NICHOLS & SHEPARD CO.

THRESHING MACHINERY

BATTLE CREEK, MICHIGAN

IN CONTINUOUS BUSINESS
SINCE 1848

SINCE 1848

NICHOLS & SHEPARD COMPANY

Have CONTINUOUSLY Built

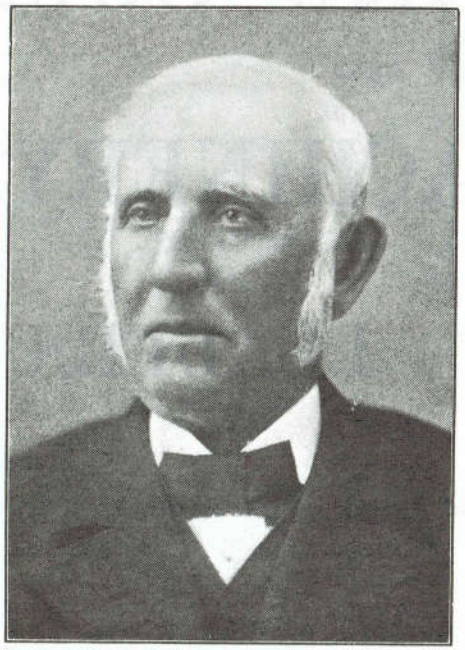
THREADING MACHINERY

LEADERS THEN LEADERS NOW

Main Office and Works: Battle Creek, Michigan

BRANCH HOUSES (With Full Stock of Repairs) At

Fargo, N. Dak. Minneapolis, Minn. Billings, Mont. Regina, Sask. Peoria, Ill. Lincoln, Nebr. Winnipeg, Manitoba
Madison, Wis. Des Moines, Iowa Kansas City, Mo. Nashville, Tenn. Indianapolis, Ind.
Geo. H. Gallagher Co., Spokane, Wash. Nichols-Shepard Sales Co., Dallas, Texas
Consolidated Wagon & Machine Co., Salt Lake City, Utah



JOHN NICHOLS

Founder of Nichols & Shepard Co., in the Year 1848

DAVID SHEPARD

Associate Founder of Nichols & Shepard Co.

FOUNDERS OF THE NICHOLS & SHEPARD COMPANY

CORPORATIONS, like individuals, have certain well-defined and dominant characteristics that can be traced to their ancestry. Those which typify the standing of the Nichols & Shepard Company are prominent and easily discerned. They are centered around two things — progressiveness and straightforward honesty of purpose in each and all of their business dealings.

It was the idea of progress that originally launched this concern — it has been steadfast adherence to the purpose of its founders that nothing should interfere with strict integrity in the conduct of their business affairs that finds their successors today the leading manufacturers of grain threshing machinery after an uninterrupted career of success that covers two-thirds of a century.

Buyers and users of the highly developed RED RIVER SPECIAL line owe much to the two Michigan pioneers whose portraits are shown on the preceding page, because it was through their combined efforts and untiring energy that this development has been made possible.

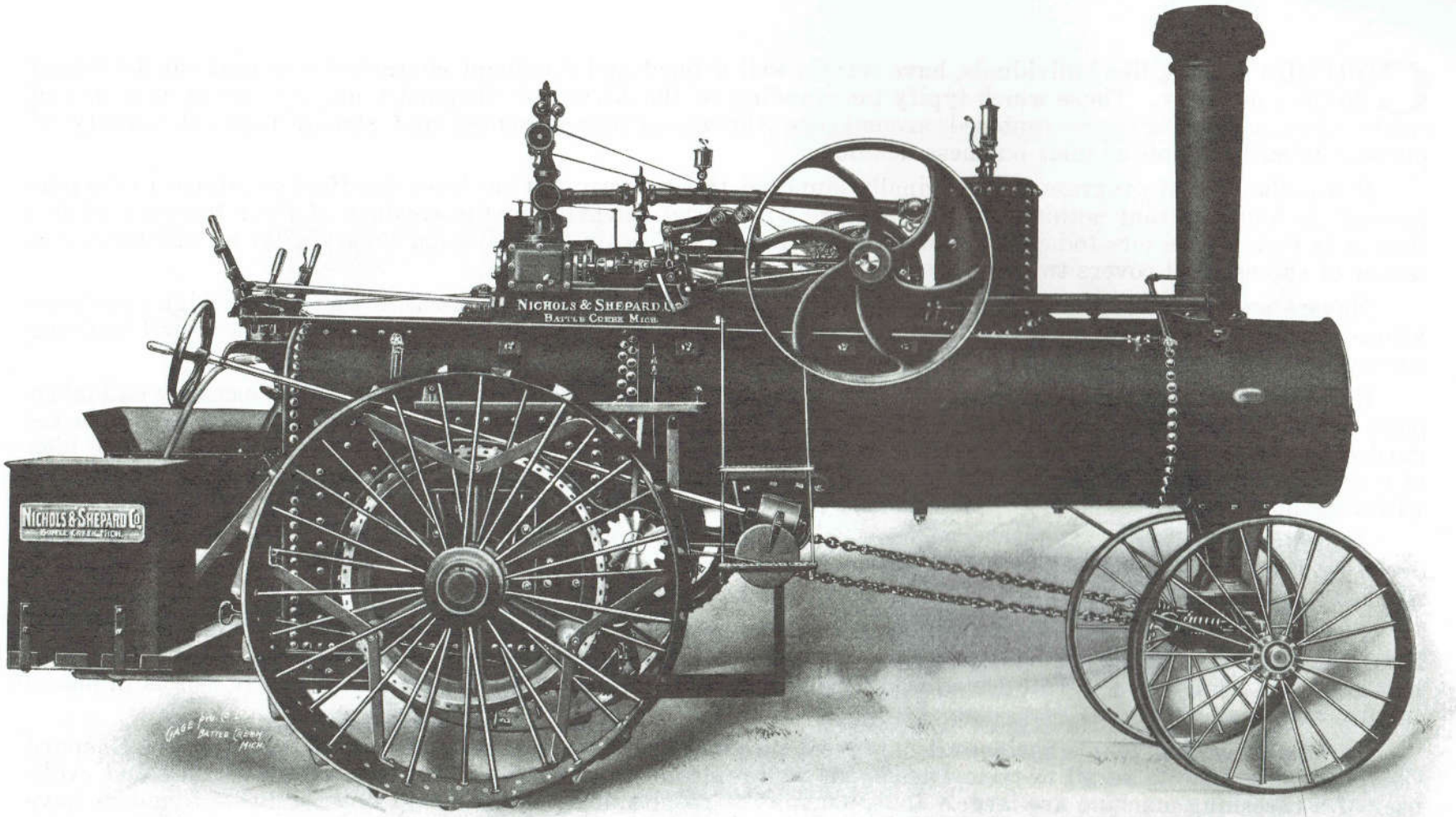
Up to the time that the Nichols & Shepard "Vibrator" Separator was manufactured, so little change had taken place in the construction of the threshing mill built by Andrew Meikle, of Scotland, in 1787, that it had come to be regarded as one of the products of inventive genius that could not be improved upon; indeed, Meikle's basic idea of the toothed cylinder for the separation of grain from straw is still used in every modern device that has to do with threshing of grain or seeds.

Aside from this feature, however, every threshing machine built today embodies some of the ideas first introduced by John Nichols and David Shepard in the construction of the revolutionary "Vibrator" Separator, which marked the beginning of a new era in the building of this class of machinery.

In competition with the invention which they developed, the Scotch machine and all other types similar to it have disappeared. In the expansion of the business which they created one of the vast industries of the world has come into being upon a scale which would have been impossible but for the impress of their genius in manufacture and finance.

In launching this year's business it is a great pleasure to the present management of the Nichols & Shepard Company to be able to recall to their friends the well-remembered features of the men to whom they and every user of a threshing machine are largely indebted for the results attained. Though both of these founders have "passed on," their influence lives in the continuance of the same spirit of progress and honesty of purpose which first gave the business life.

This is the richest inheritance bequeathed by them to the company that still carries on their work, and to the present generation of threshermen, as well.



NICHOLS-SHEPARD DOUBLE-CYLINDER TRACTION ENGINE (Fly-Wheel Side).

Made in Four Sizes, 16-50 H. P., 20-70 H. P., 25-85 H. P. and 30-98 H. P. Adapted to Coal, Wood or Straw. 16-50 H. P. Not a Straw Burner.

To Threshermen

Good Machinery

Away back in the old days when grain threshing was confined to the old endless apron type of machine, when methods were wasteful and capacity exceedingly limited, the Nichols-Shepard Company first entered into the field of thresher construction.

The effort of the new concern then stood for progress. It first brought out the vibrating principle. This revolutionized thresher construction by introducing more efficient means for separation than had previously been known or used. The old types of threshers were discarded and other builders strove to follow in the wake of this progressive company.

Thus has it been for all of these many years.

The Nichols-Shepard effort has steadily advanced in making use of the best-known means for threshing, separating, cleaning and handling the world's grain, while others have aimed to follow its lead.

The result has been truly wonderful—from the old endless apron machine with a capacity of from 400 to 600 bushels of grain per day, that truly modern machine, the Red River Special, threshes from 4,000 to 6,000 bushels per day, with far less waste and much greater cleanliness.

To accomplish such continuous improvement in effectiveness, it has been necessary to use the best-known method of separation, which is that of beating the grain out of the straw, just as you would do by hand with a pitchfork.

The Red River Special is the only thresher built which uses that method.

This effort has produced like results in all branches of the Nichols-Shepard product, Threshers, Engines, Oil-Gas Tractors, Wind Stackers, Self-Feeders and all small accessories for quick and profitable work.

Good Service

There is another very important thing to be considered in connection with the Red River Special Line of Threshing Machinery. That is good service.

Great big stocks of repairs and machinery are to be found at all of our branches, and an immense warehouse located at the Minnesota Transfer, between St. Paul and Minneapolis, Minn., covering practically two acres of ground, is kept stocked full of machinery so that orders throughout all the Northwest can be quickly filled.

The company does not feel that its interest in a customer ceases when he has been delivered his outfit. It takes pride in seeing that his machinery is properly adjusted when he starts out, and watches his work closely thereafter.

Should accident happen and repairs be needed during the threshing season, night service is maintained at its factory and all its branches, that there may be no delay.

The result is profit to the thresherman.

The buyer of Red River Special machinery makes money. He thrives and prospers far in excess of those who operate other makes. Proof of this is found by observing conditions at its factory and branch houses and comparing them with competitors.

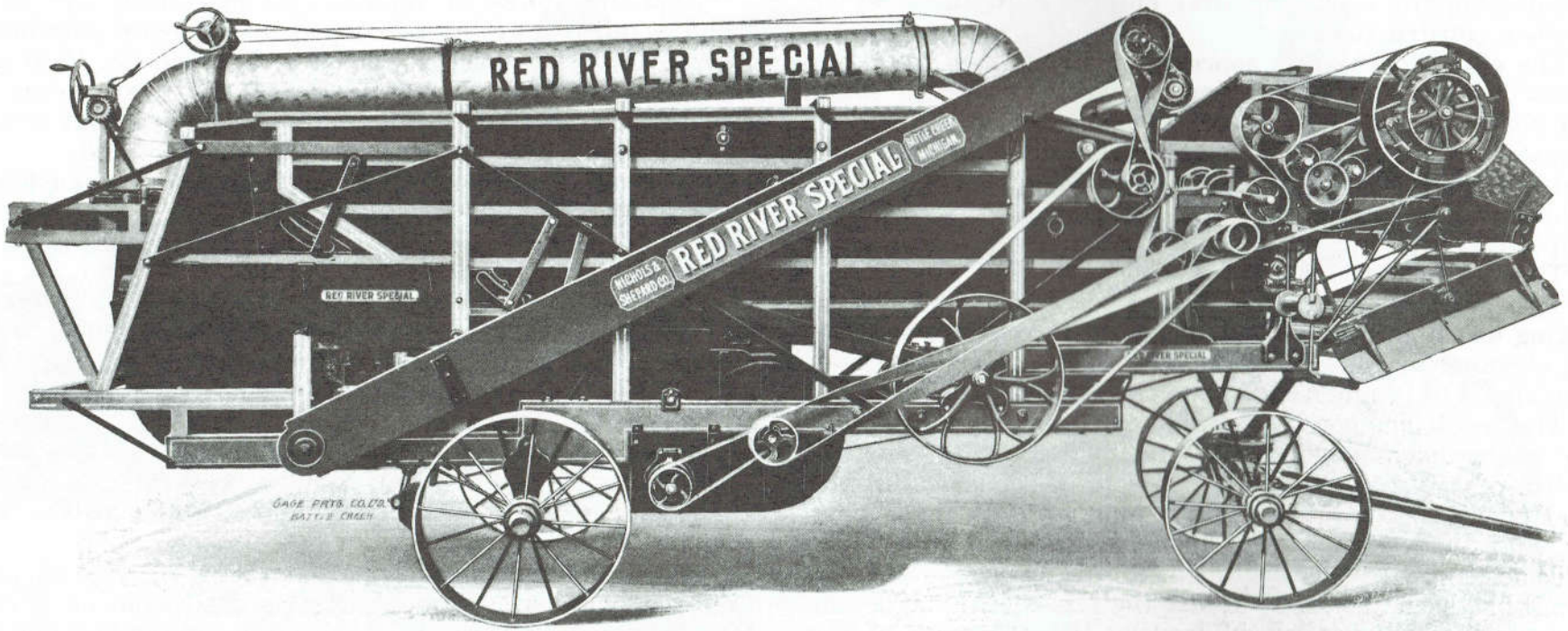
Neither factory nor branches of the Nichols-Shepard Company carry the large stock of second-hand machinery found with competitors. The reason lies in the fact that the Red River Special line pays for itself, makes money for its buyers, and does not have to be taken away from them.

Write for any desired information concerning profitable Threshing Machines.

Nichols & Shepard Company,
Battle Creek, Mich.

In Continuous Business since 1848.

It Saves the Farmer's Thresh Bill



THE RED RIVER SPECIAL.

Ready to Travel. Wind Stacker and Self-Feeder Attached.

Built in Eight Sizes, viz.: 22 x 36 and 28 x 40 Juniors, and 28 x 40, 30 x 46, 32 x 52, 36 x 56, 40 x 60 and 44 x 64.

The Red River Special Thresher

In principle, if not in results, the old-time hand threshing was not so much out of the way, and while there are many reasons why the Red River Special heads the list of the world's best machines, the chief one is found in the fact that **it is the only thresher built that beats the grain out of the straw and chaff.** It does hand work in principle with machine speed in results. All others depend upon the grain dropping out.

A threshing machine that "lays down" on the job is a thing to be shunned. A good flail in active operation will get more grain threshed than will a cheap rig standing still to make repairs.

A Good Thresher Has Several Needs.

It must do good work — thresh the grain all out of the head, separate it all from the straw, clean it fit for market, and must be built so as to last long, and not bother you by constantly "breaking down."

It Must Thresh All the Grain from the Head.

The Red River Special has the Big Cylinder, nearly twice as large and twice as heavy as the old-style, small cylinder.

It has one-half more concave surface, so that more teeth can be used than in the old style.

It is possible to use ten rows of concave teeth.

Enough concave teeth can be used to thresh any kind of grain and under any conditions.

It has greater momentum and is not affected by overfeeding.

Large pulleys are required, causing less loss of power, and insuring the most steady and even motion for all other parts of the machine.

It Must Separate All the Grain from the Straw.

The Red River Special has more to effect separation than any other thresher.

Its principle of separation and its handling of the threshed straw and grain is different from that of any other machine made.

It is the only machine which **beats the grain out of the straw.**

All others wait for the grain to **drop out.**

It has the most thorough and effective arrangement of shakers, which are continually **beating** the straw so that no grain is wasted.

It has the Man Behind the Gun, our patented separating grate and check-plate — which is the greatest separating device ever placed in a thresher.

Ninety per cent of the grain is beaten out through it — right there at the cylinder.

The threshed grain is **beaten** through this grate, the straw and grain being thrown against it at a furious speed — more than a mile per minute.

The grain goes into the grain-pan and cannot get back into the straw.

The straw passes over it on to the shakers and they **beat** out all the grain escaping the Man Behind the Gun.

After passing the Man Behind the Gun there is more separating capacity left in the Red River Special than there is back of the cylinder in any other make of thresher.

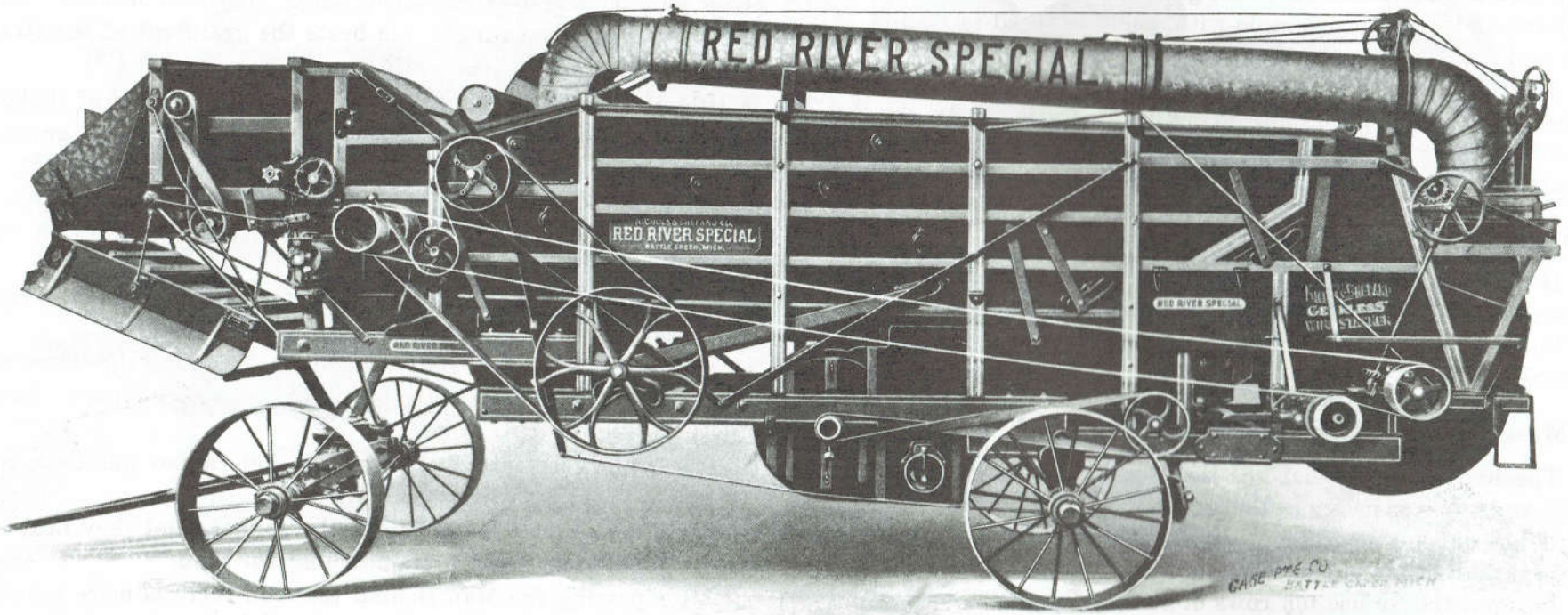
It Must Clean the Grain Thoroughly.

The Red River Special can clean the grain for market without its being materially docked.

The Red River Special

It Works Right Along When Other Makes Stand Still

It Saves the Farmer's Thresh Bill



DRIVE BELT SIDE. View with Gearless Wind Stacker and Self-Feeder Loaded for Travel.

Built in Eight Sizes, viz.: 22 x 36 and 28 x 40 Juniors, and 28 x 40, 30 x 46, 32 x 52, 36 x 56, 40 x 60 and 44 x 64.

The rear end of the grain-pan has an adjustable graduated slatted chaffer.

The operator can easily open this so that he can let as little or as much down on the sieves as conditions require.

If the grain-pan is loaded with chaff and short straw, the chaffer can be opened so it will permit just enough blast from the mill to pass through and loosen the mass of stuff, making it easy for the grain to fall through to the sieves and the straw and chaff to pass on to the stacker.

This adjustable chaffer, with the perfectly adjustable end shake shoe and ample mill, properly cleans all the grain that can be gotten to it.

The mill furnishes an even blast as strong or as mild as is required and the full length of the shoe.

The two wind boards enable the operator to put the wind right where he wants it, insuring the best of work.

A full complement of sieves is furnished with each thresher. They are easily changed and securely held in place. Simply put the sieve in position, crowd it down and the automatic sieve holder holds it rigidly in place.

It Must Do Fast Work.

Short threshing seasons make it necessary that the thresherman make the best of his time.

He must have a machine that will do lots of work.

The Red River Special is built to thresh fast and to thresh well.

The Big Cylinder, with its greater weight and greater diameter, has greater momentum than the old-style small cylinder. Its large pulleys keep the motion up steady and strong all the time, so that fast feeding, overfeeding or slugging does not bother it.

It will thresh when other machines have to lie idle. So that whatever the conditions, it keeps right on doing the best of work.

Crowding the Red River Special Does Not Increase the Percentage of Waste.

Crowd it to its utmost capacity and it will keep right on saving all the grain.

Unlike old-style and out-of-date machines, crowding does not increase the proportion of waste.

It Must Be Substantially Built.

The Red River Special is honestly built. Everything used and everything done in its building is with the idea of giving good long wear. The steel truck wheels with wide tire, the strong, rigid frame are made right, and braces and truss-rods are used to keep it right. The best of well-seasoned lumber — the most carefully selected steel and honest workmanship have made it a thresher to last. It performs its work under any and all conditions — wet seasons, dry seasons, weedy and tough grain.

It goes right along, threshing all the time, doing good work and making money for its owner.

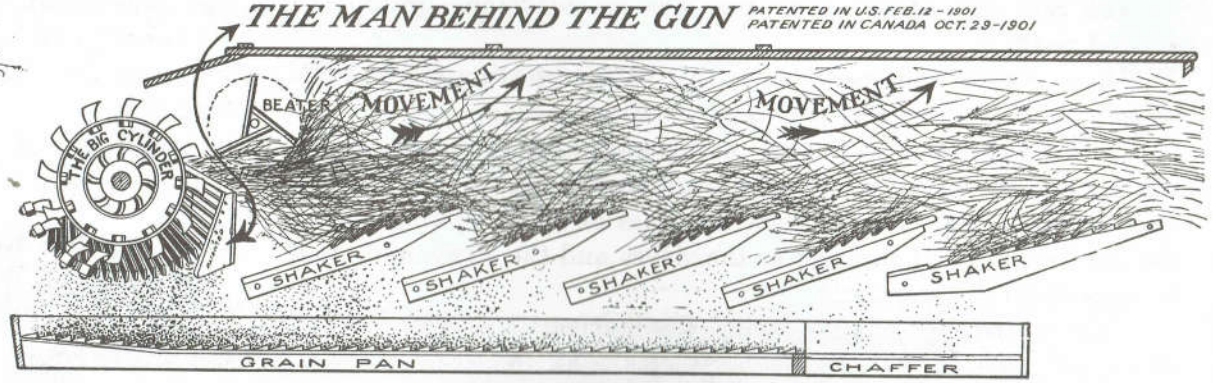
More features necessary to a **Good Thresher** are found in the Red River Special than in any other make.

The Red River Special Will Make Most Money for the Thresherman

This is the way to Separate by hand with a pitchfork

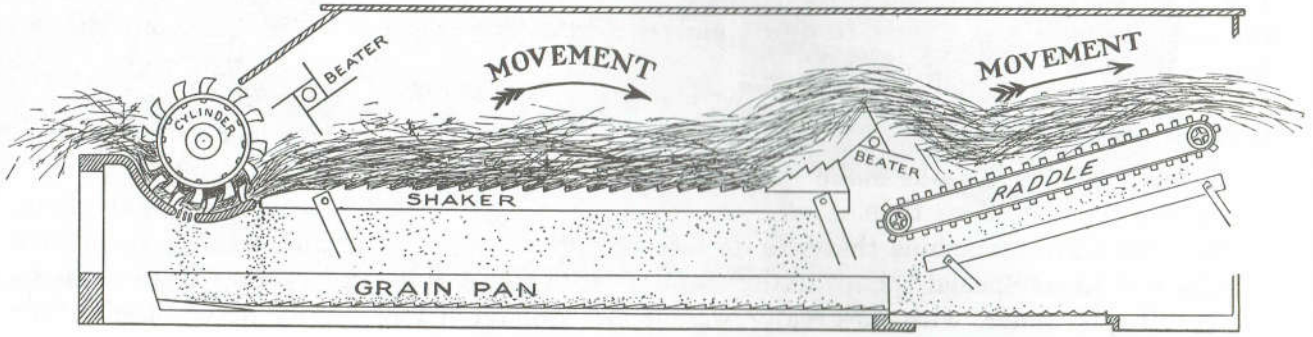
THE MAN BEHIND THE GUN

PATENTED IN U.S. FEB. 12 - 1901
PATENTED IN CANADA OCT. 29-1901



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

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



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

The Red River Special works on an entirely different principle of separation from any other make of Threshing Machine. It **beats it out** while other makes hurry the straw to the stack and expect the grain to fall out, which it does not do. Note the illustration.

Beating Out the Grain

There are two things that are of great interest to the intending buyer of a threshing machine. One of them is knowing how the work is done, the other is finding out beforehand whether he is to get an outfit that will make money for him under any and all conditions.

In considering the first point, the whole question of the right way of separating the grain from the straw and chaff must be worked out. In other words, the buyer must satisfy himself as to what successful threshing really is, and how it can best be done.

So far as he is concerned, he settles the question for himself by his choice of a machine. Upon what grounds should that choice be made?

All manufacturers will claim that the principle used by them is correct. But, all of them cannot be right. The successful working of a thresher is based upon the same simple natural law that controls the driving of a nail in a board, the application of force by beating. Before the invention of the threshing machine no other method was used. After its invention every attempt to get away from it has resulted in needless waste of power and grain.

As pioneer in the building of grain-threshing machinery, the Nichols & Shepard Company have always kept this fact in sight, and every patented improvement upon their machine has been made without change of this one great principle — that of **beating** out the grain — which they alone control, and to which their great success is due.

Let us work this out and see if it is not so.

Here on the barn floor is a pile of straw, chaff and grain to be separated to save the grain. Here is a pitchfork with which to do the job. When it is done you will know from your own efforts which of all the threshers made is the best separator for you to own or use.

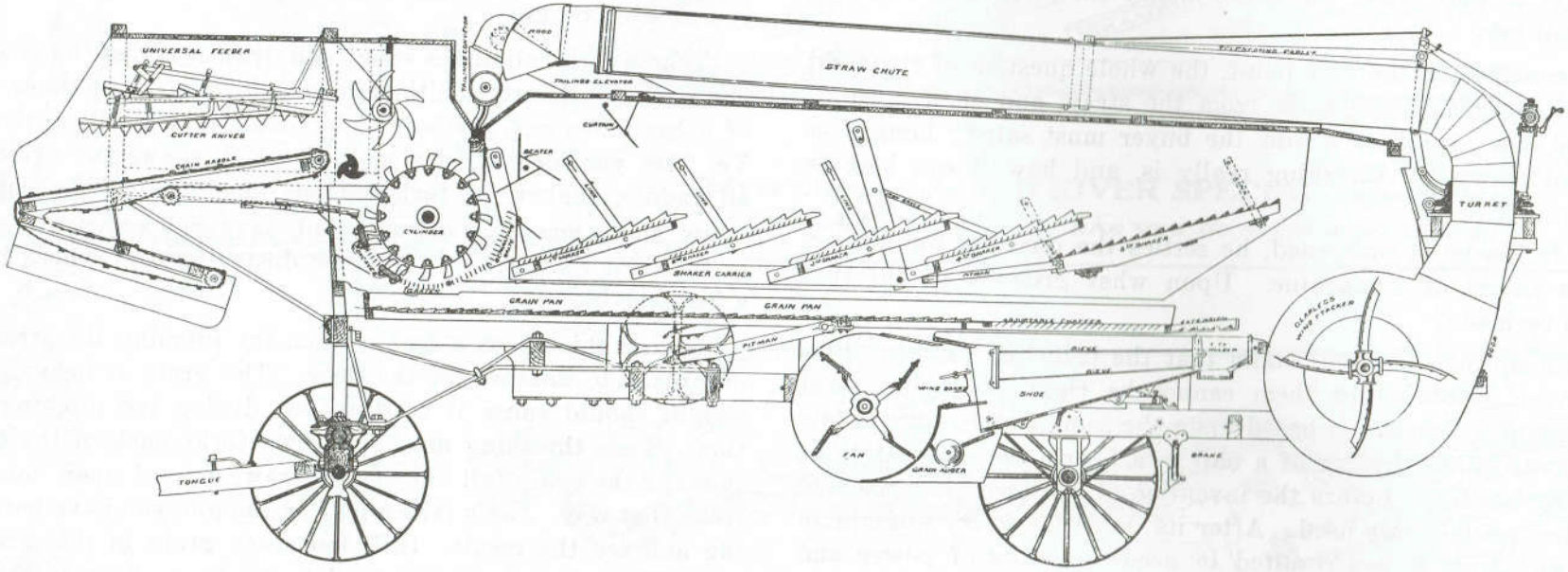
Take a fork full of the straw and draw it across the floor. You don't get much grain, although you do it a dozen times. Some of it has fallen out, that's true, but most of it is still in the straw. Yet here you have tried a method which shows the principle of all raddle, shaker, or fork-and-tine machines. They carry the straw along smoothly enough, but have not sufficient agitation to take out the grain. A feather duster method where it needs a hammer blow!

Giving this up as a bad system, try pitching the straw from one place to another on the floor. The grain is heavy, and its weight should cause it to drop out during the pitching operation. Some threshing machines, with forks back of the cylinder to make the grain fall out of the straw, depend upon doing their work that way. Let's take a look at the pile you have been pitching and see the result. Still too much grain in the straw, you say. Then that way must tend to waste, as your pitching was certainly well done.

As a matter of fact, these dragging and pitching methods, separately or combined, cover every style of separation that is used aside from the one which the Red River Special patents control.

We will now make a trial by hand that shows the Red River Special scheme of getting the grain.

It Saves the Farmer's Thresh Bill



THE RED RIVER SPECIAL.

(Sectional View.)

Look This over Carefully. There's More, Faster and Better Grain Separation Done by This Plan Than by Any Other Yet Devised.

Toss your forkful of straw up in the air, and when it falls back, give it a vigorous blow on the underside with the fork. You see that you are applying a beating force that causes the grain to drop through the fork to the floor.

You do that several times until the grain is all **beaten out,** and then you throw the forkful of straw aside and take another, which you beat out the same way. When the grain is all **beaten out,** all you have to do is to run it through a fanning mill and clean out the fine chaff.

This principle of separation is the true one. The harder you **beat** the straw with the fork from the bottom, or the harder the straw falls, the quicker you separate the grain.

If the straw fell a greater distance or fell with more speed than it does when you toss it up, the better and faster would be the separation, and the more grain would be **beaten** through your fork. But, if your fork were an open grate and the straw came down against it a thousand times faster than it does when you toss it up, think what wonderful and effective separation would result! Now, that is just exactly what the one thresher does! The Red River Special is the one thresher which uses the same method of separation that you did with the fork, and it is the only thresher that does.

The cylinder and beater throw and **beat** the intermingled straw, chaff and grain against the separating grate a thousand times harder than it fell against your fork, and the grain goes through. The check-plate catches it and delivers it to the grain-pan and it goes then to the fan, while the straw passes on over to the shakers. Ninety per cent of the separation is done right at the cylinder! We say ninety per cent because we know — we have tried it. It is not guesswork, but an actual fact which you can demonstrate yourself with any Red River Special.

When the straw passes to the shakers they go on and remove the little grain which has escaped the Man Behind the Gun, the separating grate and check-plate — by the same method,— the method you used with the fork, and the method used by the Man Behind the Gun. They toss the straw up in the machine, and as it falls back they **beat** it violently beneath, **beating** the grain all out of it. This is kept up as long as the straw is in the machine.

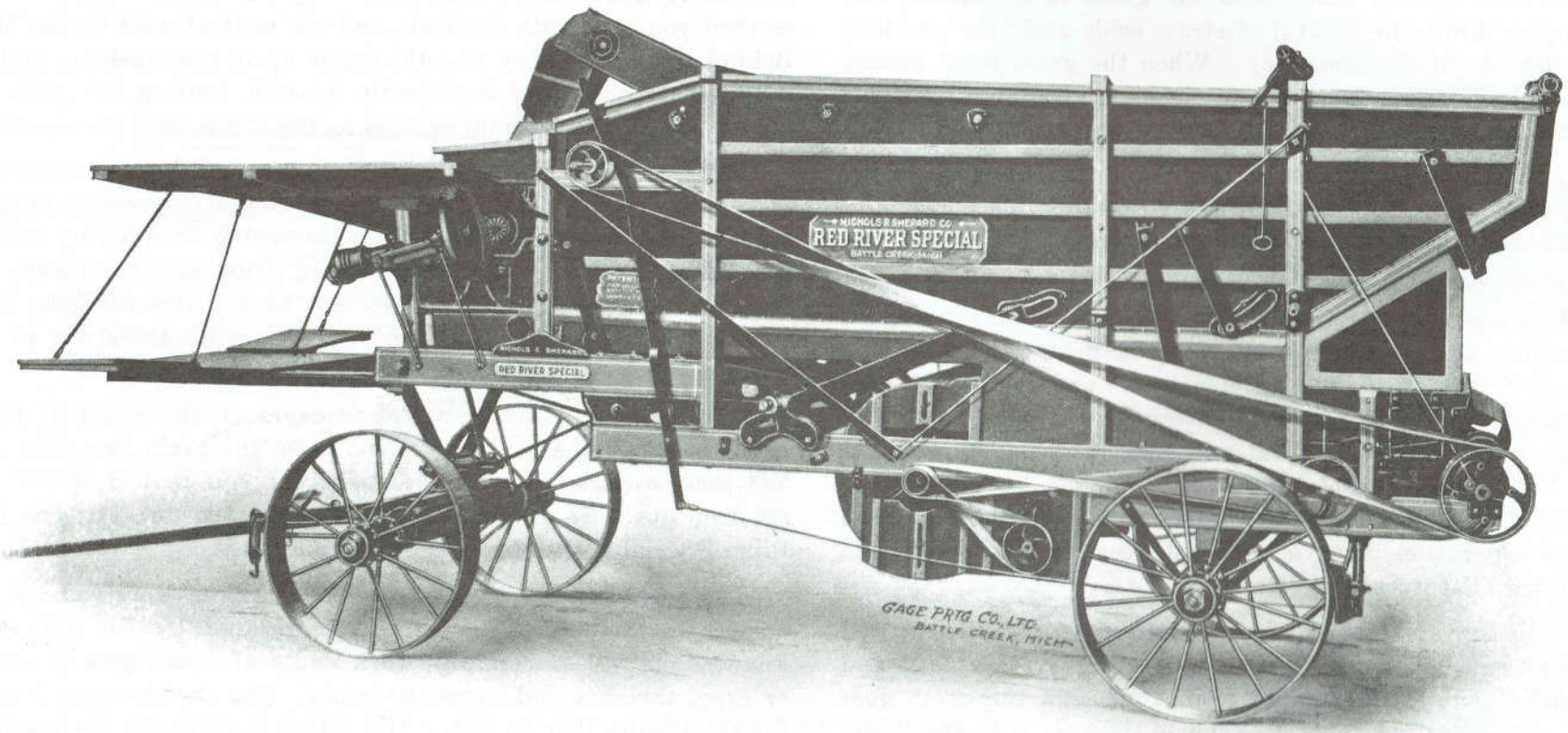
The Red River Special has no device for getting the straw out of the machine rapidly. No forks, raddles or pickers to drag it out. None are needed. There is no bunching or clogging calling for contraptions of that kind to get the straw out of the way. In fact, the Red River Special does just as you did with the fork and bunch of grain on the barn floor — it holds the straw in the machine long enough to **beat** the grain all out of it.

It is the only machine which removes all the grain by force from the straw. All others depend upon the grain dropping out. Yet your experience with the fork told you that it would not all drop out! To get it all it must be **beaten** out, and the Red River Special is the only machine that does it.

The second point of interest to the buyer is solved by the answer to the first. The Red River Special, by the only way known that will successfully work under all conditions of season or crop, threshes and saves the grain. The thresherman is paid for the results that he gets. His rating is made by the machine that he owns. If he owns a Red River Special, he makes money for himself and saves enough grain to pay the farmer's thresh bill.

Red River Results "Ring up the Cash"

It Saves the Farmer's Thresh Bill



THE RED RIVER SPECIAL.

Geared for Horse-Power. View of Gear Side.

Built in Four Sizes, viz.: 22 x 36 and 28 x 40 Juniors, and 28 x 40 and 30 x 46.

Why the Thresherman Should Prefer the Red River Special

The four great points that have made the fame of the Nichols-Shepard Red River Special outfits are the chief reasons why the thresherman should purchase no other. Business success often depends upon their careful consideration.

1. The Cost of Doing the Work.—With work on hand and fixed expense, low cost is dependent upon continuous operation. The ability of the Red River Special to go right along when other makes stand still, insures that the running expense will be small.

It will thresh when weather conditions are such that other makes cannot run.

It does more work than other machines — will take care of more grain and straw.

It has one great feature different from other machines. The percentage of waste is not increased by crowding the machine.

Others cannot be crowded because they waste too much — and the more they are crowded, the greater the percentage of waste.

Not so with the Red River Special. It can be crowded to the very limit and it still keeps saving all the grain.

2. The Value of the Work.—Comparison of productive capacity with operating cost is always in favor of the Nichols-Shepard machines. Profit comes here in rapid production at low cost.

Crops must be handled quickly.

There is a demand everywhere for speed.

The farmer must plow, plant, harvest and market his crop quickly. He realizes that his grain is safer in the granary or elevator than in the shock or stack, so he wants his threshing done promptly.

He knows it costs too much money to keep a slow-going, old-style outfit on his place.

He wants the best, the most modern and up-to-date outfit to do his work.

3. The Cost of Idle Time.—Every shut-down from conditions, or breakdown from defects, means expense that the thresherman and farmer must share. A machine like the Red River Special, that avoids both, keeps costs down and profits up.

The thresherman must look to the saving of time as much as he does to the saving of grain.

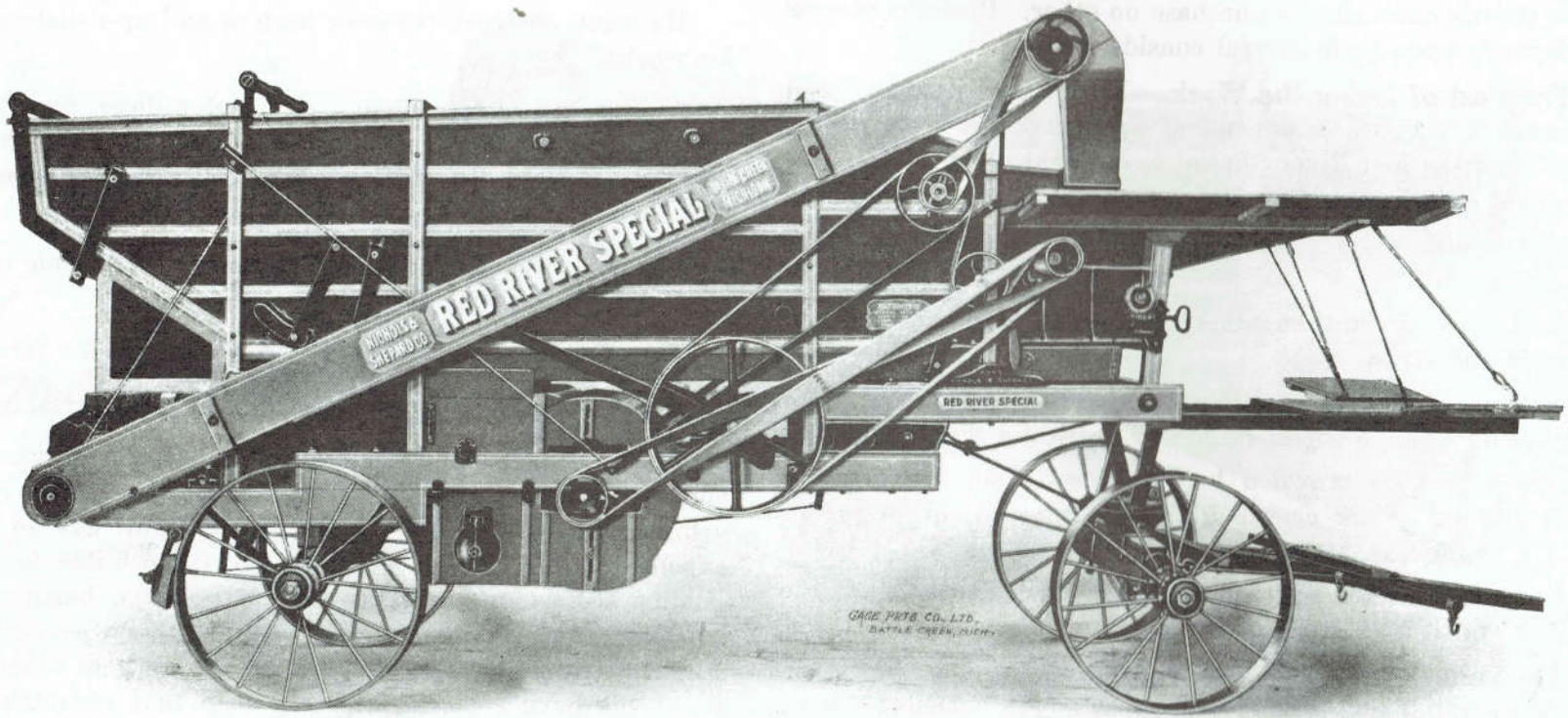
Time is money to both the thresherman and the farmer.

Fast threshing is just as important as **good threshing.**

4. The Expense of Depreciation.—Built for service — speedy and hard and lasting—built from material the best that is known —built with care and skill by men who know how to build—the expense of depreciation is at the lowest possible figure. Good quality scores no higher points than in the battle with time. Nichols-Shepard machines that went into service years ago are still running and doing the best of work where other makes of equal age have gone to the scrap-heap that ends the short and troubled life of the second-rater. The farmer knows this — so equip yourself with a threshing outfit that will meet his wishes and make more money for you.

Remember that the Red River Special is guaranteed "**with proper management to be capable of doing more and better work than any other machine made of like size and proportions, working under the same conditions and on the same job.**"

It Saves the Farmer's Thresh Bill



THE RED RIVER SPECIAL.

Geared for Horse-Power. View of Elevator Side.

Built in Four Sizes, viz.: 22 x 36 and 28 x 40 Juniors, and 28 x 40 and 30 x 46.

Why Nichols & Shepard Build the Red River Special

If each of our prospective customers could visit the big and modernly equipped factory in which the Red River Special is built, there would be little need for further effort in selling that customer a Nichols-Shepard threshing outfit. He would realize, beyond any question, that he was getting all and more than the same amount of money could possibly purchase elsewhere.

During his trip through the works he would meet man after man, in the office, at a foreman's desk, in charge of a machine, or at the bench, who is not only a time-tried employee, but a stockholder in the company as well. Everywhere he would find the pride of the workman in doing first-class work, the intelligent direction of energy that insures the proper assembling of that work and the careful keeping of office records that make the price of the completed machine fair and just to manufacturer and user alike. An interested proprietor is building or watching quality at every stage, from the selection of material to the sold machine.

The customer would see that nothing that falls below standard can, or ever will, be used in the Red River Special line. Quality — dependable and continuous — is unfailing under this system. With loose-handed factory methods it is the first thing that disappears.

An experience of sixty-six years has taught the Nichols & Shepard Company that this is so. It has also taught them that the pleasure and profit in producing the best machinery go hand-in-hand. While cheaper machinery might sell at greater profit, or more of it be marketed in a single season, the valuable reputation that the company has built would go down. The best threshermen would not buy their product because it would lack the very qualities that now attract the best threshermen to it when a purchase is to be made.

There should be only two inducements to the buyer. He wants the cheapest because it costs less, or he wants the best and is willing to pay what it costs to produce it.

The better class of threshermen, the more responsible men, want the best, and that is why it is more gratifying and more profitable to build to serve them.

That is why the Red River Special is built. It is more profitable to the builders as well as to the threshermen. It sells itself. It saves the great expense necessary to force a cheap machine on to the market.

The satisfied user, when he buys again, wants it, and it is sold without effort.

It earns more money and is more easily and more quickly paid for.

In brief, the best machine attracts the best customer, the best customer gets the best work out of the machine, and the best work soon gets all of the best and most profitable jobs of threshing.

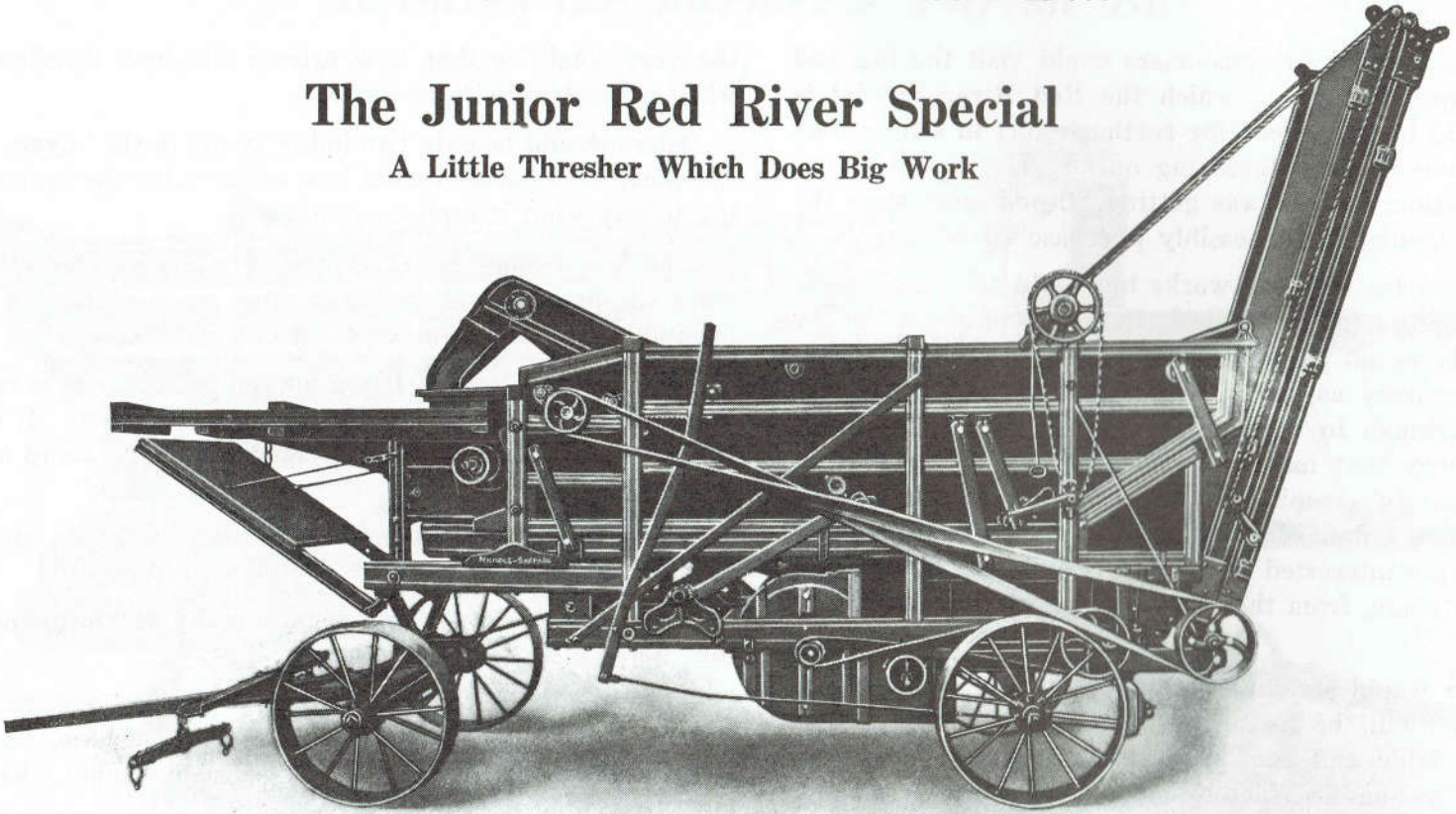
To insure prosperous growth for maker and user is the reason why we build as we do. Progress moves that way, and active farms and empty warehouses, instead of city blocks of stored machines, show that the Nichols & Shepard Company knows the ways of progress.

That is why the Red River Special is designed to do more and better work. It costs more to build, but it pays better.

It Saves the Farmer's Thresh Bill

The Junior Red River Special

A Little Thresher Which Does Big Work



The Best Thresher Ever Built for a Gas Engine.

Built in Two Sizes, viz.: 22 x 36 and 28 x 40. Can Be Furnished with Wind Stacker and Self-Feeder.

A Small Thresher

The many advantages of the Red River Special design are nowhere better shown than in applying them to the Junior machine. This size is built with a 22-inch cylinder and 36-inch rear, and 28-inch cylinder and 40-inch rear, and the smaller size will steadily thresh from 700 to 1,000 bushels of wheat per day, with other grains in proportion, and do it with the same lively speed and money-making economy that have made the larger sizes everywhere known as the world's best threshing machines.

The cylinders have 12 bars instead of 16 bars found in the larger Red River Specials.

Unlike other small machines which are made by other manufacturers, nothing except capacity has to be changed in reducing the size.

The **beating** principle is the same as in the largest thresher of our line.

The "Man Behind the Gun" is as alert and active as in a 44 x 64, and does the same prompt and thorough work in separating the bulk of the grain the moment it enters the machine.

Not a motion is different in the thresher, which gives the full threshing capacity of any other machine. Most of the work is done before the straw gets to the first shaker, but all of the regular parts are there to keep up the beating that saves the grain where waste begins with other types of separation.

Small crop, poor road, and hilly country jobs can be made profitable with the Junior, as it will get to them quicker, set quicker, and do its work faster and better without the ordinary waste of rival small machines, which take so much where so little can well be spared.

The Junior is the only separator on the market which will meet the requirements of the farmer who grows enough grain to pay for owning his own machine.

Power of any kind, gasoline, steam or horse-power, that will develop 12-horse or better is ample for the operation of the 22 x 36 Junior.

Many progressive farmers already have a power plant that is sufficient. Using it with a crew so small that an extra force of help is seldom required, he is his own thresherman at an expense that scarcely rises above his every-day operating costs.

All of this capacity is built within a length of about thirteen feet and a height of five feet to the cylinder center. Most barns have more than enough room for the Junior to get in and work.

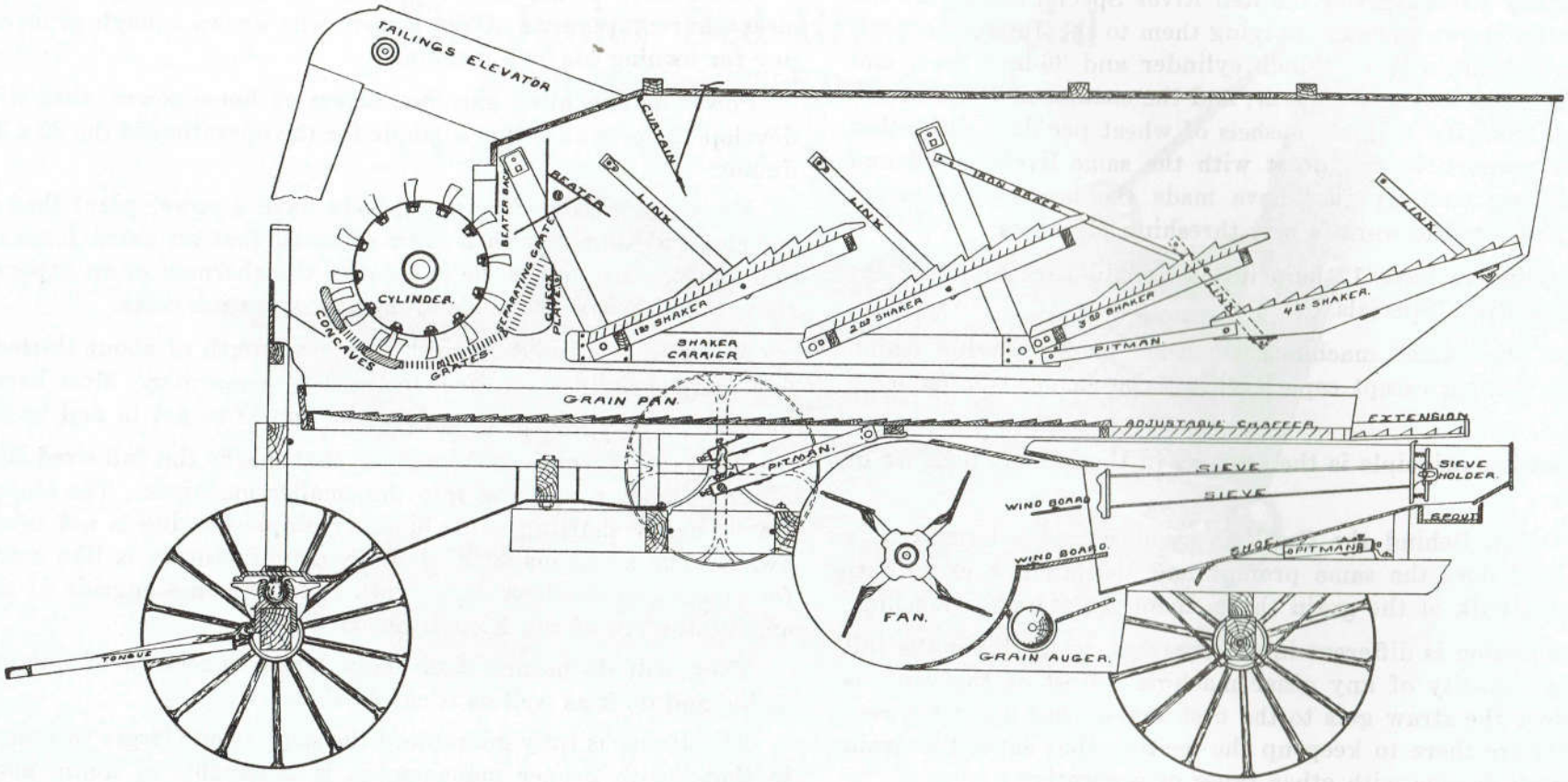
The same strength and long life that marks the full-sized Red River Specials is also put into the smaller machines. The strong frame, heavy shafting, wide belts, or ample bracing is not taken away. The small machine of other manufacturers is like a toy for amusing a child when its work is shown up alongside of the sturdy Juniors of the Nichols-Shepard line.

They will do as much as many larger machines of another make, and do it as well as it can be done.

The Junior is fully guaranteed the same as our larger threshers, in that "with proper management it is capable of doing more and better work than any other separator made of like size and proportions, working under the same conditions, and on the same job."

From threshing the "back forty" to cleaning up a mile of grain, its equal is yet to be built.

It Saves the Farmer's Thresh Bill

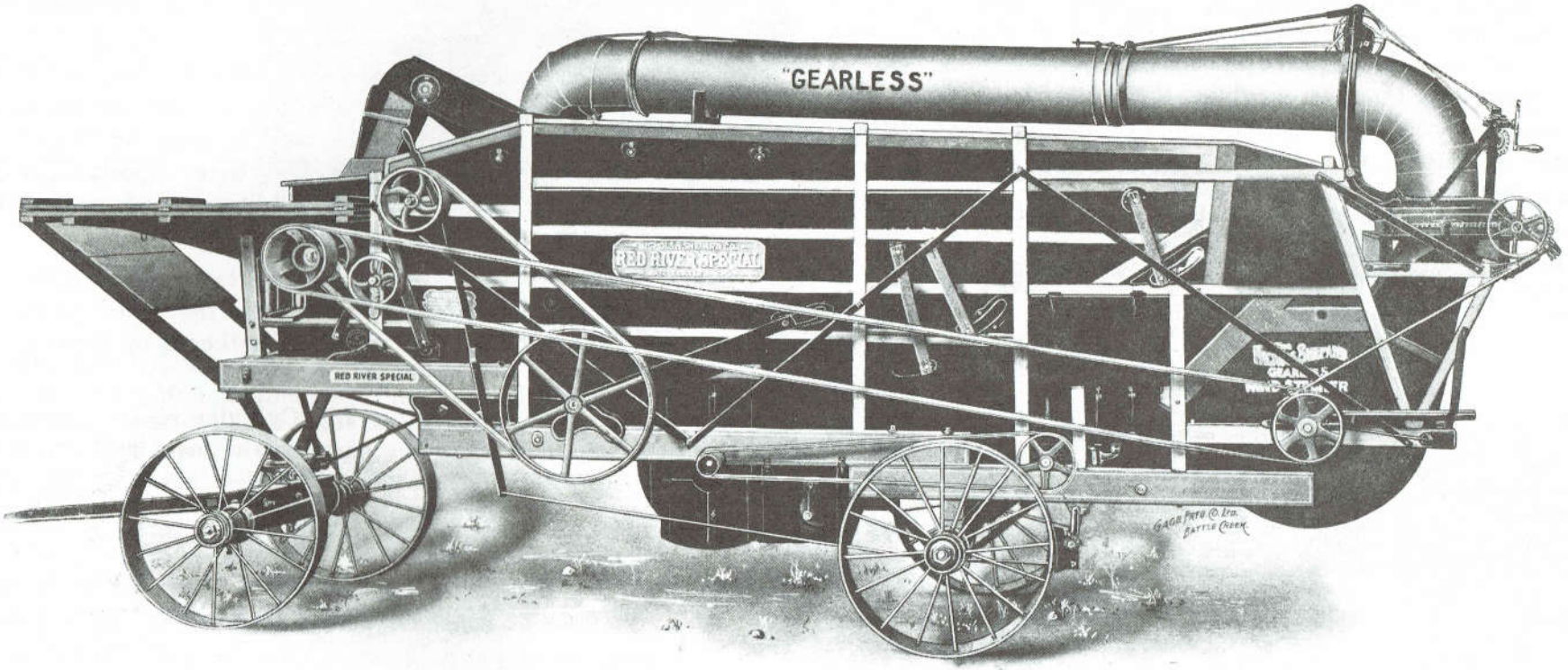


THE JUNIOR RED RIVER SPECIAL.

(Sectional View.)

Built in Two Sizes, viz.: 22 x 36 and 28 x 40. Can Be Furnished with Wind Stacker or Self-Feeder.

It Saves the Farmer's Thresh Bill



THE RED RIVER SPECIAL.

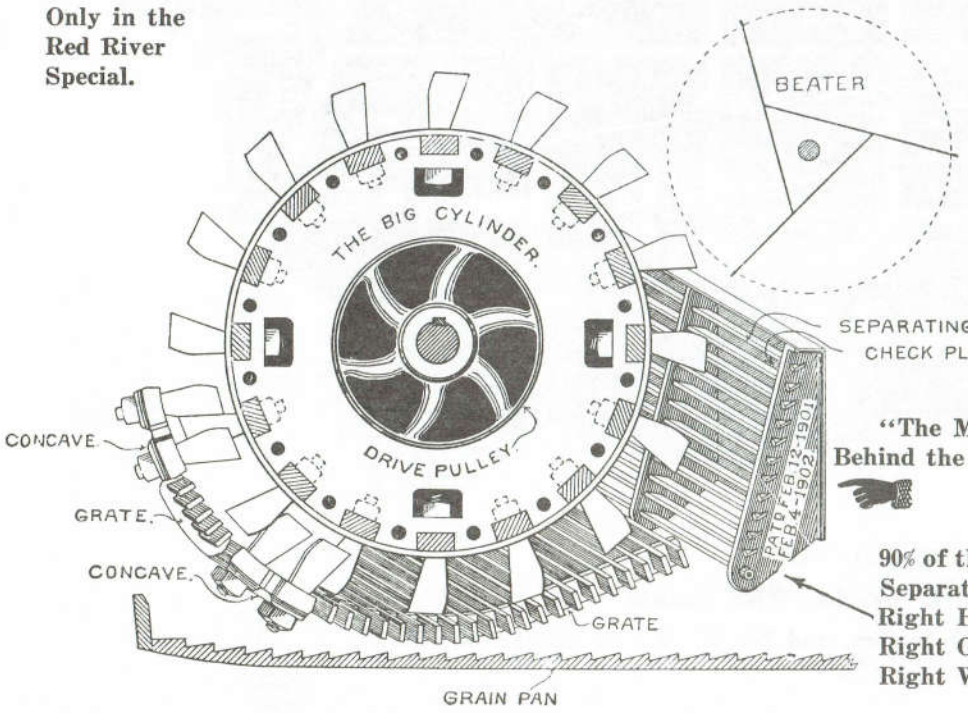
Drive Belt Side. Hand Feed. Gearless Wind Stacker.

Built in Eight Sizes, viz.: 22 x 36 and 28 x 40 Juniors, and 28 x 40, 30 x 46, 32 x 52, 36 x 56, 40 x 60 and 44 x 64.

The Big Cylinder

The Red River Special made the first successful use of the Big Cylinder. With the development of this machine, with its original and perfect method of securing the grain the instant it is beaten from the head, the Big Cylinder, with its advantage of size, weight and momentum, gave a capacity for threshing that no other maker had thought possible. Since that time others have adopted and loudly proclaimed the big cylinder idea; but, without the Man Behind the Gun, their work at the rear is so largely increased that the waste is out of proportion to the gain.

Only in the Red River Special.



"The Man Behind the Gun"

90% of the Grain Separates Right Here— Right Off— Right Well.

In the Red River Special the Big Cylinder, with its great gain in threshing capacity, is utilized for all that it is worth. The strong momentum that it gathers keeps motion even, when feeding or condition of grain is bad.

Concave surface can be increased by a full third over ordinary capacity. Six, eight or ten rows of concave teeth can be used. Bad conditions do not mean that the machine must lie idle while waiting for them to improve. The Red River Special can be quickly adjusted to meet the worst conditions, and runs right along when all other makes stand still.

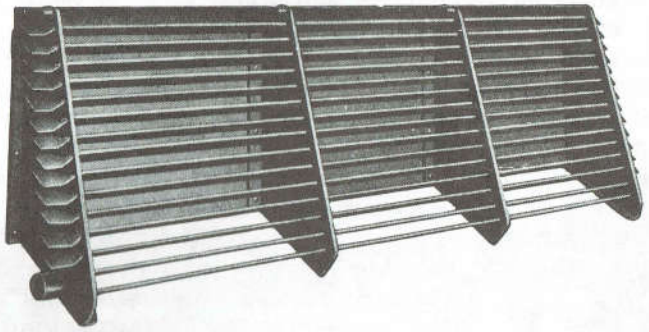
Large, strong cylinder teeth are used, heavy and durable, so that the thresherman gets results from them that are in keeping with the rest of the outfit. He is seldom bothered by these teeth breaking out.

The larger pulleys which the Big Cylinder makes necessary increase the power of all other parts of the machine. There is more belt grip on the drive for self-feeder, shakers, mill and stacker. Belts do not slip as easily as they do where contact is less, hence the motion of all parts is stronger and they will do more work.

The larger concaves and grate surface insure better separation at the cylinder, where the Red River Special gets most of the grain that it threshes. The beater and shaker motion is kept steady and strong. This means that all of the machine works all of the time to get all of the grain. There is no part overtaxed to produce this result. Correct construction insures perfect and reliable action without waste of power.

The "Man Behind the Gun"

This is the "Man Behind the Gun" The Ruler of the Threshing World.



Nichols and Shepard's Separating Grate and Check Plate Patented in U. S. and Canada.

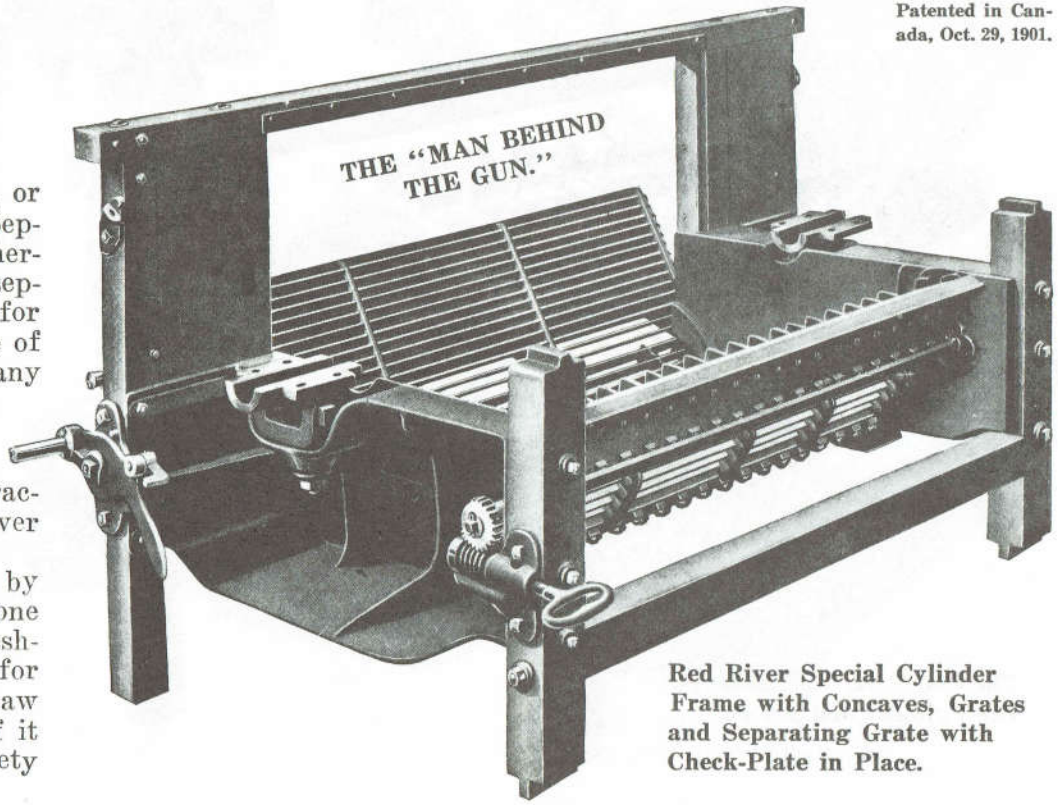
The War on Waste is Centered Here

Patented in U. S. Feb. 12, 1901.
Reissue Feb. 4, 1902.
Patented in Canada, Oct. 29, 1901.

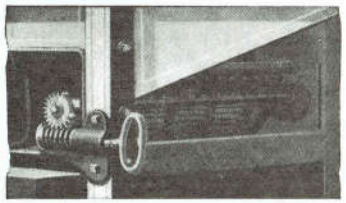
The Red River Special is the only machine that uses, or can use, the "Man Behind the Gun," as our patented Separating Grate and Check Plate is named and known wherever first-class work is done. It is in itself the greatest separating device that has ever been applied to a machine for threshing grain, and is another most convincing example of how the Nichols-Shepard method of building has for many years developed "head-work" in design rather than depend entirely for improvement in working conditions upon the product of "hands and feet."

Farmer and thresherman alike have indorsed this practical way of getting the best results by making the Red River Special the most popular of all threshing machines.

First and foremost in its great scheme of separation by **beating** comes the Man Behind the Gun. Its work is done at once, only once and at the topmost speed at which threshing machinery can be safely driven. There is no need for complicated devices for getting the grain out of the straw back of the cylinder, for the simple reason that most of it never gets into the straw back of the cylinder at all. Ninety



Red River Special Cylinder Frame with Concaves, Grates and Separating Grate with Check-Plate in Place.

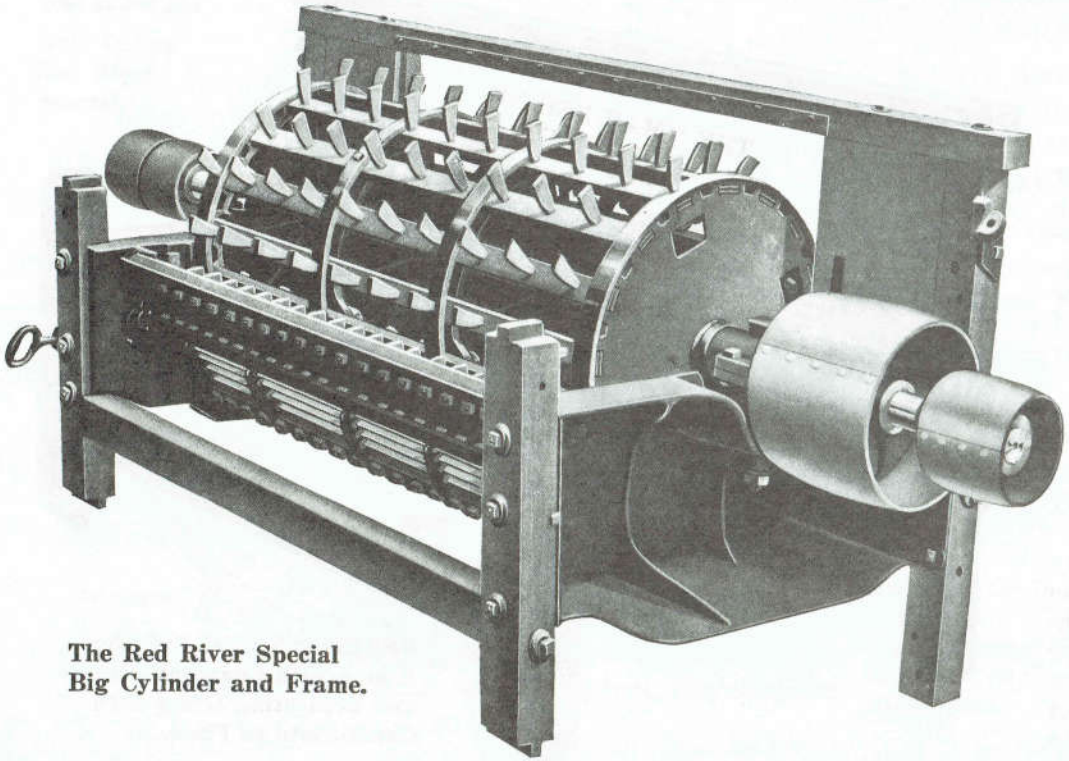


Concave Adjuster.
Simple,
Effective,
Sure.

per cent of the separation is done the moment the Big Cylinder begins its work. The Separating Grate, standing close behind, allows the grain to immediately shoot through its steel slats, while the beater above still further increases the separation at this point by forcing down through the Separating Grate and against the Check Plate the grain loosened from the straw.

All the grain thus threshed is at once dropped by the Check Plate to the grain-pan underneath, where it passes on to the mill. Any grain that may be left in the straw is then beaten and tossed upon the shakers until the last of the ten per cent, or less, which passes the Big Cylinder and Man Behind the Gun is beaten out and sent along to be cleaned. Carefully study the diagram and illustrations of this exclusive feature. The whole story of the most rapid and cleanly separation known is then easily understood, and its simplicity and value to the user brought home. A moment's comparison with other makes will show why the Red River Special saves grain, makes money, saves time.

It will also be made clear that in addition to this single part that does practically all of the work of the Red River Special, the full capacity of the ordinary thresher is still behind its cylinder, to be used by this great machine for **saving** the grain where other types are just beginning the work of separation.



The Red River Special
Big Cylinder and Frame.

A big cylinder will thresh more grain than an ordinary thresher can separate. That is why it is wasteful in other machines. The Man Behind the Gun, better than any other device, makes it possible to secure without further work the vast amount of grain separated at the cylinder. That is why it is a success.

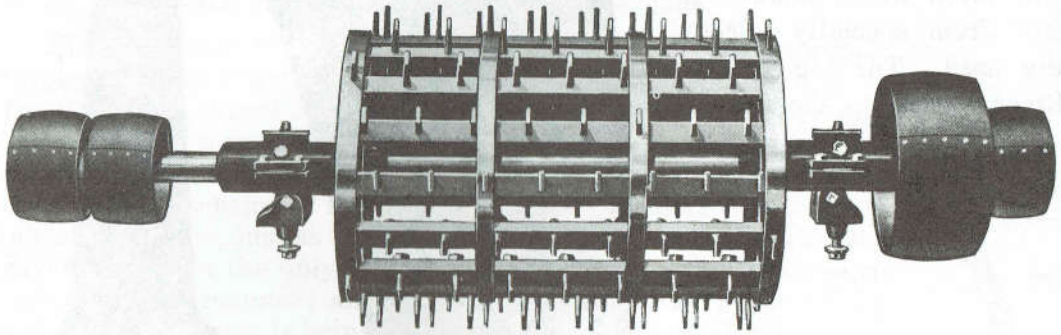
It requires no adjustment, as it does not move. Its work is well done under every condition that permits the machine to be operated, and it makes operation possible under conditions that cause rival machines to shut down. With grain wet or dry, straw long or short, care or no care in feeding, it never fails in its duty of getting the grain As it is not a movable part, wear or breakage is practically unknown.

The moment the grain is loosened from the head, separation is complete. The Separating Grate and Check Plate was invented to keep it complete without further along in the machine doing the work a second time. It is a simple idea, but an original one with the Nichols & Shepard Co. No other threshing invention in any form or style can do so much with so little expense in operation.

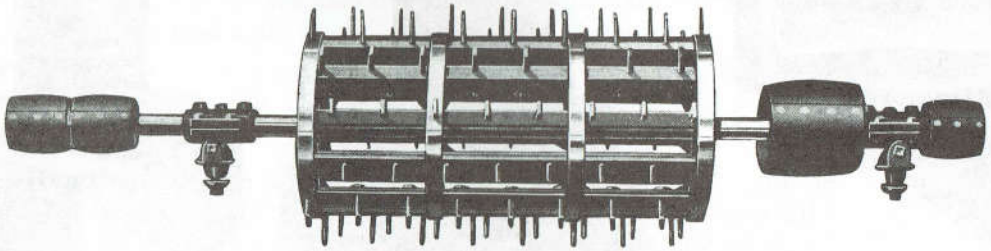
Ample patents, both in the United States and Canada, make its use exclusive in the Red River line. Other machines can neither build nor use this complete mechanical insurance that all of the grain will be threshed and saved.

Capacity Comparisons

The Big Cylinder Was Installed to Thresh More Grain. It Does It.



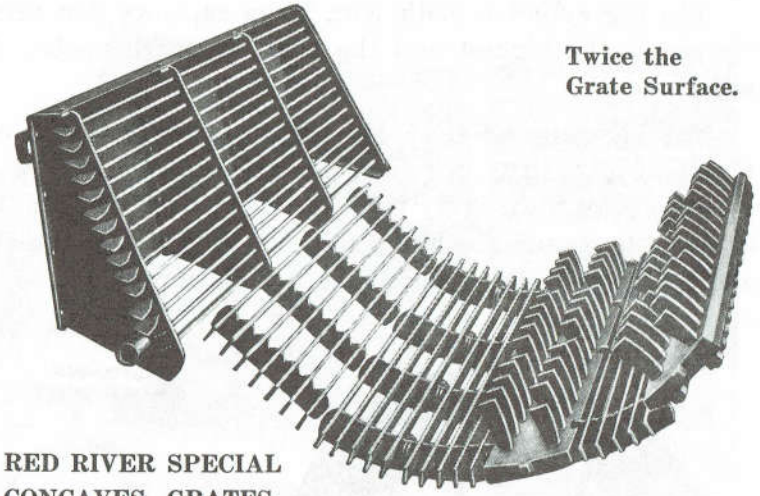
THE NICHOLS-SHEPARD BIG CYLINDER.
Note the Large Cylinder Boxes and the Big Pulleys.



THE USUAL TWELVE-BAR CYLINDER
Seen in Other Makes.

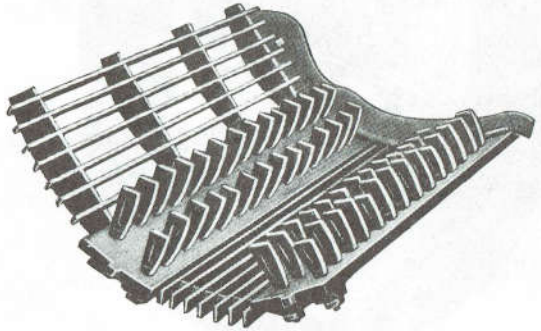
The Man Behind The Gun.

Twice the Grate Surface.



RED RIVER SPECIAL CONCAVES, GRATES, SEPARATING GRATE and CHECK-PLATE.

Patented in U. S., Feb. 12, 1901, and Feb. 4, 1902.
Patented in Canada, Oct. 29, 1901.

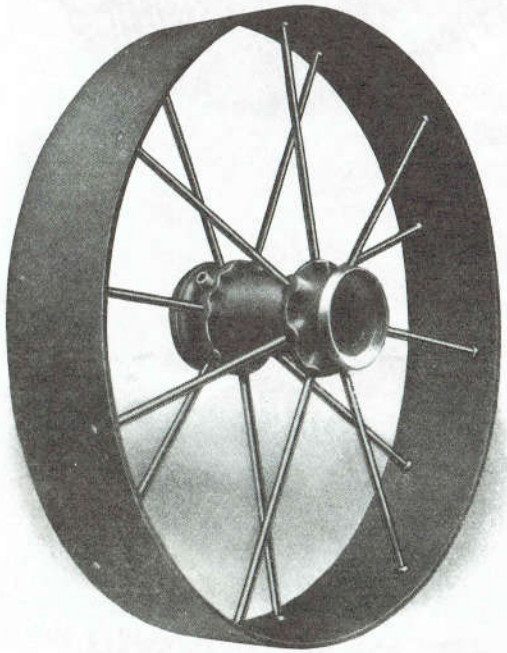


CONCAVES AND GRATES IN SMALL CYLINDER THRESHERS.

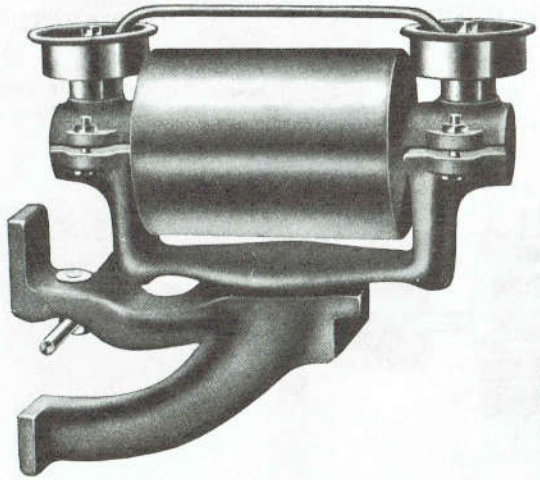
Big Teeth

The big cylinder tooth with large capacity for threshing used in the Red River Special is the biggest and the best big tooth made. Note the illustration, which is actual size.

The big cylinder teeth have a groove in the side of the tooth which doubles its threshing capacity. All Red River Special teeth are made from specially selected steel and are thoroughly inspected and tested before being used. The big grooved cylinder teeth and the big concave teeth enable the Red River Special to thresh more and to thresh better than any other machine made.



Steel Rim Truck-Wheel.



Main Drive-Belt Guide.

Actual Size.

End Shake Shoe

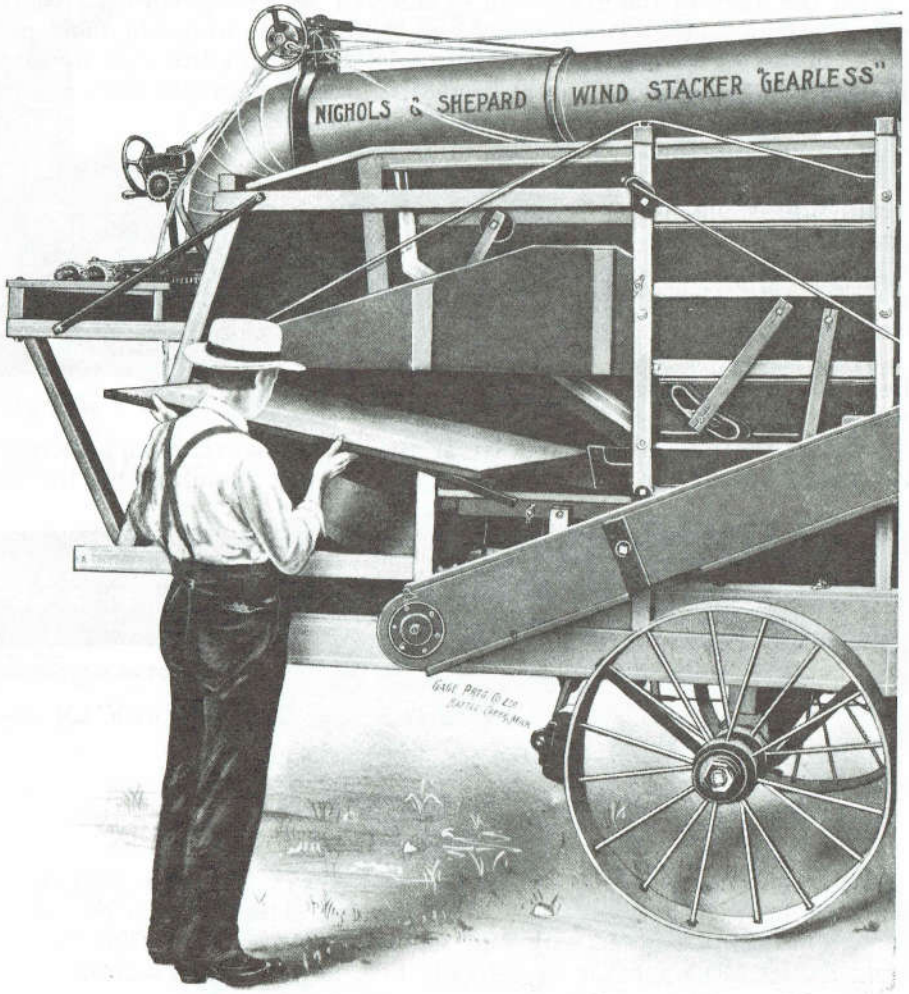
The End Shake Shoe is provided with two wind boards, which will direct the blast just where you want it, and the mill is so arranged that it can be adjusted to give as strong or as light a blast as conditions require. A full complement of sieves is provided, so that the very best of cleaning can be done.

Elevator and warehouse men and grain buyers generally throughout the country concede that the grain coming to them from the Red River Special comes in better shape, cleaner and is docked less than that received from any other machine. These special features make the Red River Special supreme. They carry out the scheme of its design, which is to **BEAT** all the grain out of the straw, just as a man would do with a fork, and the Red River Special is the only thresher built which accomplishes separation in that manner; all others depend upon the grain falling out while the straw is being dragged through the machine.

The Red River Special is simple, it requires less adjustment than other machines, making it the best for all users, whether experienced or not. The only changes to be made are in the concaves and sieves. To raise or lower the concaves, all you have to do is to turn the handle in the concave holder. To change the sieves simply slide them into place through the large, roomy opening in the side of the machine,— the automatic sieve holder secures them in position.

The wind is easily controlled by wind boards, so that the blast from the mill can be directed on that part of the sieve where it is desired.

The Adjustable Chaffer in the rear of the grain-pan can be used open or closed to meet any condition. There is practically nothing to do but belt up and go ahead. It does not matter what kind of grain or seed — the Red River Special is always ready. It does not matter what the weather may be — the thresher runs right along and threshes fast and well.

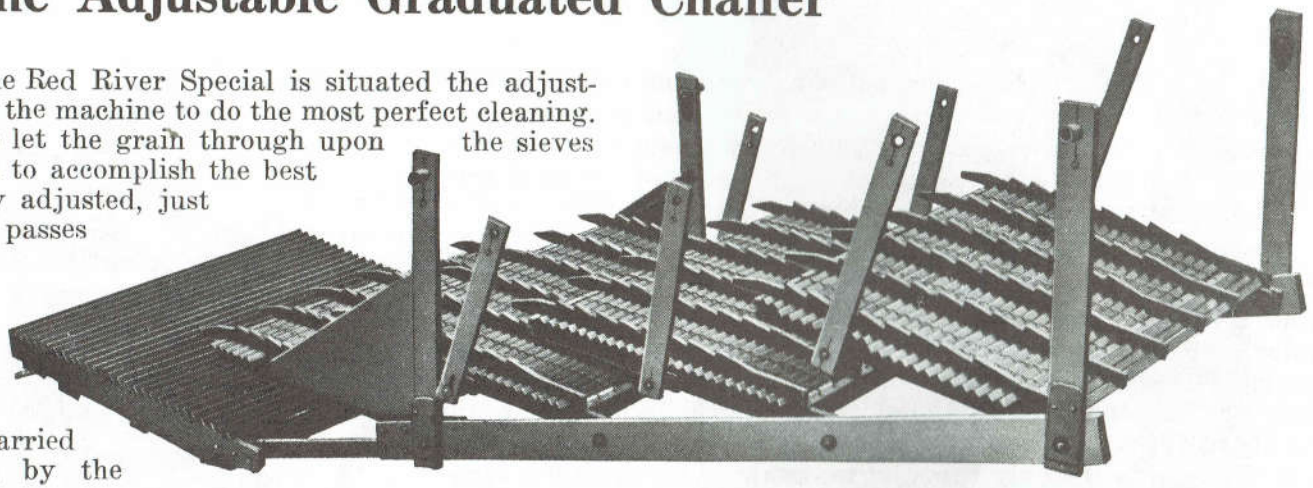


Changing Sieves in the Red River Special.

The Adjustable Graduated Chaffer

On the back of the grain-pan of the Red River Special is situated the adjustable graduated chaffer, which enables the machine to do the most perfect cleaning. This chaffer can be operated so as to let the grain through upon the sieves just as wanted and just as is needed to accomplish the best results. When the slats are properly adjusted, just enough of the blast from the mill passes up through, loosening the chaff and grain and short straw, which the grain-pan handles so that the grain readily passes through the chaffer upon the sieves, insuring perfect cleaning.

Not ten per cent of the grain is carried back in the straw and separated by the shakers.



The Beating Shakers. They Catch All That Escapes "The Man Behind the Gun."

Every feature of the Red River Special saves time and money for the thresherman, and it BEATS all the grain out of the straw, making it the most popular and the most profitable thresher for the farmer.

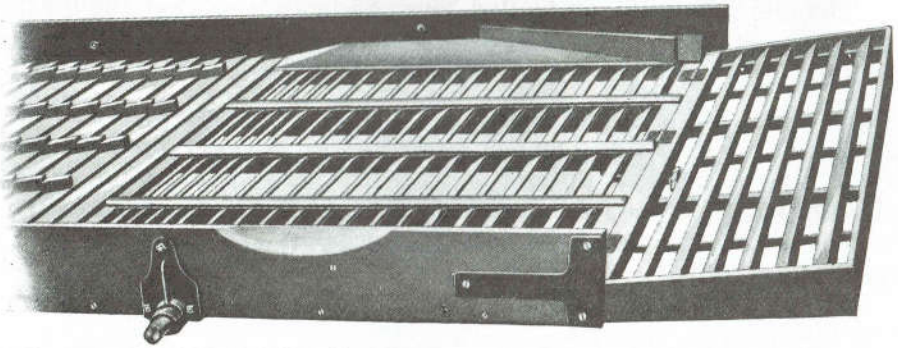
Red River Special Grain-Pan with Adjustable Chaffer.

Adjustable Chaffer with Extension.

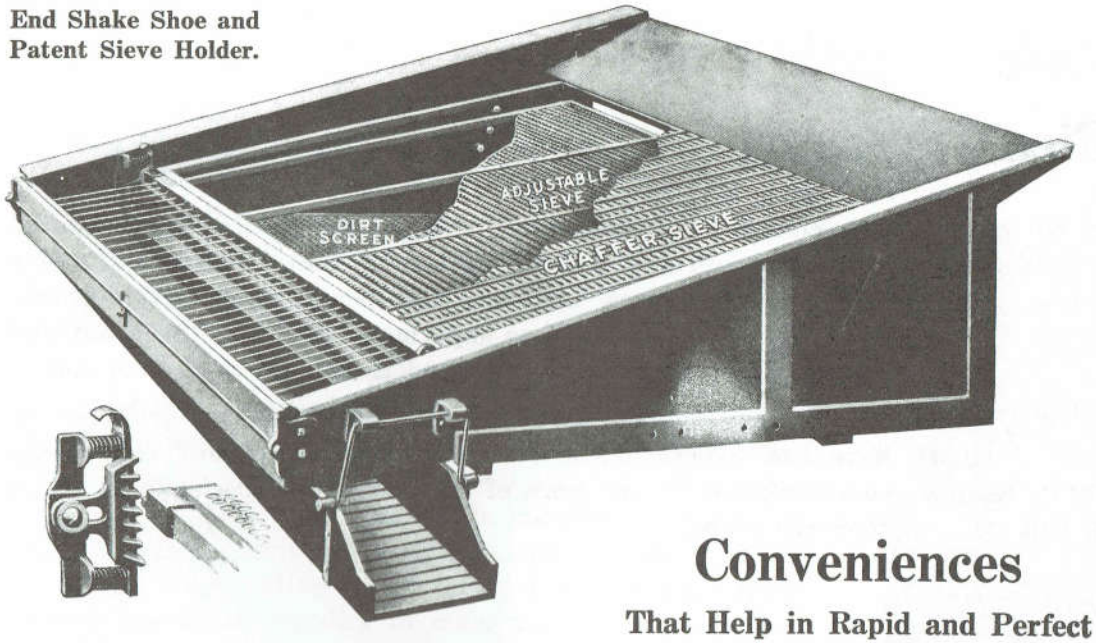
The Cylinder-Shaft

The Cylinder-Shaft is so strong and heavy that no yoke is required on the outside of the drive pulley. The belt can be put on or off this pulley at will, and in an instant's time. The belt reel enables the operator to fold his belt in a moment's time.

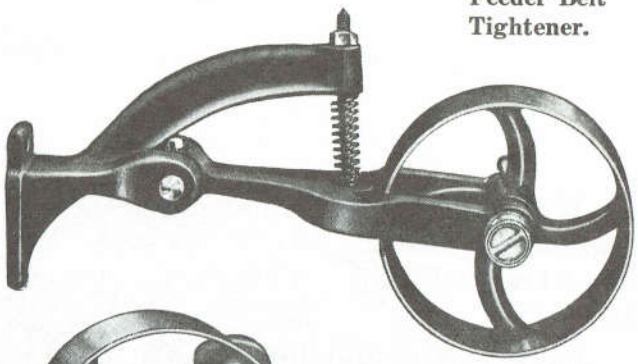
The separator runs so steadily that little blocking is necessary. The stacker and everything about the machine is easily handled.

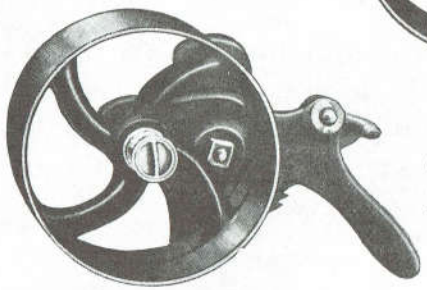


End Shake Shoe and
Patent Sieve Holder.



Feeder Belt
Tightener.

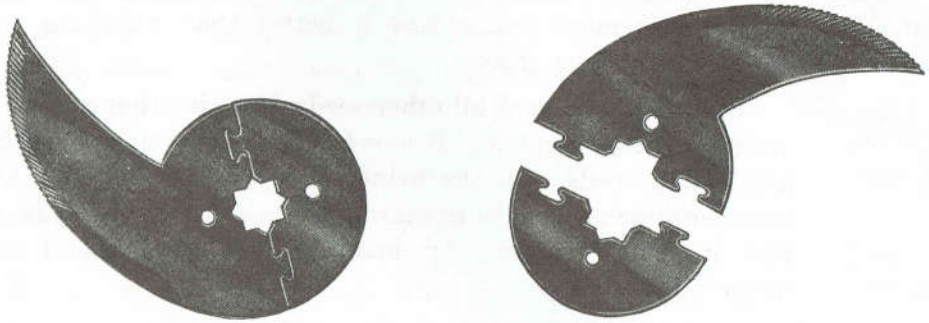




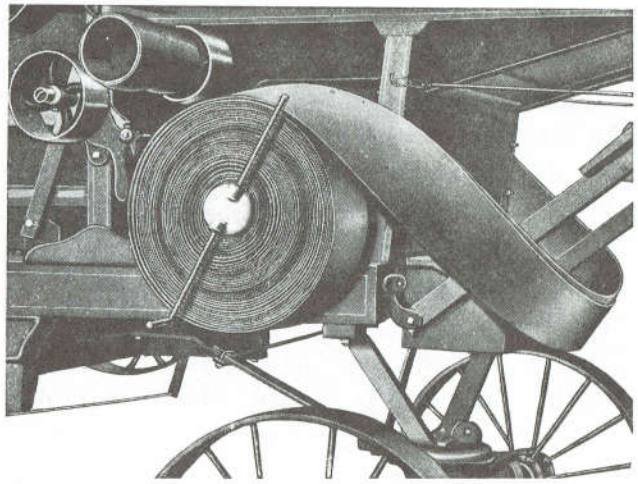
Tightener to
Main Belt.

Conveniences

That Help in Rapid and Perfect Work



Interlocking Feeder Knives Quickly Removed and Returned
Without Removing Shaft.



The Belt Reel Is a Time Saver.

Rice Threshing

The Red River Special has demonstrated itself to be the most perfect rice thresher produced in the country. It will thresh rice when conditions are such that other machines cannot be made to work.

Its big cylinder permits of a slow speed which does not crack the rice, and at the same time a thorough thresh which gets all the rice out of the straw.

The separating principle, beating the grain out, permits it all to be saved, and the adjustable chaffer, with our mill construction, cleans it most admirably. Wherever the Red River Special has been used for rice threshing in that country extending throughout Arkansas, Louisiana and Texas where rice is grown, it has demonstrated itself so superior in handling the grain that it is rapidly becoming the preferred machine by rice growers.

We have received many testimonials from rice growers who have had experience, and who volunteer the most enthusiastic commendation for the work of the Red River Special in threshing their rice crops.

Alfalfa Threshing

The Red River Special is most admirably fitted and equipped for the threshing of alfalfa. The grooved teeth, the big cylinder, and the opportunity for the use of a large concave area, permit the most thorough hulling and threshing to be done.

The separating features beat all of the seed out of the straw, and our adjustable chaffer and overshot mill clean it like a special huller.

It is conceded by alfalfa growers all over the Western and Northwestern States where alfalfa is grown for seed, that the Red River Special gets more of the seed out of the straw, threshes more, saves more and cleans it better than anything ever yet devised for that purpose.

The same is true of all other seeds, like timothy, orchard grass, millet, red top, etc., etc. It excels in the threshing of all of these grains and seeds, and the principal reason is that it is the only thresher which beats the grain out of the straw in the same manner that it would be done by hand. All others depend upon its dropping out.

The Universal Self-Feeder

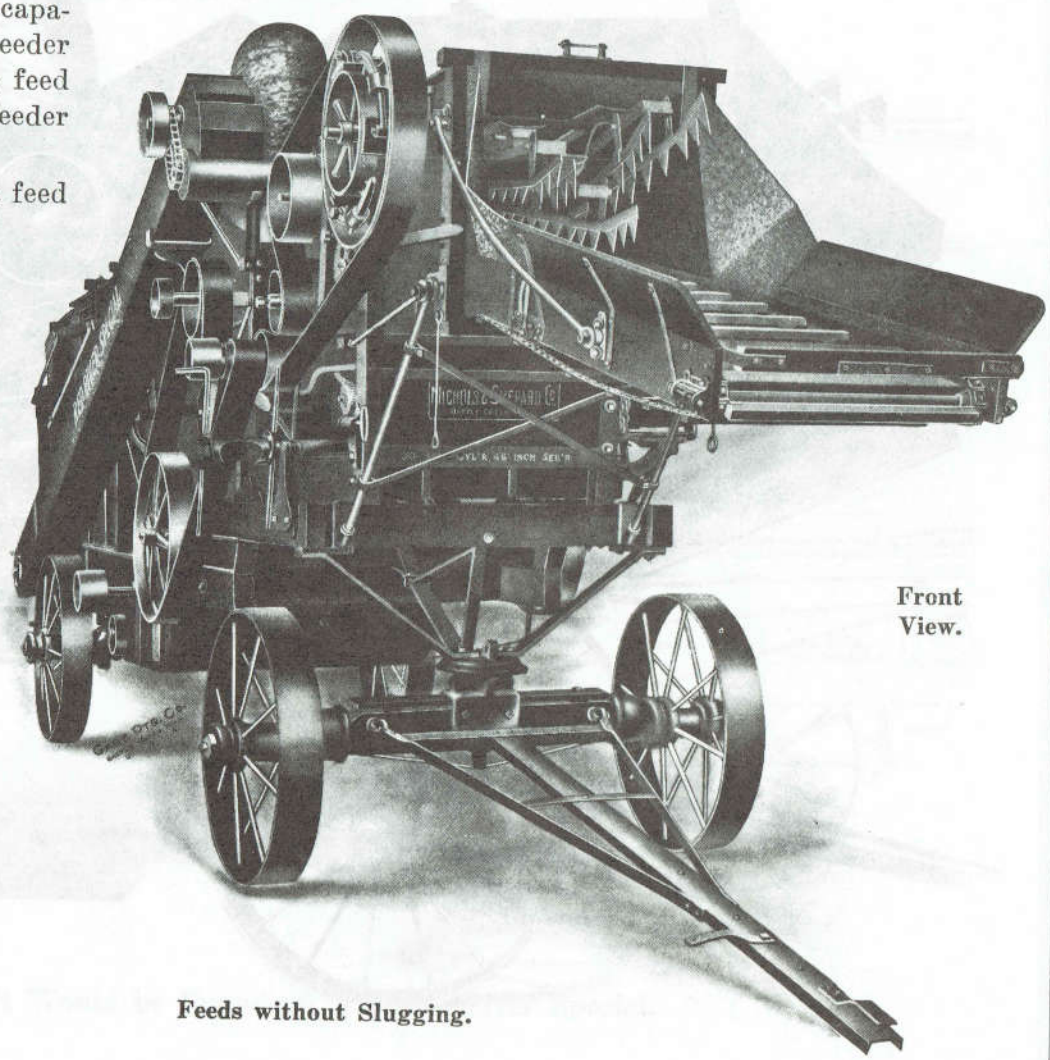
The Nichols-Shepard Universal Self-Feeder is the most capacious and successful crank-shaft and reciprocating arm feeder built. As now improved, it has demonstrated its ability to feed more grain into the thresher without slugging than any feeder heretofore produced.

It is equally successful in headed and bundled grain. Its feed table needs no legs to support it, the feeder being firmly attached to the separator. The cylinder is easily reached by tilting the feeder. The bundle carrier consists of endless links running over sprocket wheels with slats attached to them, which carry the bundles forcefully to the band-cutter knives, the retarder and the cylinder. It has both reciprocating and rotating band-cutting knives, which permit no bundles to reach the cylinder without the bands being cut and the bundles torn and spread apart.

It has a dividing board in the larger sizes for use in bundle-feeding which can be easily removed. The grain is carried to the cylinder under the band-cutting knives and feeding arms, which thoroughly cut the bands, tear the bundles and tangled grain apart, and also over the retarder which holds the bottom of the bundle, feeding the top first, as is done in hand feeding.

Large bearings are provided for the crank-shaft and arms.

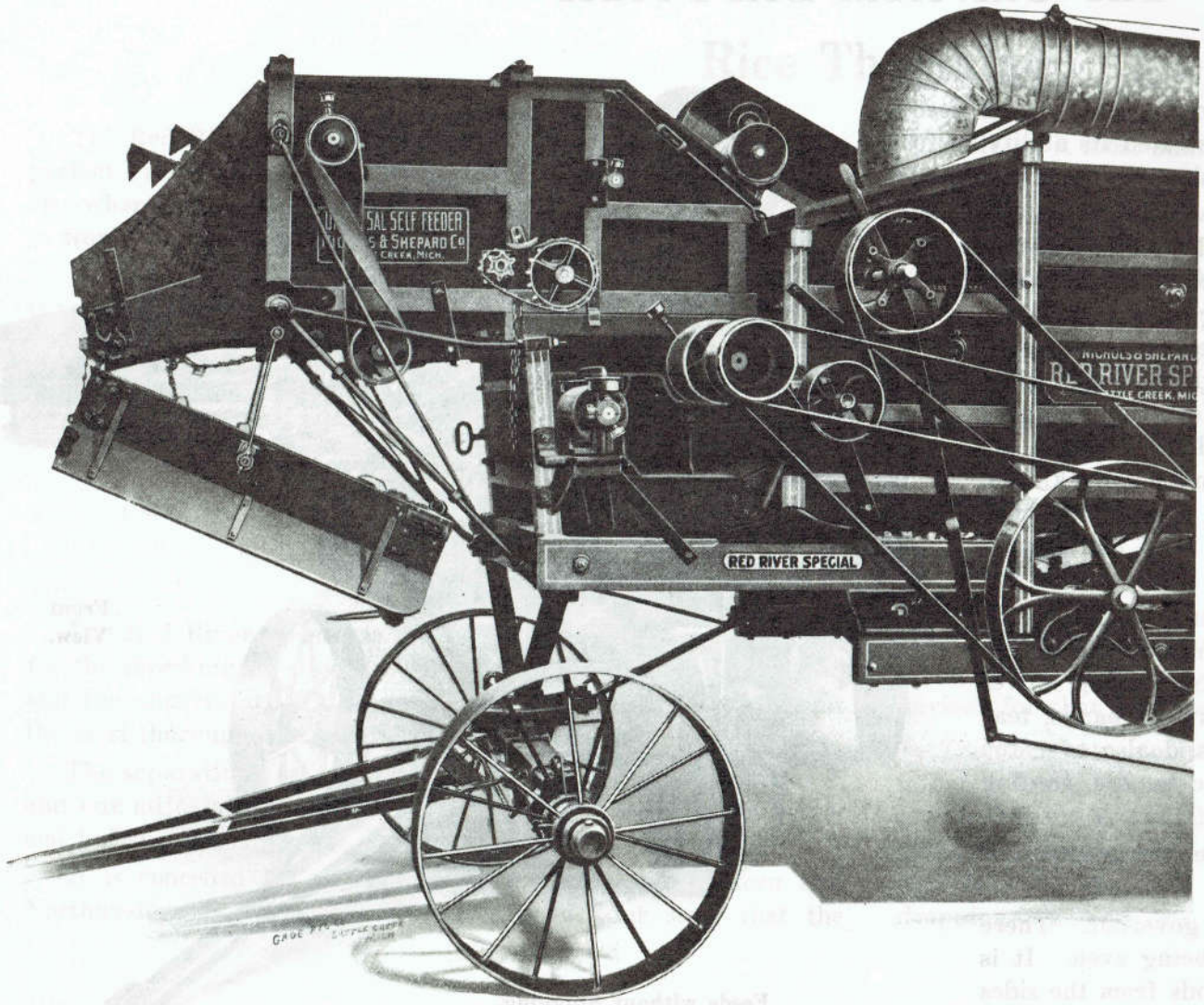
It has a very quick and sensitive governor. There is no bunching of grain, the feeding being even. It is easily folded by simply removing the rods from the sides and folding the carrier under.



Front View.

Feeds without Slugging.

It Does Not Litter.



Universal Self-Feeder

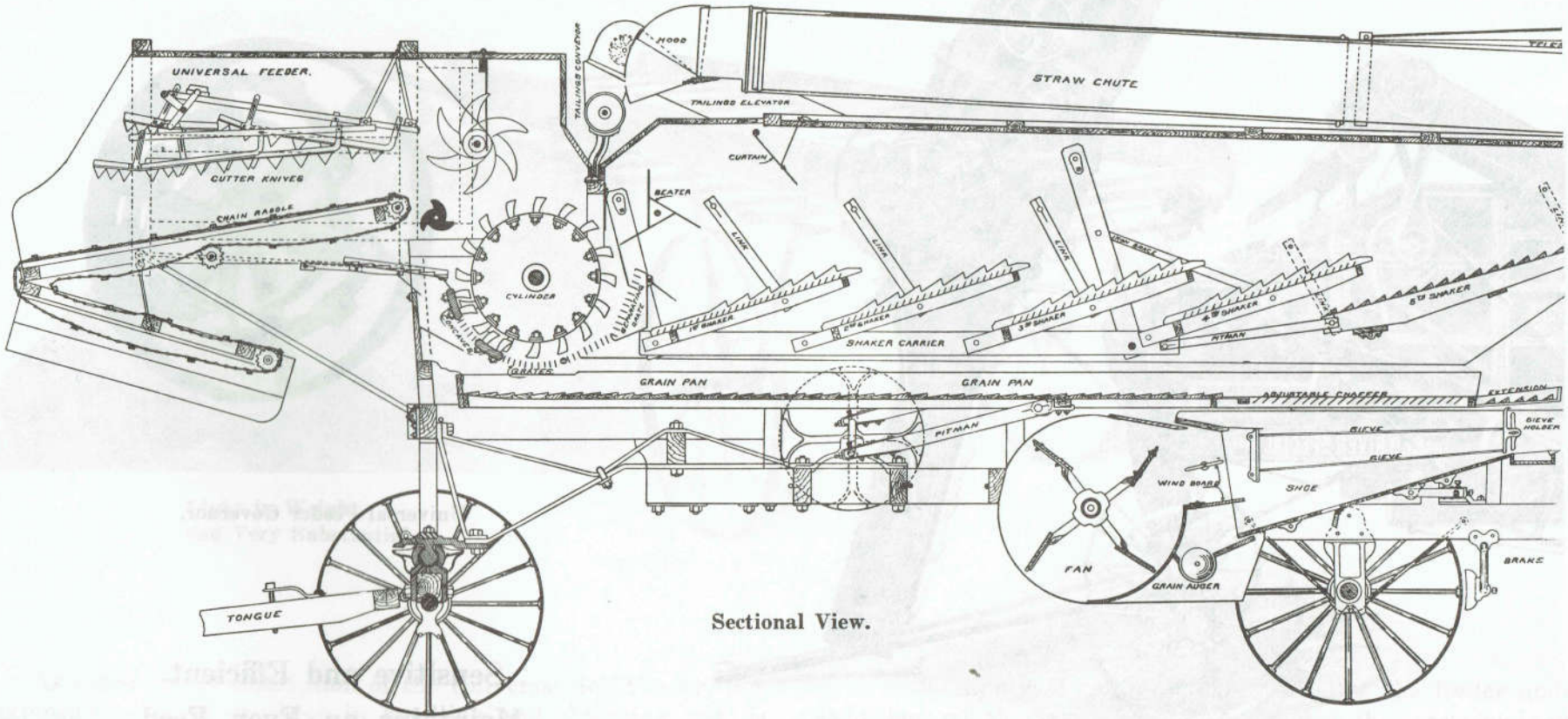
Loaded for Travel

It is provided with a steel Oscillating Pan, with fish-back risers, extending to the cylinder from the carrier, which carries all loose grain, chaff and straw to the cylinder.

Our feeder extension in connection with the Universal Self-Feeder makes an ideal outfit for threshing headed grain. The feeder extension is speeded so that it insures a good supply of grain to the feeder at all times.

The Universal Self-Feeder is built for use only with the Red River Special Separator, and as now improved and after thoroughly testing it in comparison with other feeders, we most emphatically recommend it to the thresherman who wants a labor-saving, time-saving and effective self-feeder.

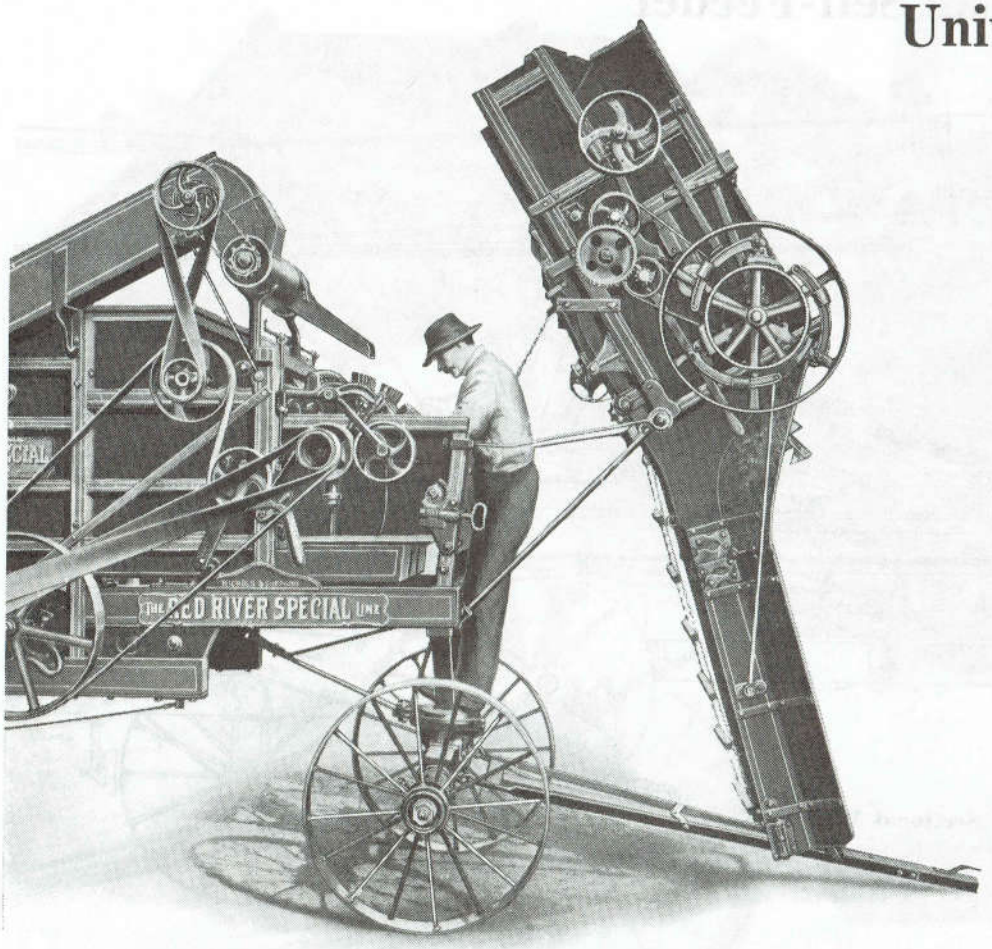
Universal Self-Feeder



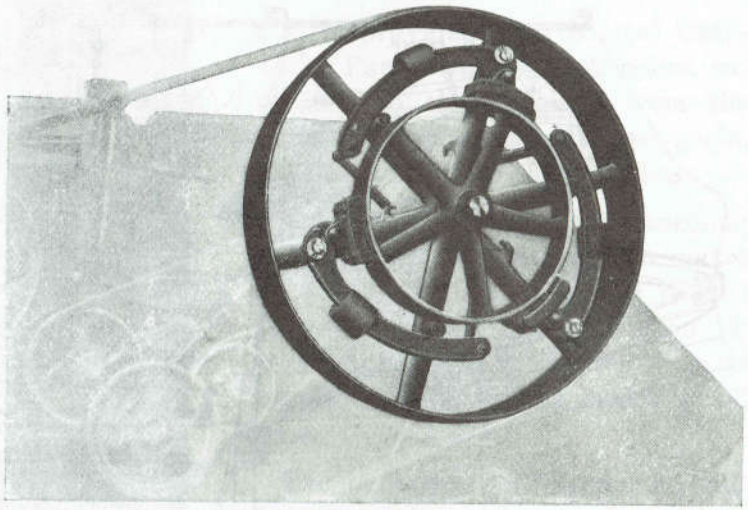
Sectional View.

If a Better Feeder Were Made, It Would be Found on the Red River Special.

Universal Self-Feeder



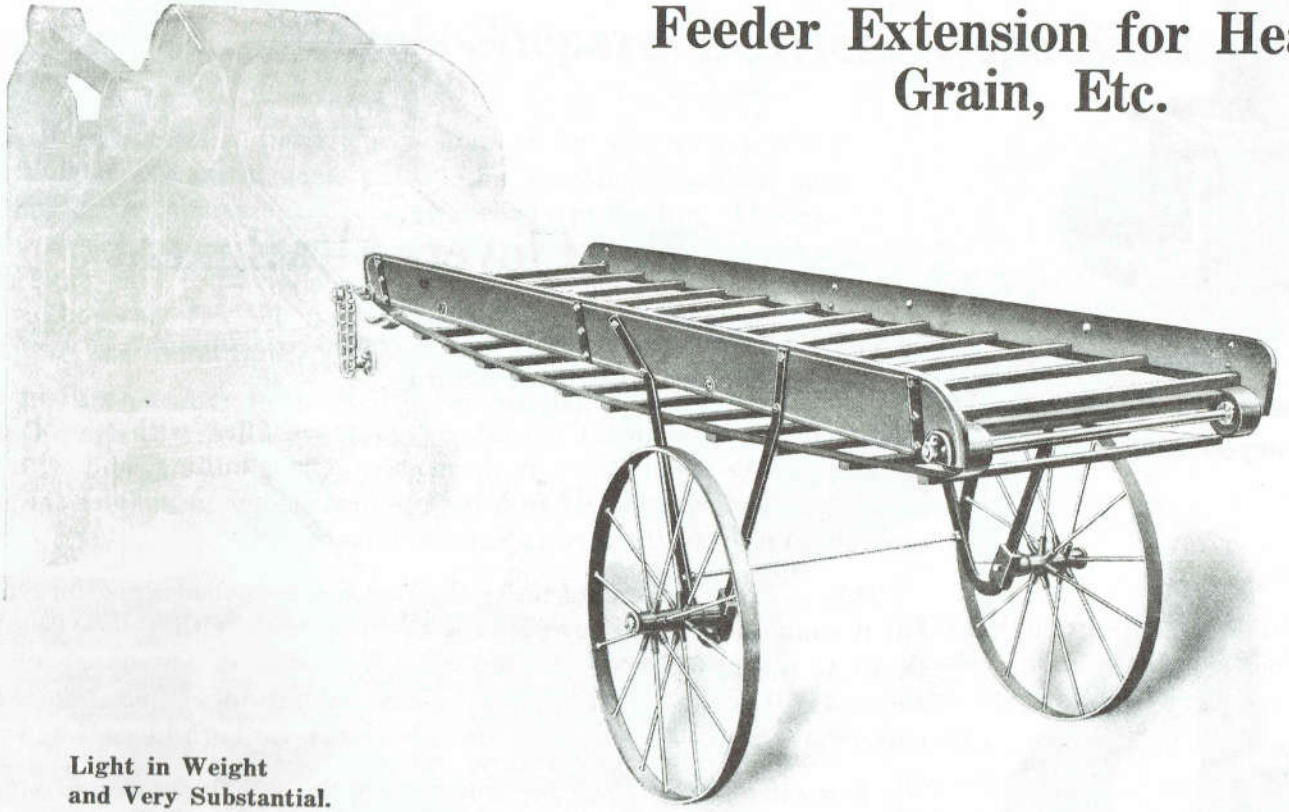
The Universal Self-Feeder Raised to Gain Access to Cylinder and Concaves.



Universal Feeder Governor.

Sensitive and Efficient.
Maintains an Even Feed
Without Slugging or Stops.

Feeder Extension for Headed Grain, Etc.

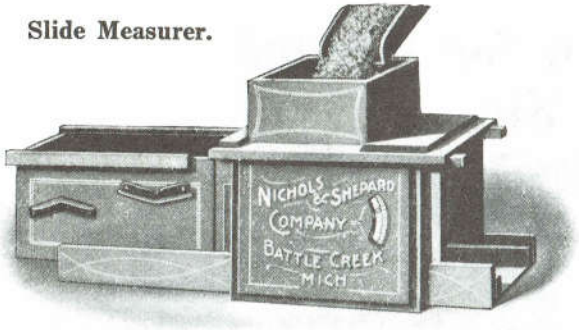


Light in Weight and Very Substantial.

As noted in the description of the Universal Self-Feeder, this extension is of great value in handling and threshing wet or headed grain. The carrier is so adjusted and speeded that it becomes, when attached to the feeder, a smoothly operating part of its mechanism, which requires no special attention to keep it doing its work.

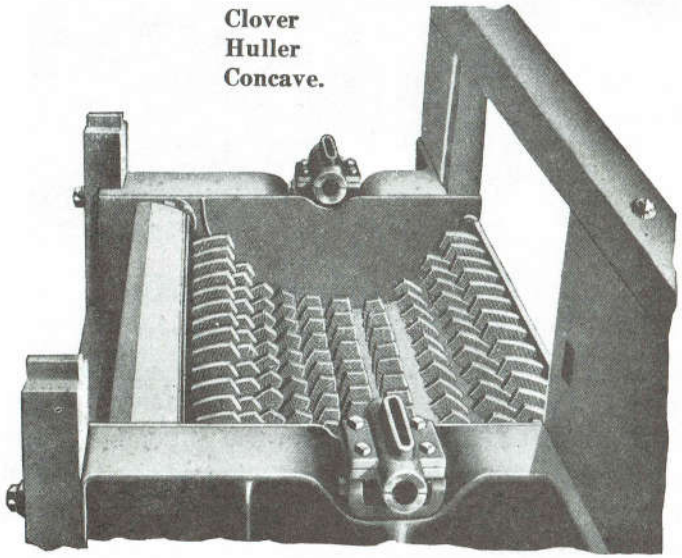
A good supply of grain is thus insured to the feeder under conditions which are often troublesome when the extension is not used, and it is another of the useful extra attachments to the Red River Special outfit which will keep it "working right along when other makes stand still."

Slide Measurer.



Nichols-Shepard Time-Saving and Money-Making Features.

Clover Huller Concave.



The Clover Attachment

The Nichols-Shepard clover huller concave enables the Red River Special to do an excellent job of clover hulling.

The huller attachment consists of concaves filled with special corrugated teeth, enabling the machine to do most excellent hulling, and with the clover sieves and perforated sheet iron for the first shaker, it enables the machine to separate and clean the seed in excellent shape.

This, of course, does not make the Red River Special a special clover huller, but it enables the owner of the Red River Special, with a very small extra expense, to fit himself where he can not only thresh an occasional job as he may encounter it in his territory, but he can go out in competition with special clover hullers and do the most profitable work for both himself and the farmer.

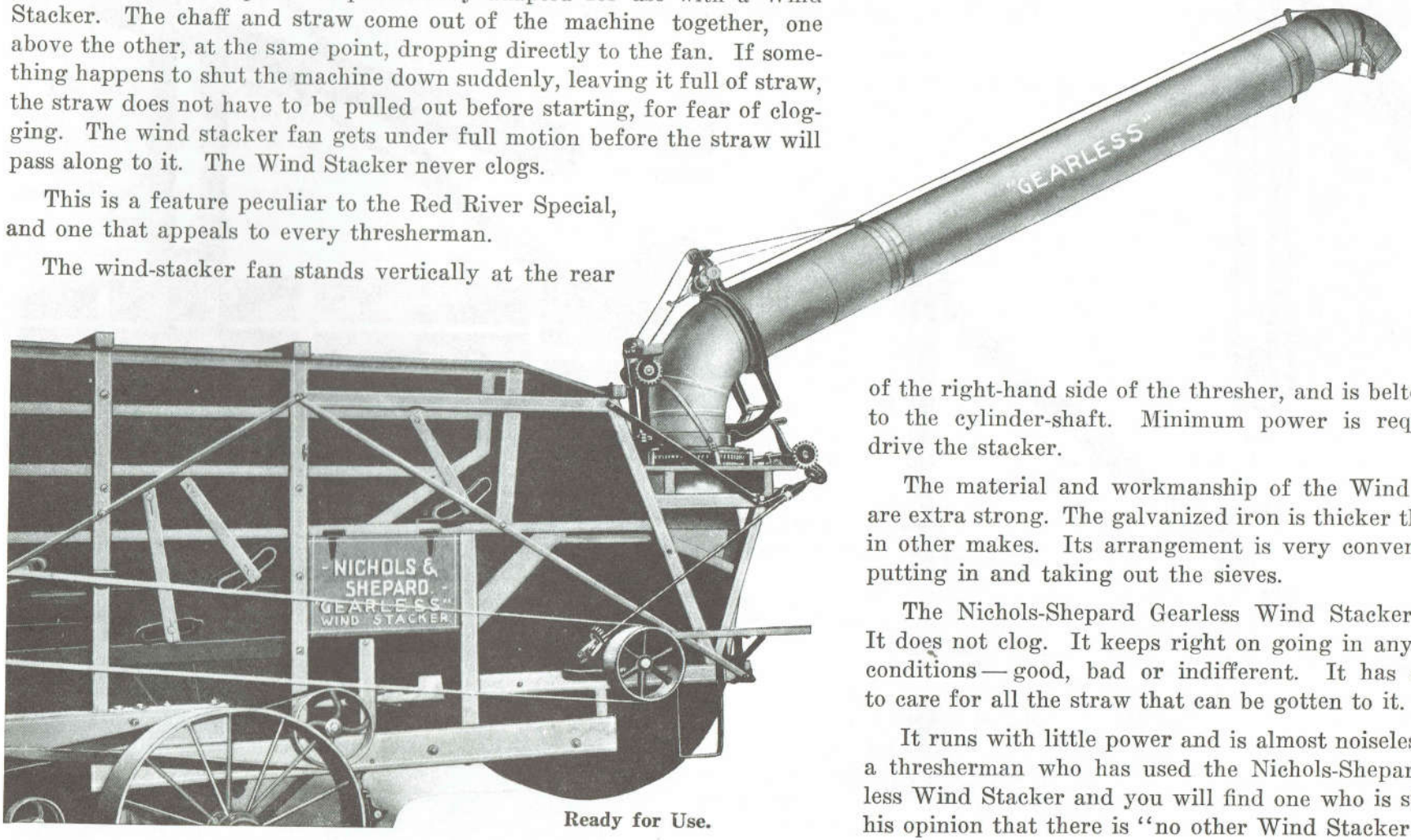
A great many of them are sold each year, and they are put out upon such liberal terms that no owner of a Red River Special need feel it necessary for him to provide himself with a special clover huller. They do a larger amount of work than special hullers and are in every way an exceedingly practical feature.

Nichols-Shepard Gearless Wind-Stacker

The Red River Special is particularly adapted for use with a Wind Stacker. The chaff and straw come out of the machine together, one above the other, at the same point, dropping directly to the fan. If something happens to shut the machine down suddenly, leaving it full of straw, the straw does not have to be pulled out before starting, for fear of clogging. The wind stacker fan gets under full motion before the straw will pass along to it. The Wind Stacker never clogs.

This is a feature peculiar to the Red River Special, and one that appeals to every thresherman.

The wind-stacker fan stands vertically at the rear of the right-hand side of the thresher, and is belted direct to the cylinder-shaft. Minimum power is required to drive the stacker.



Ready for Use.

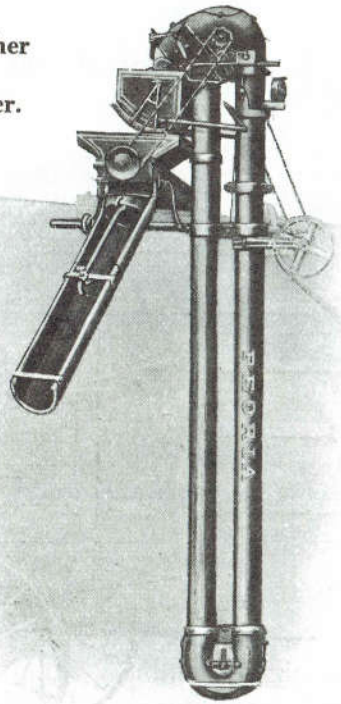
The material and workmanship of the Wind Stacker are extra strong. The galvanized iron is thicker than used in other makes. Its arrangement is very convenient for putting in and taking out the sieves.

The Nichols-Shepard Gearless Wind Stacker **works!** It does not clog. It keeps right on going in any and all conditions — good, bad or indifferent. It has capacity to care for all the straw that can be gotten to it.

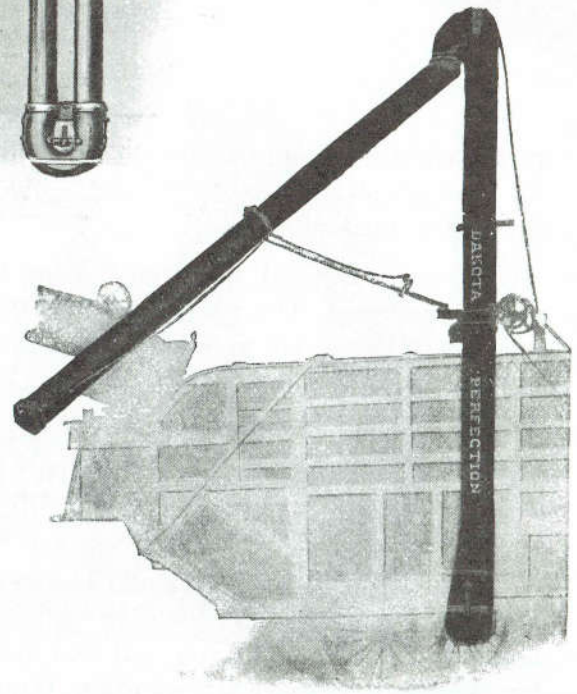
It runs with little power and is almost noiseless. Find a thresherman who has used the Nichols-Shepard Gearless Wind Stacker and you will find one who is strong in his opinion that there is "no other Wind Stacker made."

Nichols-Shepard Weighers and Wagon Loaders

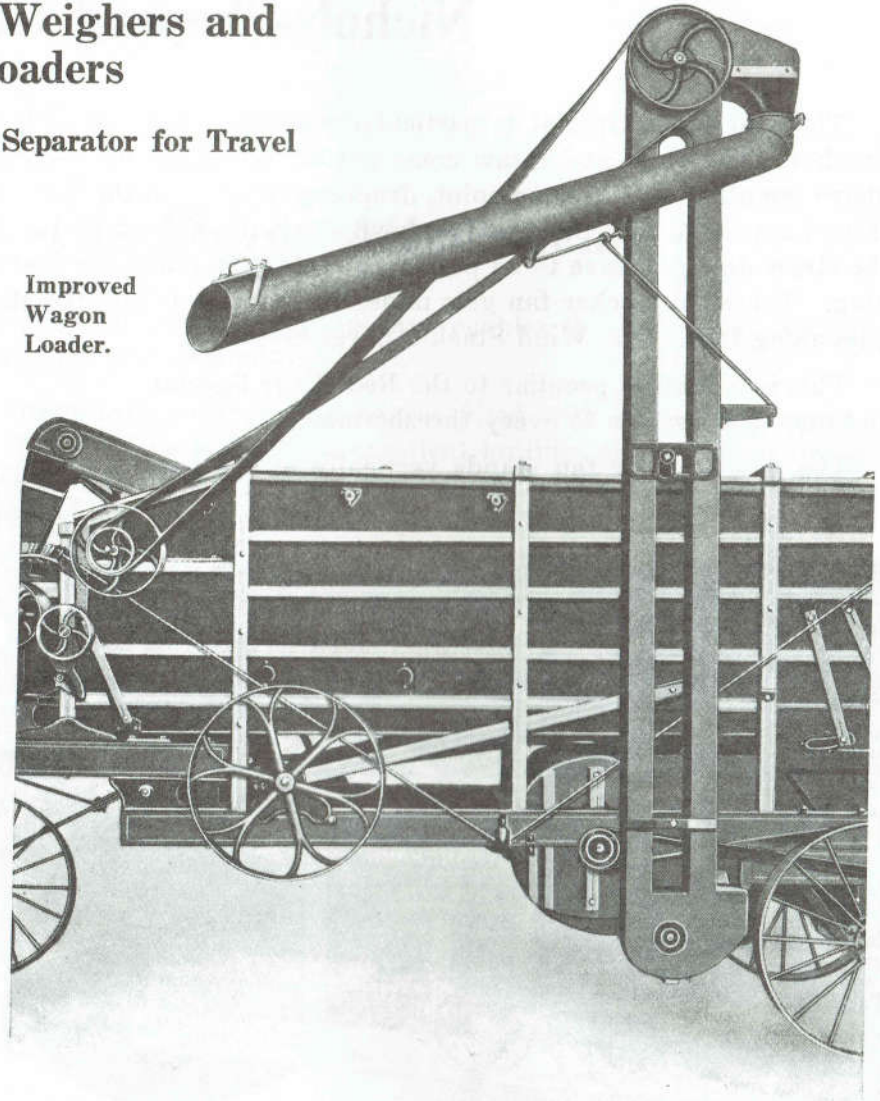
Can Be Folded Down on Separator for Travel



Weigher and Bagger.



The Perfection Dakota Loader.



Improved Wagon Loader.

Sizes of Nichols-Shepard Separators

The 44 x 64 Red River Special has a big cylinder 44 inches long; separating conveyors, with adjustable chaffer, 64 inches wide; has a full set of belts, supplies, tools, wrenches, etc., and includes belt guide, belt reel, brake, tongue, extra concave and teeth, all without extra charge.

The 40 x 60 Red River Special has a big cylinder 40 inches long; separating conveyors, with adjustable chaffer, 60 inches wide; has full set of belts, supplies, tools, wrenches, etc., and includes belt guide, belt reel, brake, tongue, extra concave and teeth, all without extra charge.

The 36 x 56 Red River Special has a big cylinder 36 inches long; separating conveyors, with adjustable chaffer, 56 inches wide; has full set of belts, sieves, tools, wrenches, etc., and includes belt guide, belt reel, brake, tongue, extra concave and teeth, all without extra charge.

The 32 x 52 Red River Special has a big cylinder 32 inches long; separating conveyors, with adjustable chaffer, 52 inches wide; has full set of belts, sieves, tools, wrenches, etc., and includes belt guide, belt reel, brake, tongue, whiffletrees, neckyoke, extra concave and teeth, all without extra charge.

The 30 x 46 Red River Special has a big cylinder 30 inches long; separating conveyors, with adjustable chaffer, 46 inches wide; has full set of belts, sieves, tools, wrenches, etc., and includes belt guide, belt reel, brake, tongue, whiffletrees, neckyoke, extra concave and teeth, all without extra charge.

The 28 x 40 Red River Special has a big cylinder 28 inches long; separating conveyors, with adjustable chaffer, 40 inches wide; has full set of belts, sieves, tools, wrenches, etc., and includes belt guide, belt reel, brake, tongue, whiffletrees, neckyoke, extra concave and teeth, all without extra charge.

The 22 x 36 Junior Red River Special has a 16-inch cylinder 22 inches long; separating conveyors, with adjustable chaffer, 36 inches wide; has full set of belts, sieves, tools, wrenches, etc., and includes brake, tongue, whiffletrees, neckyoke, extra concave and teeth, all without extra charge. Belt reel and belt guide free if fitted for steam or gasoline power. This separator has wonderful capacity and is the thresher for light power.

The 28 x 40 Junior Red River Special has a 16-inch cylinder 28 inches long; separating conveyors, with adjustable chaffer, 40 inches wide; has full set of belts, sieves, tools, wrenches, etc., and includes brake, tongue, whiffletrees, neckyoke, extra concave and teeth, all without extra charge.

Extra sizes, like 40 x 64, 36 x 60 and 32 x 56, can be furnished with sufficient notice.

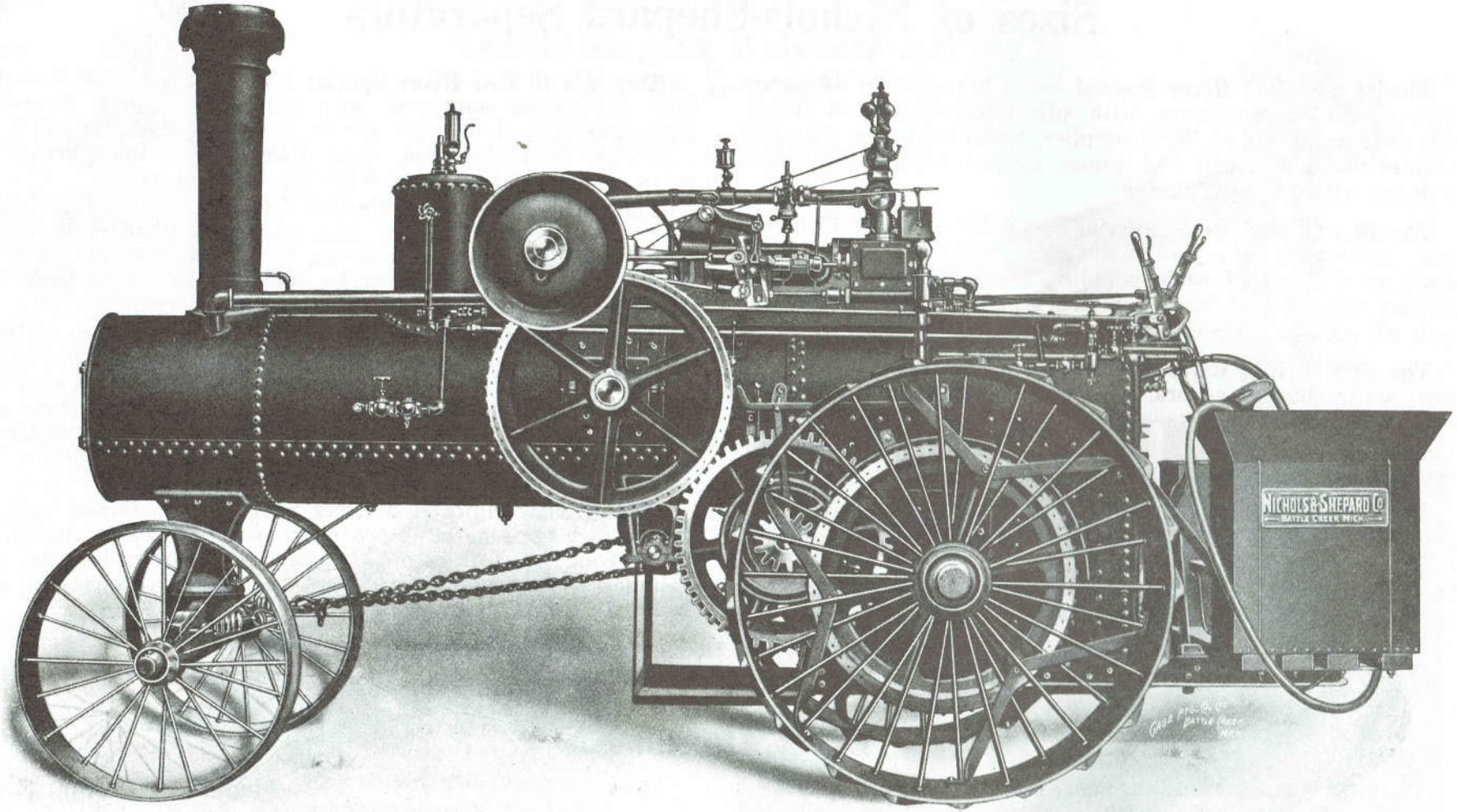
(Width of Separating Conveyors always governs price.)

Extra Attachments

NICHOLS-SHEPARD GEARLESS WIND STACKERS
UNIVERSAL SELF-FEEDERS
PERFECTION WEIGHERS, Dakota Style
HAND-FEED PARTS
GLENDALE WEIGHING AND TALLYING BAGGERS
N. & S. WAGON LOADERS
CLOVER ATTACHMENTS

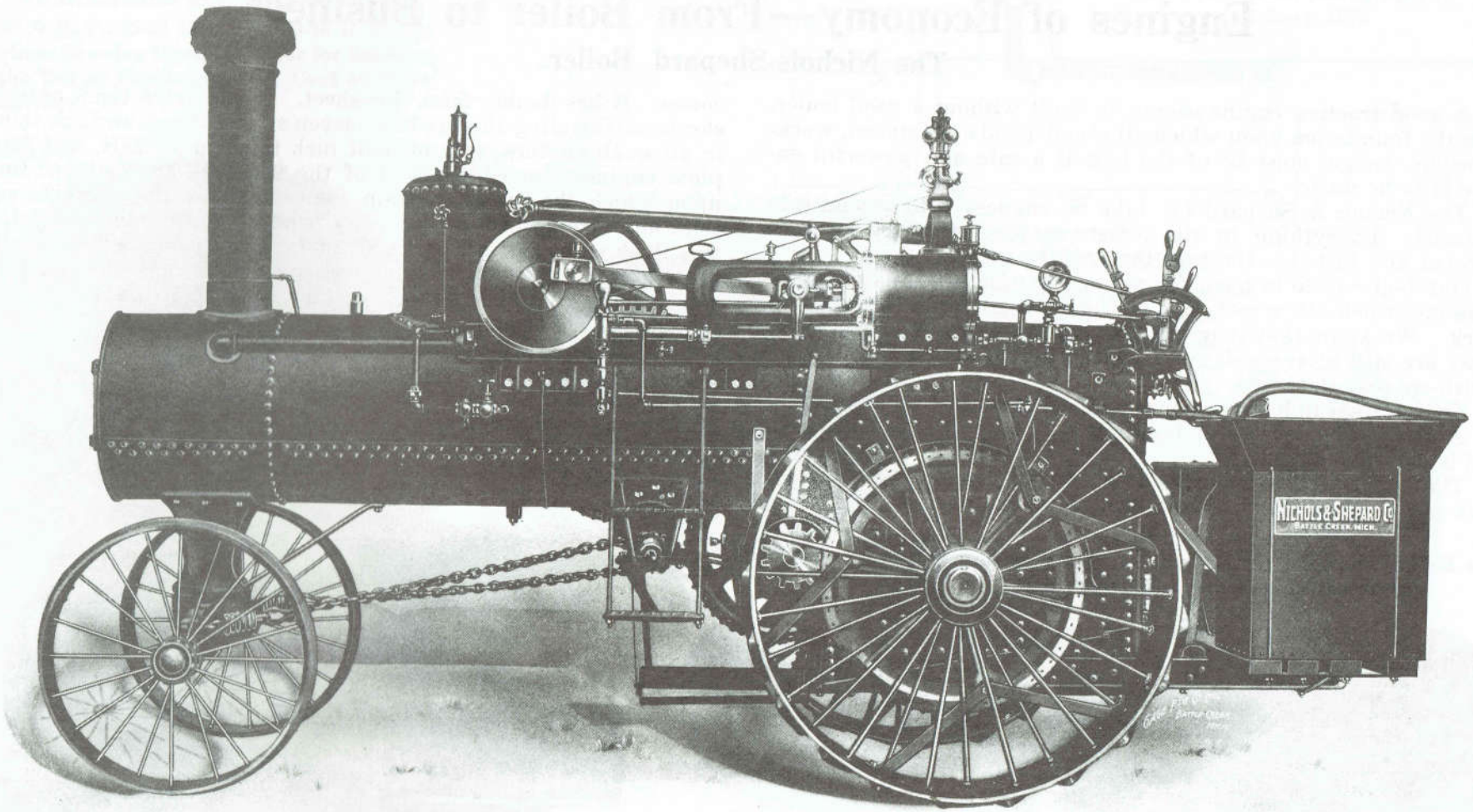
COMMON STACKERS, 18 feet long, with Raddle, Canvas Sides, Rope and Windlass for hoisting.
NICHOLS-SHEPARD WEIGHER, with Double Tube Elevator
FEEDER EXTENSIONS
WAGON TANKS
MOUNTED TANKS
TANK PUMPS AND HOSE

ENGINE TENDERS
DRIVE BELTS
16 x 16 CANVAS COVERS
22 x 34 CANVAS COVERS



NICHOLS-SHEPARD DOUBLE-CYLINDER TRACTION ENGINE (Gear Side).

Built in Four Sizes, viz.: 16-40 H. P., 20-70 H. P., 25-85 H. P. and 30-98 H. P. Adapted to Coal, Wood or Straw.
16-50 H. P. Not a Straw Burner.



NICHOLS-SHEPARD SINGLE-CYLINDER TRACTION ENGINE (Engine Side).

Built in Five Sizes, 13-40 H. P., 16-50 H. P., 20-70 H. P., 25-85 H. P. and 30-98 H. P. Adapted to Coal, Wood or Straw. 13-40 H. P. and 16-50 H. P. Not Straw Burners.

Engines of Economy—From Boiler to Business

The Nichols-Shepard Boiler

A good traction engine cannot be built without a good boiler. It is the foundation upon which all else depends. Material, workmanship, design, must be of the best if a safe and powerful engine is to be made.

The Nichols & Shepard Co. take no chances with second-rate material. Everything in the boiler, to the last rivet used, is selected and tested,—the best that can be purchased.

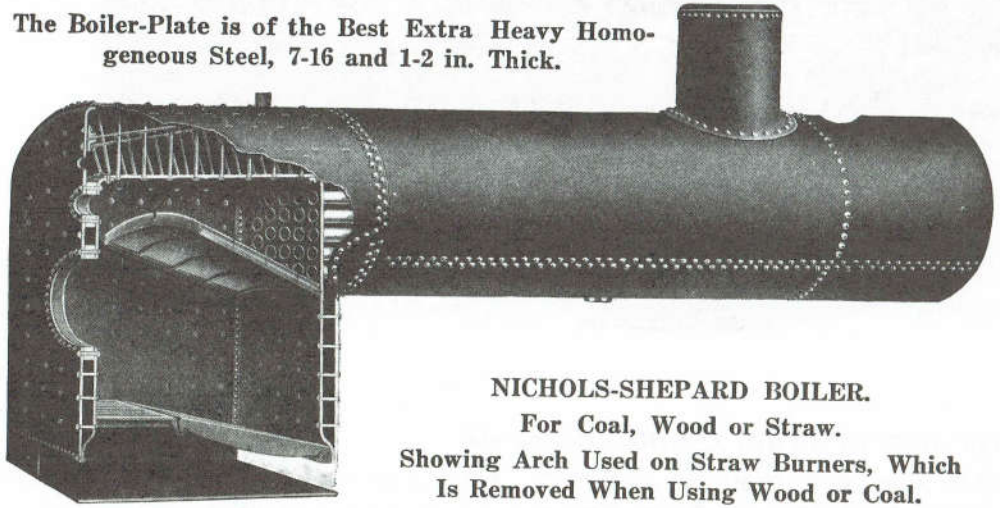
Our boiler-makers have for years manufactured under specifications which other makers claim are too good for this class of work. We know that they are not, because engines of our early make are still in every-day use, driven by the original boilers on which we sent them out.

The scrap-heap has long since claimed the "just-as-good."

A glance at our way of building tells why the Nichols-Shepard boiler stays on the job.

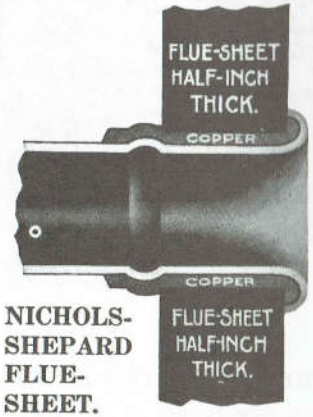
The boiler-plate is of extra thick homogeneous steel, the best that can be had. **It is double riveted** where the greatest strain comes. It has double thick flue-sheet. It has extra thick outside sheets surrounding the fire-box (seven-sixteenths of an inch thick in all small engines, and one-half inch thick in all 25H. and 30H. plow engines), to which most of the brackets are fastened and upon which the greatest strain comes, so that the brackets are solid and strong, preventing leaky bracket bolts. Only by using this thick sheet and the extra heavy brackets can the best results be attained, as the thick sheet will not spring, and the brackets are so large that they have a greater hold upon the boiler, permitting the use of more bolts, and the thick sheet also gives thread enough to the bracket bolts so that they hold firmly in place without loosening or leaking. It will be noticed that the openings into the fire-box on the Nichols-Shepard engines are oval in shape and fitted with wrought iron rings, which prevents the possibility of the frames cracking at the corners or the sheet cracking at the edge, and also prevents the seams from coming loose and leaking.

The Boiler-Plate is of the Best Extra Heavy Homogeneous Steel, 7-16 and 1-2 in. Thick.

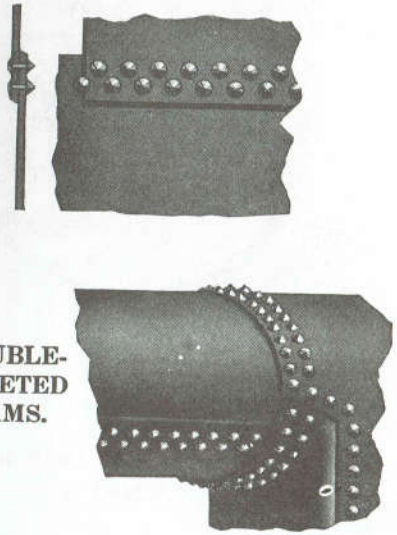


Fire-Box Extra Large.

NICHOLS-SHEPARD BOILER.
For Coal, Wood or Straw.
Showing Arch Used on Straw Burners, Which Is Removed When Using Wood or Coal.



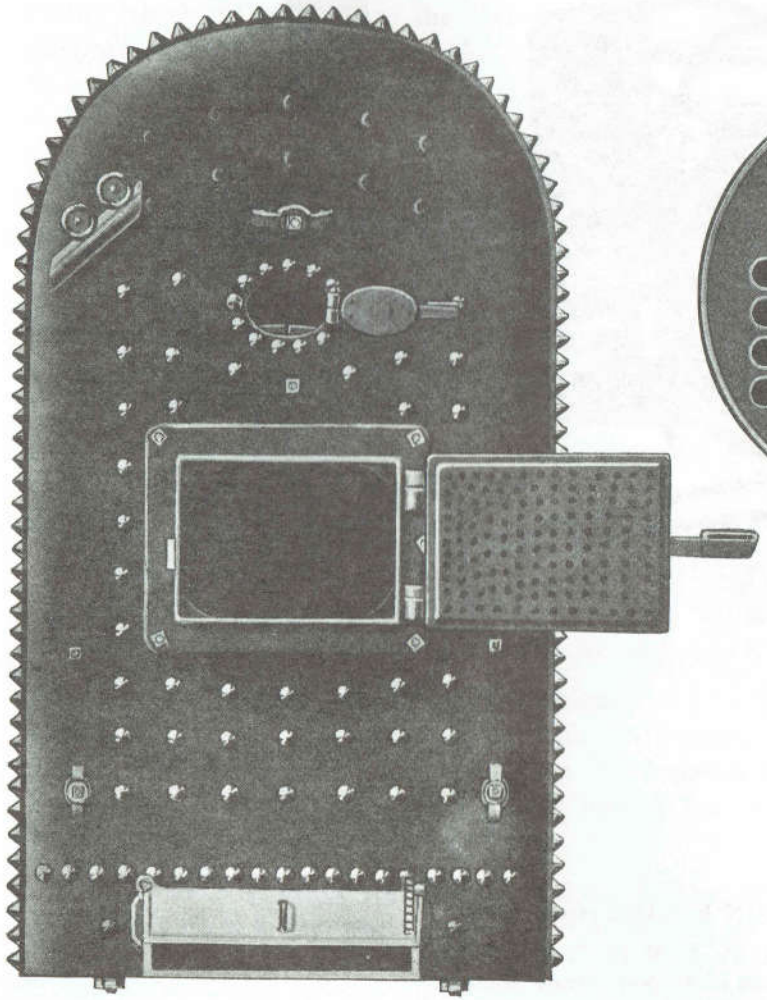
NICHOLS-SHEPARD FLUE-SHEET.

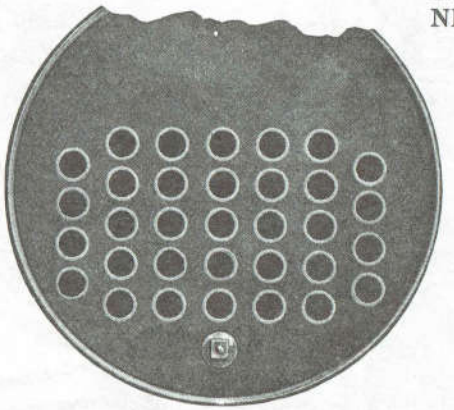


DOUBLE-RIVETED SEAMS.

NICHOLS-SHEPARD BOILER FRONT.

20-70 H. P., 25-85 H. P. and 30-98 H. P. Engines, Showing Clean-Out Door for Reaching the Top of Fire-Brick when Used as Straw Burners.

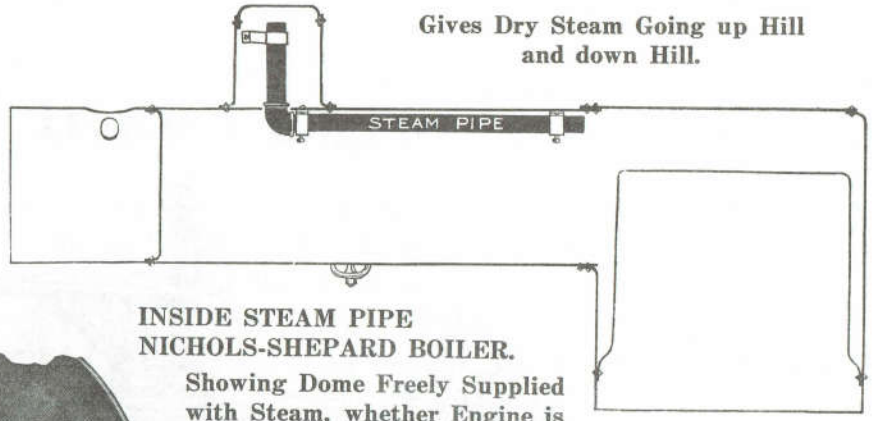




NICHOLS-SHEPARD FLUE-SHEET.

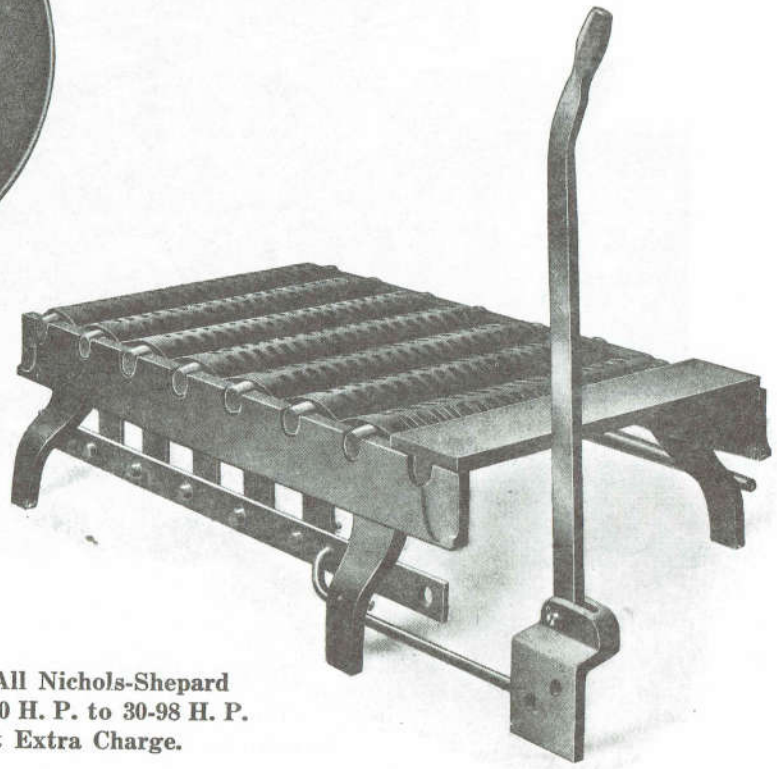
In Smoke-Box End.

Gives Dry Steam Going up Hill and down Hill.



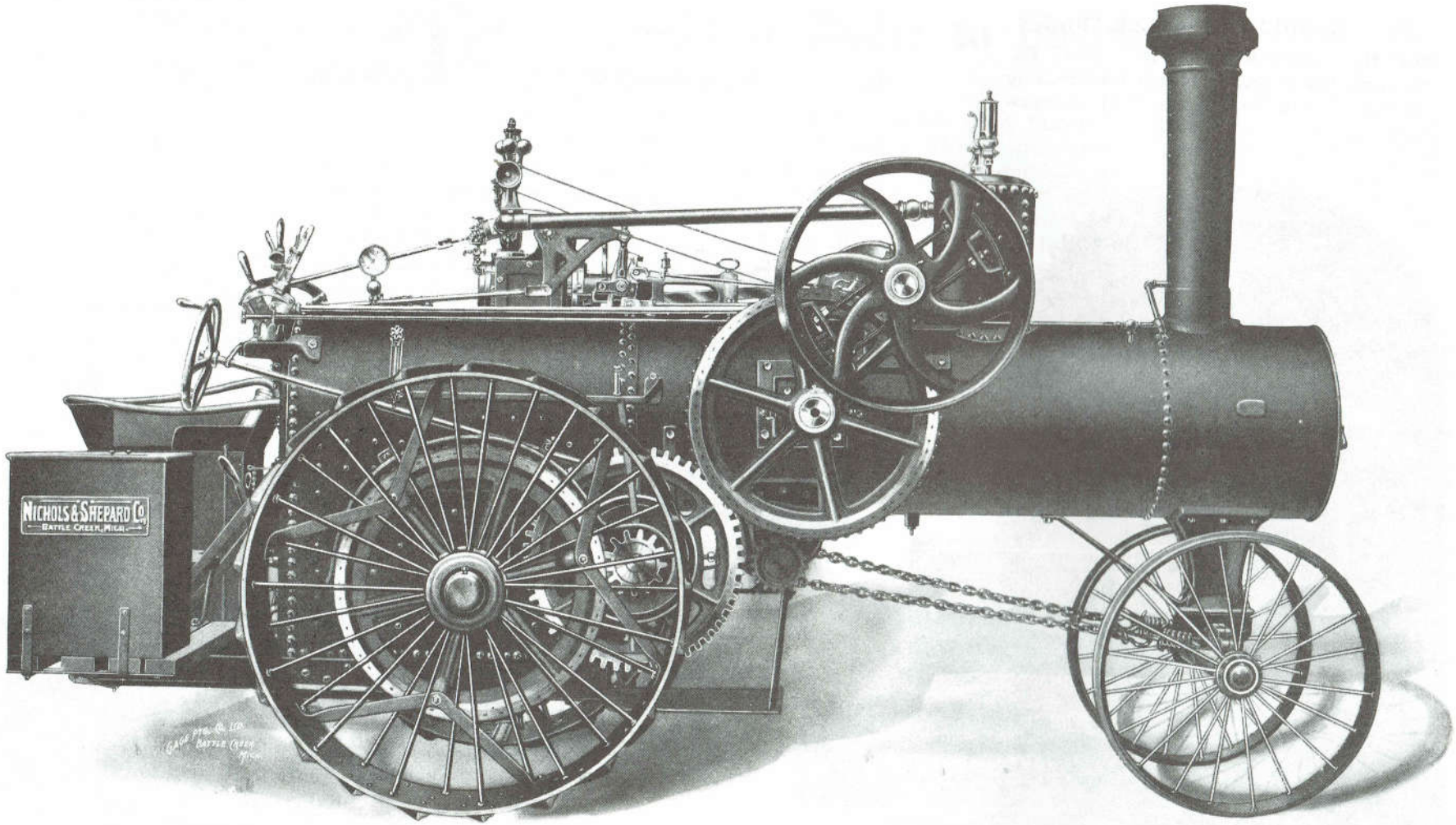
INSIDE STEAM PIPE NICHOLS-SHEPARD BOILER.

Showing Dome Freely Supplied with Steam, whether Engine is Going up Hill or down Hill.



SHAKING GRATES.

Used for Coal in All Nichols-Shepard Engines from 16-50 H. P. to 30-98 H. P. Furnished without Extra Charge.



NICHOLS-SHEPARD SINGLE-CYLINDER TRACTION ENGINE (Gear Side).

Built in Five Sizes, viz.: 13-40 H. P., 16-50 H. P., 20-70 H. P., 25-85 H. P. and 30-98 H. P.
Adapted to Coal, Wood or Straw. 13-40 H. P. and 16-50 H. P. Not Straw Burners.

The Nichols-Shepard Traction Engine

Strength, rigidity, power — power in plenty — far beyond the rating which we give — are the features which place the Nichols-Shepard engines at the top of the list when traction engines are to be bought and used.

We have told how the boiler is built to stand up to its work. The same exacting tests are applied to every part of the engine. The same results must, and do, follow this honest method of selecting and using the best.

We know that the engine must often do hard and heavy work under conditions that are not always right for its ideal performance. Allowance for this is made in building.

We know, from an experience that covers three generations, what traction engines should be made to do. We build them to do it. Plowing, hauling or threshing, they stand up and do the job right, exactly the way that it should be done.

Nor does their value stop here. Every purpose for which a traction engine can be used on the farm is best met with an engine that bears our name and is backed by our guarantee.

Every device that makes for convenience is placed where it belongs for quick and constant control. All levers and vital parts are under the hand of the engineer. This prevents accident when action must be quick, and makes money for the operator when things are running smoothly.

The great advantage of the extra thick boiler-plate used in our construction is shown in mounting the engine, as the heavy brackets upon which it is set, can be securely bolted to place. Leaking and rattling are done away with, and the engine is thus protected from a common cause of trouble.

Boiler capacity is ample for quick and easy steaming. When coal is used for fuel, the large fire-box with its shaking grates provides for keeping the hottest kind of fire.

Steel takes the place of iron in every place that it is needed to secure strength and durability.

Every casting is semi-steel.

The wheels are steel.

The platform and draw-bar are steel.

The main- and counter-shafts are tested steel, extra quality and extra large.

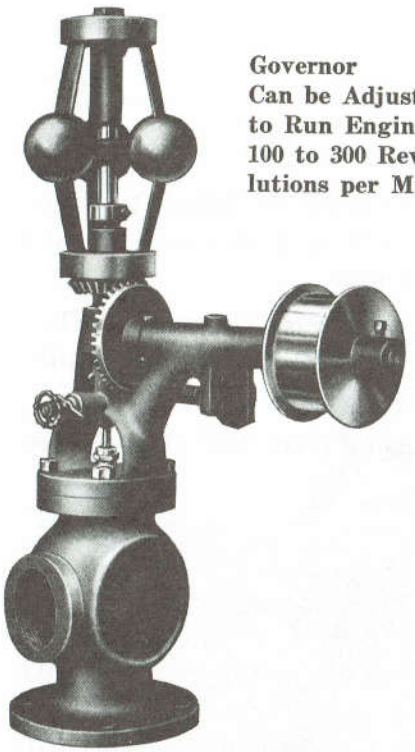
The main- and counter-shaft boxes are extra large; the lubrication is extra thorough.

The lubricator, the injector, the governor speeder can all be reached by the engineer from the platform.

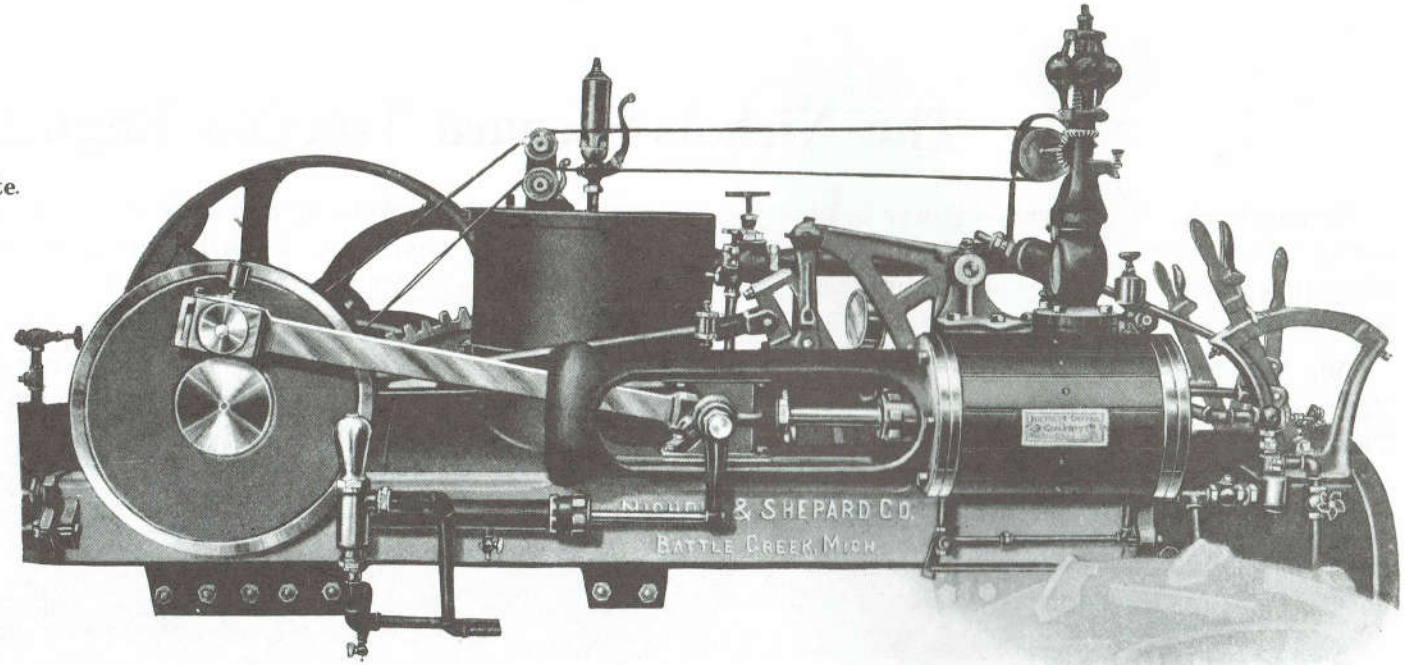
The steam-gage and water-gage glasses are in plain sight from platform or ground.

Nothing that can add to safety or convenience has been left off.

Each engine must develop, under brake test, fully three times its rated power before it leaves the factory. This insures that it will meet all reasonable requirements in the field.

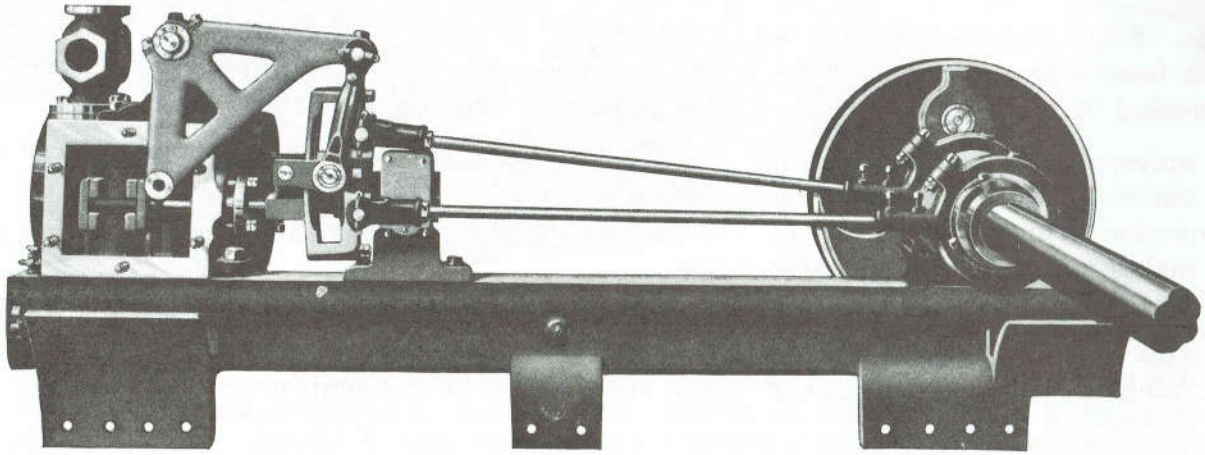


Governor
Can be Adjusted
to Run Engine
100 to 300 Revolutions per Minute.



NICHOLS-SHEPARD SINGLE-CYLINDER ENGINE AND BED.

All Our Engines Have Reliable Pump, also Injector.



Link and Valve Connection in the Above Engine.

The Nichols-Shepard Double-Cylinder Engine

For steam plowing, grading or heavy hauling the double-cylinder engine is the engine to use. The power is applied to the crank-shaft and gearing twice as often as it is with the single-cylinder engine, and the jerky motion which comes from an overload on a single engine is thus done away with.

There being no dead center or place where one of the engines is not working under direct pressure, the application of power is smoothly continuous. Low cost of operation is another good point which belongs to this engine. In the superior design which the Nichols & Shepard Company have brought to perfection, this feature is clearly shown.

No more fuel and water is required than is used by a single-cylinder engine of the same rating, though the capacity for continuous work is largely increased, while steadier power is developed.

Other advantages are to be found in the strength, durability and convenience, as well as in the cheap and effective work which this type of engine will perform.

The main crank-shaft pinion and friction-clutch are on the side opposite the fly- or band-wheel, so that the main-shaft is properly balanced and the work on it is distributed without unequal wear.

An ample steam supply is provided in each of the different sized engines, each engine being built upon a boiler that is large enough to furnish an abundance of steam under all conditions. Its friction-clutch is constructed along the most practical lines. The small pulley in which the friction-clutch engages is very convenient for driving a saw or any other machine requiring less speed than a thresher.

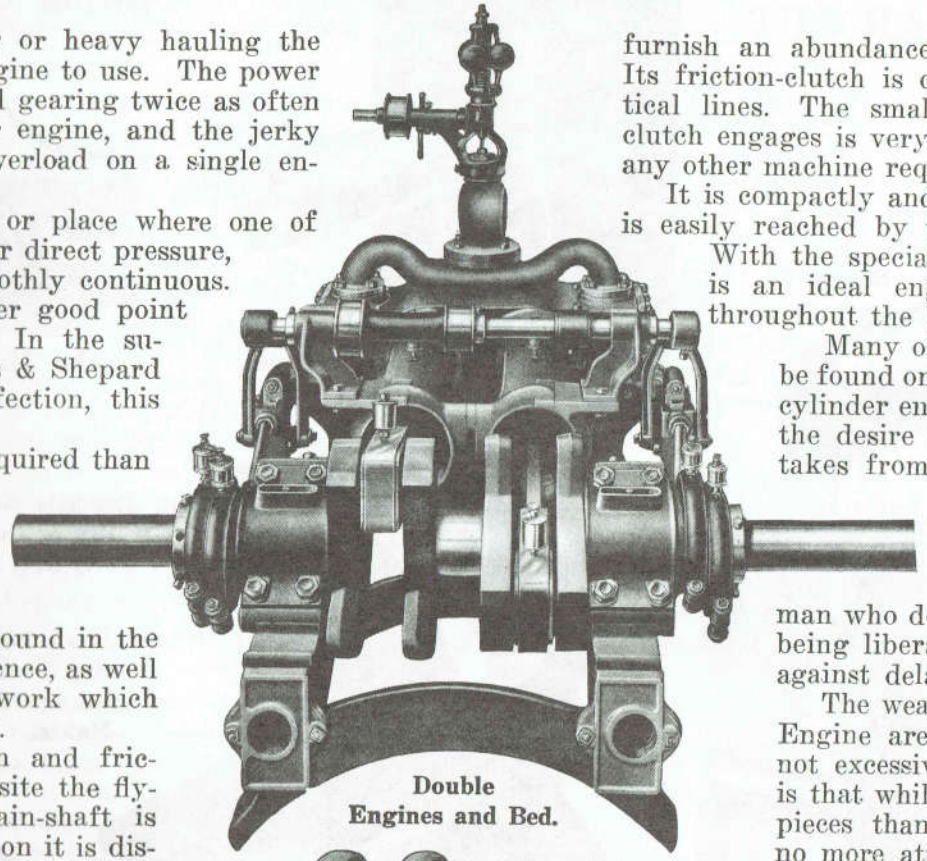
It is compactly and conveniently built. Every part is easily reached by the engineer from the platform. With the special plow platform and draw-bar it is an ideal engine for use in steam plowing throughout the United States and Canada.

Many of these money-saving ideas are to be found only on the Nichols-Shepard double-cylinder engine. There are other makes, but the desire to obtain the last cent of profit takes from rival engines most of the conveniences which are regularly furnished without extra cost to purchasers of our line.

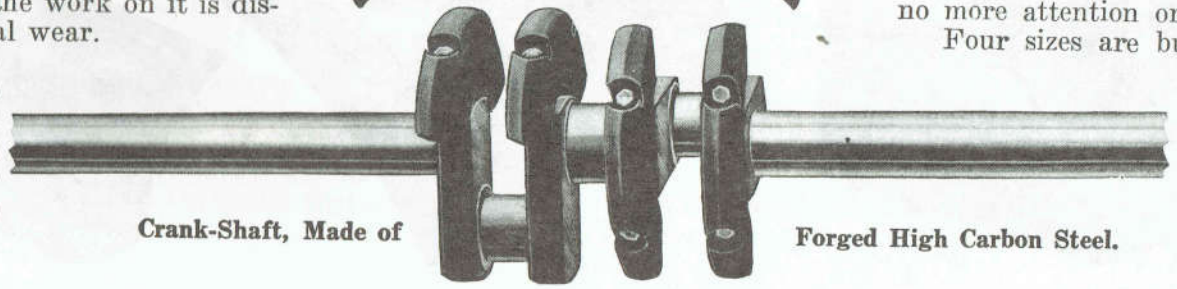
Delay cuts profits to the man who does the work with an engine. By being liberal, and building right, we guard against delay.

The wearing parts of the Nichols-Shepard Engine are so distributed that the wear is not excessive at any one point. The result is that while there are two engines and more pieces than in a single engine, it requires no more attention or adjustment.

Four sizes are built: 16-50 H. P., 20-70 H. P., 25-85 H. P. and 30-98 H. P. for coal and wood, and 20-70 H. P., 25-85 H. P. and 30-98 H. P. as straw burners.

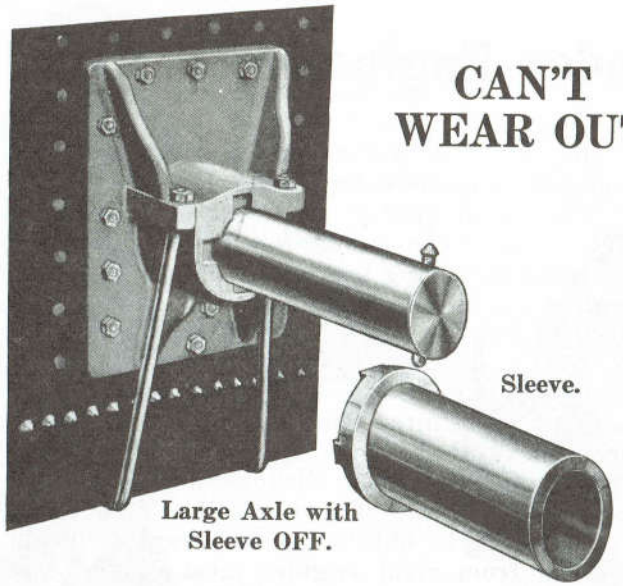


Double Engines and Bed.



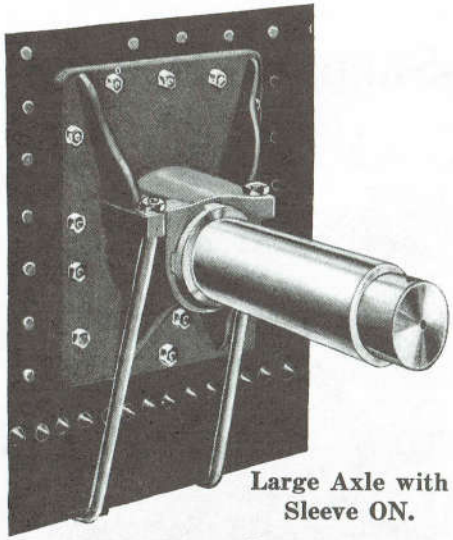
Crank-Shaft, Made of Forged High Carbon Steel.

CAN'T WEAR OUT



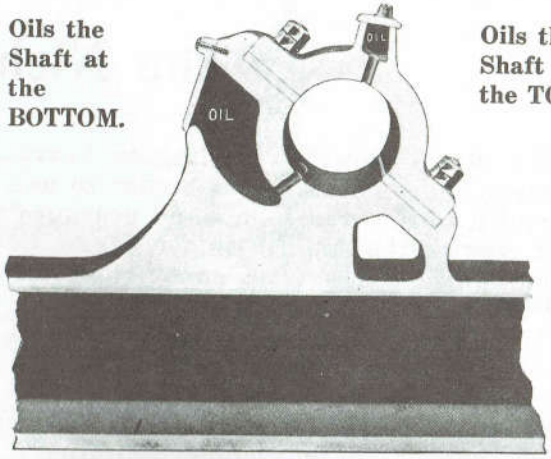
Sleeve.

Large Axle with Sleeve OFF.



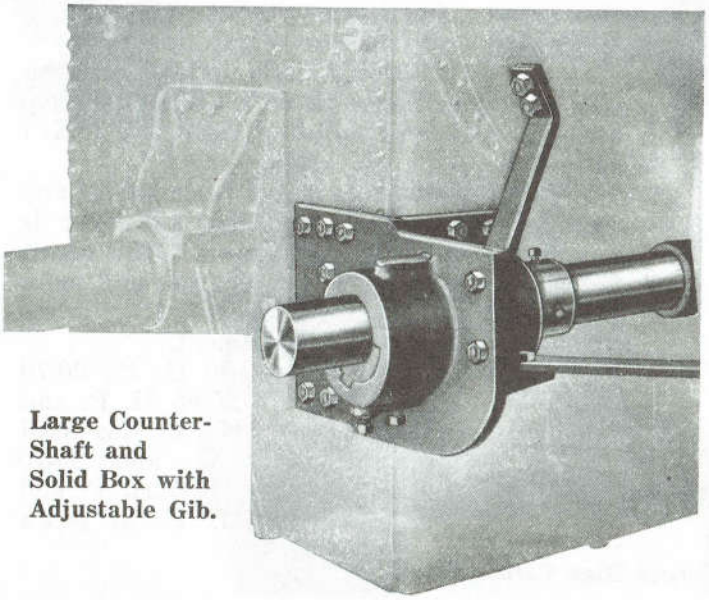
Large Axle with Sleeve ON.

Oils the Shaft at the BOTTOM.

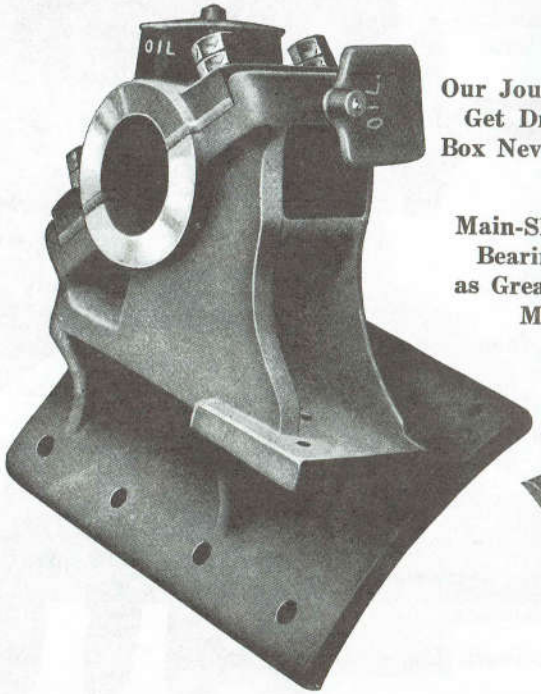


Oils the Shaft at the TOP.

The Massive Main-Shaft Always Runs in Oil.



Large Counter-Shaft and Solid Box with Adjustable Gib.



Our Journals Never Get Dry or Cut. Box Never Gets Hot.

Main-Shaft Boxes Bearing Twice as Great as Other Makes.

Expensive to Build.

Steam Plowing

The following are necessary features which every good plow engine must have:

1. A double cylinder. The power applied to the main-shaft constantly. Having no dead center, it insures a smoother motion to the engine and prevents the uneven strain and jerky motion. It is the jerky motion which breaks gears, springs shafts, and tears engines to pieces.

2. It must have an extra heavy boiler. On the ordinary engine not built for steam plowing, the boiler-plates are so light they will twist or spring out of shape on account of the terrific strain put upon them while plowing. The boiler-plate on the Nichols-Shepard double-cylinder engine is thicker than that used on other makes. On the big plow engines, 25H. and 30H., the entire boiler-shell is $\frac{1}{2}$-inch thick, and on all of the smaller engines the wagon plate, the shell over the fire-box, is $\frac{7}{16}$-inch thick, and it is on this plate, to which all brackets are attached, that the heaviest strains come.

3. It must have extra strong gears. The gear shafts, boxes and brackets upon the Nichols-Shepard engines will stand any strain that is put upon them. All pinions in the gears are solid steel castings, and the larger gears semi-steel.

4. It must have extra strong main-shaft and counter-shaft. The heavy shaft demands longer bearings, which, in turn, must be bolted to the boiler so that the bolts cannot be started, and this calls for thicker boiler-plate to give more threads on the bolts. The main-shaft and counter-shaft on the Nichols-Shepard engines are extra large and strong and have brackets so large that they are always held rigidly in place.

5. It must have extra large brackets and boxes. The brackets and boxes on the Nichols-Shepard plow engines are larger and stronger than those found on other engines of the same size. The axle brackets are very large, having a very large base, and are so thoroughly bolted to the boiler that one has never been known to come loose.

6. It must have extra wide traction wheels. The Nichols-Shepard traction wheels are both extra high and extra wide. Being extra high, they easily run over obstructions, and being extra wide, they will not cut down in soft or plowed ground.

7. It must carry an extraordinary amount of fuel and water. The Nichols-Shepard plow engines carry sufficient water and fuel to make long runs without replenishing, and are fitted so that water can be taken rapidly.

8. It must be convenient to handle. This is the most important feature in the plow engine. The Nichols-Shepard engine is compact, so that it can be most easily handled. It does not require so much ground in which to turn as is required with some engines.

Just weight enough is placed upon the front wheels to hold them down. This permits all of the weight possible being placed upon the rear wheels, which gives the engine great pulling power. In this respect it excels all other engines.

Every actuating lever and other feature which requires attention is immediately under the hand of the engineer, so that he loses no time, nor is he occasioned any trouble by confusion when quick action is necessary.

It travels just fast enough to do a maximum amount of work.

Its plow hitch is unbreakable and is built to attach to any make of plow.

Its steel frame platform will support large water-tanks and bunkers for coal without sagging.

Each engine is fitted with pump and injector, oil pump for cylinder lubrication and oil cups for lubricating bearings and gears.

Wherever steam plowing is practised, the Nichols-Shepard engine is being used with profit to the operator.

The Nichols-Shepard Friction-Clutch

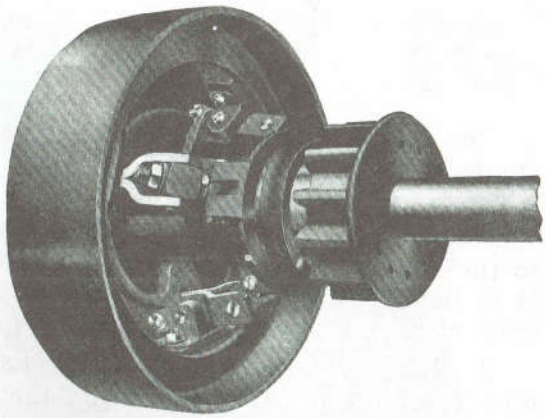
A friction-clutch that is not sure in operation and power transmission has no place on a traction engine.

The improved friction-clutch used on the Nichols-Shepard traction engine is the safest and strongest ever built for such a purpose.

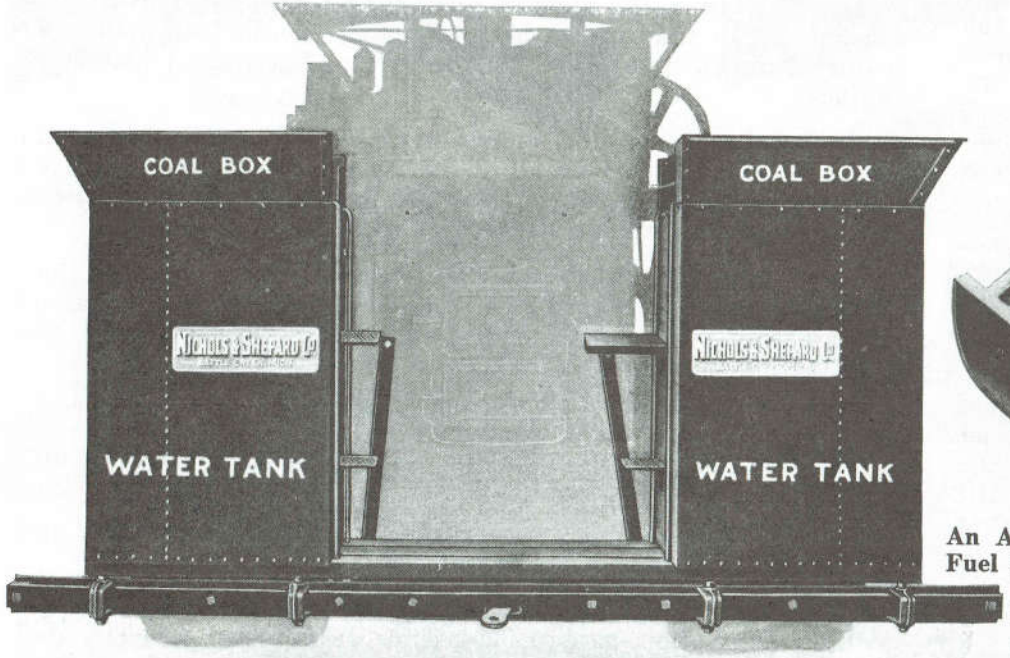
It can be engaged and thrown out more easily and more certainly than any other.

It has a strong grip in the band-wheel in which it operates, so that it conveys to the traction gearing the full power of the engine.

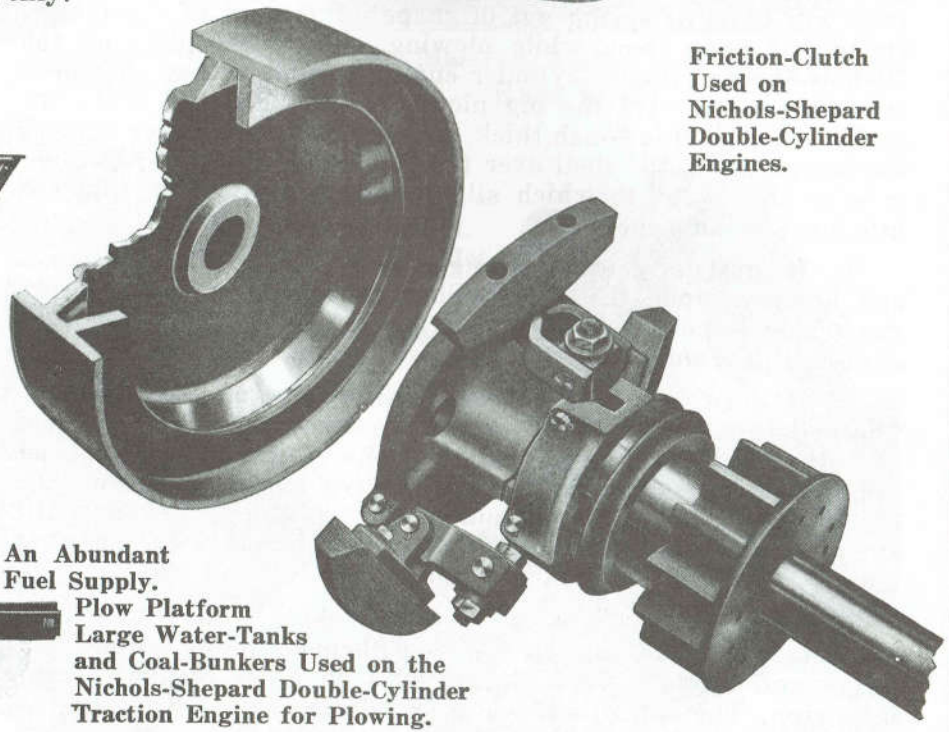
The small pulley on double-cylinder engines, in which the friction-clutch engages, gives the operator two band-wheels of different sizes, spreads the weight on both ends of the main-shaft and divides the strain between the boxes more evenly.



Friction-Clutch Used on Nichols-Shepard Double-Cylinder Engines.



Rear View of Plow Engine, with Our Special Plow Hitch.



An Abundant Fuel Supply. Plow Platform Large Water-Tanks and Coal-Bunkers Used on the Nichols-Shepard Double-Cylinder Traction Engine for Plowing.

The Steel Platform and Draw-Bar

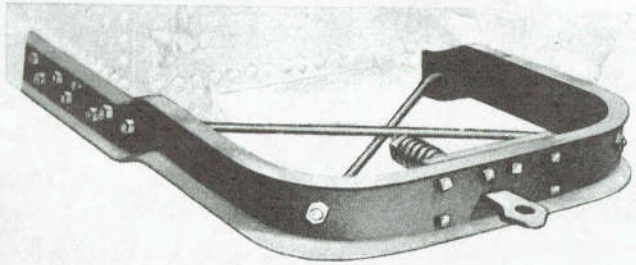
The Nichols-Shepard steel frame platform is built especially strong so that it cannot get out of place or sag with the platform load.

The draw-bar is directly attached to the platform frame.

The platform frame is made of strong bars of structural steel bent in shape so as to thoroughly support the platform, and is bolted to the boiler-shell below the water-line so that it cannot cause trouble by bolts leaking.

It is thoroughly braced and supported so that it will carry the extra large water-tanks and coal-bunkers and support the plow hitch which is so admirable a feature of the Nichols-Shepard plow engine.

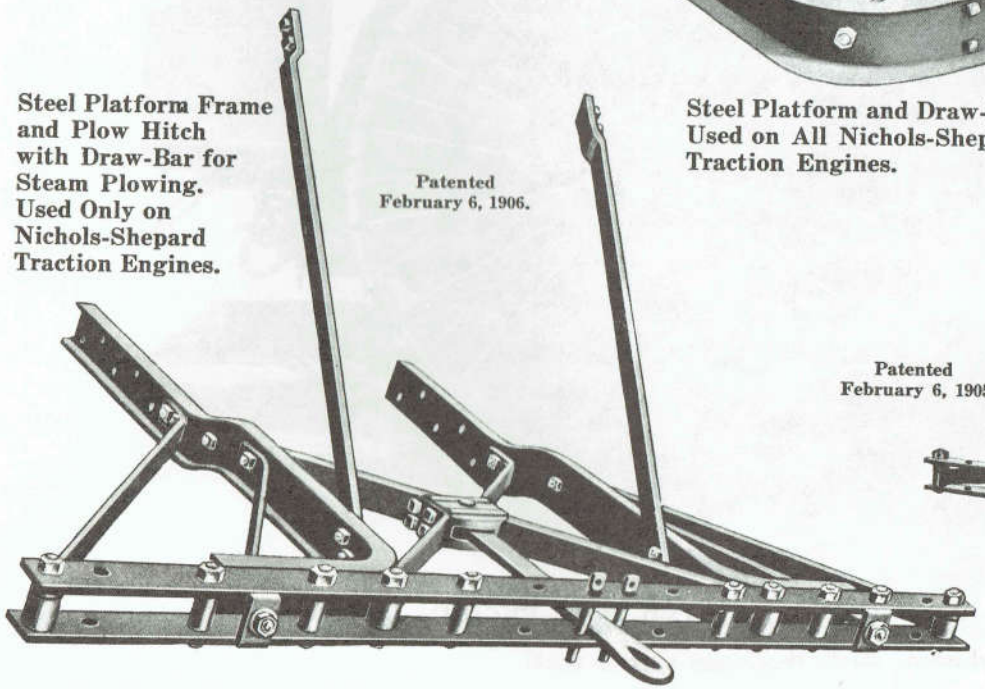
Patented
February 6, 1906.



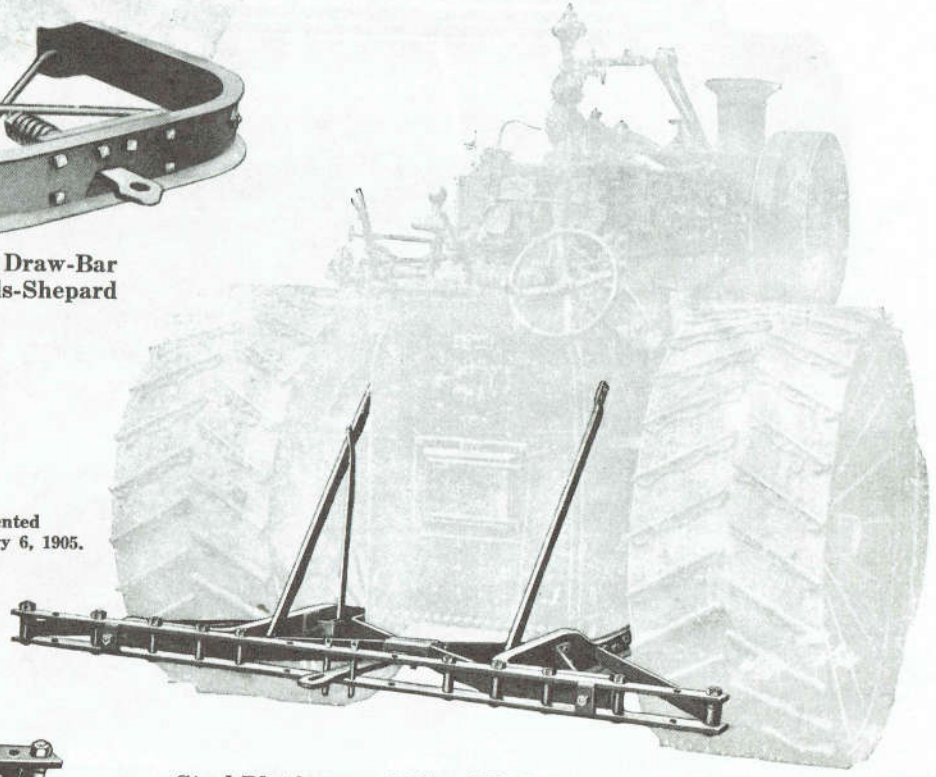
Steel Platform and Draw-Bar Used on All Nichols-Shepard Traction Engines.

Steel Platform Frame and Plow Hitch with Draw-Bar for Steam Plowing. Used Only on Nichols-Shepard Traction Engines.

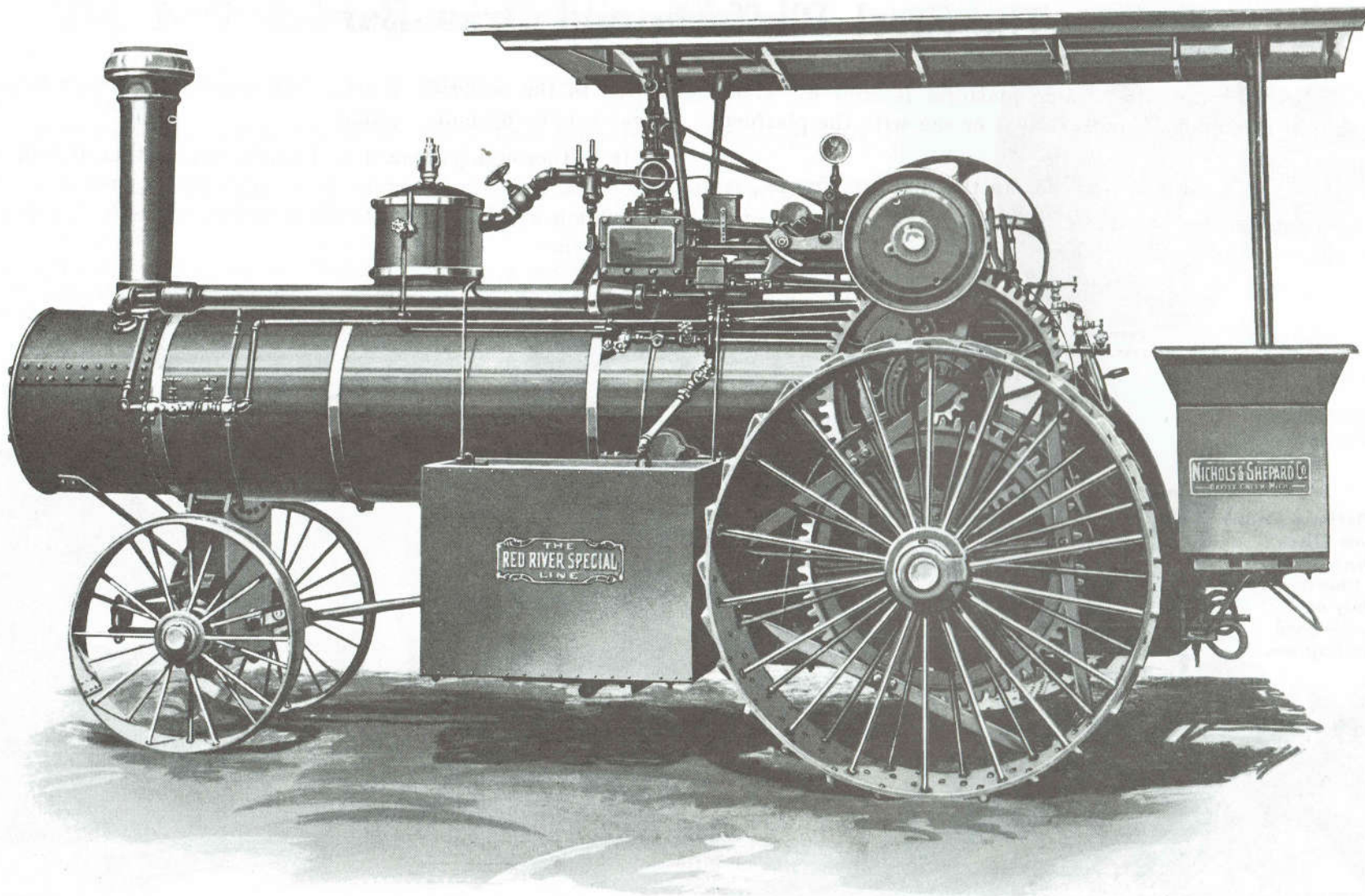
Patented
February 6, 1906.



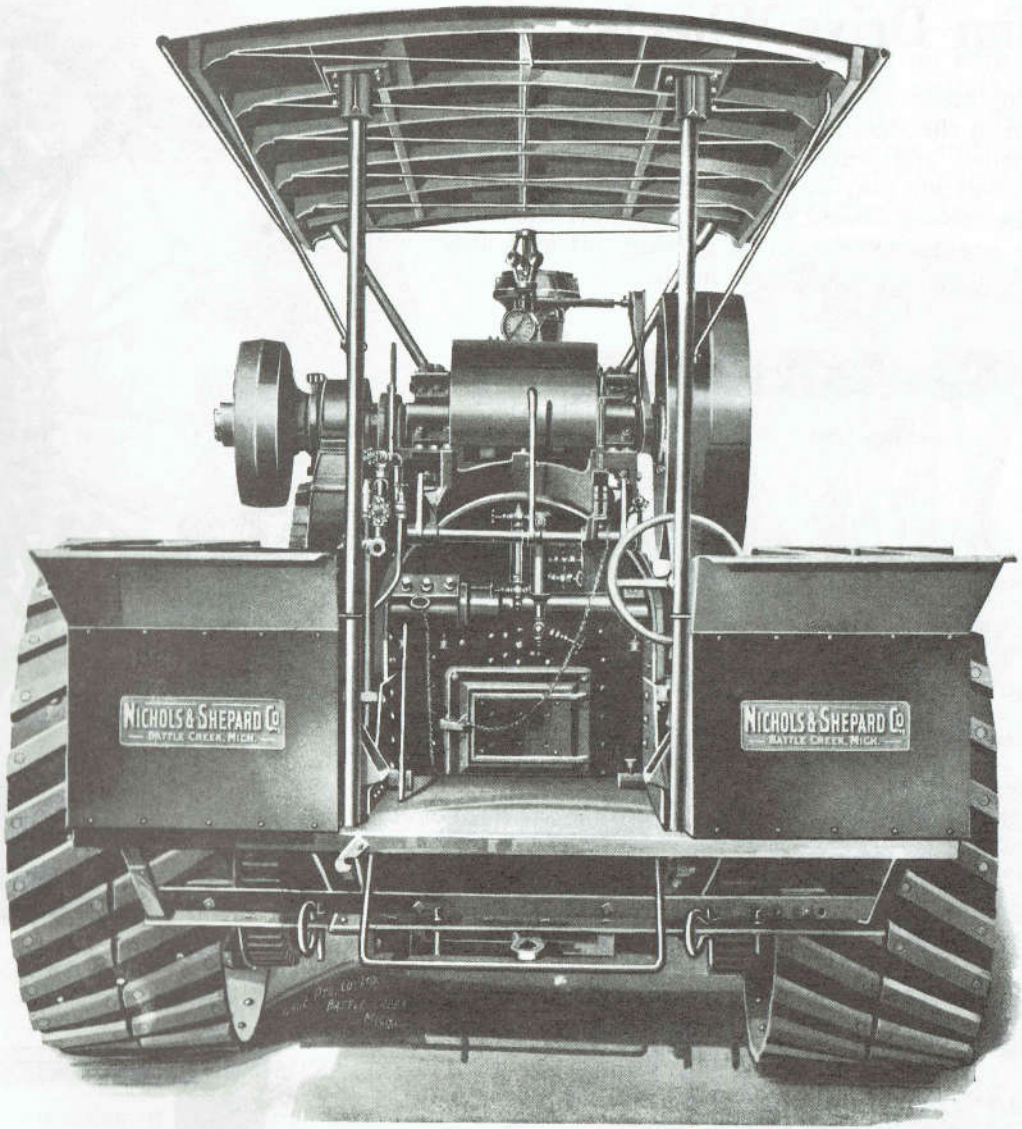
Patented
February 6, 1905.



Steel Platform and Plow Hitch, with Draw-Bar for Steam Plowing Attached to Nichols-Shepard Traction Engines.



NICHOLS-SHEPARD REAR-MOUNTED CONTRACTOR'S AND PLOW ENGINE.
Double Cylinder. 25-85 H. P.



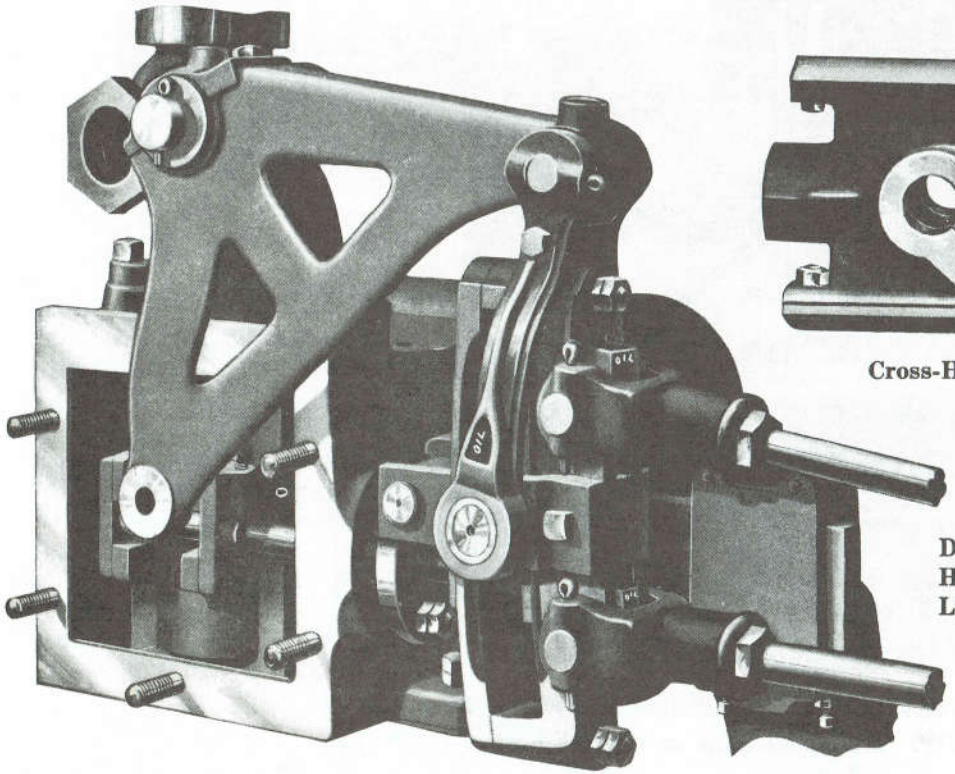
NICHOLS-SHEPARD DOUBLE-CYLINDER CONTRACTOR'S AND PLOW ENGINE. (Rear View.)
Built in One Size Only, 25-85 H. P. Municipal Lugs on Drive-Wheels.

Steel Rim Drive-Wheels

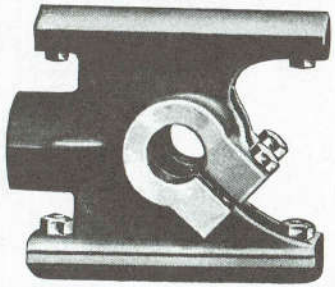
The Nichols & Shepard Co. basis of a good traction engine — strength, rigidity, power — is shown again in the steel rim wheel.

With easy going on level roads, any wheel that will carry the load will do. But all roads are not good. A good job may be on a bad road and the threshing rig has got to get to it to get the money. Sand or mud may halt the outfit, and then, with a poor wheel on the engine, the strain of getting out and away will make trouble that stays by until costly repairs can be made.

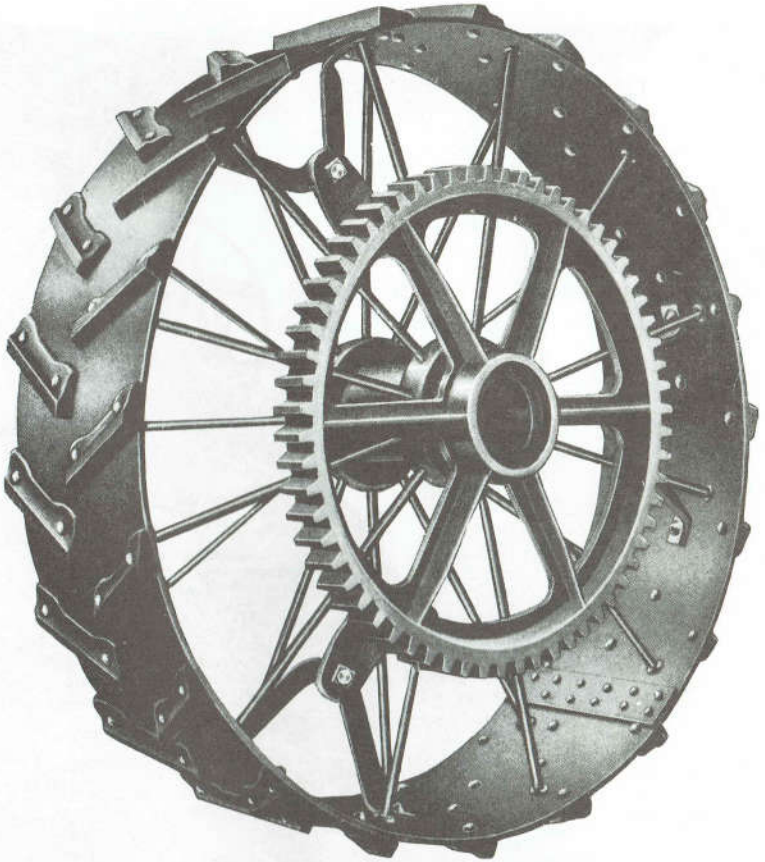
Connecting-Rod.



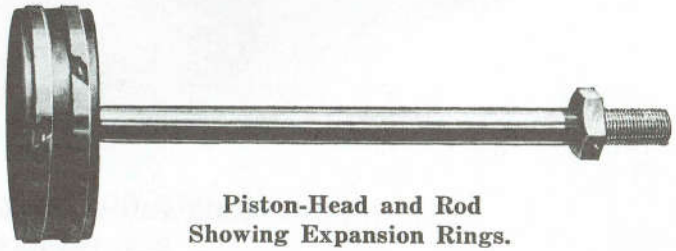
Double Hung Link.



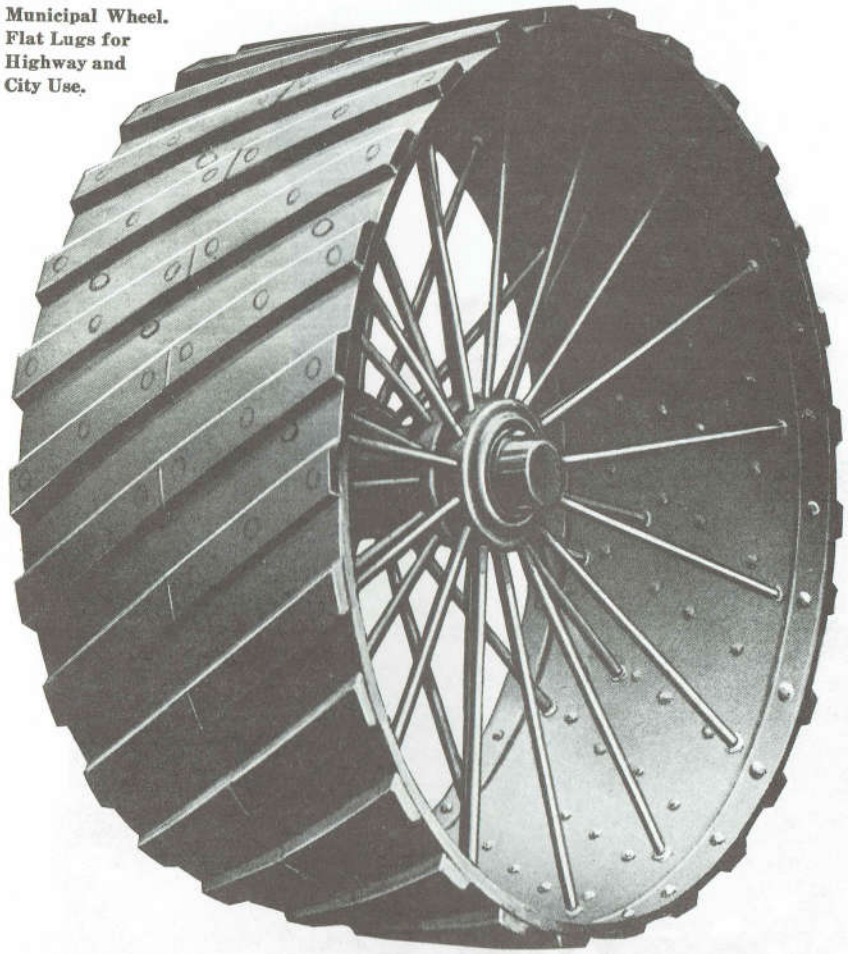
Cross-Head.



Steel Rim Drive-Wheels.
Wheel with Lug Gear Attached.



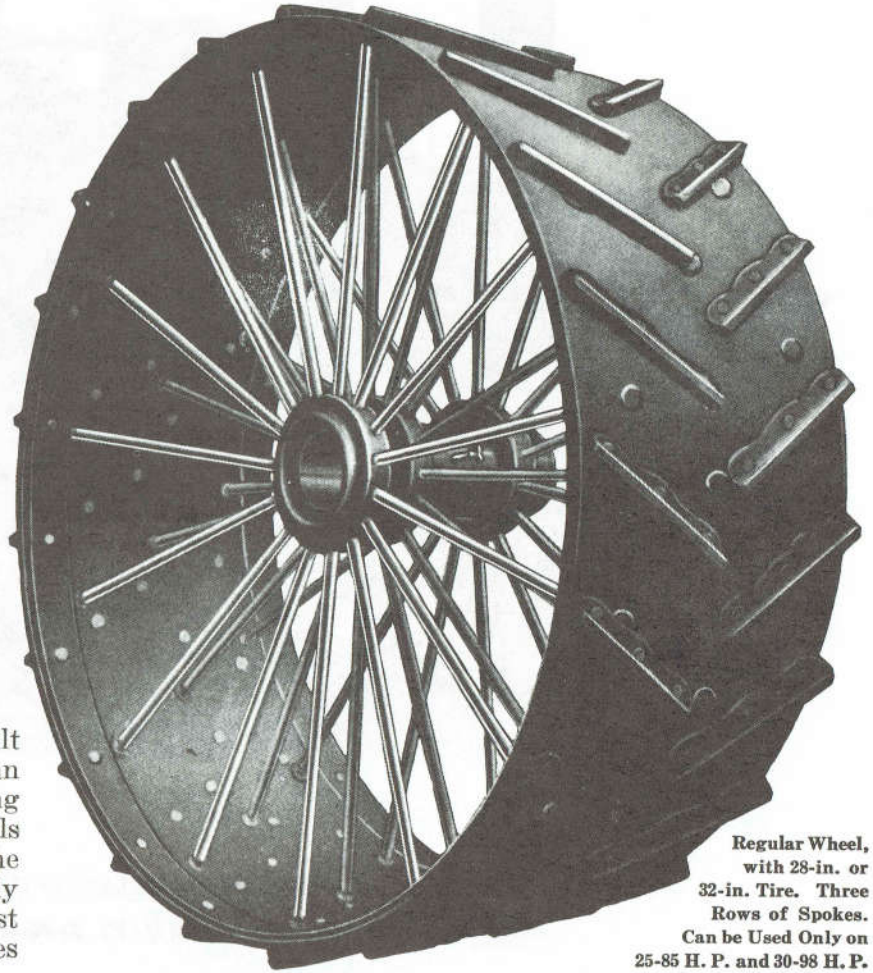
Piston-Head and Rod
Showing Expansion Rings.



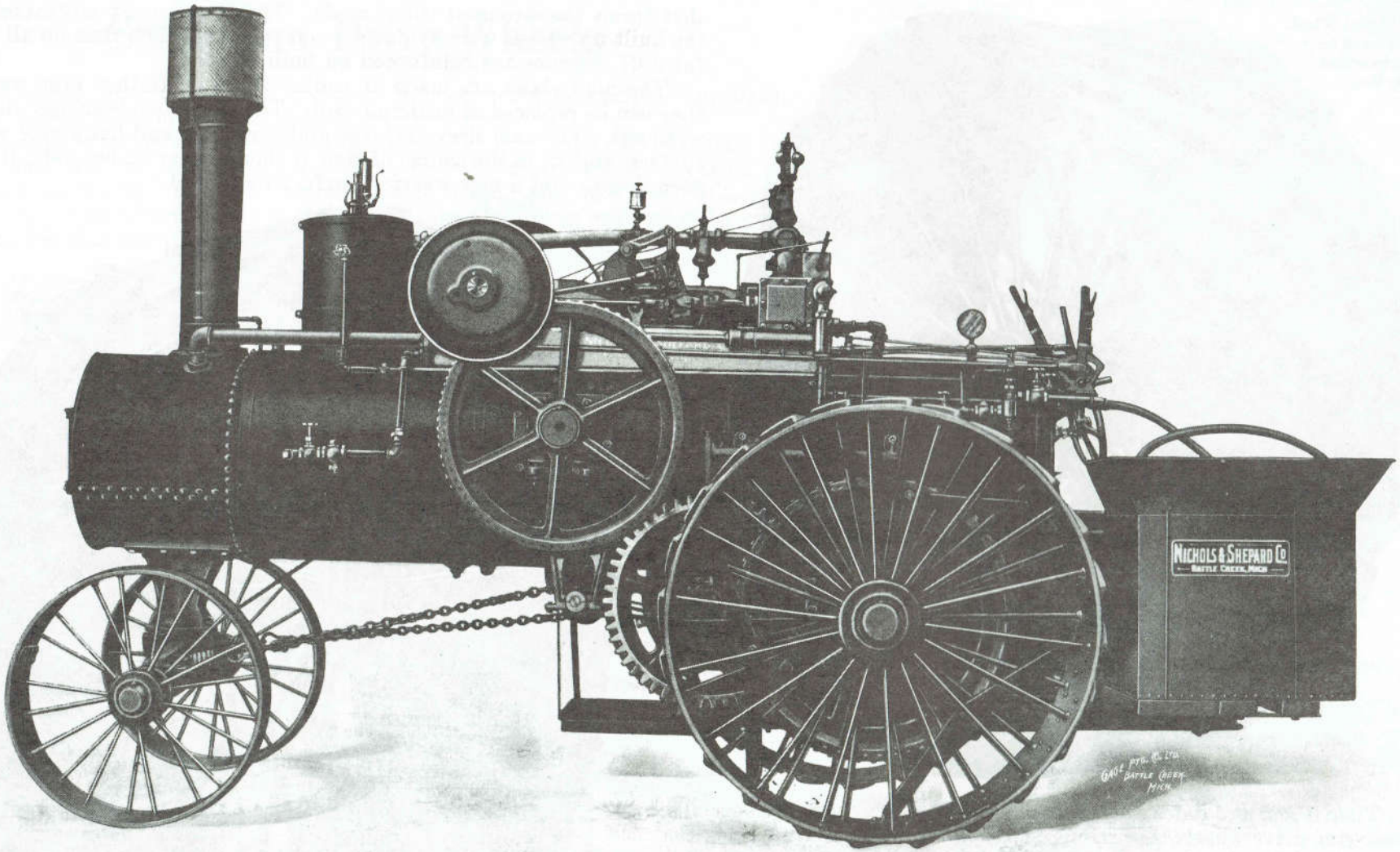
Municipal Wheel. Flat Lugs for Highway and City Use.

Time is lost and dates are disarranged. We have therefore specially-built steel rim drive-wheels, the strongest traction engine drive-wheels that can be made. The rims are extra thick, the spokes are extra large and strong and are riveted so securely that they cannot come loose. These drive-wheels are practically indestructible. The spokes, while hot, are riveted into the tires and with sufficient metal both sides of the tire to hold them securely throughout the lifetime of the engine. The molten metal of the hub is cast solid on the spokes, making a complete weld between the hub and spokes that forms the strongest wheel made. They have many advantages over the **built-up** wheels used in cheaper construction. **The rims on all wheels** for 30H. engines **are reinforced on both edges.**

The mud claws are made of malleable iron. If they ever wear out, they can be replaced at moderate cost. The large axle bearings will never wear out. The axle sleeve is large and very long and has ample wearing surface, and if, in the course of time it should wear on one side, it can be turned over and a new wearing surface presented.

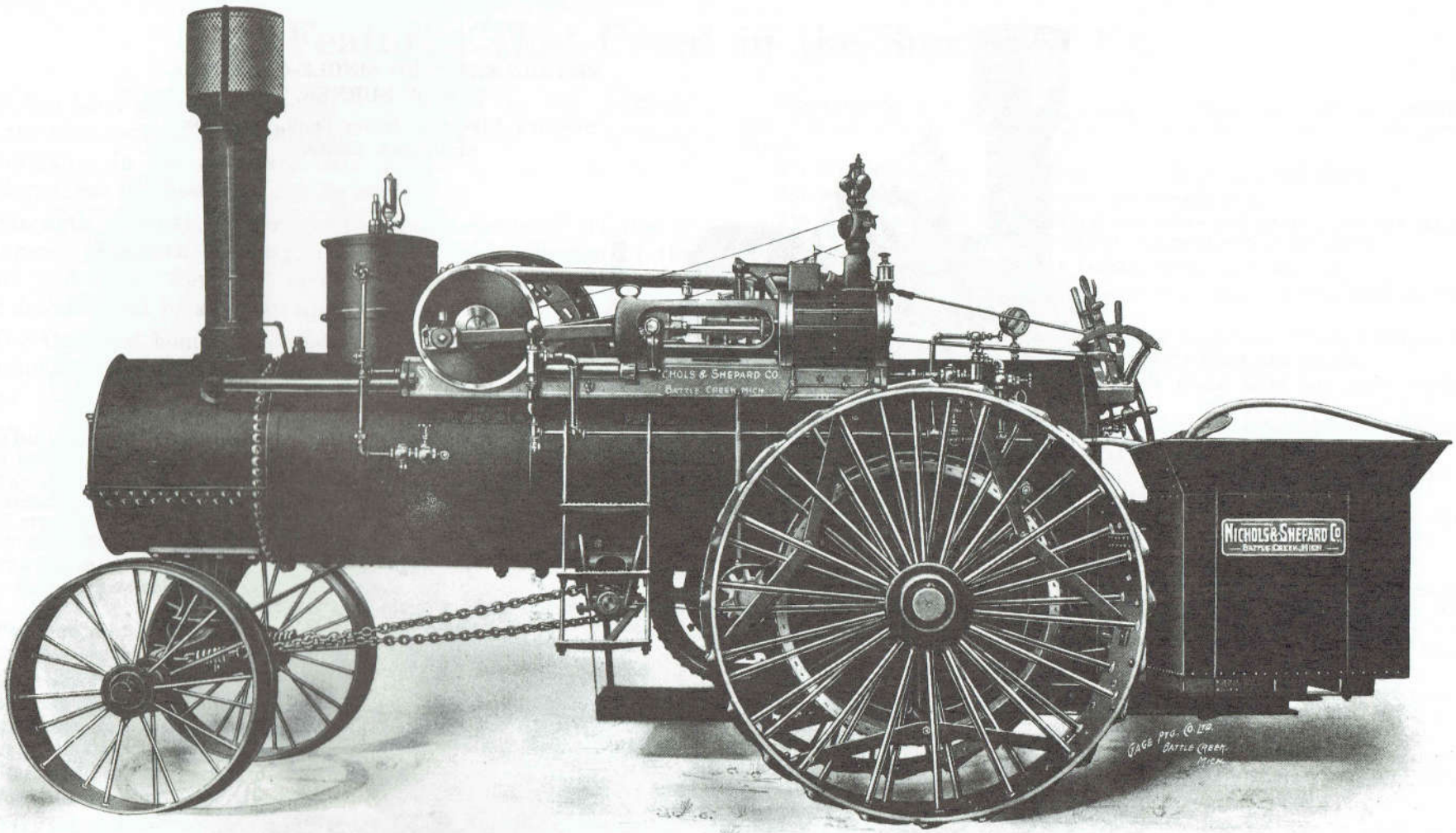


Regular Wheel, with 28-in. or 32-in. Tire. Three Rows of Spokes. Can be Used Only on 25-85 H. P. and 30-98 H. P.



NICHOLS-SHEPARD DOUBLE-CYLINDER STRAW BURNER ENGINE (Gear Side).

Built in Three Sizes, viz.: 20-70 H. P., 25-85 H. P. and 30-98 H. P. Also Adapted to Wood or Coal.

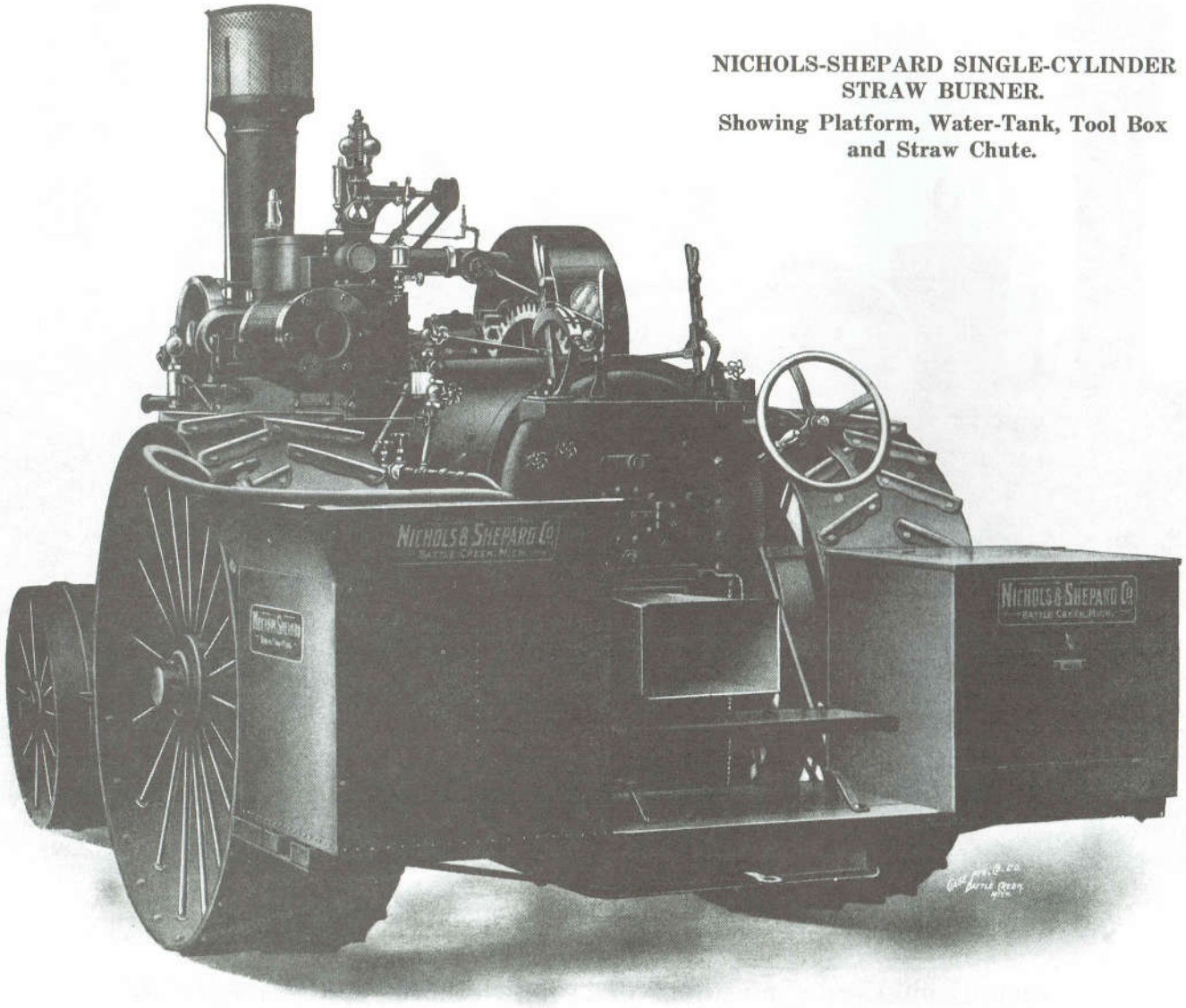


NICHOLS-SHEPARD SINGLE-CYLINDER STRAW BURNER ENGINE (Engine Side).

Built in Three Sizes, viz.: 20-70 H. P., 25-85 H. P. and 30-98 H. P. Also Adapted to Wood or Coal.

NICHOLS-SHEPARD SINGLE-CYLINDER STRAW BURNER.

Showing Platform, Water-Tank, Tool Box and Straw Chute.



Features That Count in the Summing Up

It has been the effort to make it clear that the Nichols-Shepard traction engines, from the selection of their material to their performance in the field, are built with the single purpose of making them the best that can be made.

Strength, rigidity, power are the watch-words of the manufacturers. Strength, rigidity, power are the protection of the owner and user. Pennies "saved" in the building often mean that dollars must be spent in up-keep while at work.

Get that fact home, and take another look at the features of genuine merit which the Nichols-Shepard engines so clearly display:

The Boiler.—High pressure, homogeneous steel-plate, selected stock, extra thick.

The steel-plate of the wagon box top, to which the principal brackets are attached, is on all small engines seven-sixteenths of an inch thick, which gives the brackets good support. And on the plow engines, 25-85 H. P. and 30-98 H. P., the entire boiler-shell is one-half inch thick.

The flue-sheet is half an inch thick and the fire-box ends of the flues are set with copper ferrules or thimbles. They make a better and more lasting joint.

The flues are seamless steel and extra long.

The fire-box is extra large, insuring easy steaming.

Long smoke-box to aid draft and catch the sparks.

Shaking grates in the fire-box for burning coal.

Double-riveted seams where the greatest strain comes. Amply stayed by numerous large stay-bolts.

Steel-plate on the bottom of the fire-box in place of the pan used on other makes.

The Engine.—The link is made with oil boxes which can be filled with cotton waste so the movement of the link does not throw the oil off the bearings.

The principal bearings are bushed so that when worn they can be cheaply replaced.

The eccentric hubs and valve-rods are pinned in their true position, where they cannot get out of place or slip and throw the valve out of position.

The main-shaft in the double engine is forged from high carbon steel extra strong with three boxes on the 25-85 H. P. and 30-98 H. P. power engines.

The main-shaft in the single engine is extra heavy and strong.

The connecting-rods are of forged high-grade steel.

The engine rests on a substantial bed plate and heater, through which the feed water passes and is heated hot before it enters the boiler.

Every engine provided with a reliable pump, also injector.

The large main-shaft boxes are oiled at the bottom as well as at the top, insuring perfect lubrication.

Extra strong steel and semi-steel gearing made in such proportions as to give the greatest strength. The teeth are very thick and strong.

Extra heavy and strong brass fittings made from our own special patterns.

Governor arranged so that the engine can be adjusted to run at any speed between 100 and 300 revolutions per minute.

Counter-shaft boxes extra long and made solid around the shaft with adjustable gib to take up wear or lost motion.

Large axle brackets with wide bearings attached to the plate on sides of the boiler with stud-bolts and truss-rods extending under the boiler for additional strength.

The Traction Wheels.—The wheels have steel tires, with wrought iron spokes riveted while red hot in the tires, and the molten metal in the hub is cast solid on the spokes, making the hub, the spokes and the tire form absolutely the strongest wheel made for its weight of metal. Reinforced tires on all 30-98 H. P. engines.

Lugs riveted on the wheels which can be easily replaced if in the course of long time they should wear out. They are so placed on the wheel that they clean themselves in most soils.

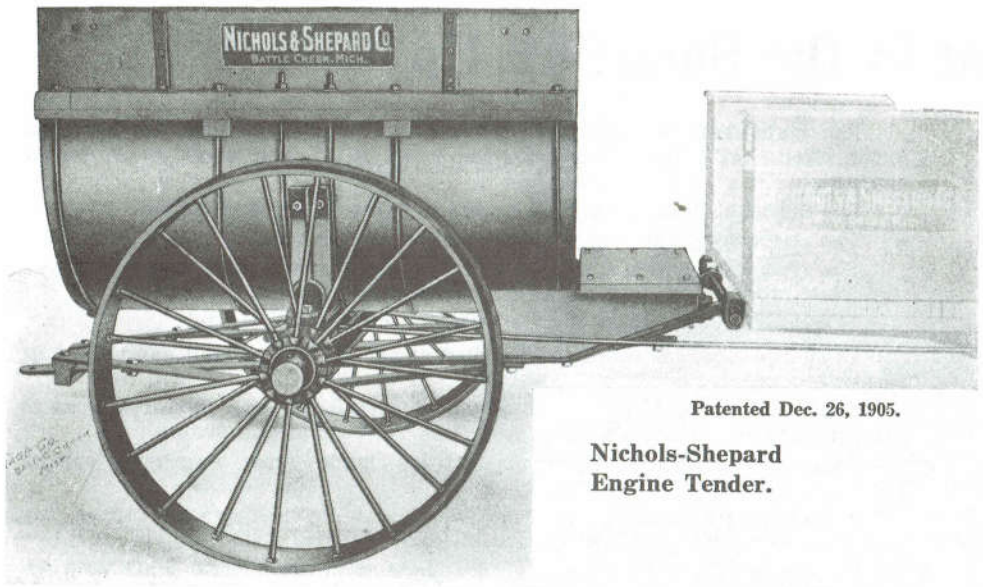
Steel axle with large cast-iron sleeve making a journal for the traction wheels that should never wear out. It is reversible if there happens to be wear on the bottom side.

The Platform.—Heavy channel iron platform frame bolted to each side of the boiler below the water-line with cross and brace rods, making it extra strong.

Large square water-tank and coal-bunker furnished on left-hand side of platform with tool-box on right-hand side.

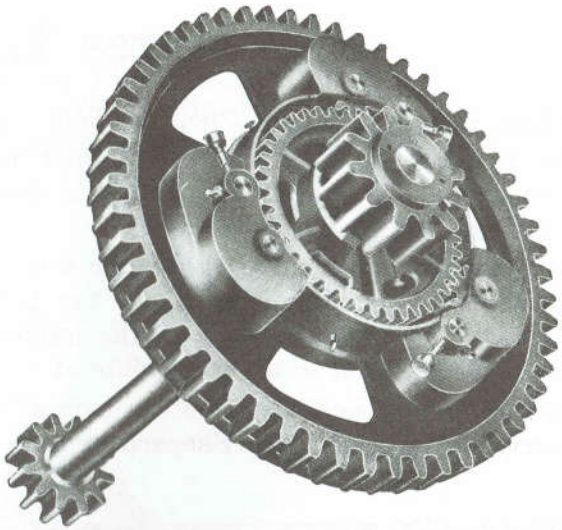
Does any other manufacturer give more?

Does any practical buyer of an engine want less?

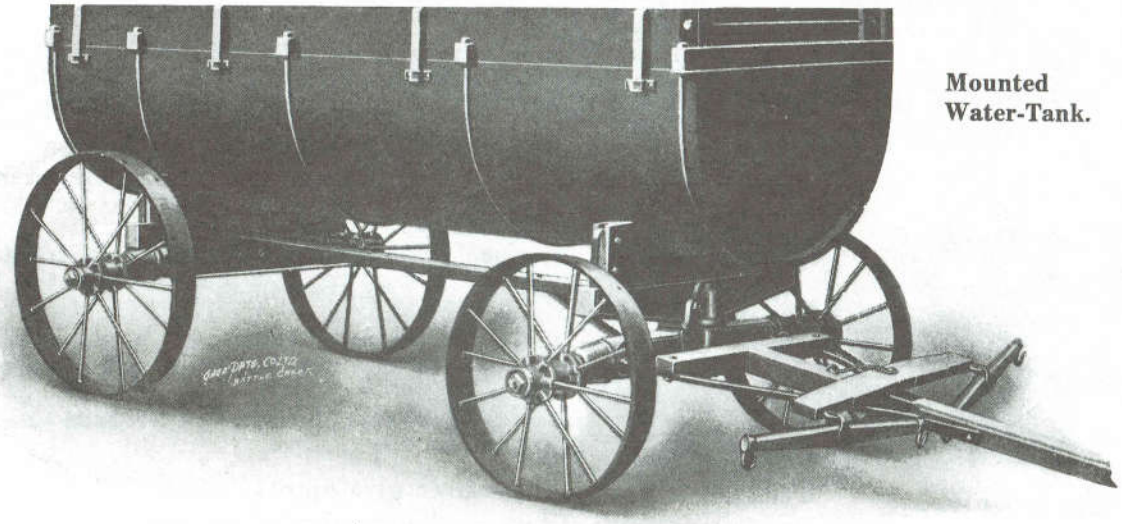


Patented Dec. 26, 1905.

Nichols-Shepard Engine Tender.



Spur Differential Gear Used on All Except 13-40 H. P. Engines.



Mounted Water-Tank.

Low Down Tank Pump.

Dimensions of Nichols-Shepard Traction Engines—in Inches

(Subject to Change without Notice)

SIZE	CYLINDER		BOILER		FIRE-BOX			FLUES			SMOKE BOX	FLY-WHEEL		SPEED	TRACTION WHEELS	
	Diam.	Length	Diam.	Length	Length	Width	Height	No.	Diam.	Length	Length	Diam.	Face		Diam.	Face
COAL AND WOOD BURNERS																
13- 40H. Single	7¾	10	28	142	34	24	33	38	2	77	30	36	10	240	58	16
16- 50H. "	8	12	29	150	40	25	40	40	2	77	30	40	10	225	64	18
20- 70H. "	8½	12	32	175	49	27	49	32	2½	94	30	40	12	225	69	20
25- 85H. "	9¼	12	36	177	51	31	51	45	2½	94	30	40	12	225	73	24
30- 98H. "	9¾	12	39	177	51	34	55	54	2½	94	30	40	12	225	79	32
16- 50H. Double	5¾ / 5¾	10 / 10	29	150	40	25	40	40	2	77	30	40	12	225	64	18
20- 70H. "	6⅜ / 6⅜	10 / 10	32	175	49	27	49	32	2½	94	30	40	12	225	69	20
25- 85H. "	6¾ / 6¾	10 / 10	36	177	51	31	51	45	2½	94	30	40	12	225	73	24
30- 98H. "	7⅞ / 7⅞	11 / 11	39	177	57	34	55	54	2½	100	30	40	12	225	87	32
STRAW BURNERS																
20- 70H. Single	8½	12	32	175	49	27	49	32	2½	94	30	40	12	225	69	20
25- 85H. "	9¼	12	36	177	51	31	51	45	2½	94	30	40	12	225	73	24
30- 98H. "	9¾	12	39	177	51	34	55	54	2½	94	30	40	12	225	79	32
20- 70H. Double	6⅜ / 6⅜	10 / 10	32	175	49	27	49	32	2½	94	30	40	12	225	69	20
25- 85H. "	6¾ / 6¾	10 / 10	36	177	51	31	51	45	2½	94	30	40	12	225	73	24
30- 98H. "	7⅞ / 7⅞	11 / 11	39	177	57	34	55	54	2½	100	30	40	12	225	87	32
25- 85H. " Rear Mounted	6¾ / 6¾	10 / 10	36	177	51	31	51	58	2	94	26	40	12	225	73	24

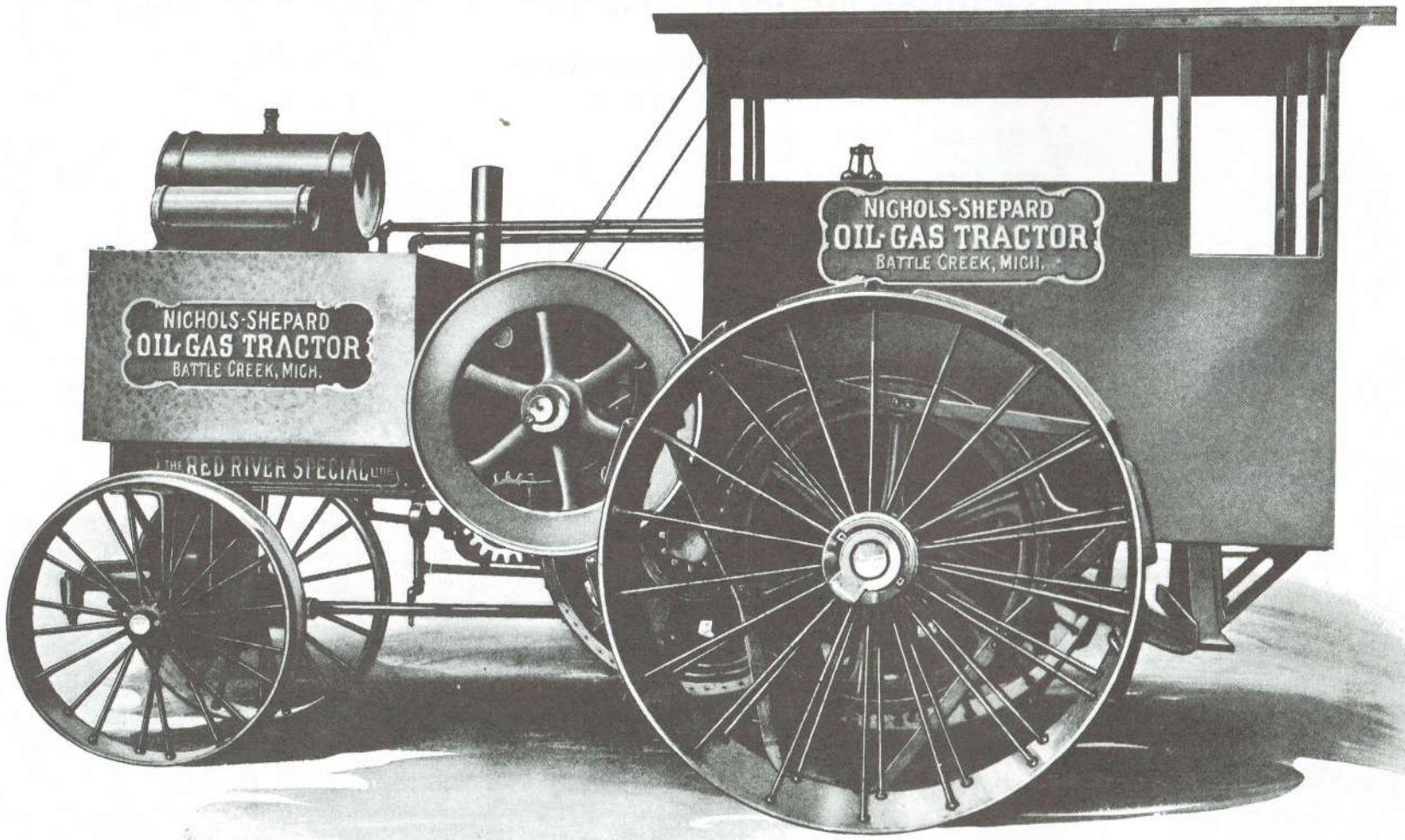
Special Note. – Can furnish 8-inch extensions, making 40-inch face wheels on 30-98H. Engines, at small additional cost. Can furnish 28- or 32-inch face wheels on 25 85H. Engines at small additional cost. Can furnish 24-inch face wheels on 20-70H. Engines at small additional cost.

Main Drive Belts, Extra

140 feet long, 6 inches wide, 4-ply Canvas ..... For 28x40 and 30x46 Red River Specials

140 feet long, 7 inches wide, 4-ply Canvas ..... For 32x52 Red River Specials

150 feet long, 8 inches wide, 4-ply Canvas }
150 feet long, 8 inches wide, 4-ply Rubber } ..... For 36x56 and 40x60 Red River Specials



NICHOLS-SHEPARD OIL-GAS TRACTOR.
Built in Two Sizes—25-50 H.P. and 35-70 H. P.

Nichols-Shepard Oil-Gas Tractor

There are numerous localities where conditions make the use of oil for fuel and power both economical and convenient.

That the Red River Special Line may lack nothing that will enable its user to secure the greatest possible returns on his investment, we build and furnish a thoroughly dependable tractor engine of the oil-gas type.

It burns kerosene, gasoline, naphtha or distillate at all loads and is guaranteed to develop twice its rated horse-power.

It is built in two sizes, 25-50 H. P. and 35-70 H. P.

It is of the twin cylinder, four cycle, throttling governor type, with jump spark ignition, starts on batteries and is equipped with a magneto for continuous running.

It has the fewest possible number of gears, the power is not transmitted through any bevel-gears either to the road wheels or the belt, and no idle gears are in motion while running ahead on the road. The engine is built for plowing, heavy hauling and threshing. It runs as steadily as a steam engine, which makes it a good engine for the threshing machine.

A carburetor of standard automobile design is used in connection with a Pickering governor, and this combination insures a speed regulation which closely approximates that of the best steam engines.

There is no device that is new, untried or experimental in its entire design.

Every feature has been thoroughly tried out and demonstrated to be thoroughly practical in every way.

Both sizes have been used in plowing, hauling and threshing until it has been proven that there are no weak or insufficient parts to make trouble and expense for the user.

It is equipped with our own non-reversible steering gear. This makes the tractor much more easily handled either in the field or on the road, for the reason that there is an entire absence of the jerk which all chain-guided engines have. It handles like an automobile. It guides as easily while plowing as when on the road.

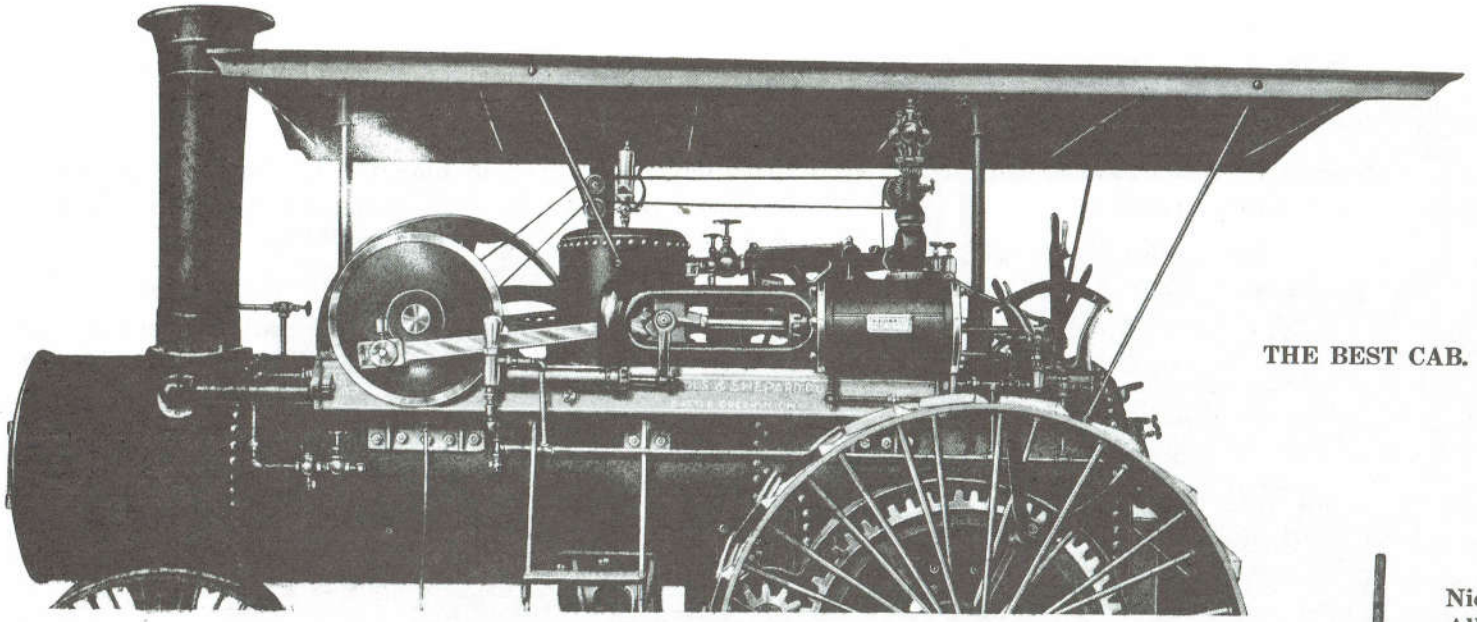
It has our own special radiator. Easily repaired if it should happen to leak, and readily equipped so that it can be oil-cooled for cold climates instead of water-cooled.

It is well to bear in mind that great caution should be used in the selection and purchase of this kind of engine. Over-confidence in untried models has shown that their greatest power may be exerted in the direction of ruin for both maker and user. No impractical machine has ever gone out under the Nichols & Shepard Company name, and none is allowed to go now.

Investigation is requested, as only by comparison can its merits be learned. It will be found practical in every way, and more durable than any other built.

The Oil-Gas Tractor is offered to the farmers and threshermen of the world as a fit and creditable addition to the Red River Special Line, and those desiring a gas engine are assured by its builders that it has no superior in the market.

Special catalogues, giving details and dimensions, are free for the asking.



The Nichols-Shepard Cab is Thoroughly Rigid, Keeps in Shape and in Place.

THE BEST CAB.

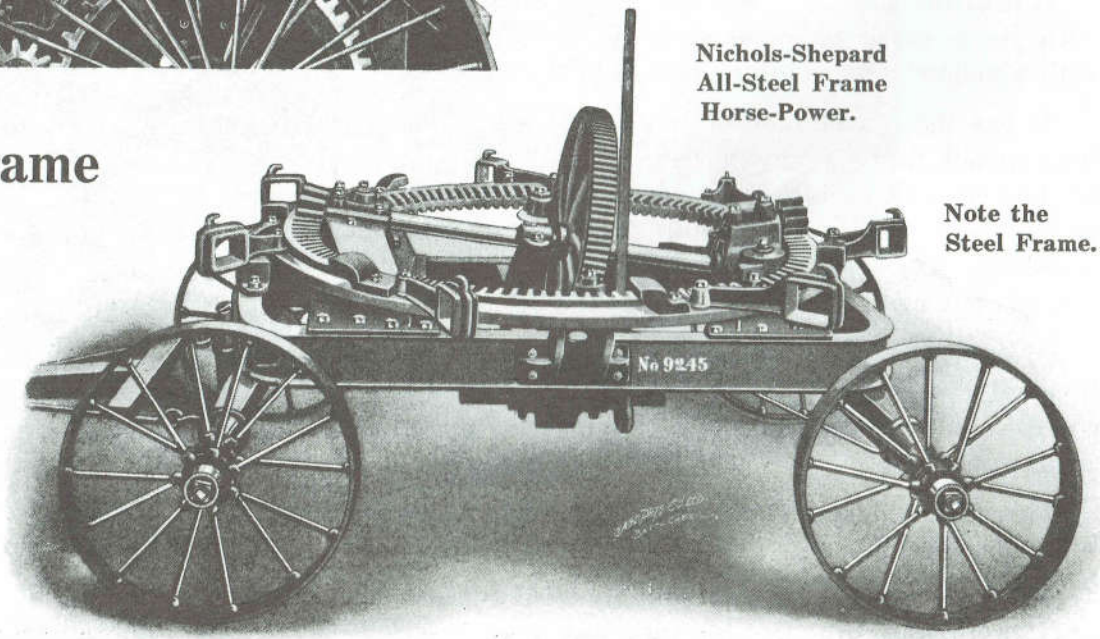
Nichols-Shepard All-Steel Frame Horse-Power

The Nichols-Shepard Horse-Power has an All-Steel Frame that is always in place. When the shafting of the power is once set in line and the gear adjusted in proper mesh, they always stay there.

Neither the weather nor any severe misusage can get the frame or body of this Horse-Power out of place. The shafting and gearing are therefore easily kept in their proper position.

Built in 10, 12 and 14 H. P. sizes.

Nichols-Shepard All-Steel Frame Horse-Power.



Note the Steel Frame.

Gage Service
Battle Creek, Mich.

BRANCH HOUSES

FARGO N. DAK.
BILLINGS. MONT.
WINNIPEG, MANITOBA
MADISON. WIS.
KANSAS CITY. MO.
INDIANAPOLIS, IND.
MINNEAPOLIS. MINN.
REGINA. SASK.
PEORIA. ILL.
DES MOINES. IOWA
NASHVILLE. TENN.
LINCOLN. NEB.

GEO. H. GALLAGHER CO.. SPOKANE. WASH.
NICHOLS-SHEPARD SALES CO.. DALLAS. TEX.
CONSOLIDATED WAGON & MACHINE CO., SALT LAKE CITY. UTAH