the best parts of the field will pay any year and will be found particularly profitable a season like the present. The seed that has had a chance to mature fully and to store within itself the full complement of energy, will give to the young plant it has the power to produce, the best possible start in life. Success in the life of plants as well as in the lives of men depends much upon getting away to a good start.

A Matter of Opinion:

One farmer advocates deep plowing in the fall; another says that shallow plowing gives equally good results. One advocates spring plowing for corn; another fall plowing. Each thinks that he is correct because he has based his conclusions upon facts observed in his own and his neighbors' fields. It very frequently happens, however, that conclusions of this kind are erroneous for the reason that all the conditions that had a bearing upon the matter were not taken into account. During recent years we have had an abundance of rain throughout the humid sections and also a much larger amount than usual in the semi-arid belt. The result of this has been a neglect of surface cultivation for the purpose of conserving moisture; in fact, many farmers have reached the conclusion in these years that the large amount of discing and harrowing that was recommended in the series of dry or normal years preceding the wet period is wholly unnecessary.

We have in mind a farmer who in anticipation of a dry season put an unusual amount of work on his oat seed bed last spring. He disced and cross-disced his fall plowed ground as early in the spring as possible and then harrowed it at frequent intervals until he had a deep, dry mulch on top before seeding the grain. The result has been, judging from the appearance of his oats in the stack, that his crop will average 50 and 60 bushels per acre of very heavy grain. A neighbor of his did not put more than one-third the amount of work on his oat seed bed and yet he has secured practically the same yield. This neighbor now says that early spring discing and harrowing of fall plowed ground in preparation for oats is unnecessary and unprofitable. Is this a correct conclusion? We say it isn't, and the reason is that he has failed to take into consideration that his land was well stocked with moisture early in the spring from the excessive rains that we received last year. With his soil thus stocked with moisture there was a sufficient amount present to produce a good crop, even if the rainfall was short during the growing season.

That the soil which was not disturbed early last spring, but which was covered with a crust till a day or two before seeding lost a lot of moisture cannot be disputed. It has been demonstrated time and again that a soil with a mulch on top retains all or practically all the moisture below that mulch, while one that is dry and hard on top, and the surface of which is cracked open, loses moisture very rapidly. Should we have another dry season next year, or more properly another normal season, the wet seasons having been abnormal, the man who did not cultivate his field early last spring, will find that he will be short of moisture next season, while the man who disced and harrowed his ground frequently and kept a thick mulch on top, may still have an abundance of moisture to produce another large crop next year.

That water can be stored in a soil from one year to another by surface cultivation, has been definitely demonstrated time and again not only in the semi-arid regions, but also in the humid sections of this country. We are referring to this matter again for the reason that we are anticipating several comparatively dry seasons and we are anxious to impress upon the minds of our readers from now on the importance of doing everything possible to aid in the conservation of soil moisture. Don't jump at conclusions with reference to these soil mulch theories. There may be times when it appears as though too much work could be put on the land, but when all the conditions are taken into consideration it will be found that the farmer who tills his soil thoroughly will raise the largest and by far the most profitable crops in a series of years.

THE FUNNY WORLD

The matter on this page lays no claim whatever to originality. The one idea is to amuse, to provoke a smile. If it fulfills this mission we shall feel amply repaid for the time and labor expended in its preparation. Have you read or heard something that has made you laugh? Has it chased dull care away for a time? Then pass it along for publication in our Funny World. Such contributions will be greatly appreciated.

The pessimistical tourist found the freckled farm boy sitting on the roadside, twanging a penny Jew's harp.

"You needn't be so confoundedly happy," warned the tourist, as he slowed up his horse. "Do you know what the almanac predicts?"

"No, indeed, mister," drawled the lad, pausing in his tune. "Dad only has one almanac, and he won't let me see that."

"Well, it predicts that there'll be an earthquake within the next ten days that'll shake you inside out."

"Won't hurt me, mister. I broke six young colts for dad this season, and I guess when it comes to shaking you up they beat a dozen earthquakes."

"Well, the week following there is to be a cyclone that will toss you over into the next county."

"Couldn't please me better, boss. There's a circus over there that week, and I'm short of railway fare."

"H'm! You are a hard nut. Know anything about comets?"

"Never saw one in my life."

"Well, one is due in a month or two, and it is liable to hit this old earth and put you out of business with a billion sparks."

The farm lad grinned.

"Billion sparks, mister? Crickey! Ma always did say I'd have a brilliant finish, and I guess that's what she meant. So long!"

A man in Ohio recently sought an expert in oil, because he believed that he had struck oil on his land. He brought a sample in a bottle.

Evidently he had been in a great hurry, and had hastily grabbed the first bottle at hand, for when the chemist had duly analyzed the sample submitted, he sent the following telegraphic report:

"Find no trace of oil. You have struck paregoric."

Little Ethel was ready for her first party, and her mother was coaching her on the subject of polite conversation. "If any gentleman asks you your name, say, 'My name is Ethel, sir.' If he wants to know how old you are, tell him politely that you are eleven. And if he were to say to you, 'Who made you?' reply 'God made me, sir.'" Arrived at the party, Ethel went on very well until a gentleman engaged her in conversation. "And what may your name be, my little lady?"

"Please, sir, it's Ethel."

"And how old are you, pray?"

"Eleven, sir."

"And who made you, little one?"

"Mamma did tell me the gentleman's name, sir, but I've forgotten it."

He was a twentieth century hustling builder, and under his auspices cottages and buildings seemed to spring up like mushrooms.

One of his foremen, rushing up to him one morning, in a state of excitement, said, "One o' the new houses has fallen down in the night!"

"What!" he roared. "You mean to say that one of my well-built, desirable residential houses has come to grief? Ah, I suppose you took the scaffolding down before you put on the wallpaper?"

"Yes, sir."

"Well, what can you expect, you rank idiot? Call yourself a foreman? Get off the job. You're discharged."

An old darky, sent to a hospital, upon his arrival was placed in a ward, and one of the nurses put a thermometer in his mouth to take his temperature.

"Well, my man, how do you feel?"

"I feels right tol'able, sur."

"Have you had anything to eat yet?"

"Yessuh, I had a little."

"What did you have?"

"A lady gimme a piece of glass ter suck, sur."

"Really, Jane," remonstrated her mistress, "you must learn to be more careful, and test the eggs before you mix them in the pudding. Now, a good way of testing is to take an egg in your hand, swing it round a few times, and then place it to your ear. If it gives out a pleasant, murmuring sound, you may then be quite sure that it is fresh and good."

Like a dutiful cook, Jane promised in future to obey her mistress's instructions, and that same night there was hot baked custard for dinner.

At least, there was to have been hot baked custard. But at the critical moment Jane appeared upon the scene, with nothing to show but a tear-stained face.

"Well, Jane?" anxiously inquired her mistress.

"Please, mum," gasped the saddened servant, "there's a little something gone wrong. I was a-testin' the egg, as you told me, and a-swingin' it round, when it slipped out of my hand, and blessed if it didn't biff my policeman in the eye, as he was watchin' me through the window. An' please, mum," concluded the cook, breaking down utterly, "I think it was a good egg, too, for I listened, and I heard a murmurin'—oh, quite a loud murmurin', mum!"

It was the Sabbath day, and the elder was shaving himself prior to church time, when he made a slight cut with the razor on the extreme end of his nose. Calling his wife, he asked her if she had any court plaster.

"You will find some in my sewing basket," she said.

The elder soon had the cut covered. At church, in assisting with the collection, he noticed every one smile as he passed the plate. Very much annoyed, he asked one of his assistants if there was anything wrong with his appearance.

"I should say there was," answered the assistant. "What is that upon your nose?"

"Court plaster."

"No," said his friend; "it is the label from a reel of cotton. It says 'Warranted 200 yards.'"

Up to the night clerk's desk goes Abe Perlmutter, a Chicago travelling man. "I wonder," he says, "could you find me somebody to play a game of pinochle for an hour or two to-night?"

"Why," says the clerk, "I guess so," and he runs his eye over the register. "Boy," he calls, "page Mr. Gutwilling." Before long Mr. Gutwilling is found, and introduced to the pinochle-hungry Perlmutter, and a game is arranged. "How did you know I played pinochle?" Mr. Gutwilling asks the clerk. "Oh, I——" begins the clerk. Just then emerged from the bar a young man, triple plied with wine. He staggers up to the desk and says: "Shay, I wanna fight! D'ye hear? I'm looking f'r a scrap!"

Thus the clerk: "Boy, page Mr. Kelly and Mr. O'Brien."

A railroad eating-house in southern Georgia, which enjoys the reputation of being one of the worst places of its kind in the State, has an ancient darky who announces dinner to the incoming passengers by ringing a huge bell.

One day the old negro was accompanied by a sad-eyed, long-eared hound, who, at the first ringing of the bell, lifted up his voice in a most dismal howl.

The old darky stopped and gazed at him for a moment, and with a "Hush yer mouth!" started ringing again.

Again the old hound, with nose in the air, sent forth a long-drawn howl.

This was too much for the bell-ringer, and, turning on the hound, he remarked:

"Now, what in de worl' is you makin' such a fuss erbout? You don't have ter eat here lessen yer wants ter."

A teacher in the factory district of a New Jersey town had been giving the children earnest lectures upon the poisonuosness of dirt.

One morning a little girl raised her hand excitedly and pointed to a boy who seldom had clean hands.

"Teacher," she said, "look quick! Jimmy's committin' suicide! He's suckin' his thumb."

"Johnson," said a schoolmaster, "can you tell me how iron was first discovered?"

"Yes, sir."

Well, tell the class what your information is on the point."

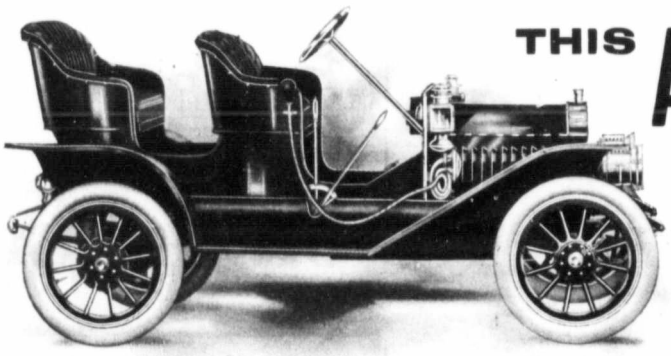
"I heard father say yesterday that they smelt it!"

"Jimmy," said the fond mother to her smart nine-year-old, "what became of that fruit cake I made for you as a treat yesterday? Did you eat it?"

"No, mamma," answered Jimmy, with a grin; "I gave it to the teacher instead."

"That was very nice and generous of you, Jimmy," complimented his mother. "And did your teacher eat it?"

"Yes; I think so," answered Jimmy. "She wasn't at school to-day."



THIS AUTOMOBILE FREE

To the one guessing nearest to the number of kernels in 12 pounds of No. 2 Northern Wheat 14272 official count

Commencing November 1st, 1910, and ending June 30th, 1911, we will carry on a Wheat Guessing Contest open to everyone in Canada except residents of Winnipeg, and are giving away to the one who guesses nearest to the number of kernels in 12 pounds of No. 2 Northern Wheat, this $1200.00 McLaughlin-Buick Automobile, all complete with oil tail lamp, oil side lamps, two gas head lights, generator, horn, repair outfit, jack and pump. This is the Model "9" Four-Passenger "Tourabout" McLaughlin-Buick Automobile with detachable rear seat. Automobile will be delivered to winner F.O.B. Winnipeg, and whoever is the lucky winner of this automobile will be the possessor of an exceptionally powerful, speedy and comfortable machine.

Read this carefully

This is the third year that we have put on a Wheat Guessing Contest, and the same general rules that have governed our former contests apply to the contest this year.

The wheat is a fair clean sample of No. 2 Northern procured from the Dominion Government Grain Inspector's office, Winnipeg. The wheat and bottle were taken to the Dominion Weights' and Measures' Office, and exactly 12 pounds of the wheat weighed out and poured into the bottle, which was immediately sealed up in the presence of two witnesses. The bottle was then photographed and deposited with the National Trust Co., and will remain in their vaults until the contest closes June 30th, 1911, when it will be taken out and counted by a board of three judges, none of whom are in any way connected with The Canadian Thresherman & Farmer.

Everyone who sends in a year's subscription for The Canadian Thresherman & Farmer, either new or renewal, is entitled to estimates as explained below. These estimates may be credited in whatever way desired, and you may send in as many estimates as you wish. Remember every additional estimate increases your chance to win the Automobile. Guess early and increase your chance of winning, for it is the first one that guesses nearest to the number of kernels, that wins the Auto.

OUR 1908 CONTEST

In the winter of 1908 we put on a Wheat Guessing Contest as to the number of kernels in 15 pounds No 1. Northern Wheat. When the contest closed it was found that there were 257,885 kernels, and the man who won the first prize was Mr. Giesler of Brant, Alberta.

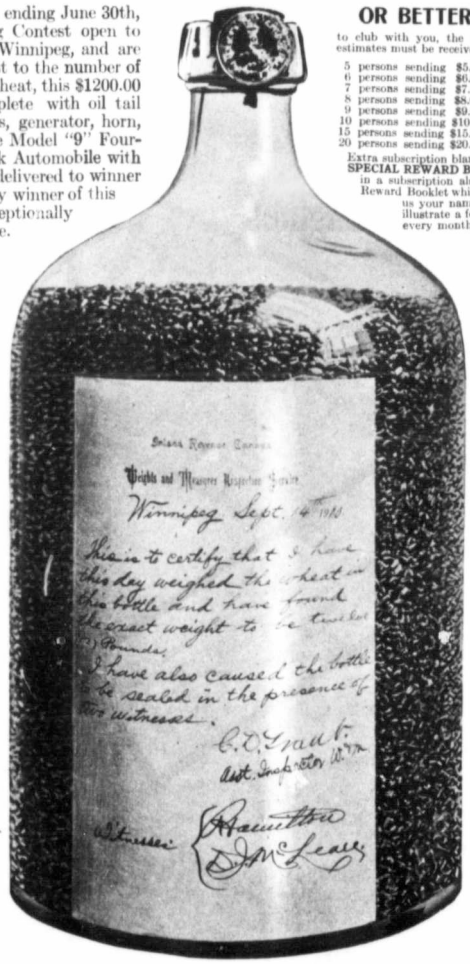
OUR 1909 CONTEST

Last year we put on a Wheat Guessing Contest as to the number of kernels in 8 lbs. 8 and 7/16 ozs. No. 2 Northern Wheat, and it was found there were 143,272 kernels. The first prize went to Mr. John Edwards, Hand Hills via Gleichen, Alberta. A full account of this contest appeared in the July issue.

With the above facts to work from you should be able to form an estimate as to the number of kernels in the bottle this year. Or better still get some No. 2 Northern wheat and count it out and form your estimate from that.

YOU MAY GET ESTIMATES THUS:

1 years' subscription and $ 1 gives you 3 estimates.
2 years' subscription and $ 2 gives you 7 estimates.
3 years' subscription and $ 3 gives you 11 estimates.
4 years' subscription and $ 4 gives you 15 estimates.
5 years' subscription and $ 5 gives you 19 estimates.
6 years' subscription and $ 6 gives you 23 estimates.
7 years' subscritpion and $ 7 gives you 27 estimates.
8 years' subscription and $ 8 gives you 31 estimates.
9 years' subscription and $ 9 gives you 35 estimates.
10 years' subscription and $10 gives you 40 estimates.



OR BETTER STILL, GET YOUR NEIGHBORS

to club with you, the subscriptions to cover one year. These subscriptions and estimates must be received in one envelope, so that we may credit them properly.

5 persons sending $5.00 get 25 estimates and each have 1 year's subscription
6 persons sending $6.00 get 30 estimates and each have 1 year's subscription
7 persons sending $7.00 get 35 estimates and each have 1 year's subscription
8 persons sending $8.00 get 40 estimates and each have 1 year's subscription
9 persons sending $9.00 get 45 estimates and each have 1 year's subscription
10 persons sending $10.00 get 60 estimates and each have 1 year's subscription.
15 persons sending $15.00 get 100 estimates and each have 1 year's subscription.
20 persons sending $20.00 get 150 estimates and each have 1 year's subscription.

Extra subscription blanks, sample copies etc., sent free on request.

SPECIAL REWARD BOOKLET. In addition to the estimates everybody who sends in a subscription also has the choice of a premium. We are issuing a Special Reward Booklet which will be ready for distribution about November first. Send us your name and address and a copy will be sent you free. Below we illustrate a few of these premiums and will show additional premiums every month. Remember, each year subscribed for includes estimates on the Wheat Guessing Contest in addition to these free rewards.

Send in your subscription at once, estimates to be placed to your credit when the Contest opens November first.

POCKET TOOL KIT

A whole tool chest in one. When closed looks like an ordinary awl with maple handle and nickelled shank, but inside the handle are ten tools including gimlet, screw driver, chisles, gouges, tack puller, etc.

Sent postpaid for two-one year subscriptions, or sent postpaid for one-two year subscription, or sent postpaid for one-one year subscription and 15c.

AWL YOU WANT

A handy sewing awl for mending harness, boots, shoes, etc., and doing all kinds of leather work. A most convenient and useful tool.

Sent postpaid for one-one year's subscription.

SELF PULLING CORK SCREW

Every household has use for a good cork screw and here is a dandy. Will start the toughest cork and draw it out clean without crumbling the cork.

Sent postpaid for one-one year's subscription.

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WINNIPEG, CANADA

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Premium

Name.....

Address.....

My estimates as to the number of kernels in 12 lbs. No. 2 Northern Wheat are:

This is an Important Advertisement for you to read

It's on the subject of Warranties

Warranties on Avery Engines

Ten years ago the Avery Company adopted
all reference to other makes of machines and
work than any other machine in the United States
unmistakable terms the character of work, the cla
machine was guaranteed under.

Under this form of warranty our machines ha
single dispute, our customers have been universall
has been built up to its present high standard.

No other manufacturer of Traction Engines a
regard as better for the purchaser, but if a
warranty adopted by any other manufacturer of th
when placing the order, to substitute such oth
purchaser is hereby authorized, before signing th
our order blank, the following:

"This order is given with the understanding th
Company are substituted in place of the warran

We also have some special warranties which
samples of them:

No. 2
Boiler Warranty.
The boilers on all Double Undermounted Engines delivered from and after this date are warranted to the purchaser to be steam tight under 200 pounds pressure, and should any leaks in flues or boiler develop within one year they will be repaired, or replaced, or made to conform to this warranty, free of charge to the purchaser.

No. 3.
Warranty Against Leaky Brackets.
All Avery Undermounted Engines are warranted for one year, or longer, against leaky cap screws attaching any brackets to the boiler, and defects of such nature will be made good free of charge.

No. 1.
Warranty on Shafting and Gearing.
We guarantee against breakage for a period of one year following da e of purchase, all gearing and shafting, including crank shaft (not only on our plowing engines, but all of our engines). We guarantee to replace, free of charge, not at the factory, but freight prepaid to the owner, anywhere in the United States or Canada, and supply a mechanic, if necessary, fr e of charge, to install any gearing or shafting, including the crank shaft, broken during any usual or unusual use of the engine, upon receipt of notice that such replacements are required.

No. 4.
Warranty on Economy, Double Undermounted Engine.
As Avery Double Undermounted Engines are the most economical engines entered in the Winnipeg Motor Contest, we hereby guarantee any of our stock engines to show the same economy in fuel and water as was shown by said engines at said Motor Contest.

No. 5.
Warranty on Economy Single Cylinder Engine.
All Avery Single Cylinder Return Flue Traction Engines are guaranteed to produce horse power hours as economically in the use of coal and water as the most economical single cylinder engine entered in the Winnipeg Motor Contest.

Note the strong backing which you get from thes

We are justified in granting to our custome
machinery has not been a wall flower in any conte
established as the real Job Takers and the big Mone
customers, the success of our agents, the success
the success of the Avery Company.

Placing your order early insures your getting
to secure your run; does not make dates of payme
in prices due to advances in labor and material, whil
our warranty protects you in case of crop failure.

Ask for our complete Catalog describing th
Representative also sent on request.

AVERY COMPANY

675 IOWA ST. PEORIA, ILL.

ew form of warranty, from which was eliminated
ragging" clause that "It would do as good or better
stead a plain statement was made setting forth in
material, and the kind of workmanship that the

et with universal approval and we haven't had a
tisfied, and the reputation of the Avery machinery

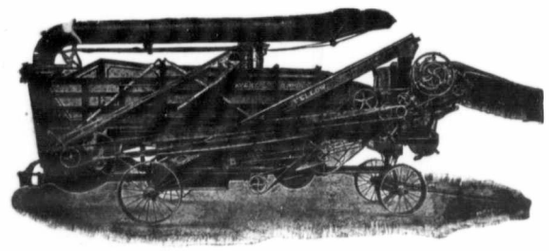
Threshing machinery puts out a warranty that we
urchaser of Avery machinery prefers the form of
lass of machinery, we will allow him the privilege,
anufacturer's form of warranty for ours, and such
rder, to write across the face of the warranty in

e warranty and all the conditions of (insert name)
rinted herein."

ill accord to our customers for 1911. Here are

No. 6.
Warranty on Separator Castings and Shafting.
All castings and shafting on Avery Separators are warranted against breakage for one year from date of purchase and if broken while threshing will be replaced free of charge, F.O.B. purchaser's railroad station.

No. 7.
Warranty on Avery Jumbo Razor Steel Cylinder Teeth.
Our cylinder is guaranteed to thresh One Hundred Thousand (100,000) bushels of grain without breaking, wearing out, or losing a single tooth, and any replacements of teeth necessary to make good this warranty will be made free of charge. Avery Jumbo Teeth are further warranted for five years or longer against breakages caused by pitchforks, bolts, spades or other foreign materials accidentally entering the cylinder.



Warranties on Avery Separators

No. 8.
Warranty on Separation.
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.

No. 9.
Warranty on Cleaning.
That the fanning mill and shoe of an Avery Thresher will clean the grain in perfect condition for the local market.

No. 10.
Warranty on Feeders.
That our Bartholomew Band Cutter and Self Feeder will feed all kinds and conditions of loose, bundled, or bound grain without slugging the cylinder, and faster and more evenly than feeding can be done by hand.

No. 11.
Warranty on Wind Stackers.
Avery Wind Stackers are warranted to handle dry or wet straw in any condition or quantity without choking and to be built with tank steel fan housings and boiler plate wings.

pecial warranties hereby granted to Avery customers.

is liberal array of special assurances because Avery
d has always made good, and they have become
arners. They have made easy the success of our
r sales organization, and they are responsible for

achine, makes prompt delivery possible, enables you
y sooner; protects you against any possible increase
e guarantee you against any decline in prices and

achines that are backed up by these warranties.

WOMAN'S DEPARTMENT

A HOUSEHOLD FORUM FOR THE DISCUSSION OF EVERYTHING THAT PERTAINS TO THE HOME.

CONDUCTED BY PEARL RICHMOND HAMILTON.

MY LIFE'S MISSION.

I was longing for a mission—
  Something men would count as grand;
Something that would win the praises
  Of the lofty in the land.
So I squandered time in waiting
  For the chance that never came—
Quite forgot to think of others
  In my yearnings after fame.
But one day I had a vision
  Of the needy close at hand;
Of the poor whose hearts are hungry
  As they journey through the land.
Starving for a word of comfort,
  Yearning, but, alas! in vain,
For the love of those about them,
  And the smile that lightens pain.
Just a little deed of kindness,
  Just a word of hope and cheer,
Just a smile! They cost so little,
  But they make it heaven here!

Thus it was I found my mission—
  Knew what work God meant for me,
And I cried, "Forgive my blindness;
  Now, at least, thank God, I see!"
And my heart that had been selfish
  In its longing to be great
Saw broad fields of labor waiting
  For me, just outside the gate.
I have sought to scatter sunshine
  In a dark and cheerless place.
Loving words have given courage—
  Brightened many a weary face.
In the joy of helping others
  God's good time I waste no more,
Since my life has found its mission—
  Found it at the very door.
Oh, the little deeds of kindness,
  And the words of hope and cheer,
And the smiles that cost so little,
  But they make it heaven here.

QUEEN MARY.

A Womanly Queen and a Queenly Woman.

By Pearl Richmond Hamilton.

The character of Queen Mary is probably more discussed to-day than that of any other woman living. People in general are looking for the woman behind the queen or in other words—the womanliness of our new queen.

When Queen Mary was called with such tragic suddenness to be our queen, we seemed to know little about her. It was due to her intense devotion to her home life—a home as pure, as unpretentious, as much a matter of intimate home joys as that of any household in the land.

An old royal retainer, who has known her a long time, says: "She is a good wife and one of the best mothers in England or out of it."

Our queen is admired for her genuine womanliness and it is interesting to study the movements of her life from early girlhood to queen of all the people in our great British possessions.

The study of the development of her character is an ideal lesson for any girl to follow. Every girl in our land should feel a thrill of pride when she studies the life of Queen Mary, for she is a woman remarkable for her womanliness—she is clever, adaptable, executive and capable as well as extremely sympathetic and thoughtful.

We see women we admire but we forget that it takes a life of steady development to be a womanly woman. When Queen Mary was young the dreams of her childhood made her sacred to herself as England's future queen. She learned in the most practical fashion the business of being queen. She spent her childhood in the nursery which had been used by Queen Victoria. Her mother was a first cousin of Queen Victoria. As Queen Mary's immediate family was not financially successful she spent much of her girlhood in Germany and Italy where she became an expert in the languages and she also developed a remarkable artistic sense. On her return to her English home she put into practice her artistic taste. She could do all kinds of work in transforming the shabby mansion from repainting stained and faded walls to turning out graceful vases and bowls. Thus she was adaptable.

There are many of our own girls who cannot adapt themselves to their home surroundings when they return from college. The straightened circumstances of the family developed her power of resourcefulness. Her mother turned over to her the problem of making both ends meet—a very helpful training for girls. Queen Mary even now examines every expenditure; she is economical—a royal lady with a great fund of that good quality we call common sense.

Her training made her practical and capable; she never hesitated to make a pastry when a pastry cook was beyond the family income. She learned sewing and embroidery and could make her own dresses. This training she now requires of her own daughter. She also teaches her daughter that her high station in life makes it imperative that she should be an example to others in her conduct, and that nothing could be more improper than any putting on of airs because she is the only daughter of a king and queen.

Princess Victoria Alexandra is being educated with great care, and she gives more time to her lessons than the average school-girl in America does. She is now thirteen years old.

Perhaps it is partly because her own girlhood was so simple, so quiet and so uneventful that Queen Mary wants her daughter to lead a life that will be most helpful to her. Although surrounded by all that money can purchase in the way of comfort and luxury, her life is simple when it comes to dress and food and living in general. Now that the Princess Victoria Alexander is the daughter of a king, her social position has advanced, and she is the first girl in Europe in social prominence, or she will be when she enters society. But at present and for several years she will be just an English schoolgirl fitting herself for the years of womanhood so soon to come.

It was Queen Mary's unusual domestic and housewifely attainments that appealed so strongly to her wooer—the present king's brother. This is real womanly education, and Queen Victoria decided that this Princess Mary of Teck was the one young woman of her day to succeed to the English throne.

Both Queen Mary and King George are deeply religious—this will prove a great blessing to our nation just at this time when people seem to be growing careless. King George recognizes the duty of going to church as an example, but he is sincere in his religious devotion as well, because his religion is genuine. When the king and queen as prince and princess of Wales visited India they were profoundly shocked to see the slackness in religious observance among the British population in India. He said to them: "Here you are ruling the most spiritually minded peoples in the world and you do not even trouble to pay the ordinary tributes of respect to your own faith."

Wherever he travelled between Cape Courvin and the Himalayas and whatever his surroundings he made a point of holding service every Sunday morning at eleven o'clock. The officials and their families had to attend. What a courageous example! Is not England blessed by the influence of a king who recognizes the Higher Power in the guidance of the affairs of our land?

Queen Mary's religion is practical—she shows this in her great charitable work.

Her mother apprenticed her to the service of the poor at an early age. One time when her mother sent a dinner to a destitute family she called Princess Mary to her and said: "Mary, dear, I wish you to go with your governess to the house of these unfortunate but respectable people, so that you may learn what it means to have a meal when one is starving." Many were the object lessons of this kind that Queen Mary learned when a child. She was not restricted to her own surroundings but was in close touch with women workers and learned to sympthize with the toilers of womankind.

Her mother founded a home for children named the "Princess Mary Village Homes," and Queen Mary helps this home a very great deal. The Home is for little girls who have no parents, or whose parents are in prison, and for those who are exposed to criminal surroundings. The children in this home are educated along domestic lines and it turns out very practical girls. One method for obtaining funds is called

MARY E. HEATH

The wife of E. H. Heath, President of the E. H. Heath Co., passed away at Colorado Springs, August 22nd after an illness of two months. We feel the loss of her personality more than words can express, because she always had a word of cheer for every one whom she met—and to know her as a friend was a rare blessing. The editor of this department came to Winnipeg a stranger and her warm welcome and kind encouragement have done much in creating the inspiration for the work of our Woman's Department. She had the interests of the women readers in Western Canada at heart, and the memory of her beautiful life will inspire in the editor of this department added zeal and ambition to make it a department in every way worthy of its founder—for Mrs. Heath, under the pen name of Estelle Percy—was the founder of the Woman's Department of The Canadian Thresherman and Farmer.

The last time I was with her, while we were looking through a house that was nearing completion, she noticed a carpenter lying on the floor of an unfinished room. Her sympathetic nature instinctively made her aware that the man was in pain and she immediately went over to him and anxiously asked if he were hurt. Upon learning that he had fallen two stories and that he was suffering, she hurried home for bandages and medicine.

She fulfilled the Divine Command: "Feed the hungry, clothe the naked and bind up the wounds of the afflicted."

Her life has made others better for having known her; we all loved her—she has been a blessing to our Woman's department. For the husband and daughters who mourn her loss we would say:

"The tidal wave of deeper souls
  Into our inmost being rolls,
And lifts us unawares
  Out of all meaner cares.
Honor to those whose words or deeds
  Thus help us in our daily needs,
And by their overflow
  Raise us from what is low."

P. R. H.

the "adopting scheme." Someone who is interested in the work of the Home expresses her willingness to adopt one of the children. She pays a subscription of a shilling a week towards the child's upkeep, and takes a special interest in the little one, sending her toys and things every now and then. The Queen herself led the way in this scheme, her "adopted" child being a girl of fifteen named Alice Steel. She takes the keenest interest in this home.

Every year, when Princess of Wales, a large portion of her birthday cake found its way to the Homes, for their girl inmates to taste.

This year, in spite of all that had taken place, it arrived as usual, but with one difference. For enclosed with it was a card, and upon it written in her Majesty's own handwriting were the words, "Birthday cake, from the Queen."

She is teaching her children to love the unfortunate. This story is told of her young son, Prince Eddie: The boy was fretful and impatient, whereupon the nurse, deeming it her duty to admonish him, said, "Your Royal Highness, surely you ought not to be so cross and impatient. Just think what you have got. You have a loving father and mother, a beautiful house to live in, a soft bed to lie on, and plenty of toys to play with. Do you know, the first little boy whom I went to nurse had no father or mother. He lived in a dirty room in the slums. He had no bed to sleep in. He lay on the floor, and he had no pillow but a bundle of old newspapers. And he had not a single toy—not one."

Prince Eddie replied, "I did not know there were any boys like that, without any toys. Might I give him some of mine?"

The nurse replied, "If your Royal Highness could spare some of the toys you no longer care for, the poor boy would, I am sure, be most grateful."

To whom Prince Eddie answered: "Oh, nurse, what do you mean? I said I wanted to make the poor boy a gift, and you say I am to give him what I am tired of. But mamma always tells us that a gift is not a gift at all unless it is something that we want ourselves, but which we give up for others. No, no; I will give him some of my own toys that I like myself."

One biographer says of her: "Princess May is far too active to waste even an hour of her day. Indeed, it happens very often that, when visitors call at White Lodge, she rises quietly during a pause in her animated chat with her own or her parents' friends, and says smilingly, "You will pardon me, I know, if I get my knitting and do some work while we talk. There is really so much to do, it seems quite wrong to be idle." And she comes back with a thick half-finished stocking, or some piece of plain needlework, and stitches while talking—stitches that some shivering creature may be less miserable in cold and wintry days. And often, when alone with the friends of her home circle, a sigh would force its way across her lips, and she would say, with a look at the heaps of needlework before her, "Oh, if I had only half of the time given to me as a present, in addition to my own time, which so many girls waste in doing nothing at all!"

From her early girlhood she has taken keen interest in all movements for remedying the nurseries of the poor. She loves the common class. Once she astonished the force at Scotland Yard by calling to study the new system of finger-print identification. Again she headed a movement for bettering the conditions among children of the industrial classes by founding diet kitchens and headquarters where household sanitation and hygiene were taught. Though somewhat averse to acting as patroness for charity bazaars, she often filled entire booths with her needlework, which brought exorbitant prices.

Queen Mary's loyalty to things British is a lesson to all young women. Patriotism has always been a strong note in Queen Mary's character.

When her engagement was announced she helped on British industries immensely by declaring that her whole trousseau would be entirely British workmanship. She saw that it was, too.

Every gown, wrap and hat was made in Great Britain. Ireland contributed lace. From Wales came gold nuggets which the Princess had melted and made into a parasol-handle and fan-sticks. Scotland contributed handkerchiefs, a hundred in all, and India sent silk stockings. Canada's contribution was enameled pins and jewelry. The material for her wedding gown was woven at the Spitalfield mills, and the brocade for the train was provided by Lady Egerton of Tatton.

And yet out Canadian girls, who say they are proud of their British birth, try to play tricks on our customs officers in order that they may add foreign finery to their wardrobe. Are they loyally British?

I am glad that our new queen is turning a cold shoulder to the American women of dollars who try to climb the ladder to social success by courting the smiles of foreign royalty. Our queen is too sensible and too busy with real womanly work to bother with women whose only aim is social standing. She is worthy of the very highest admiration of every woman in our land, because she has developed in her those characteristics that are womanly—she is responsible, adaptable, capable, charitable, sympathetic, religious, motherly—a queenly woman and a womanly queen.

ABOUT WOMEN

We are pleased to learn that Manitoba's talented author—Mrs. Nellie L. McClung—has written another book. The title of her new book is "The Second Chance." Mrs. McClung, in her writings gives us a true picture of life as it is really lived on the Canadian prairies. Mrs. McClung, besides being a woman of marked literary ability, has such charm of manner and magnetic personality that she is very popular among those who know her personally. Her new book will undoubtedly meet with great success.

Mrs. Pankhurst, the famous leader of the English suffragettes, has been called to mourn the death of her son, but in spite of her sorrow she is still working earnestly for her cause.

Mrs. Andrew Carnegie is much younger than her husband. She was a New York woman before her marriage. Her main interest is the education of her only daughter; she is training her for the responsibilities which will come to her as the heiress of her father's great fortune.

Lady Hamilton has returned to her home in Scotland from a nine months tour of the world. While in East Africa she killed a very large leopard. She is considered a good shot. More than one tiger has fallen by her gun in India, when her husband was stationed there with his regiment the 3rd Hussars.

She is called "The African Huntress" and also "Adventurous Lady Hamilton."

Mrs. Lionel Marks, the mother of two charming children, and the wife of a Harvard professor, has won the Memorial Prize at Stratford-on-Avon.

The Memorial Prize was established by Mr. Otto Stuart, of the board of governors of the Shakespeare Memorial Theatre, to encourage the art of poetic drama, and its attainment carries with it international recognition. Mrs. Marks, whose penname is Josephine Preston Peabody, was born in New York and educated in Boston. She is a graduate of Radcliffe College and was an instructor of English at Wellesley.

She has written several books—among them are "Old Greek Folk Stories," "The Wayfarers," a book of poems, "Fortune and Men's Eyes," and "Marlowe."

The play that won the Avon prize is "The Piper." "The Piper" is a poetical drama in four acts, woven about the mythical figure of the Pied Piper of Hamelin. It is an epic of passionate mother love, a poem filled with color and beauty and is a very interesting play. It was produced at the annual Shakespeare festival at Stratford-on-Avon and scored a great success. "The Piper" is a play filled with children and its whole plot hinges upon the relation between the little ones and their parents. Mrs. Marks won the prize over three-hundred contestants.

MOTHER'S CORNER

'Tis A Little Mother.

She's just a little mother in a cabin far away;
Since I kissed her in the gloaming 'tis forever and a day.
In my dreams I hear her calling, calling o'er the weary sea,
"Come ye back to Ballyshannon, Katy dear, come back to me."

She's standing in the doorway, filling up the little space,
With the kerchief o'er her bosom and the frills around her face;
She is smiling as Our Lady smiles above the Holy Child,
And my heart runs forth to meet her, o'er the waste of waters wild.

Do you know our Ballyshannon, where the very winds are sweet
With the saltness of the sea-foam and the tang of smoldering peat?
Do you know our mists that fold us in a blanket soft and gray,
Do you know our Ballyshannon in the red-rose dawn of day?

Then you've seen the little mother, just herself, so small and old,
With a look I'm sure would warm you were you shivering with the cold,
Oh, so mirthful and so patient, she, whose work is never done.
Oh, so ready with her laughter, at the rise and set of sun.

In the great house where I'm serving, folk are ever kind to me,
But they do not guess my yearning for the cabin over sea.
Wage I earn and wage I send her. Yet I cannot longer bide,
I must seek my little mother, I must nestle at her side.

She's just a little mother in a cabin far away;
Since I kissed her in the gloaming 'tis forever and a day.
In my dreams she's calling, calling! "Mother, darling, yes, I'll come.
I'll go back to Ballyshannon, to my mother and my home."

—From the Woman's Home Companion.

Childhood.

Blessed be childhood, which brings down something of heaven into the midst of our rough earthliness. These eighty thousand daily births, of which statistics tell us, represent as it were an effusion of innocence and freshness, struggling not only against the death of the race but against human corruption, and the universal gangrene of sin. All the good and wholesome feeling which is intertwined with childhood and the cradle is one of the secrets of the providential government of the world. Suppress this life-giving dew, and human society would be scorched and devastated by selfish passion. Supposing that humanity had been composed of a thousand millions of immortal beings, whose number could neither increase nor diminish, where should we be! A thousand times more learned, no doubt, but a thousand times more evil. There would have been a vast accumulation of science, but all the virtues engendered by suffering and devotion—that is to say, by the family and society—would have no existence. And for this there would be no compensation.

Blessed be childhood for the good that it does, and for the good which it brings about carelessly and unconsciously by simply making us love it and letting itself be loved. What little of paradise we see still on earth is due to its presence among us, says Amiel's Journal.

Babies First—God Bless Them.

Last winter while attempting to cross the street, a man stepped aside to make room for the baby carriage, saying as he did so: "Babies first, God bless them." I shall never forget that remark. I like this great new country because there is plenty of room for the babies. This city is attractive to me because I see hundreds of women wheeling their babies in true motherly fashion.

But I picked up the paper this morning and read in the advertisement column: "Suites to let in the — block. No children allowed." A chill of contempt swept over me.

Is this going to be allowed in our lovely city? Shall landlords here follow the example of the heartless moneyvendors in the States where it is difficult for people who have children to rent a comfortable home in a decent locality?,

I know many people whose homes are childless who create more disturbance for their neighbors in the way of noisy midnight revels than the noise the children make in their innocent play. I sincerely hope that conditions will not be encouraged here that will compel respectable people with children to walk the streets in vain for a home to protect them. We need the children—"Babies first—God bless them."

P. R. H.

Baby's Milk.

Milk has long been deemed the ideal food for the young. This is true if for cow's milk we specify calves. In the case of an infant any food other than its mother's own milk at once introduces an element of danger, but this danger is least when the substitute food is new cow's milk. The Medical Council says: With ever increasing frequency infants are boving parasites. In too many instances this rather grim alternative is accepted after small, if any, protest. The infant that can by any possibility nurse from the material breast at least a week or ten days should never be deprived of this considerable advantage.

The very principles in milk that give it character also give it low-keeping power. The immense value of the former outweighs the latter two to one. It is true that in any deterioration of milk, however slight, these super-principles are always first to suffer. But over against this is the fact that with proper care as to cleanliness these very elements affect a degree of self-preservation. But, best of all, they resist all degrees of cold.

Stale milk, cooked milk, preserved milk and any milk overrun with myriads of bacteria is void of these super-principles and worse than useless for infant feeding. Milk that must be cooked to be safe is worse than disgraceful in a nursing bottle when new fresh milk is possible.

All else being equal, the shorter the time element and the fewer the unavoidable incidentals between drawing the milk and feeding the infant, the greater is the essential value of the milk and the feeding.

In these days of nervous strain, some children from the very first are so highly strung and intensely sensitive that they shrink from a sharp word more than a healthy child would from the sting of the whip. A curt reprimand will bring the tears welling to their eyes and a sob to the throat. It is no good to get angry with such children for the weakness. Children are like flowers; each one needs individual treatment, and for nervous natures like this care, kindness and affection will do far more than scoldings. By this it is not meant that they should be given way to and spoiled, but that reproof should be administered with discretion, and faults pointed out gravely and kindly, so that the child may realize that you are not angry, but only sorry.

RECIPES

The recipes in this department are selected with care by an experienced housekeeper. The Editor asks you to report any recipe that is a failure.

The best way to make black currant vinegar is to add to every pound of fruit a pint of best vinegar, and let it stand in an earthenware basin for three days, stirring once each day with a wooden spoon. Then strain, and add a pound of lump sugar to every pint of juice, and boil slowly for half an hour. Raspberry and blackbery can be made in the same way.

Lemon Milk Sherbet.

One quart milk, two cups sugar, one-half cup lemon juice. Mix in the order given and freeze.

Mixed Mustard Pickles.

This recipe requires four quarts of small cucumbers, four quarts of very small onions, the hearts of two large cauliflowers cut in small pieces, two pounds of light brown sugar, one gallon of cider vinegar, one-fourth pound of ground mustard, and one-half ounce of curry powder. Soak the cucumbers, onions and cauliflowers in separate salt water over night. In the morning drain and boil separately until tender in half water and half vinegar. Put two quarts of vinegar with the sugar in a granite kettle and heat boiling hot; then add a paste made of one quart of cold vinegar, mustard, flour and curry powder. Let this come to a boil, stirring all the time (for it burns easily) and then add the vegetables without the liquid in which they were cooked. Do not boil the mixture, but just scald and then seal in jars. This keeps well. If small cucumbers are not obtainable, large ones may be used if pared, seeded, and cut up in small pieces.

Spiced Beets.

Wash and cook beets until tender, peel and slice. To a quart each of vinegar and water add a cupful of sugar, a small bag of mixed spices, and when the mixture comes to a boil put in the beets, let boil up, dip out beets into glass jars and cover with the boiling hot pickle, then seal while hot.

Pickled Carrots.

This is a novel recipe and very nice. The slices of golden carrot look pretty mixed with green pickles. Wash and peel enough carrots to make two quarts. Slice in pieces a quarter of an inch thick, put in a granite kettle, cover with boiling water and cook until tender, then drain and cover with spiced vinegar made as follows: Boil together two cupfuls of vinegar, half cupful of water, half cupful of sugar, and a tablesponful of mixed spices, and after putting in the carrots bring to the boiling point once again. These pickles keep well if sealed while boiling hot.

Red Pickle.

One quart of cooked and chopped beets, one quart chopped raw cabbage, one cupful grated horseradish, two cupfuls of sugar, a tablespoonful of salt, a teaspoonful of black pepper, a quarter of a teaspoonful of red pepper. Cover with vinegar and bring to a scald in an agate kettle. The unusual color of this pickle is attractive, and the combination of sweet, sour and sharp with the horseradish flavor is much relished, but the point of superiority is that it can be made at any time of year instead of adding to the work in the Fall when there is so much pickling of various sorts to be done. The ingredients are available throughout the winter, and we have found it convenient to make it in the early spring when the store of canned relishes gave out and one craved something sour. Served with lettuce and other green salads it makes a pretty contrast on account of its red color.

Sweet Spiced Cucumbers.

This recipe is the result of my own experiments. I have made the pickles for thirty-five years and they are good. Put a peck of small cucumbers, none over two inches long, in a stone crock with a brine made of one cupful of coarse salt to two gallons of water. Let soak over night. In the morning mix three quarts of vinegar, three pints of granulated sugar, one quart of water, two tablespoonfuls of cloves, half a cupful of cinnamon broken fine, one dozen small red peppers, one teaspoonful each of caraway seeds and coriander seeds, or else use a package of mixed spice. Let all come to a boil. Drain the cucumbers free from brine, wash in two fresh waters, put in the syrup and let boil up. Don't leave on the fire after it comes to a good boil. Take out the cucumbers with a skimmer and put in glass jars. Let the syrup boil for five minutes, then pour over the cucumbers through a strainer to keep the spices from going into the jars. Seal while hot. Be sure to use a porcelain-lined or agate kettle.

Spiced Pickled Onions.

Whoever tries will find this recipe excellent, for I took the premium at the county fair for onions prepared in this way. Select the small variety known as "multiplying onions." Peel and cut off tops, dividing into separate cloves, rinse and drop into a jar of brine which will float the proverbial egg. Let stand all night. In the morning bring to a boil as much vinegar as will cover the onion, adding for every quart of onions about a teaspoonful each of whole cloves, allspice and black pepper. Drain the onions out of the brine and put in clean well-scalded jars. Strain the boiling hot vinegar over them and seal at once. The onions should not be opened for a week or two, and spices should never be put in with them as they darken them.

EXPERIENCE EXTRACTS

If sour milk has become very thick put it into a bowl and beat until light with an egg-beater. It will then be smooth and much better for baking purposes.

Upon removing a cake from the oven, set the pan on a thick cloth wrung from hot water, and in a few minutes the cake may be slipped from the tin without further trouble.

Some Good Advice on Cook Stoves.

On a warm morning after a cold night the fire will not burn as readily as it does on cold mornings. This is due to the air in the chimney being colder than the outside air. To remedy this hold a burning paper to the bottom of the flue to heat the inside air.

A piece or scrap of zinc thrown on live coals will clean the stovepipe of soot from soft coal.

Soak some corncobs in coal oil, place two or three cobs under the top lids and under the oven, then close the dampers and light cobs to burn out soot which has collected. It is best to do this on a damp day.

A good cement to fill cracks in stoves is made by using equal parts of wood ashes and salt. Reduce this to a paste with water.

A Salt Water Bath.

It is not necessary to go to the seashore to enjoy a salt water bath. One can purchase a bag of good salt at any drug store for a few pennies. Dissolve a couple of handfuls of salt in a bowl of water, add it to the water for your morning bath, sponge quickly with the salt water, rinse with fresh cold water, dry the body quickly with a Turkish towel, and you will feel as if you had indeed been bathing in the briny deep. The salt bath is too little used. It is one of the best tonic baths we can take, and one which is particularly helpful in the summer.

Essence of Beef for Invalids.

Take a pound of gravy beef (leg for preference), cut it up small, and put into a jar with half a cupful of water and a pinch of salt. Cover closely, stand in a saucepan of cold water, bring to boil, and keep boiling six or eight hours. Remove meat, and when the gravy is cold it will be a solid jelly ready for use at any time by adding a little warm water. If the sick patient is too weak to swallow much, put a small piece in the mouth to dissolve. This you will find is very nourishing as well as being inexpensive.—Hilda White, Holloway, N.

Blackberry Cordial (For Diarrhœa).

(From Grandmother's Cookbook.)

You boil together two pounds of white sugar and half a gallon of blackberry juice. Remove the scum, then add half an ounce of cloves, half an ounce of cinnamon, and two grated nutmegs. When boiled let it settle, and add half a pint of brandy. Dose for a child, one tablespoonful, and for an adult one sherry glassful.

Need of Washing Lettuce.

If you will examine lettuce under a microscope you will discover on practically every leaf minute insects not easily detected otherwise. To free the lettuce of these insects, wash it carefully in a large pan of water and add salt to the last water. All insects will float to the top and may be drained off. To keep lettuce over Saturday and Sunday wrap it loosely in a wet towel and place it in a covered vessel to exclude all air.

OATS
FOR BREAKFAST

In this climate there is nothing better than Oats in some form for breakfast, and the form in which they are most easily digested is as Rolled Oats, but they must be properly milled in order that the consumer get best results. Our Mills are noted for their fine products and we know you will find

OGILVIE OATS
always give satisfaction
K.3

"Makes more bread and better bread"
PURITY FLOUR
"ask for it"

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The aim of this store has been to reach a point in its development where it can serve on equal terms all the citizens of this great Dominion, and offer to every resident of Canada the advantage of Simpson Quality, Simpson Variety and Simpson Economy, right at your own door without extra cost and without trouble or risk.

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If your name is not already on our mailing list send post-card at once for catalogue.

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Follow carefully the instructions printed in the Catalogue.

N. B.—To get our New Fall and Winter Catalogue promptly send Post Card addressed to Dept. No. 17

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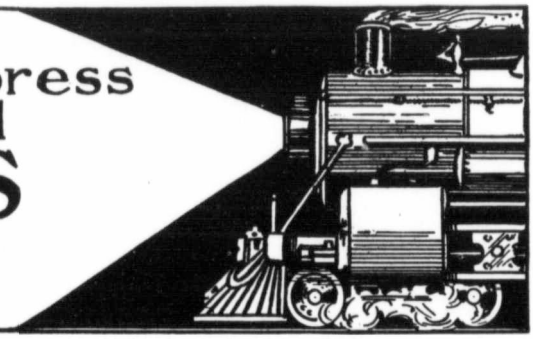


FASHIONS

A New Satin.

A new weave in the soft satin is called the enchantress. It is as pliable as muslin, and as firm as chiffon velvet, and being new, is, of course, the fad of the hour.

The New Corset.

The new corset is considerably lower in the bust than was the corset of last year. The waist is long and the hips are narrow, straight and long.

For Neckwear.

Irish crochet and other laces in the crocheted effects are being used more than any other on the neckwear. The valenciennes and the cluny rank next in popularity.

Gloves.

Heavily embroidered gloves are the fad. The black have white stitching and the white are trimmed with black and colors.

Woode n Beads.

Wooden beads will appear in many of the smartest dress trimming the coming season, being used with glass beads. Black wooden beads will be the popular trimming for mourning costumes, and will be used with black silk buttons and crepe bandings, these being the only adornment permissible.

Magyar Blouse.

The Magyar blouse, that is, the blouse with sleeves and body cut in one, will be more popular than ever during the fall. It will be made very plain. Some of the blouses have only an inch band of a contrasting color around the neck and about the bottom of the sleeve caps for a trimming. They are made of all sorts of fine materials and in every degree of simplicity. The very soft and sheer fabrics are preferable. The cashmere patterns are particularly fashionable and are generally trimmed with touches of black in the cravat, the pipings and the buttons.

BLIND GIRLS WORKING FOR THE BLIND.

As is generally known Mrs. Matilda Ziegler is publishing at her own cost a magazine for the blind, which is sent free of charge to several thousand blind persons. The magazine is a source of great delight to a large number of blind boys and girls, and this is in itself a great compensation in return for the twenty thousand dollars per year that it costs Mrs. Ziegler to print the magazine. It is interesting to know that some of the young girls who help to get out this interesting magazine are themselves entirely blind, and that the printing of the magazine affords them the opportunity of earning a comfortable living; so the magazine serves more purposes than one.

It may not be generally known that in addition to the Matilda Ziegler Magazine there is also the Ziegler Musical Quarterly, which is printed in raised letters and characters for the blind who are interested in music. This is a great help to the blind who are trying to support themselves by teaching music. A number of blind girls work on both of the periodicals.

THE Girls' Cozy Corner

PARENTAL THOUGHTFULNESS.

My big doll is Hildegarde;
The little one is Marjorie;
The paper dolls are Evelyn,
Bettina and Elaine.

The rag doll is named Claribel;
The baby I call Gwendolen.
I've different taste from my
mamma—
She named me Susan Jane.

GIRL'S PRIZE LETTER.

Central Park, B.C.

Dear Cousin Doris:—It is quite a while since I wrote to your paper so as I had nothing to do I thought I might as well write.

We live about five miles from the nearest city. Where we live there is a tram station, three grocery stores, a school, three churches and quite a few dwelling houses.

We used to live in Manitoba but we moved. We had a lovely trip out here. Coming through the mountains was the best part of our trip; it was fun to look up above you and see the snow on the mountains and besides that you could look down from where you were and see the ground. When we were coming through the mountains we had to wait on two snow-slides. I thought coming turough the tunnels was about the best part of our trip.

Our school is going to have a picnic on Thursday. I think I will be going but I do not know yet.

The berries are just coming in, all but the strawberries, and they are just going out.

Well I think I will close. Yours sincerely, Ruby Thompson, age 10 years.

Dry River, Man.

Dear Cousin Doris:—I haven't written this club for over a year and so I thought I would write now.

How many of the members went to Brandon Fair? I went the day before it ended. It was good.

My favorite game is hide-and-go-seek; we play it most of the time at school. I like watching a good exciting game of baseball. I also like to play it.

Our school has started now and I have to go. My studies are arithmetic, geography, writing, reading, spelling and history.

I am going to ask a riddle or two now. When is a door not a door? Ans—When it is ajar. What animal is it that walks on four legs in the morning, two legs at noon and three at night? Ans.—A man going through life creeping when a baby, walks erect when middle age and with a cane when an old man.

Well I will close for this time, wishing the club success. I remain sincerely, Cora Pottruff.

Cavalier, Sask.

Dear Cousin Doris:—I thought I would write a letter to your club. My father takes The Canadian Thresherman and Farmer and I always read The Girl's Cosy Corner.

I am eleven years old and I have three brothers and one sister. In Jean Barber's letter I saw a recipe for a layer cake. I made it and it was very good.

The leaves are all getting yellow on the trees; I guess they will soon fall off.

Well I will close now and leave room for the rest. Ruby Schaefer.

Strathcona, Alta.

Dear Cousin Doris:—I saw your offer of a prize for the best letter, so I am trying for it.

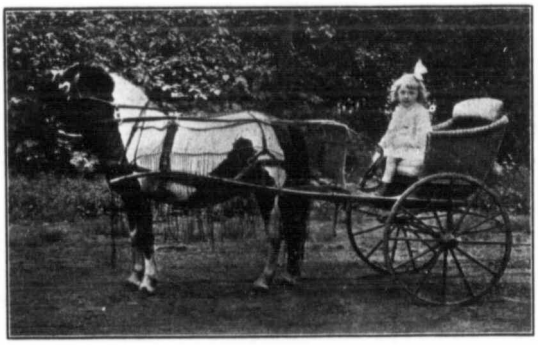
My father has taken this book since I was a little girl. There are four in our family, two boys and two girls. We have a dog; he is a good old faithful dog and would not bite a stranger for anything. I am in the third book at school and I am 13 years old. I should have been farther advanced but I have to stay home a lot on account of my mother's poor health.

Well I must close. Letta Green.

Deloraine, Man.

Dear Cousin Doris:—As I have read so many of the letters in the Girl's Cosy Corner that I thought I would try too.

We planted a flower garden this summer, but only sweet peas blossomed. I go to school and am in grade VI. My studies are reading, writing, arithmetic, geography, Canadian history, English history, grammar, drawing, and spelling. We are having our holidays now. We have six weeks holidays.



This is a real little girl and a real pony who both live on a big Iowa farm. What good times they both must have.

We live five miles from Whitewater Lake. Generally there is plenty of shooting there in the fall but there is not going to be very much this fall. I enjoy reading the stories in your paper very much. Well I must close now, hoping this will escape the waste paper basket. I remain, yours sincerely, Agnes M. Longman.

La Riviere, Man.

Dear Cousin Doris:—I saw that you were giving a book to the boy or girl writing and telliing how to play a game. I am going to tell how to play drop the handkerchief. They all stand in a circle and one goes around the outside of the circle with a handkerchief in their hand, singing I wrote a letter to my love and on the way I lost it, a little puppie picked it up and put it in his pocket; he won't bite you, and he won't bite you, but he will bite you, and you drop the handkerchief behind one and run in and out under their arms and the one that the handkerchief is dropped behind runs after you with the handkerchief in their hand and if they go the wrong way or cannot catch you, you take the handkerchief and go around again and if they touch you they take the handkerchief and go around. My teacher went to Europe for the teacher's convention. Our school opens September 6th. I am in grade five.

I guess my letter is getting rather long, I will stop and leave room for the rest. Your Cousin, Effie Clements.

Crandall, Man.

Dear Cousin Doris:—I am ten years old. My brother takes the Canadian Thresherman and Farmer and I like to read the letters in it. My favorite game is hide-and-go-seek. This is the way to play it. One person stands at one place, shuts his eyes and counts to some number. While that person is counting the rest all run and hide. When the counter stops counting he goes and tries to find the rest. If he finds one of the people that are hiding, he taps three times on the goal and the one that is caught is counter next time. But if he does not catch anybody he has to count again. I hope I'll get the prize and I also hope this letter will escape the waste paper basket. Wishing the club every success. I remain your loving cousin, Elsie Shier.

Delisle, Sask.

Dear Cousin Doris:—I have read many letters of the boys and girls and think they are very interesting and will now try myself.

My brother takes the Canadian Thresherman and looks forward to its coming. As it is holidays again I will tell you a camping trip we had to Pike Lake, which is eighteen miles from here. There was baking to be done but we did not mind that. When we got down there the men put up the tent and the women got dinner and afterward we all went in bathing. Every day we went in bathing and boat riding when not picking Saskatoon berries.

Could any of the girls tell me how to fix roses in a jar? I remain your cousin, Annie Currie.

Wild Oak, Man.

Dear Cousin Doris:—Here I am again. This time I come to thank you for the beautiful book you sent me. Oh, it's lovely. I have read it twice. I am going to keep it so I will never forget you dear cousin and the club. I hope this letter will not be thrown in the waste paper basket, although I can hardly hope to get a prize again.

My brother and I went to school this fall; but now we've stopped going until next spring.

I must stop now as this letter is getting so long, but I hope I may come again. I am very fond of reading and my favorite authors are Mrs. Mary J. Holmes, Charles Garvice and Rosa N. Carey.

Well, wishing you Cousin Doris and the club success, I remain, your cousin, Victoria Erlendson.

Oakland, Man.

Dear Cousin Doris:—This is my first letter to your club. As I was reading the letters in your paper I thought I would write to you. I am eleven years old in August. My choice game is sheep, sheep, where are you? I am going to tell you how to play it. One is blindfolded. The rest are supposed to be the sheep. The person who is "it" says "Sheep, sheep, where are you?" the rest say "Baa." The others can run around until the one that is it says "stand still" and then they can't move. "It" tries to catch one. The one who is caught is "it" and so on. It is very hot now. We are not getting much rain, so our crops are getting spoiled. We have a small flower garden; it contains geraniums, asters, sweetwilliams, pansies and lark spurs. My studies are arithmetic, reading, geography, history, spelling, drawing and grammar. We have six weeks' holidays. There are fourteen pupils in our school.

I will close with success to the club. Your loving cousin, Eva Blair.

Indian Head, Sask.

Dear Cousin Doris:—I have read so many letters I thought I would write one. I also read the letters on the boys and girl's page and think they are very nice. I am going to school every day. Our teacher's name is Mrs. Greer and our school's name is Sunny Slope. I am in the third reader. I like going to school fine. I walk to school all summer; it is one mile and a half to my school. My mother takes the Canadian Thresherman and we all like it. I have two brothers and one sister. My sister is only one month old. I was eleven years old in February. I think it is time to close. Wishing your paper every success. Your cousin Birdie Cooper.

THE Canadian Boy's Camp

EXCEPTION.

"Dishonesty in sports we hate,
Except in certain cases;
For instance, in baseball, it's great
To see men "steal" their bases!"
—Nixon Waterman.

Cousin Doris wants more letters from her boy readers—the girls are ahead this month.

BOYS' PRIZE LETTER.

Prince Albert, Sask.

Dear Cousin Doris:—This is my first letter to the "Camp." My papa takes this paper and I read the boys' letters.

I will tell you about two little birds that have interested me. They are

small, olive colored birds with long beaks. They say: "O, chee, O, chee, O, chee." They built a nest in a tin pail back of the chicken house and laid six little speckled eggs. The cat destroyed the nest. As they seemed anxious to build near the house mamma put a can on the back of the house for them. When they began building my little sister took the old nest and placed it in there. They used the material from the old nest and soon had a new one built. They had two eggs in it but seemed dissatisfied and threw them out. The mother bird is now sitting on five eggs. I would like to get a book. I am eleven years old. Your friend, Clarence Voggenthaler.

Tetellier, Man.

Dear Cousin Doris:—This is my first letter to the Boy's Camp. I have taken the Canadian Thresherman and Farmer for nearly a year. I go to school and am going to try for third. I like reading the letters of the Boys' Camp. I am fourteen in October. I live one mile from school, four miles from Tetellier and seven and a half miles from the town of Emerson. I will close, wishing the Camp every success. Your cousin, Stanley Copeland.

Maymont.

Dear Cousin Doris:—This is my first letter to your club. My brother wrote a letter and got a prize.

We have been up in the West three years. We came from Manitoba. We live two miles and a half north of Maymont. Maymont is a small town with one church, a blacksmith shop, a hotel, two stores, a station house, two elevators, one lumber yard, one photo gallery, one drug store, two livery barns, a post office, a confectionery shop and some dwelling houses.

I have not been going to school this spring as I have been out herding cows. One day I saw a badger and tried to drown him but I could not. I found fourteen birds' nests including greybirds' nests, blackbirds' nests and prairie chickens' nests and a snipe's nest. I hope to see my letter in print. I will now close. Wishing your paper every success. Your cousin, Frances Bohn.

PEACE SCOUTS.

I suppose every British boy wants to help his country in some way or other.

There is a way, by which he can do so easily, and that is by becoming a scout.

A scout, as you know, is generally a soldier who is chosen for his cleverness and pluck to go out in front of any army in war to find out where the enemy are, and report to the commander all about them.

But, besides war scouts, there are also peace scouts, i.e., men who in peace time carry out work which requires the same kind of abilities. These are the frontiermen of all parts of our Empire. The "trappers" of North America, hunters of Central Africa, the British pioneers, explorers, and missionaries over Asia and all the wild parts of the world, the bushmen and drovers of Australia, the constabulary of North-West Canada and of South Africa—all are peace scouts, real men in every sense of the word, and thoroughly up in scoutcraft, i.e., they understand living out in the jungles, and they can find their way anywhere, are able to read meaning from the smallest signs and foot-tracks; they know how to look after their health when far away from any doctors, are strong and plucky, and ready to face any danger, and always keen to help each other. They are accustomed to take their lives in their hands, and to fling them down without hesitation if they can help their country by doing so.

They give up everything, their personal comforts and desires, in order to get their work done. They do not do all this for their own amusement, but because it is their duty to their King, fellow-countrymen, or employers.

The History of the Empire has been made by British adventurers and explorers, the scouts of the nation, for hundreds of years past up to the present time.

The Knights of King Arthur, Richard Coeur de Lion, and the Crusaders, carried British chivalry into distant parts of the earth.

Raleigh, Drake, and Capt. John Smith, soldiers and sailors of Queen Elizabeth's time, faced unknown dangers of strange seas, as well as the known dangers of powerful enemies, to take and hold new lands for the expansion of our small kingdom.

Capt. Cook in Australia, Lord Clive in India, opened up new countries. Speke, Baker, and Livingstone pushed their way through the savage deserts and forests of Africa; Davis, Franklin and Ross braved the ice and snows of the Arctic regions.

In the present time Selous, the great hunter, and Lieut. Boyd Alexander, who recently crossed Africa, are peace scouts.

These are just a few names out of the many hundreds of the scouts of the nation who have from times down to the present spread the good name and power of our country in all parts of the world.

And there have been women scouts of the nation, too; such as Grace Darling, who risked her life to save a shipwrecked crew; Florence Nightingale, who nursed sick soldiers in the Crimean War; Miss Kingsley, the African explorer; Lady Lugard, in Africa and Alaska; and many devoted lady missionaries and nurses in all parts of our Empire. These have shown that girls as well as boys may well learn scouting while they are young, and so be able to do useful work in the world as they grow older.

It is a grand life, but it cannot suddenly be taken up by any man who thinks he would like it, unless he has prepared himself for it beforehand.

Those who succeed best are those who learnt scouting while they were still boys.

Scouting also comes in very useful in any kind of life you like to take up, whether it is soldiering or even business life in a city. Sir William Crookes says it is even valuable for a man who goes in for science, finding out little things about air, and light, and so on. And Sir Lauder Brunton points out how necessary it is for a doctor or a surgeon.

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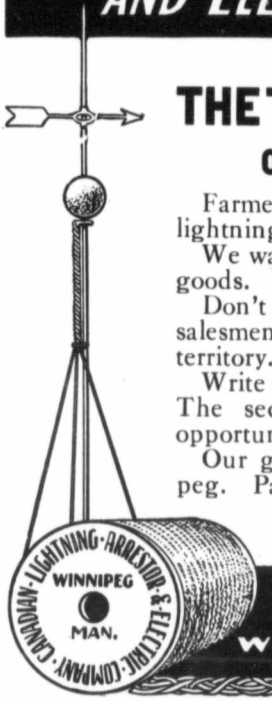

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CANADA

John Henderson, a State Senator of New York, says he was riding in the smoking-car on a little one-track road in the northern part of the State two weeks ago, and in the seat in front of him sat a jewelry drummer.

He was one of those wide-awake, never-let-any-one-get-the-better-of-him style of men. Presently the train stopped to take on water, and the conductor neglected to send back a flagman. A limited express, running at the rate of ten miles an hour, came along and bumped the rear-end of the first train.

The drummer was lifted from his seat and pitched, head first, against the seat ahead. His silk hat was jammed clear over his ears. He picked himself up and settled back in his seat. No bones had been broken.

Then he pulled off his hat, drew a long breath, and straightening up, said:

"Hully, gee! Well, they didn't get by us, anyway!"

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When a preacher takes a false step people forget all about the mantle of charity.

Problem of The Deserted House

The Thinking Machine Goes on a Loan, Mysterious Quest

BY JACQUES FUTRELLE

The telephone bell rang sharply, twice. Professor Augustus S. F. X. Van Dusen—The Thinking Machine—opened his eyes from a sound sleep, rose from the bed, turned on an electric light, and squinted at the clock on the table. It was just half-past one; he had been asleep for only a little more than an hour. He slid his small feet into a pair of soft slippers and went to the telephone.

"Hello!" he called irritably.

"Is that Professor Van Dusen?" came the answer in a man's voice—a voice tense with nervous excitement, and so quick in enunciation that the words tumbled over one another.

"Yes," replied the scientist. "What is it?"

"It's a matter of life and death!" came the hurried response in the same hasty tone. "Can you come at once and—" The instrument buzzed and sputtered incoherently, and the remainder of the question was lost.

For an instance The Thinking Machine listened intently, seeking to interpret the interruption; then the sputtering ceased and the wire was silent. "Who is this talking?" he demanded.

The answer was almost a shout; it was as if the speaker was strangling, and the words came explosively, with a distinct effort. "My name is—"

And that was all. The voice was swallowed up suddenly in the deafening crack of an explosion of some sort—a pistol shot! Involuntarily The Thinking Machine dodged. The receiver sang shrilly in his ear, and the transmitter vibrated audibly; then the instrument was mute again—the connection was broken.

"Hello, hello!" the scientist called again and again; but there was no answer. He moved the hook up and down several times to attract Central's attention. But that brought no response. Whatever had happened had at least temporarily rendered his own line lifeless. "Dear me! Dear me!" he grumbled petulantly. "Most extraordinary!"

For a time he stood thoughtfully staring at the instrument; then went over and sat down on the edge of his bed. Sleep was banished now. Here was a problem, and a strange one! Every faculty of his wonderful brain was concentrated upon it. The minutes sped on as he sat there turning it all over in his mind, analyzing it, regarding it from every possible viewpoint, while tiny wrinkles were growing in the enormous brow. Finally he concluded to try the telephone again. Perhaps it had only been momentarily deadened by the shock. He returned to the instrument and picked up the receiver. The rhythmic buzz of the wire told him instantly that the line was working. Central answered promptly.

"Can you tell me the number which was just connected with this?" he inquired. "We were interrupted."

"I'll see if I can get it," was the reply.

"It's of the utmost importance," he went on to explain tersely; "a matter of life and death, even."

"I'll do what I can," Central assured him; "but there is no record of the calls, you know, and there may have been fifty in the last ten or fifteen minutes, and of course the operators don't remember them." She obligingly gave him a quarter of an hour as she sought some clue to the number.

The Thinking Machine waited patiently for the report, staring dumbly at the transmitter meanwhile, and at last it came. No one remembered the number; there was no record of it. Central was sorry. With a curt word of thanks the scientist called for one of the big newspaper offices and asked for Hutchinson Hatch, reporter.

"Mr. Hatch isn't in," came the response.

"Do you know where he is?" queried the sceintist, and there was a shadow of anxiety in the perpetually irritated voice.

"No; home, I suppose."

The man of science drew a long, quick breath—it might have been one of uneasiness—and called the newspaper man's home number. Of course the mysterious message over the telephone had not been from Hatch. It was not the reporter's voice, he was positive of that, and yet there was a bare chance that—

"Hello!" Hatch growled amiably but sleepily over the wire.

The Thinking Machine's drawn face showed a vague relief as he recognized the tone. "That you, Mr. Hatch?" he asked.

"Yes."

"Trouble?" repeated the reporter in evident surprise. "No. Who is this?"

"Van Dusen," was the response. "Good night."

Mechanically, unconsciously, almost, The Thinking Machine began dressing. The ever active, resourceful brain, plunged so suddenly into this maze of mystery, was fully awake now and was groping through for some starting point in this single problem which had been thrust upon it so strangely. And evidently at last there came some inspiration; for

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NEXT COURSE BEGINS, OCTOBER 25th, 1910

Applications now being Received. Calendar sent free upon Application.

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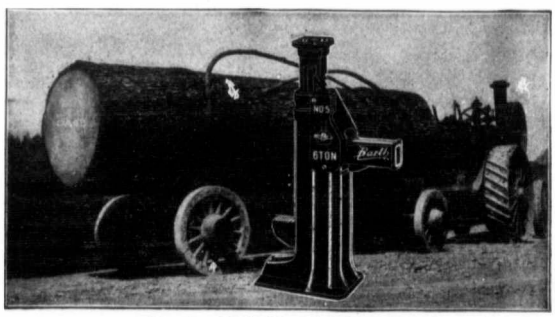

By courtesy of W. T. Tilson, Glade Springs, Va.

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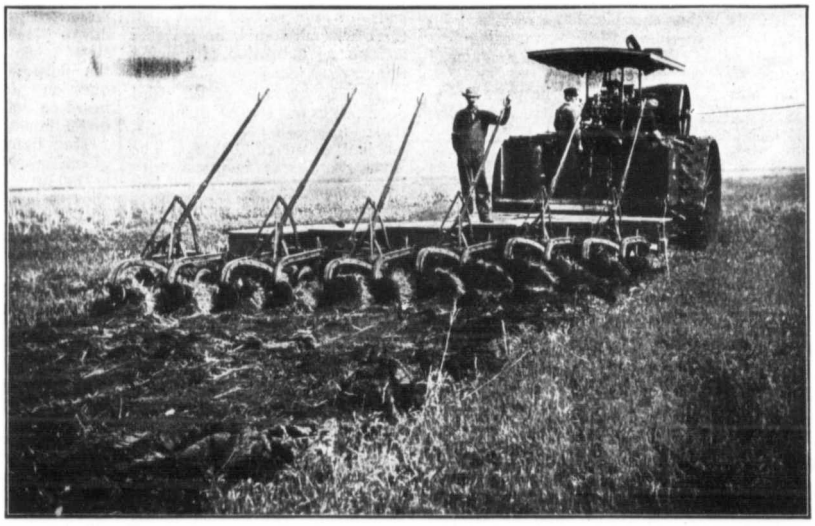

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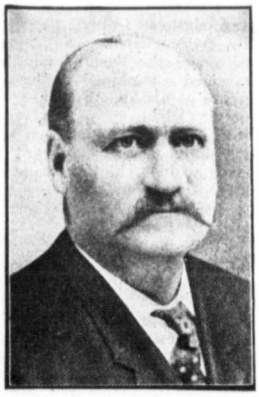

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THREE TIGERS

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TESTIMONIAL

Gaar, Scott & Co., Winnipeg

Winnipeg, September 17, 1910

Gentlemen,

The 25 h.p. Double Simple Gaar Scott engine we purchased from you this last spring has more than met our expectations and your promises.

After we got started we ploughed 1¾ miles in 22 minutes, pulling a 12-14 inch JOHN DEERE (Stubble bottom) plow. Return trip in same time. Including turn and taking coal and water, made 2¾ miles in 57 minutes which is equal to 4⅘ acres or over **40 acres in 10 hours,** and were more than pleased with the entire outfit.

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the eminent scientist started hurriedly out of the front door into the night, pausing on the steps to remember that in his haste he had forgotten to exchange his slippers for shoes, and that he was bareheaded.

Fifteen minutes later the night operator in chief at the branch telephone exchange was favored with a personal call from Professor Augustus S. F. X. Van Dusen. There was a conference of five minutes or so, after which the scientist was led back through the operating room and ushered into the long high ceiling apartment where thousands of telephone wires were centered —a web woven of thin strands, each of which led ultimately to the long table where a dozen or more girls were on watch. He went into that room at five minutes of two o'clock; he came out at seventen minutes after four and appeared before the night operator in the outer office.

"I found it," he announced shortly. "Please, now, let me speak to police headquarters—either Detective Mallory or Dectective Cunningham."

Detective Cunningham answered.

"This is Van Dusen," the scientist told him. "I should like to know if any murder or attempted murder has been reported to the police to-night?"

"No," replied the detective. "Why?"

"I was afraid not," mused The Thinking Machine enigmatically. "Has there been any call for police assistance anywhere?"

"No."

"Between one and two o'clock?" insisted the scientist.

"There hasn't been a call to-night," was the reply. "What's it all about?"

"I don't know—yet," said the scientist. "Good night."

The Thinking Machine went out after a few minutes, pausing on the curb in the brilliant glare of a street lamp to jot down a number on his cuff. When he looked up a cab was just passing. He hailed it, gave an addres to the driver, and a moment later the vehicle went clattering down the street. When it stopped at last before a dark, four-story house, the cabman sat still for a moment expecting his passenger to alight. But nothing happened; so he jumped down and peered into the gloom of the vehicle. Dimly he was able to make out the small figure of the scientist huddled up in a corner of the cab with his huge yellow head thrown back, and slender white fingers pressed tip to tip.

"Here we are, sir," announced the driver.

"Yes, yes, to be sure!" exclaimed the scientist hurriedly. "I quite forgot. You needn't wait."

The vehicle was driven off as The Thinking Machine ascended the brown stone steps of the house and pulled the bell. There was no answer, no sound inside, and he pulled it the second time, then the third. Finally, leaning forward with his ear pressed against the door, he pulled the bell the fourth time. This evidently convinced him that the cord inside was disconnected, and he tried the door. It was locked.

Without an instant's hesitation he ran down the steps to the basement entrance in an areaway. There was no bell there, and he tried the knob tentatively. It turned, and he stepped into a damp, smelly hallway, unrelieved by one glint of light. He closed the door noiselessly behind him, and stood for a little while listening. Then he did a peculiar thing. He produced a small electric pocket lamp, and holding it as far to the left as he could reach, with the lens pointing ahead of him, pressed the button. A single white ray cleft the darkness, revealing a bare, littered floor, moldy walls, a couple of doors, and stairs leading up.

He spent five cautious minutes perhaps in the basement. There was no sign of recent human habitation, nothing but accumulated litter, and dust and dirt. Then he went up the stairs to the floor above. Here he spent another five minutes, with only an occasional flash of light, always at arm's length to extreme right or left, to tell him there was yet no sign of occupancy. Then another flight of stairs to the second floor. Still there was no sound, no trace of anyone, no indication of a living thing.

His first glimpse of the third floor confirmed at first glance all those impressions of desertion he had gathered below. The front room was identical with the one below, the front hall room was identical; but there was a difference in the large rear room. The dust and litter of the floor seemed worn into a sort of path from the top of the stairs, and following this path toward the back he came upon —a telephone!

"Forty-one-seventeen," he read, as the instrument stood revealed, bathed in the light from the electric bulb. Then he glanced down at his cuff and repeated, "Forty-one-seventeen."

With every sense alert for one disturbing sound, he spent two full minutes examining the instrument. He seemed to be seeking some mark upon it,—the scar of a bullet, perhaps,—and as the scrutiny continued fruitless, the tiny wrinkles, which had momentarily disappeared from his face, appeared there again, and deepened perceptibly. The receiver was on the hook, the transmitter seemed to be in perfect condition, and the walls round the box were smooth. Finally he allowed the light to fade, then picked up the receiver and held it to his ear. His sensitive fingers instantly became aware of tiny particles of dust on the smooth black surface; and the line was dead. Central did not answer. Yet this was the telephone from which he had been called!

Again he examined the instrument under the light, with something akin to perplexity on his drawn face; then allowed his eyes to follow the silken wire as it led up, across the room, and out the window. Did it go up or down? Probably up, possibly down. He had just taken two steps toward that window, with the purpose of answering this question definitely, when he heard a sound somewhere off in the house and stopped.

The light faded, and utter gloom swooped down upon him as he listened. What he heard apparently was the tread of feet at a distance, somewhere below. They seemed to be approaching. Now they were in the lower hall, and grew clatteringly distinct in the emptiness of the house; then the tread sounded on the stairs, the certain, quick step of one who knew his way perfectly. Now the sound was at the door —now finally in the room. Yet there was not one ray of light.

For a little time The Thinking Machine stood motionless, invisible in the enshrouding darkness, until the footsteps seemed almost upon him. Then suddenly his right arm was extended full length from his body, the electric bulb blazed in his hand, and slashed around the room. By every evidence of the sense of sound the flash should have revealed something—perhaps the figure of a man. But there was nothing! The room was vacant, save for himself. And even while the light flared he heard the steps again. The light went out, he took four quick, noisless steps to the left, and stood there for a moment puzzled.

Then he understood. The mysterious tread was stilled now, as if the person had stopped, and it remained still for several minutes. The Thinking Machine crept silently, cautiously, toward the door and stepped out into the hall. Leaning over the stair rail, he listened. And after a while the tread sounded again. He drew back into the shadow of a linen closet as the sound grew nearer —stood stock-still staring into blank nothingness as it was almost upon him; then the footsteps receded gradually along the hall, down the stairs, growing fainter until the receding echo was lost in the silence of the night.

Whereupon The Thinking Machine went boldly up the stairs to the fourth floor, the top. He mounted confidently, as if expecting something to reward his scrutiny; but his eyes rested only upon the bleak desolation of unoccupied apartments. He

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went straight to the rear room, above the one he had just left, and directly across to one of the windows. Faint, rosy streaks of dawn slashed the east—just enough natural light to show dimly a silken wire hanging down from the middle of the window outside. He opened the window, drew in the wire, and examined it carefully under the electric light, and nodded as if he understood.

Finally he turned abruptly and retraced his steps to the first floor. There he paused to examine the knob of the front door; then went on down into the basement. Instead of examining the door there, however, he turned back under the stairs. There he found another door—a door to the subcellar, standing open a scant few inches. A damp, moldy smell came up. After a moment he pushed the door open slowly and ventured one foot forward in the darkness. It found a step, and he began to descend. The fourth step down creaked suddenly, and he paused to listen intently. Utter silence!

Then on down, ten, eleven, twelve, fourteen, steps, and his foot struck soft, yielding earth. Safely on the ground again, in the protecting gloom, he stood still for a long time, peering blindly around him. At last a blaze of light leaped from the electric bulb, which was extended far from the body to the right, and The Thinking Machine drew a quick breath. It might have been surprise; for within the glow of the light lay the figure of a young man, a boy almost, flat on his back on the muddy earth, with eyes blinking in the glare. His feet were bound tight together with a rope, and his hands were evidently fastened behind him.

"Are you the gentleman who telephoned for me?' inquired The Thinking Machine calmly.

There was no answer, and yet the postrate man was fully conscious, as proved by the moving eyes and a twitching of his limbs.

"Well?" demanded the scientist impatiently. "Can't you talk?"

His answer was a flash of flame, the crash of a revolver at short range, and the light dropped, automatically extinguished as the pressure on the button was removed. Upon this came the sound of a body falling. There was a long drawn gasp, and again silence.

"For God's sake, Cranston!" came the explosive voice of man after a moment. "You've killed him!"

"Well, I'm not in this game to spend the rest of my life in jail," was the answer, almost a snarl. "I didn't want to kill anybody; but if I had to, all right. If it hadn't been for this kid here, we'd have been all right anyway. I've a good mind to give him one too, while I'm at it."

"Well, why don't you?" came a third voice. It was taunting, cold, unafraid.

"Oh, shut up!"

Feet moved uncertainly, feelingly, over the soft earth and stumbled upon the inert, limp figure of The Thinking Machine, lying face down on the ground, almost at the feet of the bound man. One of the men who had spoken stooped, and his fingers touched the still, slim body. He withdrew his hands quickly.

"Is he dead?" some one asked.

"My God, man! Why did you do it?" exclaimed the man who had spoken first, and there was a passionate undertone in his voice. "I never dreamed that this thing would lead to—to murder!"

"It hardly seems to be a time to debate why I did it," was the brutal response; "so much as it is to decide what we'll do now that it is done. We might drop this body in the coal bin in the basement until we finish up here; but what shall we do with the boy? We are both guilty—he saw it. He wanted to tell the other. What will he do now?"

"He'll tell it just so surely as he lives," the bound man answered for himself.

"In that case there's only one thing to do," declared Cranston flatly. "We'd better make a double job of this, leave them both here, and get away."

"Don't kill me—don't kill me!" whined the young man suddenly. "I won't ever tell—I promise! Don't kill me!"

"Oh, shut up!" snarled Cranston. "We'll attend to you later. Got a match?"

"Don't strike a light," commanded the other man sharply, fearfully. "No, don't! Why, man, suppose—suppose your shot had struck him in—in the face. God!"

"Well, help me lift it," asked Cranston shortly.

And between them they carried the childlike body of the eminent man of science through the darkness to the stairs, up the stairs and through the basement to the back. The dawn was growing now, and the pallid, drawn face of The Thinking Machine was dimly visible by a light from the window. The eyes were wide open, glassy; the mouth agape slightly. Overcome by a newborn terror,—hideaus fear,—the two men flung the body brutally into an open coal bin, slammed down the cover, and went stumbling, clattering, out of the room.

It was something less than half an hour later that the lid of the coal bin was raised from inside, and The Thinking Machine clambered out. He paused for a moment, to rub his knees and elbows ruefully and stretch his cramped limbs.

"Dear me! Dear me!" he grumbled to himself. "I really must be more careful."

And then straight back to the entrance of the subcellar he went. It was lighter outside now,

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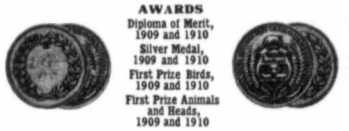

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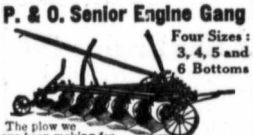

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and he walked with the assurance of one who saw where he went, yet noiselessly. But the door of the stairs leading down still revealed only a yawning, black hole. He went on without the slighest hesitation, remembering to step over the fourth step, which had squeaked once before. In the gloom below, standing on the earth again, he listened for many minutes.

Assured at last that he was alone, he groped about the floor for his electric light, and finally found it. Without fear or apparent caution he examined the huge, dark damp room. On each side were thrown up banks of dirt that seemed to have been dug recently, and here before him was where the bound man had lain. And over there—he started forward eagerly when he saw it—was a telephone! The transmitter box had been wrecked by what seemed to be a bullet. As he saw it he nodded his head comprehendingly.

From there he went on around some masonry. Here was a passage of some sort. He flashed the light into it. It had been dug out of the solid earth, and its existence evidently accounted for heaps of dirt in the subcellar. Still he didn't hesitate. Straight along the passage he went, wary of step, and stooping occasionally to avoid striking his head against the earth above him. Ten, fifteen, twenty feet he went, and still the gloomy, foul smelling hole lay ahead of him, leading to—what? At about thirty-five feet from the subcellar there was a sharp turn,—he thought at first it was the end of the tunnel,—then the passage straightened out again, and there was another fifteen or twenty feet, growing smaller and smaller as he went forward.

Suddenly the tunnel stopped. The Thinking Machine found himself flattening his nose against a door of some sort. He allowed his light to fade, then dimly, through a cranny, he saw a faint glow outside. This seemed to be his destination, wherever it was,—and he paused thoughtfully. Obviously the light outside was electric, and if electric light might not some one be in there? A subterranean chamber of some sort, perhaps? His fingers ran around the edge of the door, loosened a fastening, and he peered out. Then, assured again, he opened the door wide, and stepped out into a brilliant glare.

He was in the subway. He stood blinking incredulously. Here to his right the shining rails went winding off round a curve in the far distance; and to the left was a quicker turn in the line of the excavation. In neither direction was there anything that looked like a station.

"Really, this is most extraordinary!" he exclaimed.

Then and there the eminent man of science paused to consider this weird thing from all possible viewpoints. It was un-

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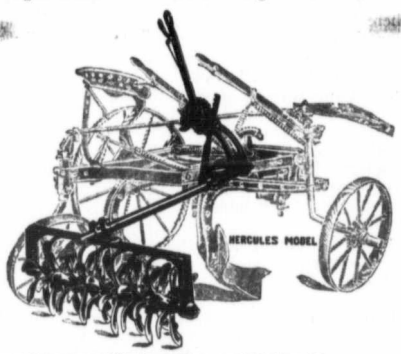

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Field Competitions in Alberta

Continued from page 33

Sedgewick except where otherwise mentioned.

The Stanley variety is very largely grown around Sedgewick but unfortunately a great deal of it is badly mixed with other varieties. There are, however, some fields of fairly pure Red Fife, and the one field of Kharkoff was exceptionally pure. The district is exceptionally free from the more noxious varieties of weeds.

In the oat competition the prizes were awarded as follows:

2nd Peter Cunningham, Sedgewick, Banner variety, score 79
3rd A. M. McKee, Sedgewick, Abundance variety, score 78

The other exhibitors were: Geo. Tanton, W. I. Sharpe, P. D. Sinclair, Fred Fisher, J. S. Sparrow, and Emil Hertberge. The oats made rather a poor showing as compared with the wheat in this district. They are rather light and are mixed with other grains.

Vermillion Valley & Beaver Lake Agricultural Society.

Judge: Albert Lougheed of Bowden.

In the wheat competition at Vegreville there were eleven competitors and the prize winners were:

1st P. Bolan, Vegreville, Red Fife variety, score 83
2nd C. T. McGowan, Hairy Hill, Preston variety, score 82½
3rd Julius Felsrow, Hairy Hill, Preston variety, score 82

The other exhibitors were Phil. Bechtloff, Vegreville; P. B. Holden, Vegreville; A. M. Bontillier of Soda Lake; J. Trimble, Vegreville; Jos. McCallum, of Beaver Lake; Geo. Hewer, of Soda Lake; Wm. Still, Vegreville; and Robt. Stewart of Vegreville.

Preston seems to be the favorite variety in this locality on account of its earliness. The judge observed some fields that had smut and weeds. The crop on the whole was fairly good.

There were six competitors in the oat competition.

1st Geo. Colby, Vegreville, Abundance variety, score 74
2nd W. E. Wagner, Vegreville, Tartar King variety, score 73
3rd S. A. Kirkwood, Vegreville, score 69½

Other exhibitors were: Jos. Baxandall, Vegreville; C. T. McGowan, Hairy Hill; J. R. O. Wills, Vegreville. Weeds were rather prevalent among these crops and the land appeared rather loose and soft. Its condition would have been improved by packing.

While the judges are more apt to remark on the weak points and thus try to remedy them, the good scores allotted show that on the whole a high grade of excellence prevailed all through the competitions. As these competitions were held in all parts of the Province they show that no part is without some good crops, and that even in such a season as 1910 good farming will produce a fairly profitable crop in all parts of Alberta.

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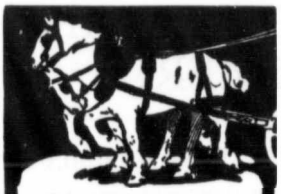

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From the Bar Ranch, Alberta, to the Seattle A.Y.P. with a Shipment of Pure Bred Percherons.

Continued from page 50 last issue

(the south branch of) the Thompson River." Ducks, the scene of the recent holdup on the C.P.R. is passed on the banks of the Thompson River until finally Kamloops, the next divisional point, is reached.

Here again, the usual amount of engine and crew changing, accompanied with the usual amount of shunting around in the re-making up of our train, was undergone. We also took on a fresh supply of hay and water for the horses and provisions for ourselves. Resuming our journey, just below Kamloops the Thompson widens out into Kamloops Lake, a broad, beautiful, hill-girt sheet of water, along the south shore of which the railway runs some twenty miles, then the series of the Thomspon River canyons is entered, leading westward to the Fraser through marvellous scenery. The mountains now draw together again, and the railway winds along their face hundreds of feet above the struggling river. This is the Thompson Canyon. The gorge rapidly narrows and deepens and the scenery becomes wild beyond description.

Ashcroft is speedily passed and at Lytton, a small trading town, the canyon suddenly widens to admit the Frazer, the chief river of the province, which comes down from the north between two great lines of mountain peaks, and whose turbid flood soon absorbs the bright green waters of the Thompson. The railway now enters the canyon of the united rivers, and the scene becomes even wilder than before. Six miles below Lytton the train crosses the Fraser by a steel cantilever bridge, high above the water, plunges into a tunnel and shortly emerges at Ciseo. The line now follows the right hand side of the canyon with the river surging and swirling far below. The old Government road, built in the early '60's, and abandoned since the opening of the railway, attracts attention all along the Fraser and Thompson valleys. Usually twisting and turning about the cliffs, it sometimes ventures down to the river's side, whence it is quickly driven by an angry turn of the waters. Six miles below Kanaka, where it follows the cliffs opposite to the railway, it is forced to a height of a thousand feet above the river, and is pinned by seemingly slender sticks to the face of a gigantic precipice. The canyon alternately widens and narrows. Indians are at times seen on projecting rocks down at the water's edge, spearing salmon or scooping them out with dip-nets, and in sunny spots the salmon are drying on poles. Chinamen are noticed on the occasional sand or gravel bars washing for gold; and irregular Indian farms or villages, alternate with the groups of huts of the Chinese.

North Bend is then reached and just below it the principle

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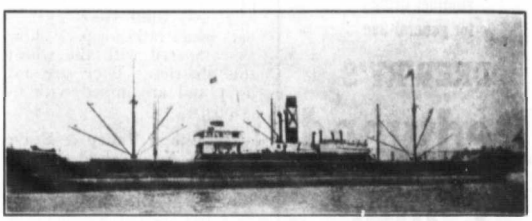

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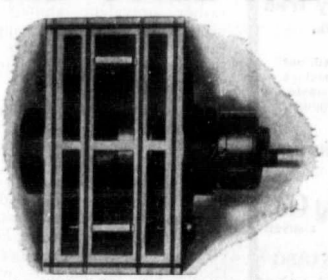
AND STILL THEY COME



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Dear Sirs,
Your Mr. Kent sold us one of your valves for our Atlas 100 H.P. Engine. The valve has been working for about a month and it is saving us from 20 to 25 per cent. of coal.
We are very well satisfied with the valve, and would recommend it to anyone working a slide valve engine. Yours truly,
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Dear Sirs,
The valves I purchased of your agent, Chas. E. Kent, have been found very satisfactory both in increasing power of engines and removing entire load of valve gear.
E. P. JENKINS.

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canyon of the Fraser commences, and from here to Yale, 23 miles, the scenery is not only intensely interesting but startling. It has been described as "matchless." The great river is forced between vertical walls of black rocks where, repeatedly thrown back upon itself by opposing cliffs, or broken by ponderous masses of fallen rocks, it madly foams and roars. Near Spuzzum the Government road, as if seeking company in this awful place, crosses the chasm by a suspension bridge to the side of the railway, and keeps with it, above or below, to Yale. Ten miles below Spuzzum the enormous cliffs apparently shut together and seem to bar the way. The river makes an abrupt turn to the left, and the railway, turning ,to the right, disappears into a long tunnel, emerging into daylight and rejoining the river at Yale. Yale, Hope and Agassiz are rapidlv passed, the latter place being noted for its Government experimental farm, where fruit and grain are grown in great variety. Aggassiz is also the station for the Harrison Hot Springs, on Harrison Lake, five miles north, and Mission Junction is finally reached in the evening. Here we make a decided change in our course, turning direct south, reaching Sumas at the international boundary on the morning of September 24 about 5 a.m.

Here we have to lay over a day waiting for veterinary inspection and custom clearance. The snow capped peak of Mount Baker is seen in the distance and altogether the place takes on, especially on the American side, a decidedly American atmosphere.

We duly obtain our clearance to enter the States and leave Lumas on Saturday, the 25th and arrive in Seattle at the Exposition stock show grounds on Sunday morning about 3 a.m.

Again there is a delay for the breaking of the "in bond" seals by the custom officers and not until eight o'clock in the morning do we get the horses off the train. Eventually we got everything unloaded and together with our show wagon and our outfit of supplies, we finally got located in our allotted section in barn No. 4 in the draft horse section of the stock buildings. We soon had everything in ship-shape order, the horses fed and watered and given a good liberal supply of bedding and they certainly took advantage of this opportunity to lay down, for they had been standing the whole of the trip from High River to Seattle, taking in all five days, the narrow compartments of the palace horse cars not permitting them to lay down.

The horses were not shown till the following Wednesday, so we had ample time to get them into fairly good trim, although it was soon apparent that we had a sick horse upon our hands, the horse Halifax. This horse was very sick during the whole of our stay at the show and only recovered sufficiently to permit him being loaded upon the cars for the return trip home.

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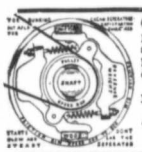

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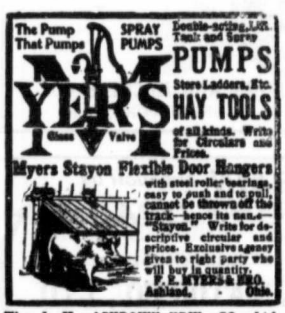

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Distributing Agents, WINNIPEG, Canada.

As has been already said we captured the larger part of the available prizes for the Percherons and judging by the number of visitors we had and the questions asked us about Alberta, we were certainly considerable of an advertising medium for Western Canada.

We had stock parade every day and the day we paraded for President Taft was as far as the Western States are concerned a record-breaking one in all respects. Every available animal at the show was in the ring dressed and decorated up to the highest limit. The weather was perfect, the crowd immense and good humored, and at the critical time when the President stepped from his automobile, marched down the avenue of live stock, and mounted the platform erected for him in the centre of the arena, the applause was deafening, and everyone, American and Canadian, showed their respect to the first minister of the nation by uncovering and cheering him to their utmost capacity.

Every day we had a stock parade and each successful string of horses belonging to the one competition was sent around the ring of the arena to the accompaniment of a splendid band, and announced by an announcer through a megaphone as to the ownership of the horses and standing as prize winners. As our prize winning class of horses was execptionally strong, and being sent around the ring at a pretty stiff clip and at the same time announced as being from Alberta, Canada, the applause was hearty and continuous, thereby showing that the American has fairness of spirit and placed their praise, unreservedly too, where it was fairly, honestly and meritoriously won. We were treated handsomely by the show officials, and many were the decisive decisions given to us to pay a visit to this wonderful Canada of ours. There were no serious accidents at the stock show; in fact the whole show was conducted on an orderly, strict and temperate basis. No intoxicants were allowed within three miles of the grounds, undesirable side-shows were eliminated; in fact the square deal, pleasure and education was the key note of the whole exposition. Pay Streak, with its streak of shows was the streak for fun, the various industrial buildings, the buildings of the various governments, togther with the United States building and our own Canadian building were all a source and fountain of education in themselves, and any objection to an exorbitant price obtained by a showman for an inferior show and the return of the monies demanded upon the threat of being exposed to the authorities, was sufficient to convince all that fair play was also a key-note of the Exposition. The return journey was made without any serious mishap, although the weather was cold and stormy. Upon arriving at our home town again, we lay over for a week for the purpose of showing at our local show. We

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The WAWANESA MUTUAL INSURANCE COMPANY
HEAD OFFICE: WAWANESA, MAN.
A. F. KEMPTON, Secretary-Manager
Amount of Insurance in force Dec. 31st, 1907 - - - $20,355,303.00
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THE NUMBER OF FARMERS INSURED DECEMBER 31ST, 1907, 16,316
Over 16,316 Farmers Insured. The Largest Agricultural Fire Insurance Company west of Lake Superior. Agents wanted in unrepresented districts

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The Sackett Plaster Board
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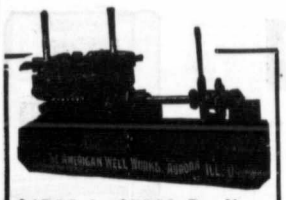

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MANSFIELD, O.

had a successful time but, however, did not enter into any of the competitions. The horses are all doing well and an additional string of twenty head just imported from France this winter should give the Bar U Ranch a showing of horses next summer unequalled by no one upon this American continent.

J. B. Weston.

Farm Machinery and What it Means to the Farmer.

Continued from page 12

From an economical standpoint alone, a man can afford to purchase a cream separator, provided his cows yield him 50,000 pounds of milk in a year. A separator will easily save him 5 per cent. of the fat or 250 pounds of butter fat in a year. At 20 cents a pound this amounts to $50, or nearly the price of the separator in one year, not to mention the labor saved, inconvenience done away with, and the good humor of the housekeeper. With the gasoline engine it is not so much a matter of dollars and cents directly as indirectly. One hundred dollars invested in a little gasoline engine will do innumerable little chores, turn the cream separator, saw wood, pump water, cut straw and mangles, turn the emery and a dozen and one other things. Many a farmer does not get time to read the farm paper because of the multitude of these little jobs, that can be done better and quicker by a little gasoline engine. Besides this more than one farm boy has grown up to dislike the farm just because of these, and nearly always the farmer was in a position to buy the engine had he only thought so. There is no doubt, whatever, that a small gasoline engine will go a long way towards building up into the heart of the boy a strong desire to work at the trade of his father.

The manure spreader is an economical machine as well as a labor saving device. It costs 50 cents a ton less to apply manure with the spreader and the manure is worth 50 to 75 cents a ton more when applied this way instead of by hand. A farmer with 100 loads of manure per year soon earns the price of the machine and at the same time does away with half the usual labor and most of its disagreeableness.

So much then for regard to the machines of the day, the farmers are looking forward to some new machines that are all ready in sight, designed to do away with most of the hard labor found about the farm to-day, namely the milking machines, the stooking machine, the auto thresher, and the gas tractor. The general introduction of these machines will mean great things for the West. The milking machine will remove the principal barrier in the development of the dairy industry. The stooking machine and the auto thresher will solve the labor problem in connection with the harvesting

EVERYTHING about Amatite appeals to the man with common sense. He can see its superiority at once—the *real mineral surface* which never needs painting; the *two layers of Pitch* which is the only imperishable waterproofing known; the two layers of *heavy Tarred Felt*—all these contribute to the popularity of Amatite.

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Simply the fact that it *needs no painting* is enough to make a man sit up and take notice—especially the man who has spent dollars and days in painting and repainting his smooth-surfaced roofings.

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MYERS
Famous Lock Stitch SEWING AWL

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Send $1.00 for sample and special offer to agents.

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The Farmers' Home Journal is edited by a man who lives on a farm. Then the paper is printed on the farm, and in fact it is the only paper which is actually set up and printed on the farm.

It is not a farm paper, but a paper for the farmer, containing good articles on poultry, and giving some bright interesting stories.

The price is only ten cents a year, and you would do well to send ten cents in stamps or a dime to-day by mail and receive the paper for a year.

The Editor of the Farmers' Home Journal is Mr. J. R. Cote, who contributes the Poultry Articles in this paper, and if you desire to get a good paper, send ten cents to-day, and get it for a whole year.

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of our crops, and the gasoline tractor will enable more thorough tilling of the soil. These machines are here now yet not perfect enough to become general, but the distance between these machines as they are and perfection is far shorter than was the distance between the sickle, and the self binder as we have it today. The days are not far off when the farmer will be as much a mechanic as of old he was a laborer.

We come now to study the effect of the farm machine upon the social development of the people of agricultural pursuits. The machinery has enabled the farmer to produce more in less time, and with much less expense of energy, than formally. To realize fully the effect this has had it will be necessary to note first the condition of the average farmer before machinery came into general use.

The farm was generally small possibly 20 to 30 acres of cultivated land and pasture land. He raised enough stock, grain and vegetables to feed himself and family. The labor of his own hands gave him sufficient for the family, but none extra to barter or exchange for other than the bare necessities of life. His capacity for productiveness was limited, but he was entirely self-sustaining, carpenter, mason, handyman, farmer, and all round man, and his wife an all round woman, skilful to a certain degree in spinning and weaving.

With the introduction of farm machinery all this changed. He was able to produce much more than he needed to keep himself and he ceased to make so many things for himself, but with his surplus products hired some one else to make these things. This has gone so far today that very few things are home made, the farmer finds it easier to grow grain to trade for the things he wants rather than to make them himself. Due to this has come into existence of the enormous factories making every thing from a wire nail to the self binder, and from the coarsest of clothes to the finest of linens.

The greatest change is perhaps in the man himself, his life is materially different to what it was then. He is no longer placed at the bottom of the professions, as uneducated, narrow minded, slow of thought and action and taking no part in the life of his state; but today he takes his place with the best, educated, alert and keen, broad minded, well versed on all the important questions of the day, and capable of holding the highest position his country has to offer. The change is due entirely to farm machines. The old time drudgery has disappeared, the long hours of work are done away with and the narrowness of life is gone. The children are receiving a thorough education, along all lines according to their several taste. The boys hate to leave the farm now, it is the best of good places to them, and even if they do leave, their heart always turns to the farm home when comfort and peace are wanted. The farmer and his wife have time to read the daily paper, they are interested in all phases of life, they have time to think and some thing to think about, two things very essential to the bringing out of the best in one's life. On the farm machine hangs the fate of the world. The coming generations will have problems to face of a magnitude never dreamed before. To solve these will call forth the best the world has to give. These will come from the farm because only there are found perfect conditions for intellectual development, sufficient work for perfect physical development, pure air, and time for thought and study and freedom from care and worry. Thus what we are today, what we will be tomorrow and the success with which we deal with the problem of the day all must be credited to the "Farm Machine on the farm."

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Conducted for the benefit of Dealers, Threshermen and Farmers who have anything to sell or exchange. Three cents a word for each insertion.

WANTED—One good Hart-Parr plowing engine. State price and terms.—Jos. Pantel, Somerset, Man.

FOR SALE—South-African Scrip. Two years' terms to farmers with acceptable security.—Romeril-Fowlie & Co., Prince Albert, Sask.

FOR SALE—Red River Special Separator 40x60 complete. Feeder, Weigher, Bagger, Windstacker, Belts, etc. $300.00 quick sale. Address, E. S. Burrow, 555 Burnell St., Winnipeg.

FOR SALE—One Avery Steam Plow, 1906 make, with ten breaker and stubble bottoms and steam lift complete, at Elm Creek, Manitoba. For further information address—Walter M. Grimes, Nokomis, Ill., U. S. A.

WANTED—Position as Engineer for season of 1910. Steam Traction preferred. Also one which will be plowing after threshing. Am holder of Diploma from Heath School of Traction Engineering, have had two falls experience firing and one driving. Please state make, and H.P. of engine and wages. Address to—W. M. L., c-o Box 167, Bossievain, Man.

EXPERIENCE ENGINEER desires position. I am an experienced Traction Engineer, Plowman, and Thresherman, and hold License for Saskatchewan and Alberta. When replying please state make and size of outfit, and wages offered. Address —Chas. A. D. Scott, Coultervale, Man.

COLLECTOR—First-class open for engagement Sept. 1st, at present on homestead. If you want an A-1 man write at once to Box No. 3079, Winnipeg, Man. Salary required $100.00 per month.

ENGINEER wants position on a plowing engine or a stationary for the season of 1910. Have had two years' experience; am also a graduate of the Heath School of Engineering. Can furnish references. Chas. McMain, Summerberry, Sask.

YOUNG MAN used to gasoline engines wants position on gasoline tractor this summer. State make of engine and wages to Box 3079, Canadian Thresherman and Farmer, Winnipeg.

FOR SALE—One Gould Balance valve for 22 or 25 H. P. Gaar-Scott engine. J. Reynolds, Yellow Grass, Sask.

ENGINEER—Wants position on plowing outfit coming season in Manitoba, Saskatchewan, or Alberta. Saskatchewan certificate. Strictly temperate. Do own repairing. References furnished. —Edward Winchester, Melita, Man.

WANTED—Position as engineer on steam plowing outfit the coming season in Manitoba or Saskatchewan, or Traction Engine work of any kind. R. H. Hargest, McLean, Sask.

EXPERIENCED Practical Engineer, Fireman and Traction Plowman desires position. Licensed for Saskatchewan and Alberta, also Graduated Student of The Heath School of Traction Engineering. Apply H. L. Bushell, 448 Elgin Ave., Winnipeg.

CERTIFIED ENGINEER and Machinist with fifteen years' experience wishes position on steam or gasoline plowing engine. Can do own repairing. Apply D. Mark, Manville, Alta.

A COOK and Caker seeks place on big farm, ranch or other place where good board is appreciated Wages moderate. State wages. Address F. M. Burns, 295 Thompson St., Winnipeg.

FOR SALE—30 H. P. Flour City gasoline traction engine, price $2400.00, plowed 400 acres. As good as new. For terms, etc., write to Glennie & Rodger, Macdonald, Man.

BROTHER, accidentally discovered root will cure both tobacco habit and indigestion. Gladly send particulars. H. Stokes, Mohawk, Florida.

WELL DRILLING OUTFIT FOR SALE
A Sparta No. 3 Hydraulic Jetting machine with a 6 horse power Fairbanks-Morse upright gasoline engine attached. All complete and in good working order. Geo. Taylor, Bresaylor, Sask.

FOR SALE—A 18 horse Advance traction engine (straw burner) and 36x56 New Challenge separator, in fair condition. Very cheap if taken at once. Jacob P. Ellias, Hochfeld, Winkler, Man.

WANTED—Position as engineer, strictly temperate; have had considerable experience and can furnish references. State wages and make of engine. Address Andrew J. Johnston, Killarney, Man.

FOR SALE—Small separator complete with all attachments. $400 cash. Box 13, Welby, Sask.

WANTED—Position on steam plowing outfit, firing preferred, experienced. Frank Campbell, Marquette, Man.

ENGINE OWNERS write me for terms on refueing and stay bolt repairing. I can save you money. I am also open for engagement during the plowing season. Chas. Fenwick, Licensed Engineer, Wardella, Sask.

WANTED—Position as engineer on plowing engine. Can begin work at once. Fully experienced in Western Canada. References furnished. Joseph Richers, 73 Parr St., Winnipeg.

EXPERIENCED—Practical Machinist desires position as Threshing Engineer in Manitoba Apply W. B. c-o Canadian Thresherman and Farmer

WANTED—Position as fireman during plowing and threshing season of 1910. Two years experience. Can operate engine if necessary. References. Reply stating wages to Russel Alguire, 255 Dorothy St., Winnipeg.

WANTED—Position as Engineer, experienced. First class references. Ready to start at once. Saskatchewan or Alberta preferred. Apply Box A, Winnipeg, Man.

Steam Traction Engineer wishes a position on a ploughing outfit for coming season. One season's experience threshing. Am also a pupil of the Heath School of Traction Engineering by correspondence. Canadian. Total abstainer. Can secure references. Percival Huggard, Winnipeg, Manitoba.

WANTED—Position as engineer on steam plowing outfit, 7 years' experience in Ontario and one in Saskatchewan. Hold a provincial certificate for Saskatchewan. Will take engine through threshing if desired. Address E. F. Sharpe, Maple View, Ontario.

WANTED—Position as Engineer on a steam traction outfit. Fully experienced. Can furnish references. Address J. E. Peatch, Clava, Man.

FOR SALE—Two Parlin and Orendorff 6 bottom engine gangs nearly new, breaker bottom. Price $75.00 each. Address—E. L. Zurcher, Sperling, Man.

WANTED—Position on steam threshing engine for fall of 1910. Am a graduate in the Heath School of Engineering. Also a graduate from short course of engineering given by the University of Minnesota. Apply stating wages and kind of engine. Address Ellery S. Post, Woodmore, Man.

FOR SALE—20 H.P. International gasoline traction engine; also 5 furrow Cockshutt Plow, both new this spring, broke six hundred acres, gearing good as new. Engine $1,450, plow $250 cash, f.o.b. Colonsay. Apply C. A. Shier, Colonsay, Sask.

ENGINEER—Wants position on engine for threshing, good practical running and shop experience. Diploma from Heath School of Traction Engineering; do own repairs. State size and make of engine. E. Coleman, 46 Kate St., Winnipeg.

WANTED—Position as Engineer on Threshing Outfit this fall. Will work for going wages. Licensed for Alberta and Saskatchewan. Norman Woolley, Norton, P.O.

WANTED—At once: First class experienced Collectors, farmers paper. Salary. Address Box 3079 Canadian Thresherman.

FOR SALE—One 4 H.P. Fairbank-Morse Gasoline Engine, in perfect order, complete with all attachments, has been used one week. Owner having no further need of same. Apply The Winnipeg Fur Co., Limited, 181 Bannatyne Ave., East.

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WANTED—Experienced man to run separator, also an engineer for season's threshing. Apply stating experience and wages to W. N. Carney, Hascleliff, Sask.

WANTED—By holder of second class certificate position as engineer; have also good knowledge of gasoline engines. Address care of Box 148, Oxbow, Sask.

FOR SALE—22 H.P. Port Huron traction engine, 33x51 Port Huron separator complete with self feeder, high weigher, wind stacker, tank, caboose all in good running order. Easy terms or will exchange for land. S. Plott, Redvers, Sask.

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32x54 Wood Separator, No. 39862, Wind Stacker, Feeder	500.00
32x54 Steel Separator, No. 48902, Feeder, No. 15972, Windstacker No. 14376, No. 2 Weigher No. 20669, at Brandon	775.00
36x58 Wood Separator No. 34664, No. 4 Bagger, No. 5744, New 58 inch Steel Windstacker No. 16281, New Hand Feed	500.00
36x58 Steel Separator No. 42013, 36 inch Wood Feeder No. 9179, 58 inch Steel Windstacker No. 9065, No. 4 Bagger No. 12567	700.00
36x58 Wood Separator, No. 37127, No. 2 Weigher No. 18376, New 36 inch Steel Feeder, New Folding Stacker	525.00
36x58 Wood Separator No. 42228, New Steel Feeder No. 20564, New Steel Windstacker No. 15836, No. 1 Weigher No. 4940	785.00
30x58 Wood Separator, Carriers, Feeder, No 2 Weigher	175.00
36x58 Case Wood Separator, Folding Stacker, Feeder and Weigher	300.00
36x58 Steel Separator No. 43663, Steel Feeder No. 12997, 58 inch Steel Windstacker No. 18096, No. 2 Weigher No. 11137	900.00
40x62 Wood Separator No. 39965, Feeder No. 9579, 62 inch New Wood Windstacker No. 10058, No. 1 Weigher No. 10620	775.00
40x62 Wood Separator No. 43913, Feeder No. 12780, 62 inch Wood Windstacker No. 8453, No. 2 Weigher No. 10945	700.00
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We have a very few second-hand and re-built engines, about which we would be glad to give information. Kindly address the J. I. Case Threshing Machine Company, Winnipeg, Manitoba.

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One American Advance Separator, 36x56, with all latest attachments. One 15 inch Vessott Grinder; one 2 wheeled Engine Tender; 2-3 furrow John Deere Engine Gangs. The above property for sale cheap. F. W. Hunter, Stonewall, Man.

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FOR SALE

SECOND-HAND AND REBUILT MACHINERY.

Two 25 H.P. Simple J. I. Case engines.
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One 15 H. P. Compound J. I. Case engine.
One 32x54 Wood Case separator.
One 28x50 steel Case separator, with wind stacker, self feeder and weigher.

J. I. CASE THRASHING MACHINE CO., Calgary, Alberta.

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1 Advance 36x60 Case Separator. Bustle Creek with Hawkeye Foaston Wind Stacker.

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22 H. P. Port Huron Compound Traction Engine No. 5057, equipped with steel gearing and all plowing attachments.

36x60 Port Huron Rusher Separator No. 6569, with all attachments.

Price F.O.B. Winnipeg, Man., for full outfit $5,000.00

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36x60 Port Huron Rusher Separator No. 6680, with all attachments.

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These outfits have been thoroughly rebuilt, painted and varnished, and ready for immediate shipment.

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1—20 H. P. J. I. Case Traction engine.
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1—17 H. P. Sawyer & Massey Portable engine.
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1—size 6 36x56 Northwest Separator with Parsons Feeder, N.W. Windstacker, and Dakota Perfection Weigher.
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1—36x90 Port Huron Separator with all attachments just as it stands. (Not rebuilt).
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with "THE MODERN FARM HORSE"

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This natural question deserves a definite answer.

The HART-PARR way of farming means to plow 20 to 30 acres per day; to disc and seed 40 or 50 acres per day; to break 15 to 20 acres per day: to harvest a 24 foot swath every time around the field; to thresh 1500 to 2000 bushels per day, and every day, whether the wind blows or not; to haul 600 bushels of wheat to the siding or elevator at one trip and at low cost; to get the fall plowing all done in good time before freezing, so that the land is ready for early sowing and a big crop next year; to have absolute dependable power for running grinder, saw-mill or other machinery in winter time—to have a power that isn't stalled by wet weather, that doesn't injuriously pack the soil; that doesn't require frequent repairs—and a power that has conclusively proven its reliability and profitableness.

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Moose Jaw, Sask., Nov. 10, 1908.

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Portage la Prairie, Man.

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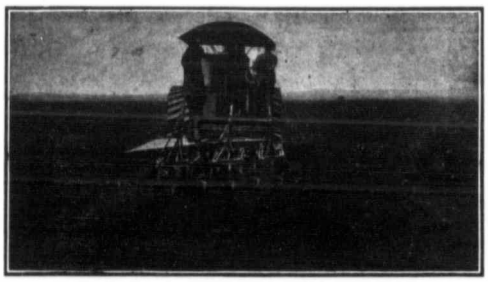
I beg to be allowed to say a few words in favor of your Gasoline Engine. I think I am safe in saying it is the finest engine on the market to-day, both for plowing and threshing, and as for being easy to operate and kept in running condition, it has no equal.

My engine is a 22 tractive (45 brake) H.P. and with a Case machine we threshed 1200 bushels of wheat in less than six hours; our average run was 1300 bushels per day. Anyone wishing to purchase a plowing or threshing engine, I advise them to get an engine that has been tried and tested and has met with success everywhere.

Yours truly,
W. H. Catheart.



HERE'S ANOTHER

Macleod, Alta., April 22, 1908.

The Chapin Co.,
Calgary, Alta.

Gentlemen :—

The Hart-Parr plowing engine we bought of you more than does what you claim for it.

We are pulling six 14 in. John Deere breakers in the toughest prairie sod, and the engine is doing its work with ease although the ground is very hard and stony and we are plowing from 4½ to 5 inches deep. Both plows and engine are working very satisfactorily.

We would be pleased to answer any inquiries from intending purchasers or to show them the outfit in operation.

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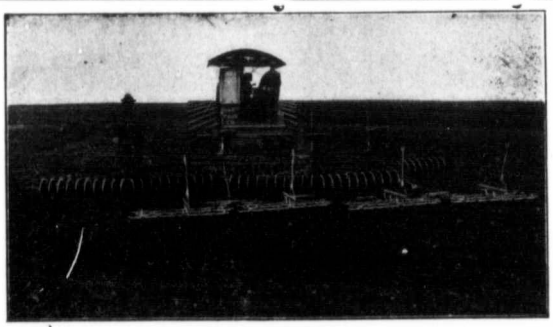

HART-PARR ADVANTAGES

Double cylinders insure steady motion

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Oil-cooled—free from water troubles

Uses 11 cent kerosene — lowers the cost of fuel

THIS POWER WILL MAKE MONEY FOR YOU AS IT DOES FOR OTHERS

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HART-PARR CO.

30 Main Street
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