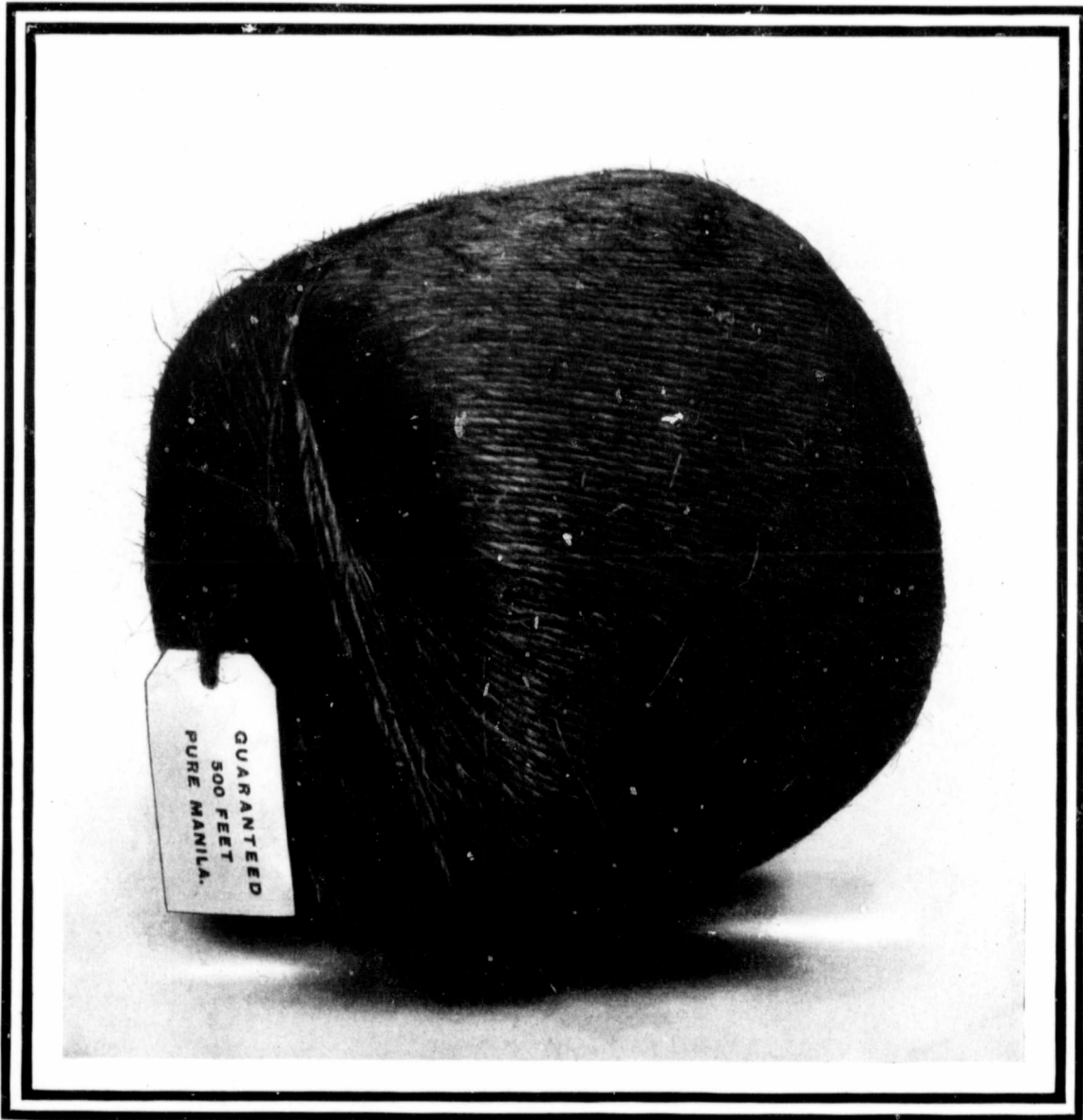


The **CANADIAN** THRESHERMAN AND **FARMER**

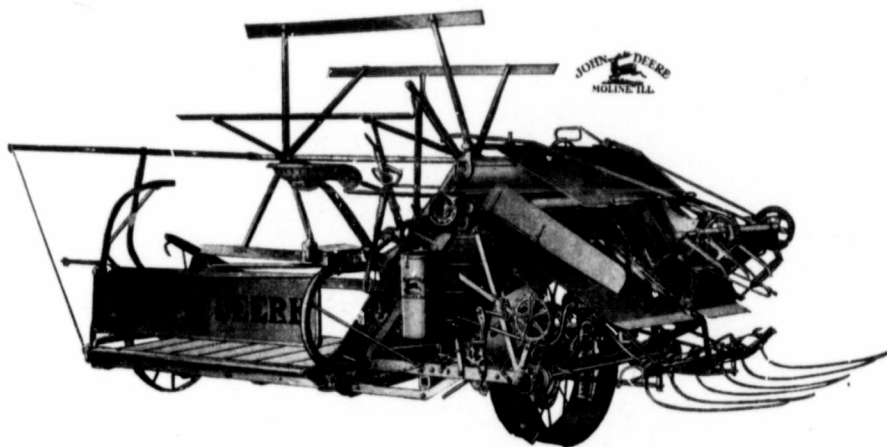
WINNIPEG CANADA

JULY
NINETEEN FOURTEEN



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

JOHN DEERE



The Binder for the Harvest of 1914, and many years after

Binders are used at a critical season of the year. With ripe grain and favorable weather one second of time must not be lost.

A Binder should be substantial in construction. A break down may result in a serious loss. The working parts should be designed and assembled, so that friction is reduced to the minimum and no power wasted. These qualities are embodied in the John Deere Binder. It is a strong, powerful cutter and handles the grain properly after it is cut. Light in draft, dependable under the most trying conditions.

READ WHAT THE USERS SAY:

Otterburne, Man.

John Deere Plow Co., Ltd.,
Winnipeg, Manitoba, Canada.
Gentlemen.—The 8-foot John Deere Binder I purchased from your agent, A. Genest, has cut about 140 acres, and I can say it is the best binder I ever had anything to do with, and I have run all makes. I have a 6-foot binder of another make, and it could not go through without clogging up, where the John Deere binder never stopped.

It is much lighter draft and will handle down and tangled grain better than any binder I ever saw, and as for tying, it cannot be beat. It certainly is going to be a winner with farmers, as I started the machine myself, and it has never needed any adjustment.

Yours very truly,
T. H. JOUBERT.

Construction the Very Best

The best materials are used. Finish of the bearing surfaces, both bushings and journals, provides for long continued use with minimum wear.

Main drive chain is heavier and stronger than what is used on other binders and is automatically kept tight when machine is raised or lowered.

Veteran, Alberta.

John Deere Plow Co. of Calgary, Ltd.,
Calgary, Alberta, Canada.

Gentlemen.—I purchased one of your 8-foot binders this season through Robertson & Snider, at Veteran, and have cut 130 acres to date.

The machine runs very light, and is doing satisfactory work and shows practically no wear. Ties perfect bundles and has never missed a sheaf.

Yours truly,
J. H. N. DUTTON,

P.S.—Have used most other makes and find the John Deere the most satisfactory of all.

Among Harvesters the John Deere Binder takes first place. Like every other John Deere farm implement, it is the leader in its line.

Your grain will be harvested in less time, with less expense and worry, if the binder you use bears the name "John Deere," a guarantee of the highest quality

We have a Beautiful Booklet illustrating in detail the John Deere Binder—mailed on request. See your nearest John Deere Dealer.

Esterhazy, Sask.

John Deere Plow Co. of Saskatoon, Ltd.,
Saskatoon, Saskatchewan, Canada.

Gentlemen.—I have been running binders for twenty-five years and bought one of your binders this year from Minnick Renuart Company, and have got one that suits me at last. It draws easier, saving one horse at least, and makes a job which no machine can beat. If any of my farmer friends don't believe this, they can come and see the work I have done with the John Deere Binder this season, which I can safely recommend to them as a perfect machine.

Yours truly,
LOUIS GONCZY,

Kaposvar, Saskatchewan.

Light in Draft and Easy for Driver and Team

The drive wheel is steel. Higher and wider than on most binders. Grain wheel is also larger and wider than ordinary, reducing the draft.

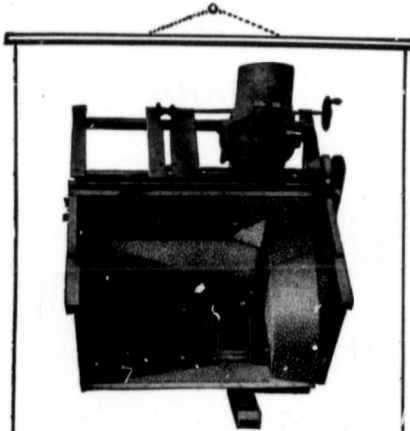
The John Deere Binder does better work under the most trying conditions with less energy on the part of the horses and driver than any other similar machine.

John Deere Plow Company Limited

WINNIPEG
REGINA

CALGARY
SASKATOON

EDMONTON
LETHBRIDGE



MR. FARMER, WHERE DO YOU WANT YOUR GRAIN? IN THE STACK, OR IN THE SACK?
THE RUSSELL WIND STACKER CO.
INDIANAPOLIS, IND.

THE GEARLESS RUSSELL

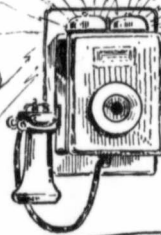
WITH THE SHARPE

GRAIN SAVING FEATURE

MAKES BUSINESS FOR YOU MR. THRESHERMAN

WRITE

THE RUSSELL WIND STACKER COMPANY
INDIANAPOLIS, INDIANA.



and so understand you have the Gearless Russell with the sharp grain saving feature. For you know green stacks do not look good to me.

Kindly let me know when you can thresh for us. Sincerely yours, Elias R. Ogden

We prefer to buy chicken feed rather than feed you wheat and we thresh you so our grain is clean. You have a year left to buy Russell with the Sharpe grain saving feature. H.H. Peterson

The grain you saved me this year with your new Gearless Russell with the sharp grain saving feature. Helped in a great many ways. J. H. Miller

Mr. Thresherman can you do me a favor? Thinking next and me think it is wonderful has it ever done anything for you? Thank you

Mr. Thresherman when can you do our stacking? Yours truly

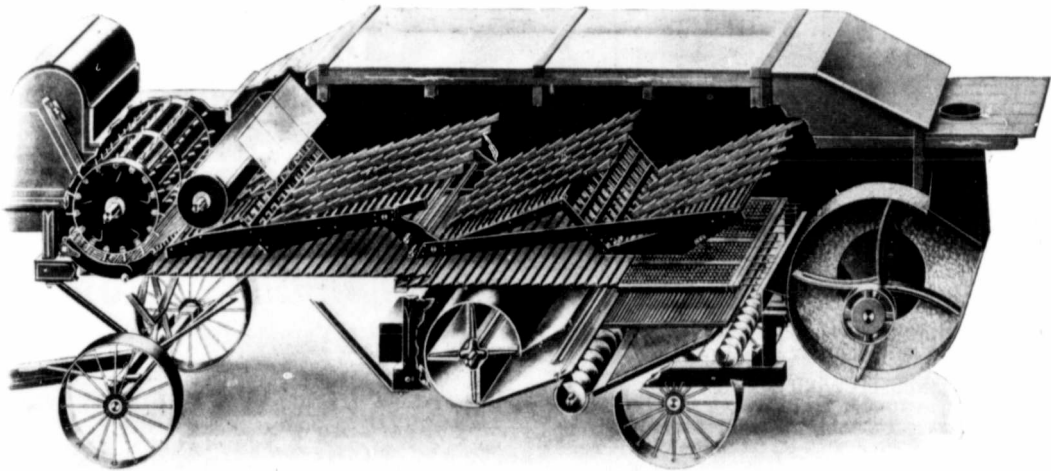
used check to pay for this season. Threshing the Gearless Russell with the sharp grain saving feature, does wonderful work you will not be short.

Dear Mr. Thresherman since I can't learn you have the Gearless Russell with the sharp grain saving feature. We have a number of stacks on hand and have threshed for you this year. Yours truly, R.O. Baker

Mr. Thresherman we are a small farm and we have a few acres of wheat. We would like to buy a Russell with the Sharpe grain saving feature. We would like to see it and we would like to know how much it costs. We would like to see it and we would like to know how much it costs. We would like to see it and we would like to know how much it costs.

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

The "Money Maker" is Double Belted Double Eccentric Driven Thruout



Interior view, Hart-Parr "Money Maker" Thresher.

AND HERE ARE A FEW MORE OF THE MANY FEATURES
THAT MAKE THE

HART-PARR

"MONEY MAKER" THRESHER THE CHOICE OF SHREWD, CAREFUL BUYERS

Nearly every owner will tell you that the "Money Maker" self feeder is almost human. It more nearly duplicates the old time hand feed method than any other. First the bands are cut. Then the wobble-knife spreader thoroughly spreads the bundle and distributes it evenly to the cylinder, much as you would by hand. Automatic governor control prevents slugging of the cylinder.

Most separators have solid grain pans. Frequently these warp and sag, allowing the grain to pile up in the centre of the grain pan, thus preventing thorough cleaning. The "Money Maker" grain pan is split. No chance here, for warping or sagging. Grain distributes evenly over the pan and is well exposed to the cleaning blast.

The "Money Maker" wind stacker fan is driven by a ratchet pulley. Should the separator speed slow up, lost motion is taken up by this ratchet and the fan momentum remains unchecked. It's impossible to choke the stacker, and its belt lasts much longer.

All adjusting and oiling devices on the "Money Maker" are on the outside, hence easily accessible. You can adjust and oil the "Money Maker" without stopping the outfit and without risk of being caught in the working parts.

Before you purchase any separator, it will pay you to investigate the Hart-Parr "Money Maker". A postal will bring you our bulletin fully describing all the features that make it a big grain saver and money maker. Write for this bulletin to-day.

HART-PARR COMPANY

30 Main St., Portage la Prairie, Man.

1616 8th Ave., Regina, Sask.

The Chapin Co. 325 8th Ave. W., Calgary, Alta.

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

**Mackenzie, Brown,
Thom, McMorran,
MacDonald, Bastedo &
Jackson**

Barristers, Solicitors, &c.
Regina, Sask., Canada

Norman MacKenzie, K.C.
Hon. George W. Brown
Douglas J. Thom
T. Sydney McMorran
Hon. Y. MacDonald, K.C.
Frank L. Bastedo, L.L. B.
Edwin Jackson

General Solicitors in Canada for the National
Thresher Manufacturers' Association of America
General Solicitors in Canada for the American
Collectors' Association.
General Solicitors in Canada for eight Thresher
and Implement Companies, and in addition for
Six Thresher and Implement Companies in
Saskatchewan.

**Pace, Harrison
& Millar, Ltd.**

Winnipeg
INSURANCE

LIVE STOCK
Fire
Accident
Sickness
Automobile
Plate Glass
Liability
Bonds
Tornado

WRITE FOR AGENCY

Pace, Harrison & Millar
Ltd.
General Agents, Winnipeg



**Fighting for Honest
Competition**

WE DO NOT buy old wire and make it
into fencing.

WE DO NOT spend thousands of dollars
for advertising trying to push 2nd
and 3rd class fence.

WE DO NOT believe in blackmailing
our competitors.

WE DO BELIEVE IN A FAIR AND
SQUARE DEAL FOR EVERYBODY.

Write for prices and catalog mention-
ing the quantity of fence required and
the purpose it is needed for

The Great West Wire Fence Co., Ltd.
76-80 Lombard Street, WINNIPEG, Man.

Distributing Offices:
Messrs. Reynolds & Jackson, Calgary, Alta.
Messrs. Rice, Hunt & Gidd, Edmonton, Alt.

**PROVINCIAL
EXHIBITION
REGINA SASK.**

July 27-Aug 1/1914

\$40,000.00

in prizes and purses
Prize list is now ready
D.T. Elderkin, Manager, Regina

ABOUT OURSELVES

50,000 is the Slogan

THIS is nothing new but it is the first time we have put it into type. It means simply this. The Canadian Thresherman and Farmer is going to have 50,000 subscribers among the farmers of Western Canada just as soon as money and energy can get them.

Western Canada is growing. It is in fact developing faster than any other section of the world to-day, which simply means that if any business or proposition is to stay in the game and render a creditable account of itself it must grow likewise.

Our progress in the past has been remarkable. Starting ten years ago and weathering the lean years and taking every advantage of the fat ones, we have reached a position where we can say that we are to-day the largest monthly farm publication on the North American continent.

It has taken both money and labor to do all of this and now that we have reached an enviable position in agricultural journalism the fact confronts us that we have only begun and that the work ahead is bigger and harder than ever before.

During the past twelve years we have done our best to keep in the van of progress. We have tried to feel the pulse of this leaping country and come forward with a magazine that our readers would read and appreciate. That we have not failed is evidenced by the fact that our readers have rallied round our banner year after year, and through their hearty support have enabled us to command an unusual advertising patronage — the financial backbone of any publication.

We are the organ of no clique or organization. Not that we have any quarrel to pick with such bodies. They have their places and their missions to perform and providing their object is a legitimate one we wish them God-speed.

Our aim is to furnish our readers each month with a magazine that will be helpful, instructive, unbiased, full of good cheer and worth five dollars for every dollar spent.

Now a word about this increase in circulation. If every one of our readers would simply get one neighbor who does not already take our magazine, to become a subscriber the slogan of 50,000 would be the most simple matter. We could double our circulation in one month and in so doing we could treble the quality of our magazine. Big circulation, if the publisher be fair, must result in better magazines and right here we want to put ourselves on record as guaranteeing to you a much better issue each month just as soon as our circulation warrants it. To-day we are giving you more value than any other magazine published. Each copy is costing us simply for printing over 15 cents. In other words you get \$1.80 worth of actual printed matter for \$1.00. Can we do more?

The big fairs will be on by the time this issue reaches you and in this connection we want to say a word. You will undoubtedly visit one or more of these fairs and in all probability will be approached by our subscription solicitors. Give them a word of cheer. Give them your renewal and refer them to one or more of your neighbors. If the magazine has pleased you pass the good word along. You cannot realize how much good it will do us and incidentally you benefit yourself more than you know.

You'll find our representatives courteous and above all, gentlemen. They are engaged in a legitimate business and as our representatives, won't you extend them a glad hand?

Remember the Slogan—50,000



Reaches the
Hard to
Clean
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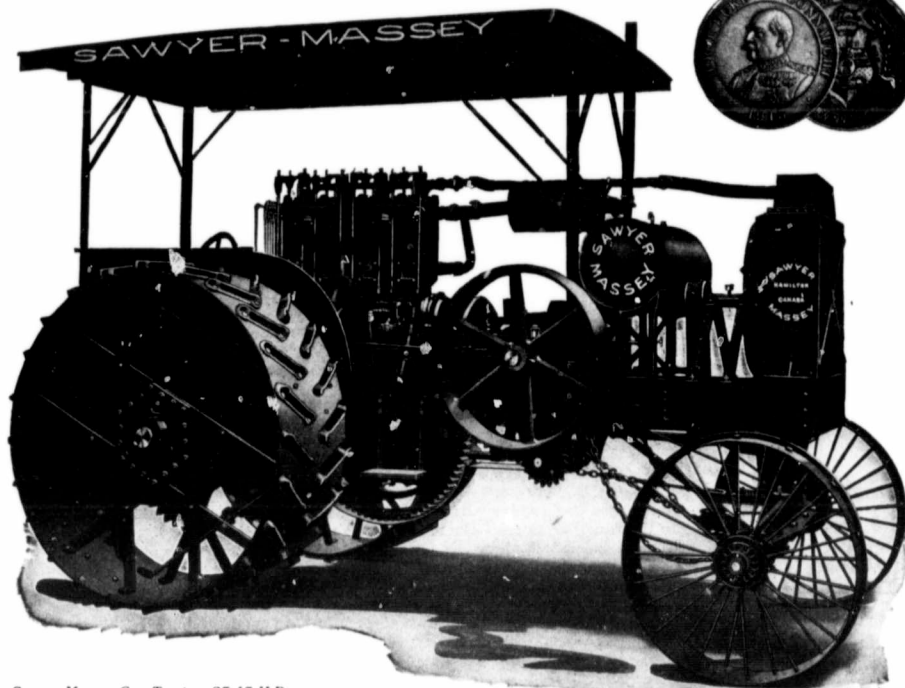


Write to the CUDAHY PACKING CO.,
TORONTO, Canada, for our booklet
"HINTS TO HOUSEWIVES"



THE PREMIER COMPANY

THE PREMIER GOODS



Sawyer-Massey Gas Tractor, 25-45 H.P.

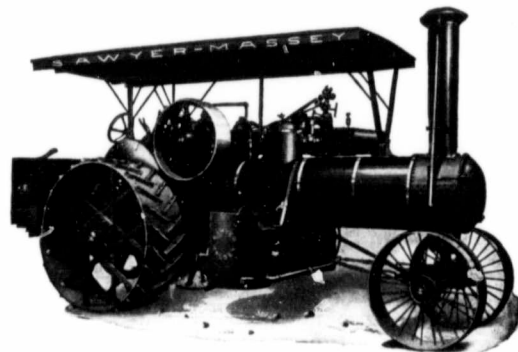
SAWYER-MASSEY FRIENDS

The work of a SAWYER-MASSEY Tractor is its best recommendation, for wherever there is a SAWYER-MASSEY Tractor or Thresher you will find a SAWYER-MASSEY friend.

Our 25-45 H.P. "Gold Medal" Gas Tractor, powerful, smooth running and efficient, has been proven the best Gas Tractor in Canada by hard work in the field and performance in contest. It is easy to run and easy to take care of, economical of fuel and water, strong, steady and reliable, and has well earned its reputation as the Premier Gas Tractor of Canada.

There are many styles and sizes of SAWYER-MASSEY Steam Engines, from the small 30 H.P. Portable to the big, powerful 115 H.P. Tractor. There is a SAWYER-MASSEY Tractor to meet every requirement, each one tried and tested and proved thoroughly efficient and the leader of its class.

It will pay you to investigate these tractors. A copy of our big Illustrated Catalogue and the "Sawyer-Massey Chronicle" will be sent you for the asking.



SAWYER-MASSEY COMPANY, Limited

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

Head Office and Factory HAMILTON, CANADA

Branches and Warehouses: WINNIPEG, Manitoba; REGINA, Saskatchewan; CALGARY, Alberta; Agency, BUENOS AIRES, Argentina.

SAWYER-MASSEY

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

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Vol. XIX.

WINNIPEG, CANADA, JULY, 1914.

No. 7.

THE greatest mind in the world to-day is the young mind, and in the circumstance that Canada is recognised as "the young man's country," there is more to hope and expect from her than from any country where repression is the rule and indulgence the exception in those things which hold the interest of the youthful spirit.

The most practical and by far the most important subject for the consideration of the progressive West at this moment is that of the care and culture of the young generation of human souls that are being born or brought into the country in such rapidly increasing numbers. There is no "problem" of city or rural life of greater significance, and there is no study in human experience which promises such abundant satisfaction as a whole hearted interest in our young manhood and womanhood.

Long observation and the general experience of others who are watching the trend of things convinces us that no neglect is being so rigorously punished as that of the common indifference to the young mind. The problem really does not seem so much to be what to do with, what to make of our boys and girls, but how to handle those fathers whose least iniquity is that of leaving their boys to "take their chance," whose greatest sin is that of handling their pliant natures in such a way as to prevent all possibility of the lads taking anything but a galley slave's interest in the great and most beautiful world of things into which those

FARMERS OF TOMORROW

By J. D. D.

fathers have brought them. There is an old song with the refrain: "A boy's best friend is his mother." That song was written

the mother soul as it has in so many cases the fathers of the nation.

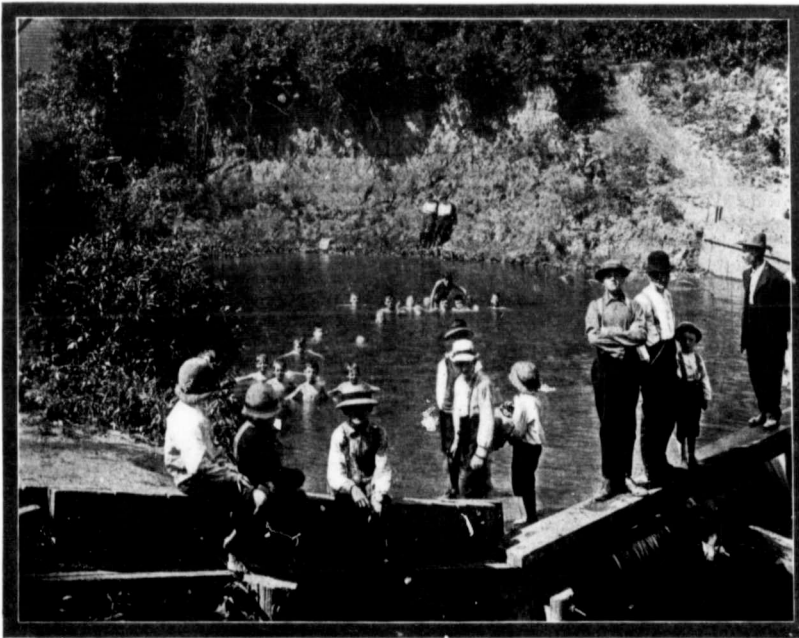
This article is written in no

strongly as do those of his own household.

A good boy or girl is the natural product of a good home, and all the efforts of philanthropy to make boys and girls better are consciously imperfect substitutes for the natural influences of a healthy-minded home. The great and overshadowing peril of a boy's life is not as many suppose, his bad companions, or his bad books, or his bad habits; it is the peril of homelessness. Not merely

that homelessness having no bed or room which the boy can call his own, but that "aching void" — that complete homelessness which does exist even in luxurious houses, the isolation of the boy's soul, the lack of any one to listen to him, the loss of roots to hold him to his place and make him grow. This is what drives the boy into the arms of evil and makes the streets his home, the gang his family, or else drives him in upon himself into uncommunicated imaginings and feverish desires.

This loneliness of the boy's soul is the modern story of the man whose house was "empty," and just because it was empty, there entered seven "devils" to keep him company. If there is one thing that a real live squirming boy cannot bear it is himself. He is, by nature, a gregarious animal, and if the group which nature gives him is denied, then he gives himself to any group that may solicit him. A boy, like all things in nature, abhors a vacuum, and if his home is a vacuum of lovelessness and homelessness, then he



"FROM SPORTS LIKE THESE ARE ALL OUR CARES BEGUILED."
A Swarm at the Swimming Hole, Dauphin, Man.

for the comedy footlights, but like so many things of the kind it subconsciously popularized one of the greatest facts in life. The mother invariably does her part. She is rarely neglectful or found wanting in real solicitude. She may sometimes err by too freely indulging in the whims of her offspring, but in Western Canada at least we have yet to find a case of native motherhood in which that polar frost of downright thoughtlessness and neglect has seized

perfunctory mood to fill space. The subject is one of intense concern to the writer who has known the joys of fatherhood for over a quarter of a century. He has "tried out" the sentiments set out in these pages, so far with the most gratifying success in the persons of those young minds he has sought to influence. He has no keener delight than in the society of young folks and the bright faces of "other people's children" appeal to him almost as

naturally abhors his home. If to some city magnates and hustling farmers it may now seem somewhat old-fashioned, that



First Prize Winner for B. P. Rocks at Starbuck Fair

picture which Lord Lytton gives of the father and son in his "Caxtons" still appeals to the writer as one of the finest examples in literature of this greatest of all human compacts. "Often," says the younger Caxton, "I deserted the more extensive rambles of uncle Jack or the greater allurements of a cricket match in the village, or a day's fishing in Squire Rollick's preserves for a quiet stroll with my father by the old garden wall; sometimes silent, indeed, and already musing over the future while he was busy with the past, but amply rewarded when, suspending his lecture, he would put forth hoards of varied learning and experience, rendered amusing by his quaint comments, and that socratic satire which only fell short of wit because it never passed into malice." It is to his father that he resorts in all his difficulties, who is his stay in his hours of sorrow, into whose ear he pours all his hopes and aspirations.

Dr. John Brown (the author of "Rab and his Friends"), gives a touching and eloquent sketch of his father, an eminent Scottish divine, one passage of which it is impossible to read without emotion. "After my mother's death," he says, "I slept with him. His bed was in his study, a small room with a very small grate; and I remember well his getting those fat, shapeless, spongy books (the German Exegetics) as if one would sink in them and become bogged, as it were, in their bibulous unsized paper; and watching him impatiently as he cut them up. He never came to bed while I was awake, which was not to be wondered at; but I can remember waking far on in the night or morning and seeing that keen, beautiful, intense face, bending over these wonderful books, the fire out, and the grey dawn peering through the windows; and when he heard me move, he would speak to me in the foolish

words of endearment my mother was wont to use, and come to bed and take me, warm as I was, into his cold bosom."

This real incident in two splendid lives puts before us in a way which nothing in speech or literature could illustrate, an ideal of the relation of love and trustfulness that should subsist between father and son; the son watching the father with the gaze of vigilant affection, the father taking the son to his heart with a deep and earnest sympathy. It is not the relation that binds mother and son; for in that there is less of command on the one side and obedience on the other; but if there be less tenderness, there is more confidence; if less of passion, more of reason; if less of sweet dependence, more of wise equality. The father may not know so much of his son's heart as his mother does, but he will know more of his mind; he will stand to the boy in the threefold capacity of guide, philosopher and friend.



"EYES FRONT"

In this highly specialised age of gas engines and speed-limit-breaking, these homely illustrations of a by-gone, but still recent day, may appear as wholly inapplicable to our environment of "intensive agriculture" of grain-growing and stock-raising by daylight and any kind of night light of sufficient luminosity. They may savor of antique pedantry on the one hand and of priggishness on the other. That impression, however, will only attach itself to the man who has neither the means nor the capacity to read the lesson of any wayside incident.

The pedant, the windbag of words is with us yet, and he is a wearisome fellow even at the best of times. But no man with a heart who loves the face of nature can fail to see and become thrilled with the rare humanity, the incarnated divinity of love that speaks in these incidents. It will never be a father's love and companionship or a mother's affection and solicitude that will make a "prig" of their boy. Prigs are the offspring of—prigs, the two-legged creatures who worship "gentility" and are its slaves. They may admire their fetish but they are as

incapable as caterpillars of loving the divine in human flesh.

It is not the purpose of this article to prescribe a set of "rules" for the guidance of fathers in the training of their sons. We will give every father credit for knowing something more than the rudiments of successful boy-raising. What the world wants to-day more than anything else in its social life is real sympathy and genuine companionship between father and son. In farming life, to wit, we suggest that the only way to keep the boy on the farm is to coax him into a real liking for the things of the farm. If the father is not a lover of his job to the extent of an enthusiast, there is not much hope of him playing the part of a successful teacher; but if he is an enthusiast there will be a little need for him to say much. The coldest subject rarely fails to kindle at the flame of enthusiasm, and a boy can't work at all if he can't work with all his soul. The boy who is coerced into doing a job may

born farmer" may beget an engineer or a merchant or an artist for successor to the family name. Some talent or aptitude latent for two or three generations may crop out in the new one and a plain, systematic farmer discover that his boy is a born explorer, inventor, sailor, soldier or path-finder. The weird of fate seems to lie over some cradles.

But there is such a charm about out-door life and "seeing things grow" that few men need fail if they set themselves to captivate the interest of their off-spring. It takes a little more pains and a little more thought to do this than the average farmer is inclined to give it; but it is an "investment" that will give him a far better return than any time or thought expended on his live stock, and the neglect of which he will feel more in time than if he had neglected his seed bed from year to year until his farm became a howling wilderness.

A delight in the society of animals and flowers seems to be born in every child and some boys drink in an irresistible love of machinery with their mother's milk. These native proclivities can be cultivated and made still more alluring by any farmer whose intelligence is but slightly removed from that of the plodding horse, and just as easily rendered so "commonplace" and repulsive that when it comes to the parting of the ways in a boy's life he declares himself to have been so "fed up" with the farm that he must find some other interest in life if he is to retain his reason.

With all our heart we feel for a lad in this plight. We know boys who came into the world with the very best heritage of physical and mental capacity a noble mother could give them, whose personality and character were of that type that find a way into the hearts of men everywhere, who would have done honor to any parentage or ancestral line and yet have been ruined



Starbuck's golden future

hold of his own. The younger personality may never be intended to fit into the grooves that the elder has made or accepted. "A

for all usefulness in life by the gross stupidity of the father. They were born farmers but they had a father who was so busy

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"attending to other things," who handled his lads as he would have handled a brace of yoke oxen, and by and by they were missing one spring morning. The city got them after they had long passed the borderland between youth and manhood, with no training or capacity whatever for city life, and now they are with the crowd of jobless beings—drifting and without hope.

We know of a farmer friend who, on the other hand, found himself in the hands of two of those boys—those strangely inquisitive beings who are born with an unconquerable itching for trying things. The father is an ideal agriculturist and would fain see his lads (or one of them, at all events), following in his footsteps. He coaxed and cajoled and compassed the lads with all sorts of "candie-d" ideas of stock-raising. There was nothing "dry" in his programme, if he did follow the most approved rules of dry-farming, but it didn't go home somehow.

But that man had a sagacity beyond the common herd and he wisely took his medicine with the result that he is now in the best of health and spirits; beloved, revered and admired by none so much as his own boys who so grievously "disappointed" him. The lads at an early age developed the tinkering habit. The mother was consulted, with the result that the young indians were allowed to have as much of this as they liked. They lived within three miles of the town where there was every allurements known to Canadian life in the shape of sports and entertainment, but the good mother was anxious to chain the boys to the farm-home and she used links that were never forged on a blacksmith's anvil.

By common consent of father and mother the boys were not hindered or interfered with in any way in their mania for making things. The father subscribed for the "Boys Own Paper." The

other room they called the laboratory where they installed a small electric lighting plant, from which wires run to different rooms where small incandescent lights are fixed — one at the head of the stairs, two in the cellar, etc. The "current" is generally from dry-cell batteries. They made the switch-board, a rheostat and a volt meter, also a machine for generating static electricity that will give an inch spark.

In this room they have a small steam engine that will propel small machinery, an emery wheel for sharpening tools, etc. Since "the laboratory" was established these lads have spent in it every bit of the leisure from school work and their own share of the chores that would otherwise have been dawdled away in some aimless fashion or filled in less innocently away from the home. They were taught obedience from the time they were little tots—not by ill-tempered outbursts but by kindly firmness, and a wise in-

the first prize heavy drafts in his stables. His idea about any boys he expressed thus: "Get them interested in good reading, and let them work out their ideas. Probably some noise will result, but it will not be 'sounding brass or tinkling cymbals,' and they will be at home nights."

Now neither of these boys are likely to drift to the city. At first sight it might be expected that one of them at least would blossom out into an electrical engineer. The fact is that things were made so interesting to them on the farm they have no desire to get away from it. Their taste for mechanics and scientific "puddling" was gratified from the first. They had their fill of it, and it will remain with them as a profitable hobby to the end of their days. But they found out that the farm was too good a thing as a certainty to let go in favor of anything else in sight. Of course the father is responsible for this. He is a good farmer and one of those farmers who

the times is the tendency to keep it a young world and to get away from the old time concept that it is a "wilderness of woe." Some



First Prizeman for Spuds at Starbuck Fair

of our old time songs and hymns need revising—not to bring them abreast of fashion but to line them up with fact. For example is it in accord with the spirit of youth that it should see nothing but "change and decay in all around?" We know — every child knows that there must be "change and decay" before there can be new growth but it will only be the morbid mind that will sit down to ruminate on the disintegration of things. The happy, hustling young folks in these pictures with their hoes and their rakes don't worry about "change and decay." Their wonderful minds can only be intent on "one thing at a time," and their whole eager outlook is upon the new things, the things that are growing.

These pictures are from a small corner of the splendid work recently inaugurated by the extension department of the Manitoba Agricultural College in the formation of Boys' and Girls' Clubs, for the special encouragement of the young folks of the province in their agricultural and horticultural pursuits.

Of course "the government" can only take a second rank position in work of this kind which must have its initiative at home. Almost as much will depend upon the individual teacher of the rural school in creating or stiffening the interest in the work, the real steam that must be generated in the minds of the youngsters before anything of any account can be accomplished. But the Department of Agriculture is to be warmly congratulated on the substantial impetus it has given to the idea of children's fairs and competitive effort among the young people.

Special and very attractive prizes have been offered to contests in poultry raising, potato growing, fodder corn cultivation and pig raising. The department has issued a very neat little booklet giving not only details of its

Continued on page 40



Brain and Brawn hard at it

dulgence soon taught them that if dad or mother said "no" to this, or the other request, it meant no. It did no good trying to debate the point; besides, their expanding intelligence soon taught them that if there was a set back to their whim to-day, it would not be long until a pleasant surprise would far more than compensate for the disappointment of the moment.

This particular father believed

wisely make chums of their boys from the start. The boys found so many outlets to their tinkering proclivity and to their mechanical bias on the things of the farm around them. For instance when a small stationary gas engine came to the place to run the saw, feed-hopper, etc., they hung around almost to the point of playing truant from school watching the man who came to see it in good going order before he left it. Two years later the elder of the two took a course in gas engineering and after a fortnight doing nothing else but running a big tractor in one of the demonstrating yards he came home to take charge of the "family" tractor.

Neither of these lads are dissatisfied with their job. They have accepted the farm life as "the best thing going" and they have been fitted into this frame of mind in a way that probably has never failed to win a growing boy—unless, as we said, some hereditary gift has predetermined his steps in another direction.

This world is getting better and brighter all the time. It is truly a great, a lovely world to live in and not the least hopeful sign of



Skilled Craftsmen and their Finished Product

mother surrendered a room in the house in addition to the sleeping-room in which the two restless creatures slept together. This

that good reading and plenty of it was as necessary to the development of these growing lads as oats and such like tit-bits were to

THE CANADIAN THRESHERMAN AND FARMER

CANADA'S LEADING AGRICULTURAL MAGAZINE

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JULY

"QUALITY AND TYPE"

1914

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."

"NO CROP EVER GOT A BETTER START in Western Canada" said one the other day who has been long in the business of wheat raising and wheat-marketing. He is not given to exaggerating but in any case his word is confirmed by nearly every report that comes in. Barring calamity, it looks as if the Western Crop would be an abundant one. If in addition to the expected increase of millions of bushels it grades up to the standard of Canadian wheat as it is known in the European market, there will follow the beginning of the end of a season of depression and money scarcity such as we hope the country will never again run into. "Boom" years are fatal years because they violate every rule in the decalogue of supply and demand. Heaven knows, Canada has suffered from the "boom" craze more than once in her short life-time, and it is yet too far beyond the lines of probability to expect that she will profit permanently by the experience of those years of reaction through which she is still plowing her way to better times.

THE GRAIN COMMISSION OF 1906-7 when it visited Great Britain received more than one gilt-edged testimony to the high rating of Canadian Grain Certificates. That is an asset in the national credit which we believe has in no sense depreciated since it was officially given to the commission appointed by the Dominion Government to inquire into the operations of its Grain Inspection Act. It has been reinforced again and again by private admissions from men whose interests are rather to depress than inflate Canadian Securities. This is a cheering reflection that may always remain with us and one which we can influence—the quality and the "true to type" brand of our products. No combination of human genius can at any time guarantee the quantity but every man engaged in the business can do a very great deal towards maintaining the quality and type of the country's wealth in crop or live stock.

THE SEASON'S FAIRS are among the very best institutions for the preservation of this high standard. And it is like all standards in the sense that the public demand is incessantly for something at least a little better than any past record. When a man earns a reputation it is never a wise proceeding to sit down on it. His best friends earnestly expect him to "go one better" next time and his competitors are on the watch with sleepless vigilance to discover any falling off. We have many adversaries and a lot to contend with besides the uncertainty of weather conditions, but the human agency can win out practically all the time in quality, and as the old advertising saw has it: "Quality remains when price is forgotten." Ten bushels of dollar wheat, does more good to the country than a hundred so foul or frost-bitten that it is only fit for feed.

COMMON SENSE AND PAINSTAKING CARE will do much in the production of clean grain, and getting one's

seeding done in time will go far towards safe guarding the crop from frost. Here's to the summer fairs then. We are publishing a long list of dates in each of the prairie provinces and this note is a gentle reminder that every man is expected to do his duty in trotting out whatever he has got to show. The fair boards in quite a large number of conspicuous instances have gone to the most generous lengths in encouraging competitive effort in farm produce of all sorts. Prize money and trophies of one kind and another have never been on a scale to discourage a man in taking the necessary pains to get there and win them, but for some reason or another quite a few men systematically back out whose exhibits would not only do much for the reputation of their district but incidentally do no less for the credit of the country at large.

MAKE IT A PERSONAL MATTER THIS TIME. There are risks, no doubt, but having the end in view, they are all worth taking. We note with much satisfaction the very great encouragement now being given to children's fairs by the extension department of the Manitoba Agricultural College and have referred at greater length to this in another page. No less can be said with regard to that splendid movement on the part of the Canadian Bankers' Association of Canada in donating \$1,000 in cash prizes for boys to be won at the Manitoba Winter Fair and Fat Stock Show in Brandon next March. This magnificent donation is made "for the sole purpose of encouraging the boys of the farm and stimulating a greater interest among them in breeding, caring for and feeding of cattle for market." This, no doubt, has been inspired by the splendid BOYS' record established at Chicago last year by a Brandon lad of seventeen years. Raising the very best he could, in "Aberdeen Angus" breed and type, he took his chance against all comers with the result which fills one of the brightest pages in Canadian history. What has been done can be done again and it has shown that there are no limitations to a Canadian boy which are not common to the boys of any country the world over.

WE HAVE NO COMPLAINT so far. Watching the reports of distant markets and listening to the comments of friends as we do very often upon the character of our "stuff," there is no cause for alarm. The trend is not downwards but distinctly upwards. There is a keener competitive atmosphere today in Canada among its producers than in any country that has any rating in commercial affairs and as the effect of this is to stiffen prices let us go ahead doing our best to keep up the character and preserve the type. This we can do—the Almighty alone can give the abundance Surely, of all people the farmers of Western Canada may be credited with the highest purpose and the best means of fulfilling it that has ever been given to men.

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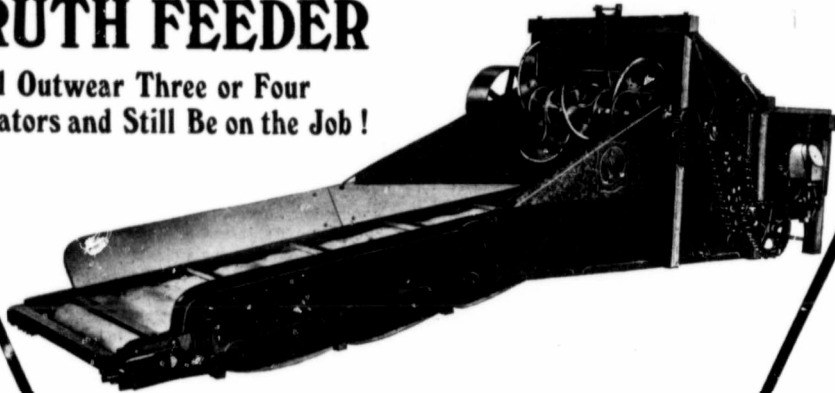
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MAYTAG CO.
LTD.
WINNIPEG
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It Can Never Slug a Cylinder

Or Bend or Break Any of the Teeth

The durability of the Ruth Feeder is as remarkable as its ability to do a wonderful amount of work—more work and better work than any other feeder you can buy. There are self-feeders that cause all kinds of delays, disappointments, money losses, because they cannot stand up under the work during the threshing season.

We know—and probably you know of feeders that are notorious for the fact that they rarely run one single season without shaking themselves to pieces. They are built flimsily. Their mechanism is weak. Their entire make-up is a mistake.

Yet—some people buy these other feeders. If one doesn't investigate, one is liable to invest in the wrong feeder—one that you'll have to replace at the end of the year, or even before the season is over. It may fall down on you right in the middle of the season.

Your pocketbook prompts you to pry into the facts about the Ruth Feeder. Learn how and why it does more work and better work. Learn how it perfectly regulates the flow of the grain, the throat contracting and expanding so that the right amount of grain is fed always.

Learn the other advantages of the Ruth. How the retarder and the feeding cylinder are controlled by the Pickering Governor, the governor operating a trip lever that stops the riddle until the feeding cylinder and retarder have disposed of the grain. By this means, the bundle is transformed into an even flow of grain. Clogging is impossible. Speedy, thorough work is facilitated.

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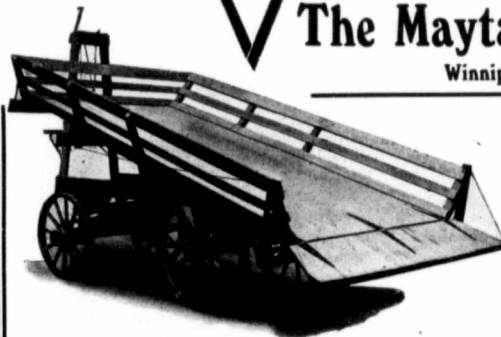
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Is, in our opinion, the greatest labor-saving and money-making piece of machinery for sale to-day. It is easy to load, easier to unload, and any boy that is old enough to drive a team can handle it. Can be used on any make of standard wagon gear, with either low or high wheels. If you own a stook loader you will see in a minute the advantage of having a set of the racks shown with the automatic end gate, over the old-fashioned hay rack that has been used heretofore. A rack with no end gates requires a man to load the bundles to keep them from falling out behind when rolled in with the stook loader. This end gate works automatically. When the load dumps it opens itself and when the rack goes back in place, closes itself. The lumber used in this rack is the best grade of Fir—not pine. Rack is 10 ft. wide and 15 ft. long, with high sides and ends all painted. Three or four of these racks will keep any machine going. How many teams, wagons and men did you use last year? Please write for prices and full particulars.

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MIXED FARMING

MANITOBA - SASKATCHEWAN - ALBERTA

BY W.C. McKILICAN B.S.A



No. 5. Leguminous Crops

HERE is no more important factor in the building up of a permanent system of agriculture than the group of plants known as legumes. This group includes alfalfa, clovers, peas, beans, vetches and other plants of a similar nature. They have several distinguishing features by which they differ from other members of the plant kingdom, but the most important of these, agriculturally, is their ability to take plant food in the form of nitrogen from the air and to store it in the soil as available fertility. Of all the elements of plant food that are used by plants in their growth, nitrogen is by far the most expensive to replace when gone. Yet this nitrogen forms four-fifths of the air, and therefore exists in enormous quantities in close proximity to the plants as they grow. However, to all kinds of plants except the legumes the nitrogen of the air is entirely useless; so unavailable is it to them that it might as well be at the other end of the earth. Only the legumes have the ability to draw on this great supply. They do it by means of the bacteria which live on their roots.

Action of Bacteria

Bacteria are generally supposed to be agents of evil and we associate them in our minds with typhoid fever, tuberculosis, and similar scourges. However, there are beneficent bacteria as well as harmful ones, and to the former class belong the bacteria which associate themselves with clover, alfalfa and other plants of the same group. If you dig up a root of one of these plants, you will find on it little warty lumps. These are called nodules and are the homes of the bacteria. The clover and the bacteria live together for mutual benefit. The clover provides a home for the bacteria on its roots and the bacteria provide food for the clover.

When the air circulates through the surface soil, the bacteria take the nitrogen which exists in the air in its pure, free state and combine it with elements obtained from the soil. The free nitrogen which was unavailable to ordinary plant life, is thus changed into compounds called nitrates which are soluble in water and easily used by the clover or any other crops that may grow on the same land after the clover is gone. While clover and other legumes use more nitrogen in their growth than other plants, yet the action of the bacteria in storing it up is so bountiful that the percentage of nitrogen in the soil increases while the clover is growing. The following table shows the increase of nitrogen in

standard or increased, some form of legume is part of the system. In Ontario and England it is largely red clover, in parts of the United States it is alfalfa and in other parts cow peas. Legumes are everywhere depended upon as the soil-enriching crops of the rotation and no rotation is on a satisfactory basis without them. Continuous growing of crops of grain, grass, or other non-leguminous varieties exhausts the soil. Legumes counteract this loss and may increase the total fertility if used to a sufficient extent. The following experiment conducted at the Brandon Experimental Farm shows the effect of the growing of clovers on the wheat that followed. Wheat was grown on plots that

the plants. We call these nitrogenous compounds in plants by the group name of protein. This protein is to the growth of animals as important as the nitrates were to the growth of plants. It is the most valuable part of the foods we give our animals; it is the one that is the most frequently deficient and the most expensive to buy. Protein is the part of the food of animals that produces muscle or lean meat, milk, hair, tissue, in fact the greater part of the body. The other important parts, carbohydrates and fat, go to produce fat and to keep up the animal heat and energy. Protein is present in all fodder plants, but it varies greatly in the proportion in which it is found; for instance cotton seed

meal contains 37 per cent digestible protein while wheat straw contains only 4-5 per cent of it. These are extreme cases and practically all other kinds of feed for farm animals come in between these two. Now, leguminous crops are specially valuable because they contain large percentages of protein.



Farmers and Farmers' Wives of Tomorrow. Young Manitoba Demonstrating its Knowledge and Skill in Manitoba.

the soil on a field that grew red clover for ten years.

Pounds of Nitrogen per acre in top 4 inches of soil.	
Before experiment	533
After two years	708
After four years	742
After five years	841
After six years	908
After seven years	915
After nine years	1065
After ten years	1044
Increase of nitrogen due to ten years' growth	511

Effects on Other Crops

Thus, not only are the leguminous plants themselves benefited by the action of the bacteria but the land is left in an enriched condition so that crops that grow on it in the years following are able to produce larger yields. This explains the great importance placed on leguminous crops in the systems of cropping where an effort is made to keep up the fertility of the land. In all countries where agriculture is on a permanent basis and the yield of the crops is being kept up to a

standard or increased, some form of legume is part of the system. In Ontario and England it is largely red clover, in parts of the United States it is alfalfa and in other parts cow peas. Legumes are everywhere depended upon as the soil-enriching crops of the rotation and no rotation is on a satisfactory basis without them. Continuous growing of crops of grain, grass, or other non-leguminous varieties exhausts the soil. Legumes counteract this loss and may increase the total fertility if used to a sufficient extent. The following experiment conducted at the Brandon Experimental Farm shows the effect of the growing of clovers on the wheat that followed. Wheat was grown on plots that

had been growing red clover, alsike, western rye grass and timothy for a number of years. Except for the difference in preceding crop the treatment of the wheat on all four plots was exactly the same.

The following yields were obtained:
 Wheat following Red Clover 37 bus., 5 lbs.
 Wheat following Alsike 33 bus., 30 lbs.
 Wheat following Western rye grass 27 bus., 37 lbs.
 Wheat following Timothy 26 bus., 47 lbs.

Feeding Value of Legumes

Besides having such great value on account of their effect on the land, leguminous crops are of great desirability owing to their feeding value. Here again it is the element nitrogen that is the key to the situation. This nitrogen transferred from its pure form in the air to nitrates in the soil, is again transformed into still more complicated compounds through the growing of

When this protein can be grown cheaply in the form of alfalfa and clover hay it makes a much more economical ration than where it is supplied by buying it in expensive forms such as cotton seed meal, oil cake or bran. Where protein is not provided in proper quantities at all, the ration is unbalanced and the results unsatisfactory. The superiority of leguminous crops over others of the same class is shown in the following comparison of red clover and alfalfa hay with timothy, and peas with barley.

	Digestible Protein per cent	Digestible Carbohydrates per cent	Digestible fat per cent
Peas	16.8	51.8	7
Barley	8.7	65.6	1.6
Red Clover	6.8	35.8	1.7
Alfalfa	11	39.6	1.2
Timothy	2.8	43.4	1.4

While it is quite possible to overdo the feeding of protein,

Continued on page 22

Harvest Help at Half Price

and the "supply" will meet the demand of the biggest farm and all the farms in Western Canada. Yet every man employed will receive his full wages. No breaking into "Union" prices--no sweating for a small pittance. Every possible head of grain secured and the last sheaf delivered to the thresher in a fraction of the time taken by the old time bundle pitchers. This we positively guarantee with a saving to you of

At Least \$20 a Day on Your Harvest Bill
IF YOU USE

The Stewart Sheaf Loader

For saving the grain, for getting it threshed in time, for economy in the labor bill, there is nothing comparable to it. It is the complement of the self-binder and no farmer will now consider it less needful to his harvesting operations than the binder. 1400 Stewart Sheaf Loaders were at work on the 1913 crop--its third season of strenuous work and this is what a few of those hundreds brought us in unsolicited testimony:

H. A. Baade, Imperial, Sask., Nov. 8, 1913: "I am well satisfied with the Loader as it saved me \$500 on a 36 day run, besides, I waited less for bundles than in the old way. In flax or tangled grain it is worth at least 2 cents a bundle extra as it will pick up everything clean."

H. W. O'Brien, Vanguard, Sask., Nov. 2, 1913: "I find that The Stewart Sheaf Loader does very satisfactory work and especially in flax and in picking up all loose grain which the pitchers will not pick up, making a saving in both labor and money."

Miller Bros., Grenfell, Sask., Jan. 23, 1914: "We have used one of your Loaders for this season and find it a great saving as labor was scarce and wages high. We figure that it easily saved us \$20 per day besides the board for the extra help. We operate a 36-inch separator and find that it keeps five teams with two spike pitchers at the machine, going all the time. Saves about four teams and two men in the field."

Box 273 Moose Jaw, Sask., November 19th, 1913.
To Whom It May Concern:
I hereby testify to the working and saving powers of the Stewart Sheaf Loader as I worked same this season and found it the biggest money saver of a threshing crew, both for thresher and farmer. It does the work of five men and two teams, which is a saving of \$20 per day, and will save more grain than you will with the pitchers in the field, and will keep a 36-60 separator full, in good grain, with four stook teams, threshing two thousand bushels per day.
JOHN FROST.

Eyebrook, Sask., Oct 31, 1913.
Gentlemen:
Having just finished my fall's threshing, and having used one of your Loaders for two seasons, I feel that you should hear a word from me in regard to the machine. I run a 36-60 Garr-Scott separator and 25-horse Buffalo engine. I ran thirty days this fall and averaged 2,250 of wheat per day with four stook teams, as before I had your Loader I had ten teams and four pitchers in the field, and the best I could do was 1,800 and 2,000 of wheat per day.
HENRY WILSON.

Dundurn, Sask.
I purchased one of your Stook Loaders this fall and may say that it did not give us any trouble. I had four stook wagons and it kept our 36-58 Chase machine going nicely, where eight or nine teams were required in former years, and without one cent of repairs (only a few slats broken by careless drivers) and I know it saved me from \$25 to \$35 per day for twenty-six days' threshing. It is surely a machine that saves its cost in a few days' work, to say nothing about the board for a lot of men in wet weather.
F. P. LINDBERG.

You can save the price on your 1914 labor bill and the machine is good for many years.

Make a clean field of the worst entanglement

You Can't Farm Profitably Without It



You Can't Get It In Time For 1914 Unless You Order It NOW

COMPLETE INFORMATION ON RECEIPT OF CARD TO

The Stewart Sheaf Loader Co., Ltd.

804 Trust and Loan Building, Winnipeg, Manitoba

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

A MAN'S TALK TO MEN

By
REV. DR. J. L. GORDON



Agitate. Agitate

Are You Shy?

ARE you shy? Do you hesitate when you are called on to speak? Do you shake when you are introduced to some great man? Do you find yourself shutting up like a clam when the social circle expects you to lead in the conversation? Do you blush like a red, red rose when you are asked to preside over some social function? Never mind, scores of great men have been "shy." The biographer of Charles Kingsley, wrote: "It was his own conviction that nothing but a public school education would have overcome his constitutional shyness, a shyness which he never lost, and which was naturally increased by the hesitation in his speech—"That fearful curse of stammering," as he calls it, "which has been my misery since childhood." This was a sore trial to him through life; and he often wished, he said, as he entered a room, or spoke in public or private, that the earth would open and swallow him there and then."

How to Begin

WHEN you organize a home for yourself, build on a foundation which is in harmony with the best traditions of your own family. Do nothing inconsistent with the family name which you bear. Be careful not to violate the sacred relationships which you are under obligation to sustain. Remember that the folks who have sacrificed all for you have still some claim upon your time, strength and consideration. Those are practical words by Jacob A. Riis, in "The making of an American": "What sort of a husband is the man going to make who begins by pitching his old mother out of the door to make room for his wife? And what sort of a wife would she be to ask or to stand it?"

Use Your Brains

THINK your way in. Think your way through. Think your way out. Thought rules the world. Every thinker is "original." The man who is not original does not think. The man who stands in the presence of The Temple of Mystery and insists on being admitted is original in the quality of his thought. Any man can achieve originality. Down the thought which staggers you. Cultivate clear thinking. Seek to exercise good judgment. In 1791 Pitt invited Burke to dine with him. After dinner Burke was earnestly representing the danger which threatened the country from French (revolutionary) principles, when Pitt said, "Never fear, Mr. Burke; depend on it, we shall go on as we are till the day of judgment." "Very likely, sir," replied Burke; "it is the day of no judgment that I am afraid of."

Home Life

THERE is one place where a man's character is known and that is in his home. He may deceive the world, but he cannot deceive the wife of his bosom or the children who bear his name. The final verdict is the family estimate. Therefore the highest of popularity is that which belongs to the home circle. What does your wife think of you? How do your children regard you? "I'm sanctified," said a man to Mr. Moody one day. "I'll have to ask your wife about it before I believe it," was the reply.

YOUNG man: have a hand in the agitation of some great vital question. Do not be discouraged because the numbers interested in the agitation are small. Rather be sure that you are right in the cause which you espouse. Get your logic right and you need have no doubt as to the future outcome of things. There is no evil strong enough to stand the force of truth. Bright and Cobden, both young men, were members of the "Anti-Corn-Law League of Manchester." The League engaged a room for their meetings in an upper floor on Market Street, Manchester. The room was divided by a red curtain, which, said Cobden, the committee drew across so that the small number of their members might not discourage them. "What a lucky thing it is," he said to a friend, "the monopolists cannot draw aside the curtain, and see how many of us there are! for, if they could, they would not be much frightened."

The Whole Truth

THE whole truth is not in possession of any sect, denomination or party. The circle which claims to be in the possession of the whole truth thereby reveals its narrow spirit and mental incompleteness. Truth, when most completely comprehended, but opens the door for larger views and broader visions. The man who "knows it all" has a small "it" and an insignificant "all." You remember in the Egyptian story, how Typhon with his conspirators dealt with good Osiris; how they took the virgin Truth, hewed her lovely body into a thousand pieces, and scattered them to the four winds; and, as Milton says, "from that time ever since, the sad friends of truth, such as durst appear, imitating the careful search that Isis made for the mangled body of Osiris, went up and down gathering limb by limb still as they could find them."

Character

FAITH'S first anchorage is human, not divine. The child believes in its mother. The boy believes in his father. The young man believes in his Bible Class Teacher. The young woman believes in her friend. The congregation believes in the man who is called "pastor" and "minister." It is a man's faith in man which is the foundation for man's faith in God. Therefore the profound necessity that as professed Christians we should be consistent in character and conduct. It was said of Adoniram Judson Gordon "in his daily walk he was beyond criticism." "He and his sermons are one," they were wont to say of John Tauler. It could be repeated here. "If Dr. Gordon should sin," said a Boston minister, "I should loose my faith in God."

Do it Well

NO man can know the full meaning of life. The letter which you write may be held up in court. The brick which you lay may yet mark a spot famous in history. The sentence which you utter may yet inspire the poet or historian. The garment which you weave may be worn by some great soul or favorite child of destiny. Every act has an eternal value. Every word has a spiritual relationship. One of George Whitefield's college mates in after life twitted him with having once blacked his boots. "Yes," said Whitefield, "and didn't I black them well? I want you to understand that I was a good bootblack." He did lowly work with a high purpose.

The Cross

NO great life has ever been without a cross. There is a cross in science—the X-ray. There is a cross in astronomy the Southern Cross. There is a cross in architecture—the girder resting upon the pillar. There is a cross in physiology—look at the veins upon your body. There is a cross in history—the intermingling of races. And mark you! wherever you find the cross you will find stability and progress. Do not be afraid of the cross. When Wilberforce was in the thick of his great agitation against the slave trade, an old, gouty peer said to him, "So, young man, you intend to reform society, do you? Do you see that?" said he, pointing to a cross near by. "That is what those come to who attempt to reform society." And it is true still, and true for you, if you are bold enough to make it so.

Stubbornness

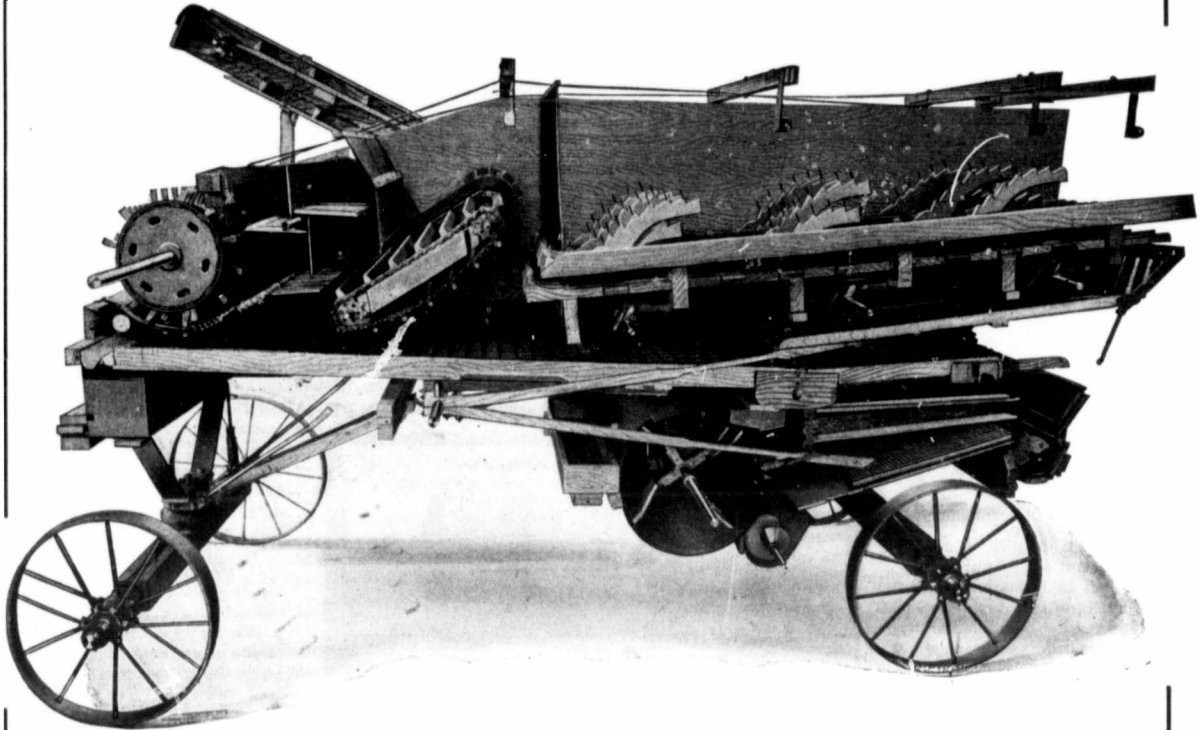
STUBBORNNESS is not firmness. A man may possess decision of character and yet have a degree of divine flexibility. There is a margin of charity in the scope of every man's thought whose mind is normal. The man who refuses to change just because he regards changeableness as a sign of weakness, is apt to be dogged in his ways and mulish in his disposition. Every normal trait or attribute in human character if pressed too far ceases to be a virtue and in the end becomes a vice. It is said that "The Bronte sisters had so much independence and so little yield in their temperament that their adversities told sorely on their happiness and made life bitter-hard for them. Their brother, the unhappy, weak, yet stubborn Patrick, when mortally ill, refused to take to bed and give in at the bidding of death, and died persistently standing."

Fads

DON'T believe in a thing because it is new. Don't believe in a thing because everybody believes in it. Don't believe in a thing because it is the fad. Don't believe in a thing because Dr. Way-up, Senator Get-there, Col. Full-dress, Mrs. Diamond-lace and Prof. Know-it-all, have approved of the new doctrine. It may be a passing phase of thought notwithstanding. We are reminded at this point of some vivid words of Parker uttered late in life: "In the past thirty-three years I have seen enough dead theories and discarded hypotheses to fill a good-sized cemetery. They entered the world like an amateur military band, with much noise and swagger, and coughed their way out of it like a squad of consumptive tramps."

The "New Century" Separator

Light Weight—Unlimited Capacity—Perfect Separation—Convenience—Durability



A Canadian Favorite

The unrivalled performance of the "New Century" Separator in the Canadian field has earned for it a reputation that places it in a class by itself. In every part of Canada, agents, operators and patrons of operators are praising in the highest terms the most excellent work of the "New Century." Agents prefer to sell the "New Century," because it makes a satisfied customer every time. Operators prefer the "New Century" because it makes them the most money and satisfies their patrons the best. Farmers everywhere prefer to have their crops threshed with a "New Century," because it saves the grain, cleans and delivers it in the measure in a perfect condition—in double quick time—no costly delays—once started on the job, there are no stops until completed.

Do not be led to believe that some other separator is just as good as the "New Century," for it is not built. What you want is a "New Century." Insist upon having it—allow no substitute. You know that the "New Century" is the speediest and cleanest separator built—that it's the separator that reigns supreme in every grain growing section of the world—that it runs from two to four horse power lighter than any other separator of like size—that it is simple, compact and convenient—that its perfectly balanced movement insures endurance—that its well built wood frame is far superior to any steel frame construction. A steel frame construction to be as rigid as the "New Century" frame, would be excessive in weight. The "New Century" is just the machine you want to render you the kind of all around threshing service you're looking for.

Be sure you see the "New Century" before you buy. Get our Catalog and study the construction of this wonderful separator if you are not already familiar with its construction. You want a "New Century" to make your threshing a success. Be sure you get it.

International Harvester Company of Canada, Limited
Canadian Sales Agents for "New Century" Separators

The Aultman & Taylor Machinery Company

Lock Box No. 64, Mansfield, Ohio

BRANCHES: Minneapolis, Minn.; Great Falls, Mont.; Calgary, Alta.; Regina, Sask., Canada

TRACTION PLOWING

AS TOLD BY THE MEN WHO DO IT

An Experience Worth Reading

1913 completed our second season of operation with a gasoline engine as our chief source of power. We were requested at the end of our first season's operations to give our experience in traction farming for publication in the Canadian Thresherman and Farmer but we felt at that time that our experience was not sufficiently conclusive to be of any value to the readers of your paper. We approach the subject at the end of our second season's operations with somewhat the same feeling, for, as our experience widens, the more we see to be learned. However, we have worked out certain phases of the power farming problem with sufficient thoroughness to feel that we may be able to give some information of value to others even though our knowledge of the subject may be limited.

The fact that this article contains no records of costs of operation can only be explained by the statement of our conviction that such records are inconclusive and misleading. We have a 20 h.p. opposed cylinder motor and have performed absolutely every field operation connected with the farming of two sections of land with this engine, having only three horses upon the place. We have kept fairly accurate records of the costs of the various operations, and have never performed the same work twice with the same results as to costs. In fact some of the figures vary so widely as to lead us to doubt their correctness.

When we complete a stipulated piece of work without accident or delay our records of the results compare favorably with any we have seen in print. When we start upon another piece which, theoretically, should be completed with similar results, and mire the engine in wet spots two or three times, stop to take up a connecting rod bearing, break a plow shank upon a stone, etc., etc., the record of costs looks entirely different. These things will happen and must be expected even under the best of management. The physical conditions under which farming operations are conducted vary so greatly that even the average results for a season

could not be considered as a standard.

We had in crop this past season nearly 1,000 acres, and as stated above, all the work was done with the tractor. We expect our engine to run 20 hours a day throughout the rush seasons, and with the exception of drilling and harvesting, but one man is with the engine at a time. We find that the engine shows the greatest economy for the work accomplished in doing the lighter farm work such as fitting, drilling, harvesting, etc. We are convinced that where a tractor is required to do a variety of work a medium size, such as ours, is far more practical. If nothing but plowing and threshing is expected

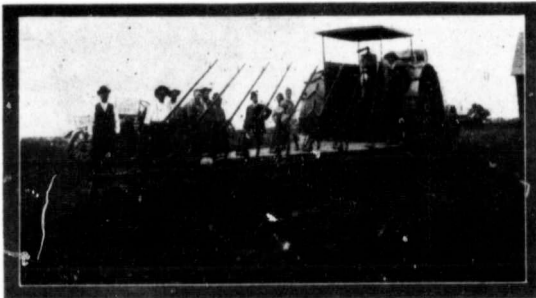
Plowing is, of course, harder upon the engine than threshing in that gearing is in use and getting wear which is idle during threshing. The strain upon the motor, however, we believe to be equally as heavy in threshing as in plowing and in one sense more so. This is due to the fact that when threshing heavy grain which is consuming pretty nearly all the available power there is no opportunity to let up on the engine when a wet bundle goes in or feeding is too heavy. The engine must maintain its uniform speed, no matter how heavy the work, if slugging at the cylinder or poor separation is avoided. When plowing, if a heavy piece of sod is encountered, or a sharp grade,

satisfactory as steam, provided they are not overloaded. The fact that most of the gasoline engines now on the market deliver a much larger proportion of the brake horse power at the draw bar than does a steam engine leads a great many to expect too much of them at the belt. A gasoline engine may be able to pull as many plows as a steam engine and still not be able to drive the same size separator.

In connection with our farm operations we have worked out a system of accounting from which we are able to derive a great deal of valuable information. The season just past is the first opportunity we have had to put the system to anything like a fair test and we can say for it that it has enabled us to put our finger upon numerous instances where better management, better farming, or better selling methods will increase our profits.

As we are leasing land as well as operating land which we own, for the sake of convenience we decided that in our books we would credit one-third of the entire crop raised (which is the share we give upon the land we rent) to the land whether it belonged to us or not. If land belonging to others is entitled to this share ours should be credited likewise, and we are in this way putting it squarely up to ourselves to show a profit for our investment in machinery and labor from the remaining two-thirds of the crop. We also made out a schedule of prices for all the usual operations of grain farming, based upon the prevailing contract prices paid in this district. We decided that our labor and equipment was justly entitled to an income equal to the contract value of the work performed, and it follows, therefore, that as we depend upon the crop raised for our pay, we have a right to expect the crop to produce a margin, over and above the contract value of the work performed in raising it, sufficient to insure us for the risk we carry in depending upon this crop to repay us for our expenditure of labor.

Theoretically, therefore, we should have three sources of income, as follows: (1) from the one-third of the grain credited to the land (2) from the margin between the contract value of the



Big Interest in a Big Job.

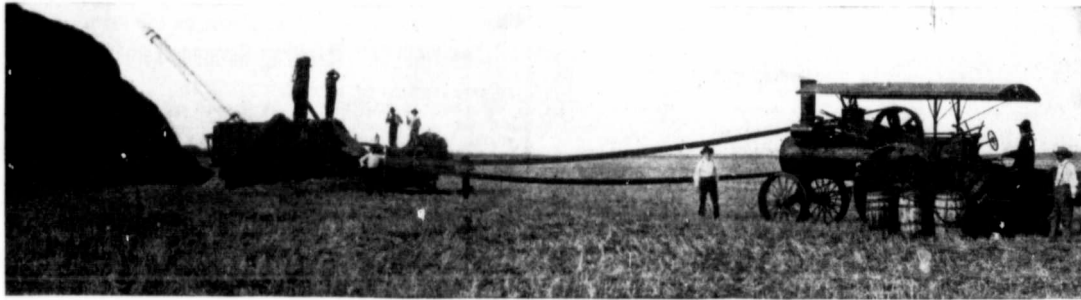
of the tractor we are not sure but that the higher power engines are more practical, provided, of course, that there is sufficient work ahead to warrant the added investment.

Our experience has been that the tendency is to work the engine too nearly up to its maximum capacity in the heavier work of plowing and threshing. A tractor is like a horse, it will last longer and do more work in the end if it is working well within the limits of its power. With a tractor capable of hauling four and five plows, dropping off a plow when the work is unusually heavy means a large percentage taken off the work it is possible to do in a given time. Nearly everyone will endeavor first to get the last ounce of power out of the engine and keep the plow running. With a larger engine pulling from eight to ten plows, dropping off a plow may be all that is necessary to bring the load well within the power of the engine and the percentage of work lost is only half as large.

and the engine is working hard, it is always possible to release the clutch, allowing the motor to cool off slightly and gain momentum for a fresh start.

Our separator has a 28 inch cylinder and has a rather heavy draft in comparison with some others. It is capable, however, of handling an immense amount of straw for its size. We threshed during the season of 1912 with our gasoline engine at the belt and found that in heavy grain we could work the separator to full capacity only by the utmost care in feeding. With constant care in this regard we succeeded in making our run with practically no stops. For the threshing season just passed we purchased a second-hand 22 h.p. steam engine and find it very satisfactory for our separator. An added advantage is that our gasoline engine is free for fall work upon the land.

We have no criticism of gasoline engines for threshing purposes. In fact, we believe that in capable hands they are fully as



Advance outfit in the field. A very popular Steamer. A big capacity Separator.

30,618,500,000 Bushels

This is about the amount of grain that will be threshed by the 61,237 Rumely, Advance and Gaar-Scott Separators that have been sold.

Think of the billions of bushels threshed by Rumely, Advance and Gaar-Scott Separators and of the millions of bushels that have been saved by having these machines do the work. A long record of satisfactory service has won fame and favour for these 61,237 Separators among farmers everywhere; and this has resulted in busy seasons and big profits for threshermen who operate Rumely, Advance and Gaar-Scott machines.

A few weeks ago, two immense trains took over \$300,000 worth of Rumely, Advance and Gaar-Scott separators and steamers, OilPull and GasPull tractors to the Southwest to thresh the promised bumper crop. More train loads of these machines are on their way to other parts of the United States and Canada. There is a reason for the demand. Rumely Power-Farming Machinery, through many years of service has proved its superiority under every condition, before the most exacting judges.

No matter what kind or amount of grain you have to thresh, we have a Rumely, Advance or Gaar-Scott outfit that will do fast, clean work, give entire satisfaction to the farmer and yourself, keep down costs and yield profits. Any outfit will be equipped just as you want it. Separators range in size from 18 to 40-inch cylinders. Steamers can be equipped to burn coal, wood or straw. Built in simple, compound, single and double cylinder types.

The OilPull tractor burns kerosene and other cheaper distillates at all loads, under any conditions. Sizes 15-30, 25-45, 30-60 horsepower. The GasPull is a light, powerful, general-purpose tractor. Size 15-30 horsepower.

You get Rumely service with every purchase—49 Branches and 11,000 dealers. Parts and supplies can be secured without delay. Talk it over with the Rumely man.

Catalogs on Request

Canadian Branches:

Calgary, Alta.
Estevan, Sask.
Regina, Sask.

Rumely Products Company

(Incorporated)

Power-Farming Machinery

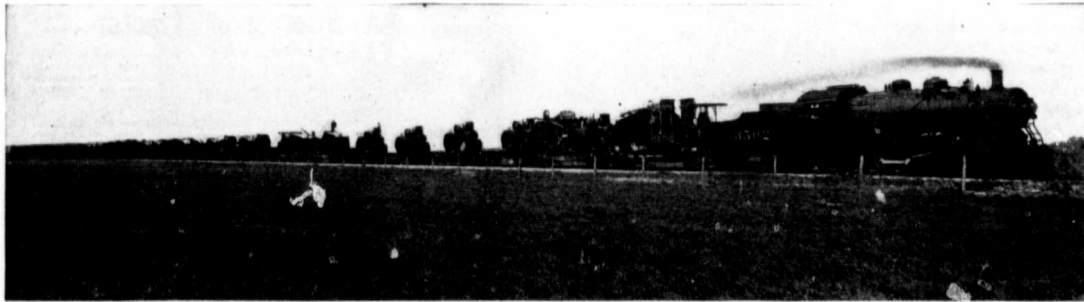
Chicago

Ad. 976

Illinois

Canadian Branches:

Saskatoon, Sask.
Winnipeg, Man.
Toronto, Ont.



One of the big Rumely trains that took \$300,000 worth of machinery to the Southwest to thresh the bumper crop

Gas Engine Troubles

By A. C. CAMPBELL

Article Number 3.

CONTINUING our discussion of the case of an engine which is not developing its full power we will find that there are still a number of causes of this symptom of trouble to consider.

Overheating of the cylinder and piston will quickly reduce the power of the engine and will finally cause the piston to bind and stop if load is kept on. The piston and cylinder can become overheated from various causes the most common of which is insufficient cooling water or oil. When the cooling medium is allowed to get low its ability to carry off the excessive heat is reduced proportionately. The same trouble is experienced when the free circulation of the cooling medium is interrupted either because of the circulating pump being out of order or the pipes becoming clogged. In the earlier types of traction engines we found that some of the radiators did not have sufficient cooling surface, but this trouble has now been eliminated by the manufacturers.

An exhaust valve which opens too late and closes too early will soon cause an engine to become overheated for the piston will return during the exhaust stroke against considerable back pressure and also complete exhaust of the burnt gasses will not be obtained.

Insufficient lubrication causes friction which in turn results in overheating. Lubricants of poor quality or excessive lubrication will cause carbon deposits in the cylinder and piston. This carbon may become incandescent and cause pre-ignition and overheating.

Friction of any of the engine parts or bearings will, of course, reduce power but when a bearing is tight enough to reduce power it will not be long before the operator will have a babbitting job on his hands. A bearing should always be tight enough so that it has practically no play, yet loose enough to enable the shaft to turn freely on the bearing. Then, it must be well lubricated with a good grade of lubricant.

Overload on the engine will soon cause overheating and excessive friction of working parts.

Leaks in the compression chamber are a very fruitful cause of lack of power and these leaks can occur in many different ways, such as valves not seating,

valve stems worn bent or binding, or valve springs weak, loosened or broken. When a valve is not seating properly it must be ground into its seat with either emery or carborundum.

The face of the valve should make a gas tight fit with the seat, the whole surface of the one coinciding with the whole surface of the other. Leaks can also occur because of the piston rings not being properly covered with a film of lubricating oil. This film of oil is very necessary to make the piston and rings perfectly gas tight. Piston rings sticking in their grooves will fail to perform their function which is to press against the cylinder walls and thereby prevent the escape of gas and if they are put in with all the leaks in line they will permit gas to blow through. Rings which are not truly circular will also fail to hold compression.

Valve cages not properly packed or ground into place cylinder gaskets defective, ignitor mechanism leaking or sand holes in the piston, all result in loss of compression and lack of power.

Carbureter openings clogged, exhaust too long, too small or with too many turns in it, intake valve spring too strong (this refers to a suction intake), all contribute to reduction of power. The writer remembers visiting one engine which failed to deliver the power it should have done. The engine had been pulling four plows in breaking and during a wet spell the engineer had ground the valves and put a new spring on the intake. Afterwards he had difficulty in pulling three plows and could not understand it. The writer simply cut two coils off the valve spring and the engine again delivered its normal power. The engine had not been getting enough mixture.

The third symptom of trouble which we will deal with in this series is that of "pounding" or "knocking."

If the spark occurs too early the gasses in the cylinder commence to expand before the piston has reached the end of the compression stroke. The momentum of the fly wheel is driving the piston into the cylinder and the expansion of the gas is working against it, resulting in pounding. Overheating which has already been discussed will also cause pounding for the same reason, the

Continued on page 20

The Long Looked For Has Come!

It is here! Cheap Power for the Farm

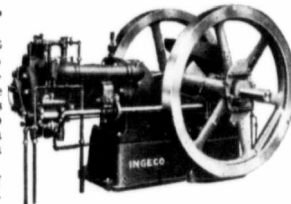
The "INGECO" Throttling Governor Kerosene Engine

IT APPEALS TO US, IT WILL APPEAL TO YOU

If you really want the best engine value in this Country, this engine will surely appeal to you.

This is not a Gasoline Engine with a Kerosene Attachment, it is a Kerosene Engine, designed to burn Kerosene, operates with Kerosene and is economical on Kerosene.

We guarantee consumption of Kerosene with "INGECO" ENGINES not to exceed in quantity what it takes of Gasoline to operate a Gasoline Engine. Think of the saving in dollars in one year.



An "INGECO" Engine will deliver 100 per cent service. It will come up to your fullest expectation as to power, reliability and durability.

Besides its operating cost is very low, which is an important item at the present cost of fuel. Its simplicity of construction and accessibility make it easy to take care of.

All parts are made from jigs and replacement is readily made.

The "INGECO" Engine is designed and constructed to give satisfactory service under all conditions and always delivers its full rating with an abundance of power to spare.

We have such a range in sizes and styles, that space does not permit us to quote prices. If interested, write us for circulars fully describing. Made in sizes 1 1/2 to 7000 H. P., Tank Cooled, Hopper Cooled, Air Cooled, Horizontal and Vertical, Portable and Stationary.



Canadian Distributors

Burridge-Cooper Co., Ltd., Winnipeg, Man., and Regina, Sask. Address enquiries to Winnipeg Office.

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

"FLOUR CITY" TRACTORS



A Successful Tractor

The two essentials in a successful farm tractor are—staunch construction and plenty of power. One without the other will result in failure. Combine these with a design that eliminates superfluous weight without sacrificing strength and you have the main features that are embodied in the design of the "FLOUR CITY."

Add to this our well balanced, four cylinder motor and simplified bevel gear transmission, and you have the main points which have contributed to the success of the "FLOUR CITY" and made it the most popular tractor in the field to-day.

The "FLOUR CITY" tractor is built in four sizes and is designed for plowing, threshing and kindred farm work. Our new booklet sets forth the views of farmers who have used the "FLOUR CITY" for a number of years. It is the best evidence you can get, and will be sent you on application.

If interested send for descriptive catalog.

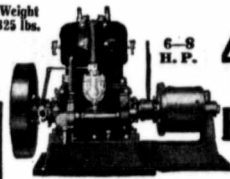
Canadian Branch: 828 44th Ave. N., Saskatoon, Sask.

KINNARD-HAINES CO. MINNEAPOLIS, MINN.

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

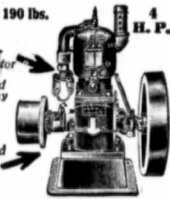
Great Strength and Great Power in Light Weight.

Weight 325 lbs.



4 to 20 Horsepower

Weight 190 lbs.



It's in the Design Built Light, Built Right

Cushman

4-CYCLE GASOLINE ENGINES

Are built to produce great power and strength in light weight. Meet every power need on the farm. Equally efficient and economical for light or heavy jobs. Distinctive for work no other engine can do.

The One Practical Binder Engine for all grains in any section. Works on any Wheat, Rice or Corn Binder. Tested and proved by 7,000 farmers, on soft, sandy, hard and rough ground. Engine does all operating, having chain drive from patented clutch. Horses merely draw machine.

This Same Engine is Also An All-Purpose Engine. Good for pumping and light work; also for grinding and heavy work.

There is a Cushman for every job. The double cylinder engines from 6 to 20 H. P. are practical powers for hay balers, silo filling, corn pickers and general heavy work. Admirably adapted for corn shellers, hoisting, separators, etc.

Study the pictures in this advertisement. Fit them into your own work. Don't merely wish or wonder. Get busy. If you have any questions or doubts, write us. We will give you honest answer. Don't be afraid of the light weight. A 190-lb. Cushman will do all the work any 1000-lb. 4 H. P. engine can do, and some work no other engine can do. Will stand up under it. Ten-year guarantee.

FIGURE WHAT THESE DISTINCTIVE FEATURES MEAN TO YOU:

- Easily moved to where the work is. Fits any binder. Quickly attached or detached.
- Runs at different speeds for different loads. Speed changed while running.
- Throttle governed. Steady speed at all loads.
- Consumes fuel in proportion to load. Patent Economy Tube in Schebler Carburetor saves gasoline—no waste.

Ask your dealer. Write us today for catalog. Tell us your needs.

Cushman Motor Works of Canada Limited

257 PRINCESS STREET, WINNIPEG, CANADA

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

Cushman Engines in Australia

The accompanying illustration depicts the 4 h.p. Cushman farm and binder engine in use upon the wheat fields of Australia. These light weight throttle governed engines, successfully attached by brackets to the rear of the binder operate the mechanism independently of the bull wheel and the power exerted by the horses. The horse merely pulls the weight of the mechanism, no driving power for the elevating and binding integrals being necessary—eliminating thereby a great strain in the haulage of the machine. It is claimed that two horses, with one of these engines attached, will cut a larger acreage with less effort than four horses without the engine. Throughout the wheat-raising areas of the world these engines are to be found in

successful use, and hundreds of Canadian dealers and farmers can testify to their success in the Canadian Northwest. It is of special importance to the farmer that the engine can not only be used for adaption to the binder, but also for any other power

their Winnipeg address, 288 Princess Street.

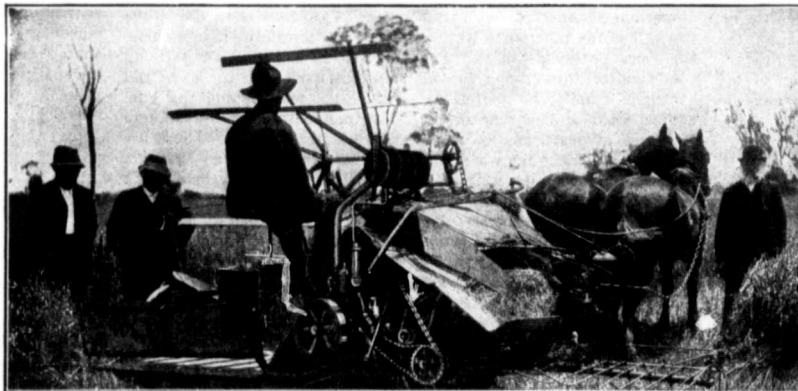
Saskatchewan Winter Fair Adds to Its Prize List

At a recent meeting of the Saskatchewan Winter Fair

milking test, it is advisable that this matter should be brought to the attention of breeders of dairy cattle at an early date. The sections included, will be as follows: Milking test; Class for cows 36 months and over, test to be a two day test, commencing on the Monday evening of the show and finishing on Wednesday noon. The second class will be for cows under 36 months. Two ring classes will also be included for cows in milk, under the same classification, actual age of animals at time of the fair to count in all cases.

It is probable that some further information with regard to the poultry section will be forthcoming later.

Uncle Bob—Did you like the trip to the West, Johnny?
Johnny—Not so much. I was waiting for train-robbers, and we never saw one the whole time.



The Cushman Binder at Work in Australia.

work such as pumping, elevating, grinding, etc., throughout the year. This makes it a very valuable asset to the farmer. Full information concerning these engines will be supplied any dealer who will write the company at

Board, it was decided that two important additions be made to next year's prize list. This will include the addition of a department for both dairy cattle and poultry. Owing to the fact that the dairy section will include a

FARMERS! DO YOU WANT GOOD MACHINERY?

if you do, this is what you are looking for—a Tractor that is Guaranteed to stand up to its work and give good service. Built by "MARSHALL'S"—a firm of world-wide repute. Every part Fitted, not assembled. Only best materials used and all carefully tested out before selection. The horse power is not over-rated, and we guarantee they will do all that is claimed for them. They are well named:

The Dreadnoughts of the Prairies

BUILT LIKE A BATTLESHIP—RUNS LIKE A WATCH

**ECONOMICAL,
DURABLE,
RELIABLE**

WE ARE NOT OFFERING YOU AN UNTRIED ARTICLE, AND CAN REFER YOU TO A NUMBER OF USERS IN THIS COUNTRY.

THE MOTOR IS BUILT UNDER THE BEST ENGINEERING PRACTICE AND WE INVITE YOU TO COMPARE OUR CONSTRUCTION AND BEARING SURFACES AS AGAINST ANY OTHER TRACTOR SOLD IN THIS COUNTRY. WE ARE HERE TO LOOK AFTER YOU AND HAVE SKILLED MECHANICAL ENGINEERS FROM WORKS AT GAINSBORO.

We Guarantee! Prompt Despatch of all Repair Parts.
Crude Oil Engines, Stationary and Portable. Simplest and most economical Engine made.
Fixed Steam Engines 2 to 2000 H.P.
Road Rollers, Steam Hauling Tractors, etc.
Steam Boilers, all kinds.



Two Sizes in Stock: 16 Draw-Bar H.P., 30-35 Brake H.P.;
32 Draw-Bar H.P., 60-70 Brake H.P.

EVERY ENGINE IS THOROUGHLY TESTED BEFORE LEAVING THE WORKS AND WE GUARANTEE ITS EFFICIENCY.

WE HAVE THEM RIGHT HERE WAITING FOR YOU. COME AND CHOOSE YOUR SIZE.

"MARSHALL'S" NAME STANDS FOR QUALITY ALL OVER THE WORLD.

WE HAVE A FULL STOCK OF SPARES ON HAND AND THERE WILL BE NO DELAY IN CASE OF ACCIDENT.

Not in any Combine

Send for Illustrated Catalogue with Full Description

The "Marshall" Works at Gainsboro, Eng., were established in 1848, and now employ over 5,000 men. Works cover 40 acres and they have produced about 155,000 Engines, Boilers, Threshing Machines, etc. Call and see our New Factory at Saskatoon, site 500 x 130 ft.

Marshall, Sons & Co. (Canada) Ltd., Engineers, Saskatoon, Sask.

Telephone No. 3393

FACTORY: ELEVENTH STREET WEST

P.O. Box 1564

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

Traction Plowing.

Continued from page 19

work expended in raising the crop and the actual cash returns from two-thirds of all the grain raised, and (3) the margin between the actual cost of doing the work and its contract value. The first two sources of income are affected by the prices we receive for the grain and by the yields we are able to produce through wise distribution of the labor expended in producing the crop.

The last source of income, represented by the margin between the costs and the contract value of the work performed, is determined largely by the efficiency of our work and the success we have with our engine. As stated above we credit our equipment with the contract value of the work performed and charge it with all items of expense. We include not only the usual items of interest, depreciation, etc., but we charge a rental for the farm buildings, which is based upon a fair interest return for the money invested in them. At the close of our first year's test of this system we find this machinery account a very interesting one, and in planning next season's work we find ourselves constantly referring to it for information.

Comparison of an engine with horses is rather a difficult matter. From our experience we believe we are safe in saying that where it is possible to get on the land we can compete with horses in all the operations of grain farming. While we find drilling proportionately one of the cheapest operations connected with our work, it is the time when we feel the need of horses most. The condition of the ground in the spring is usually the poorest for engine work: of any time in the year and at least one outfit of horses to work out the wet spots, is almost a necessity no matter how ideal the farm for engine work. Whenever we are working upon a good sized piece free from sloughs and in good condition for engine work we can outclass the horses at practically any kind of work.

The fact still remains, however, that the man who has the ability to handle horses successfully and owns an outfit of good mares can discount any engine that will ever be produced simply by eliminating the biggest problem of traction farming—depreciation. In making our comparisons of horse and engine labor we have not considered this item.

The only cause for alarm as a result of engine work upon the

land that we see is the tendency to do all the work in one direction. The long way of the field is always chosen with an engine and frequently cross-work and work done diagonally is very beneficial. Whether ridges will result from continued operation in one direction remains to be seen. Carelessness in doing the work will certainly produce them.

After all is said power farming resolves itself into the same old story—the man behind the gun. The tractor is here to stay. There is work for it to do. There are no two farm problems that are alike. One man may be able to use the tractor at a much greater variety of work than another and do it successfully. Another may find it practical for plowing or threshing only. The man whose work will stand the test of time and who will do the most to give the modern tractor a definite place in our agricultural economy is the man who most successfully adapts the tractor to the conditions under which he works.

Arthur Bates & Son,
By A. Lee Bates,
Liberty, Sask.



The hen will lay a little egg
And boast of it all day.
It's just because she's musical—
She likes to sing her lay.

Gas Engine Troubles.

Continued from page 18

charge becoming ignited too early because of the excessive heat or because of glowing particles of carbon in the cylinder. We know of a case where an engine pulled a full load of plows for half a mile with the switch off and fired every charge, which goes to prove that the charge can be ignited without the spark when an engine is overheated.

Looseness in some parts of the engine will also cause pounding, and the operator must train his ear so as to be able to detect the cause of the pounding. Connecting rod bearings may be loose, main shaft bearings loose, fly wheel loose on shaft, fly wheel cracked in hub, spoke or rim or lost motion in any other part of the engine. It sometimes happens that moving parts of the engine are striking and this can only be determined by a thorough inspection.

Poor speed regulation is another symptom of trouble and can generally be traced to the governor although the cause might also be faulty ignition. If the charges are not all fired the speed of the engine will vary considerably, no matter how good or sensitive the governor

may be, or if the charges are not all fired at the same point in the cycle, because of timing mechanism being out of adjustment, the result will be the same.

When the trouble is found in the governor it is very often due to lost motion in the moving parts. When such is the fault the governor balls can fly out or drop in quite a lot without having any effect on the throttle slide or butterfly valve, as the case may be. The writer has visited engines where the governor rocker arm could be moved half an inch without moving the throttle slide at all and remedied the trouble by renewing worn parts. All moving parts of the governor should set in unison for if they don't poor speed regulation will be the result. The governor should also be well lubricated and care taken that no parts become gummed. Where the governor is on a "hit and miss" engine and is not holding the speed constant the trouble is generally found in the detent arm. The knife edges may be worn or the arm may be bent, giving it too much clearance.

Incorrect mixture may also cause poor speed regulation for the incorrectly proportioned mixture may not always be fired or it may burn slowly and cause popping at the carbureter. These conditions have however been discussed already and it is therefore sufficient to just mention them.

Excessive fuel consumption is the fifth of the symptoms of trouble and a person might well laugh at the simplicity of some of the causes of this trouble. The writer has actually been called upon to reduce the fuel consumption of different engines when all the "expert work" which he had to do, was to stop a number of leaks in the piping and fuel pump. The vibration of a tractor running over rough ground is bound to cause pipes to become loose and the operator should watch this carefully. The packing in a pump will also become loose after a time and will require to be renewed. We generally

Great Results at Little Outlay

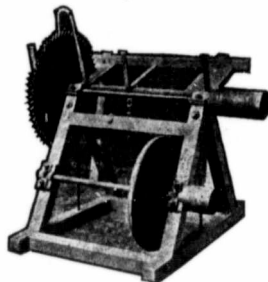
[WITH] WATSON'S "Ideal" Feed Mill

A good feed mill is one of the best investments possible on the farm, and for a small outlay gives big returns. To grind your own grain not only saves you money, but relieves you of the necessity of frequent trips to the grist mill.

Our "IDEAL" Feed Mill is the simplest, strongest, and fastest made. Turns out the feed in perfect condition at the following rates per hour: Corn, 6 to 20 bushels; Corn and Oats mixed, 8 to 15 bushels; Oats only, 3 to 6 bushels; Wheat Screenings, 4 to 8 bushels. Style illustrated is our No. 15 with sweep power. We also make several other sizes of grinders, for both sweep and belt, and roller crushers.



Ask [for] WATSON'S When You Buy Saws!



Absolutely the best value in their line. Heavy steel shafts and boxes, solid fly-wheel, three pulleys and strong, rigid wood frame. WATSON'S Pole Saws are specially designed for the purpose. If you want Saws that are safe and easy to run, strongest on the market and that STAY SHARP.

GET WATSON'S!

If your dealer cannot supply you, write us

John Watson Mfg. Co.
ESTABLISHED 1872
WINNIPEG
MAN

WE SELL:

- Sleighs, all sizes
- Pole and Cordwood
- Saws
- Grain Grinders,
- Straw Cutters
- Horse Powers
- Wheel Barrows
- Root Pulpers
- Channel Steel
- Harrows
- Boss Wood Harrows
- Steel Boss Harrows
- Harrow Carts
- Pulverizers
- Lawn Goods
- Turnip Seed Sowers
- Warehouse Trucks
- Double-Trees and
- Neck-Yokes
- Heider and Greig
- Eveners
- Janesville Plows
- Moline Plow Repairs

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

tell a man who is losing fuel in this way that gasoline or kerosene is a poor fertilizer to be spreading all over the farm and besides it is very expensive.

Incorrect mixture, defective ignition and leaks in compression chamber are all causes of excessive fuel consumption.

If an engine is run at too low a temperature it will use considerably more fuel than it would if the temperature was kept up to the correct point. The idea of a cooling system on an engine is not so much to keep the engine cold as to keep the temperature of the cylinder constant. It is generally conceded that the temperature of the jacket discharge water should be just below the boiling point or in the neighbourhood of 180 degrees F. in order

to obtain the best efficiency from the engine.

If the jacket water is kept very much colder too much heat is wasted off into to cooling water and less heat is delivered in the form of work. To accomplish a certain amount of work a certain amount of heat must be transformed into work. A given quantity of fuel contains a definite amount of heat; therefore if an excessive amount of heat is wasted off into cooling water more fuel will be required to deliver a certain definite amount of work.

Those of us who are operating engines know that the engine delivers more power on less fuel when it becomes thoroughly warmed up. The writer had occasion to visit a stationary

engine one time which was being used for crushing grain and similar jobs. When he got there the outfit was running and after watching the engine for a short time the owner put his hand in the water tank and then drained off two pails of water and put in two pails of cold water. On being asked what his idea was, he said that the engine was getting too hot. He thought that the water should be kept cold. The writer operated the engine all afternoon that day and never touched the cooling water. The result was more power on less fuel.

In Answering Advertisements

in this Magazine be sure and mention where you saw the advt. Remember we guarantee the reliability of all our advertisers.



When
Harvesting
WITH YOUR
TRACTOR

USE A

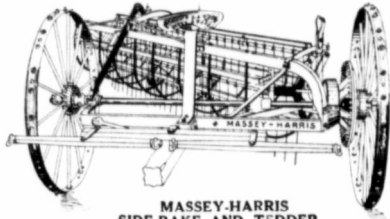
CASWELL AUTOMATIC BINDER HITCH

It is simple, dependable, strong, durable. Requires no operator and only a very small investment. Manufactured in Canada by

SASKA MANUFACTURING CO., LIMITED, Saskatoon, Sask.

Make Hay While the Sun Shines

If you can, but if the shines are few and far between, you will have need of the most improved Hay-Making Implements, and here they are.



MASSEY-HARRIS
SIDE-RAKE AND TEDDER.

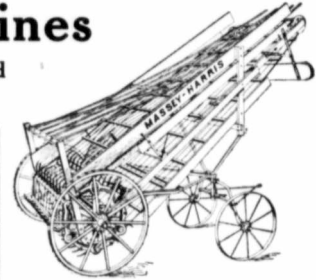
Quickly changed from one to the other, and satisfies the most exacting in either capacity.
Made almost entirely of Steel.
Gearing is strong and simple—fast speed for tedding, and slow reverse motion for raking.
Angle of Teeth adjusted by a convenient Lever.

MASSEY-HARRIS CO.,

Limited.

Winnipeg, Regina, Saskatoon, Swift Current,
Calgary, Yorkton, Edmonton.

— Agencies Everywhere —



MASSEY-HARRIS HAY LOADER

Simple in construction—will not get out of order.
Yields automatically to any obstruction or unusual volume of hay.
Places the hay well forward on the load.
Its motion is steady and constant.
Furnished with or without Forecarriage.

They Save Many a Crop which would otherwise be Damaged by Rain or Exposure

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

Mixed Farming

Continued from page 12

there is little danger of it with our Western feeds. Hay made from tame or native grasses is rather short in protein, straw is very short in it. Oats have a fair proportion but not enough to make up the shortage in hay and straw. Thus hay crops with a good percentage of protein are just what is needed under our conditions.

Alfalfa Next Month

By far the most important leguminous crops for Western Canada is alfalfa. Next to it would come the clovers (red and alsike). These crops I consider of sufficient importance to occupy separate articles, so you may look for an article on alfalfa next month and one on red clover and alsike the following month. Our remaining space this month will be used to treat of some of the minor crops of this great family.

Field Peas

Field peas are a crop that might very well be grown more extensively in Western Canada. They yield a good crop where grown under suitable conditions, and the grain is very rich in protein and therefore of great value in mixing with other grains and especially in the feeding of pigs. The straw is also of value, particularly if cut on the green side and used for the feeding of sheep.

The great difficulty in raising peas has been in harvesting them. They cannot be cut with the binder and are hard to thresh without splitting. They may be cut with the mowing machine by using a pea harvesting attachment to lift them off the ground, or they may be pulled with a

horse rake or by hand with scythes.

By using peas along with oats for green feed or by allowing pigs to harvest them, the harvesting difficulty may be overcome. Peas and oats make a considerably better grade of green feed than oats alone. The oats hold the peas up so that they may be cut with the binder. When pigs are used to harvest them, the pigs may be turned in when the peas are almost ripe. They will pick up everything and incidentally put it to good use. When sown alone peas should be sown at from 2 to 3 bushels per acre depending on the size of the peas. They should be sown early; their season is about the same as for wheat. When mixed with oats different proportions may be used, but 2 bushels of each per acre makes a very good green feed.

Vetches

What has been said of peas is very largely true of vetches. They are very seldom grown for grain, but are very good for green feed either alone or in mixtures. About 1 bushel per acre is sufficient seed to sow.

Cow Peas and Horse Beans

These crops fill a very important place in the southern part of the United States. For Western Canada they are not well suited as they are semi-tropical plants and require a long season. Peas or vetches are to be preferred for our climate.



Obeeyed Orders

"Drive like the dickens!" shouted Smith, springing into a taxi. With a lurch the car went



**EIGHT YEARS ago we began to Market the First
Portable Corrugated
GRANARIES**

Sold in Western Canada

They were produced to meet the peculiar needs of this country. Imitators have come and gone. From year to year they have changed their design, each claimed to be better than the last, but each in turn discarded. The original idea in ours has remained the same, with the ideas of the users in the fields incorporated as improvements. These original granaries are still in use and giving good service. This is a guarantee of safe investment that you cannot afford to ignore.

Write to-day for full particulars and the terms of the biggest and best proposition ever made on Granaries anywhere.

Winnipeg Ceiling & Roofing Co., Ltd.
P. O. Box 3006 C T., WINNIPEG, MAN.

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

forward, and away they went like lightning through the gathering fog. People shouted, policemen impotently held up their hands as the taxi dashed up one street and down another, taking corners on two wheels and threatening destruction on every hand. At

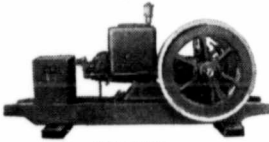
last, after half an hour's furious racing, they slowed up and Smith poked his head out of the car. "Are we nearly there?" he asked, breathlessly. The chauffeur turned in his seat and shouted: "Where did you want to go, sir? You have not told me yet."

Bigger and Better than Ever

Canadian Stover Gasoline Engine Company have always given the best quality.

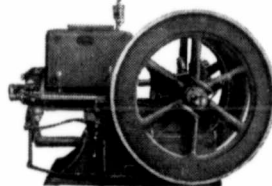
NOTE OUR LATEST OFFERS

1 1/2 H.P.



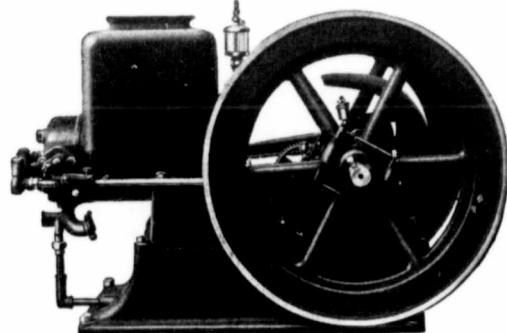
Price \$45.00
Complete with pulley. Guaranteed.

3 H.P.



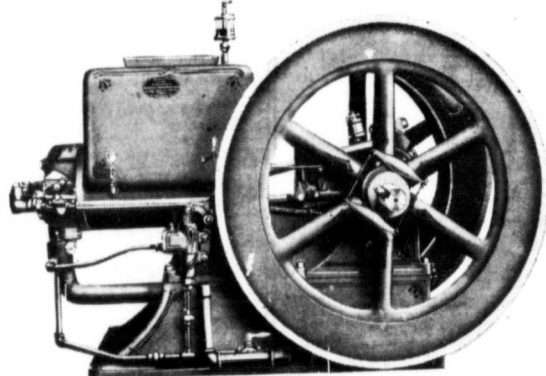
Price \$85.00
Complete with pulley. Self Contained. Guaranteed.

4 1/2 H.P.

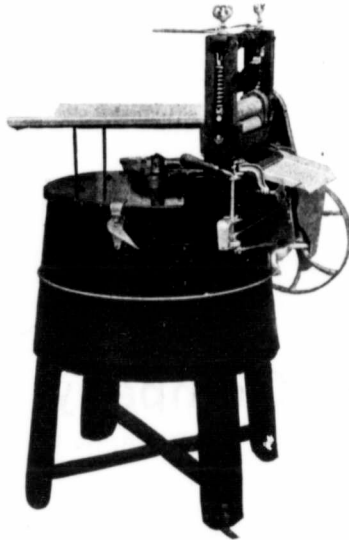


Price \$130.00. Complete with pulley. Self Contained. Guaranteed.

7 1/2 H.P.



Price \$195.00. Complete with pulley. Self Contained. Guaranteed.
Patent Safety Release our Exclusive Patent



Reversible Wringer. Enamelled drain-board. Drains from the bottom. Complete with wringer. \$32.00.
Washer and Wringer is controlled with small lever.

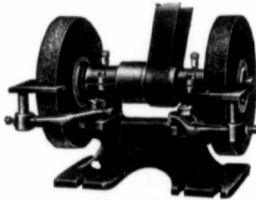
Write for
Catalog

☺

Compare
our Engines
with the
Best on the
Market

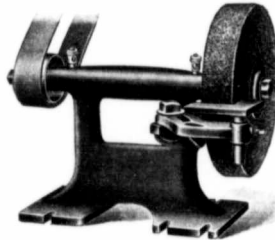
Every Engine Guaranteed Perfect in Workmanship and Material
And to Develop Much More than the Advertised H.P.

Tool Grinder No. 310



Price \$15.00
Complete with sickle-grinder attachment

Tool Grinder No. 308



Price \$5.50

Tool Grinder No. 205



Price \$7.00

Canadian Stover Gasoline Engine Co., Ltd.

Eighth and Pacific Avenue, BRANDON

The Original Farmers' Company

Life Insurance for Farmers

By GEO. M. REID.

In the two articles preceding it has been shown how strongly the sound principles of Life Insurance should appeal to Farmers as a class and brief descriptions have been given of the chief forms of Life Insurance available, with some reference to results that may be considered typical of those secured in the best Canadian Companies.

It may now be interesting to observe some of the privileges and provisions that make modern Policies so decidedly attractive to those who are able to appreciate a business-like contract—one in which the conditions of purchase are stated in unmistakable terms, as are the privileges and ultimate benefits to be derived by the insured and by those for whose advantage the Insurance is arranged.

Everyone knows how crude the old-time Policies for Life Insurance used to be. They filled a need, but only partially. It has remained for later discoverers to plan the extremely liberal provisions that are now at the disposal of those who have the wisdom to secure the many benefits of Life Insurance.

In those early days Policies were issued upon what is known as the "Natural" premium plan. That is to say, the premium was upon an increasing scale, growing larger year by year, until at the higher ages very large sums were payable by the survivors. This was, upon the face of it, a most undesirable method — for the insured at any rate. In old age, when a man must naturally desire to be relieved from heavy commitments, the premiums became more and more excessive, until the attainment of a considerable longevity was accompanied by charges most burdensome if not entirely prohibitive.

This method of premium payment has long given place to the far more equitable plan of fixed payments, where the premiums are "evened up" by charging somewhat more than the actual cost of Insurance in the earlier years that later years may necessitate no increase. This "level premium" plan is the only desirable one and is now general in the "old line" Companies. The Policyholder knows precisely how much he will be called upon to pay each year, and under the popular limited payment forms he knows precisely for how long he will be required to pay that annual amount.

Now let us examine some of the latter-day privileges that

Has it Ever Happened

that you were short of help at threshing time, or that your expenses were too heavy? You can guard against this.

The Answer is—

Hart-Brown Wing Carriers

ATTACHES
TO ANY
SEPARATOR
WITH ANY
FEEDER.
OLD OR NEW



Mr. Hart B. Carrier will prove the best hired man you ever had. The carrier attaches to the main sills and main frame of separator, putting no weight on feeder. It delivers the bundles to the band knives straighter, more evenly and uniform than is done by hand. It facilitates rapid and steady threshing. The troughs swing about as is most convenient, and the carriers will save the services of from two to four pitchers, and if used with the Hart Universal Thresher Racks will

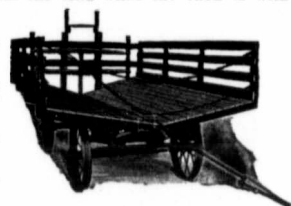
SAVE EIGHT TO TEN MEN AND TEAMS

The Hart Universal Thresher Rack fits on any wagon or truck gear, has no derricks or other complicated parts for unloading—only a simple pull-off gate that holds the load while the rack is withdrawn from beneath it.

No waits at the machine for an opportunity to unload. No time wasted in pitching off.

One rack and driver will do as much work as two ordinary racks, two drivers and one field pitcher.

Racks may be purchased complete, or you can **Build Racks Yourself**. We will furnish plans, specifications and license.



Sold by

Canadian Avery Company

WINNIPEG, Man. - and - REGINA, Sask

Manufactured by

HART GRAIN WEIGHER CO., PEORIA, ILL.

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

have, one by one, been included in the Policies of the Companies keeping abreast with Life Insurance developments.

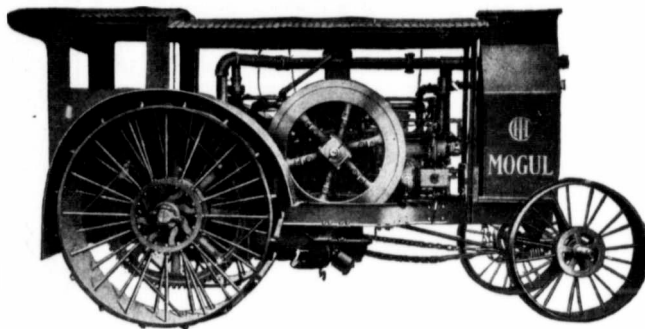
One of the most valuable advantages accorded to the insured has been the liberal **Loan Value** now applying to most forms of Life Insurance contract. The Policyholder may borrow a stated portion of his premiums, after three such premiums have been paid, the loan remaining a charge against the Policy in the event of death occurring before the loan is repaid. Thus the amounts deposited are largely at the Policyholder's disposal, and form a most valuable resource in time of need. Many a business has been saved by the timely availability of the loan value of a Life Insurance Policy. For it should be remembered that the amount is at the demand of the insured without possibility of re-

fusal, and without increased interest charge, even in times of the severest money stringency, when the banks shut down tight, and funds are hardly available at any rate of interest. Scores of instances might be given of the immense value of this resource in time of need — a resource, of course, that should only be turned to in case of emergency.

Another most advantageous privilege entirely absent from old-time Policies is the non-forfeiture provision applying to most modern contracts. Let us suppose that the Policyholder, after paying three premiums, falls upon evil days and is unable to continue his payments. The Policy is by no means lost. The non-forfeiture provision, very often automatic in its operation, even without application by the Policyholder, takes care of the premises for a further period of

years—the length of time depending upon the number of premiums that have been paid. Thus if three premiums have been paid, the Policy may be continued in force for three and a half years longer, if ten premiums have been paid, for a further ten years and so on. The contract may be brought to its former condition at any time by the payment of back premiums due. It is impossible to exaggerate the value of this attractive feature of Life Insurance. Imagine the joy and relief of some poor widow, finding an old policy upon which she knows her late husband has been unable to pay premiums for a number of years—her application to the company and the letter she receives telling her that the old Policy is worth many hundreds of dollars, to be paid by her upon completion of the claim papers. Such instances occur times with-

Leading A Double Life



THE International Harvester oil tractor leads a double life. In its two distinct sides—drawbar and belt-power work—it is equally efficient. In drawbar work, you can see its great efficiency, for instance, at the plows. Where one day's plowing used to be two to three acres, the I H C tractor plows ten to thirty acres. It will pull three or more drills or binders, haul huge loads to town, and do your road work. It will pull plows, disks, and harrows, all at the same time, saving many hours of time when time is most valuable.

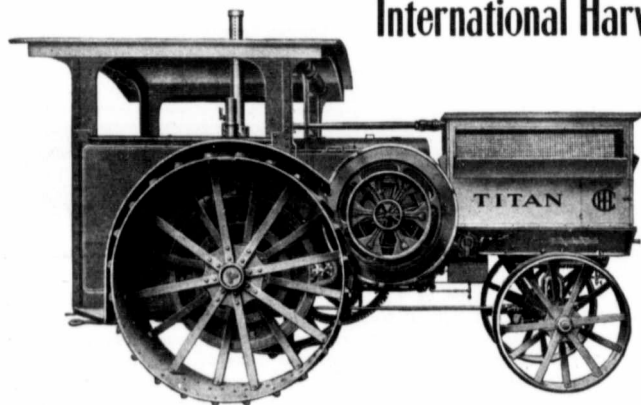
As a belt-power machine it can be kept busy in all seasons. Belted to the separator, it will thresh the grain. It will run any machine requiring steady power.

An IHC Oil Tractor—Mogul or Titan

is indispensable on the modern farm. Plowing and threshing take up but a small fraction of its time, if you use it wherever it can be used. Study the tried and tested I H C tractors, with their simple, powerful engines and transmissions; their ample, well-oiled bearings; their freedom from sparks, soot and smoke; their all-round usefulness and reliability.

I H C tractors are made in all approved styles, in 6-12 to 30-60 horse-power sizes. They operate on low and high grade fuel oils. I H C general purpose engines, for every power use, range in size from 1 to 50 horse-power. Write us for interesting catalogue and other information.

International Harvester Company of Canada, Ltd



Western Branch Houses:

At

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

out number. The whole scheme of the great Life Insurance Companies is to benefit their Policyholders in every possible way—and one of the most beneficent provisions ever devised is this safety clause which makes it almost impossible to lose a Policy, even in the face of carelessness and neglect on the part of the insured.

Then again, in a great many Policies, there is that most comforting assurance that should the Policyholder become unable to pay his premiums by reason of Total Disablement by accident or disease, his Policy will be taken care of, and all unpaid premiums cancelled. This provides for one of the contingencies of life every man must face, and not least the farmer, to whom risks of accident occur more numerous than to many other classes.

One of the most serious problems confronting the average man, and the farmer no less than others, is not merely to leave adequate provision for those whose welfare is his care, but also to leave that provision in such form as shall be to their best and permanent advantage. It is not enough to leave a considerable sum of money at death. Often the large sum paid to the widow is nothing but a source of distraction to her. She knows nothing of the safe investment of any considerable amount—she is an easy prey for dishonest persons on the watch to take advantage of inexperience. Or she may be tempted to undue extravagance and soon fritter away capital that should be used to purchase **Income**. And that is where one of the most valuable of all the privileges of up-to-date Life Insurance steps in. The Policyholder may so leave his affairs that the Life Company will act virtually as his unpaid Trustee, charged with the care of the money left for the support of his family. A monthly or yearly income will be paid to them, and the beneficiary receive the benefit, not only of this careful safeguarding of his or her resources, but will secure the advantage of the excellent investment organization of the great Life Insurance Company, with its Millions of Assets, and Officers trained in the safe and profitable use of money.

Finally, the man who has entrusted his protection to the care of a good Life Insurance Company may know that not an unnecessary moment will be lost in handing the proceeds of his Policy to those entitled to it. The Companies pride themselves upon the utmost despatch in settling claims, and place every facility at the disposal of those to whom

the money is frequently the only barrier from immediate want.

Remembering all these things, who can neglect the privilege of Life Insurance? For privilege it is indeed—a privilege at the disposal of every man who has good health and a little money to pay for it. For the benefit derived the charge is altogether insignificant. Thousands of cases occur where the amount insured is collected after the payment of only one premium—returning, it may be, four or five thousand per cent upon the investment. Is not that the nearest approach to obtaining "something for nothing" to be conceived? And where the Policyholder lives out his full allotted span, he himself will be the gainer under the broad provisions of modern Life Insurance.

Let every reader of this journal act the part of the prudent man, who thinks of the future in his financial affairs in just the same way as he looks ahead in planning for seed-time and harvest in the daily operations of the farmer's year.

What is Wanted in Hens

We want hens on the farm that are rustlers. Stock that is pure-bred, of course, is not always more active, but we find that when they are put upon the market they are all the way from one to three pounds heavier per bird. Weight counts when we come to sell the birds by the pound. They are also uniform, and that is more than we can say of the average farmer's flock.

We also find that the average yield is around seventy-two eggs per year on the farm, while by carefully selecting the flock and by careful feeding we can get as many as two hundred eggs per hen. Some farms exceed even this to a great degree. We do not expect to find very many two-hundred egg hens upon the farm, but we can expect to have one-hundred-and-fifty-egg hens instead of the seventy-five-egg hens.

If by careful selection, feeding and housing, we can produce just double the number of eggs we have been doing, we will accomplish a great deal. If the young chickens are heavier for their age than the scrubs, we have again increased our production. Our profit can be more than doubled by building up our breeding flock. A great deal of the young chickens living is picked up around on the farm during the summer months, and when sold in the fall just off the range they have not been a very great expense. If well-bred birds weigh two pounds more to the bird and sell for nine cents a pound, as they did last



Harvest Finished Without a Hitch

DELAYS are dangerous at harvest time—therefore it pays to have a reliable Binder. You might get through all right with "any old binder," but if you want to be sure, you should have the Binder which is known all over the world for reliability under the most trying conditions.

The Massey-Harris Binder

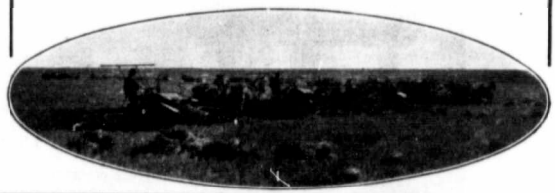
Is recognized as the standard of excellence wherever Binders are used, and while the first cost is a trifle more than some others, this is lost sight of when one considers the increased efficiency, the freedom from repair bills and the fact that the Massey-Harris will outlast any Binder on the market.

Then, when you remember that a poor Binder may give out at some critical time and your crop be seriously damaged as a result of the delay, we think you will agree that it pays to be on the safe side, and the Massey-Harris Binder will be your choice.

Superior Cutting Mechanism; Easily Handled Reel; Floating Elevator, front and rear; Reliable Knotter; Positive Drive; Easily Adjusted for varying conditions.

Massey-Harris Co., Limited.

Winnipeg, Regina, Saskatoon, Swift Current,
Calgary, Yorkton, Edmonton.
— Agencies Everywhere —



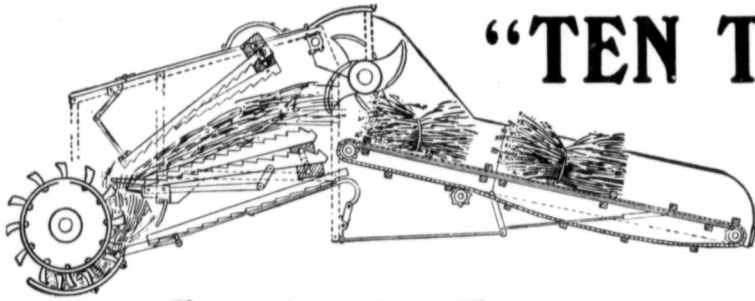
fall, the increase on one hundred birds would be eighteen dollars. Would it not pay to spend a few dollars and buy some real good roosters and mate with some of those best hens that you have? Then see how much better and larger the young stock will be this coming fall.

In selecting your rooster, look for those heavy, clean shanks, not

long and rangy, but close to the ground. The head of the bird is its "health certificate"! Purchase those birds with bright red color; the strong, well curved beak, bright, prominent eye and full face, not too long from the eye to the base of the beak; a full breast, and fleshed well down in the thigh, and carrying a broad back well out towards the tail.

[Continued]

To a the san lands very m Vancou classed veloped inflated of the Vancou able of ably ov importi produce and pay



“TEN TO ONE”

Your feeder is the weakest part of your threshing rig; it must be the strongest or it is a “Back Number” and you will soon be out of business.

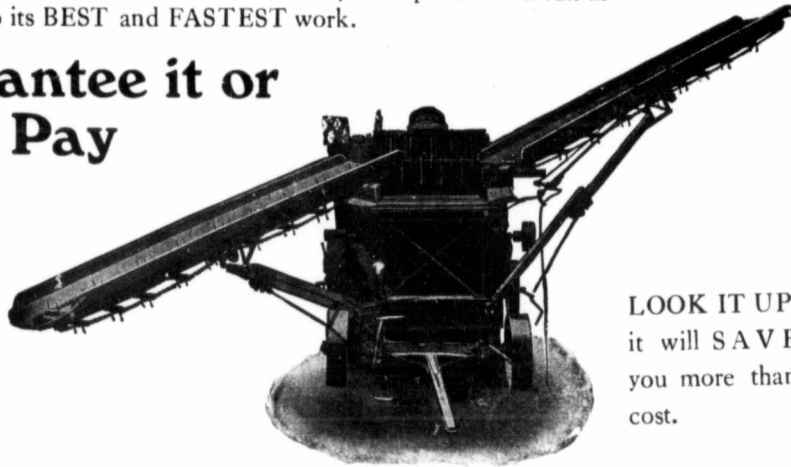
Study the Feeder Question

If your separator wastes grain, or does a poor job of cleaning, or the blower clogs, or the belts fly off, or the cylinder slugs, or if it takes you more than two minutes to clean up after a setting, if the teeth break, or the pitchers plug the cylinder any time they feel like it, then there is **SOMETHING WRONG** with your FEEDER.

THE ONLY WAY to remedy the difficulty is to get a GARDEN CITY FEEDER and then tell the pitchers to “GO TO IT” while YOU do the standing around. Just let them pile the grain in as fast as they please and “ANY OLD WAY”, the separator will run as steady as a clock and do its BEST and FASTEST work.

We Guarantee it or No Pay

If you use dump racks you should have a GARDEN CITY WING FEEDER. It will please you and save a lot of expense; some of the users claim to SAVE TWENTY DOLLARS PER DAY; how would YOU like that?



LOOK IT UP; it will SAVE you more than cost.

SEND TO ANY OF THE FOLLOWING PLACES FOR OUR FREE CATALOG:

THE GARDEN CITY FEEDER CO., Ltd. - Regina, Sask.

H. P. NORTON COMPANY - Calgary, Alberta

THE GARDEN CITY FEEDER CO., Ltd. - Hamilton, Ont.

MART McMAHON - - - Lethbridge, Alberta

Order a Caswell Belt Guide Now

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

Farm Problems

(Continuation of Article "Vancouver Island" from page 20 June Issue.)

To a very considerable extent, the same conditions apply to farm lands near Vancouver; indeed very many of the sub-divisions of Vancouver should properly be classed as farm lands, and developed as such, but the foolishly inflated values have put this out of the question, and the city of Vancouver with a townsite capable of accommodating considerably over half a million people is importing large quantities of produce from the United States, and paying duty on same. In

any case, development of wood lands into farms must always be slow, and the booming of the towns has had a very bad effect on the farm lands immediately surrounding them.

I wish once more to lay emphasis on the fact that what is said in this article applies only to the small areas seen by the writer. The government of British Columbia, especially through its Department of Agriculture, is doing a very great deal for agricultural education and to stimulate dairy and poultry farming, but with lands that have an al-

most unprecedented record of yield when once brought under cultivation, British Columbia is to-day importing literally millions of tons of farm products.

Readers of the column may say, why bother us with British Columbia, their problems are not ours, and this is absolutely true, but there is a lesson for the people of the prairies in the conditions in British Columbia just the same. For the prairie farm lands have been unduly inflated in value, and a very considerable part of the depression from which we have been suffering, and from

which we will continue to suffer, is due to the fact that the value of farm lands has been inflated to a point where it is no longer possible to profitably grow wheat upon them. It is a question whether wheat was actually grown at a profit in any part of Saskatchewan last year. The man who secured his land early, and farmed it well, in individual cases, no doubt made money, but putting growing in 1913 was extremely small, if indeed it existed.

We hear a great deal about mixed farming, and the necessity of going into it, and it is well that

this gospel should be preached, but it must also be borne in mind that there are large areas of the prairies which are very suitable for grain raising, but are not suitable to stock raising, owing to an inadequate supply of water, and in these sections, grain, particularly wheat raising, should remain a staple industry, but it can only do so, so long as the price of the land is not unduly inflated, thereby putting the cost of production to a point where it is impossible to make a profit with any prices for wheat which are likely to obtain in the years to come.

Western Canadians have, to use a slang expression, been "fed up" on the idea that they had the best country in the world to grow grain in, and could produce the best wheat in the world, and this foolish propaganda has done more to spoil wheat growing in the West than any other one thing. The prairies of Canada can and do produce some of the finest wheat in the world, but Russia can produce just as good wheat, and has been doing so. The only difference is that Russia has not enjoyed the system of grading and handling which has been so large an asset to the Western Canadian farmer, and about which he does more kicking than about any other one thing.

Russia has enormous areas of virgin land, her climate very nearly approximates our own, she having the advantage of a slightly greater rainfall. Labor is cheap with her, and she can therefore produce much more cheaply than we can. For a number of years, the Russian Government has had men in Canada and the United States studying our elevator systems, our grading and in general the methods by which the Canadian crop is handled.

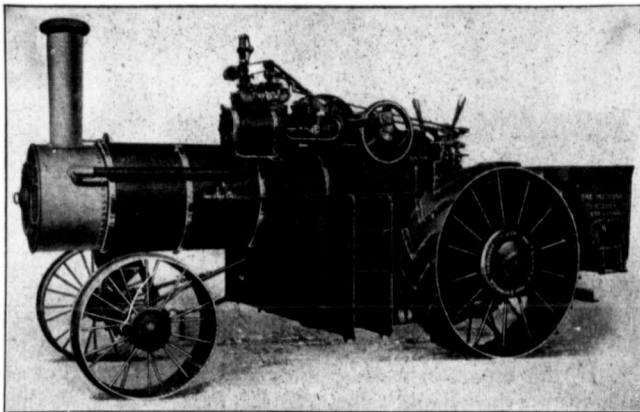
Already the contracts have been let for the erection of huge terminals on both the Baltic and the Black Sea. These elevators will be equipped with the last word in elevator and cleaning machinery, and once Russia has this system in working order, she will be a most formidable rival for first place with the British miller, who is one of Canada's best customers. Russia has one enormous advantage over us in the matter of many thousands of miles of river transportation.

It may be said that the opening of the door for our wheat into the United States would make us less dependent on the British market, and that is to some extent absolutely true, but so long as the United States continues to bend her energies towards increasing her wheat production per acre, and is as successful in doing so, as she has been in the past ten years, we will need both markets, and if

Made in Canada

We have reached the climax in Threshing Machinery.

Engines in sizes 16, 20 and 25 h.p. Easy Steamers and convenient to handle. Most reliable Valve Gear made. No other like it for economy and simplicity.



"Decker" Separators

In the following sizes: 24-46, 28-50, 32-54, and 36-60. We guarantee the "Decker" Separator to be the easiest driven machine on the market, and consequently well adapted for light engines. Write for Catalogue

The Macdonald Thresher Co., Limited

Head Office and Factory: Stratford, Ontario, Canada

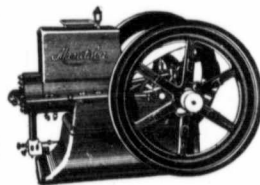
Western Branch: Winnipeg, Man.

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This is the sort of Letter that proves our claim for

The *Manitoba*

as an Engine of strictly high grade construction, and representing all that is best in simplicity and effective service:



"Manitoba Engines Limited, Saskatoon, Sask.

"Dear Sirs:—We unhesitatingly recommend the Manitoba Engines to give perfect and entire satisfaction and to be just as represented. We have a 10-h.p. to drive an Eclipse Sawyer-Massey Separator, and although the threshing was often very tough last fall, we had always power to spare, used about 8 gals. of gasoline per 10-hour day, and had no trouble with lubrication. Our Engine was equipped with a Bosch magneto, and on cold mornings all that was necessary to start up without any trouble was to see that all connections were clear and use a couple of quarts of hot water on the carburetor.
"The simplicity of the Engine is one of its chief attractions. Gasoline engines so frequently prove disappointing that it is a real pleasure to have one like the Manitoba, and we will gladly answer personally any inquiries about this type of an engine. Wishing you every success, we are, sincerely yours, BAILLIE BROS & PFUND (per A. A. BAILLIE)."

Get our Catalogue to learn how many things the Manitoba will do and why it will do them better.



Manitoba Windmills—

In all Sizes, for Power or Pumping

Made with all-steel towers, and in sizes from 8 to 14 feet. Manitoba Windmills have demonstrated by their merit that they are, beyond all, the windmills for the West. They embody many special features not found in any other mill. Our illustrated Windmill Catalogue is free for the asking.

"Made in the West for Western Needs."

We Manufacture Gasoline Engines, 1 1/2 to 25 H.P. Wood and Iron Pumps. Grain Grinders, 6 to 12 inch. Wood Saws, all sizes. Pumping and Power Windmills, 8 to 14 feet

MANITOBA ENGINES, LIMITED

Calgary, Alta. BRANDON, Man. Saskatoon, Sask.

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

we are to compete successfully with Russia, we must reduce our cost of production, because with the enormous railway haul, the possibilities of greatly reducing the cost of transportation are very small.

It may seem a very far cry from the small fruit farm of the Saauich Peninsula to the great steppes of Russia and the requirements of the British miller, but I

think a careful reading will show that the sermon has not entirely run away from the text.

General Rules for Handling Wool Crop

(From Bulletin No. 40 Saskatchewan Dept. of Agriculture)

Care of Sheep's Back:

1. Breed for improvement and uniformity of fleece (not omitting block qualities.)
2. Never use hairy or coarse

fleeced rams or ewes for breeding purposes.

3. Dip every animal thoroughly twice a year.

4. Never brand with ordinary paint, use a regular marking paint that will scour out.

5. Keep flock in thriving condition at all seasons.

6. Keep fleeces as free from straw, chaff, dirt, burrs, etc., as possible, winter and summer.

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7. Keep sheep in dry quarters at all times.

Shearing Rules:

1. Never shear wet or damp sheep.
2. Use only a clean, dry, well lighted place for shearing.
3. Shear on platform or canvas.
4. Employ only experienced shearers.
5. Shear with a minimum amount of handling and at the same time be quiet, quick and avoid injury to animals.
6. Shear as smoothly as possible and, above all, avoid second cuts.
7. Keep fleece as clean and intact as possible.

Rolling and Tying:

1. Roll on lath table if possible, if not on clean space.
2. Before rolling clip off all "tags" (dirty, clotted wool).
3. To roll, turn sides in and roll from neck to rear leaving freshly cut side out.

In Tying:

4. Use only special twine, three ply paper twine if possible, if not a smooth hard twine which will not shed fibres.
5. Roll twine tightly around fleece at least once each day and knot securely with a square knot.
6. Never tie two fleeces together.

Grading and Packing:

1. Pack fleeces from ewes, wethers, bucks and blacks separately.
2. Pack fleeces from different breeds or grades of different breeds separately.
3. Always pack "tags" separately.
4. If different grades in one sack, separate with strong sheets of paper.
5. Use regular wool sacks of smooth, closely woven canvas, opening at side.
6. Sew up sacks with smooth, hard packing twine, using skewers and packing needle.
7. Address and number each sack clearly and mark total weight, number and kind of fleeces.

8. Mark sacks on side well away from seams. **Never at the ends.**

Storing:

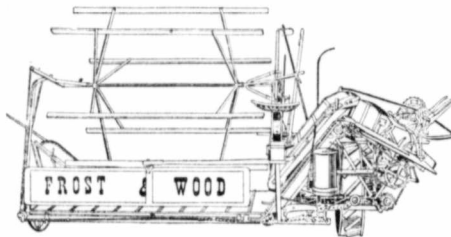
1. Never store wool except in sacks, even if only for a short time.
2. Store in a dry, clean, well ventilated place. Wool must be kept dry.
3. Never let sacks rest on ground.

TO RUN TRACTOR (Rumely or Marshall preferred) and Binder—experienced man wants job during harvest and threshing. Can handle horses. State wages. A. G. Brooke, Box 135, Winnipeg.

"FROST & WOOD" BINDERS

Make Harvests Pay

Crops harvested with "FROST & WOOD" Binders cost least to reap and bind. No straw or grain wasted—all crop brought to the table. Reel arms pick up the down and tangled stuff in fine shape.



Wide Adjustment For Close Cutting

Wide range of cutter-bar adjustment enables the "FROST & WOOD" to reap very close. Force-feed Elevator with Relief Roller delivers grain to binder deck without any crowding or "threshing" Our accurate knottter and Eccentric sprocket-wheel drive insure compact, securely tied sheaves.

Roller Bearings Make Light-Draft

Roller bearings at every frictional point—axles, cross and crank shafts, elevator rollers, etc.—make the "FROST & WOOD" an extraordinarily light-draft machine. With it you can cover more acreage in a single day than with any other binder we know of.

Our nearest agent will be glad to show you the "FROST & WOOD'S" superiority. Or learn more about it from our splendid booklet "Reliable Harvest Helpers". A copy sent free on request.

Cockshutt Plow Co. Limited

BRANTFORD WINNIPEG REGINA CALGARY SASKATOON

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

To See and to be Seen

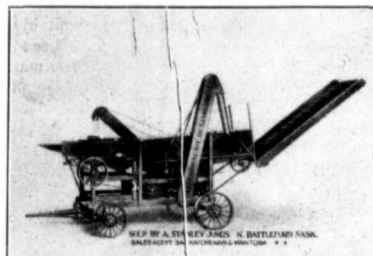
In an address at Tacoma, Mrs. Arthur Wentworth Balfour, the Western Audubonist, praised the action of Congress in forbidding the importation of all feathers save those of the ostrich and the domestic fowl.

"Feathers, anyhow," she said, "aside from the cruelty of them, make so for vanity, don't they?"

"I know a man who sat at the opera, one night, behind a lady with an eighteen inch white aigrette in her hair. The man craned to the right, he craned to the left; but that tall, white, thick, superb aigrette was always in his way.

"At last, desperate, he bent forward and whispered,

"\$612.00 Complete Threshing Outfit."

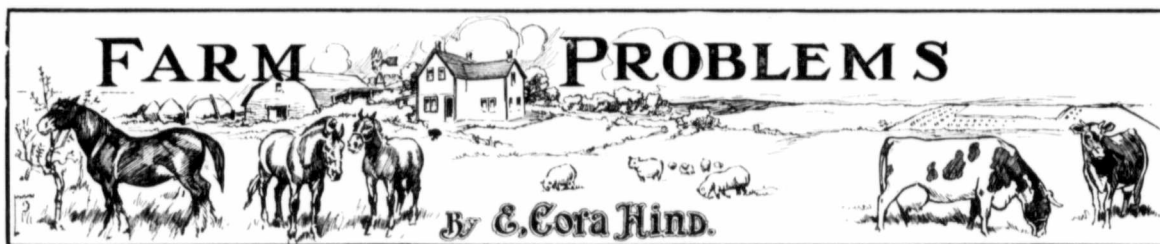


8 H.P. Engine, Carrier, High Loader, Chaff Return. All belts, can be mounted on one platform on any wagon. Capacity four hundred to one thousand bushels according to grain. Large stocks at North Battleford. Smaller sizes from \$383. engine and separator. Carriage paid in Saskatchewan. Cut shows separator at \$284 and \$317, freight paid-Manitoba and Saskatchewan, mounted on special \$65 truck. Extendable to 16 feet to carry whole outfit. WRITE FOR FREE CATALOGUE and time terms also.

A. STANLEY JONES, North Battleford

General Agent for Saskatchewan and Manitoba, La Compagnie Desjardins. Established 1864.

"Madam, I paid six dollars for this seat. It was in order to see." "And I, sir," the lady answered haughtily, "paid sixty dollars for this aigrette. It was in order to be seen."



Dominion Experimental Farms

The Department of Experimental Farms for the Dominion of Canada is making a new departure with a view of calling attention to the work of the department, and a special car to help in the campaign for the sheep and cattle industry will tour the West. The car will contain an exhibit which will show the production and preparation of wool for the market, and the handling of wool from the sheep's back to the finished article. It will include samples of the wools of Canada and also of other countries and will show both the faults and defects, in order that the sheep farmers may know what to avoid. The exhibit has been prepared by T. R. Arkell, of the Sheep Branch. The exhibit will be unloaded and placed at the following exhibitions: Calgary, Lethbridge, Winnipeg, Brandon, Saskatoon, Edmonton and Medicine Hat, and later will go through to British Columbia. In connection with this exhibit there will also be one of eggs, which will be arranged so as to illustrate the best method of handling and shipping eggs. In addition to this exhibit there will be a special Dominion Experimental Farm exhibit at each one of the fairs named, which will occupy a space at least 75 feet long. This will show grain, forage plants, fruits, vegetables, poultry, honey and many other things. This will be in print too late to catch all of the exhibitions, but will be in time for everything from Winnipeg onward, and every farmer should make a point of visiting these exhibits, as they will be of a most instructive and helpful character.

Hog Raising

Probably few of the men who are raising hogs have any real conception of the extent to which the industry has grown in the past three years. Since the first of January approximately half a million hogs have been marketed in the Canadian West, and a very conservative estimate of the value would be \$12 per hog to the farmer on the farm. This means that six million dollars, or a million dollars a month, have gone into the pockets of the Western Canadian farmers for this one item of farm produce,

and while the heavy marketings have somewhat reduced the price, the prices have never dropped below a point where there was a fair margin of profit to the producer. Any man with a reasonable care of his methods of feeding can afford to sell a seven or eight months' old hog for \$12. The opening of the market to the south has been a most material help in keeping the prices steady, and this market will no doubt be a good one for some time to come. The south St. Paul stockyards report that in spite of the heavy influx of hogs on June 25, the

upon the West that in view of their long distances from seaboard, they must, in order to farm profitably, ship the major portion of their products in the most concentrated form. There is more profit to the Western farmer in shipping choice bacon to the English market than there is in shipping his wheat and barley in bulk, but in order that the farmer should get the most out of it, this work should be done co-operatively as it is done in Denmark. The Saskatchewan farmers and the Alberta farmers are making a move in this direc-

financing co-operative packing houses. The Saskatchewan and Alberta co-operative elevators are making a success of it and there is no reason why co-operative packing houses should not be a success also. I think it is hardly likely that the farmers of the Canadian West are going to admit that they have less brains and business ability than the farmers of Denmark. The only stumbling block in the path of progress for co-operation, as I see it, is that the farmers are inclined to depend too much on the government and too little on themselves in this matter. A very striking illustration in point is that of the elevators in Manitoba. If the Grain Growers' Association of Manitoba had asked for co-operative elevators instead of government owned, the province would not be in the deplorable position it is in to-day. Last year these elevators, which were a failure under government management, were leased to the Grain Growers' Grain Co., and they declared that they lost money in operating them. At the present time nobody knows whether these elevators will be available this coming season in Manitoba or not, and if they are not, it will be to the serious loss and detriment of the farmers.

Car Distribution

During the month C. J. Mickle, judge of the county court at Minnedosa, delivered a judgment which was of very great importance to the farmers. Ever since the privilege of loading grain into cars from the loading platforms was granted to the farmers under the Canada Grain Act, there have been complaints of elevator operators loading cars which were not allotted to them by the station agent. A case of this kind came up at Vista last October. A farmer placed his name on the car book for a car to load oats which he had in store in the Northern elevator at that point, but before his car came, he decided to sell his oats to the elevator operator. On the arrival of the car that was allotted to him the elevator operator loaded it, and billed it out in the farmer's name without consulting him. The local Grain Growers' Association took the matter up, and filed a complaint before a



Not a "Horse Fair," but just a few teams and their owners—Manitoba farmers—giving a neighbor who was burnt out, a lift with his seeding.

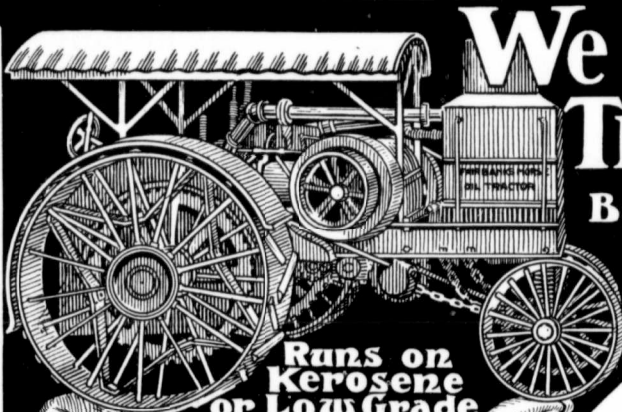
market has been booming for a fortnight, and Canadian droves led the advance which carried the trading basis up to \$800 a hundredweight for the first time in nearly a month. Reports from Chicago and Seattle markets indicate that prices will continue to be good, but the rapid increase of hogs should turn the attention of the farmers more than ever to the matter of co-operative packing houses. If live hogs from Alberta can profitably be shipped, as they have been this year, to the Toronto market, there would be still more profit in shipping Alberta cured bacon to the British market. Abattoir men and retail dealers agree in declaring that the hogs now being raised in the Canadian West are furnishing a quality of meat infinitely superior to anything that has been offered in the past, and if these hogs were properly cured, the bacon would find a ready market in England.

Many years ago, Dr. James W. Robertson, then Agricultural Commissioner for Canada, urged

that it should be a move which includes all of the three provinces, and it cannot be done too soon. Some at least of these co-operative packing houses should be in operation by next year. If something of this kind is not done, there will be the old cry of over-production and unprofitable prices.

I would like to draw attention to the fact that this year 60 per cent of the binder twine used in harvesting the Saskatchewan crop, will be bought co-operatively, and that the same local organizations who are buying their twine through J. B. Musselman, the secretary of the Saskatchewan Grain Growers' Association will buy their coal for next winter in the same way.

Since the annual meeting of the Grain Growers of Saskatchewan last February, 78 local co-operative societies have been formed. These are really co-operative societies for purchasing, but if so active a spirit of co-operation exists, there should be little or no difficulty in establishing and



**Runs on
Kerosene
or Low Grade
Distillate or
Gasoline**

We offer a Tractor

**Built to
Last**

**And a
Separator
Fit to Bear It
Company**

Long before we tackled the Tractor problem we had been building Engines recognized as Standard the world over. In the years following the invention of the Tractor we have merely had to DEVELOP from the point where others had to START.

We offer you, then, a Tractor as perfect as modern knowledge can produce—a simple, easily-controlled, powerfully-constructed machine, that runs smoothly, and develops more than full rated power on Kerosene, Gasoline, Naptha, or Oils as low as 39 degrees Baume.

Let our nearest offices send you full particulars regarding the three sizes of Fairbanks-Morse Oil Tractor. Merely fill in and mail the coupon below. With this we will give you also information about the Farquhar Separator.

In order to assure the satisfaction of Fairbanks-Morse customers we have gradually added to our Engine Products most of the agricultural lines that will best work in conjunction with them. We handle only those articles which we are fully able to cover with the same unqualified guarantee that is already associated with our name. Hence, when we suggest

The Farquhar Separator

WITH THE

FAIRBANKS-MORSE OIL TRACTOR

**35
years**

**Engine
building
experience
behind
this Tractor.**

as an Ideal Team for Threshing, you may rest assured that there are points of superiority about the Farquhar worthy of your consideration.

WE MANUFACTURE

Fairbanks-Morse Oil Tractors, 15-30, 20-40 and 30-60 H.P. Oil Engines, Portable and Stationary, 1 to 500 H.P. for all purposes. Marine Engines, 2 and 4 Cycle, 3½ to 100 H.P. Binder Engines, adapted to all makes of Binders. Hand and Power Pumps for every Purpose. Truck and Pitless Scales, especially designed for farm use. Electric Lighting Plants, suitable for country residences.

THE CANADIAN FAIRBANKS-MORSE CO. LIMITED

WINNIPEG	REGINA	SASKATOON	CALGARY
Montreal	St. John	Ottawa	Toronto
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**Made in
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sizes**

Send this **COUPON** to our nearest office.

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Mail free Catalogue of your

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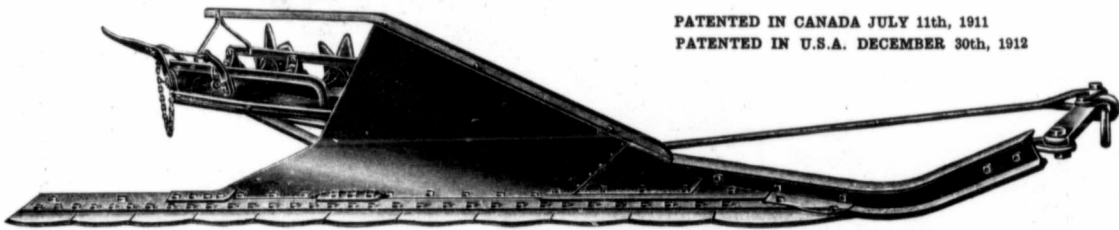
ADDRESS

CUTTING SCRUB

**As Rapidly
As Cheaply
As Mowing Hay**

THIS EXTRAORDINARY RESULT CAN POSITIVELY BE ACHIEVED BY THE
EAGLE STEEL SCRUB CUTTER

PATENTED IN CANADA JULY 11th, 1911
PATENTED IN U.S.A. DECEMBER 30th, 1912



MADE IN THREE SIZES FOR HORSE TEAM, LIGHT OR HEAVY TRACTOR

No. 1 size (for 4 or 6 horses) cuts a swath of anything in scrub timber from a sapling of 1 inch to 5 or 6 inches diameter. No. 2 size (for light tractor) with a swath of 5½ feet will cut easily up to 7 inches in green poplar. No. 3 size (for heavy tractor) has a sweep of 7½ feet; will mow down anything in growing scrub up to 12 inches. In every case the cut is made close to the ground which is left as clean and even as a table top.

This machine is built entirely of Steel and will assuredly save 75 per cent of the Cost of Cutting Scrub besides doing it in a fraction of the time an army of men would require to do the job. The Eagle Steel Scrub Cutter has been operating all over the West during the past 3 years and we refer you to any of the farmers, Municipal Councils or others who have used it.

SPECIMEN TESTIMONIAL

I am delighted with the splendid work of the Eagle Steel Scrub Cutter which I recently had from you. It certainly does all you claim for it and I am sure every one of the large number who have seen it at work on my farm will endorse my opinion that it is the greatest success, labor and money saver I have yet seen at work in clearing land for cultivation.

St. Norbert, June 20th, 1914.

J. BOHEMIER.

WRITE FOR COMPLETE DETAILS TO

The International Harvester Co., Winnipeg
or the **EAGLE MANUFACTURING Co. Ltd., DAUPHIN, Man.**

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

magistrate. This magistrate, before he would give a decision, submitted the evidence to the office of the Attorney General in Winnipeg. The Deputy-Attorney General advised that, according to his interpretation of the Act, the elevator operator did not commit an offence. The magistrate acted on this advice and dismissed the case. The matter was then sent to the Central Grain Growers' Association, who decided to get a decision from a higher court, and appealed before a county court judge, they undertaking to stand all expenses of the appeal. The bill came up for hearing before Judge Mickle, and he gave judgment against the elevator operator. It would take too long to quote the judgment here, but it is a very valuable one, and farmers who have suffered in the past through this breach of the Canada Grain Act would do well to write to

Roderick McKenzie, Secretary of the Manitoba Grain Growers' Association, and secure a copy of the judgment. It is so clearly expressed, and with such an absence of technicalities that any farmer can easily understand it, and it would be an excellent weapon with which to prevent elevator operators committing the same offence again.

Ambitious Undertaking

Great interest is being manifested in the destruction of noxious weeds on our fertile lands in the West, and the Dominion Government have placed a considerable sum in the estimates for practical demonstrations.

Dodds & Detwiler are making daily demonstrations on a big summer-fallow at Headingly, on the farm of Hon. John Taylor, ex-

minister of agriculture, where the Canada thistle, sow thistle and dandelion are being cut off below the crown, with the Cyclone Weeder, and the roots are pulled out with the Gooseneck Cultivator.

Messrs. Dodds & Detwiler invite the high priests of agriculture from the government experimental farms and agricultural colleges, editors of the agricultural journals, and farmers to inspect the fallow and attend these demonstrations during the season. The first of these demonstrations took place at Headingly on Saturday 27th June, in the presence of several expert farmers and agricultural journalists with astonishing results. Briefly, every blade of weed growth (the lungs of the plant) appearing above ground or within 2 inches was cut off clean as by a razor. These lay in wilted and withered rows under the hot sun

and later the "gooseneck" pulled up to the surface practically every parent stem and runner of sow thistle, dandelion, etc., that was within six or eight inches of the surface. These are certainly wonderful machines and only want knowing.



Five or six men were recently chatting in a village inn, when one of them said:

"I say, I buy ye dinners all round ye can't tell me the answer to a puzzle I knows of."

"Done," said they. "I bet we can. What is it?"

"Well," said Pat, "why is a journalist the funniest creature in the world?"

After vainly trying for about two hours, they sadly said they must give it up.

"Why," said the delighted Pat, "because his tale comes out of his head, don't it?"



Increase Your Profits for 1914

The expense of operation and up-keep of an engine cuts a large hole in the profits of each season's run. The direct cause of part of this expense is the Common D Slide Valve. Replace it with a Gould Balance Valve and you will increase the capacity of your engine, save fuel, water and lubricating oil. Eliminate the expensive wear in the valve gear. For further information, write for our tenth Annual Catalog and copy of the "Evidence."

HOW TO SET A SLIDE VALVE

is explained fully and is easy to understand. Both these books sent postpaid. Address:

Gould Balance Valve Company, Manufacturers of Gould Balance Valves, "Iowa" Engine Cutters and Gardner Grain Conveyors, Kellogg, Iowa

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

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Ideal Grain Storage

"What we have we'll hold" is an old-world watchword that has had much to do with some of the greatest successes we read of in history, as well as the common everyday "luck" of, perhaps, our next door neighbor.

Yet a vast number of men and women seem to have been born without the ability to "hold" their possessions. Their income, whatever form it takes, seems to dribble through their fingers like fine sand, or to shrink away like a quickly drying stream from its banks till they are left high and dry—stranded and "broke" for all effective purpose in life.

What an asset it is to a farmer when he puts himself in a position to be able to hold his grain instead of being compelled to sacrifice it for the lack of proper storage. He must foist it on an over-loaded market or take his chances in cost and leakage in handing it to the care of the local elevator.

No business man who is farming in these days and who is raising a few thousand bushels of grain that is entitled to a decent grade will raise a crop before he has arranged for the safe-keeping of it, just as he provides for his live stock. The matter of housing the wheat has now been simplified to a point which leaves no excuse for the inconvenience or expense of erecting a costly wooden or other building around the farm home for this purpose. The modern portable steel granary has solved the problem beyond a peradventure, and we specially invite the notice of our readers to the fine portable iron granary made by the Winnipeg Ceiling and Roofing Co. particulars of which will be found on another page.

This easily handled grain holder is made of corrugated iron, in two sizes (850 and 1,000 bushels capacity) and in six styles. It is absolutely fire proof, vermin proof and watertight. The body is made of heavy, 24 U.S. gauge galvanized iron, corrugated and curved to make it rigid, without woodwork of any kind, making it not only fire and lightning proof, but portable in fact as well as in theory.

The frame work of the roof is made of seven steel angles, which bolt to ring at top and to the sides of the tank at bottom. The roof is of 26 U.S. gauge galvanized iron with each alternate seam a raised seam, reinforced with a steel rib.

We cannot do justice to this handy and inexpensive building in a brief notice, but are glad to endorse the very best that is being said about it by quite a number of friends we know who are using it. As an evidence of its value and real utility we are aware of one extensive grain farmer who placed an order for one hundred for his last year's crop, and of another who has something over ninety scattered

Make the Thresher Pay

Thresher service is largely a matter of **belt** service. When a belt breaks the whole thresher is out of commission.

And the thresher's money-making season is short. A break-down works real hardship. It upsets the schedule. Eats up dollars.

And yet some men still buy belting on a "price" basis when **service** is so vital.

Service Always

In the making of Goodyear Threshing Belts, **service** is the one consideration.

A thresher belt is exposed to unusual grueling conditions. It must stand all weathers. Its very surroundings mean rough handling. And when "the next crop ahead" is waiting, the thresher is pushed to the limit.

There are two Goodyear Belts that set a new

standard in thresher efficiency. They stand roughest weather and most severe service.

"Black Diamond"

Made from heavy cotton duck and belt rubber friction. A splendid thresher belt. The different layers vulcanized into one impervious, powerful unit. Used for sawmills as well as threshers.

"Reliable"

A fine belt for ordinary work. Not as high grade a belt as "Black Diamond" but far superior to other belts made to "meet a price."

Every Belt Tested

Every Goodyear Belt is tested before it is placed on sale. This means quality and service you can depend on.

Don't consider "price" when buying belting. You wouldn't use a belt that came to you free. Then why **pay** for unknown quality?

Service belting is always the most economical.



Agricultural Hose

Goodyear "Gold Seal" has a yellow woven jacket that stands hard usage.

"Power" Suction is similar to "Gold Seal" but does not have the yellow woven jacket.

Both are of high quality fabric and rubber—wire lined—the hose for just such rough service.

Use Goodyear Belting and Hose for the Thresher Plant. They mean utmost efficiency all the time—no breakdowns—no money loss.

Ask Goodyear experts to tell you more of Goodyear Service. Costs nothing to ask questions. No obligation involved.

The Goodyear Tire & Rubber Company Of Canada, Limited

Head Office, TORONTO ONT.

Factory, BOWMANVILLE, ONT.

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

over his grain fields at convenient points, which he purchased at intervals spread over a period of six years, indicating that experience in the use of the granaries begot confidence in their capacity for saving and making him money.



There's a certain inconsistency about endowing a woman with all your worldly goods and then making her ask you for carfare.

When a man tries to drown troubles on his way home, he always finds them sitting and grinning on his doorstep like

OXY-ACETYLENE WELDING

Mr. THRESHERMAN:

If anything breaks or is worn out on your threshing machine or traction engine have it welded. Your time is valuable and we are at your service. Tell us your troubles. Send the broken parts to us or ask us to come to your place. No waste of time and no trouble to us. We are the pioneers of the process. We are experts and guarantee our work. Lowest prices.

L'AIR LIQUIDE SOCIETY, 325 William Ave., Winnipeg, Man.
Largest manufacturers of Oxygen and Welding Plants
Ask for information and newest catalogue.

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

drenched cats.

If the rich man could get through the eye of the needle as

easily as he squeezes through the loopholes of the law, his future would be safe.

Farm Help!

ORDER EARLY

No Provincial Government in Canada is more Constantly Alert than the Government of Manitoba to Assist the Farmers in Practical Ways



The present prospects in Manitoba are for an exceptionally bountiful harvest. An unusually large amount of plowing was done last fall and the area devoted to wheat, oats and barley has increased. All this points to a busy harvest season. **WHAT ABOUT YOUR FARM HELP?**

The dairy industry is showing rapid development in Manitoba. There is a large increase of cattle and livestock generally. Sheep, for instance, have increased this year by nearly 23,000 over last year. Fodder crops have kept pace. In short, Mixed Farming in Manitoba is coming into its own. Perhaps you who read have taken it up or are on the

point of doing so. **WHAT ABOUT YOUR FARM HELP?**

It is estimated that Manitoba needs a total of 35,000 men on the farms in addition to the 25,000 already employed and that another 5,000 domestics could be used on the farms to advantage. **WHAT ABOUT YOUR FARM HELP?**

Manitoba farmers who desire to avail themselves of the government's assistance in securing farm help from the Old Country will require to apply at once. The plan of securing this Hand-Picked-According-To-Individual-Needs sort of help, the very best you can get,

has been successfully conducted by the Manitoba Department of Agriculture for over a year. The best services of the Department are yours to command.

All you need to do is to drop a postal, requesting an Application Form. This will be sent you by return mail. It contains full particulars as to the operation of the plan and a series of questions, the answers to which will guide the Government's representatives in the Old Country in selecting for you the cream of the agricultural labor market. The kind of men you want will be yours when you want them, if you act promptly. Write for an application form. **WRITE RIGHT NOW!**



A Postcard will do

Hon. George Lawrence
MINISTER OF AGRICULTURE AND IMMIGRATION
WINNIPEG - MANITOBA

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

THE modern motor-car is a particularly well-designed and constructed machine, but, like any complicated and high-speed mechanism, it demands a certain amount of systematic attention and care to keep it in good running condition. To neglect the car in any way is certain to impair its condition, shorten its period of usefulness, and cause a marked depreciation in its value. Although the automobile should be given a thorough examination at frequent intervals to determine the actual condition of the several parts, this periodical attention must necessarily be more or less superficial when the car is in constant use, and once a year, before the touring season opens, the entire mechanism should be given a complete overhauling. That this annual cleaning may be a thorough one, practically the entire car must be taken apart, cleaned, lubricated, and readjusted. To do this in a workmanlike manner requires some little time, and the "man on the job" must expect to perform a certain amount of manual labor, unless the services of a handy man are secured.

It is partly on this account that the work of overhauling is generally turned over to the garage, yet if the autoist elects to do the

How to Overhaul Your Automobile

work himself there is no reason why he cannot and do it well, incidentally saving enough money to buy a set of new shoes. Indeed, there is no better opportunity for the driver to familiarize himself with the many parts which enter into the construction of his machine, and to a person having a liking for machinery the hours devoted to overhauling will be assuredly time well spent. Providing the car has been given ordinary good care while in use, it should be in pretty fair shape, and as there will probably be no particular need for expert labor, the average man will encounter no difficulty in knocking down and assembling his machine with his own kit of tools.

To avoid confusion and mixing up of the component parts (there are about fourteen hundred parts in the modern car) the amateur mechanic should undertake the job in a methodical manner. Do not fall into the common error and unscrew every convenient

bolt and screw in sight, but take one unit apart at a time. Before beginning work call up your merchant and have him bring up a number of wooden boxes of various sizes. These will be found most convenient for holding the numerous small parts as they are taken apart, and there should be enough boxes of ample size to hold all the parts of each unit separately. If this is done it will prevent confusion when the car is re-assembled and effectively obviate the mixing up of bolts and screws of one unit with another. For the same good reason it is desirable to finish cleaning one part before taking down the next unit, and the cleaning should be thoroughly done, not rushing the job "a la contract," but taking plenty of time to do everything well.

Though the principle of construction is the same in all cars, there are, however, many modifications and variations met with in cars of different makes, and

the exact procedure of "knocking down" and assembling varies somewhat in different models. It is the mission of this article to cover the most important points in a general way, and if any special information is wanted the autoist should consult the instruction-book supplied by the maker of his particular car.

For the sake of convenience, it will be well to first remove the body from the chassis and support the frame on strong horses, or by blocking up if no horses are at hand. When the latter method is resorted to care should be taken that the blocking is built up firmly, lest it suddenly collapse and let the frame fall to the floor. This may be avoided by arranging the blocking in the form of a crib or hollow square, by placing two blocks on the floor and laying two more upon them at right angles, finishing up with a couple of smaller blocks at the top.

Getting at the Power Plant
After the body, wheels and fenders have been removed, and the frame is propped up solidly at both ends, the power plant is naturally the first consideration. Although one may begin with any part of the car, the engine, by reason of its greater importance, is generally the first unit

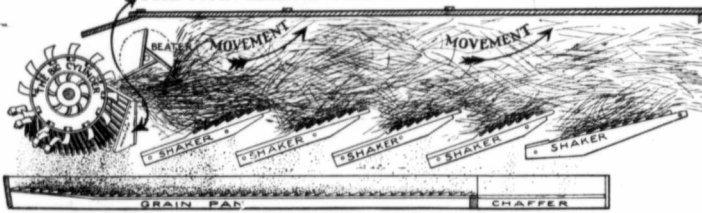
Continued on page 48

DON'T LOSE OUT

NOTE CAREFULLY THE FOLLOWING ILLUSTRATIONS:

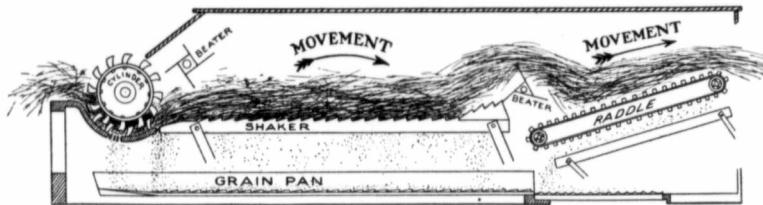
THE MAN BEHIND THE GUN

PATENTED IN U.S. FEB. 18-1901
PATENTED IN CANADA OCT. 23-1901



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

This is the way to Separate by hand with a pitchfork



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

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

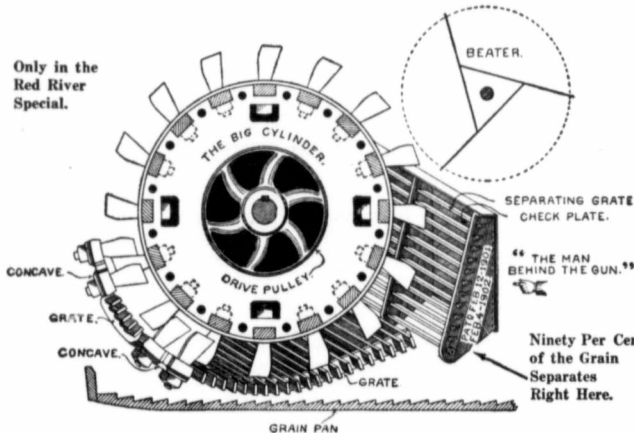
The Season of 1914 is going to be the biggest year Threshermen ever experienced. Big crops. Big straw. And big earnings if you have the right outfit. You should start out with an outfit that the farmers want. An outfit that BEATS THE GRAIN out of the straw. The Red River Special is the only machine that BEATS THE GRAIN out of the straw. The farmer knows it. It saves enough more grain and time for him to pay his thresh bill. The Big Cylinder, the "Man Behind the Gun," and the Beating Shakers can be found only in the Red River Special. 1914 can be made the most profitable season you ever had if you start out with the right outfit. Don't lose out by clinging to an old, worn-out rig, nor by running one which does not have the true principle of BEATING OUT THE GRAIN. Get a Red River Special outfit and please the farmers and make a profitable run. Note the cuts on this page showing the true principle for separation as used only in the Red River Special.

DON'T LOSE OUT

"The Man Behind the Gun"

We have thousands of testimonials like the following:

Only in the Red River Special.



Ninety Per Cent of the Grain Separates Right Here.

Patented in the United States and Canada.

Send for free Catalog and Thresher Facts.

Cando, North Dakota, October 7, 1913.
This year our friend and neighbor, August Link, bought one of your 44 x 64 Red River Special separators and did our threshing for us. Not until then did we realize how much grain it was possible for your Red River Special to save. We honestly believe that it has easily saved us enough to pay our thresh bills this year; and we find that we are docked less per bushel at the elevators when marketing our grain, because the Red River Special not only saves more grain than any other make of thresher that we have ever had thresh for us, but it delivers it so much cleaner that we are docked less at the elevators. Wishing the Red River Special all success, we are—

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|---------------|-------------------|
| D. C. Kimball | W. F. Pardon |
| Jas. Mulcrane | R. M. Farquharson |
| John P. Dix | Lewis J. Powell |
| J. W. Lurber | |

Deedsville, Indiana, August 20, 1913.
We, the undersigned farmers, had our threshing done this year by a 32 x 32 Red River Special separator with wind stacker and Universal feeder owned by Eugene Mills. We were more than pleased with the work this separator did for us. It wasted less time and less of our grain than any other thresher we ever saw, and we believe it saved enough grain that any other machine would have wasted to pay our several thresh bills and it cleaned the grain ready for the mill. If all grain growers could see the Red River Special work, they would let no other machine do their threshing.

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|--------------|------------------|
| Wm. Teel | P. E. Sarver |
| W. C. Friend | W. W. Morrett |
| W. F. Chapin | C. R. Knuff |
| Jacob Lewis | Walter Balabaugh |
| Bert Leeds | C. M. Pollenger |
| Chas. Chapin | Chas. M. Wright |
| Roy Hattery | L. M. Cunningham |

NICHOLS & SHEPARD COMPANY, Battle Creek, Michigan

In continuous business since 1848

Builders of the Red River Special Threshers, Traction Steam Engines, Oil-Gas Tractors, Stackers, Feeders, etc.
Branch Houses with Repairs and Stocks of Machinery at WINNIPEG, MAN., and REGINA, SASK.

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

PRACTICAL TALKS TO THRESHERMEN

Talk No. LXXXI.

Conducted By PROFESSOR P. S. ROSE

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

Almost the only use a horse or an ox has for its front legs is to keep its nose out of the ground and to give it steerage way. The front legs are an animal's rudder which turns it to the right or left. They become propellers only when it tries to stop or when it backs up. The front legs don't help push much on the straight ahead motion; the actual work of propulsion falls on the hind legs. That is why they are so big and heavily muscled.

Animals like the horse or ox have hard, sharp hoofs which enable them to dig into the hard earth and obtain a toe hold. It must have been a study of the physical characteristics of these humble beasts of burden that gave the early inventors and experimentors with steam tractors their ideas of construction, just as a study of birds enabled the Wrights, Curtiss and others to build a successful aeroplane. The early tractor men have certainly built their machines after the pattern of the horse or the ox, with the propellers or pushers behind and the steering device in front. Then they copied the ox's hoof to the extent of making a wheel with sharp cleats or spurs and the job was done.

The automobile men sought wisdom of the elephant, that other great beast of burden, and instead of making a hard, unyielding wheel they made one with a wide, soft pad. But they did not depart from nature's method of propulsion from behind.

The gas tractor people copied everything that went before them in the traction field and made a machine like the steam tractor except that it had a different kind of motor and no boiler. Naturally, also, they distributed the weight of the machine in just the same

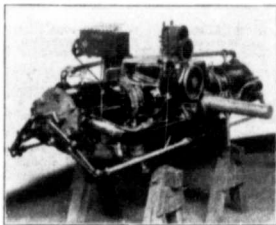


Fig. 195. Two Cylinder Opposed Engine used on Heer Tractor.

way that the steam men did by placing about seventy per cent of it on the rear wheels and the rest of it in front.

Weight on the front wheels does no good except what is necessary to hold the front wheels to the ground and give them steerage way. Any more than this is a detriment and only makes the machine steer harder.

Thirty per cent of the weight in front while the machine is standing still is found to be ample. Then when it begins to pull, the leverage of the gearing tends to lift the machine in front so that when it is working hard there probably is not more than fifteen per cent of the weight of the whole machine on the front wheels. We say probably because no accurate measurements have ever been reported showing the extent of the lifting forces.

Before traction or heavy pulling was the chief work for tractors some machines were built with the center of weight only slightly in front of the rear axle and drivers; consequently when they started up a sharp incline with a load they were almost sure to tip up in front and frequently

every part of it is utilized to increase traction.

Attempts to do the same thing have been made with steam tractors, but on account of structural difficulties it never became popular, though several machines were constructed. The auto truck people succeeded in making a four wheel drive truck by using an electric motor for each driver. There is also one truck in this country, at least, that uses the four wheel drive operated by the usual four cylinder gasoline motor. This machine is said to have given a very excellent account of itself in trials carried out two years ago by the regular army. It made its way through soft sand and deep mud better than most any of the other trucks,

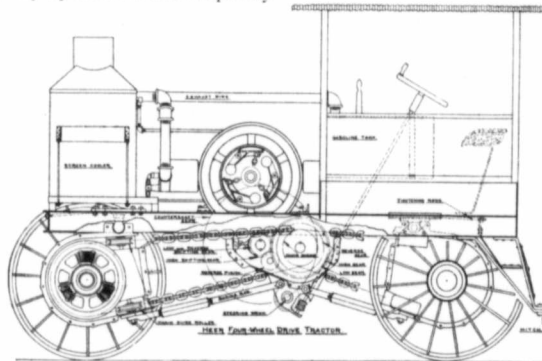


Fig. 196. Side Elevation of Heer Tractor.

the only way they could get their load up the hill was to turn around and back up, a rather undignified proceeding even for a traction engine and one that certainly did not reflect much credit upon its designer.

The same problems of weight and its distribution were encountered by locomotive designers. They had to have a truck in front to carry the front end of the machine and another one at the rear to carry the cab. Thus only a part of the load was carried on the drivers where it was available to help in the work of propulsion. Later, when they began to build multiple driver locomotives, their troubles were reduced in a corresponding degree. But even then they have found it necessary in certain types to arrange to lift the rear trucks off from the track when the machine is pulling hard.

The designers of electric locomotives have always claimed they had the ideal system of traction for the reason that they distributed the weight of the entire machine on the drivers and made every wheel a driver by placing an electric motor on each axle. This places the weight where it does the most good and where

it was claimed, because it had four drivers instead of only two as generally employed.

Several months ago we illustrated a four wheel drive tractor with worm transmission. This machine has not as yet been built in any considerable numbers but the four wheel drive described in this lesson has enjoyed a large scale and has been on the market for several years. So far as we have been able to determine, it is the first successful four wheel drive tractor built in the United States.

This tractor is equipped with a two cylinder opposed engine as shown in figure 195. The valves are all mechanically operated and the cam shaft is located in the engine base beneath the crank shaft. Figure 196 shows a side view of the assembled tractor with all parts clearly marked. It will be noticed especially that the weight is evenly distributed. The engine is set in the middle of the frame midway between the forward and rear wheels. This, with the water tank and cooler on the front end, divides the weight almost equally between the front and the rear. The gasoline tank is set in the steel cab at the rear

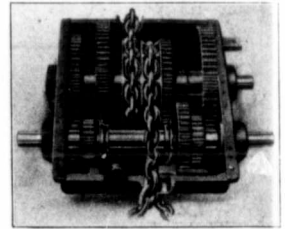


Fig. 197. Gear Case showing Chain Sheaves.

where all the levers for operating the machine are placed within easy reach of the driver.

A top view of the transmission case is shown in figure 197. This is a steel casting separated through the middle, and is machined and bored after being bolted together. Both countershaft and drive shaft are carried in Hyatt special nickel steel roller bearings. On the drive shaft are placed the driving gears, and in the center, the double chain sheave, by which the power is transmitted to both the front and rear axles. On the outer end of this shaft is also placed the brake drum. The drive from the transmission case to the center of the axles, is similar to that which obtains in automobile practice. The large sheave is also a steel casting, and carries the three differential pinions. The drive chain is led onto this sheave by means of two grooved guide rollers, one placed on either side. By using the round link or log chain for driving, it is possible not only to drive both axles but to steer them as well, since this style of link will allow motion in both directions. It will be noticed that the ball and socket connection of the front axle is directly over the chain guide rollers and that the radius rod connection at the bottom is directly below. This is one of the important features of this construction, and allows the axles to be turned for steering purposes without in any way cramping the chain.

Figure 198 shows a view of the two halves of the differential case showing the bevel gears, the chain sheave, and how the chain is led into the sheave. In the construction there shown, a steel tube was used over the axle, but this is now replaced by a solid casting. This case is bored out at either end, and Hyatt extra long roller bearings are placed over the axle. The drive wheels are of open cleat construction, the cleats being of angle iron riveted to an angle iron ring. To transmit the driving force from the hub to the rim, eight braces are used. A turntable is

"The Great Minneapolis Line"

Most in demand because most satisfactory

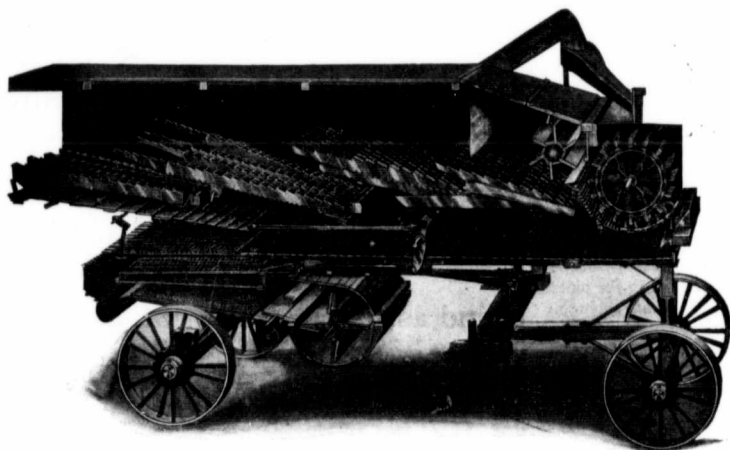
Are you going to buy
a new separator this
year?

Investigate thoroughly

Compare carefully
and
Order Early

The more you know
about the Minneapolis
the surer you are to

Buy One



"IT SAVES THE GRAIN"

The Minneapolis Separator

will please the farmers you thresh for because
it is a fast thrasher, a close saver and a good
cleaner.

"Your threshing run will be longer"

The Minneapolis Separator

will please you because it will last longer, with
less expense for upkeep.

"Your profit will be greater"

Minneapolis Engines either Gas or Steam will give good steady power either in the belt or at the
draw bar and will be found

Reliable

Economical

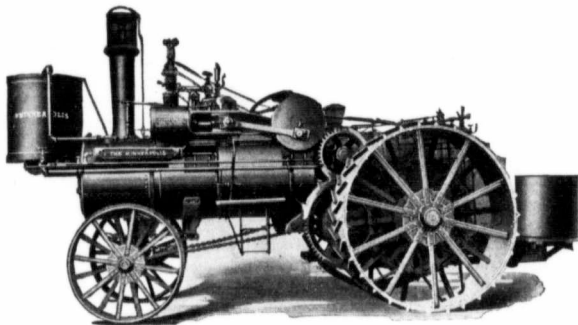
Durable

You should know more about these engines
before placing your next order. We will be
glad to aid you in making your investigations.

Ask any Owner

Large General Catalog.

Booklet of testimonial letters, threshing and plow-
ing scenes. Threshers' account Book, any or all will be
sent free upon request, without any obligation.



The Minneapolis Threshing Machine Co.

Hopkins

(West Minneapolis)

Minnesota

REGINA

WINNIPEG

CALGARY

EDMONTON

provided over the rear axle, so as to maintain the frame parallel to the axle at all times. A pivot joint between the differential case and the turntable allows the axle to be pushed back by means of the radius rod when necessary to tighten the chain. The radius rods will take care of any slight

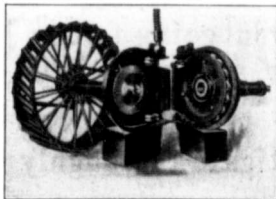


Fig. 198. Differential Gear Case opened, showing Case and Pinions.

extensions in the chains, and when more is necessary both the turntable plate at the back as well as the ball plate at the front may be pushed back by means of the tightening rods, as each are provided with slotted holes. By this means any extension in the chains is readily taken up and the operation requires but two or three minutes. Should it become necessary to take care of any extraordinary extension in the chains, a special drop forged open link is provided so that any odd number of links may be sawed out of the chain and this open link then inserted. This open link is of such construction that it has a greater tensile strength than the chain itself.

The plow hitch is attached directly to the frame at the rear so as not to interfere in any way with the steering, which would otherwise be the case were it attached to the rear axle.

Getting Satisfaction

By J.B.C.

In the course of a number of years as gas and oil engine expert I have found that there are a number of simple things which neither text books nor tractioneer schools make any mention of.

In this article I will do my best to mention a few of the most important.

When priming an engine do not use pure gasoline. You will waste the cylinder oil from the piston rings, and it will probably be a few minutes running dry. Pour a tablespoonful of cylinder oil into the gasoline can and shake it up before priming. The oil does not hurt the gasoline. In cold weather use a mixture of one-fourth ether or spirits of camphor; but keep the priming can in a cold place if you do so.

While on the subject of cylinder oil, there are many good oils, such as automobile cylinder oil, "air cooled" oil, etc., which are of no use in the cylinder of a heavy duty

engine. Their quality is high, as is generally the price, but they are too light; they have not the "body" for hard, continuous work. If your engine is in good shape, but blows smoke past the piston, don't send off for new piston rings until you have tried changing to a heavier grade of gas engine cylinder oil.

If you get gasoline in drums or barrels you will get some dirt or water generally at the same time. The best, and so far as I know, the only way to remove the water is to strain through a piece of chamois skin. This takes time, but not so long as getting water out of a tank in the base of an engine weighing half a ton. If you should have to disconnect gasoline pipes, use a little laundry soap in making the joint, but be careful to keep it out of the pipes.

In the event of taking an engine to pieces for a complete overhaul, you may have trouble to remove pulleys, etc., keyed to the shaft. This may be easily done by driving the pulley or flywheel back along the shaft for 1/4 inch or thereabouts, after which the key may be easily drawn out.

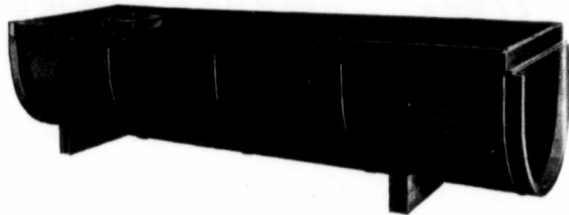
A key should not be a tight fit at the top. It was never meant to be used for a wedge. It should clear the top of keyway in flywheel by about 1/84 inch, but should be a tight driving fit sideways. If it is not tight get a new key right away. You will have to pretty soon anyway, and you may save a wreck. When removing piston from cylinder you will not have to pull nearly as hard if you remove the igniter or spark plug, or provide some other means of letting air into the cylinder.

When you overhaul your engine get a box of spring washers and put them wherever there are no cotter pins to stop nuts slacking back. Twenty-five cents will never be better invested.

If anything seems wrong when the engine is running, don't look around to find out what it is. Stop the engine first thing. It takes no longer, and it is lots healthier for the engine.

If your engine governor can be screwed down to double its speed, take a look at a few of the things that would be smashed if a flywheel burst. Then write to the makers and ask them the cost of a new flywheel; then add freight to it, and see if you can't get your machinery to run faster by putting a larger pulley on the engine instead. The makers generally run an engine as fast as is advisable to. They would get more power if they ran it faster, so it is a pretty safe guess that if it was not bad for the engine they would speed it up.

Some people think that because a magneto runs fast that it needs floods of oil. The bearings of a magneto run very fast, but



When you think Thresher Tank, think

"Saska"

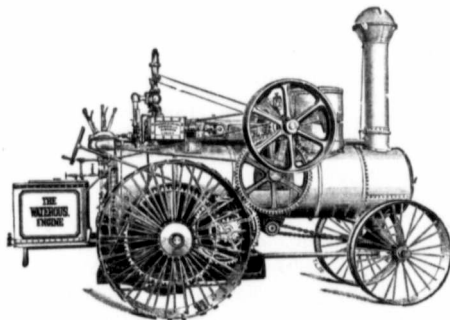
and ask any Implement Dealer in Western Canada, or write us for Special Delivered Price.

"SASKA" MANUFACTURING CO. LIMITED
SASKATOON SASKATCHEWAN

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

Second Hand Threshing Machinery

When in Winnipeg for the Exhibition, examine our stock of thoroughly repaired Engines and Threshers before placing your order. The prices at which we will sell these machines they are real bargains, write for price list.



DON'T WAIT FOR A RIG TO DO YOUR THRESHING

Buy a good second hand outfit of your own.

Waterous Engine Works Co. Ltd.
Winnipeg, Man.

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

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Belts That Make Business

Business is slow and money is short—only when something has cut the connection between supply and demand. Usually this "break" is something that has been foolishly forgotten, or it is some weak link in the "best laid schemes of mice and man." A poor or even second grade belt will make a bad hitch in your season's threshing. It may do you out of many cents a bushel on your crop through missing the market. Get a belt that will NEVER humbug you when you are rushing at full steam to catch top prices; therefore get a



Lion Brand

Rubber Belt

OR THE

Maple Leaf

Endless Thresher Belt



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

Gutta Percha and Rubber Limited, WINNIPEG CALGARY

NOT IN ANY TRUST OR COMBINE

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

they have very little work to do. There is little or no pressure worth mentioning on them, and so the oil lasts a long time; it is the pressure on a bearing that "kills" the oil. Use thin oil, a few drops at a time.

Don't couple up new and old batteries. In a few hours they will all be old. Because a battery is new to you it does not have to be a new battery. Make your dealer let you test them before you take them. Remember

"A red spark is a dead spark;
A blue spark is a true spark."

Don't monkey with your magneto. If it won't work there is probably something seriously wrong. Write to the makers. If you state the facts and don't kick too hard, they generally use you all right. That's their business.

Regina Offers \$40,000 in Prizes.

An attractive prize list has just been issued for the Provincial Exhibition which will be held in Regina, Sask., on July 27th to August 1st, 1914. The large sum of \$40,000 is divided into prizes for the various departments. These departments are for heavy

and light horses, beef and dairy cattle, sheep, swine, poultry, creamery and dairy butter, seed grain and other farm crops, horticultural products, school children's exhibits, ladies' work and fine arts and races.

Some features of the prize list worthy of special mention are:

1. Amateur exhibitors are given special sections in live stock classes where there are a large number of entries, such as Clydesdales, Percherons, Short-horns, Herefords, Aberdeen-Angus, Holsteins and Ayrshires. Exhibits in these sections may also be shown in the other sections for which they may be eligible.

2. Special prizes for live stock are offered by many of the breed associations.

3. Classes are given for farm flocks of poultry, not necessarily pure bred, to be shown by bona fide farmers or members of their families. Flocks are to consist of one male and six females.

4. A new department is added for seed grain and collective farm exhibits, with \$1,000 offered in prizes.

5. The prize money for creamery and dairy butter is increased more than 50 per cent.

6. New classes are added for flowers and vegetables raised by children in school gardens, and for flowers and vegetables raised on vacant lot gardens.

7. Competition in the ladies' work department is limited to exhibitors resident in one of the four western provinces.

The complete prize list may be secured upon application to the Manager of the Exhibition, D. T. Elderkin, 1818 Scarth Street, Regina.

Where He Was

"To what do you attribute your good health and remarkably robust condition?"

"To regular habits and early retiring."

"Then you have been so situated that you could carry out these excellent rules for the preservation of the health?"

"O, yes. I was in the Illinois penitentiary for twenty-three years."

SMOKE
FOREST & STREAM
TOBACCO

It is exceptionally mild

10c Per Tin 10c

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

Answers to Correspondents
 The Thresherman's Question
 Drawer

ANSWERS TO KORRESPONDENTS

Q. C.S. 1. We have a 16-horse power simple engine equipped with link reverse gear. When the reverse lever is thrown forward, causing the engine to run under, for moving on the road, the valve has equal lead and equal cut-off, but when the reverse lever is pulled back, giving the engine threshing motion, when we get an even cut off we get no lead on one end and too much on the other. When given no lead, the valve travels one-eighth inch further toward the crank end of the cylinder than it does in the opposite direction. What causes this difference in the valve motion? The link is centre hung, no parts are broken and none that were not made by the manufacturers are used.

A. 1. The link reverse gear can be set to give either lead or equal cut-off, but when it has equal lead the cut-off will not be the same for both ends of the cylinder when running in the same direction. This is due to the angularity of the connecting rod. The difference in cutting off varies with the angularity and in threshing engines runs from one-half to one inch, depending upon the size of the engine and length of stroke. On the other hand, if the engine is set for equal cut-off the lead will not be the same when the piston is at either end of the cylinder and the engine is running in the same direction. This again is because of the angularity of the connecting rod. For heavy road work or for plowing, engineers very frequently set the valve for equal cut-off, letting the lead be what it will. This gives them a little stronger pulling engine but for threshing or light work, and where economy of fuel is not so essential, the valve is generally set for equal lead.

When the link reverse gear is set up correctly, the link block will rest in the centre of the link when the reverse lever is in its centre notch. Also, when the reverse lever is at either end of the quadrant, the centre of the link will occupy the same relative position with regard to the centre of the eccentric rod connecting in the link. In other words, when the reverse lever is moved from one extreme end of the quadrant to the other, the block should move equal distances from

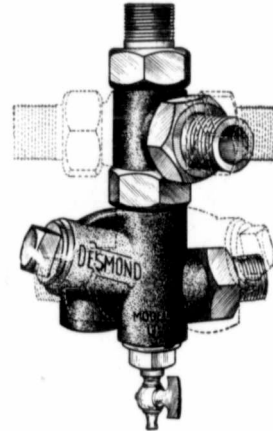
each side of the centre of the link. Also when the engine is exactly on dead centre and the reverse lever is the middle notch the link should stand vertically and the block should be in the middle of the link. Of course if one eccentric should be a little out of position this would throw the top end of the link either forward or backward a trifle as the case might be, when the engine is on dead centre and the reverse lever is in the middle notch. The same thing might occur if the reverse rod were a trifle too long or too short or if one of the eccentric rods were too long or too short.

If you have handled the engine since it came from the factory you will know whether any new parts have been put in and whether any of the original adjustments of the lengths of rods have been changed. If they have, then, in order to get anything right, your problem is one of assembling.

To determine if there is anything particularly wrong with the lengths of the various parts, proceed as follows: Take the steam chest cover off so that you can observe the valves. Place the engine on dead centre and the reverse lever in the centre notch of the quadrant. When in this position the valves should show no lead, the block should be in the centre of the link and the link should stand vertically. When the reverse lever is pushed forward there should be a little lead shown; when the reverse lever is in the last notch or the one next to it, the lead should be the same whether the lever is pushed clear forward or clear back. If it should happen that the link does not stand vertically and the block is not in the centre when the reverse lever is in the middle notch, the trouble may be due to unequal lengths of the eccentric rods, to wrong adjustment of the length of reversing rod or to a wrong setting of one or both of the eccentrics. An inspection of the mechanism, moving it back and forth, will reveal which is at fault. If the trouble is found in the adjustment of the length of the eccentric rods, our method of procedure should be thus: Loosen the set screws in both eccentrics and shift them slightly on the shaft so that one stands with its high part straight above the shaft and the other with the high

THE DESMOND MODEL U INJECTOR

is the one BEST Injector. Every one tested and proved.



The Desmond-Stephan Mfg. Co.,
Urbana, Ohio, U. S. A.

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

Steam or Gas Tractors



Equipped with

PICKERING
THE GOVERNOR WITHOUT JOINTS

give greatest efficiency

FITTED TO EVERY BUILD OF ENGINE

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

The Pickering Governor Co.

PORTLAND

CONN., U.S.A.



SPARK ARRESTER

One that gets all the sparks without clogging or interfering with the draft. Fits any engine. Screens adapted to any fuel.

ACETYLENE GAS HEADLIGHT

Turns night into day. Bracket to fit any make of engine. Throws light 400 feet. Operating expense about 1c. per hour.

FLUE CUTTER

You need this tool to get ready for your Spring Plowing. Is adjustable in length and size. Cuts the flue without burring the end. Try it.

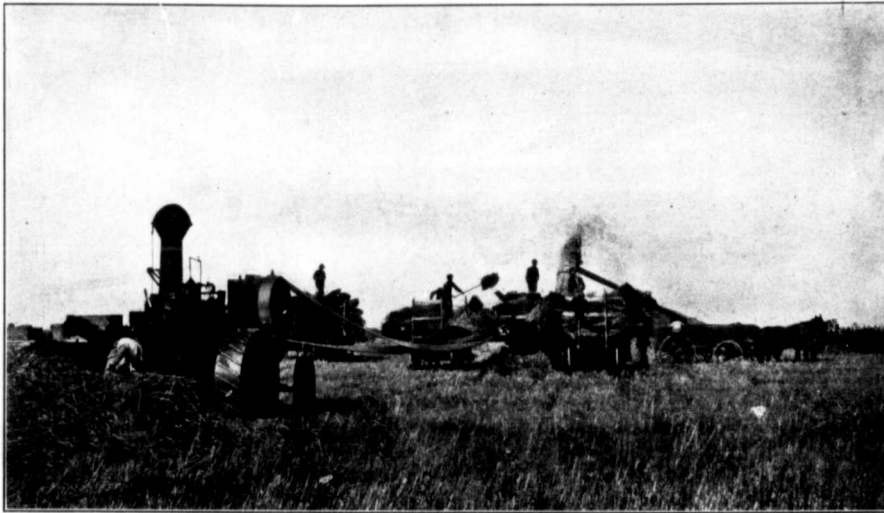
Estate of E. M. POPE, Watertown, S. Dakota, U. S. A.
Send for Catalogue and Price List to

THE MAYTAG COMPANY, LIMITED, Winnipeg, Man

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

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Too Early For Threshing



But not too early to buy a **"Star"** or a **"Lumber King"** Belt
Canadian Consolidated Rubber Company, Ltd., Montreal, P.Q.
 Winnipeg Regina Saskatoon Calgary Edmonton
 Write for a Quotation

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

part straight below. With the reversing lever the right length and the eccentrics in this position, the link should stand vertically if the rods are of equal length. If they are not, shorten or lengthen one of them a slight amount. Now put the reverse lever in the last notch in the quadrant set one of the eccentrics in place by means of the set screw and turn the other eccentric clear around the shaft in the direction the engine is supposed to run, remembering to operate the eccentric whose rod is opposite the centre of the block in the link. Note the amount of opening of each of the ports and see if the travel of the valve is central. Bring the eccentric back to the position you start with, set it in place by means of the set screw, reverse the engine and perform the same operation with the other eccentric. If the travel of the valve is not central over the ports, lengthen or shorten the eccentric rod which appears to be at fault an amount equal to half of the error.

Before making this adjustment, the valve is supposed to be set on the stem in its central position over the ports. When the engine is set on dead centre first it is advisable to place it on that centre which will leave both eccentrics pointing toward the link. When

in that position the eccentric rods will not be crossed. The lower eccentric will then have to be moved down only a very little and the upper eccentric will only have to be moved upwards a trifle to set the eccentrics opposite each other, then after the adjustments, which have just been described, have been made and the rods of the right length both eccentrics should be set back toward the link, each through an angle of about twenty degrees. Now throw the reverse lever over the one end of the quadrant and move the eccentric whose eccentric rod is opposite the link block until the valve has the correct lead, reverse the engine and do the same for the other eccentric. Now go through the operations again and when the lead is made correct for either forward or reverse motion, set both eccentrics up tightly and put the engine on the other dead centre and observe how the lead is, first when running in one direction, then running in the other. If the lead is not equal for running forward or back, correct half the error by moving the eccentric and half by changing the length of the eccentric rod governing the valve.

If the work has been carefully done up to this point the assembly of the valve motion will be correct and the valve will be set

correctly. It requires however, very careful work to avoid all error.

A Cent and a Half a Mile

Ford, Ont., May, 1914. To the man inclined to believe that motor car travel is still a luxury and for the rich alone, figures secured from more than three hundred automobile owners, and on hand at the Ford Motor Company of Canada, Limited, should prove most interesting.

These three hundred owners have all kept careful and complete

records the cost of operation of their cars—Ford's of course—for an average of nine and a half months. Each of the three hundred and seventeen owners had driven his car an average distance of five thousand two hundred and seventy-three miles.

It cost an average of \$55.02 for gasoline per car for the nine and one half months service. The average expense for lubricating oil during the same period was \$6.28. The average cost of repairs, over-hauling, etc., per car for the entire period of operation was 18.19 which gives a total cost of about a cent and a half a mile.



"SIMPLE AND STRONG NOTHING TO GO WRONG."

The more simple any piece of machinery is constructed, the better, if it will do its work right.

The Practical Force-Feed Oil Pump

is the most simple lubricator ever produced—just two pieces do the pumping, and made adjustable for wear—entire pump can be taken apart and put together again in a few minutes—no ratchet wheel, pawls, etc. to wear and cause trouble.

Pumps any grade of oil no matter how heavy or light—the weather never gets too cold or too hot for this simple lubricator to do its work right.

For seven years it has stood the test—thousands of them in daily use.

You can't afford to waste time and money fooling with a lubricator or common ratchet pump when you can get a "Practical" at the price they are now selling at.

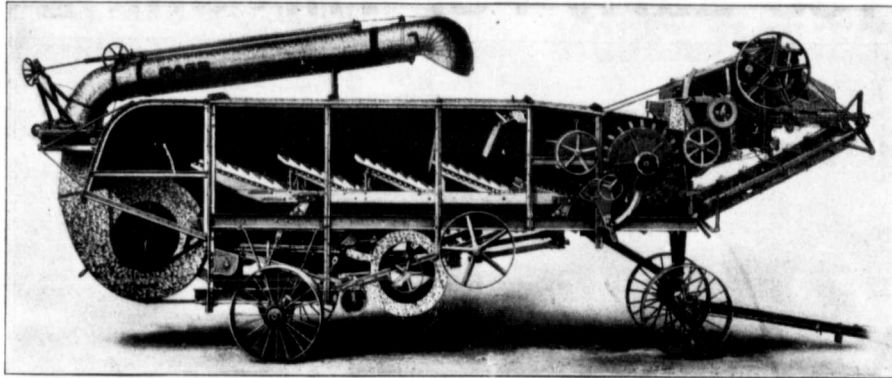
Write for Catalogue and full information.

McCullough Mfg. Co., Minneapolis, Minn., U.S.A.

Crane & Ordway Co., Winnipeg, Man.

Distributing Agents for Western Canada.

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



Grain Saved Is Grain Grown

Unnecessary waste is criminal, no matter how much you have. Wasted grain is wasted money. You grain growers should get from your crop every kernel possible, whether you do your own threshing or hire it done.

Why not get all that you have coming? How are you going to get it?

FROM A

CASE STEEL THRESHING MACHINE

BECAUSE--

No. 1 These machines are designed with extraordinary separating surface at the cylinders. **OVER NINETY PER CENT OF THE GRAIN IS THRESHED AT THE CYLINDER.**

No. 2 On account of the narrow space between the beater and the grate below, a large part of the remaining grain is beaten out before it reaches the rack.

No. 3 The improvement in our straw racks increases their capacity, so that the machines come as close as possible to separating one hundred per cent of the grain. This feature will interest you, because increasing the height of "risers" of the racks increases the separating area.

No. 4 These are only a few reasons for buying CASE Steel Threshing machines. Remember that these Steel Machines are fire proof and weather proof—that they have fewer parts than other machines—that with minor adjustments they thresh perfectly all kinds of grains and seeds—that they are not only most economical of grain, but they require the minimum power to run—that they are well called the "General Purpose" Threshing Machines.



What size do you need? Will you send for our catalog, which describes them in detail, or inquire at one of the following branch houses for further information?

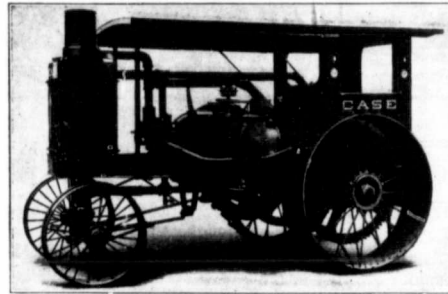
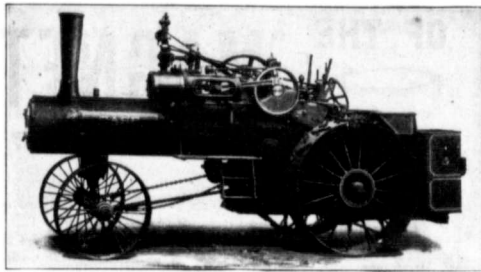
ALBERTA: Calgary, Edmonton
MANITOBA: Winnipeg, Brandon

ONTARIO: Toronto
SASKATCHEWAN: Regina, Saskatoon

J. I. CASE THRESHING MACHINE CO.

(INCORPORATED)

741-791 STATE STREET, RACINE, WIS.



Power For Your Threshing

Steam?

Either Way
Your safest buy is the

Gas?

CASE ENGINE

Why buy a CASE Steam Engine?

Just because it is a CASE. For years CASE Steam Engines have been acknowledged the unrivaled leaders in the field of steam farm power. Farmers the world over recognize this fact. They know it because most of them have used other kinds. They invariably find their complete satisfaction in the CASE Engine, because—

No. 1 They are so simple in design—no complicating mechanism—simplicity and fewness of parts.

No. 2 They are so honestly, so thoroughly built—only the best materials are ever used, as all buyers of CASE machinery know.

No. 3 They are so economical in operation. At Winnipeg last year our 110 Horse Power Steam Engine beat its own world's record for economy. Our smaller engines are proportionately economical.

Why buy a CASE Gas Engine?

For the same reasons that the man whose needs require steam, buys a CASE Steam Engine. Like all products bearing our name, your confidence cannot be misplaced in CASE Machinery, whatever your requirements. Our reputation is at stake in every machine bearing the CASE trade mark—the Eagle.

May we send you our catalog and booklet, "FACTS FROM THE FIELD," where users tell what they have accomplished with CASE Machinery?

ALBERTA: Calgary, Edmonton
MANITOBA: Winnipeg, Brandon

ONTARIO: Toronto
SASKATCHEWAN: Regina, Saskatoon

J. I. CASE THRESHING MACHINE CO.

(INCORPORATED)

741-791 STATE STREET, RACINE, WIS.





Dairying in Western Canada.

By MAX McD.

Western Canada is eminently suited for dairying, and this industry is rapidly growing in the three prairie provinces. This is so, not only in the districts surrounding the large cities of the West, but in rural communities where the producers must be able to manufacture the raw material themselves. In places such as these the milk is either taken to a cheese factory, separated at home and butter made; or cream taken to a creamery.

Dairying has been, up to a few years ago, conducted largely as a side line. After a day's work on the land the farmer has not felt much like milking ten or twelve cows, and the low price of milk a few years ago was not encouraging to the mixed farmer. These conditions have changed, however, and many farmers are recognizing in the dairy, the most important branch of their farming activity. For many years to come the dairy farmer will be the man who will make the money.

Canadian farmers have made money raising wheat because they understood the business of grain-growing; and they will make money dairying, because, with the valuable help given by the dairy branches of the Departments of Agriculture of the provinces and the demonstration and experimental farms, they will know how scientifically to handle their dairy cows and the milk after it has been taken from them. In Wisconsin, Missouri and other States, in England, Scotland, Holland, and Denmark, dairy farmers are making a good living off land ten times higher in price and not as fertile as that in the Canadian West. Feed is more expensive, and, with the exception of labor, everything is higher priced, but

they are making a good living because they understand the business.

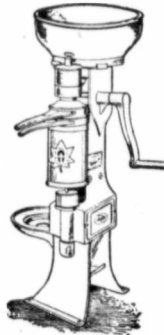
The time was when Denmark bought the feed for her dairy cattle in America, shipped it six or seven thousand miles to feed her dairy herds, and even then, sold dairy products in London cheaper than the butter from Canada and the United States could be sold, and the dairymen of little Denmark grew rich.

The largest creamery in the world is located in the Missouri Valley, and it was made possible by conditions favorable to the industry. In the rolling prairie provinces of Canada, the numerous springs, rivers and lakes, together with luxuriant native grasses and immense fields of alfalfa, have been the principal elements in the development of dairying on the western farms. The ease with which fodder can be produced to supplement the pastures in late summer and fall and provide for winter feeding makes dairying easy and profitable in Western Canada. Compared with Missouri, there are possibilities undreamed of in Western Canada.

Little has been done thus far in winter dairying except by those catering for city milk supply. Winter is the most profitable time of year to milk cows, and in some districts enough is done to keep factories and creameries open throughout the year. Up to the present time land has been so cheap, and farmers have made their money so easily, that there has been little need for much work in the winter. But close settlement and higher prices obtainable for dairy products will alter these conditions. The influence of dairying on intensified farming has been a most important link in the chain of development. The success of the farmers in the eastern provinces in bringing from their farms the returns and profits which were waiting for them has been accomplished, to a degree of thoroughness, by intensified agriculture and dairying has filled the gap between a promise of what the land will provide and a complete fulfilment of its possibilities.

The demand for dairy produce is increasing faster than the supply, and there is in this industry the greatest opening for profitable, safe, and continuous

THE WEARING RECORD OF THE "MAGNET" Cream Separator



has been established by over ONE HUNDRED THOUSAND Canadian Dairymen and Farmers who have used it during the past 16 years. This record of WEARING QUALITY is unsurpassed by any other make of Cream Separator the world over, probably unequalled by any machine on the market.

THE REASON

Because it is built with the only correct running gear, the reliable and double Square Gear.

Its perfect skimming is because in its one-piece skimmer the cones are set so that the centrifugal force that breaks the connection between the butter-fat and milk, in order to make perfect separation, has free action. Beware of cones that are placed close together, as is the case with all worn gear separators, as they introduce **Frictional** separation which prevents the full action of the centrifugal force and therefore, irregular separation, and then besides the insertion of many extra pieces which are really **Mechanical obstructions** and are also very troublesome to clean.

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

The Petrie Mfg. Co. Ltd.

Head Office and Factory: HAMILTON, ONT.

Winnipeg, Calgary, Regina, Vancouver, Montreal, St. John, Edmonton.

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

The "Meadows" All Steel Portable Grain Elevator



Both elevator and receiving hopper are entirely of steel and only the best of heavy sheet steel is used. The hopper is absolutely grain tight and has a large capacity.

It is the only successful feeder ever devised for a small grain elevator.

The only elevator that can be adjusted to different heights. Top and bottom sections are both nine feet long. Middle sections four and eight feet long. The sections are coupled together with malleable cast coupling and the ele-

vator can be easily and quickly taken apart and lengthened or shortened by removing four bolts and can be put together just as easily and as quickly. The capacity is practically unlimited—the greater the speed and horse power the greater the capacity. The Meadows is positively the best single legged steel elevator built.

We are also the western distributors for the Fuller & Johnston Kerosene and Gasoline Engines

See our exhibit at all of the leading fairs in Western Canada. Write for complete illustrated literature.

**Henry Rustad, 108 Carlton Building
Winnipeg, Canada**

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

DR. WARNOCK'S ULCERKURE

The wound healing wonder. Heals without leaving a scar or the usual aftergrowth of white hairs. Ulcerkure is the surest and safest of all antiseptics.

Sold in bottles, 50 cents and \$1.00
Western Veterinary Co.

Sole Proprietors

P.O. Box 2132, Winnipeg, Canada

Mention this magazine when writing advertisers

farming for any number of settlers. In some districts farmers are beginning to realize its possibilities. The profits accruing from careful handling of dairy stock may be seen in a few cases which have come under the writer's notice in the last year. An example will be given from each of the prairie provinces.

In Southern Alberta a Slav had been working in the mines. He had saved \$700, and with his wife and a family of small children, he moved to a farm on the International Boundary line, for which he paid \$15 an acre. The land was bought on time payments and the \$700 was put into cows and a few vehicles and implements. That was nine years ago. To-day that farmer has 29 cows and his receipts for cream at Cardston creamery in 1913 was \$850. In addition to this he sold calves and other live stock amounting to \$1,300, and this is about his yearly turnover from his mixed farm. This man has paid for a half section of land, built a comfortable house and buildings, paid for machinery and working equipment and does not owe a dollar in the world. He attributes his success to dairying. His cows, he says, bring him \$65 a head, and besides that keep his household in groceries and dry goods.

Another case is that of a hired man in Saskatchewan. Five years ago he had nothing but a homestead of 160 acres. Without any help he sold a carload of potatoes this year, shipped the milk from 20 cows, threshed some 79 bushels of oats to the acre from 30 acres, had 15 acres of corn, besides other grain and sufficient feed for a large stock of cattle, horses and hogs. This man attributes the success of his five year's work to his dairy cows. They made possible expenditures that developed his farm to its present state of production.

The outstanding example of profit in dairying is, however, seen in the experience of two Belgians in Manitoba. With their mother they landed in Winnipeg without capital and not able to speak the English language. They worked three years as laborers and saved \$700. They bought a dairyman out and purchased his 28 cattle for \$1,600, making the \$700 as first payment and rented his premises for \$25 a month. The first year they paid off their debt of \$900 and purchased 5 acres of land of their own. The second year they built a modern house and stable to hold 80 cows. All modern improvements, concrete floors, steel stanchions, individual water basins, and litter carriers were installed. Then the herd had been increased to 66. These

cattle were tested on the advice of the dairy inspector and 33 were found diseased and ordered out of the herd. This was a loss of half their cattle, but they were not discouraged and steadily added to their herd, having all new cattle tested, and to-day, six years after their arrival in the country, they have a herd of 110 cows, a modern house and stable, and five acres of land all paid for. They are getting over \$600 a month for their milk and are worth \$30,000 in property. It was the dairy herd that did it.

Cases such as these could be multiplied many times and they are abundant proof that dairying offers wonderful opportunities for making money in Western Canada. More than this it is a splendid indication that the dairy cow will help to tide the mixed farmer over a year that his grain crop is not all that it promised to be.

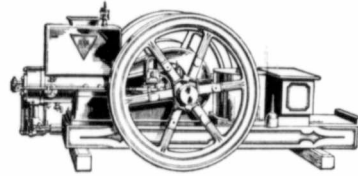
Economical Milk Production
Dominion Dairy Branch Bulletin

The manufacturer perhaps more than the retailer looks closely after the matter of cost knowing that his principal hope of making a good profit lies in attaining economy in the actual production of the article, for no profit can be expected if the selling price is below the cost price.

Is not the dairy farmer a manufacturer? So it would seem to be wisdom to look the more closely after cost, especially as he does not expect the selling price of milk to soar. Assuming that the farm is in good condition and carefully handled, what does milk cost per hundred pounds? That can be ascertained only by keeping records of each individual cow.

This is all the more necessary because "men (and cows) were deceivers ever." They may appear to be good heavy producers, but their value as economical producers can only be determined when their yield of milk and fat is checked up by the scales and test. Of what use is it when the factory pays 95 cents per 100 pounds to keep cows whose milk costs \$1.25 per 100 pounds just for feed alone? This is what often happens till cow testing is taken up. Milk and feed record forms are supplied free on application to the Dairy Division, Ottawa.

It is quite possible to have one dollar's worth of feed return two dollars' worth of milk through good cows, that is, cows selected by the test. This is both economical and profitable milk production. The average cow is not an economical producer because she has not been selected.



No tinkering, worry or bother, plugs right along like a steady, well-broken horse

The Alpha Gas Engine

ANYBODY CAN RUN AN ALPHA Gas Engine. Your wife can run it; your boy can run it; the hired man can run it.

THERE IS NOTHING MYSTERIOUS or complicated about an Alpha. That's why it's an ideal engine for farm use.

NOT ONLY DOES THE ALPHA work well but it wears well, because it is made from the very best material and its workmanship and design are high-grade in every particular.

THERE ARE NO BATTERIES TO fuss with or get run down or out of order in operating an Alpha. It starts and runs on a slow speed magneto.

JUST GIVE IT A SUPPLY OF gasoline or kerosene, oil it up and give it a pull and it saws your wood, cuts your fodder, grinds your corn, pumps your water, runs your cream separator or your washing machine, or does anything else that you want it to do. It's certainly a great labor saver on the farm.

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Cut-Worms

By C. B. WALTON, Horticulturist, North Dakota Experimental Station

There has been considerable complaint for several years past on the part of both farmers and gardeners as to the damage done by the cut-worms.

The cut-worm is the larval form of some of the many species of owl moths. These moths are commonly known under the name of moth miller. There are several species of owl moth, the larvae of which are more or less destructive. These different species closely resemble each other and as their life history is very much the same it is not of importance to give an accurate description of any one of the species. The moths are of a mottled gray or grayish brown color. The under or hind wings are lighter in color and somewhat thinner in texture than the upper or forewings. The forewings are nearly an inch in length so that the moth expands to a width of about two inches. The moths first appear about midsummer and are common from that time until late in September. They fly almost wholly at night and in the day time conceal themselves about the buildings, fences, trees, etc. They are often seen in the evening flying about lamps when they can gain entrance to the house.

The moths begin laying their eggs shortly after the middle of July and continue this process until cold weather in the fall. Each female lays from two hundred to five hundred eggs. The eggs for the most part are deposited on the stems of grasses and weeds close to the ground. On this account meadows, lawns and fields that have been allowed to grow up to grass and weeds during the latter part of the summer are places where the cut-worms are usually found. The eggs hatch within a few days when the larvae begin feeding upon the roots of the plants. At this time of the year the plant food is so abundant that the work of the cut-worms is unnoticed. As they feed they increase in size, molting their skin two or three times before winter. At the beginning of winter they are usually from three-fourths of an inch to an inch in length. As winter approaches they bury themselves a short distance below the ground where they hibernate. With the beginning of spring they again become active. This time feeding upon the young plants as they are transplanted in the garden or upon the young corn, flax or grain plants as they begin their growth. It is at this time of the

year that their destructiveness becomes more apparent as their food supply is limited to the young plants. Where these young plants are very numerous as in the grain field it is only occasionally that their destructiveness is sufficient to greatly damage the crop, though in certain seasons they have been known to take practically all of a field of wheat or flax. Their damage is most noticeable with crops like the corn and garden crops where the individual plants are further apart.

The larvae keep feeding during the spring and early summer and after they have obtained their full size they burrow down some four to six inches below the surface of the ground and pupate. They remain in the pupal stage but a few days when they reappear as moths and the egg laying again begins. As the moth selects places in grass or weeds in which to deposit their eggs, it is obvious that where land is kept perfectly clean by cultivation there is little danger of cut-worms the following season. It sometimes happens that gardens are badly infested with cut-worms though they have been kept perfectly clean during the entire summer. This is generally due to the fact that the cut-worms come in from the strips of grass along the edges of the garden or from adjoining lawns or pastures. We have found that the land which is covered with two or three inches of straw as early as the middle of August and burned off before the land is plowed in the fall or spring will be free from cut-worms the following year. While this method is entirely practical for gardens it could not, of course, be applied to fields, because of the labor involved.

It has been found that early fall plowing greatly lessens the number of cut-worms. When the land is plowed early in the fall and immediately worked down the cut-worms are deprived of their source of food and many of them will starve before winter. Late fall plowing has very little effect upon them.

In gardens we have found it practical to poison them by scattering a poisoned bait upon the land before planting the corn and other crops or setting out the plants from the hotbeds. This poisoned bait can be prepared by mixing with fifty pounds of wheat bran, one pound of paris green. To this should be added about two quarts of molasses and enough water to moisten. This should be applied to the land by placing small handfuls here and there, two or three yards apart. It is also an advantage to cover this poisoned bait with a handful of grass or some other protective



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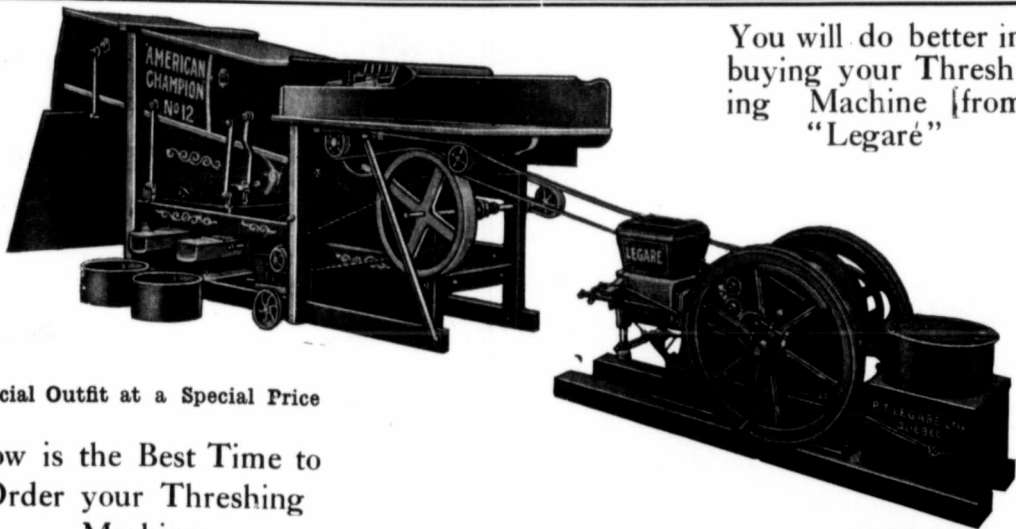
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Canadian Thresherman, July, 1914

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material that the cut-worms may seek it more readily. This remedy would not be a practical one applied to large fields. In that case the only practical measure consists in keeping the land in which corn is to be planted free from grass and weeds during the latter part of the summer or else to plow early in the fall the land that has been allowed to become weedy and to see that it is kept clean during the remainder of the season. Plants can be protected from cut-worms by putting a band of paper around them, extending an inch into the soil and an inch above ground. The cut-worms will not eat through the paper. This method works fine for a small number of plants and especially if the paper bands are put on when transplanting. The natural enemies of the cut-worm are the robin and grackle commonly known as the black-bird though different from the common black-bird that are so numerous at harvest time. The robins may be encouraged by providing trees where they can build their nests. We have counted over one hundred robins in one single flock in the spring all busily engaged in digging out cut-worms. Each one probably destroys twenty or more in a single day. With the help of the

birds and such remedies as can be put into practice the ravages of the cut-worm can be reduced to a point where our crops are not greatly endangered.

Harvesting Grain for Seed Purposes
By H. L. BOLLEY.

The purpose of this article is to prove that more care in handling the seed and soil before sowing and the proper handling of the ripened crop will result in improvement of the cereal crops, which at present are low in quality.

The essential steps necessary for improvement are as follows:

1. Get better seed.
2. Establish a consistent crop rotation.
3. Handle the farmyard manure properly as to the weed seeds and the plant disease that it carries.
4. Disinfect all seed sown.

How to Get Better Seed

1. Raise your own seed.
2. Harvest the seed when mature.
3. Thresh it as soon as dry.
4. Store the seed when dry.
5. Grade out all weed seed and light weight stuff.
6. Seed must be of pure variety.

Precautions at Harvest

Many farmers have used grain which has been wet in the stack or moist in the bin, and have raised what they consider a good normal crop.

This has been the result only when working on new or summer-fallowed land already free from disease. Experiments at the North Dakota station have proven that the chief injury caused by wet to the seed grain after it is harvested is due to the action of moulds and parasitic fungi which grow into or under the seed coats. Bleached and blistered grain, due to wetting in the shock, is largely brought about by the growth of fungi lifting up the bran layers or skin layers.

If only a few plants are attacked by wilt or canker, these sick plants are tied up in the bundles. If these bundles get wet, this mould or parasite grows all through the bundles until the seed is affected. When threshed, such flax seed is not only completely covered with the mould spores, but most of the seeds are full of filaments and cannot be properly disinfected because the seed cannot be soaked sufficiently long to kill the fungi without killing the seed. This statement holds good with wheat, oats and barley. If such seeds are planted on clean, new

land, each will produce there a plant which will become diseased and there will be produced at this point an area of disease infected soil which each year spreads to larger areas until the whole field becomes wheat-sick, or flax-sick according to the crop.

We have learned by careful laboratory trials that wheat seed from a moderately infected root-rot infected field can be graded and treated so as to free most of the seeds from the root-blight or root-rot fungi if that seed has never been allowed to get wet

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than in that many years as an apprentice. Students work in machine shops, traction engine house and garage, largest in country. Repair and drive gas and steam engines and automobiles. Small tuition fees. Lowest living expenses. No entrance examinations. Send for illustrated catalogue.

GEORGE P. MAGILL, President
Des Moines, Iowa

after it was mature. We have learned that we cannot do this if the seed is allowed to get wet enough to bleach and blister for the fungi have gained the interior of the seeds.

Seeds from flax plants which are internally sick usually die before two or three inches high or are sure to produce shrivelled or cankered seed if they live. Wheat seeds from a wheat-sick soil which are allowed to get wet in the stack or softened in the bin almost invariably produce root-rot or root-blight plants when placed in clean soil.

Bright, plump, hard seed from a wheat-sick soil or flax-sick soil properly disinfected on the exterior very often produce pure white roots, that is to say, a large percentage of such seeds can be properly disinfected so that the young plants will come healthy on clean ground, because, in the case of such seeds, the infecting spore bodies are only dusted on the exterior of the seed coats.

How to Handle Flax

1. Pick out the most healthy, dark green colored area of flax on your land and remember this when you cut the crop:

2. Have the mustard, false flax and other weeds pulled out of your seed plot.

3. Let the flax get fully mature.

4. Cut, if possible, with a binder, shock, and thresh as soon as dry, or stack it dry and cover with a canvas cap or slough hay. If the ground is rough and the flax straw is too short to cut with a binder, use a "flax attachment" and run the sickle bar as close to the ground as possible. Many of the growers lose about one-third of their flax seed which they grow, because they do not make smooth enough seed-bed to allow the reaper to work smoothly below all of the heads. If you cut it and drop it in loose bunches, do not let these get wet, if you can help it, because they soon become mouldy and this ruins the seed for sowing purposes, besides when the bolls begin to dry after being wet much flax is lost through shelling. If it cannot be threshed at once when dry it should be placed in large cocks or small stacks and covered with caps.

5. Store the seed dry and keep it dry.

6. Grow your own seed. No matter how small an amount of seed ripened on your land, save some of it. It is better than that grown somewhere else. This is the only way of getting the best wilt-resistant seed. If you have some flax-sick land, try it. Save the seed from such land, grade out the light weight seeds and sow it back on your flax-sick plot and each year it will become more

and more resistant until eventually a type of flax will be gained which is practically disease resistant.

Handling Coarse Grains

Any of the general statements made regarding the wetting of flax applies to the larger cereals. Wheat, barley and oats each carry internal diseases similar to wilt and canker in flax. In wheat, such disease causes blight in the heads so that the top one-third often contains only shrivelled grain. When such a head gets wet in the stook, moulds spread through the bundle and penetrate the bran layers of the damp, healthy seeds, thus spoiling the whole. In oats from diseased seed or land, certain plants have blighted or unscaled heads, and if bundles are wet, the moulds grow through these into and under the chaff and bran layers in the same manner as indicated in wheat and flax. So also in barley.

Capped Stook

Have enough of these at least to cover stooks of each kind of grain sufficient for your own seed. Allow this seed to get nicely ripe and cut it in the heat of the day when the straw contains no rain or dew. Have the bundles stood on end immediately in round stooks. Do not pack too tightly at first. Before dew begins to fall at night cover each stook with sheaves or a canvas cover tying down the corners with binding twine to the bands of the bundles. If 6 x 6 or 7 x 7 covers are made and the bundles are well dried one can construct much larger stooks or small stacks which are safe under such covers.

The first and second days after cutting, these caps should be removed when the sun is shining brightly to allow the heads to become thoroughly dry. They may, in intensely hot days, tend to heat a little under the caps if there is any moisture in the straw.

Do not think this statement with regard to the cap covers is a joke. It is a serious proposition to you. Healthy wheat seed or flax and other grain so saved will allow you an increased yield per acre each year greater than anything you may at first imagine. In flax it means 3 to 4 bushels on clean ground anywhere from one-third to the whole of your crop. In oats and barley it means anywhere from a few bushels gain to thirty bushels per acre according to the amount of diseased plants which are in the crop at harvest time when the seed is being saved.

This saving of the seed dry and keeping it dry makes it possible for you to grade out the light weight, diseased seed and disin-



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Besides greatly increasing the quantity and improving the quality of cream and butter De Laval Cream Separators save much valuable time and labor.

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As compared with other Separators the De Laval saves much time and labor by its greater capacity, easier running, easier handling, easier cleaning and freedom from need of adjustment or repair.

These are merely some of the advantages which make a De Laval Cream Separator the best of all summer farm investments, as every De Laval agent will be glad to explain and demonstrate to any one at all interested.

See the nearest De Laval agent at ONCE or if you do not know him write us direct for any desired information.

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MONTREAL PETERBORO WINNIPEG VANCOUVER

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER.

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We save you money on high grade threshers' supplies, as Our Prices are based on the actual manufacturing cost, every article guaranteed to be first class.

ENDLESS STITCHED BELTS

T 10. Our "Reliable" Belts are the heaviest and most durable offered. They are made on full weight 32-oz duck. They are filled with pure linseed oil, pressed with the new and improved hydraulic machine process, making the belt exceptionally pliable and durable. They are impervious to heat, cold, steam, gas or acid fumes. All belts will stretch some. The "Reliable" will stretch but little. It is made on a special weave of duck of proper width for each size belt, giving a proper salvage and even strain on both edges. You will find our "Reliable" Drive Belts the best and most durable and pliable you ever used.

100 ft., 7 in. x 4-ply ...	\$26.00	120 ft., 7 in. x 4-ply ...	29.50	150 ft., 7 in. x 4-ply ...	39.50
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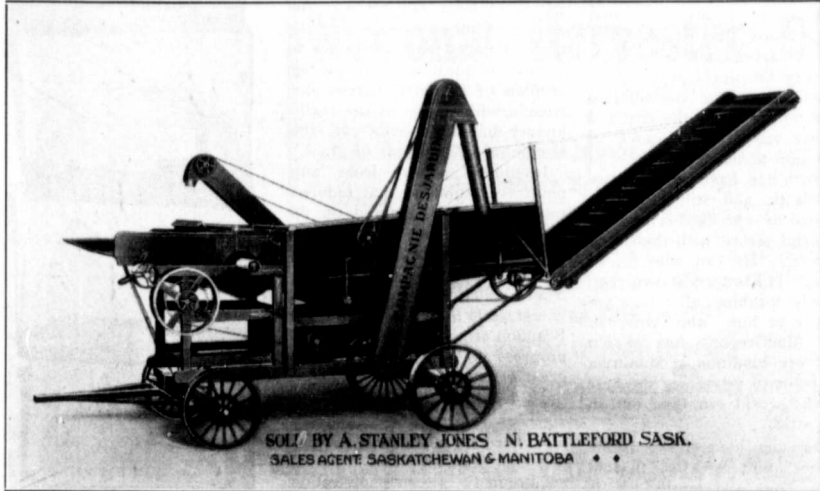
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If you want engine and separator, we have them and can quote you \$383 to \$612 for engine and separator freight paid anywhere in Saskatchewan and many points in Manitoba. The \$612.00 consists of 28" separator, high loader chaff return, straw carrier, all belts including main belt and an 8 H.P. engine. Time Terms also. WRITE FOR FREE CATALOG.



SOLE BY A. STANLEY JONES N. BATTLEFORD SASK.
 SALES AGENT SASKATCHEWAN & MANITOBA

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fect the exteriors of the plump, internally healthy ones which is the first essential step in improving the yield and quality of the cereal grains in the northwest or for that matter anywhere else, for it prevents the continual introduction of the root blighting fungi into your lands.

Frosted Grain as Seed

It is known that different kinds of grain will withstand varying amounts of frost in the presence of moisture. Immature wheat frosted not too hard when properly graded may give a very good stand of grain. Immature flax or barley which has been frosted while the grain is yet damp is essentially worthless for seed.

Immature Seed

Immature seed that is cut too green if properly dried and kept where it will not become damp is much better seed than seed which has been allowed to become thoroughly mature and then allowed to become wet and then allowed to freeze.

The Seed Plot

In closing I would advise every farmer to have a seed plot each year for each kind of grain. The crop the preceding year should be corn or potatoes which would tend to purify the ground from weeds, root disease and volunteer grain of the same kind. Even when one does the best he can

there will possibly be some volunteer grain of different variety in the plot. It is as easy to pull this out as to pull out mustard.

Brandon's Big Summer Fair

In a season that promises great abundance there will be no brighter spot than the great Inter-Provincial Fair to be held at Brandon from July 20th to 24th (inclusive). The prize list is before us and we have seen something of the platform and other attractions which will be pulled off at this great assembly.

It is the practice everywhere in the West to "go one better" than all previous record, if that is humanly possible, and in energizing and spending and lending every available asset to the success of its big fair, the citizens of the wheat city are withholding nothing that will make it an occasion of the first magnitude. From its local records and from the story of the whole contingent country in prize-winning since the fair of 1913, it looks like making a world's wonder.

The great and phenomenally successful show of 1913 is still fresh in our memory. It was worthy of any community of

DOMINION OF CANADA
 Department of Agriculture

DOMINION EXPERIMENTAL FARMS

J. H. GRISDALE, B. Agr. Director

Experimental Farm for Manitoba,
 W. C. McKILLICAN, B.S.A.
 Superintendent.

MILTON J. TISLIE, B.S.A.
 Assistant Superintendent.

EXPERIMENTAL FARM FOR MANITOBA,
 BRANDON, MANITOBA

June 13th, 1914

Messrs Dodds & Detwiler,
 Leland Hotel,
 Winnipeg.

Dear Sirs,

Will you please supply the Experimental Farm with one of your Cyclone Weed Destroyers, send 12ft size. Please send in the bill in triplicate for the price of the same.

Yours truly,

W. C. McKILLICAN,
 Superintendent

The use of the D. and D. CYCLONE on the plots of the Mother Colony of Experimental Farms in the West—at Brandon; the clean condition of these plots; the moisture the land contained when the test through dry weather was applied; and the ability of Prof. McKillican to recognize a good implement when he was shown it. GOT US THIS ORDER without solicitation.

Our Trade Mark, "G. L. D.!" is the exclamation of the noxious weeds, the interpretation of which is: "From all such destroying weapons, Good Lord deliver us!"

For scientific literature on dry land soil culture address

DODDS & DETWILER
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 (Factory: Corner of Ross and Tecumseh)

agricultural interest on this continent. Much has been accomplished since then and the very best of the grand aggregate will be seen and felt at Brandon this month.

The remarkable incident of Glencarlock Victor 2nd at Chicago is one of the splendid achievements that has made the city's name a brand for quality and breeding in live stock that to-day heads the list in every cattle market and breeders' fraternity the world over.

MacGregor's fine contribution to the reputation of the city and province has been a source of inspiration to many men who, in their own line, have become more enthusiastic and still more determined to reproduce some such wonderful record with their own products. "He can who thinks he can." It has been shown that, humanly speaking, all things are possible to him who wills it. "The MacGregor" has shown that every condition in Manitoba is in favor of producing the best that the world can turn out in beef cattle.

Other men have shown (some of them quite recently) that in horses, hogs and mutton it is within the lines of probability that they will not come out behind any competitor in the next world's great International. Some of these will be in evidence at Brandon and it is a human certainty that in live stock alone there will be an exhibit at Brandon this year such as has never been surpassed in character at any world's fair.

A large sum is spent annually in beautifying the fair grounds (which have their own unique natural advantages) and in enlarging the barns and pavilions for the accommodation of exhibits and the comfort of visitors. The directorate have dug deeply into their pockets since the gates closed on "1913," and to the regular visitor, the general improvement will be one of its most noticeable and gratifying features.

\$50,000 will be disbursed in premiums and purses. Surely this sum is alone sufficient to guarantee an event of red letter import in the story of our great provincial fairs and to inflame the cupidity of any farmer, farmer's wife or young person of the farm who has anything of outstanding merit that can be put alongside of anything else in the show ring.

The recreative features (apart from the educational display of grains, dairy products, industrial arts, live stock, etc.) will be of surpassing interest. These are usually billed as "attractions" and this year will include a big programme of entirely new and striking vaudeville numbers,

aviation flights, while the fireworks will be of an unusually novel and brilliant type.

Several excellent bands will be heard at this gathering and a programme of really high class music is promised during the continuance of the fair. The mid-way carnival will, of course, present its own novelties and will be under the eye of a strong committee of local gentlemen. An attractive bill of speed events has been arranged and altogether it is beyond question that this big reunion of farmers, citizens and friends will be one of the really history-making events of the Dominion in this year of grace.

Intending visitors from any point are reminded that reduced rates have been secured on all railroads, and that special trains will accommodate probably the remotest point in the province from which any homesteader would seek to wend his way to Brandon at some time during the progress of this record week of great events.



Farmers of To-morrow

Continued from page 9

requirements in this connection on the part of the competitors but the most concise and simple instructions as to the growing and handling of the various farm products included in the programme. The booklet is worth possessing if only for its information as to "growing things," whether or not the pupil intends to enter the local or other contest.



Any one who cares to take the trouble to put up a wireless telegraph receiving station can get the correct time from Washington every day. It is sent out at ten o'clock at night from the great wireless station at Alexandria, Virginia. Many jewellers and other business men have already equipped their places of business with the apparatus necessary to receive the signals.



A man who had been troubled with bronchitis for a long time called on a rather noted doctor. After a few questions the doctor told him he had a very common ailment that would readily yield to treatment.

"You're so sure you can cure my bronchitis," said the man, "you must have had great experience with it."

"Why, my dear sir," confided the doctor, "I've had it myself for over twenty years!"



"What you need," said the doctor, "is an operation."

"Very well," replied the patient. "Which operation are you cleverest at?"



Dominion Cannery Co., Limited
Bow Park, Brantford, Ont.



Robt. Manilla Brantford Ont.



Nicholas Roth
Shakespeare Ont.



Burley Miller
Port Rowan Ont.



Wm Reid Princeton Ont.

Ask these Men if they ever saw better Barns

FARMERS can now buy better barns than they ever saw before—Steel Truss barns of iron and steel. They can put them up in days with a few helpers, where it used to take weeks and months—and a big gang. They can get rid of the old clumsy wooden frame that filled the inside space with beams and timbers. They can forget half their worries, because Steel Truss Barns are fire-proof, lightning-proof, and weather-proof.

This puts barn building on a modern basis. And we leave it to the men who have built on this plan, to say how it carries out all our claims.

But here is the best part of this big new idea. The Steel Truss barn—the barn you would gladly pay a big price to own—costs less than perishable wood.



These Steel Trusses of Double-Angle Steel make the most rigid barn construction known to man

Steel Truss Barns

(Patented in Canada and the United States)

These barns are built complete in our factories. We send you a whole barn. There is nothing for you to provide, because we ship everything complete—Steel Trusses, corrugated iron covering, and all the lumber, and there's not a piece of wood in the whole job that one man cannot handle. The Steel Trusses come ready to put in place. Doors are fitted with all the hardware, and are ready to hang. Bird-proof track is supplied. Windows are of metal and wind-glass, and are built into the sheets of corrugated iron. They are as easy to put in place as any other sheet of iron.

To land a barn on your farm in such shape as this is going to save you many a dollar in labor, and an endless amount of time and trouble. And, remember, no wood shows anywhere on this barn. Once a Steel Truss Barn is built, there is no cost for repairs—no paint bills, no rotting sills or shingles. Figure that saving when you think about your new barn.

The Steel Truss Barns have large, circular ventilators of galvanized iron—and the best hayfork outfit money can buy. Cornices, ridge and eaves, roof and sides are all the best grade of galvanized iron.

Eight factories are ready to send you one of these barns any size you want—and the very day your order reaches us. We know that men will want to know a lot about this great new barn idea, and we are ready to answer questions and send out full information explaining the whole thing clearly. Do not hesitate to write us about it. Tear out the coupon and mail it to-day.

The Metal Shingle & Siding Company, Limited

WINNIPEG, MAN.

Head Office: PRESTON, ONTARIO

Associated with A. E. ORMSBY & Co., Limited. Consolidated Factories at Preston Toronto Saskatoon Regina Montreal Winnipeg Calgary Edmonton

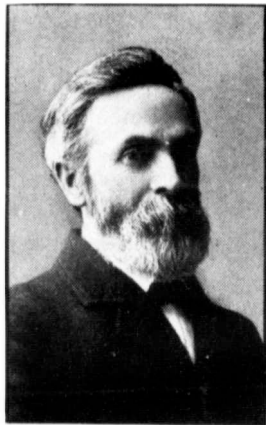
COUPON
To The Metal Shingle & Siding Co., Ltd.
WINNIPEG, MAN.

Send me full information about Steel Truss Barns advertised in Canadian Thresherman & Farmer

Cheering Outlook for Dairy Produce

One of the most gratifying happenings of recent date in the midst of so great an outcry as we have had about business stagnation is the result of the extended trip which Mr. A. B. Petrie, President of the Petrie Mfg. Co., Ltd., has recently completed in the West.

Mr. Petrie's visit to Western Canada was a compulsory one, made for the specific purpose of buying property in order to establish additional branch warehouses. These extensions are necessitated by the constantly increasing demand for their Canadian made and now world-renowned "Magnet" Cream Separator and for



A. B. Petrie, President of the Petrie Manufacturing Co.

their "Magnet" Gasoline Engine. The Petrie Separator is so well known to our readers, little need be said about it. The fact that it is represented in so many dairy farms in the West and is finding its way in carloads into fresh territory every week speaks in better terms than any descriptive "advertising" can give it.

The "Magnet" Gasoline Engine is no less a wonder in its way than the Separator. The latter has won its remarkable success simply because of its mechanical excellence. It was designed and is made by Canadian men (born mechanical engineers) who have spent a long life time in this special work. The Gas Engine is the outcome of the same level-headed brains, and its operations alike as a stationary and portable power machine have won golden opinions from gas engine specialists and the farming public wherever it has been tested.

These two great essentials in farming plant, as we have said, are being installed all over the West in regularly increasing numbers, and it is to accommodate this growing business that Mr. Petrie has purchased within the

past few days property in Lethbridge and in Calgary. Buildings are now in progress at Calgary and Edmonton and the Company is making extensive additions to its Regina warehouse.

Men do not build barns and storehouses unless they have something to put into them, and Canadian Manufacturers, of all people, do not dip their hands into a deal of this kind unless there is a legitimate and urgent call for its completion.

All success to this Canadian enterprise. It claims the best that can be accorded it for the dual reason that it is the only Canadian made separator in the market to-day, and the Petrie Company's products are of the kind that have been sold from the first—solely on their merits.

The New Industry of Fox Farming

One of the still unexplored mines of wealth at our very doors is being seriously looked into, tried out and wherever it has been energetically handled has met with surprising success. This is the business of farming the Silver Black Fox.

Several "Fox Farming" companies have been in existence for some time, producing wonderful results in every case, and in at least one instance returning a dividend of 500 per cent to the stockholders. We are glad to refer our readers to the announcement of the "Great West Silver Black Fox Company, Ltd., of Winnipeg," which will be found on another page.

This new industry had its inception in Prince Edward Island, but there can be no doubt that our own Northern Manitoba being the natural home of the Silver Black Tipped Fox offers a unique opportunity in response to some reasonable expenditure of capital in providing and caring for suitable breeding quarters, affording unrestricted freedom to the fox, yet safeguarding it against all risks of escape or attack from its natural enemies.

The Winnipeg Company consists of some of the city's most enterprising business men and from the uniform success which has attended their projects in other directions, the victory of their part in this new industry in a brilliant future is practically assured.

A few days after a cyclone had visited their section, two farmers met in a neighboring town, according to an exchange.

"She shook things up pretty bad out at my place," said one, stroking his whiskers meditatively. "By the way, Hi," he added, "that new barn o' yours get hurt any?" "Wal," drawled the other. "I dunno. I hain't found it yet."

QUALITY FIRST

Your first consideration in the purchase of Harvester Oil, should be QUALITY—price is on'y a secondary matter.

National Harvester Oil

is made to a standard of quality—not to a price.

White Rose Motor Gasoline

Rex Motor Spirit

Lily White Engine Kerosene

National Light Oil

National Carbonless Motor Oil

National Gas Engine Oil

Black Beauty Axle Grease

OTHER NATIONAL "QUALITY FIRST" BRANDS

WRITE US FOR PRICES—THEY WILL INTEREST YOU.

CANADIAN OIL COMPANIES

LIMITED

WINNIPEG

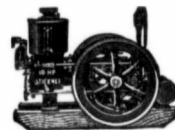
REGINA

CALGARY

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

Stickney Gasoline Engines

ARE THE BEST



Don't Buy a "Pig in a Poke"

Don't take anybody's word that is printed in a dateless catalog. You can't tell whether it was printed in 1914 or 1877. He may be dead or he may be broke. We are here to show you the actual Stickney Engine with its outside igniter, straight line valve motion, perfect cooling system, three point suspension and ball-bearing governor. We not only have on hand all sizes of Engines but a full and complete Stock of repairs.

If interested, write for full particulars:

WE ARE EXCLUSIVE AGENTS

THE MAYTAG CO. Ltd. Winnipeg

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

Get Your Neighbours Interested in

The Canadian Thresherman and Farmer

It will educate them and we will PAY YOU



NO. 1 HARD

Winnipeg, July 2, 1914

Wheat

June is always the important growing month for Western Canada crops, for the progress of this month determines the thickness of the stand and length of head. As usual, some districts have been highly favored with the necessary moisture but the greater part of the wheat belt has been quite deficient in that regard. Hence a probable shortness of straw and of head as well in the latter districts. Insect damage has been small. So urgently is moisture needed over a great percentage of the belt that the volume of the crop will be greatly affected for good or ill by the weather for the next week. A fair sized crop, not a big one, now appears probable.

Across the line, all three spring wheat states have had too much moisture and dry weather is needed. In Europe Russia, our greatest competitor, reports less favorably on the growing crop. The winter wheat crop has been safely harvested in the United States and is now being threshed, yielding and grading well. The initial movement from the farms is heavy but July shorts in the Chicago and Minneapolis markets are both very nervous and to-day those options ran rapidly upward. All markets have recently been heavily oversold and the reaction was long overdue.

During June as the harvesting of the American winter wheat progressed and the saving of an immense crop was assured speculators in all markets pressed an active selling campaign, pressing their advantage vigorously until Chicago wheat was the lowest since September, 1906 and our October touched 80 cents. Immense short lines were thus put out. The American farmers were stampeded into selling until Kansas wheat touched a figure well below the cost of production. Great quantities were worked for export and July-August ocean freight space is already scarce. Very few Western Canada farmers have sold ahead this year for October, the prices being, so far, uninviting.

But it only required the setting aflame of racial passions amongst the warlike Austrians and Serbs,

following the assassination of the Archduke and Archduchess to put all Europe into a nervous frame of mind and she has been buying feverishly the last two days. Of course, the drought in eastern and northern Manitoba helped, while too much moisture in the spring wheat states alarmed Minneapolis dealers. So great has been the rainfall in South Dakota and the southern portion of North Dakota that rust is feared.

Canadian stocks are fairly light but receipts run rather heavy, the country elevators shipping out to fill July contracts. Very little wheat remains now on the farms or held by farmers in store. Deliveries on the July option here to-day went into strong hands and this grain will likely be shipped forthwith. Ocean freight rates are advancing due to demand for space for American winter wheat. It is said that 35,000,000 bushels of new crop winter wheat have been worked for export already.

The flour demand on both sides of the line has been decidedly better, as wheat prices fell away, and the buyers had reached a low ebb in supplies, requiring stocking up. American millers have been making low offers to stimulate business and a brisk foreign demand coming in, set domestic buyers right after the flour.

Looking over the whole situation it is likely the low point, for some time to come, has been reached and with European crop outlook only fair, and foreign markets all oversold, the continent should be a heavy buyer and our crop after all, bring to Western farmers a little higher prices.

Corase Grains

Oats have held strong and steady throughout June with good export demand. Stocks of contract oats at terminals are very small. But the new crop coming along has suffered considerably from drought, in fact the best oat districts have been the most poorly favored. October oats seem low, being about four cents under the price at which oats were selling last October and oats and corn in the United States are both higher now and a much

GEISER and PEERLESS WINNERS

Peerless Separators



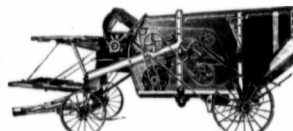
Have made the great reputation they enjoy by their light running and grain saving qualities. The "Peerless" is a separator without riddle and with many valuable features not found in any other make of machine.

We do not pretend to say that these Separators will save absolutely ALL the grain, but we do assert that they will save 98 per cent of that which is ordinarily wasted by the best machine now in the field, when it is crowded as it must be for big work; that at the same time it leaves the straw from the straw by the time it leaves the market. We can supply with these Separators, Wind Stackers or Straw Carriers, Self Feeders and Band Cutters, Automatic Weighers or Wagon Loaders, Flax and Timothy Attachments.

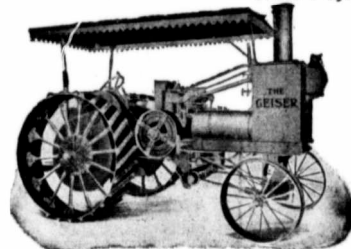
The Bagger is an Extra Wind Stacker, Self Feeder or Wagon Loader can be attached.

There are no riddles in this machine hence there is none to clog and give endless trouble. No time wasted in making changes for the different kinds of grain. Adjustments all made on the outside and can be done while the machine is being operated. Cylinder contains nine bars of exceptional strength and is perfectly balanced. It will positively pay you to investigate other exclusive features of this machine.

Geiser Separators Nos. 4 & 5



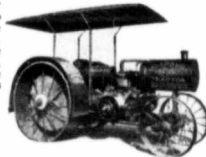
Geiser 4 Cylinder, 4 Cycle Engine



Power, Durability and Strength are all embodied in this exceedingly popular tractor — the Geiser, 4 cylinder and 4 cycle type. Forward speeds 1 3/4 and 2 3/4 miles per hour. The crank case is exceedingly strong where bolted to other parts. Gearing is of the best open hearth steel. Vertical cylinders with cylinder head, valve box and water jacket all in one casing. Connecting rod is made from a steel forged from one large billet of open hearth steel; you can't beat it.

The exceptional results secured by users of our Diamond 40-70 Gas Tractor and the large demand for a smaller gas tractor embodying the same practical features has induced us to place the Junior Model, as herewith illustrated, on the market. Two forward speeds of 2 1/2 and 4 miles per hour; reverse speed 2 miles per hour. All controlled by one lever. Burns distillate, kerosene or gasoline. Gasoline consumption averages 8-10 pints per h.p. per hour, with a slight increase when kerosene or distillate are used. Will handle five 14-inch breaking plows in average soil or six 14-inch stubble bottoms.

Diamond Junior Gas Tractor



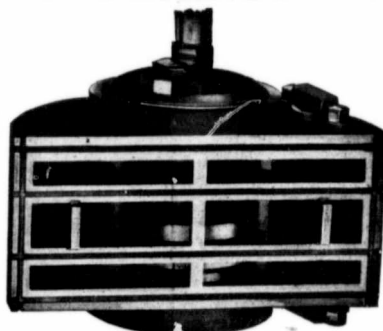
We are offering very attractive prices and terms—good until August 1st, but cannot guarantee them after that date.

Burridge-Cooper Co. Ltd., Winnipeg Man., and Regina, Sask.
Address all inquiries to Winnipeg Office.

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

Baker Balance Valves

We have arranged for the exclusive sale of the Baker Balance Valves in Manitoba, Alberta and Saskatchewan



You cannot get 'Value Received' out of your Engine unless it is equipped with a Baker Balance Valve

THE BAKER BALANCE VALVE is considered by all mechanics to be the finest principal of a balance valve in existence, and will increase the power of the engine from 20 to 30%. The Baker Valve can be attached to any kind of slide valve type of engine without facing the valve seat. Note the soft metal packing around the face of cage.

They pay for themselves in a short time in actual saving of oil, fuel and water.

WRITE FOR FULL PARTICULARS

The Maytag Co. Ltd., Winnipeg

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

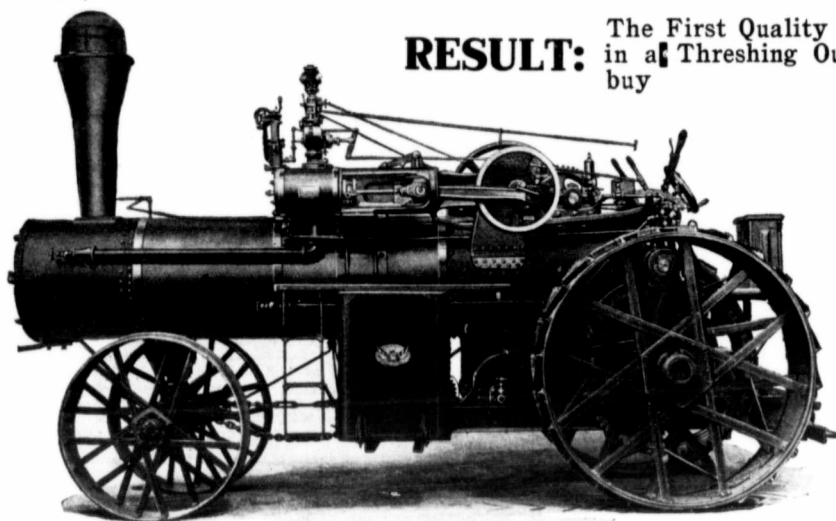
THERE'S BIG MONEY IN THRESHING

WITH THE

FIRST QUALITY LINE

Having devoted FIFTY YEARS of our life to the one business of building Threshing Machinery, we feel justified in believing that our word and our experience will not be lightly esteemed by the Threshermen and Farmers of Western Canada. It means that in this long period we have experimented with and profited by every phase and new idea in the development of Canadian Threshing Machinery.

RESULT: The First Quality and the Best Service in a Threshing Outfit that money can buy



The White Rear Mount Steam Tractor

is a well-balanced, well-made threshing engine; durable, economical, easily steamed. It is easy to handle—a pleasure to operate under any conditions.

THE FIRST QUALITY LINE is guaranteed to be made in every detail of the very best material by the most skilled labor employed in Threshing Engineering. Day in and day out it will go into the field and give perfect service in the work it was intended to do under the most exacting conditions of soil and climate.

The White Special "Challenge" Thresher

continues from season to season by increased sales to back up its reputation and the character we claim for it.

We have lived by
"QUALITY"
 for Fifty Years



Quality Counts

and is our one permanent salesman. Conditions become more exacting every recurring season and nothing will meet them but the very best in brain and brawn. You have them both in the

Quality Line

Write to-day for catalogue and complete information to

THE GEORGE WHITE & SONS COMPANY, LIMITED

LONDON, Ont.

BRANDON, Man.

MOOSE JAW, Sask.

poorer crop than last year. Farmers, who for years past have been accustomed to sell, at Winnipeg fair time, there oats for October-November delivery might well hold off this year. With light hay crops in the West this year, and an increasing number of farm animals, due to mixed farming, the consumption of oats and barley on the farms should increase. Oats seem well worth present prices.

Barley has weakened somewhat. Stocks at Terminals became so light that dealers could not make up cargo lots but these stocks are again increasing slowly. Midsummer dullness now prevails in this grain. The new crop, being as a rule, late sown, is suffering greatly from drought in Manitoba at least and promises to be only fair. Likewise October barley seems quite low enough at 45 to 45½ cents in store.

Flax

Flax receipts have been running away under those of last year, yet stocks have not diminished satisfactorily. A peculiar situation has developed. Fort William stocks are about 3,500,000 bushels but shipments out are very small. Dealers can buy July flax and sell October and hold the flax in store at a profit. Hence this carry-over will materially affect the price of October flax which otherwise would be higher. The new crop promises rather poorly. Flax prices should hold fairly steady.

Put Chickens in Colonies

Colonizing poultry is not a new idea, but a very old one. However, it is a reliable principle because it is based upon the inexorable laws of nature. It was intended that fowls of all kinds should roam at will and live in flocks. These flocks should not be too large or too small to secure the best results and eliminate labor from the caretaker.

Colony houses, with or without a floor, with three sides and roof wind and storm proof, with one side facing the south, covered with netting and a door at the side, built large enough to accommodate at least twenty-five fowls, should be provided for the laying stock during the summer months. The location should be beneath a tree of considerable size, beside a bunch of bushes or in the edge of the woods, the idea being to secure for the flock protection from the sun. These houses should face the south and be located some distance apart to prevent the flocks from mingling.

The object in thus colonizing the laying stock is to give them a chance to partly feed themselves

and secure in proper quantities green and animal food so essential to continued egg production. Better health and vigor are thus maintained and more eggs are thus produced than by any other system or method ever yet devised; for freedom is one of the laws of nature, and free range is an important factor to success in poultry culture.

No better way has ever yet been discovered in which to raise chickens than by the colonizing plan. In flocks of twenty-five, with unlimited range and houses large enough to accommodate them until near maturity, they will grow like weeds. This plan is based on nature and copied after the way in which the partridge rears her young. Open-front houses approach the evergreen tree for roosting-quarters. The growing chick needs lots of exercise and freedom. In small colonies he gets the things so essential to his best growth and development. A. G. Symonds.

Feeding Brooder Chicks the First Few Weeks

The yolk of the egg which is absorbed by the young chicks just before emerging from the shell supplies the necessary food during the first forty-eight hours of the life of the chick. The first requirement of the young chick is grit to aid in digestion and pure water. Small grains of sharp sand or pieces of egg shell are splendid for this purpose. Hard boiled eggs, thoroughly mixed with bread crumbs moistened in milk can be used the third and fourth days. Fine oatmeal can be gradually added to this mixture and fed sparingly at periods two or three hours apart.

A simple ration for chicks a week or more old may be made of two parts by weight of finely cracked corn, one part of broken wheat, one part oatmeal and one part of meat scraps. Whole wheat can be substituted when the chicks arrive at six weeks of age. Grit should be supplied at all times as well as green food. This ration ought to be fed about five times a day in a fine litter of straw or hay, thus encouraging the chicks to scratch for the feed. The water should be changed frequently and the food never ought to be allowed in any quantity greater than the chicks can eat up clean. Infertile eggs from the nests or incubator can be utilized. Finely cut grass, alfalfa, clover or oats may be used as green food. Successful chick feeding is based on carefulness to details, a well balanced ration and proper sanitation.—North Dakota Experiment Station.



LUMBER DOORS AND MOULDINGS

In fact every foot of material, rough and finished, used in the construction of your building, shipped in one shipment direct to your nearest railroad station at **WHOLESALE MILL PRICES.**

In placing our wholesale mill prices in the hands of the farmers we had at one sweep relieved him of one of the greatest obstacles to mixed farming which he has had to contend with, that is, **LINE YARD PRICES ON HIS LUMBER.** In addition to high prices a system of regrading has been indulged in by many yards, which not only deprived the consumer of quality, but increased the prices to him. In fact, the statement is made by one company that the line yards which they operate in connection with their mills saved the situation for them, as it gave them control of the retail market, and enabled them to show a return on a capitalization which is out of all proportion to the actual money invested.

These line yard operators view with consternation the placing of **WHOLESALE MILL PRICES** in the hands of the farmers, and have issued instructions to their representatives; where a farmer is familiar with the **CONSUMERS LUMBER COMPANY'S PRICES,** meet them and under no circumstances let an order get away; by this method they hope to compel us to discontinue selling direct to the farmer, which would make it possible for them to continue to control the retail market and put the old prices into effect again. But the Western farmer is not so short-sighted as all that, and he cannot be worked that way. He knows how he has had to pay for lumber in the past and welcomes relief from the old prices. The success of our **DIRECT TO THE FARMER POLICY** and a permanent continuation of fair prices is entirely dependent upon your co-operation and support. Our results of the past four months have proved that the farmers in the prairies are alive to the situation.

Keep before you the following facts which you will all admit make lower prices:—We sell our entire product direct to the farmer by mail. We have no **AGENTS** or **REPRESENTATIVES** of any kind. We pay no **COMMISSIONS** to anyone. We sell for cash, keeping no open accounts, eliminating all bad debts. We give you the benefit of this saving in the price. We guarantee all lumber to be of the **HIGHEST QUALITY** in the grade in which you select, and we **GUARANTEE PERFECT SATISFACTION** to you in every respect.

SEND YOUR BILL FOR PRICES

Make out your bill, stating just what you require—lumber, door, windows, mouldings, etc.—and without cost or obligation to you we will promptly send you an estimate telling you what each item, as well as the entire lot will cost you delivered at your nearest station freight paid.

We Wholesale to a Nation instead of
Retail to a Neighborhood

Consumers Lumber Company

City Offices: Birks Bldg.

VANCOUVER, B.C.

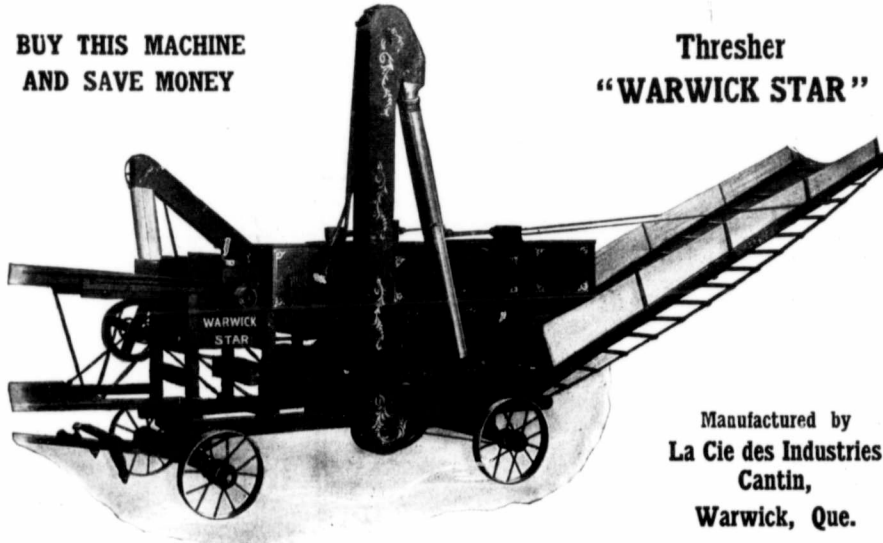
Special thresher constructed to answer the needs of the Western Farmers. We have threshers with straw elevator, such as shown in the above illustration, and with blower; also smaller threshers which can be operated by engine or horse-power.

We also have gasoline engines to suit our threshers as well as horse-power and different kind of drags and circular saw rigs.

Any farmer desirous to acquire a thresher and an engine, must not fail to ask us for circulars and prices, because we can furnish him with an outfit to thrash his grain more economically than any other on the market to-day.

BUY THIS MACHINE AND SAVE MONEY

Thresher "WARWICK STAR"



Manufactured by
La Cie des Industries Cantin,
Warwick, Que.

All information to be addressed to the head office, at Warwick, Que., or after July, 15th to

O. F. KIROUAC, King Edward Hotel, Saskatoon, Sask.

LA COMPAGNIE DES INDUSTRIES CANTIN,
WARWICK, QUE.

The distributing point for our machines is Saskatoon, Sask.

We will have repair pieces within buyers' reach.

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

The following are brief extracts from articles and an address lately published and delivered by W. E. Day, Professor of Physics, Ontario Agricultural College, Guelph, and are of especial value at this season of electric storms. It is to be hoped that they may be of service to some of our readers before it has been too late to cover their stock barns and homes from the imminent risks of lightning:

"Until recently iron and copper were the only two metals thought of in connection with lightning rods. Now aluminum also becomes a competitor as there are rods of this material on the market. For a long time copper was considered the only metal for lightning rods, the reason being that it conducts a steady current of electricity six times as well as iron, the size of wire being the same in both cases. But the difference may be overcome by using iron wire six times as large in diameter as the copper. This, however, makes too heavy a cable. As standard copper rods weigh about two and one-third ounces to the foot, the iron cable would have to weigh almost one pound to the foot to be as good a conductor of steady current as the copper rods in general use. Hence it is not practicable to make iron rods that will be as

The Value of an Effective Lightning Conductor

good conductors of steady current as the copper rods.

"To prevent a stroke there must be a gradual flow of electricity along the rod to the point and into the air. Now, for steady current, copper rods have a higher conducting power than iron ones, hence, for preventing strokes, copper rods are the best. Thus we see that lightning rods have two functions to perform; that for the one purpose, an iron rod is the best, and for the other a copper. Taking into consideration the question of durability, I am inclined to believe that on the whole copper is a somewhat better material than iron.

At the Ontario Agricultural College, where we have been collecting reports on lightning for eleven years, we have found that of all buildings reported to us as being struck by lightning 55 per cent, or more than half, are burned, whereas of the rodDED buildings struck, only one in six was burned, which is a little over 16 per cent. Comparing 55 with

16 we concluded that an unrodded building if struck is more than three times as likely to be burned as a rodded one if it is struck.

"As to the other information of lightning rods, that of preventing strokes. The strongest evidence we had in favor of the claim that lightning rods do prevent strokes was the testimony of the Farmers' Mutual Lightning Protected Fire Insurance Company, of Flint, Michigan, which, as its name indicates, insured only rodded buildings, whose rodding, moreover, must be approved. This company, in its three and a half years of experience had only paid ten dollars for damage due to lightning, although they had worked up a business covering 5,011 policies carrying risks which totalled over \$15,000,000.

"Here let me sound a note of warning to every one who is having his buildings rodded. Be present and see the ground rods put down. Know for yourself that the rods are actually down eight feet or more. Don't take

anybody's say so on this point. Lightning rod men, as a class, are as honest as any other class of the community, but an odd one is unscrupulous and will 'scamp' the job if possible. We have records of cases where the rodding agent, instead of putting the cable eight feet straight down into the earth, has coiled it up and buried it in a shallow hole in dry earth. Nothing could be more dangerous. When electric power companies want to prevent the lightning from coming in on the line wires and damaging their machinery, they make a 'choke' coil of several times of the wire just inside the station and beside the line put a ground wire. When the lightning follows the line to the station the 'choke' coil makes it so difficult for the sudden current to pass that it jumps the air gap to the ground wire in preference and thus escapes to the earth. Now, the coil at the foot of the lightning rod acts just in the same way. It chokes the flash back and makes it take some other path, down through the building, probably firing the building on the way.

"Consequently, let me say again look well to the groundings. They are probably the most vital part of the system. See the ground rods put in and deep enough to reach moisture.

How to Overhaul Your Automobile

Continued from page 30

to be attended to. Commencing with the motor, the first step is to strip the engine of lubricator, carburetor, pump, wiring, spark plugs, inlet and exhaust manifolds, magneto, outside oil leads, fuel, water-pipes, and their connections. In taking off the exhaust manifold it is unnecessary at this stage of the work to remove the exhaust piping and muffler. Disconnect and free the engine by unscrewing the union at the manifold end.

In taking apart spark and throttle rods and other parts about which some doubt may be felt as to their exact relative positions, a check mark made with punch or file should be made on both parts. This is a much surer way than to trust to memory, and if this system is followed in taking apart the entire car much labor will be saved when the work of assembling is attempted. The magneto should be removed from the engine but not taken apart. When the motor is completely stripped the lower half of the crank case should be removed.

In the garage, where help is always within call, it is the custom with most repair men to uncouple the big ends of the connecting rods and to lift the pistons and cylinders off together. This is not practicable in the case of a one-man job, as the combined weight of pistons and cylinder castings is too much for one man, unless a portable hoist or crane is at hand. The best way is to remove the holding-down bolts which fasten the cylinder to the upper half of the crank-case and lift the cylinder off the piston. When the motor is cast en bloc the weight of the casting is considerable and the assistance of a helper will be required, or a tackle hoist may be rigged to do the trick for you.

Most cars nowadays are made with cylinders cast separately or in pairs of twos and threes, and they may be easily lifted by one man standing astride the frame. To prevent the possibility of straining and springing the crank-shaft and connecting rods, the castings should be lifted up and pulled off with the pistons in an upright position. The pistons and their connecting rods may then be removed by uncoupling the big ends to free them from the crank-shaft. Each piston should be marked with file or punch, that they may be assembled in their respective cylinders. This is important to observe, otherwise the compression of your motor will likely fall off to a very noticeable extent.

The cylinders should now be wiped clean on the outside and

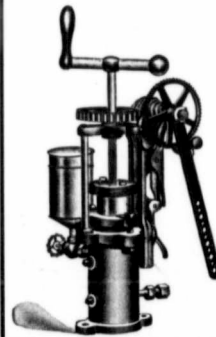
either soaked in a bucket of kerosene, or the inlet and exhaust ports and spark-plug openings plugged with corks or tightly fitted wads of waste, and filled with kerosene to remove the old oil and soften the carbon deposit. If the inside walls are found to be badly encrusted with carbon, this must be removed, either by scraping or by the use of a solvent. A convenient tool adapted for this work may be had of the dealer, or an improvised tool may be made by turning over the end of an old half-round file and grinding the edge sharp. Many motorists are now using one of the several carbon removers so largely advertised, and while the writer has not given these preparations a thorough trial, much is said in their favor. As is well known, kerosene is a good solvent, and will soften and remove all ordinary deposits of charred oil.

This done, the pistons should be examined, and if the rings show signs of wear they should be replaced with new ones. If the rings fit tightly in their grooves and the rubbing surfaces are smooth and bright, they will probably require only a good cleaning. A small bristle brush (such as is used in the kitchen to scrub vegetables) will come in handy for cleaning bolts and screws and other small parts. The piston or wrist-pin should be examined, and, if loose, the set-screw which secures it in place should be tightened. If looseness is the result of wear, a new piston-pin will be necessary.

It is important that the piston-pin be a good tight fit, and as most cars are fitted with some kind of an anchoring arrangement, trouble of this kind is not so prevalent as formerly. A loose pin is a source of danger, as it is likely to work out beyond the face of the piston and so score and cut the soft iron walls of the cylinder.

After the several pistons have been thoroughly cleaned and the rings snapped back into place, the valves may be attended to. It will probably be found that the valve gear is in good shape, and requires only to be cleaned. The entire valve-operating mechanism may be readily removed by unscrewing the plates fastened to the upper part of the crank-case. Although the large majority of American cars make use of the roller plunger rod, some few are equipped with steel balls, and a very few still cling to the older-fashioned solid-steel heads working against the steel cam. All of the devices seem to perform their functions remarkably well, and as the balls, rollers, and pins are made from special hardened steel it is seldom necessary to replace them because of wear.

Traction Engine Lubrication



is a big problem when you do not have a good oil pump. It's hard on the engine and it is a waste of oil and money.

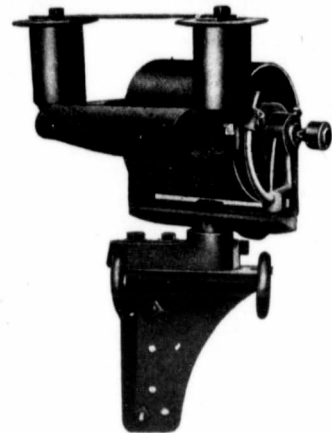
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solves the problem. It keeps the engine always lubricated, and will do it with any kind of oil you use. Automatic in action. Very simple in construction and principle. Is guaranteed with a money-back guarantee which means you are taking no chances in buying an Acorn. We can ship at once—order today.

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Winnipeg, Manitoba

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

For valve-grinding one may use any of the abrasives put up for this purpose, or employ powdered glass, carborundum, pumice, or emery as preferred. All are in use and give satisfaction; but whatever grinding medium is selected the motorist should make it a point to procure only the finest grades. A coarse, gritty abrasive is altogether unsuited for valve grinding, and it will be found impossible to do a good job with the coarser grades. The object of valve grinding is primarily to remove the carbon and pit marks due to excessive heat, and while it is advantageous to first dress off the face of a badly pitted valve with a flat single-cut file, this preliminary smoothing up must be followed with the usual grinding with emery.

A valve which has been properly ground in will show a bright ring of polished steel over the entire bevel face and seat, and it should be practically free from score marks and scratches. High compression can only be secured by keeping the valves and their seats clean and bright, and in view of its importance the motorist should not slight this part of the work, but take ample time to do it well. To grind in the valves, put a little of the fine emery or other abrasive in a tin cover, add

a teaspoonful or two of kerosene to make a fluid-like paste, then add a few drops of heavy lubricating oil to give the mixture a little more body and prevent it from running too freely. Smear a little of this on the bevel face of the valve and also on its seat, and rotate the valve by inserting the blade of a screwdriver in the slot in the valve-head.

Grinding the Valves

A screwdriver having a smooth, round handle is preferable, and the grinding is most easily done by rotating the handle between the palms. That the grinding may be uniform, the valve should be given a dozen or so turns in one direction, then lifted up and rotated in the opposite direction, repeating this alternate grinding and lifting until the surface of both valve and seat is smooth and bright. All the valves should be ground in after this manner, and when all have been attended to the valves and seats should be wiped off with gasoline to remove all trace of the grinding compound.

In case the stem of the valve is found to be warped or worn thin near the head, the damaged valve should be replaced with a new one, which must be grounded in in the same way as outlined above. Valve springs should

also be tested and replaced where required. The springs of the exhaust valves are far more likely to lose their elasticity or "set," owing to their being subjected to the extreme heat of the exploded gases.

Before the cam-shafts can be taken out it will be necessary to remove the radiator. This is easily accomplished, as it is only necessary to unscrew the bolts which fasten it down to the frame. It is a good plan to remove the fly-wheel also, as the bearings may be more readily adjusted if the crank-shaft is free and light. The cover which encloses the timing gears may now be removed, and the cam-shafts taken out of the opening. It is the practice of present-day manufacturers to mark the proper meshing point

of the gears by means of punch marks on the crank-shaft, cam-shaft and magneto driving gears.

These meshing points or timing marks are sometimes designated by letters, but are often indicated by a single punch mark, one being on the tooth and the other straddling the two teeth in which the first should mesh. In case the timing is not indicated on the cam-shaft of your motor, these check marks should be made with a punch before the gears are disturbed. If this is done, considerable trouble will be saved when the motor is assembled, as the timing of the valves must be correct if the marked teeth are assembled to mesh in the proper indicated positions. The cam-shafts will probably only require cleaning,

FARMERS! We Invite You

to make our office your headquarters at Exhibition time and to get better acquainted with us. Likewise we appreciate meeting personally many patrons who have favored us with their business the past two seasons.

We are right here with better facilities and greater experience to assist you, this year of low prices, in making the best sales of your grain.

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but in the event that the cams are considerably worn, a new cam will be needed. If the cam-shaft is of the integral type, a new piece of metal will have to be welded on to build up the damaged part. Repairs of this nature can only be properly made by expert workmen, and the factory is the proper place for doing the work well.

Clutches of the multiple-disc design may be removed as a unit by simply taking off the cover of the clutch-case, disconnecting the clamps connecting clutch with transmission shaft, and unscrewing the bolts fastening the two clutch members. In some cars using clutches of the cone type it will be necessary to disconnect the rear dust-pan and remove the set-screw which secures the sleeve to the universal joint, which may now be moved forward. The radius and brake rods must also be disconnected, which will allow the transmission

to be moved backwards in its yoke, and the tumble shaft will drop out. Drive the universal coupling off the clutch hub, detach the side links, and remove the ball race and clutch spring. The cap screws which fasten the clutch ring to the flywheel are now readily removed, and the entire clutch may be taken out.

In other makes of cars which the writer has overhauled the clutch is most easily taken down by removing the pedal shaft, the central member of the clutch coupling, the nuts holding clutch shaft, and the spring nuts and springs. The exact manner of taking down the clutch varies with different cars, but if the coupling shaft which connects the clutch shifting sleeve is first uncoupled, there is generally sufficient room between clutch and gear-box to take the clutch apart.

Making the Clutch Work Better.

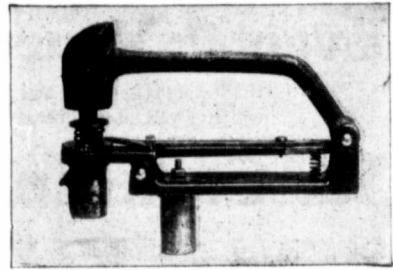
In case the leather face of the cone clutch is in good condition, with the exception that it is worn down so as to expose the rivets, much additional service may be had by resetting the heads of the rivets below the surface. A cone clutch which takes hold with a "fierce" grip may often be remedied by resetting the rivets. If the leather is dry and the action harsh, give it a couple of dressings of castor oil.

In case the main or crank-shaft bearings have considerable play, this looseness must be taken up. In many motors this adjustment is effected by means of shims or thin strips of metal, which are inserted between the bearings to allow for natural wear. When adjusting the bearings it may be necessary to remove one or perhaps two of these shims from each side of the bearing. After the shims are removed the nuts should be tightened, and the bearings will be found to fit closer to its shaft. Though a bearing should fit snugly and without undue play, it must not be set up so tight as to bind and pinch the shaft, and where the metal shims are found too thick to make the proper adjustment the insertion of paper shims will often do the trick.

When the center and rear bearings are mounted in disks, adjustment is made by wedges lying on top of the caps. These wedges are provided with two nuts, and it is only necessary to turn up the nuts until the play or looseness is taken up. The crank-pin bearings are generally provided with brass or copper shims, and one or more may be removed, and the nuts set up to make a proper fit. Care should be taken not to pinch the bearing, lest the cap be bent and thus bind the shaft.

Owing to the fact that almost all motors are provided with an-

MORRIS Improved BEADING TOOL



This invention is a great labor saver, especially for work on tubular or flue boiler, as the old style beading tools cannot be held in the right position under the crown sheet or top row of tubes and the same on both outside rows, and the operator was unable to strike right and was thus liable to cut or crack the flue. This new patent flue beader is self-guiding, and will bead just as easy on the sides and top rows of tubes or below the crown sheet as in the most convenient part of the boiler, and one strikes straight blows with the hammer, no twisting of arms with this beader, all nice straight work. It will bead all tubes alike. Just place tool in flue as per direction with each tool, operate hammer and you can beat twice as fast with not half the work.

SIX REASONS WHY YOU SHOULD HAVE IT

1. Because it can be used in any and all makes of boilers.
2. Because it does not require an experienced hand to operate it.
3. Because it expands the tube at the same time of beading.
4. Because it compels you to treat all parts of bead alike.
5. Because it expands under a spring pressure allowing tube to upset and reinforce in tube sheet, instead of being crushed away as by other expanders.
6. Because tubes beaded with the Morris Improved Beading Tool will last twice as long as tubes beaded in the old way.

The Maytag Co. Ltd., Winnipeg.

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—Your Family and Stock from Disease

The ruinous drought of 1913 taught farmers a bitter lesson! Farmers with deep drilled wells had abundance of pure water for irrigation—for live stock. They were not imperiled by deadly typhoid, malaria and other fatal diseases that breed in the water from shallow and "dug" wells.

That's why, right this minute, there is no finer *more* drilling to be done than drillers do to it!

Men Who Had No Previous Drilling Experience Write Us They Are Making \$20 to \$50 a Day with

Armstrong Well Drills

Reliable drillers everywhere are months behind their orders! It's the chance of a lifetime! Farmers—railroadmen—engineers—threshermen—men from all walks of life—are grasping this remarkable chance to get into a good paying business for themselves.

Learn how you can get started in this business. Learn how you can get a drill that will drill fast and at a lower cost per foot than any other well drill in existence, the Armstrong Well Drill, either portable or traction—built for service since 1887. And pay for it on our part cash and time payment plan.

Shrewd Threshermen Keep Their Crew Busy All the Year Round with a Well Drill!

The Armstrong Well Drill is a marvel of simplicity, efficiency and durability. Supplied with wonderful engine built for drilling requirements. Three right hand levers complete every operation. Many beginners average 50 ft. per day. That, at \$1.25 a ft., will be 62.50 in 62.50! On hard tests it has averaged 92 ft. per day through no id rock, using only 6 1/2 gallons fuel! Figure the profit possibilities out for yourself!

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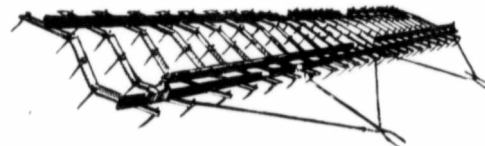
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Showing method of attaching Christiansen Engine Plow Harrow. This harrow is flexible and is built of steel.

THE CHRISTIANSEN ENGINE PLOW HARROW

is the only harrow on the market today that can be used successfully after an engine gang. It can be adjusted to any angle, and does not interfere in the least with turning at the ends. Adjustable to same angle for all sizes of plows.



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Don't begin your Spring work until you have investigated our line of harrow attachments. They have no equal. More of them in use than all other makes combined.

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6-bottom, 2 sections	\$18.00
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Saves \$2 per day for every plow and man.

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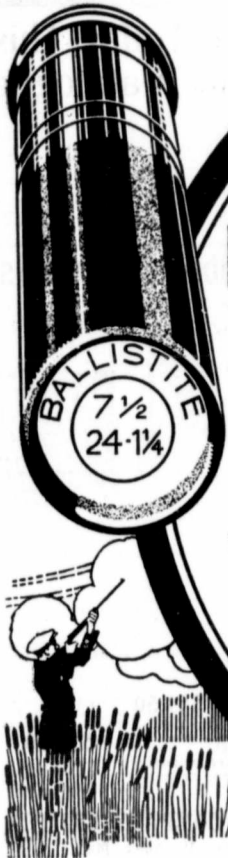
nular ly that require thorough are for their gear s should ones, c turer. is mou remova the m should with ke lubrica be held oil. In th axle—w in mod may be culty. hub ca wheels axle-sha drawn tubes. case giv tial hou hold the stion. (general bevel dri must be for the r

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BALLISTITE DENSE AND **New** BULK **Empire** **Smokeless Powders**

BALLISTITE (Dense) A waterproof powder of high velocity, yet gives lower breech pressure than any made. Considered the "fastest" powder ever put into shells.
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You can get BALLISTITE and NEW EMPIRE smokeless powders in any shell loaded in Canada. Specify them and get highest results!



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mular ball bearings, it is not likely that the change-speed gear will require anything further than a thorough cleaning. If the gears are found to be badly worn at their edges through improper gear shifting, the injured gears should be replaced with new ones, ordered from the manufacturer. Where the transmission is mounted as a separate unit, the removal of the cover will expose the mechanism, and the box should be raised off and filled with kerosene to remove the old lubricant and any grit that may be held in suspension in the old oil.

In the floating type of rear axle—which is most widely used in modern cars—the differential may be taken down without difficulty. After the rear axle shaft, hub cap, driving clutch, and wheels have been taken off, the axle-shafts should be partly withdrawn from their protecting tubes. The removal of the top case gives access to the differential housing cap screws, which hold the differential gears in position. Removing these screws (generally six in number) the bevel driving gear roller bearing must be taken out to make room for the removal of the assembled

differential gears. The live rear axle and differential gears seldom give trouble if kept clean and supplied with suitable lubricant.

In case any great amount of play is found in the bevel driving gears, the looseness between the crown and bevel pinions may be taken up by adjusting the gears to mesh closer with each other. This adjustment requires good judgment, since a very slight change in the position of the two gears is likely to increase the friction in transmitting power to the wheels, and the inexperienced should consult a competent automobile man in case the differential requires adjustment. The oil in the housing should be drawn and washed out with kerosene, opening the drain plug provided for this purpose, and then filling up with the proper quantity of oil or light grease recommended.

The mechanical oiler or pump should be taken apart and thoroughly cleaned out with kerosene or gasoline to remove the old oil. The oil pipes and leads should likewise be cleaned out by forcing a gun or two of gasoline through them. Where a sight feed is fitted to the dash, this should be taken apart, cleaned, and the

glass washed out with gasoline.

Looking after the Wheel

The axles and bearings of each wheel should be cleaned with kerosene or gasoline. The roller or ball bearings will probably be in good condition, but if found otherwise the damaged part must be removed. The tires should be removed, the rims cleaned of any rust that may have accumulated, and the metal sandpapered smooth. Further rusting may be prevented by either painting the rims with a couple of coats of black enamel, or by the application of beeswax, melted and applied with a brush.

The brakes should be taken down and well cleaned and examined for possible wear. If the frictional lining or expander shoes are worn to any extent, these should be renewed. Toggle joints and all adjusting bolts and screws should be attended to and any looseness taken up. The brake-lever and foot-pedal should be examined to ascertain if they have the proper amount of travel required for efficient breaking. The adjustment of the brakes should, however, be left until the car is assembled, and as the maximum braking power applied by

the equalizing bar can only be secured if both brakes are adjusted as nearly alike as possible, this important matter can only be properly determined to a nicety while the car is driven on the road.

As the tires are by far the most expensive item in the maintenance of a car, the matter of shoes and tubes should be given careful attention. After removing them the tires should be cleaned of any adhering mud and the inside brushed out to remove the old chalk. The tread should be examined for cuts and holes, which should be cleaned with gasoline to remove the dirt, and then sealed with rubber solution. Large cuts can only be properly repaired by vulcanizing. The motorist should make it a point to repair all cuts and punctures in the shoes at once, thus preventing the entrance of dirt and moisture. If this is promptly attended to, sand blisters and mud boils will be done away with and the life of the tire will be considerably lengthened.

As soon as the tread begins to show signs of excessive wear, the worn shoes should be removed from the wheels and sent to the factory to be retreaded.

Lime Water for the Preservation of Eggs

(From Bulletin issued by the Extension Department, University of Saskatchewan.)

A series of experiments in egg preservation was carried on by Professor Shutt, of the Central Experimental Farm, Ottawa. This work, extending over a period of seven years, and involving as it did the trial of twenty-five different preparations, has shown conclusively the superiority of lime water over all the preservations tested.

The Preparation of Lime Water
Concerning the preparation of lime water, Professor Shutt says:—

"The solubility of lime at ordinary temperature is 1 part in 700 parts of water. Such a solution would be termed "saturated lime water." Translated into pounds and gallons this means 1 lb. of lime is sufficient to saturate 70 gallons of water. However, owing to the impurities in commercial lime it is well to use more than is called for in this statement. If freshly burnt quick lime can be obtained, 1 lb. to 5 gallons (50 lbs.) of water will be ample, and the resulting lime water will be thoroughly saturated." The method of preparation is simply to slake the lime with a small quantity of water, and then stir the "milk of lime" so formed into 5 gallons of water. After the mixture has been kept well stirred for a few hours it is allowed to settle. The clear liquid above which is now "saturated lime water" is drawn off, and poured over the eggs which have previously been placed in a crock, butter-tub, candy pail, or other suitable container.

As exposure to air tends to precipitate the lime (as carbonate), and thus to weaken the solution the vessel containing the eggs should be kept covered. The air may be excluded by a covering of sweet oil, or by sacking upon which a paste of lime is spread. If after a time, there is any noticeable precipitation of the lime, the water should be drawn or siphoned off and replaced with a further quantity newly prepared.

If many eggs are to be preserved, a large quantity of lime-water may be prepared at one time in a tub or barrel, and used as required, provided it be not kept exposed for too long a period. Since lime is very cheap, and there is no danger of making the lime-water too strong, one could safely use twice or three times as much lime as is indi-

cated above, if there is any question as to its strength of freshness.

A Few General Rules

1. Use only perfectly fresh eggs. (On the farm it is well to put each day's eggs in lime-water as gathered. In a store the freshness of the eggs should be determined by candling).

2. Do not put in any cracked or thin shelled eggs. One broken egg in a crock may in time spoil 12 or 15 dozen.

3. Do not have containers too large. Crock (3 to 5 gallons) are convenient. Butter-tubs or candy pails will serve well enough, particularly if they have previously been coated on the inside with hot paraffin wax. Aside from the greater convenience of small container, there is less risk of a broken egg spoiling a large number of sound eggs.

4. Be sure to keep eggs completely covered by the lime-water during the whole period of preservation. It is well to have an inch of liquid above the tops of the eggs.

5. It is best to store the crocks of the eggs in an airy cellar or basement. A room in which the temperature does not go above 45, nor below 35, is most suitable. If allowed to freeze the shells crack and the eggs are useless.

If the above instructions are carried out there will be no trouble in preserving eggs in good condition for six or eight months. At the college we have just finished using (April 15) some eggs put in lime-water last August.

During the first week of April, 1914, at a number of country points, eggs were sold at 12½¢ per dozen. Next winter these same eggs, or what is left of them, will be sold out of cold storage at from 35¢. to 45¢.

Two or three crocks and ten cents worth of lime will take care of all the eggs most families require during the winter. Try it once, and see how you like using first quality eggs at 15¢. a dozen in January.



At Rest

"Well, did them picture people get moving pictures of everything on the farm?"

"Everything but the hired man," said Farmer Heck. "They couldn't ketch him in motion."

Let Us Send You Today This Amazing Bargain Catalogue

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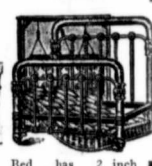
It is crammed full of money saving bargains at prices that guarantee you a saving of 25 to 50 per cent. You will find a complete line of FURNITURE, STOVES, VEGETABLES, GROCERIES, HARDWARE and numerous other articles for the Home and Farm. Every article listed is GUARANTEED to give entire satisfaction, or your money will be refunded immediately together with all freight charges. We will send you this BIG CATALOGUE FREE on receipt of your name and address. It will be the means of saving you considerable on your purchases, besides giving you merchandise of QUALITY, that is only obtainable at our store.

Three Big July Exhibition Specials

Quarter Cut OAK BUFFET and CHINA CABINET

Complete 9-Piece DINING ROOM SET at Big Saving

No. 3F679—Complete Bed Bargain Offer



\$49.50

Something entirely new in a combination. Made of solid Oak highly polished. Base is 40 in. wide, with two China cupboard doors, bent glass doors, two large drawers and large cupboard. Nicely shaped bevel plate glass in artistically shaped back, with two small bracket shelves. Special price for July buyers—

This beautiful set is made of hardwood, finished surface oak, golden of early English finish. Buffet is 46 inches wide and has three small drawers, one large drawer and double cupboard, leaded glass doors. China closet is 30 inches wide, 38 inches high. Table has 45-inch top, and extends to 6 feet. Diner set consists of five small and one arm chair, upholstered in imitation leather, strongly constructed, brass arms on small chairs. It will pay you to look over this big value and many more we are offering. We save you 25 to 50 per cent. over what other houses ask.

Bed has 2 inch continuous posts, ¾ tilters, made extra strong and finished in Venus Martin all-gold finish. Spring has woven wire, fabric supported underneath by special springs. Frame is all steel. Mattress has Excelsior center overlaid with heavy cotton felt. Covered in a high-grade art ticking deeply tufted. A regular \$25.00 outfit. No. 3F679—Bed, Spring and Mattress

No. 1011—\$21.75

\$49.50
Visit our Showroom and Exhibit when in Winnipeg for the Big Exhibition, July 10th to 18th.

\$16.50

DON'T purchase your Oils, Belting, Pumps, Cup Grease, Suction Hose, Hardware and General Supplies until you have our prices. We quote on a complete line in our Big Catalog. Send for it to-day and save 30 to 50 per cent.

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OWL BABBITT METAL

For Thrashing Machines, Small Gas and Steam Engines.

Cash with order price 30¢ per lb.

Scientifically alloyed Babbitt metals made in Winnipeg by

The Owl Metal Co., Ltd.

Metallurgical Experts
151 Notre Dame Ave. WINNIPEG

OWL TRACTION METAL

For Gas and Steam Tractors will stand heaviest work. Worth \$1.00.

Cash with order price 65¢ per lb.

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Lower Prices on GENUINE GOODRICH TIRES Direct from Headquarters

This wonderful drop in prices on a number of the popular sizes of the accepted standard automobile tires means a great saving in running expenses. Prices quoted are f.o.b. your nearest station.

Size	Smooth Tread		Safety Tread	
	Prices	Prices	Prices	Prices
30x3 1/2	\$15.25	\$16.45	36x4	\$35.00
32x3 1/2	20.50	22.10	38x4 1/2	45.00
32x3 3/4	22.50	24.45	38x4 3/4	47.25
33x4	31.80	34.10	37x4 1/2	48.55
34x4	32.85	35.15	37x3	36.60
35x4	33.95	36.30	38x5 1/2	72.00

Send in your order now. Other sizes at corresponding scale. Don't Pay More.

Mailday Bros., 268 Hargrave St., Winnipeg, Distributing Agents for

B. F. GOODRICH CO., Akron, Ohio

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

The Development of a New Industry in Winnipeg, Canada



Farming the FOX

A Wonderful New Industry

Write for our Illustrated Booklet to

The Great West Silver Black Fox Co.

LTD.

SOMERSET BUILDING, Winnipeg, Canada

DURING the past four years one of the most wonderful of new industries has grown up in Canada, that of FOX FARMING. It received its first start and impetus in Prince Edward Island, and has made the first millionaires of that Maritime Province. Our own Northern Manitoba is the natural home of the Silver Black Tipped Fox in Canada, and it is here in Manitoba that this Company intends to operate. The days of the trapper are passing for ever and the demand for precious fur is constantly increasing and the price advancing. The business of Fox Farming holds out a literal and actual reward of millions. This has already been proven.

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

WE are glad to direct the attention of readers to the proposal made by the "Western Okanagan Orchards Co., Ltd.," particulars of which will be found elsewhere in this issue.

The beauty of the Okanagan Valley is world famous. Its salubrious and uniform climate is also beyond peradventure and its extraordinary fertility and fitness for intensive fruit culture has been demonstrated in the most remarkable manner. It has been advertised far and wide as one of the most delightful spots on earth to live in, the ideal corner in which to build a home where the wearied toiler of the plains may spend the evening of life.

A Sane Method of Settling the Fruit Lands

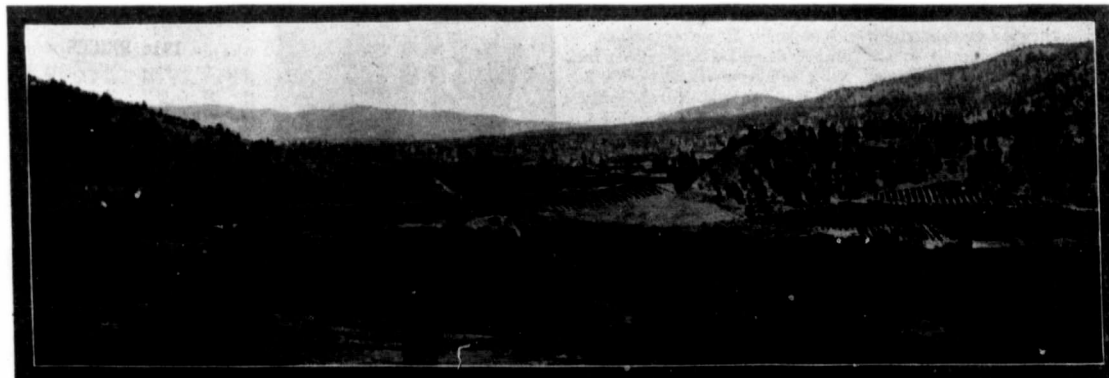
After a fairly intimate knowledge of the "Okanagan" extending over some years, and having in some measure been the means of inducing friends to settle there, we would not subtract one line from anything that has been written or a single picture from the multitude of embellishments which have been used in Okanagan publicity literature; not even as to its money making

possibilities. And yet there have been failures, but when these have been looked into, it has invariably been found that they are due to causes entirely outside local conditions and are in no greater proportion than the unfortunates to be found in every walk of life.

Nearly all if not all of the disappointments we know of in fruit growing in B.C. have been

due either to lack of experience or (which is practically the same thing) starting in to wild land or unplanted soil without anything like sufficient capital to meet necessities until the property was a revenue-bearing one. Just here the Western Okanagan Orchards Co. meets the case and their proposition is briefly as follows:

The company have divided their land in 5 and 10 acre lots, which will be cultivated and planted with apple trees of the best standard commercial varieties, 150 trees to the acre. The trees will be given the best scientific horticultural attention during the developing period, and the orchard turned over to the



Typical Okanagan scene showing a corner of the Western Okanagan Orchard Company's Property.

purchaser at the end of 5 years, full bearing and income producing.

This plan must appeal strongly to those who desire to purchase an orchard as an investment, or income property, and who would hesitate to undertake the planting and care of the trees during the developing period. The company assumes all responsibility, the price to purchase including all costs up to the fifth year or bearing period.

Thus at the end of 5 years, say in the case of a ten acre orchard the purchaser comes into possession of a property, the income from which, that same year, will net him from \$1,200 to \$1,800, which income will be increased from year to year as the trees grow larger and their production increases. Trees in their fifth year will produce, on an average 1 1/2 boxes per tree. The average price to grower is \$1.00 per box. The increase in production is about 1 1/2 boxes per tree per year, until the twelfth year, at which age a tree will produce from 12 to 17 boxes. The company guarantees 120 bearing trees per acre.

In addition to the income assured, the orchard has greatly increased in value by reason of said income. Orchards in their fifth year are worth on the market from \$1,000 to \$1,500 per acre, so that during the period in which the purchaser has been paying for it and developing it, it has

increased in value by reason of its earning power, making the valuation profit of \$3,500 to \$4,000 aside from the crop income. As the trees increase their production so does the land value increase. 12-year-old orchards are worth from \$2,000 to \$3,000 per acre, many trees producing from 30 to 32 boxes.

The company has set aside a section of land to be sold as raw or unplanted land, for those who desire to cultivate and plant their own orchards. To the purchaser of such land, company experts will give such information and advice as may be required, assist in the selection of trees, advise as to care and cultivation, and, in fact, assist in every way possible. It is to the interest of the company that each individual orchard be a success, and to this end are only too glad to assist purchasers in every way.

As loyal Canadians, we are intensely desirous of seeing British Columbia "coming into its own." It already is producing splendid object lessons of its possibilities under experienced management but these are, alas, somewhat few and scattered. Where B.C. has been given a black eye, it has been administered unwittingly by some bungling novice who not only has dropped into his self-made furnace of affliction but has done not a little to wreck the reputation of one of the grandest bits of country on God's earth.

Cutting Six Inch Scrub Oak Like Mowing Hay

This is a day of big things, but for real utility we have seen nothing for many years in the way of clearing obstacles to agricultural progress like the work of the Eagle Steel Scrub Cutter. It was our privilege a few days ago to see this wonderful machine at work on the farm of J. Bohemier of St. Vital, the power used being a medium sized Hart-Parr Gas Tractor.

The experiment was made upon a large poplar bluff in the presence of a "cloud of witnesses" consisting of farmers, implement men, expert mechanics, and far-travelled journalists. The bluff was densely treed, chiefly poplar, but with an odd oak here and there. The trees ran from 3 to 8, 10 and in some cases over 12 inches in diameter near the base. The cutting blades are close to the soil, the machine was weighted with rock from the neighborhood, and one man (the

engineer) did the entire job of cutting.

The following in brief is a description of this splendid implement, but needless to say it is not possible to give a satisfactory impression of it and the ease with which it cuts into the timber unless one can see it demonstrating in the scrub.

The main frame or runner is formed of 60 lb. steel rail on the No. 1 and 2 cutters, and of 80 lb. steel rail on the No. 3, which makes a very stiff and unbreakable support for all braces.

The knife plate or cutter bar is formed of a wide plate of steel drawn to an edge and reinforced underneath with a narrower plate of heavy steel, making a very stiff bar, the back of the knife coming in contact with the reinforcing bar, thus taking the strain off the bolts. The knives are 12 inches in length and cut in the form of a mower section, and when

IT WILL PAY YOU TO WRITE FOR OUR NEW CATALOG



It shows a complete line of plow shares, farm implement supplies, threshers supplies, belting, oils, stoves, beds, pumps, harness, etc.

Our canvases are made of best quality No 11 white cotton sail duck, hardwood slats and oak tanned harness leather. They are strongly and well made and guaranteed to give perfect satisfaction. Write for Catalog.

Platform Canvases, any make. Elevator Canvas, any make. Each. 6 foot \$4.50 Upper \$3.50 7 foot 5.00 Lower 4.00 8 foot 5.50

Wire Lined Ironclad Suction Hose. 45c per foot.

Our suction is one of the best on the market. It is made of extra quality rubber, covered with 4-ply of heavy canvas, supplied in either 20 foot or 25 foot lengths at 45c. per foot.



A full line of oils, greases, injectors, etc. carried in stock.

95c lb. Genuine English Lace Leather Side 95c lb.



4c each Binder or Mower Section 4c each. We carry a full line of binder or mower sections, also guards, plates, etc. Price per box of 25, including rivets, \$1.00.



Plow Shares

Our Shares are made of the best quality absolutely guaranteed crucible cast steel.

H. R. HAWKEY & Co.

WINNIPEG

HARDWARE MAIL ORDER SPECIALISTS

REFERENCES BANK OF HAMILTON

MAN.

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

No Punctures, No Skidding On This Year's Program



You can enjoy the benefits of pneumatics with none of their drawbacks. You can drive anywhere without fear of skidding, punctures, stone cuts, bruises or oil rot. You can come home at night, or hurry for an engagement, or set out for a tour, without fear of your pleasure or business being spoiled by tire troubles.

Best of all, you can spend LESS money instead of more.

WOODWORTH TREADS are an always-ready non-skid and puncture preventer. They are ALWAYS ready for greasy roads, and an ever-present surety against tire damage.

Their patented coil tension springs absolutely prevent them from stretching loose and chafing the tires. They are soft and glove-like, yet very durable. Their life is equal to that of bare tires in equal service; but new tires covered by WOODWORTH TREADS last about three times as long as when run bare. Thus the Treads earn more than their whole cost in the tires they save.

WOODWORTH TREADS for 1914 sell at the same prices in Canada as in the United States.

1914 PRICES

Size	Price	Size	Price
30 x 3	8.00	34 x 4	\$16.50
30 x 3 1/2	10.75	35 x 4	17.25
32 x 3 1/2	11.50	36 x 4	17.75
33 x 4	16.00	36 x 4 1/2	22.00

Other Sizes in Proportion

WOODWORTH TREADS are sold by JOHN MILLEN & SON, LTD., and THE CANADA CYCLE AND MOTOR CO. at all their branches and by first-class dealers everywhere. Send for our new booklet, "Tire Users New Freedom."

Leather Tire Goods Company

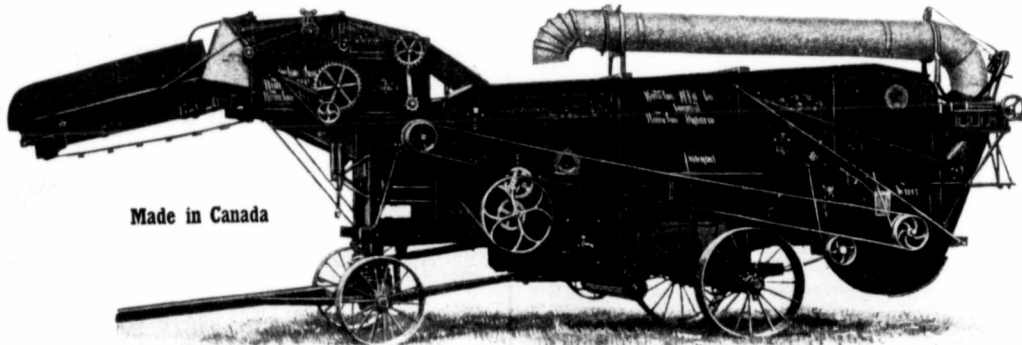
Niagara Falls, Ontario

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

bolted serrate through Knives change by any The up to feature formed blades t easily t sharpen cut the is brace heavy : being u front er rail by a to fit in class ro 4 or 6. the No. shackle No. 3 m. As the chine is l iron. E ciently heaviest practical same ti simplest with no parts. "The F doubtful on the m and wher

"WATERLOO" Engines and Separators

"WATERLOO" Threshing Machinery, as it stands to-day, represents the experiments and improvements of more than sixty years of manufacturing experience. A "Waterloo" Separator will give absolutely reliable service. It is especially adapted for gasoline engine power; easy to drive; convenient to operate, and, with its popularity as an efficient grain saver, merits careful inspection. "Waterloo" Separators are the greatest grain savers on the market. Our line of Steam Engines is complete; 18 to 27 H.P. Intending purchasers are invited to investigate fully the "WATERLOO" line before placing their orders



Made in Canada

"CHAMPION" and "MANITOBA CHAMPION" Separators

Made in sizes: 28-42; 33-52; 36-56 and 40-62.

We will be glad to send our latest Catalogue—drop us a postal.

We Carry a Full Line of THRESHERS' SUPPLIES

THE WATERLOO MANUFACTURING COMPANY LIMITED

Branch Office and Warehouse
REGINA, Sask.

Western Headquarters
PORTAGE LA PRAIRIE, Man.

Head Office and Factory
WATERLOO, Ont.

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

bolted in place form a continuous serrated knife, which cuts through the wood very easily. Knives are reversible and interchangeable, and can be sharpened by any good blacksmith.

The spade wheels, for holding up to the work, are a special feature of the machine, they are formed by bolting heavy steel blades to a cast hub, and are very easily taken apart if in need of sharpening. As shown by the cut the knife bar of the machine is braced direct to main frame by heavy steel braces, no castings being used for this purpose; the front end of bar is connected to rail by a heavy steel plate, flanged to fit into groove in rail. A first class roller and chain evener for 4 or 6 horses is furnished with the No. 1 machine, and heavy shackle and ring with No. 2 and No. 3 machines.

As the name implies, the machine is built entirely of steel and iron. Every part is made sufficiently strong to stand the heaviest work, and the machine is practically unbreakable, at the same time being built in the simplest and possible form and with no unnecessary and useless parts.

"The Eagle Scrub Cutter" is no doubtful experiment. It has been on the market for over two years, and where tried out it has per-

formed its duty with unvarying success. Something between four and five hundred of the machines are at work from Eastern Manitoba to British Columbia and from Prince Albert, Sask. to Billings, Montana.



A Corner of the Bluff. The poplar tree in the foreground has been cut clean through at its base, which measured 12 1/2 inches by 11 3/4.

It is claimed that it will save 75 per cent of the clearing of heavy scrub. We have no doubt from what we saw that this is quite within the mark and that it will

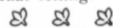
enable the holder of scrub land to get it under cultivation on a revenue paying basis in the shortest possible time.

The inventor and patentee, Mr. Eagle of Dauphin, is a native of Ontario who has spent nearly half of his life in Manitoba. With some heavy trials in clearing scrub land, and possessing an inherent inventive genius, he set to work some years ago to get the idea perfected that would effectively and quickly do the work. The result we have tried to describe. The machine seen by the writer was an improved "1914" model—a heavier and somewhat larger than the original implement.

Some slight conception of its great capacity may be formed from the observations taken on the date referred to. The circumference of the bluff was at the moment the writer came on the ground, 446 yards. The engine and cutter made the round in ten minutes, and a few seconds, and an agreed conservative estimate made 2 1/2 trees to the yard. Thus, something over 1,100 trees of varying dimensions were cut clean by the root in ten minutes—as stated with no other human assistance than the one man at the engine.

A bevy of hands, of course, were engaged to clear the trees as

they fell from the path of the engine on its next round, but this clearing process would be necessary under any system of felling and does not affect the scrub cutter and the "one man" aspect of the actual felling.



North American Machinery Co.

From reliable authority, we learn **The North American Machinery Company**, of 7 and 9 Higgins Avenue and 1, 2, 3, 4 Sutherland Avenue, Winnipeg, Manitoba, have decided to establish a distributing warehouse at Young, Saskatchewan.

The company's manager, Mr. A. Cooper, recently paid a visit to this district, and was so much impressed with the central position, unique farming district and the possibilities of Young growing and developing in a like rapid manner to Swift Current, that he placed his views before in Saskatchewan to serve the immediate needs of the district, and as a tributary to a sanatorium to be erected on the shores of the beautiful lake Manitou.

Mr. Campbell generously responded, and offered the company a free warehouse site of an area of some 35,000 square feet. This offer the company has accepted, and will commence the erection of the warehouse during the coming season.

LISTER MACHINERY

Figuratively speaking "The Melotte" cream separator has been in the mouths of the dairy world for many years. Made by the E. A. Lister Company in Dursley, England, it has found its way by sheer merit into every corner of the world where milk cows are bred and relieved of their product by any other than the primitive method of the uncivilized hottentot.

This favorite dairy machine is represented by several models (starting with the "Baby Melotte" of 180 lbs per hour), every one of which is not only a slightly article, convenient as to floor-space requirements, but of great working capacity, simple in construction, easy to handle and easy to clean.

With the recent flick up which has been given to Dairy farming in Western Canada, the Lister Company from its Winnipeg distributing house is being kept busy making deliveries as fast as they can be obtained from the works, and with the confidence of a lifetime's experience with its product, the Lister Company undertake to give a free trial of "The Melotte" on the farm of any one who needs and is contemplating buying or replacing a cream separator.

"The Melotte" has captured the highest honors awarded to dairy machinery, on at least twelve great occasions (from 1897 to 1913) when it has appeared in international contests held in the great centres of dairying, and its cabinets of trophies make a brilliant display and give an impressive idea of the place it holds in the esteem of expert dairymen.

One of its many individual points of excellence is the **suspended bowl**. Hanging free from a ball-bearing spindle, the Melotte bowl really is self balancing and practically frictionless. This feature is sometimes claimed for other makes but the manufacturers of the Melotte are careful to point out the obvious fact that the bowl which has to be supported on the top of a spindle has to be mechanically balanced and the various bearings and bushings which are necessitated thereby

The T.N.B. DUMP RACK



Mfd. by The T.N.B. MFG. CO. Ltd.
WATFORD, ENGL.

Mention this magazine when writing advertisers

cause heavy running and consequent excessive wear and tear.

Another feature is the gearing which is square cut, all enclosed and running in oil on ball bearings. There are no "worn" wheels and such like to cause needless friction, and the system of lubrication is so perfect and economical as to save half the oil usually required by cream separators.

The Lister Company claims for the Melotte the largest sale in the British Empire, over one million being in use at this date.

No less recognition has been paid by experts and the popular vote to the exceedingly compact and finely adjusted gas-engine also made in the Dursley factory of the Lister Company. It is of the vertical type and named the "Lister." It is impossible in a brief notice to do justice to this fine piece of farm machinery. It has many points to commend it beyond the common features of efficiency and durability.

One prime quality it possesses is its structural simplicity and the absence of that complicated multiplicity of parts which made some of the earlier machines and some "gas engines" still in the market a puzzle even to those who have a perfect facility in handling gas power machinery.

The "Lister-Bruston" Automatic Electric Lighting plant is another, and if possible, still more wonderful product of the Lister Company. While it has been designed for hotels, town halls, churches, private houses, etc., there can be no doubt that it is the ideal lighting plant for farm buildings. It certainly does away with the frightful risk of the common stable lantern and the no less dangerous possibilities of any gas equipment.

No attendant is required for stopping or running the plant; the simple switching on or off of the lights by any one around the house immediately starts or stops the plant however far away it may be from the house. The generating power is a low speed petrol or gas engine of the Lister Standard design, the only addition being a simple valve lift for relieving the compression for starting and stopping. Over a thousand of these are now in use and the testimonials in every case from points where they have been installed are unqualified and of the most flattering type. We have pleasure in advising our readers to look out for the Lister exhibit which will be found at all the leading fairs this season.

Teacher—How many zones has the earth?

Pupil—Five.

Teacher—Correct. Name them.
Pupil—Temperate, intemperate, canal, horrid and ozone.

The Inter-Provincial Fair

Brandon, Manitoba

July 20th to 25th, 1914

WESTERN CANADA'S BIGGEST FAIR

Farmer's—This is your Fair.

It's where you feel at home and where you see the best in Live Stock, Agricultural Products, Manufactures and Attractions.

At Brandon is where you will see the best exhibit of Live Stock in Canada, an immense exhibit of Poultry, a magnificent display of Farm Machinery, and all those other features which provide education and recreation and for which this Fair is famous.

Attractions — Aviation Flights, Platform Attractions, Grand Firework Displays each night, splendid Speed Program and many Bands.

Excursions and reduced rates on all Railroads

Entries close July 11th. Write for Prize List

Make an exhibit, it will pay you. If you miss this Fair, you miss the Best.

J. S. Gibson,
President

W. I. Smale,
Secretary

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

The Self-Steering Device

Has earned and received more gratitude from plowmen and plowing experts than anything that has been invented for the dual purpose of saving time and labor and making absolutely perfect work.

Can be fitted to any Tractor now on the Market

It is the only patented steering device now in general use on tractors. Insures to all traction engine operators the most perfect self-steering arrangement, regardless of what make of tractor they are using. Extends only five feet in front of tractor axle to truck axle, and takes very little if any more head-land. Unanimously endorsed by prominent engine experts who acknowledge it to be a direct and simple solution of all engine steering troubles. Used all over the world on all tractors. Four successful seasons in Canada. Any man can attach it to any engine. Price is reasonable, backed by a Positive Guarantee that it will fulfill its purpose.

Steer Right. Save Trouble. Save Time



Let the Cuddy do the Work

Write for Complete Details to

Cushman Motor Works of Canada Ltd.

Light Weight Gas Engine Builders

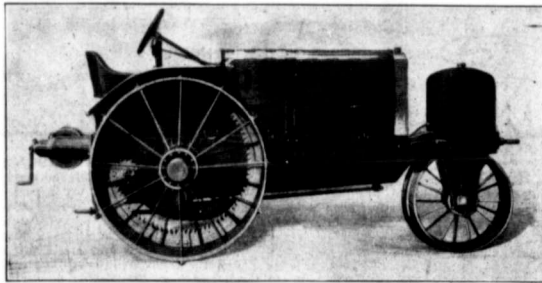
290 Princess Street, Winnipeg

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

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balance.

A CLASSY PAIR And Just as Good as they Look



The Wallis 15-20 Cub Fuel Save Tractor

is designed to suit the average farmer. Four cylinder type (each 6 x 7 inches). Develops 50 brake-horse power and weighs 8,500 pounds. It is constructed of the very best material throughout. Has 3 speeds, thus adapting itself to all kinds of farm work. Low on fuel cost and equally low on up-keep expenses. Very light in weight in proportion to its horse power.

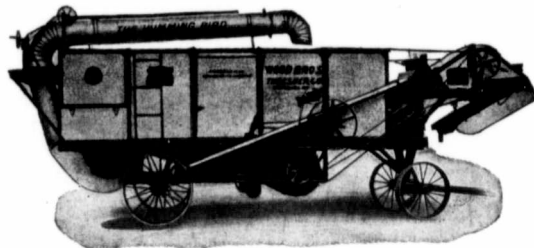
Heavy weight tractors mean excessive use of fuel in handling dead weight, hard packed strips of ground left behind each drive wheel; delays in wet weather because of tendency of heavy tractor to "mire"; inconvenience, expense and danger in crossing bridges, and a curtailment of its use as a crop-hauling machine as it quickly wears out under its own strain on rough ground.

Built Also in 30-50—Slightly Different in Design to the "Cub" The New Steel Humming-Bird Separator

Leaves no green straw stacks—Runs smooth—Noiselessly and will earn you bigger profits than any other thresher

The "New Steel Humming Bird" embodies more perfect design, more modern construction and refinement of detail than is possible in wood construction. The working parts and dimensions are the same. The wind stacker is built on the machine—a big improvement. The simplicity of the "New Steel Humming-Bird" is its big asset. Great capacity and a fast worker. In sizes 24 x 46; 28 x 50; 32 x 54; 36 x 58; 40 x 62.

Let us tell you more about these World's Champions. Write to the



NORTH AMERICAN MACHINERY Co., Winnipeg, Canada

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

Testing the Light Draft of Davenport Roller Bearing Steel Wagons

Easy draft on a wagon is a big consideration. The John Deere Plow Company favor us with the accompanying cut and particulars as to testing the respective drafts of wagons, etc., which will be found of exceptional interest to those of our readers especially who have to arrange for heavy haulage. Dynamometers and other like devices for testing draft are complicated and delicate machines, requiring special knowledge to understand. They are, therefore, unsatisfactory to the average man who is in doubt and wants simple proof that he can see and understand. All understand the common lever balance, which is the principle employed in this draft test. The test is simple and is conducted in the following manner:

Take the regular Davenport farm gear and put on the box bottom only. After weighing it, load it with 4,000 or 4,500 pounds of some condensed weight, such as kegs of nails, bags of cement, pig iron or pig lead. Do the same with a 3 1/4 ordinary wagon. If one gear weighs a little less than the other, put on enough additional weight to make them balance.

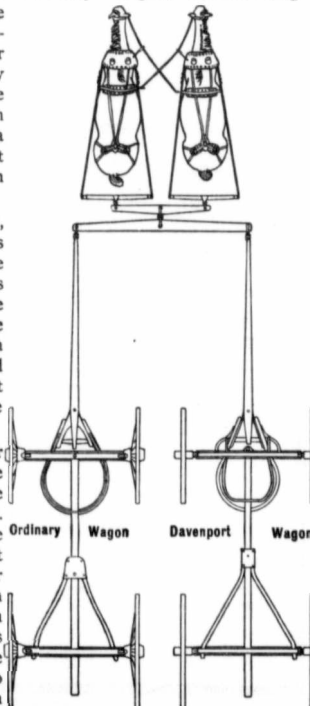
Line up the two wagons, so loaded side by side, with the tongues supported in the stiff position. Take an 8-foot double-tree and attach it by means of clevises to the point of each tongue. See that the distance from the front axle to the common doubletree is the same for each wagon. Attach an ordinary doubletree to the center of the common doubletree and hitch on a good team of horses. If a motor truck or gas tractor is at hand, use it instead of the team of horses, as the pull is steadier.

Pick out a stretch of good, smooth road, line up the wagons exactly even, and start up the team or truck. The wagons should be equipped with brake and a man to handle the brake should be seated on each wagon so the wagons can be stopped when the team stops and prevent them from running up on the horses' legs.

Upon starting the team or truck it will be observed that the Davenport shoots ahead and the ordinary wagon lags behind. Transfer part of the load from the ordinary wagon to the Davenport wagon, say about 200 pounds for a starter. Start up the team again and see whether the wagon run even, or if the Davenport shoots ahead. Keep on transferring the load from the ordinary wagon to the Davenport until they will run

even on the steady pull of the horses.

Then figure the weight of the load on the Davenport wagon and the weight of the load on the ordinary wagon, remembering



that any transfer of the load is a subtraction from the weight on the ordinary wagon and an addition to the weight on the Davenport. The difference in these loads expresses in pounds the lighter draft of the Davenport wagon. To reduce this to a percentage basis, divide this difference by the weight of the final load on the ordinary wagon.

This test can be made on a level road or on a grade. The only precaution to be observed is that the road be smooth, as otherwise one wagon might strike an obstruction which the other wagon would miss, and thus destroy the accuracy of the test.

Picked Too Short

"Why, Rebecca," said mother, "that dog isn't yours! You've no right to bring him home!"

"W-well, mamma," pleaded Rebecca, "he was jest not belonging to anybody—like the flowers! I can pick flowers and keep 'em, wild ones, and the doggy was jest like—like the flowers, and I came along, and—and sort of—picked him."

Here the dog, turning around, displayed a noticeable lack of tail—a bobbed-off, rabbit-like stump. Whereupon Rebecca's quiet brother Paul spoke up unexpectedly.

"You—you didn't pick a very long stem," he said.

OUR YOUNG CONDUCTED BY Cousin Doris. FOLK

Girls' Cozy Corner

THOUGHTS

By Ethel Blair

When a little child is naughty,

And is cross with everything,
All his thoughts are changed to hornets
That go flying off to sting.

When a little child is happy,

Then his loving thoughts, I think,
Are turned to floating butterflies,
All white, and gold, and pink.

Reston, Man., May 25, 1914.

Dear Cousin Doris—This is my third letter to your charming club. My father takes the Canadian Thresherman and Farmer. I have been a reader of the Girls' Cozy Corner Club for some time.

I am fourteen years old. I have four brothers and one sister. My sister is only two years old. My brothers are eight, six, two, and the baby is only three months old. One of my brothers and sister are twins.

We have an engine and ten plows. The men are all away plowing now. There is just my mother and grandma, and my brothers and sister at home. We have to send them cakes and pies away, and bread. They cook the rest themselves. I like baking. I make cakes quite often.

I go to school nearly every day. I am in grade seven. Our studies are arithmetic, spelling, reading, history, geography, drawing, composition, and grammar. Our teacher's name is Miss Douglas. We all like her very much. I like composition and geography the best. If we have our spelling all right for ten days we get a note book, a scribbler or a pencil. I have had five.

We have the most of our garden in now. We have all our potatoes in. We have a hot-bed with cucumbers, radishes and cabbages growing in it. We planted a garden at school, too. There are two who have their garden together. I have mine with Eva Wilson. We had ninety-five chickens hatched out. A skunk ate them all but thirty-five before we caught it. We have three old ducks, and some eggs set. They will soon be out now. I have a pig. It is three months old. It is white. We are milking five cows. We have four calves.

I am taking music lessons. I have taken them for three years. I like it very much. I did not like practising at first, but I like it now. I can play a lot of hymns. I have Silver Bell for my lesson this week.

I was to the Brandon Fair last year. I have two aunts in Brandon and an uncle. I was to the Sells-Floto circus. It was good. Well, this is all I can think of, so good-bye.

From Julia Fraser.

Gladmar, Sask., May 21, 1914.

Dear Cousin Doris—This is my second letter to the Girls' Cozy Corner. I am not going to school just at present. When I will be going to school I will be just one mile from it. My brother takes the Canadian Thresherman and Farmer. And I like to read the letters in it. The boys are trying to beat us, aren't they? The boys are saying that they are going to beat us next month.

I have one calf, no dog, no cat, and some turkeys, and one hen; one brother and no sisters. My brother is eleven years old and I am twelve years old. I see the people are getting in their grain

in a hurry. I will close with a riddle. How can you stop a fish from smelling? Answer—Cut off his nose. Well, that is all I can think of just now. Hoping to see my letter in print. From your dear cousin—Mary Hazel Underwood.

Canadian Boys' Camp

THE WIGWAM
By Nellie W. Hale

There was a fascinating tent
Where children loved to play
At "Indians" and other things
Most every sunny day.

There were two busy little "squaws"
That in the tent would stay
While all the painted "warriors"
Were fighting far away.

And sometimes there would pass a band
Of hostile Indians by,
Then down the flapping sides would come
As in the tent they'd fly.

And dollies, kitties, puppies, all
Must keep so very still
Until the frightful "enemy"
Had swiftly crossed the hill.

These squaws had a "divining stick"
To throw up in the air;
Whichever way it pointed quick
The warriors were there.

And plainly could they hear them talk
By "wireless telegraph."
And when they learned that they were
Well,

These merry squaws would laugh.

Now, if you ever pass that way,
Be sure to stop and look
For "Tammymund" and "Watawa"
And little "Chuckakook."

Macklin, Sask., Feb. 17, 1914.

Dear Campers—It is the first letter I have written in this Club. My brother John has taken the Canadian Thresherman for 2 years. He has a 22 horse-power gas engine. I like to ride on the plows when he is plowing. I have a little threshing outfit. We have 5 horses and 4 mules, 7 head of cattle and 32 pigs, 80 chickens. My age is 12 years. I don't remember any more to tell. Yours truly,
Fred Nelson.

Gull Lake, Sask., Feb. 4, 1914.

Dear Campers—I thought I would write a few lines to join your Club, as I have read all of the letters for nearly six months. I was fourteen years old on the 13th of last July. I have not attended school since July 15, 1913.

I can run either steam or gasoline engines, also separators, although we do not own any kind of an engine or separator. I have one brother and three sisters; two of my sisters attend school when it is possible. I have a 22 rifle and shoot within three-fourths of an inch of a mark at as long a distance as the bullets will carry. I would like to correspond with members if they will write first. Wishing the Club success.
Jos. M. Hodgson.

Winkler, Man., March 22, 1914.

Dear Campers—This is my first letter to your Club. I wish all the boys and girls a happy Easter. I just thought of writing once to the club seeing that the girls are always on the top, and the boys at the bottom. Boys come let us make up our mind to beat the girls, the girls had ten the lazy poor boys only five, half as many as the girls. The verse says girls first but they are not supposed to be first every where. Would like to see the boys first in the next paper. Am reading three papers, The Canadian Thresherman and Farmer, Weekly Free Press and Prairie Farmer,

and The Western Home Monthly, but I like The Canadian Thresherman and Farmer the best of all my papers. We have nine horses, and two colts, seven cows, five calves, two big pigs and ten young ones, but also about a hundred hens. I live about four and a half miles from the town Winkler. I am a farmer's boy now, like the farm work very much. We will build a new barn this summer and are now busy driving lumber. I got stuck in the mud with a load of lumber it was a bad job, but I think the trouble will all be over soon again. Would like to see this letter in print because it is my first one to the Club. Yours truly,
Peter J. Ball.

Queen Centre, Mar. 29, 1914.

Dear Campers—This is my first letter to your Club. My brother takes The Canadian Thresherman and Farmer. I find it very interesting reading the letters. I live on a farm near a creek. In the summer when I go to shoot some ducks I take my little dog named Niger along. He will get the ducks out of the water for me. I have two other dogs named Jack and Rover. My father has 2 horses, 1 colt, 4 oxen, 5 cows, 5 calves. Well I guess I will close my letter and hope that it will leap over the W.P.B. Yours sincerely,
W. August.

Huxley, Alta., March 25, 1914.

Dear Cousin Doris—This is my first letter to your Club. I am going to school now. I am eight years old, and I have three sisters and two brothers. We have some snow here about three inches deep. We have a spring here and lots of water. Hoping to see my letter in print, wishing your Club a good success. From your cousin.

Sunny Slope, Alta., March 22, 1914.
Dear Campers—This is my first letter to the Camp. My father takes The Canadian Thresherman and Farmer. I



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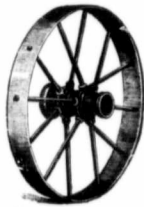
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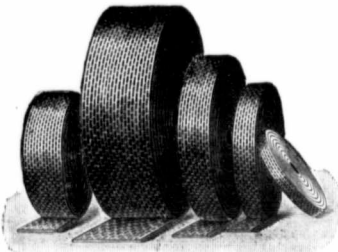
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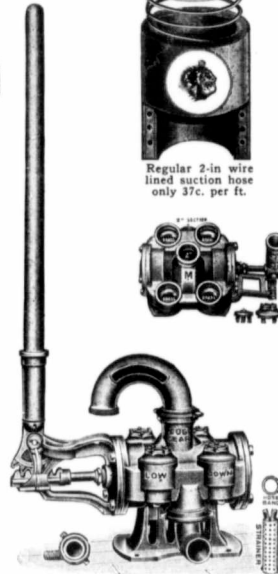
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You saw this advertisement in this magazine. Don't forget to say so when writing.

like to read the boys' and girls' letters in the Cozy Corner. I am seven years old. I go to school every day. We live one mile from the school. I have one brother and two sisters. Hoping to see this letter in print, I remain yours truly,
 David Reddekopp.

Queen Centre, March 29, 1914.
 Dear Cousin Doris—This is my first letter to your club. My brother takes The Canadian Thresherman and Farmer. I find it very interesting reading the letters. I am 12 years old now. It is very windy to-day. I am not going to school now. I am in the third grade now. We have snow yet but it is going away fast now. I raised lots of grain last year. I have 5 brothers. We have 90 chickens, 4 turkeys and 3 ducks, 2 horses, 1 colt, 4 oxen, 5 cows and 5 calves. Do you think it is harm to dance? I can dance a little now. Wishing your club every success. I hope my letter will leap the W.P.B.
 E. L. August.

Sunny S'ope, Alta., Mar. 22, 1914.
 Dear Campers—This is my first letter to your Club. I am 8 years old. I go to school every day. I am in the first book. I like to read the boys and girls letters in the Cozy Corner. We have 16 horses and 8 cows, four calves and one hundred hens and 45 pigs. I catch gophers with a string. I put the string around the hole and when the gopher comes out of his hole I snare him as tight as I can and then I slap him to the ground and then he is killed. Well I guess my letter is getting long so I'll close for this time. Yours truly,
 Henry W. Beddekopp.

Oak Lake, Man., Jan. 4, 1914.
 Dear Cousin Doris—Here I am again as well as ever, I hope you are the same. We are farmers living 9 miles south of Oak Lake. Me and my brother Frank have dandy fun snaring bush rabbits and trapping weasels. I have caught 6 weasels and about 20 or 30 rabbits. I sell my rabbits at 25c a pair at our butcher in Oak Lake. I go to a French

school just now but expect to go to an English school after the winter passes. I am in the fifth grade. Our school does not start till the seventh as our teacher has got married and is taking a honeymoon. Our school is situated in a large bush overflowing with rabbits so we have great fun snaring rabbits in winter and finding crows' nests in the spring.

At about half past six the wind began blowing and it started to rain, and as my father and brothers were doing chores it started hail and it hailed about a quarter of an hour when it stopped and we went out to see the damage. The crop was down, buggy shed roof off and a few pigs astray. I will close with a riddle. Little nanny Edicoat in a white petticoat with

its warehouse in the Y.M.C.A. building, out of his kindness of heart took the dog there and cared for him until recovery, when the animal departed to again take up his wandering life. A few evenings ago he appeared at the building limping badly on the r h e e t, and carefully holding up the thigh, which had been injured. Mr. Hurley was at the door and saw from the dog's eyes that the animal begged entrance. This was granted and the dog entered and remained until well again, when he went away as before.

Such things raise our estimate of the genus dog and call to mind the words of Barney, the janitor, "He had the sense of a Christian and the lovin' heart of a dog, an' when ye've said that, ye've said it all."



Boys of the "Old Brigade." Last Year's Young Farmers who Camped on Winnipeg Exhibition. (Photo taken at New Agricultural College.)

In this bush are large hills which we slide on with sleighs and have great fun. Well I must close wishing to see my letter in print but if it is no good drop it in the W.P.B. Wishing you success, your sincere friend,
 Harold Elwin Robinson.

a red nose, the longer she stands the shorter she grows. A candle. Your Cousin,
 Fred R. Miner.

THE DOG CAME BACK
 A few months ago a dog, apparently without a home, or in other words just an ordinary hobo canine, but a fine looking fellow, was badly injured by a street car in Green Bay, Wisconsin, says the Review of that town. L. P. Hurley, the watchman for the Grass Rug Company at

THE HORSE'S FACE
 A Roman nose in a horse, like the corresponding aquiline contour in a man, generally indicates strong individuality, often accompanied with great intelligence, says W. M. Phillips in Twentieth Century Farmer.

A straight facial line is quite as often found with a high degree of intelligence, but a dish-faced horse is rarely anything but a nonentity in character. We have seen a few exceptions to this rule, but they only prove it. A fine muzzle denotes a high, nervous organization, while a coarse and large muzzle, with small and non-expansive nostrils and pendulous lower lip, mean stupidity.

A sensitive and trumpet-shaped nostril means courage and intelligence, even when, as it does sometimes, it also means heaves.

The ear is most intelligible even than the eye, and a person accustomed to the horse can tell all that he thinks or means. When a horse lays his ears flat back on his neck, he most assuredly is meditating mischief, and the bystander should beware of his heels or teeth. In play the ears will be laid back, but not so decidedly nor so long. A quick change in their position, and more particularly the expression of the eye at the time, will distinguish between playfulness and vice.

Ferry Point, Alta., Mar. 24, 1914.
 Dear Campers—This is my first letter to your Camps. I am going to tell about a hail storm last fall.

Our Women Folk

CONDUCTED BY
PEARL RICHMOND HAMILTON

The Road Home

By ALICE M. CLARK.

It's just a common country road,
Leading, who cares where?
An old-rail fence crawls by its side,
Fallen here and there.

A purple thistle stands as guard
Lest strangers venture nigh;
A bursting milkweed sends out ships
That lazily drift by.

A meadow-lark calls plaintively,
Hid by the tall green grass;
A saucy sparrow cocks his head
To watch me as I pass.

Why is it that I praise this road
That looks just like the rest?
Because it is the road to "Home;"
That's why I love it best.

QUAKERS FOR EQUAL SUFFRAGE

At the yearly meeting of the Friends, just held in Philadelphia, both the men's and women's branches indorsed equal suffrage. The resolution reads:

"In view of the fact that the Society of Friends, by reason of its inheritance and present organization, gives evidence of the advantage which results to the home, to the meeting and the community, through a full recognition of the dignity of woman and her right to complete development, the Philadelphia yearly meeting of the Religious Society of Friends records its indorsement of equal suffrage as a principle of justice to woman and an opportunity for more effective service.

"The yearly meeting recommends that monthly meetings be watchful for opportunities to influence equal suffrage legislation and encourage their members to active interest in the accomplishment of this reform."

This was prepared by a committee of women, and was met with hearty approval in the women's meeting. It was suggested that the men's meeting be asked to take similar action, and two young women were named to present the request.

Dr. Joseph Swain, of Swarthmore College, said: "When we consider the history of suffrage as granted to men, no argument can be brought against its extension to women."

Others who favored the indorsement were William D. Yarnall, Dr. Pusey Heald and Ellwood Roberts. It was carried overwhelmingly.

Dear Women Folk — Our H.E.S. and Home-makers' Clubs have responded so generously for the past few months that I have left out my editorials because I feel that their papers on gardening, butter making and practical problems are based on experience that must interest Our Women Folk more than anything I might write. Our department is an open forum for Our Women Folk. May we not have papers on the school and the home? I should like more papers about experiences with children. These would help young mothers.—Sincerely, P. R. H.

The book, "Helps for Expectant Mothers," will be sent free to any wife upon request. Kindly enclose two-cent stamp for mailing. P. R. H., 983 Grosvenor Ave.

Mothers' Corner

IN THE BABY'S EYES

What is the dream in the baby's eyes,
As he lies and blinks in a mute surprise?
With little wee hands that aimlessly go
Hither and thither and to and fro;
With little, wee feet that shall lead him
—God knows.

But a prayer from my heart like a benison goes;
Bundle of helplessness, yonder he lies—
What is the dream in my baby's eyes?

What does he wonder and what does he know?
That we have forgotten so long, long ago?
Bathed in the dawnlight, what does he see

That slow years have hidden from you and me?
Out of the yesterday seeth he yet
The things that in living he soon shall forget.

All that is hidden beyond the blue skies?
What is the dream in my baby's eyes?

Speak to me, little one, ere you forget—
What is the thought that is lingering there yet?
Where is the land where the yesterdays meet.

Waiting and waiting the morrows to greet?
You wee, funny fellow, who only will blink,

What do you wonder and what do you think?
Bright as the moonlight asleep in the skies,
What is the dream in my baby's eyes?

—Tom Cordry.

Dear Readers who are Mothers—Sometimes letters come to my desk from mothers overburdened with the care of children. Occasionally letters come to me from wives whose arms ache to hold a little one of their own. The mother-heart is born in many women who never know the thrill of a babe's tender caress. The following confession from a wife suffering from the heart hunger of a childless home I have taken from The

Mother's Magazine. I am sure every mother who reads it will offer a prayer of gratitude for her children:

MOTHERHOOD

By Margaret Charlton

Dear Dream-Baby-of-My-Heart:

If your immature mind could grasp how much depends upon your coming to me, you would hesitate no longer. For 12 years I have longed for you, watched for you, prayed for you, and still you do not come. Had you come to me early—at nineteen—when my world was very young and all my clouds were rose-lined, I should have merely loved you; to-day, at thirty-one, after all these years of unsatisfied longing, I would worship at your shrine! You would owe me nothing but the love and respect that ought to be within my power to engender. On the other hand, I should owe you everything! You would owe your being solely to the fact of my love for the man whom I selected to be your father, knowing his physical and mental worth, and to my own normal instinctive yearning to become a mother. In these purely mental and physical instincts you would have played no part. Therefore, because of this, I should owe you everything!

Could you but realize my bitter agony of mind, day after day, month after month, year after year, from your failure to come, worlds, I know, would not keep you from me. Come to me then, dear heart, while I am still beautiful, while my brown eyes yet hold their sparkle and my hair emmeshes the burnished glint that Daddy loves.

Loves, did I say? Perhaps I should have said loved! Possibly he, too, has missed you, and manlike has buried his baby's bitterness in fathomless depths that no human eyes can plumb; no, not even mine, Sweetheart! The club seems to have attractions for him of late that even I cannot dissipate. Can't you see, Baby-Love, how much we both need you?

It is during these long, lonely evening vigils that bitter thoughts arise, when self-communion is inevitable; when latent thoughts become desires, and these dormant desires are transfused into later action whose cumulative force is beyond all human control. You must come before I grow quite desperate. In all of us, Dear Heart, there are depths undreamed of, unsounded, which, touched

by unsatisfied desire, germinate tremendous forces.

Come to me then; come to me, Dear, before it is too late.

When I realize the millions of babies that go to millions of mothers each year, I grow heart-sick! And some mothers! They don't deserve that hallowed name! You should be my baby—not the baby of a hireling. You should have no nurse; I should be your mother in all that precious name implies. I should bathe you, nourish you, care for you, no alien hands should touch you!

I haven't told you, have I, that twice in those twelve years we anticipated you for a few short months and in that finite space I scaled the heights of human happiness and sounded the depths of human woe. Had you come to me, I should have felt that heaven had laid its treasures at my feet and the world had nothing more to offer. I should have felt, indeed, that I had realized the fulcrum of my being in comparison to which all else is dross! Then—you failed me! The golden moment had passed me by!

And the little dainty things I had prepared for you! There were dresses—slips, of the finest muslin, soft as a silken web; little robes as downy as the breast of a dove and as warm, and into every handmade stitch was woven a wealth of love that falls to few babies, and a prayer to God to guide you.

I have always felt that I was especially fitted to be a mother. I was a dolly girl. And being an abnormally solicitous dolly mother, my feelings were always on tenterhooks. I can recall with a feeling almost of pain, even now, how a little vindictive cousin who was my childhood chum used to retaliate for some actual or imagined hurt by thrusting her naked dollies under a black horsehair sofa in a fireless parlor. I have written in agony over the thought that their little china or sawdust bodies must of a certainty be covered with goose flesh, and with a wistful tenderness watched my opportunity to rescue and surreptitiously reclothe them.

Have you ever thought, dear baby, how many childless mothers are bravely going about their daily tasks with a smile on their lips, a sword of sorrow in their hearts, who, "like sorely wounded animals would fain nurse their pain alone?" We rant of race suicide. I strongly doubt if there be such a thing. I know countless women to-day who are eating their hearts out, silently longing for the caress of baby fingers, the thrilling clutch of red, moist lips on "dainties made for them."

I know just how you will look, for I have pictured you so frequently—strong and tall and sturdy; brown eyes, brown hair—and curly; and yes, you will have something of a temper, that will later change to temperament. Through the open door between your room and mine, each morning dreamily, your throaty gurgle comes to me; in these subconscious fancies I can picture you, sweet babe of mine, happy, care-free as babies ought to be, with their bright eyes searching questioningly, speaking to me unutterable tenderest things. I awake still sleepy-eyed and cruelly realize that this wondrous prelude to my day was briefly snatched from dreamland and the ace in my throat is "as though a tongueless nightingale should swell her throat in vain and die heart-stiffed in her delirium!" You will come to me, Dear-Heart! I want you now; I want to play with you, to teach you, to study with you—and oh, Baby Darling! most of all I

DO YOU OR ANY OF YOUR FAMILY NEED EYEGLASSES?

If so, take advantage of the Special Railway Rates during Winnipeg Exhibition Week, visit the City and call on our optician.

He will give your eyes a thorough examination, and tell you whether glasses will help you in your work or not. This examination is free of charge.

If you have to buy glasses, we have our own lens-grinding plant which enables us to guarantee not only the absolute correctness of the glasses, but also prompt delivery of them to you. If necessary, we can make them up the same day you leave your order.

Do not forget, then, this opportunity of visiting our Optical Department, and remember, also, our address, Corner Portage Avenue and Main Street, Winnipeg.

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do so want to be young with you! So you simply must hurry!

We would have such glorious times together—you and Daddy and I. First let me impress it on you, you should be an outdoor baby. You should grow up with the wildwood things — the trees, the grass, the flowers, the birds, and the insects, the squirrels, the chipmunks and the rabbits! They do have such lovely times!

Daddy and I have such a beautiful place in the woods for you! Shall I tell you about it? I think it is nice to know just where one is to live. Well, it's a love of a bungalow set right in the heart of the woods. And if you come to us in May you will know right away that you have tumbled into a bit of fairyland! The dogwoods will have unfurled for you their petals; the wild azalea you will find a blushing, glowing pink like your ten little tiny toes, and the Quaker ladies will already have laid their dainty carpet for your dainty feet.

Or, perhaps, you will elect to come in June when the bird-world is all expectancy! When Mother Wren — like the exacting little housekeeper she is — is preparing for the arrival of little Jenny Wren. You won't have to move from your own front porch to see and hear her. She will more than likely be house-cleaning; you will see her come to the entrance of her house with portions of last year's nest in her bill and she will work tirelessly until everything has been cleaned out and her new nest is in apple order. And how this bobbing, busy little housewife does chatter and scold!

And the thrushes, the robins and the vireos — they are all, all waiting for babies. And while this is mostly a beautiful world, Baby Dear, still even the birdies have their heartbreaks. Last June, on a branch of a dogwood that stood close to the house, Father and Mother Vireo, in anticipation of the greatest event in the world, built a beautiful nest of leaves and grasses—built it where it rocked to the rhythm of every rampant breeze. I looked in one day and there were four little brown-and-white speckled eggs. Lady Vireo was a very gentle bride, and I think was proud of the attention she received. And then one day she was off the nest searching for a nice, fat worm—I think Father Vireo had gone to the club, now that the thing was all over—I peeped in and there were four of the loveliest tiny babies, mostly mouth!

Would you believe it, my own sweet baby, that gentle little mother actually let me feed her babies! I took bread and moistened it and then slipped tiny particles into four cavernous little mouths! But one day when they had reached a very interesting age, a wicked but beautiful blue-jay came along searching for his breakfast. Being an epicure, he swooped down and plucked the plumpest birdling from its nest. When we realized what had happened we frightened him away, but the gluttonous thief came back and greedily devoured them all. For two days those unhappy parents hovered about that empty nest with a heart-breaking, silent grief, feeling, I am sure, like Macduff when the news of his slaughtered family reached him: "What — all my pretty ones — at one fell swoop?" I know, Dear Baby, just how they felt. That poor little mother would have to wait patiently for more. We women seem to have been born to wait! Perhaps when the vireos come again, I'll be looking for you, too! Who knows?

Home Economics

Address all communication to this department to 983, Grosvenor Avenue, Winnipeg. This department went to press so late last month that unfortunately several errors occurred. Mrs. McNevin's paper entitled "The Work of our Societies" was not printed in full. As the editor did not designate a continuation we are publishing the entire paper this month. Unfortunately a private letter was in the reports and published, for which we apologize. This department goes to press on the fifteenth of each month. All reports received after the

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will be found in light, flaky pie-crusts, delicious delicate cakes, sweet snow-white, wholesome bread, and cookies beyond compare.

The quality and strength of PURITY FLOUR permit you to add more water than other flours can stand, meaning that you get more loaves from PURITY FLOUR than from an equal amount of any other flour milled.

Dealers pay more for PURITY FLOUR than for other kinds. The fact that the better class dealers are willing to sacrifice a part of their profits in order to sell you PURITY FLOUR, is strong evidence of their belief in its being the best flour on the market. Get a 7 lb. sack and try it yourself.

PURITY FLOUR

More Bread and Better Bread

157

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

fifteenth are published the following month. P. R. H.

MIAMI

The entertainment given by Mrs. Nellie L. McClung, under the auspices of the Home Economics Society, was much appreciated by those who were fortunate enough to attend. Mrs. McNevin, as president of the society, occupied the chair. Music was furnished by local talent. Mrs. McClung gave selections from her earliest attempts at poetry which were very amusing. Also recitals from her books, "Sowing Seeds in Danny" and "The Second Chance." Throughout her entire recital the audience was delighted with the keen insight of her character sketches, the truth and depth of the pathos and her flashes of wit. Mrs. McClung has a thorough mastery of the interpretation of her own books. The receipts at the door amounted to something over \$50.

VIRIDEN

Women's Institute

Demonstrations in Home Cooking and Dr. John's Medical Inspection Report

The regular monthly meeting of the Viriden Home Economics Society was held in the court room on Saturday, May 23rd, 1914. The meeting was held on the fourth Saturday instead of the last Saturday in the month, as the President

could not be present on the latter date. Dr. St. John gave a short report of his medical inspection of the schools. The doctor spoke of cases where he hoped he had been able to help, and also told of the suggestions he had made to the trustees:—That the teachers be given a small first aid supply; that the closets where the children hang their clothes be disinfected at intervals; that the children each bring their own drinking cup; that the water supply at the schools be improved; that the children be given talks on "How to be healthy."

DELORAINÉ

The April meeting of the Delorainé Home Economics Society was held at the home of Mrs. Jas. Cavers. This was one of the largest meetings we have had—about 60 present. Several new members (Beveridge and Mrs. D. J. Wright) on the constructive talks were given by Mrs. Thos. were added to the list. Two very in-Boys' Position in the Home. The Misses Sawyer favored us with an instrumental trio, after which the National Anthem closed our meeting. Mrs. Cavers kindly tea. This meeting being so large the invited us all to remain for a cup of ladies decided to take the May meeting to the Presbyterian basement. Again our President was not able to be there, the chair being filled by Mrs. Price, the on Patriotism, which was much enjoyed (Rev.) Littlejohns addressed this meeting by all. Mrs. Price also sang a solo. At this meeting the circulating library was

distributed, and the ladies are finding it very helpful. The National Anthem and a cup of tea closed this meeting.

Our June meeting was held in the Methodist basement. I shall say very little about this meeting, as I have succeeded in getting the two papers that were given by Miss Muir and Miss Snelgrove, which will speak for themselves, and little Gerlie Hanson favored us with

A long list of business was talked over, an instrumental solo.

Mrs. Beveridge and Mrs. Brown kindly served a cup of tea, and the meeting served a cup of tea, and the meeting again closed with the National Anthem. R. H. P.

OAK LAKE

The regular monthly meeting of the H. E. Society took place in Cameron's Hall on Saturday, April 18th.

The Viriden members of the H. E. Society, who were the guests of our local branch for the afternoon, provided the programme. The Provincial President, Mrs. Dayton, honored us by occupying the chair. She spoke briefly of the difficulties which she had met with in organizing the first branches of the society in Manitoba, also of the great work which had since been accomplished. Mrs. Search gave a most instructive paper on "Babies and Their Needs."

Mrs. Fitches' paper on "Home and Country" was excellent.

A splendid paper on the "Relation of the Home to the School," written by

Miss Gillrai was read by Mrs. Bayne. Mrs. McLaughlin and Miss Mullins both sang delightfully, adding much to the enjoyment of the afternoon.

At the close of the programme the visitors were invited to the Rest Room, where supper was served.

In the evening a game of baseball played between the girls of Virden and Oak Lake, was the attraction.

This concluded one of the most unique and enjoyable meetings which the society has ever held.

Laura McLeish.

SWAN LAKE

Swan Lake has a neatly printed programme for the year's work. It is as follows:—

Programme for 1914

President—Mrs. G. B. Gordon. Vice-Presidents—Mesdames A. E. Downey and W. E. Gardner.

Board of Directors—Mesdames J. Herbert, S. P. Hodgson, A. E. Penniston, H. Dodd, R. Blair, A. J. Moore and W. W. Shirley.

Secretary—Mrs. W. F. Hartwell. Cor. Sec.—Mrs. B. Langridge.

Programme and Lunch Committee

January

Programme—Mrs. Dayton, Pro. Pres. Lunch—Mesdames Hartwell, Dodd, G. Crawford, W. J. Scott.

February Omitted

March

Programme—Mesdames Gordon, Gardner, Hartwell, Penniston. Lunch—Mesdames Gordon, Robb, J. Couch, Clark.

April

Programme—Mesdames Hodgson, Blair, De Roo, Langridge. Lunch—Mesdames McDole, Harman, Misses Bowes, E. Shirley.

May

Programme—Mesdames Flack, Clark, Misses Beech, V. Gordon. Lunch—Mesdames Moore, Hodgson, Penniston, Anderson.

June

Programme—Mesdames Downey, Moore, Pepper, Miss Connelly. Lunch—Mesdames Gardner, Blair, Herbert, Moffatt.

July

Programme—Mesdames Anderson, Irwin, Miss E. Docking, Mr. Holland. Lunch—Mesdames McPherson, Angell, Sarley, Pepper.

August

Programme—Mesdames Dodd, McPherson, Dunfield, Miss Gamble. Lunch—Mesdames Hedley, Skinner, De Roo, Miss E. Docking.

September

Programme—Mesdames Herbert, J. Couch, Shirley, Robb. Lunch—Mesdames Dunfield, G. O. Couch, Misses Beech, V. Gordon.

October

Programme—Mesdames Moffatt, Skinner, Mesdames Docking, E. Shirley. Lunch—Mesdames Downey, Cook, W. H. Couch, Miss Connelly.

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November Christmas Suggestions Programme—Mesdames McDole, W. H. Couch, Cook, Miss Bowes, and other members. Lunch—Mesdames Gordon, Irwin, Scott, Miss Docking. December Programme—Annual meeting. Lunch—Mesdames Hartwell, Dodd, J. Couch, Clark.

Homemakers' Clubs

Kindly send all communication to this department to Pearl Richmond Hamilton, 983, Grosvenor Avenue, Winnipeg. Some of the reports have been lost I fear, as I have had letters asking why reports from certain societies have not been published. We publish all reports we receive. Some of the papers are left over as a great many have come in lately.

The following report of the Homemakers' Convention at Saskatoon will be interesting to both H. E. S. and Homemakers' Clubs. It was written by Mrs. Dayton, who is the Provincial President of the Home Economics Societies of Manitoba. We are pleased to have it for publication.

Homemakers' Convention at Saskatoon

Dear Mrs. Hamilton—As you have so kindly opened your page to "Our Women Folk" I feel you will be interested in an account of the Homemakers' Convention held at the University of Saskatchewan on the 26, 27, 28, 29 of May.

Many of the delegates and visitors arrived at the University on the evening of the 25th, and as they approached were treated to a beautiful display of fireworks, and for a moment thought it a special welcome to themselves, but soon remembered, it was Empire Day. The impression created, however, was one of welcome even before the building was entered, and this was enhanced when on entering the tired travellers were treated by Miss De Lury to much appreciated refreshment, though it was after 10 o'clock p.m. This welcome continued until the very close of the convention, and as shown by every one in any way connected with the work from Governor Brown to the janitor of the building.

President Murray, of the University, in his cordial greeting struck the keynote of service from the University to the Homemakers, and through them to the children of Saskatchewan. "Your children are Saskatchewan's greatest asset, and we want you to let us know of anything we can do to help you" that these were not empty words will be seen later on.

Dean Rutherford followed in like vein, saying "You are a parliament of women to whom prominent officials welcome the opportunity of presenting plans." This was the note used by every official and the tone rung true.

All the way through the women were not overruled, but were made to feel that they and their work were an important part of the work of the University, and that through the women the true meaning of the word would be better understood.

That the University of Saskatchewan was not only for the sons and daughters of the province, but was for the benefit and service of the mothers as well. You can readily see what importance is thus attached to their work. In this respect it seems to me the University of Saskatchewan is unique. It creates a pride and an interest in the hearts of the mothers that is making of them its greatest ally, and will in this way build up a powerful institution that will prove a blessing to the people of the whole province, and not to the few, as is often the case.

I am also told that no friction but only good arises from the city and country boys mingling in the same halls.

What will interest you most is that the resolution brought in by Mrs. Beattie at the Man. H. E. S. Convention of 1913 as nurses for needy districts of our own and Western provinces is bearing fruit, and that Miss McKenzie, head of the Victorian Order of Nurses in Canada, travel-

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led from Ottawa chiefly to address this Convention. The work outlined by her appeared so practical that it touched the hearts of the women present in a way that nothing else could have done. Many pioneer women were there (some of whom had driven 50 miles before reaching their train), whose ability to give her—at first hand—information of conditions that showed the great need of proper nursing for the mothers of Saskatchewan (84 of whom died last year that might have been prevented). One after another in the audience stood up and offered help to arrange meetings of clubs grouped to save time, so that in August, when Miss Mc-

an Fe... st... an... th... whic... i... book... her... from... made... pain... In... the... not c... act... count... for a... s... ling... out... wher... time... to th... arran... during... Must... given... Wedn... when... school... of th... prizes... privi... 500 y... I w... choir... could... in ou... towns... This... out m... hospi... Ruth... receipt... of Pre... Pers... to be... in the... vere o... the tre... in tou... numbe... so nu... of our... that ti... over it... A me... the me... makers... meeting... been tr... was giv... by ten... men... the play... certain... alike by... toast th... of Shak... much t... plays th... ting clo... a heart... who had... the read... These... ley Hom... held in J... Asiatic... In re... issue of... the Beni... points w... that soci... is only a... time sinc... to take u... in the re... first, t... which re... to the M... unities...

an doubled during the past year. To each club there is given a permanent library of 10 books, bearing on any phases of the work. In addition to this a travelling library of 30 volumes, which is renewed every six months, making in all a library of 40 volumes of good books, a greatly prized boon, and wherever there is a club house or rest room the library is kept there, to be the nucleus of one that the women will take pains to add to as time goes on.

In Highworth, through the efforts of the women, the young bachelors helped not only to provide the material, but are actually doing the work of building a country club, in this way becoming better acquainted with the women. Previous to this they only thought of getting their homestead duties done to sell out. Now many are intending to remain where they are, and this is not the first time that women in the West have added to the stability of the country.

Great thoughtfulness was shown in arranging the dates of the convention during the week of the Songfest or Musical Festival, and free tickets were given to all who wished to be present on Wednesday and Thursday evenings, when choirs, choral societies, bands and school choirs from many cities and towns of the province competed for beautiful prizes. On Thursday evening we were privileged to hear the massed choirs of 500 voices in many selections.

I was much impressed by the school choirs, and wondered if something more could not be done to encourage this work in our own province, not only in the towns, but in rural schools also.

This article would be incomplete without mention being made of the splendid hospitality of Mrs. Murray and Mrs. Rutherford in giving a most enjoyable reception to all the delegates at the home of President Murray.

Personally, I felt it a great privilege to be asked to be present and take part in the program and discussions which were of outstanding interest; and it was the treat of a lifetime to come so closely in touch with the splendid women—to the number of nearly 2,000—who are doing so much for one of the finest provinces of our great Dominion, and my best wish for the University of Saskatchewan is that the Christlike spirit which hovers over it at present may long remain.

Yours very truly,
Rebecca Dayton,
Prov. Pres. Man. H. E. S.

PENSE

A novel programme was enjoyed by the members of the Pense (Sask.) Homemakers' Club at one of their monthly meetings. After necessary business had been transacted, a Shakespeare reading was given, the different parts being taken by ten of the members and five gentlemen. "The Merchant of Venice" was the play chosen, and the two hours entertainment was thoroughly enjoyed alike by readers and listeners. It is hoped that this will be but the first of a series of Shakespeare readings which will do much to kindle interest in the finest plays that were ever written. The meeting closed with a welcome cup of tea and a hearty vote of thanks to the friends who had done so much towards making the reading a success.

Hanley, Sask., June 5th, 1914.

These are the papers read at the Hanley Homemakers' Club meeting that was held in May.

Mrs. J. H. McKenzie,
Assistant Secretary,
Hanley, Sask.

Correspondence

In reading the report in the June issue of the Canadian Thresherman of the Benito H.E.S. I feel there are some points which the worthy secretary of that society does not understand, which is only natural, since it is but a short time since Benito organized. Allow me to take up the points in the order given in the report.

First, the invitation to the conference which read as follows: "You are invited to the M.A.C. to a conference to discuss matters of business relating to H. E.

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Societies;" then went on to state that the Dept. of Agriculture would defray all travelling expenses and also that "if desired" free accommodation would be provided at the College. The Benito correspondent's letter would lead all readers to infer that the presidents invited to this conference had prearranged to slight the College staff by absenting themselves from the College en masse until the hour appointed for the meeting. The only rearrangement prior to the conference consisted in the announcement of an informal meeting of presidents to be held in the Industrial Bureau on the morning of the day appointed for the conference. If preparations were made at the College for a greater number of presidents than actually availed themselves of the accommodation then the fault is a personal one and is in no way connected with or to be attached to the presidents as a whole. Each president was responsible for the acceptance or non-acceptance of her private, personal invitation to free board and residence at the College, and any president who neglected to acknowledge her invitation in writing in a definite way to Mrs. Salisbury before leaving for the city must shoulder her part of the blame for any inconvenience to which the College staff may have been subjected on this account. As to the actual meeting, there was nothing wrong in calling a meeting, and all were perfectly loyal to our organization and its relations, but we had a real grievance to discuss, and we wished to have it put into a presentable form favorable to all. Accordingly the desired amendment was drawn up and unanimously accepted, and was afterwards presented at the conference in the afternoon.

The Benito correspondent makes the statement that it would only have been

common courtesy to allow Mr. Black to carry out the programme as he had arranged it. I would refer her to the invitation — "A conference to discuss matters of business relating to H. E. Societies." Does not this mean a meeting where ideas would be interchanged and reasoned out? And how can there be discussion where only one side of the case is presented, and where we are to present our business difficulties if not a business meeting?

Benito correspondent further asks why the President of the Advisory Board did not call a meeting of her board and wait on President Black privately, and thus have matters adjusted and avoid publicity. She evidently does not know that in March of last year a letter was sent to President Black by the said board asking him to recognize their position in allowing them to act in the capacity assigned to them by the delegates from the societies in convention and as relegated to them in our constitution at organization. When this was of no avail, a deputation consisting of two members of the Provincial Executive Board and two lay members, all from different societies, waited on the Minister of Agriculture, explained the grievance and asked that it might receive favorable consideration. Still no notice was taken. The question was asked at the conference "Why elect a board at all when its position is never recognized?" Mr. Black replied that he thought the president would like the honor of presiding at the meetings, but it is noteworthy that he relegated this position to himself at the conference, thus even withdrawing the empty honor from the Provincial President.

As regards the term Provincial President, it is merely an abbreviation for the President of the Provincial Executive

Board, but since the passing of the H.E. Act in the early spring of 1913 no such officer or Provincial Executive Board exists although the officers of said board were never notified of the change nor yet received a copy of the Act.

Benito correspondent is no doubt unaware that the older societies organized under a Provincial Executive Board, which they believed, and still believe, to be very necessary, for the following reason: The women who are doing the real work in the societies—and doing it willingly and gladly — who know the real needs and problems of women's lives because they themselves are women, who know the difficulties peculiar to each community as no outsider can, would be brought into direct touch with the Director of College Extension Work through the medium of the board, and thus, through the co-operation of theory and practice, of all parts and peoples, the interest would be united and the achievement greater. This was the dream of the societies, but it is still a dream.

Although a new board was elected annually, it was never called upon; there were no meetings held. After a time, its name was changed from an Executive or Controlling Board to Advisory Board—a board, I take it, to be called upon for advice when deemed necessary. Then in 1913 the H. E. Act did away with the board only a few days after the delegates in convention at the College elected that board under the direction of President Black. It is unthinkable that the "powers that be" were unaware of the terms of the Act when we were asked to proceed with our annual election. Had we organized under the constitution as it stands to-day there would have been less ground for complaint, but it is surely the right of every member of every organization to be at

least told when any change of constitution is contemplated. What have the women of Manitoba done to merit such treatment?

Benito correspondent's idea that the societies are seeking separation from the college is entirely an erroneous one. None of us can afford to lose or treat lightly any opportunity by which our homes and our country may be benefited. We want the best that our province can produce, and we want to produce the best province. We are proud of our M.A.C., its professors, and all that it represents; but as far as the H. E. Societies are concerned we would suggest that by co-operating with the women—the mothers of its students—it would become a still greater force for good. It is for this that we plead, not for separation; but whether an education that savours of autocracy and seeks to kill individuality will be accepted remains to be seen.

Mary Price,
Vice-Pres. Deloraine H.E.S.

Dear Mrs. Hamilton—In the last issue of the Threshherman I noticed a statement by Mrs. Davison to the effect that her visit to the H.E.S. last winter was made at the request of the Advisory Board of the H. E. S. I was a member of said board, but the first intimation I had of Mrs. Davison being requested to visit the societies was her letter to you. I would like to ask when and where the meeting was held at which this request was made; also if President Black, chairman of the board, called the meeting, and if every member was notified? Yours in the work,
F. A. McCharles.

Manitou, June 3rd, 1914.

How to Teach our Children Economy
Read at Manitou Home Economics Society by Mrs. TAIT.

In considering the subject, there are many things to teach under this heading, but one will suffice, and that is time; teach the children early to economize time.

Wisely has it been said that lost wealth may be regained by industry and economy, lost health by temperance and medicine, lost knowledge by study, but lost time is gone for ever. Oh, it's only five or ten minutes to meal time, there's no time to do anything now, is one of the commonest expressions heard in the family. Teach the children that the worst of a lost hour is not so much in the wasted time as in the wasted power. Idleness rusts the nerves, and makes the muscles creak. Work has a system, laziness has none. Marion Harland has accomplished wonders. She has been able to do this by economizing the minutes to shape her novels and newspaper articles; when her children were in bed and whenever she could get a spare minute.

Harriet Beecher Stowe too, wrote her great masterpiece, "Uncle Tom's Cabin" in the midst of pressing household cares; the author of "Paradise Lost" was a teacher, sec. of the Commonwealth, sec. of the Lord Protector, and had to write his sublime poetry whenever he could snatch a few minutes from a busy life.

In teaching the children economy thus do not excuse them for poor slipshod work on plea of lack of time, rather teach them to know that in ordinary situations of life there is plenty of time to do everything as it ought to be done.

Oh! mother I hadn't time is very common. Tell the boy or girl that great men have ever been misers of moments; if such a scholar as Shakespeare could say: "I wasted time, and none doth time waste me." What a rebuke to the thousands of young men and women who throw away whole months and even years. Time wasters are everywhere. He who has nothing to prevent him but too much idleness, said one man of another, which I have observed fills up a man's time much more completely, and leaves him less his own master than any other sort of employment whatsoever.

A nation's children are its greatest assets was the statement made by Dr.

Pickard, city health officer for Brandon, in an able address to the Trades and Labor Council at their monthly meeting, March 12th. The mothers of great men must have realized that the world's interests were and are (under God) in the hands of the young. Teach the children that in economizing time, time is money. We should not be stingy or mean with it. Waste of time means waste of energy, waste of vitality waste of character in dissipation. It is left for each, says Edward Everett, by cultivation of every talent, by watching with an eagle's eye for every chance of improvement, by redeeming time, by defying temptation, and scorning sensual pleasure, to make himself or herself useful, honored and happy.

Every young man should have a hobby to occupy his leisure hours, no one is anxious about a young man or young woman, where he or she is busy in useful work. Most of those who climb upward to honor and fame devote their evenings to study or work, or the society of those who can help and improve them. Each evening is a crisis in their career. There is a deep significance in the lines of Whittier:

This day we fashion Destiny,
Our luck of Fate we spin;
This day for all hereafter choose
In holiness or sin.

Lost, somewhere between sunrise and sunset, two golden hours, each set with sixty diamond minutes, no reward is offered, for they are gone for ever.

The Work of Our Societies

Mrs. Catherine Helena McNevin.
(Read before the Miami Society).

Co-operation is necessary for greater efficiency in our work; for our social betterment, to give us broader and more liberal views concerning the important things in life. That we may understand let me dwell for a few moments on each of these. In our work we may profit by the experience of others, and they will gain by giving us the benefit of their ideas, as an idea becomes clearer in the expression. This feature appears in the work of the society in the various talks, papers, recipes, etc., that deal with anything and everything that may be considered woman's work. Encouragement is given for practical demonstrations in many kinds of work, such as baking, preserving, cooking of meats, preserving of fruits, sewing, lace making, and young girls are encouraged in various ways to fit themselves for the practical duties of life. This is one of the places where our educational system needs supplementing. Our grandmothers received practical training at home and were fairly good practical housekeepers before leaving the parental roof. The young ladies of to-day often play the piano, sing, play tennis and a few other things, but are quite unable to bake a loaf or make a custard. In our societies we, are all sisters, some know one thing, some another; we put all our knowledge and experience at the disposal of each member, and both giver and receiver are benefited. The old idea that a woman's work is never done is dying out. The ideal worker is not she who never ceases to work, but she who works rapidly and efficiently, finishes her task and finds time for reading, social intercourse; in short, woman, rather than sewing, washing and ironing machines are in demand.

All work and no play makes Sally a dull girl, and that one's feet are tired is not an absolute proof that one has done a good day's work. I should like now to say a few words on the necessity for co-operation from the social standpoint. A man who talks to himself said he did so because he liked to talk to decent folks. Few women find this kind of conversation satisfactory.

Dickens tells us "that each man's spirit must mingle with that of his fellows in this life, or he may bear a clanking chain of neglected opportunities in the world to come." Bacon says conversation maketh a ready man, and One wiser than Bacon has said "iron sharpeneth iron," "so doth the face of a man his friend." All these sayings are doubly applicable to women.

The biggest thing in life is not money or fame, but life itself, and the best way to understand life, to live abundantly

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is to participate in the life about you. Work, service of some sort, is more important than pleasure, but we must enjoy life if we would give the best service.

This society strives to make our lives happier and more contented that our influence for good may be greater, such social gatherings as this—minus this address—illustrates this. Just a word or two about the broadening influence of co-operative work, such as we have in this society. You know one shrinks to the size of one's tasks; the unused members become flabby, the unused faculties shrink; a human soul requires more room than is afforded by the shop, the school, the office or even the kitchen. There is an old saying that when we go up in a balloon the first things that disappear are the fences.

Our society takes a place up high enough to leave party class and sectarian lines behind. We are not farmers, shopkeepers or professional people, but just sister women banded together for mutual benefit and for the betterment of the locality in which we live. We do not propose doing the work of the man, but supplementing their work. There are a few things, such as washing babies in which men do not excel. We can be of service in following up what we began in the training of our boys and girls, in protecting them when they flutter a little piece away.

This phase of the work is brought out in the request for the medical inspection of schools, in the establishment of reading rooms and in providing wholesome entertainment for the young of both sex.

The business world is a man's world. Many women either from necessity or choice have to engage in certain forms of business which used to be reserved for men, naturally little provision has been made for the convenience or comfort of such women.

Our rest rooms are an instance of what the society is doing along these lines. Everyone wishes to be in the ranks of the living rather than that of the dead.

The H. E. S. is a coil of live wires. From Prince Edward Island to British Columbia the membership is advancing by leaps and bounds, and our power and influence will be still greater when those mere men give us the legal standing which is our just due.

Catherine Helena McNevin,
Pres. H. E. Society.

Garden Making
(By Mrs. J. Frederick—Read at the May Meeting of the Hanley Club).

Now as I am asked to speak on gardening, I will say that I am not an expert gardener, but I have put down a few things here in order to be better able to remember what my experience has been in gardening. Not I mean to say that this is the only way, but that this has been my way of making garden for a good many years. The first thing I do is to have the man haul the scraping out of the barn every week during the winter time, till I get my garden covered so whatever snow will fall on that it will soak through, and will make the land better for the next season. There are a lot of people who believe in making garden only on summer fallow, but my idea is when it comes to a garden there is nothing better than land prepared with well rotted manure.

I've had my garden on the same place for the last nine years, and it seems to be getting better every year. In the spring we burn the long straw, and then plough quite a depth, and only plough part of the garden, so as to plant such seeds as should be sown early, such as lettuce, radish, onion, beets, carrots, cabbage and parsnips, and plow later for corn, cucumbers, citron and tomato plants. Now lots of farm papers recommend plowing the garden in the fall. I

**DURRO VIOLINS
VICTORIA MANDOLINS
STEWART BANJOES**
Have a world wide reputation
Roy Music Company
460 Spadina Avenue, Toronto.

have helped to make gardens for over 25 years, and always plowed our garden in the spring with good results. As a person here in this country has all the work he can handle in the fall, without thinking of ploughing the garden for the next summer, and we are often glad to get in the cellar such vegetables as we raise during the summer. After ploughing I get it all floated, so it breaks up all lumps of earth, and makes it level then I take a twine the full length of the garden, and I take the hoe and make a trench along the string, to put in the seeds. By doing this I get the rows nice and straight, which makes quite an improvement in looks. Of course the old saying is you can raise more in a crooked row than in a straight one, but I will take the latter for mine. Then I put the rows 2½ or 3 feet apart; this takes up a little more land, but I find it a lot easier to keep clean that way, as you can take a horse and cultivator, and go through it in a very short time. Then I just have to clean along the rows by hand, and in about 1½ to 2 hours you will have the garden clean; in the meantime you have to keep on the good side of the old man.

Now my cucumbers I generally plant in 2 rows. I have a lot of manure handy, and when they plough, we rake the furrow level full and the next furrow the same, and then I plant the cucumbers in the centre, and seed them quite thick in the row, so that when they come up the poles will soon meet, and they will bear sooner, and will be easier to cover them to protect from early frost. Citron I plant the same way. Cabbage I seed right out in the garden. I put five or six seeds to a hill, then later on I thin them out when the cut worms are through, leaving the healthier plants stand. Tomatoes I seed in boxes, and after they are a fair size I thin them out, so that when I get ready to plant them in the garden I can take them out with a little earth around the root; then it will not keep them back so much. Then I also think that a few shrubbery are very nice, such as currants, gooseberries and raspberries. From \$2.50 invested we have now about 75 gooseberries and 25 currants started. I have taken as much as 30 quarts of currants from nine bushes; we put some manure around the bushes and some on the outside branches, leave the top stick out, and then they set root under the manure, and then you can set them out the next spring. I also find that a few flowers add to the appearance of a garden. I generally plant them at one end of the garden, and throw a few poppy seed over the garden, so when they start blooming they will kind of cheer up the vegetables.

Mrs. J. Frederick.

Remedy for Burns

Children are continually burning themselves, and it is a good thing for the mother to have some simple, reliable remedy on hand. If she will immediately smear the burn with vaseline and sprinkle common baking soda over it, then bandage it with a clean linen cloth, she will find that the smarting will cease, and the child will obtain almost immediate relief.—J.A.

CANNED RHUBARB — COLD WATER

Select young, tender rhubarb, wash it thoroughly, and without peeling, cut it into small pieces. Sterilize the jars by washing them well and placing them in boiling water for ten minutes. When the rhubarb is prepared, remove a jar from the boiling water without touching it on the inside. Then pack it full of rhubarb without crushing the pieces, put a new rubber in place, fill the jar to overflowing with fresh, cold water, and seal it.

After twenty-four hours the water will come within about two inches of filling the jar; this is because it has gradually soaked into the rhubarb and forced the air from the tiny cells. Remove the cover, drain off the remaining water, re-fill the jar to overflowing with fresh cold water, and seal it again. After another twenty-four hours repeat the process; then seal the jar permanently.

Rhubarb canned in this manner keeps indefinitely. It is, of course, very tart, and should be used for pies as if it were fresh.

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Furs and Ready-To-Wear

that can be produced from first quality material and the most skilled workmanship in the labor market, it is only necessary to visit our great annual

Summer Sale

which we have arranged to run during the inclusive dates of Winnipeg's Industrial Exhibition. Bear in mind that we handle no second grades. We have one quality only—the best. We buy no "sales" goods;—what we have to offer you is our regular standard quality and the very latest styles simply because it is our policy to carry no stock from one season to another that can be sold at a price

OUR OFFER IN FURS WILL NEVER RECUR AT THESE PRICES

Our complete stock of ladies' suits, coats, dresses and millinery will be included in this sale.

VISIT OUR STORE. NO OBLIGATION TO BUY.

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297-299 Portage Ave., WINNIPEG.

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**BASEBALL UNIFORMS
OUR BIG SPECIALTY**

Get our prices before placing your order, as we certainly have the finest in Western Canada. Also

Baseball Supplies of all descriptions, Football Goods, Lally's Lacrosse Sticks, Tennis Goods, High Grade Cricket Bats, Kams Golf Clubs, Sweaters, Pennants, Shirts, Cycle Tires, Baseball Shoes, Waterman Canoe Engines. **GET THEM AT THE**



Sportsmen's Headquarters

P. J. Cantwell Co. Limited

346 Portage Avenue, Winnipeg, Man. Dept. C.T.

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**MOTHERS
READ THIS
ABOUT
Porter's Baby Food**

337 Alexander Ave., Winnipeg, Mr. G. Porter, July 1st, 1914.
Dear Sir: I want to tell you how well your food is suiting my baby girl. She is only five months old, but six weeks ago I thought I should lose her. She was suffering from indigestion through unsuitable food and had diarrhoea and a bad cough which weakened her dreadfully. My doctor advised me to try Porter's Food which I did, and it is really wonderful how my baby has improved. She takes it greedily, her cough has left her, her bowels act naturally and it is quite surprising how strong she is.
I shall certainly recommend your food as it has been such a Godsend to my baby.
Yours truly,
MRS. T. METCALFE.

Send at once for a free sample of Porter's Food if it is not sold locally. A 5-cent stamp (to cover postage) will bring a ¼ lb. sample tin, or \$1 for a 3 lb. tin.

George Porter, 309 Victor St. WINNIPEG, Man.

Mention this magazine when writing advertisers.



**The Right
Lads for
Farm Life**

are being sent out by the Bisleys Farm and Shaftesbury Homes in the county of Surrey, England, and the Twickenham Home, Middlesex.

Their Majesties the King and Queen

are patrons and the Earl of Jersey, G.C.M.G., is president of the Society of which the above named homes are units specially equipped for the training of lads for farm life.

The work of the Society is an imperial one and for many years it has been supplying lads of excellent character and physique to the farms of the Dominion. About 1,000 are now settled at various points in Canada.

Mr. H. G. Copeland, the Secretary, who has recently been on a tour through Canada, will be glad to receive donations towards the Society's work at the headquarters, 164 Shaftesbury Avenue, London, England, or they may be sent to the editor of this paper.

You cannot interest yourself in a more worthy institution.

GRAND TRUNK PACIFIC

SPECIAL Low Excursion Fares

TO
EASTERN CANADA
AND
UNITED STATES

VIA
"GREAT LAKES" EXPRESS
AND
NORTHERN NAVIGATION

Important Announcements!!!

SUMMER TRAIN SERVICE

"Double Daily" Service

Between

Winnipeg, Regina, Yorkton, Canora, Nokomis, Saskatoon, Biggar, Battleford, Camrose, Calgary, Edmonton. Connections at Edmonton for Edson, Jasper (Yellowhead Pass), McBride and Prince George.

See
Time
Table
on
Another
Page

"Great Lakes" Express

Your Trip East?

"Route of Many Comforts." G.T.P. Agents hold Boat Staterooms, Parlor and Sleeping Car Space through to Toronto.

Reasons why you should Travel Grand Trunk Pacific

- BECAUSE!—They have the Best Service in Western Canada.
- BECAUSE!—They have the smoothest running roadbed.
- BECAUSE!—They have the best Dining Car Service.
- BECAUSE!—They have the best Equipment; Electric lighted throughout.
- BECAUSE!—They appreciate your business and do everything to retain your patronage.
- BECAUSE!—They will route you any way you wish to travel.
- BECAUSE!—They have the fastest service.
- BECAUSE!—You get solid comfort if you use the "Character Service" of the Grand Trunk Pacific.

Arrange Your Trip Now!!!

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Opens June 26th at
Minaki, Ont.

114 miles from Winnipeg.
"Canada's Finest Summer Resort."

SEE OUR AGENTS

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District Passenger Agent
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Winnipeg

FORT GARRY

Winnipeg, Man.

Convenient to Union Station,
The Finest Hotel in Western Canada.

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WILLOWMOOR

Meeting held at the home of Mrs. H. Laycock. Meeting opened by singing the Maple Leaf.

Minutes from last meeting read and adopted. It was decided to have an ice cream social June 13th, also to invite the S. Eagle Hills Homemakers, and after the social to arrange for the yearly picnic.

It was thought advisable to postpone our next meeting until the second Thursday in the month, on account of the picnic being the day before.

Mrs. Groves gave a good paper on "The Culture of Vines."

The meeting closed with singing the National Anthem, after which a dainty lunch was served.

Next meeting at the home of Mrs. Blades, July 9th.

Contributed by

Mrs. C. Laycock, Willowmoor Club
To me the most beautiful sight in our work-a-day world is to see a woman dealing out her bright smiles with the daily food in her home to her husband and family. I think Monday is the right day for washing because it is easier to pick the clothes up and put them in the washing machine; the clothes have all week to dry if necessary. I have a boilerful of boiling water to put in the machine. I have a small pail to dissolve the soap in. I put part of the soap in the machine and wash each lot ten minutes. (I wash the handkerchiefs out before putting them in the machine.) I then rinse, blue, starch and hang out my clothes. I think a woman should prepare part of Monday's dinner on Saturdays.

A very handy utensil in scrubbing the floor is to put four castors on a board to set the pail on; you can then push your pail instead of lifting it.

I do all my ironing on a large board covered with $\frac{1}{4}$ -inch thickness of flannelette and then cotton. Anyone using a board will never be without one.

In cleaning floors I use a mop as it is easier on the back. I recommend every housekeeper to have a small ten-cent nail brush and keep it for cleaning vegetables and graters or lemons. It cleans them like magic.

Breathes there a man with soul so dead,
Who loves not home-made, new-baked bread.

We may live without poetry, music and art;

May live without conscience, and without heart;

We may live without books;

But sensible men cannot live without cooks.

Dried Apple Cake.

Here is a recipe for a dried apple cake which is good and takes the place of more expensive fruit cake very nicely. Soak 3 cups dried apples over night; chop fine and cook in 2 cups syrup or molasses for one hour. When cold add 1 cup sugar, 1 cup butter, 4 eggs, 3 cups sifted flour, 2 pkgs. or 2 lbs. raisins, 2 cups chopped walnuts, 3 tsp. each cinnamon, allspice, cloves and nutmeg, 1 tsp. baking soda. Bake in moderate oven one or one and one-quarter hours. — Mrs. A. T., Calif.

"O wide poor keep of m which him ers. glam first trils, law. to bel praise since ment, to de Es- cu her co "De the m "Ne what Alexa family House on me Blair's ander his dro But fi could substa ing be found, been melanc ly. N about unknow vicinity "By voted; was f body-s "Gar explain "Wh had arr woman know, skull c Blair v by h mortall home to "Tha version "As i "Wel "But "In least."

A NOVELTY IN MYSTERY STORIES
THE SECRET OF LONESOME COVE
 By
SAMUEL HOPKINS ADAMS
 AUTHOR OF AVERAGE JONES ETC
Copyright, 1914, The Bala-Herrill Company.

Continued from page 77 June

"Oh, ill-treatment! That is a wide term. I believe that the poor weakling did his best to keep faith and honor. But ropes of mud are strong. Those with which he had bound himself drew him resistently back to the sewers. Hers was but a marriage of glamour, at best. And, at the first scent of foulness in her nostrils, it became only a marriage of law. Society does her the justice to believe her faithful to him, and praises the devotion with which, since his breakdown and retirement, she has given up her world to devote herself to his care. Essentially the girl is Puritan in her concepts of duty."

"Does she know anything of the manner of Blair's death?"

"No one knows much of it, from what I understand, unless it be Alexander Blair. One of the family, who went to Hedgerow House for the funeral, called upon me, as a courtesy due to Mrs. Blair's nearest relative. Alexander Blair, he said, was reticent; his dread of publicity is notorious. But from what he, the relative, could ascertain, the affair was substantially this: On the evening before the woman's body was found, Wilfrid Blair, who had been exhibiting symptoms of melancholia, left the house secretly. No one saw him go; but, about the time that he left, the unknown woman was seen in the vicinity of Hedgerow House."

"By whom?"

"By a half-breed Indian, a devoted servant of the family, who was practically young Blair's body-servant."

"Gansett Jim! That helps to explain."

"Whether or not Wilfrid Blair had arranged a meeting with this woman is not known. As you know, she was found with his skull crushed, on the sea beach. Blair was afterward discovered by his half-breed servant, mortally injured, and was brought home to die."

"That is Alexander Blair's version of the tragedy?"

"As I understand it."

"Well, it's ingenious."

"But untrue?"

"In one vital particular, at least."

"Are you at liberty to state what it is?"

"Wilfrid Blair never was brought home."

"Ah? In any case, Alexander Blair is striving to conceal some scandal, the nature of which I have no wish to guess. By the way, I should have added that he suspects a third person, an artist, resident not far from his place, of being his son's assailant."

"Francis Sedgwick."

"You know the man?"

"It is on his behalf that I am acting," replied Kent.

"My informant, however, inclines to the belief that Alexander Blair is wrong: that Wilfrid Blair killed the woman and then inflicted mortal wounds upon himself. Perhaps you would better see my informant for yourself."

"Unnecessary, thank you. Mr. Blair is not telling quite all that he knows. Nevertheless, the theory which he propounds as to his son's assailant, is natural enough, from his point of view. Although," added Kent thoughtfully, "it will be most unfortunate if it leads him to distrust Mrs. Blair."

"Marjorie? Am I to infer that her good name is involved?" demanded the old man.

"Hardly her good name. Mr. Blair believes—if I correctly follow his mental processes—that Francis Sedgwick met his son on the night of the tragedy, by chance or otherwise, and that in the encounter which he believes followed, Wilfrid Blair was killed. Unfortunately, some color of motive is lent to this by the fact that Sedgwick had fallen desperately in love with Mrs. Blair."

"Impossible! Marjorie is not the woman to permit such a thing."

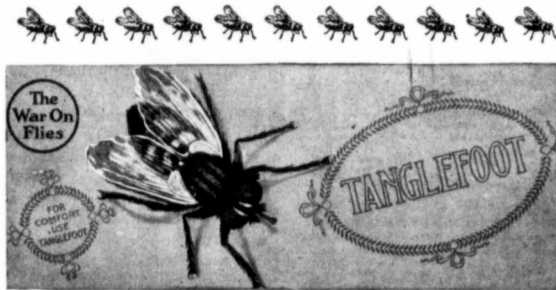
"Without blame to her, or, indeed, to either of them. She also believes, now, that Sedgwick killed her husband."

"And—and she was interested in your friend?" asked the old scholar slowly.

"I fear—that is, I trust so."

"You trust so? With this horror standing between them?"

"It must be cleared away," said Kent earnestly. "Circumstantial evidence is against Sedgwick; but, I give you my word, sir, it is wholly impossible that he should



Fight Flies With Tanglefoot!

For 30 years Tanglefoot has been America's surest, safest, most sanitary fly-destroyer. It is non-poisonous, easy to use, and costs but a trifle. Each sheet is capable of killing 1,000 flies. And Tanglefoot not only kills the fly, but seals it over with a varnish that destroys the germs as well. In buying, ask for the genuine "TANGLEFOOT"—it costs you no more and lasts twice as long as the no-name kinds sold merely as fly-paper, or sticky fly-paper.

Made only by The O. & W. Thum Co., Grand Rapids, Mich. Gasoline will quickly remove Tanglefoot from clothes or furniture.

How to Use

Open Tanglefoot slowly. In cool weather warm slightly. For best results place Tanglefoot on chair near window at night. Lower all shades, leaving one at the Tanglefoot window raised about a foot. The early morning light attracts the flies to the Tanglefoot, where they are caught. (31)



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

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

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Ask our nearest Branch for a sample of the Belt.

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of Canada, Ltd.
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All "ARLINGTON COLLARS" are good, but our **CHALLENGE BRAND** is the best. Mention this magazine when writing advertisers.

\$35
DOMINION BICYCLES
FOR
\$25



These famous Bicycles now sold at little more than the cost of manufacture. The Dominion retails at \$35 in Winnipeg, but you can buy it by mail for \$25. Equipped with mud guards, wood or steel Dunlop rims, roller chain, New Departure Coaster, rubber pedals, pump and tools.

Sundries and Tires at wholesale prices to everyone. Send for our illustrated free catalog.

Dominion Cycle Company

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WINNIPEG, CANADA

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SATISFACTION IN EVERY CAN OF
Stephens'
ENAMEL

Mention this magazine when writing advertisers.

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Every CLEVELAND GRINDSTONE is absolutely even in texture all through, and sharpens knives, axes, hoes and cutter-bar blades exactly right. Made of the only genuine Berea stone, finest in the world. Guaranteed to do satisfactory grinding, or your money back. We are the biggest grindstone makers in America. We have experts of 30 years' experience who select stones with the right grit for farm use. Let them select for you.

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Look at the fine stone shown below! It's the CLEVELAND "EMPIRE," a sturdy grinder to run by hand or gas engine. Bull-bearing. Strong frame and trough of cast iron that won't rust out. Genuine Berea stone mounted on steel shaft, complete with 6-inch pulley. Will last a lifetime. Write for our great booklet. The Grit that Grinds, and we'll give you the name of our nearest dealer. It will save you money. Write to

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You can learn to be a salesman in eight weeks by mail and be earning while you learn. No former experience required. Write today for particulars of hundreds of good openings and testimonials from hundreds of our students who are earning well. Write a month's trial course. **Dues, 125¢**

National Salesmen's Training Association
Chicago New York Kansas City San Francisco

have killed your niece's husband."

"To doubt your certainty would be crassly stupid. And are you hopeful of clearing up the circumstances?"

"There I want your aid. The night of the tragedy a person wearing a dark garment embroidered with silver stars, was on Hawkhill Heights. I have reason to believe that this person came here to meet someone from the Blair place; also, that he can tell me, if I can find him, the facts which I lack to fill out my theory. It is to run him down that I have come to Boston."

"A man wearing a dark garment embroidered with silver stars," said the philosopher. "Surely a strange garb in this age of sartorial orthodoxy."

"Not for an astrologer."
"Ah; an astrologer! And you think he came from Boston?"

"I think," said Chester Kent, drawing some newspaper clippings from his pocket; "that somewhere among these advertisements, taken from the newspapers which are subscribed for at Hedgerow House, he is to be found."

"There I ought to be able to help. Through my association with the occult society I have investigated many of these gentry. Great rascals, most of them."

"Whom would you consider the most able of the lot?"

The old man set a finger on one of the clippings. "Preston Jax," said he, "is the shrewdest of them all. Sometimes I have thought that he had dim flashes of real clairvoyance. Be that as it may, he has a surprising clientele of which he makes the most, for he is a master-hand at cozening women out of their money. More than once he has been in the courts."

"Probably he is my man. Anyway, I shall visit him first, and, if I find that his office was closed on July fifth—"

"It was, and for a day or two thereafter as I chance to know, because one of the occult society's secret agents was to have visited him, and could not get an appointment."

"Good! I shall see you, then, to-morrow, sir."

"Clarity of vision go with you, amid your riddles," said his host with a smile, shuffling the cards which Kent had gathered up for him. "Here is my all-sufficient riddle. Watch me now, how I meet and vanquish the demon meet and vanquish the demon mischief." He turned up a card. "Ah," said he with profound satisfaction, "the seven of spades. My luck runs in sevens."

"STUDEBAKER"
Electric Started
Electric Lighted



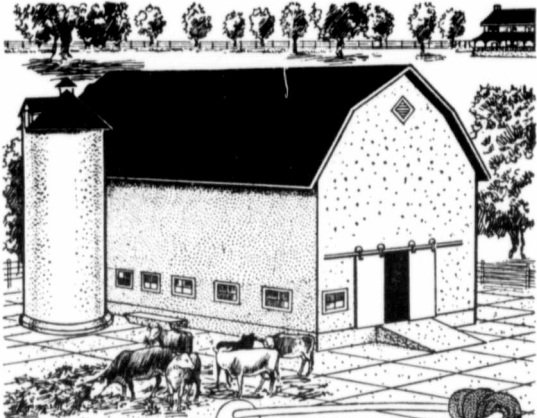
Four Cylinder \$1,375.00
Six Cylinder \$1,975.00

Complete Stock of Spare Parts Carried for all Models from 1911 to date. Trade discount to legitimate dealers.

Breen Motor Co. Ltd., Factory Distributors
704 Broadway, WINNIPEG

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Build Concrete Barns and Barnyards
YOU will find that they are best at first and cheapest in the end. Concrete buildings cannot burn and many dollars are saved in lower insurance rates. They need practically no repairs and never need painting. Concrete barnyards make the best kind of a feeding-floor and save many dollars in feed bills, as your stock gets every particle that you feed to them. Send for this free book "What the Farmer Can do With Concrete." It shows just how to build your own concrete barn, feeding-floor or any other building that you may need. Farmer's Information Bureau Canada Cement Company Limited 781 Herald Building, Montreal




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Family Group Photos a Specialty
AT
STEELE & CO., LTD.
MAIN ST. AND BANNATYNE AVE. WINNIPEG

CHAPTER XVIII

The Master of Stars

Ten o'clock of the following morning found the Harvard professor formally presenting his friend, Chester Kent, to Mrs. Wilfrid Blair, at the house of the cousin with whom she was staying.

"My dear," said the old gentleman, "you may trust Professor Kent's judgment and insight as implicitly as his honor. I can give no stronger recommendation, and will now take my leave."

Kent resisted successfully a wild and fearful desire to set a restraining hold upon the disappearing coat tails, for embarrassment had again engulfed the scientist's soul. He seized himself by the lobe of the ear with that grip which drowning men reserve for straws. And—to continue the comparison—the ear sank with him beneath the waves of confusion. Mrs. Blair's first words did not greatly help him.

"Have you an earache, Professor Kent?" she inquired maliciously.

"Yes. No. It's a habit," muttered the caller, releasing his hold and immediately resuming it.

"Isn't it very painful?" "Of course it is," said he testily; "when I forget to let go in time—as I frequently do."

"As you are doing now," she suggested.

Kent bestowed a final yank upon the dried fount of inspiration, and gave it up as hopeless.

"I don't know exactly how to begin," he complained.

"Then I will help you," said she, becoming suddenly grave. "You are here to speak to me on some topic, wholly distinct from one forbidden phase."

"Exactly. You make it difficult for me by that restriction. And I rather like difficulties—in reason. Let me see. Have you lost any jewels lately, Mrs. Blair?"

The girl-widow started. "Yes. How did you know?"

"You have made no complaint, or published no advertisements for them?"

"I have kept it absolutely secret. Father Blair insisted that I should do so."

"They were valuable, these jewels?"

"The rings were, intrinsically, but what I most valued was the necklace of rose-topazes. They were the Grosvenor topazes."

"A family relic?"

"Not my own family. My husband's mother left them to me. They came down to her from her grandmother, Camilla Grosvenor."

"You speak that name as if it should be recognized by me."

"Perhaps it would, if you were a New Englander. She was

LASTING---Dome and radiator are American Ingot Iron—99.84% pure. These parts in

McClary's Sunshine Furnace

can never wear out or rust away. See the McClary dealer or write for booklet. 36

THE "HERCULES" PUMP GOVERNOR
is the new name for **THE ADVANCE PUMP GOVERNOR**
WHICH WE NOW CONTROL IN WESTERN CANADA

Can. Pat. 144464. Dec. 3rd, 1912

Write for our Pump Governor Pamphlet which gives all information, and also a plan to **MAKE A LITTLE MONEY** without soliciting, collecting or obligation on your part.

The Western Steel and Iron Co. Ltd., Winnipeg, Canada

W. D. Mann, Arch't, Chicago
Residence of George Ade, Brook, Ind.

Shingles, Siding and Trimmings Stained with Cabot's Creosote Stains

Exterior staining is no longer confined to shingles. Stains are being used more and more upon all kinds of rough and smooth siding, trimmings and other outside woodwork. The colors are soft, and transparent, and the effects are therefore especially harmonious and suitable for bungalows, camps and cottages, as well as for suburban and country houses. They cost only half as much as paint and are cheaper to apply, and they are made of Creosote, which thoroughly preserves the wood.

For Full Particulars write
Braid & McCurdy
Winnipeg, Manitoba

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Fit to Fire the Farm Engine

Costs no more—lasts longer

When you want a battery for any purpose — especially for your engine auto or tractor—say Columbia and get the time-tried product of the largest battery makers in the world. Quarter century's repute for batteries built for business. Columbias are sold all over the world. Every cell signed by the makers. Let us tell you the nearest place to get them.

Canadian National Carbon Co. Limited
99 Paton Road, Toronto, Ont.
Palmstock's spring clip binding Posts at no extra charge.

Mention this magazine when writing advertisers

Stop This Waste!

Why the Hecla Saves One Ton in Seven.

All the heat that goes up the chimney is wasted. The patented steel-ribbed fire-pot of the Hecla Furnace has three times the radiating surface found in others, it radiates the heat so quickly that very little of it has a chance to escape, more of the heat from the coal is used to heat the house, less goes up the chimney, the fire-pot never becomes red hot, is guaranteed not to burn out.

The Hecla Cannot Leak Gas or Dust.

Hecla Radiators are made with our patented "fused-joints." They can never be loosened by the action of the heat, so that we can absolutely guarantee them never to leak gas or dust up into the house.

Some Other Hecla Advantages.

The triangular grate-bars of the Hecla each work independently—you can clean all the ashes without wasting any good coals, and you don't have to use a poker.

The large circular water pan at the bottom insures plenty of moisture for the whole house healthful heating.

Send for This Book. Our booklet, "Comfort and Health," will be invaluable to you if you are interested in a furnace.

Clare & Brockest, Limited
Winnipeg, Man.

2A You saw this advertisement in this magazine. Don't forget to say so when writing.



SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS

THE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the District. Entry by proxy may be made at the office of any Local Agent of Dominion Lands (not sub-agent), on certain conditions.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required in every case, except when residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price \$3 per acre. **Duties**—Six months' residence in each of six years from date of homestead entry (including the time required to earn homestead patent) and 30 acres extra cultivation. The area of cultivation is subject to reduction in case of rough, scrubby or stony land after report by Homestead Inspector on application for patent.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may take a purchased homestead in certain districts. Price, \$3 per acre. **Duties**—Must reside six months' in each of three years, cultivate 50 acres and erect a house worth \$300.

W. W. CORY,

Deputy of the Minister of the Interior.
N.B.—Unauthorized publication of this advertisement will not be paid for.—3785.

1877-1914

Thirty-six years' experience in brewing

Drewry's Redwood Lager

tells the story of its popularity

TRY IT

There's a NEPONSET Roofing for Every Building



Learn this by heart:—

Only Slowly Made Roofings are Slow to Wear Out

We do not trust to bought felt—the foundation of roofing—we make our own from all-rag fibre, no cheap stock.

Asphalts, good and bad, look alike. Trained chemists select ours and blend them to stand torrid heat and Arctic cold.

We give ample time to tests and inspections at every step of manufacture. That is why Neponset Paroid wears so long, is so truly economical, resists sparks and embers.

Surely send for our ROOF BOOK—free.

NEPONSET PAROID ROOFING

BIRD & SON (Est. 1785), 867 Heintzman Building, Hamilton, Ont.

Also makers of Neponset Wall Board and Building Papers

rather a famous person in her time. C. L. Elliott painted her—one of his finest portraits, I believe. And—and she was remarkable in other respects."

"Would you mind being more specific? It isn't mere curiosity on my part."

"Why, my uncle could have told you more. He knows all about the Grosvenors. My own knowledge of Camilla Grosvenor is merely family tradition. She was a woman of great force of character, and great personal attraction, I believe, though she was not exactly beautiful. When she was still under thirty she became the leader of a band of mystics and star-worshippers. I believe that she became infatuated with one of them, a young German, and that there was an elopement by water. This I remember, at least: her body washed ashore on the coast not very far from Hedgerow House."

"At Lonesome Cove?"

"Yes. The very name of it chills me. For my husband it had an uncanny fascination. He used to talk to me about the place. He even wanted to build there; but Mr. Alexander Blair wouldn't listen to it."

"Would you know the face of Camilla Grosvenor?"

"Of course. The Elliott portrait hands in the library at Hedgerow House."

Kent took from under his coat the drawing purchased from Elder Dennett.

"That is the same," said Mrs. Blair unhesitatingly. "It isn't quite the same pose as the finished portrait. And it lacks the ear-ring which is in the portrait. But I should say it is surely Elliott's work. Couldn't it be a preliminary sketch for the portrait?"

"Probably that is what it is."

"Can you tell me where it came from?"

"From between the pages of an old book. It must have been carelessly thrown aside. The book has just been sold at an auction in Martindale Center, and the drawing found by a man who didn't appreciate what it was. I bought it from him."

"That's rather wonderful, isn't it?"

"There are more wonders to come. Tell me how your necklace was lost, please."

"I don't know. On the afternoon of July fifth I left Hedgerow House rather hurriedly. My maid, whom I trust implicitly, was to follow with my trunks, including my jewel case. She arrived, a day later, with part of the jewels missing, and a note from Father Blair saying that there had been a robbery, but that I was to say nothing of it."

"July fifth," remarked Kent

Will run all day without attention, furnish exactly the power you need, maintain a uniform speed and save you money every hour it works.

Use either Kerosene or Gasoline for fuel. Best economist of time and money you can place on the farm.

PRICES FOR CASH WITH ORDER

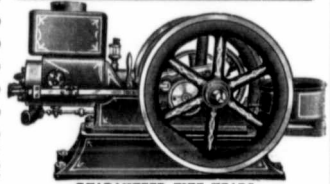
1 1/2 H.P. Air Cooled Engine	\$ 38.40
1 1/2 H.P. Hopper Cooled Engine	39.20
2 1/2 H.P. Hopper Cooled Engine	56.80
4 H.P. Hopper Cooled Engine	104.00
6 H.P. Hopper Cooled Engine	148.00
8 H.P. Hopper Cooled Engine	209.60
12 H.P. Hopper Cooled Engine	314.40

Prices quoted are for skid mounted.

These engines will all develop from a half to a horse power more than they are rated above.

THE WATERLOO BOY GASOLINE ENGINE

LOWEST IN PRICE BECAUSE MADE IN LARGE QUANTITIES AT LOW MANUFACTURING COST



GUARANTEED FIVE YEARS

THE DEXTER ELECTRIC WASHER



Its absolute safety, ease of operation and substantial construction make a strong appeal to every prospective purchaser.

Admiration is expressed by everyone at the neatness, safety and convenience of this machine. When in operation, one becomes enthusiastic at its marvelously smooth and perfect work, making wash-day delightful. Put in the "dope" switch on the electricity and it is practically all over: but looking at it. Absolutely safe, as all moving parts are entirely covered by smooth, metal cases. No danger of injury to the fingers—no chance of tearing or soiling the clothes as the Dexter cleans by agitation rather than by friction.

Prices for cash with order: Hand Machine (with free pulley), \$12.40—No Wringer. Power Machine, complete, \$22.40. Electric Machine, complete, \$55.00 (can only be used where electric power is available). If interested write for Catalogue.

Address all inquiries to Win nipeg.

Canadian Agents All prices quoted are f.o.b. at Winnipeg

Burridge Cooper Ltd. Winnipeg and Regina

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




A COOL KITCHEN



A cool kitchen on ironing day is possible with a

New Perfection Oil Cook-stove

The heat is all in the burner—none in the room.

The New Perfection is cheaper than coal—and cooks better. Broils, bakes, roasts, toasts. In 1, 2, 3 and 4 burner sizes. Ask to see the 1914 model 4 burner, cabinet range with fireless cooking oven. At all hardware and general stores.

Royalite Oil Gives Best Results

THE IMPERIAL OIL CO., Limited

Calgary Regina Montreal Quebec
 Halifax Winnipeg Edmonton Saskatoon
 Vancouver Toronto Ottawa




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Make High-Priced Pork while
Feeding their own Feed.



**AGENTS
WANTED**
in Every Town
and District

Shipments made
from Galt, Ont. and
Winnipeg, Man.

Address to Head
Office

Canadian Hog Motor Co. Ltd.

92 Alexander Ave. East Winnipeg, Man.

Mention this magazine when writing advertisers.

Well Drilling Machines

Over 200 styles and
either deep or
shallow wells in
any kind of soil
on wheels or on
rails or horse
powers. Strong,
simple, durable.
Any mechanic
can operate
them. Send
for catalog.

**WILLIAMS BROS.,
ITHACA, N. Y.**

Mention this magazine when writing advertisers.

Imperial Bank

OF CANADA
Established 1875

Capital Authorised \$10,000,000
Capital Paid Up 7,000,000
Reserve and Undivided Profits 7,000,000
Total Assets 78,000,000

BRANCHES IN WESTERN CANADA

Province of Manitoba
Brandon Portage la Prairie Winnipeg
Province of Saskatchewan
Halgoun Broadview North Battleford
Rosthern Fort Qu'Appelle Prince Albert
Saskatoon Moose Jaw Regina
Wilkie Hague Weynard

Province of Alberta
Athabasca Landing Edmonton Strathcona
Banff Lethbridge Red Deer Wetaskiwin
Calgary Red Deer Rediff
Rocky Mountain Hse. Medicine Hat Millet

SAVINGS DEPARTMENTS AT ALL
BRANCHES

Interest allowed at Current Rates
Drafts and Letters of Credit issued available in
all parts of the world.
Winnipeg Branch

**N. G. LESLIE,
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Mention this magazine when writing advertisers.

The Pump That Pumps
MYERS PUMPS
Double-acting, L.H. Tank and Spray
SPRAY PUMPS
Store Ladders, Etc.
MYERS HAY TOOLS
of all kinds. Write
for Catalogue and
Price.

Myers Stayon Flexible Door Hangers
with steel roller bearings,
easy to push and to pull,
cannot be thrown off the
track—opens in same
"stayon." Write for de-
scriptive literature and
prices. Exclusive Agency
given to right party who
will buy in quantity.
C. H. WELLS & SONS,
London, - Ont.

Mention this magazine when writing advertisers.

Boring Machine
THE ORIGINAL PECH
Easiest to operate
Bores Faster
Most Durable
Improved Up-to-date Drilling Machines

DESCRIPTIVE CATALOGUE, FREE
Cherokee Mfg. Co., Dept. A, Cherokee, Iowa.

Mention this magazine when writing advertisers.

with his lids dropped over the keen gaze of his eyes. "It was the following morning that the unknown body was found on the beach near Mr.—near the Nook."

Her face showed no comprehension. "I have heard nothing of any body," she replied.

"Did none of the talk come to your ears of a strange woman found at Lonesome Cove?"

"No. Wait though. After the funeral, one of the cousins began to speak of a mystery, and Mr. Blair shut him off."

"Your necklace was taken from that body."

Her eyes grew wide. "Was she the thief?" she asked eagerly.

"The person who took the necklace from the body is the one for whom I am searching. Now, Mrs. Blair, will you tell me, in a word, how your husband met his death?"

Her gaze did not falter from his, but a look of suffering came into her eyes, and the hands in her lap closed and opened, and closed again.

"Perhaps I can save you by putting it in another form. Your father-in-law gave you to understand, did he not, that Wilfrid Blair met and quarrelled with— with a certain person, and was killed in the encounter which followed?"

"How shall I ever free myself from the consciousness of my own part in it?" she shuddered. "Don't—don't speak of it again. I can't bear it."

"You won't have to, very long," Kent assured her. "Let us get back to the jewels. You would be willing to make a considerable sacrifice to recover them?"

"Anything!" "Perhaps you've heard something of this man?"

"Some of my friends have been to him," she said. "For a time he was rather a fad."

"But you haven't ever consulted him, yourself?" "No, indeed."

"That is well. I want you to go there with me today."

"To that charlatan? Why, Professor Kent, I thought you were a scientific man."

"Translate 'science' down to its simplest terms in Saxon English," said Kent.

"It would be 'knowing', I suppose."

"Exactly. When I think a man knows something which I wish to know but do not know, I try to possess myself of his knowledge, whether he is microscopist, astrologer, or tinsmith. To that extent I am a scientist."

"And you expect the stars to tell us something about my lost topazes?"

"They seem to have had some influence on the career of the

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

Mason & Risch Pianos

"FROM FACTORY TO HOME"
17 WESTERN BRANCH STORES

It does not take much intelligence to realize that the maker of any article can sell his product cheaper than the dealer who must buy from the maker before selling to the consumer.

All Mason & Risch Pianos and Player-Pianos are sold to the home direct at ONE profit, and realizing that our name and reputation are at stake with every piano we sell, we protect ourselves by making the best piano possible to be made. Whoever buys one of these instruments takes no risk.

WRITE FOR BOOKLET TO-DAY.

MASON & RISCH LIMITED

WINNIPEG, MAN.

RESULT OF A TEN PAY LIFE POLICY

in The Great-West Life.

\$1,000 Ten Pay Life Plan. Issued 1903. Age at issue 30. Premium \$51.10.

OPTIONS AT END OF TEN YEARS:

1. Take Paid-up Policy for \$1,000 and use profits to
 - (a) Purchase Bonus addition \$281.00
 - or (b) Withdraw in cash 118.00
2. Surrender Policy for cash
 - Guaranteed Reserve \$422.00
 - Surplus 118.00
 - Total Cash value 540.00
3. Take Life Annuity of 34.35

Ask for personal rates

The Great-West Life Assurance Company

Head Office - Winnipeg, Man.

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

Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Splint, Sweny, Capoea Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Kingbone and other bony tumors. Cures all skin diseases of Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Ears Throat, etc. It is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. For send for descriptive circulars, testimonials, etc. Address
The Lawrence-Williams Co., Toronto, Ont.

Mention this magazine when writing advertisers

PATENTS TRADE MARKS AND DESIGNS

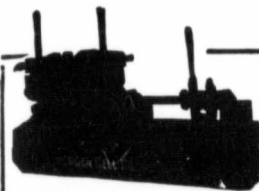
Write for booklet, circulars, terms, etc.

FETHERSTONHAUGH & CO.

FRED. B. FETHERSTONHAUGH, K. C. M. E.
GERALD S. ROXBURGH, B. A. Sc.

36-37 Canada Life Bldg. WINNIPEG

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\$1500 to \$5000 Per Year

have been made by hundreds of people operating the "American" Drilling Machines. 40 years' experience, 50 regular styles and sizes and the output of the world's largest manufacturers of this kind of machinery make

"AMERICAN" MACHINES STANDARD

Made in types for every kind of earth and rock drilling or mineral prospecting, equipped with any power, or operated with your traction engine. Our new 196 Page Catalog Free.

THE AMERICAN WELL WORKS

General Office and Works:
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ILL.,
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First Nat. Bk. Bldg.

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ERZINGER'S No. 2 CUT PLUG

Leads them all. It's the Best Dollar Tobacco sold anywhere.

JOHN ERZINGER
McIntyre Bldg. - 293 Portage Ave.
Phone 69 Phone 2677

Mention this magazine when writing advertisers

to his professional judgment. The visitor was obviously "light."

Quitting his peep-hole, the Star-master pressed a button. Strains of music, soft and sourceless, filled the air (from a phonograph muffled in rugs). The moon glow paled a little. There was a soft rustle and fluctuation of wall draperies in the apartment. The light waxed. The Star-master stood before his visitors.

They beheld a man of undistinguished size and form, eked out by a splendid compositism of manner. To this his garb contributed. All the signs of the zodiac had lent magnificence to the long, black, loose robe with gaping sleeves, which he wore. Mrs. Blair noted with vague interest that it was all hand embroidered.

Pale and hard the face rose from this somber and gorgeous appareling. It was a remarkable face, small, calm, and compacted of muscles. Muscles plumped out the broad cheeks; muscles curved about the jaws; muscles worked delicately along the club of a nose. The chin was just one live, twitching muscle. Even the faint screwed lines at the eye- corners suggested muscle. And, withal, there lurked in the countenance a suggestion of ingenuousness. The man looked like a bland and formidable baby. He looked even more like a puma.

With a rhythmical motion of arms and hands he came forward, performed a spreading bow of welcome, and drew back, putting his hand to his brow, as if in concentration of thought. Marjorie Blair felt an unholy desire to laugh. She glanced at Professor Kent, and, to her surprise, found him exhibiting every evidence of discomposure. He fidgeted, fanned himself with his hat, mopped his brow and palpably flinched under the solemn regard of the mage.

"Stupid of me," he muttered, in apology. "Gets on one's nerves, you know. Awesome, and all that sort of thing, fussing with the stars."

Preston Jax bestowed a patronizing smile upon his visitor. Protectiveness, benign and assured, radiated from him.

"Fear nothing," said he. "The star forces respond to the master-will of him who comprehends them. Madam, the date, year, month and day of your birth, if you please?"

"March 15th, 1889," replied Mrs. Blair.

Propelled by an unseen force, a celestial globe mounted on a nicked standard, rolled forth.

To be continued)

The Occidental Fire Insurance Co.

Head Office: WAWANESA, MAN.

A. NAISMITH, President R. M. MATHESON, Vice-President
A. F. KEMPTON, Sec. and Mgr. C. D. KERR, Treasurer

Subscribed Capital \$300,000.00
Security to Policy-holders 640,817.29

Full Deposit with Dominion Government
Agents wanted in unrepresented districts

S. H. Henderson, Pres. E. H. Dewart, Vice-Pres. C. D. Kerr, Treasurer

The WAWANESA MUTUAL INSURANCE COMPANY

HEAD OFFICE: WAWANESA, MAN.

A. F. KEMPTON, Secretary-Manager

Amount of Insurance in force Dec. 31st, 1913 \$38,342,194.00
Assets over Liabilities \$652,467.96

THE NUMBER OF FARMERS INSURED, 31st. Dec. 1913, 25,495

The Largest Farmers Mutual Fire Insurance Company in Canada. Agents wanted in unrepresented districts

REGISTERED TRADE MARK



JOSEPH RODGERS & SONS, Limited

SHEFFIELD, ENG.

Avoid imitations of our CUTLERY by Seeing that This EXACT MARK is on Each Blade.

SOLE AGENTS FOR CANADA

JAMES HUTTON & CO., MONTREAL.



You can see under the glass how rough that spindle is.

Mica Axle Grease

Fills the cracks and makes easy, smooth running.

"It's the Mica that does it."

THE IMPERIAL OIL CO., Limited

Winnipeg
Vancouver

Toronto
Montreal

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Halifax



There Is No String To This Pipe

It is absolutely FREE to subscribers who take advantage of this offer

The Weekly Free Press and Prairie Farmer,

Winnipeg

The Canadian Thresherman and Farmer

Both including Pipe for the nominal sum of **\$1.25**

The lowest price at which these two papers will be offered this year is \$1.25. it makes no difference whether you take the pipe or not, the price is the same. While the supply of these pipes lasts they will be given away free to all who subscribe. Better get your order in early and be sure of a good smoke.

Weekly Free Press and Prairie Farmer.1914
Winnipeg, Man.

Find enclosed \$1.25, for which send the "Weekly Free Press and Prairie Farmer" one year, and the "Canadian Thresherman and Farmer," one year, together with pipe to the following address:

Name

Town

Province P.O. Box



Conducted for the benefit of Dealers, Threshermen and Farmers who have anything to sell or exchange. Five cents a word for each insertion.

FREE FOR SIX MONTHS—My special offer to introduce my magazine "Investing For Profit." It is worth \$10 a copy to anyone who has acquired poorer while the rich, richer. It demonstrates the real earning power of money and shows how anyone no matter how poor, can acquire riches. "Investing for Profit" is the only progressive financial journal published. It shows how \$100 grows to \$2,200. Write now and I'll send it six months free. H. L. Barber, 496-50 W. Jackson Blvd., Chicago.

FARMS WANTED. We have direct buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 15 Palace Bldg., Minneapolis, Minn.

OXY-ACETYLENE WELDING—Save your cracked or broken castings from the scrap heap. We weld cylinders, crank shafts, gears, levers, etc., retain original form and strength at a small cost. Metal added to worn-out parts. All metals welded satisfactory. The Manitoba Welding & Manufacturing Co., 62 1/2 Princess Street, Winnipeg.

FOR SALE.

We have on hand at present a very full line of Rebuilt and Second-hand Engines and Separators, which we are offering at attractive prices. Write us fully what you are thinking of buying and we shall be pleased to tell you what we have and quote prices. All our rebuilt goods are sold under same guarantee as new ones and of course are carefully repainted and look exactly like new. If you write us at once we are sure to have the size you almost want.

SAVYER-MASSEY COMPANY, LIMITED, Winnipeg, Man.

BARGAINS.

- 1 30 H.P. double undermounted Avery engine, with Alberta and Saskatchewan Boiler. This engine has been repaired and fixed up in first class shape.
 - 1 30 H.P. undermounted Avery engine, with regular boiler, repaired and fixed up in first class shape—this would make a dandy threshing engine.
 - 1 20-35 Avery gas engine—has been out two seasons and is in first class shape.
 - 1 20-35 Avery gas engine—has been out seven days in 1913, is practically as good as new.
 - 1 18 H.P. double undermounted Avery engine, coal burner, is in first class shape.
 - 1 3-ton Avery farm truck, has been repaired and over-hauled and is in first class shape.
 - 1 36 x 60 Avery separator, complete with feeder, weigher, wind stacker; has only been out 30 days. Has been repaired and repainted, looks like new.
 - 1 32 x 54 Avery separator, only been out 20 days, and is in first class shape.
 - 1 42 x 70 Avery separator, has run 50 days, has been repaired, repainted and over-hauled and is in first class shape.
 - If you are interested in second hand goods and none of the above suit you, let us hear from you, stating just what you want, and we feel sure we can fix you out all right. We feel sure we can fix you out all right.
- CANADIAN AVERY COMPANY, LTD.**
Winnipeg and Regina.

BUYERS, ATTENTION!

THE GEORGE WHITE & SONS COMPANY LIMITED, BRANDON, MAN.

ENGINES

- 3-25 H.P. White tractions thoroughly rebuilt and in good shape. Each... \$ 180.00
 - Second Hand
 - 1-16 H.P. American Advance traction... \$ 700.00
 - 1-18 H.P. Minneapolis traction... \$ 600.00
 - 1-20 H.P. Brandon Cornell, Portable... \$4000.00
 - 1-20 H.P. White traction... \$1200.00
- SEPARATORS—Second Hand**
- Aultman & Taylor, 28x50, all attachments... \$ 400.00
 - 1-40x62 Waterloo separator, all attachments... \$ 400.00
 - 1-36x60 Goddison separator, all attachments... \$ 300.00
 - 1-36x60 American Abell, all attachments... \$ 325.00
 - 36x56 Fulsom separator, all attachments... \$ 300.00
 - 2-32x56 Great West separator, all attachments... \$ 200.00
 - 1-32x56 Great West separator, all attachments... \$ 200.00
 - 2-White Challengers separators, thoroughly rebuilt, all attachments, Each... \$ 900.00
- Write us re new goods—We have the best.

WANTED—Improved farms and wild lands. Best system for quick results. Full particulars and magazine free. Don't pay big commissions. Western Sales Agency, Minneapolis, Minn.

REBUILT ENGINES and separators bought and sold. Do you want a good rebuilt automobile? Experts sent out to all parts of Sask. Agents for Geo. White engines and separators, Rumbely, Gaas Scott, and Advance lines. The G. M. Graves Machine and Motor Co., Sutherland, Sask.

FOR SALE.

- | | |
|-----|---|
| No. | |
| 15 | Horse Case Simple Portable Engine.....20940 |
| 15 | Horse Case Simple Portable Engine.....15833 |
| 15 | Horse Compound Portable Engine.....13428 |
| 18 | Horse Simple Traction Waterloo.....323 |
| 16 | Horse Portable Sawyer-Massey.....8299 |
| 20 | Horse Portable Sawyer-Massey.....1419 |
| 20 | Horse Simple Traction Sawyer-Massey...1116 |
| 20 | Horse Compound Traction Engine, Case 7926 |
| 20 | Horse Simple Traction Engine, Case....1721 |
| 20 | Horse Simple Traction Engine, Case....16912 |
| 32 | Horse Simple Traction Engine, Case....19019 |
- J. I. CASE, THRESHING MACHINE COMPANY, WINNIPEG, CANADA.**

FOR SALE—1 110 H.P. simple traction J. I. Case engine, 1 80 H.P. simple traction J. I. Case engine, 1 75 H.P. simple traction J. I. Case engine, 2 25 H.P. simple traction J. I. Case engines, 1 60 H.P. simple traction J. I. Case engine, 1 45 H.P. simple traction J. I. Case engine, 1 45 H.P. simple portable J. I. Case engine, 1 30-60 oil tractor J. I. Case engine, 2 40-62 separators, J. I. Case; 2 36-58 separators, J. I. Case; 1 32-54 separator, J. I. Case; 1 28-50 separator, J. I. Case; 1 24-42 separator, J. I. Case. The above separators are all equipped with feeders, windstackers, and automatic grain handlers. The 110, 80 and 75 H.P. engines are equipped with contractor's fuel bunkers. We also have for sale two second-hand J. I. Case 30 H.P. automobiles, which will be sold at reasonable prices. J. I. Case Threshing Machine Co., Regina, Sask.

PEDIGREED SEED WHEAT, OATS AND BARLEY—Big strong seed with breeding money back guarantee. Surprisingly low prices. Get samples and catalog showing how these seeds are bred by both the Garton and Swedish systems. Harris McFayden, Farm Seed Expert, successor to Garton Pedigree Seed Company, Winnipeg. We ship same day your order reaches us, and carry complete assortment of all farm seeds.

FOR SALE—Shop-worn National Cream Separators, guaranteed new, \$25.00 each. Raymond Mfg. Co. Ltd., Winnipeg, Man.

312 ACRES—Improved, five miles from Moose Jaw, 220 acres near Munster; 1,280 acres near Gainsborough; 160 acres improved, near Carievale; 640 acres, 3 1/2 miles from Lanigan; 320 acres near Wroxton; 1,280 acres near Borden. Write for full particulars regarding any parcel in which you may be interested. Canada Lands, Limited, 400 North Crown Bank Bldg., Winnipeg, Canada.

LAND—30 miles from Winnipeg. All mixed farming lands. Good transportation, from 1/2 mile to 3 miles from railway. Water at 15 feet. Garden City Land Company, 318 McIntyre Block, Winnipeg. Phone M 4799.

WANTED to hear of good farm or unimproved land for sale. Send description and price. Northwestern Business Agency, Minneapolis, Minn.

STEWART SHEAF LOADER—Good as new. Will be sold cheap. Apply R. A. Brodie, Pierson, Man.

FOR SALE—4 H.P. Waterloo Boy Gasoline Engine, practically new. Has been used for demonstrating purposes only. In first class shape. Price \$125, a real snap. Maytag Co., Limited, Winnipeg, Canada.

"HEAVEN AND HELL" and the world of spirits. Swedenborg's great work on the life after death. 400 pages. Only 25c. post-paid. W. H. Law, 486-G, Euclid Ave., Toronto, Ont.

HALL'S RED RIVER EMPLOYMENT OFFICE, 188 Logan Ave. East, Successors to old established Red River Employment Office. Farm lands, engineers, steam and gasoline plowmen and all other farm help. Phone Main 7298.

AGENTS WANTED—Having the sole agency for the Dominion of Canada to handle The Richmond Automobile Fire Extinguisher we are willing to pay big commissions to agents to represent us. Just a few more agents wanted. Write immediately. The Hobart Mfg. Co., 210 Edendore Bldg., Winnipeg. 8-14

CANADIAN GOVERNMENT EXAMINATIONS for railway mail clerks everywhere soon. Citizens over 15 eligible. Big pay, 16 job. Yearly vacation with full pay. Common education sufficient. Write immediately or free sample questions and list of examination places. Franklin Institute, Dept. G 90 Rochester, N.Y.

FOR SALE—640 acres 2 1/2 miles from Lanigan, 310 acres 3 miles from Moose Jaw, 1,280 acres near Gainsborough, 160 acres improved near Carievale, 1,280 acres near Borden, 320 acres near McNutt, 640 acres improved near Paynton, 160 acres improved near Rama. These lands are offered at right prices on the following terms: 1-10 cash, balance 9 yearly payments at 6 per cent. For list and maps write Canada Lands, Limited, 400 Northern Crown Bank Bldg., Winnipeg, Canada.

ENGINEER—Wishes position running gas tractor. Fairbanks or Rumbely preferred. Apply C. J. Surprenant, Otterburn, Man.

Typewriters

OLIVER TYPEWRITER, NEW MODEL, No. 7, the machine that writes in a wisper with a touch that is lighter than the lightest of any writing machine. You can buy an Oliver for 17 cents a day, other machines taken in exchange. "Canadian Threshermen and Farmer use Oliver's exclusively." Write to-day. Winnipeg Typewriter Co., 251 North Dame Avenue, Winnipeg.

DANGER STOP! LOOK! LISTEN!
WHAT WILL HAPPEN TO YOU OR YOUR FAMILY IF YOU GET **HAILED OUT?**

TIME, STRENGTH, EXPERIENCE AND HONOR BEHIND A **BRITISH AMERICA HAIL POLICY**

SEE OUR LOCAL AGENT, OR WRITE TO **BRITISH AMERICA ASSURANCE CO. WINNIPEG, MAN.**

AGENTS WANTED IN UNREPRESENTED DISTRICTS

Incorporated 1833 A.D.
Financial Test—Assets over \$2,300,000
Test of Losses Paid—Losses Paid Exceed \$37,000,000
Test of Honor in Directorate **BEST BY TEST**
A British America Hail Policy **SECURE THE BEST**

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

THE STORY OF TWO FARMS AND ONE FLASH

'PROTECTION POSITIVELY GUARANTEED

caused by lightning to any structure and its contents if said structure has been rodde by our ninety-nine p.c. pure copper cable. We give an absolute guarantee to this effect, and we know we are taking no risk in doing so.

IN OUR TEN YEARS' BUSINESS AS ELECTRICIANS

No building which has been protected by the "TOWNSLEY" system has ever been damaged by lightning storm, while others in the immediate vicinity have gone up in smoke.

IT CANNOT HAPPEN

and our protecting cover (which is the least expensive insurance you ever paid) not only guarantees you against loss of property, but the inconvenience arising from such destruction, and the double loss in being put out of business till it has been replaced.

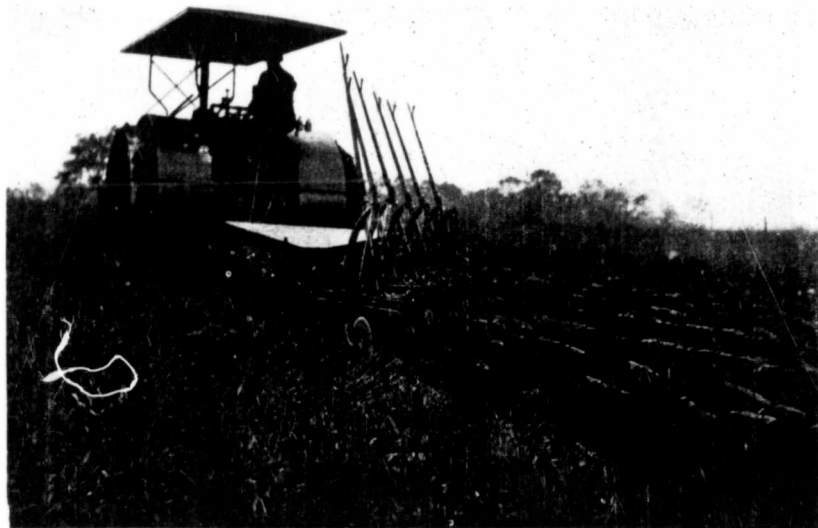
Write us at once for full particulars. Agents wanted in Western Canada

335 9th Street
Brandon
O. W. TOWNSLEY, Manager

99 OF PURE COPPER CANADIAN LIGHTNING ARRESTER 99
CAND ELECTRICAL CO LTD BRANDON PURE COPPER

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

HUBER



Huber 20-40 Gas Tractor Threshing.

Whatever the extent of your farming operations, you have need of a mechanical power. The size tractor you need depends on the size of the farm, and whether you do threshing or other custom work with it. If you are operating on a big scale, you will not want anything smaller than our Thirty-Sixty. For lighter work, our Twenty-Forty or Fifteen-Thirty will suit.

As a medium size tractor, the Twenty-Forty is very popular. The illustration shows it pulling six 14-inch plows, turning the ground to a good depth, and doing it easily. It burns either gasoline or kerosene, and does not require a large amount of fuel for work. The Fifteen-Thirty is similar, but of lighter construction for lighter work. All sizes of Huber Tractors are equipped for both gasoline and kerosene.

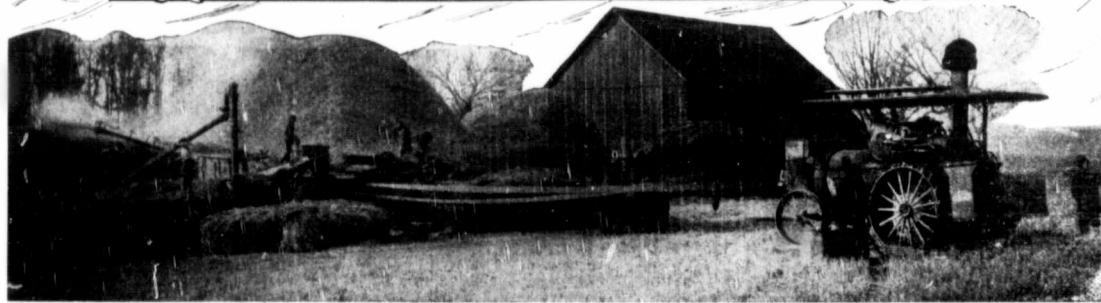
Of interest to the thresherman, in connection with the matter of a power outfit, is a machine for threshing the grain. The HUBER grain thresher is

not and never has been excelled by any. It has a splendid reputation for saving and cleaning the grain. Farmers get full value from their crops when threshed with a HUBER. The Threshermen get full pay for their work, for all the grain goes into the measure. Oiling troubles are eliminated; for the HUBER has large automatic oiler which lubricates cylinder boxes without any attention from operator, except to see that oil pot is full at the beginning of each day. Belt troubles are avoided by automatic tighteners, which keep all belts at proper working tension, without stretching the life out of them or allowing them to slip on pulleys.

We furnish every modern attachment to increase the capacity of the threshing outfit and do it with the minimum of labor. We wish to get in touch with all who are interested in the operation of threshing machinery. We are able to make prompt shipment from stock, and furnish goods that will satisfy in every particular.

The Huber Manufacturing Co.

Logan and Arlington, Winnipeg, Man.



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BALING PRESSES



Case 60 Oil Tractor - Case Steel Baling Press

There is no machine that contributes so easily to your profit account as the Hay Press. Because—

It can be used over an extended season.

It can work at times when otherwise your tractor would be idle; thus it not only produces profit from its own work, but by keeping your power busy, it adds so much to that source of revenue.

Look around and see the almost general demand for baled hay. Why do you not get this business? It will pay for your baler in a short time.

What Baler will you buy? Why, CASE of course! The CASE Belt Power Baler comes in two sizes, 14 x 18 and 17 x 22. The first has a capacity of three and a half to five tons per hour; the second four to six.

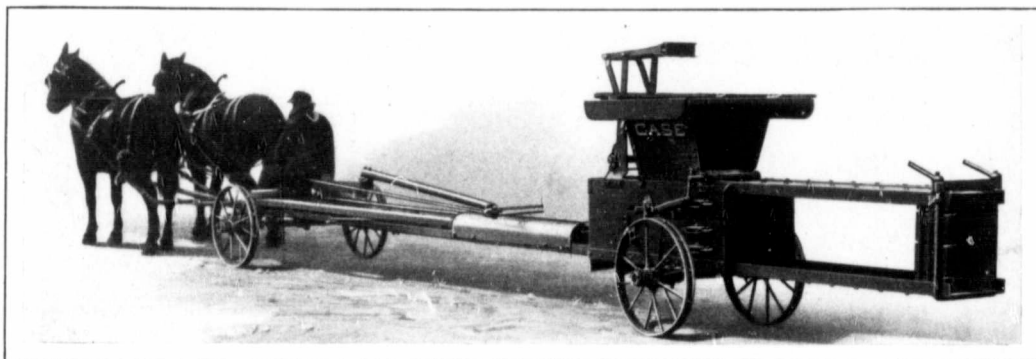
Note the large opening for feeding and the condenser. This condensing device so compresses the hay that the whole forkful is placed under the feeder, and the entire feed thus goes to the baler at one time.

The complete mechanism of these Balers is sturdy—built for steady, profitable service. The friction clutch lets the flywheel get up to speed before starting the Baler. This does away with the throwing of the belt, so common in many Balers.

CASE SWEEP POWER PRESS

The size of this machine is 14 x 18, with a capacity of one and a half to two tons per hour. It is made to be run by two horses. It is built throughout with strictest attention to service to its owners. Its self-feeder increases its capacity at least fifty per cent over that of hand-feeding.

Our new catalog on Baling Presses will be sent you in response to a card simply marked "Baling Presses," and signed.



Case Horse Power Baling Press

CASE THRESHING MACHINE CO.

CHICAGO, ILL. U.S.A.

SOLE AGENTS: TORONTO, MONTREAL, WINDSOR, SASKATOON, REGINA & CALGARY