

Chicago, N.Y.



MILWAUKEE HARVESTER COMPANY,

INCORPORATED.



MANUFACTURERS OF
HIGH GRADE
GRAIN & GRASS CUTTING
MACHINERY.

MILWAUKEE, WIS. U.S.A.

Exclusive Features Found Only on the Milwaukee Machines.

Raising and Lowering Device, described and illustrated on page	.	.	4
Carrying Spring,	"	"	4
Cables,	"	"	4
Latchless Tilting Lever,	"	"	5
One Lever (latchless) Reel,	"	"	6
Concave Main Wheel,	"	"	8
Adjustable Elevator Throat,	"	"	10
Binder Shift and Lever,	"	"	13
Compression Device,	"	"	14
Needle Trip,	"	"	14
Simple Truck,	"	"	19

Other Features which We Originated and Use,

but which are now being also used in a modified form by our competitors:

Platform Grain Shield,	described and illustrated on page	5
Spring Balanced Reel,	"	6
One Piece Main Frame and Platform,	"	7
Steel Cutter Bar,	"	7
Removable Axle Sleeve,	"	8
Drive Chain Links,	"	8
Self-Aligning Boxes,	"	11
Simple Reel Drive,	"	11
Knotter Attachment,	"	15
Spring Drop Decks,	"	18
Shifting Bundle Carrier,	"	19

Special Features which Make Milwaukee Mowers Unparalleled

Strong frame; large wheels and axle; wide tread; foot lift; simple and convenient levers; carrying spring; four ratchet pawls; pitman protected by drag bar; removable crank shaft box; genuine horizontal crank shaft; lightness of draft; seat springs adjustable to weight of driver.

That "THE MILWAUKEE LEADS"

is clearly shown by the above features and others which are fully illustrated and described in the following pages of this book.

To Our Friends,

The Farmers of the World:

The following pages describe briefly but clearly a few of the many superior qualities of the Milwaukee Binders, Mowers and Reapers.

Twenty-four years ago our predecessors put into the field the **FIRST SUCCESSFUL TWINE BINDER EVER OFFERED TO THE WORLD —THE APPLEBY BINDER.** Twelve years later (in 1888) we built the **FIRST LIGHT STEEL HARVESTER AND BINDER EVER PRODUCED:** a genuine two-horse machine, weighing only 1250 lbs.

THE MILWAUKEE LEADS to-day, as it has in the past, with a line of grain and grass cutting machinery, world-famous for its light draft, perfect operation, durability and mechanical beauty, and all those other desirable and necessary qualities required to make a perfect machine, the results of our generation of experience in field and factory and our constantly maintained system of inspection of all materials used.

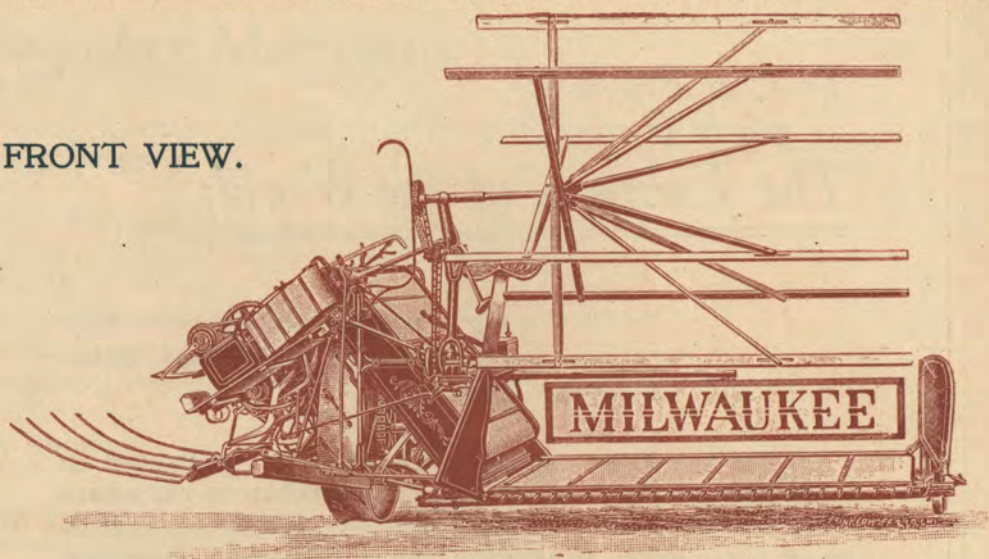
The wonderful success of our machinery and phenomenal increase of our trade is proof positive that the farming community appreciates our efforts.

Having just very materially increased our ground space, we are erecting additional buildings for the purpose of supplying our increasing trade. We ask that before purchasing elsewhere you call upon our agents in your vicinity and inspect our samples.

Milwaukee Harvester Company.

Milwaukee, Wisconsin, U. S. A.

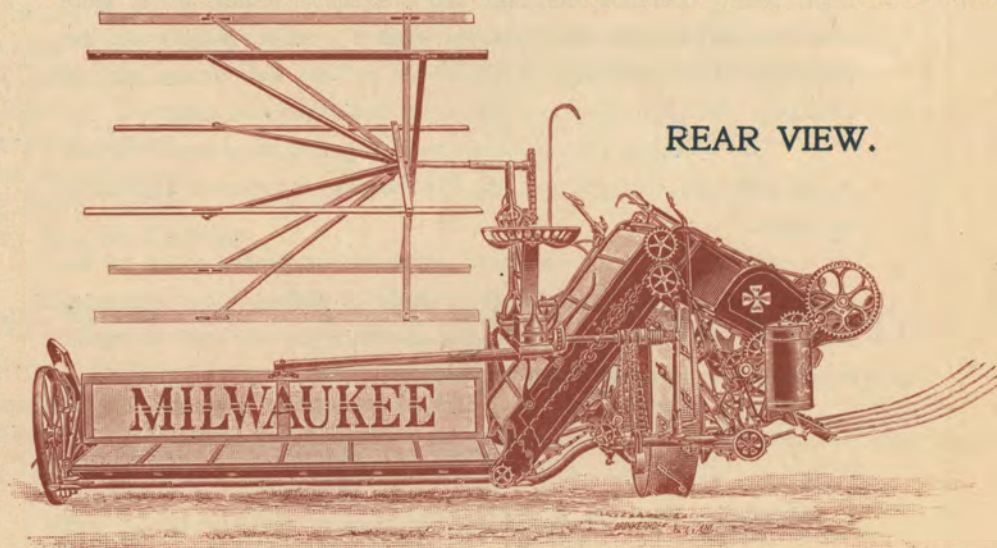
FRONT VIEW.



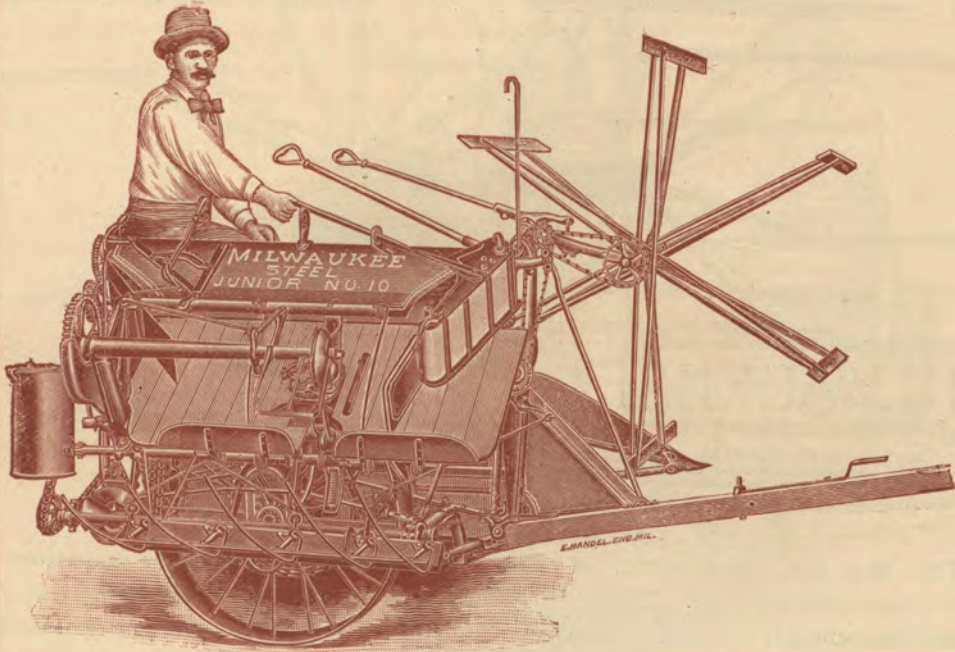
Three widths of platform, 5 ft., 6 ft. and 7 ft.

The 6 ft. machine weighs 1,250 pounds.

REAR VIEW.



Convenience of Levers.



Each machine when built is given a thorough test by electric power, and all parts are brought into proper adjustment for perfect field work. After undergoing a searching inspection, the machine is partly taken down, for convenience in handling and shipping. If put together again in the field exactly as directed in our instruction pamphlet, it will be found ready to handle and bind any and all conditions of grain without further adjustment or expert assistance.

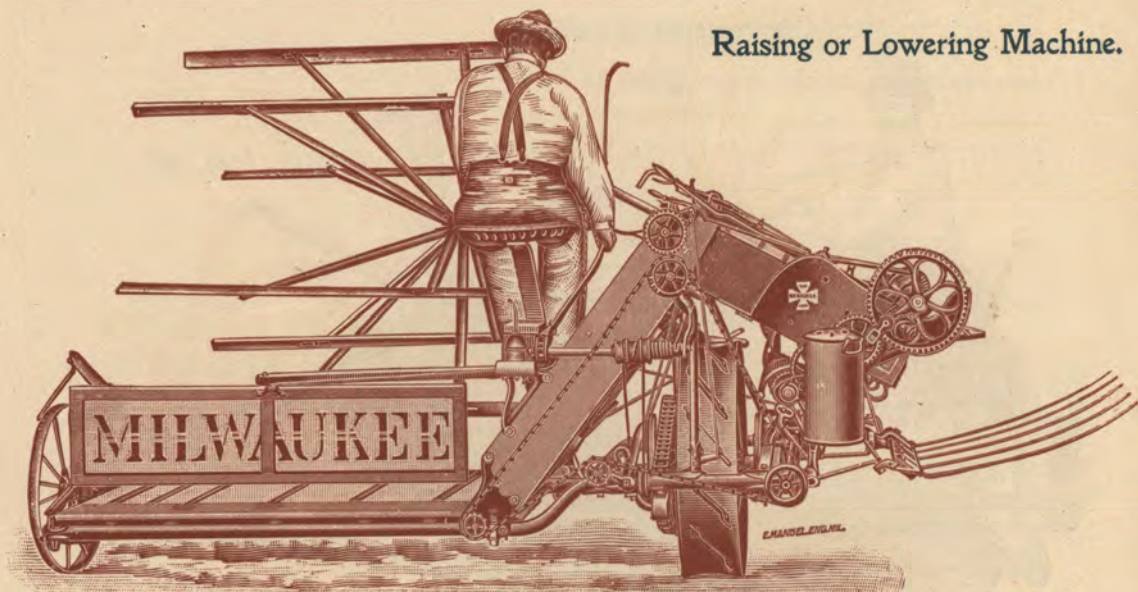
The cut on this page shows the advantageous position of the driver for overseeing all the operations of the machine. It also shows how easily any lever may be reached from the driver's seat, facilitating quick adjustments.

All levers, and parts controlled by levers, are so proportioned and connected that only a slight effort is required to operate them. The binder attachment rests on rollers, and shifts without friction. The sheaf carrier requires no attention, as it shifts automatically with the binder, and is always in position to receive bundles. The reel is spring-balanced, requires little effort in shifting, and cannot fall when released. All other adjustments are likewise designed for easy operation.

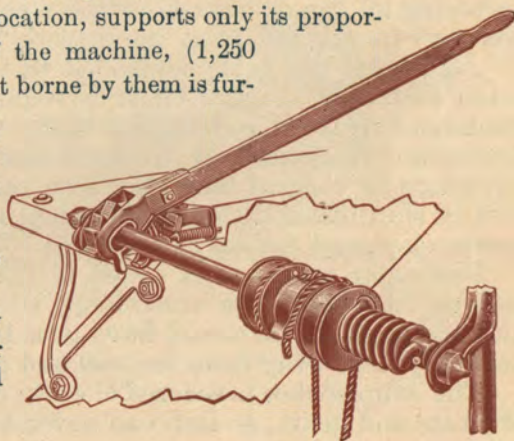
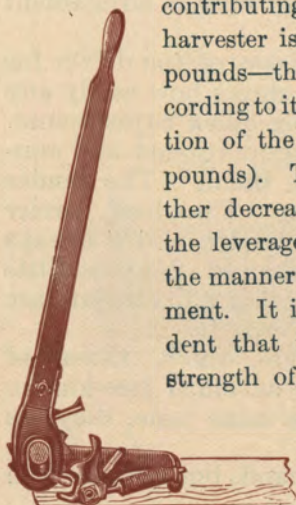
Particular attention is called to the large line guide, which, instead of confining the lines to a small loop, allows the driver as much freedom in handling them as he would have in a buggy. At the same time, they are effectually held away from the reel and gearing.

The whip-socket is secured close to driver's right hand, but remote from sprockets and gears, so lash can never become entangled.

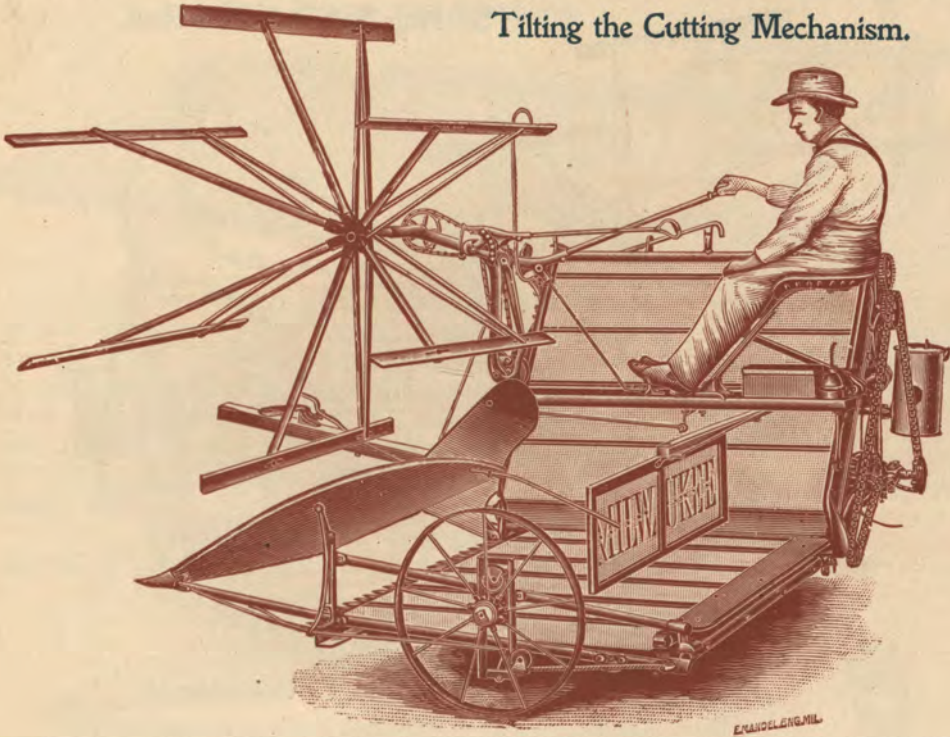
Raising or Lowering Machine.



The *Milwaukee* machine can be raised or lowered—both ends at the same time—with a single latchless lever. This lever is operated by the driver while in his seat on the machine, whether machine is standing or in motion. Thus, an operation, ordinarily so laborious and slow, is made quick and easy, and much is added to the cutting range of the machine. The cut at the left shows lever in position for lowering the machine, and at the right in position for raising it. The latter cut also shows the *Milwaukee* carrying spring and cable drum, by means of which the entire weight of the machine is supported through the cables, relieving it from disastrous shocks, and contributing to the comfort of the driver. The large raising cable on the harvester is guaranteed to withstand a direct tensile strain of over 4,000 pounds—the smaller cable, 3,000 pounds. Each cable, according to its diameter and location, supports only its proportion of the total weight of the machine, (1,250 pounds). The direct weight borne by them is further decreased one-half by the leverage resulting from the manner of their attachment. It is, therefore, evident that the ultimate strength of the *Milwaukee* cables is many times greater than the load they carry.

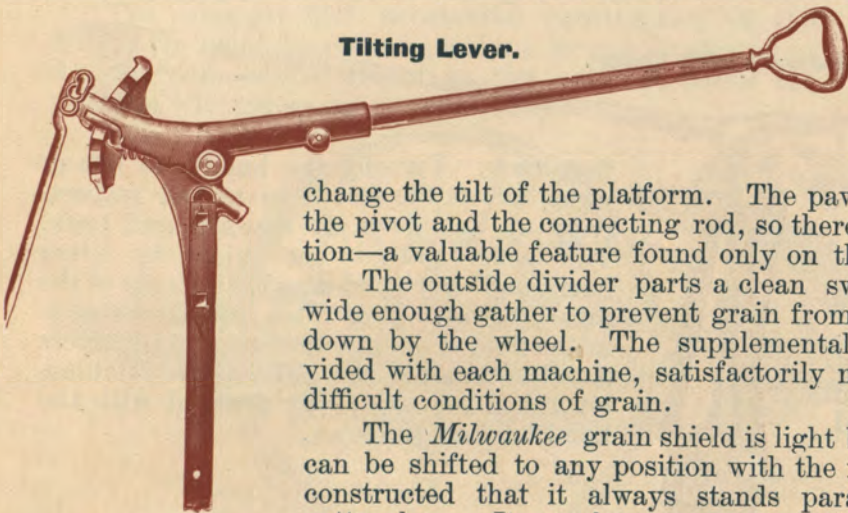


Tilting the Cutting Mechanism.



The latchless tilting lever is composed of a steel and malleable tubular portion, inclosing a steel rod with a crank-shaped end, which is held in engagement with the sector notches by a spring, and is turned out of the

Tilting Lever.



notches by a slight twist of the handle, when the driver desires to

change the tilt of the platform. The pawl lies between the pivot and the connecting rod, so there is no lost motion—a valuable feature found only on the *Milwaukee*.

The outside divider parts a clean swath, and has wide enough gather to prevent grain from being tracked down by the wheel. The supplemental divider, provided with each machine, satisfactorily meets the most difficult conditions of grain.

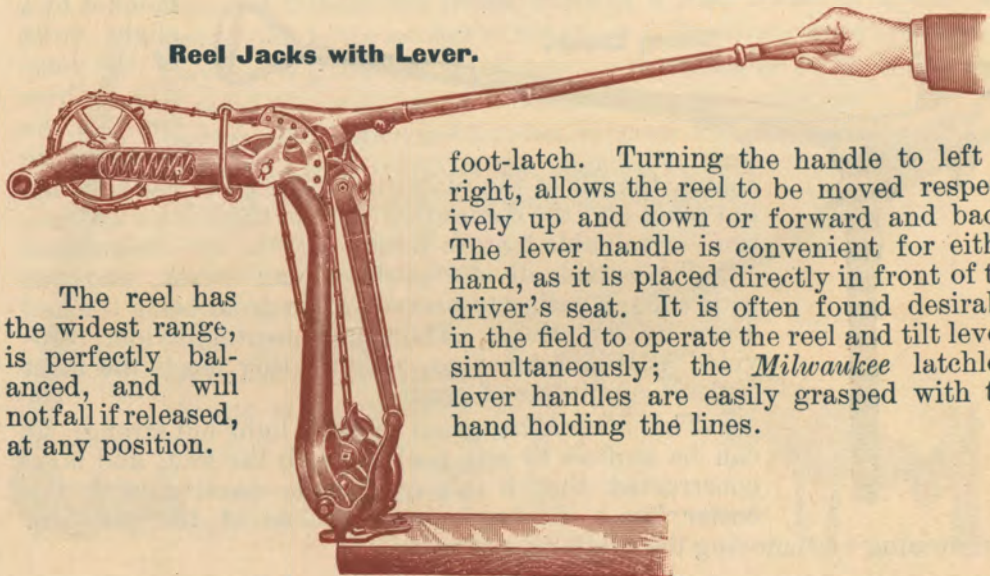
The *Milwaukee* grain shield is light but strong. It can be shifted to any position with the foot, and is so constructed that it always stands parallel with the cutter bar. It can be swung clear of the platform for tightening or removing the platform canvas.

Shifting Self-Balanced Reel.



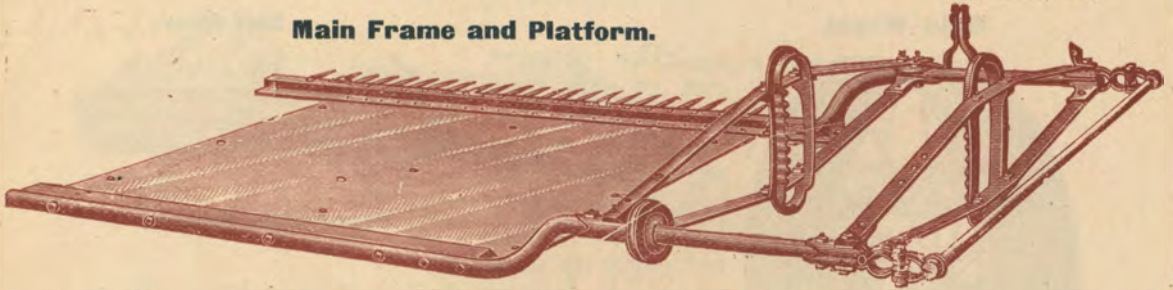
The neatness of the sheaves depends largely upon the position of the reel. The *Milwaukee* reel mechanism is unapproached in its simplicity and effectiveness. A single lever makes all adjustments, without finger-latch or

Reel Jacks with Lever.



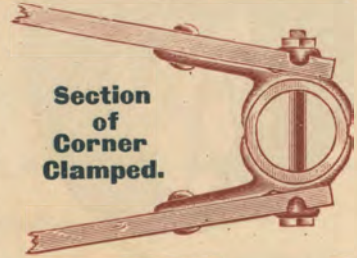
The reel has the widest range, is perfectly balanced, and will not fall if released, at any position.

foot-latch. Turning the handle to left or right, allows the reel to be moved respectively up and down or forward and back. The lever handle is convenient for either hand, as it is placed directly in front of the driver's seat. It is often found desirable in the field to operate the reel and tilt levers simultaneously; the *Milwaukee* latchless lever handles are easily grasped with the hand holding the lines.

Main Frame and Platform.

A notable feature of the *Milwaukee* machine is its substantial and rigid foundation, composed of a jointless tubular sill at the rear, heavy steel trusses on the right, tubular sill and cold-rolled guard-bar in front, and trussed divider frame on the left, the whole being further strengthened by the steel platform with its angle ribs.

The powerful clamping devices, which cannot work loose, connecting the trusses and sills, are shown in cut.



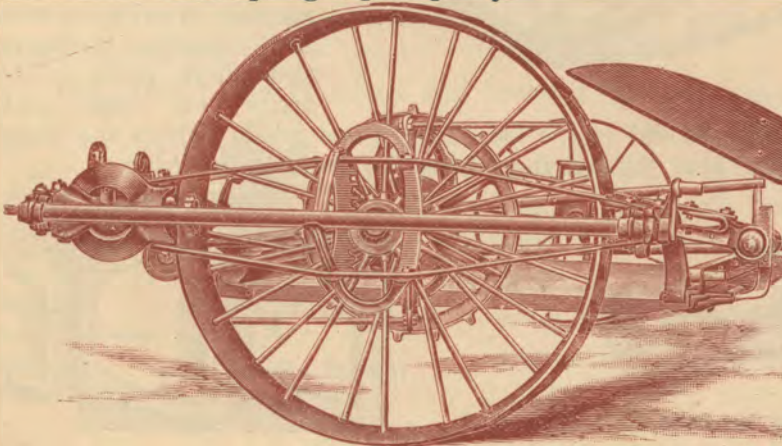
**Section
of
Corner
Clamped.**



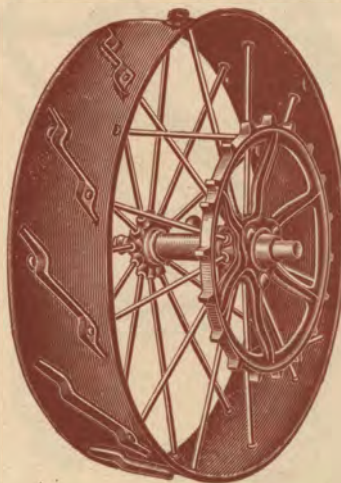
The most important part of a harvesting machine is the cutting apparatus.

The *Milwaukee* guards and clips are securely bolted to a specially-designed Z-steel bar. Points of guards can be tilted to the ground for low cutting.

The compact and substantial construction of the *Milwaukee* main frame and platform is well illustrated in the cut. A man's weight on the outer corner of the platform will not spring it perceptibly.



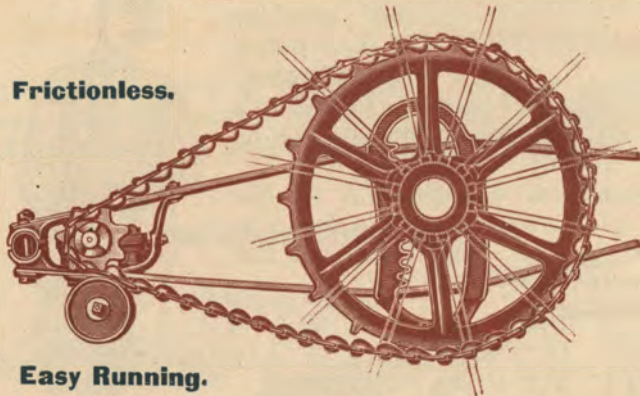
**Testing
Firmness
of
Milwaukee
Frame.**

Main Wheel.

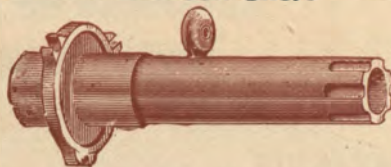
be easily inserted in the machine.

Chain Drive Gearing.

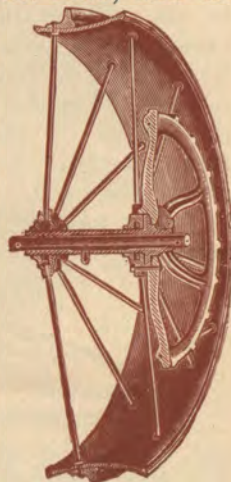
We were the first to see that a flexible driving connection was necessary for field machinery, and intro-

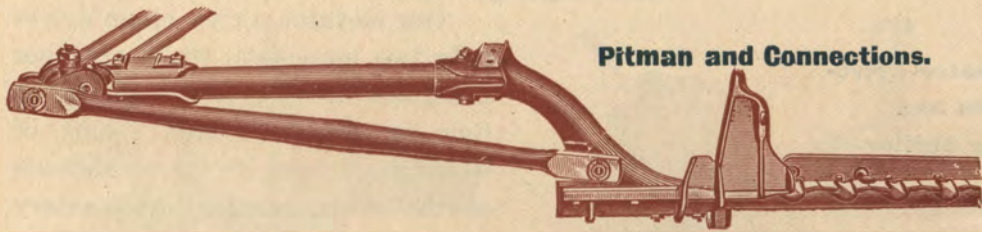
Frictionless.**Easy Running.**

duced the perfect chain-drive. Our chain is of special design, with large bearing surfaces and short pitch. The arrow on each link shows direction chain should run. Our idler wheel guide brings the links positively to the sprockets without increasing the draft of machine.

Short Pitch.**Large Wearing Surface.****Self Oiler.****Removable Sleeve.**

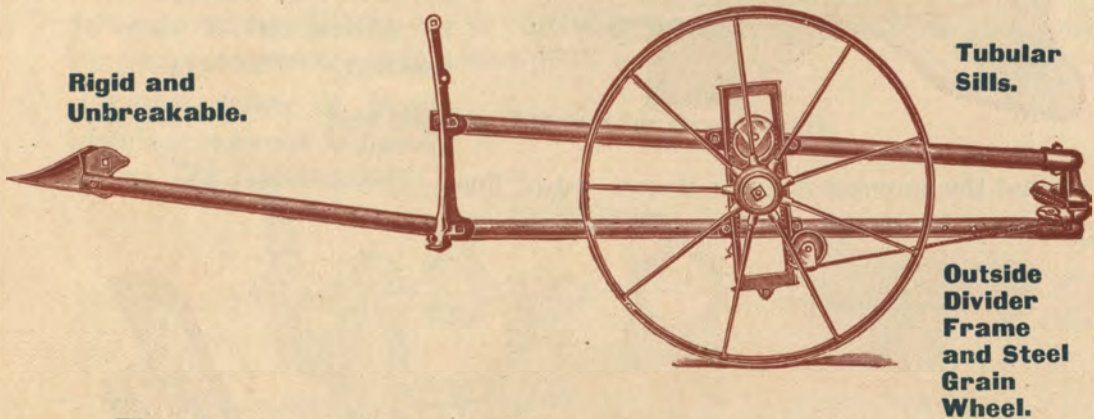
The concave rim of our steel main wheel prevents side-sliding to or from the grain on hilly land, and it does not carry up sand or mud to drop on chain and sprockets. Its recessed lugs travel smoothly on the road, and afford powerful traction in the field. The axle-sleeve is removable, and carries a special oil cup, which can be filled with the wheel in any position and feeds oil gradually to the axle. This driving wheel can

**Sectional View.
Main Wheel.****Chain Link.**

**Pitman and Connections.**

The *Milwaukee* maple pitman is very long, and its thrust nearly level with the knife. The crank-shaft runs in self-aligning bearings, and cannot become cramped. The knife heel is steadily guided by the heavy main shoe.

A very heavy tie-piece is used to connect the main frame and platform at the front.

**Rigid and Unbreakable.****Tubular Sills.****Outside Divider Frame and Steel Grain Wheel.**

The tubular-trussed outside divider frame connects the outer ends of the rear sill and the cutter bar. It is built to withstand the shock of accidental encounters with stumps or stones. It carries the supporting frame for the steel grain wheel.

The grain wheel is raised and lowered by cable connection from the driver's seat simultaneously with the main wheel, with which it is always in line. The grain wheel is provided with a removable sleeve, chilled as hard and smooth as glass, to prevent wear, and carrying a self-oiling device similar to that on the main wheel.

**Chilled Grain Wheel Sleeve—Removable.****Grain Wheel Stud.**

Elevator Drive-Chain and Gear Shifter.

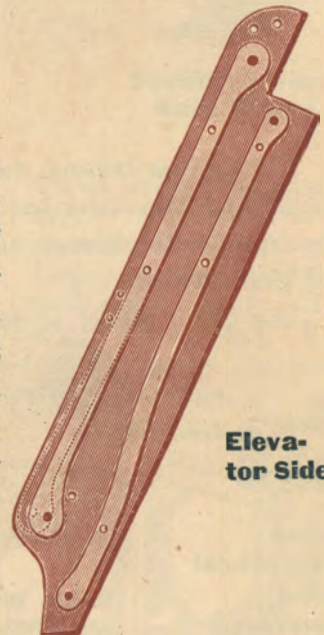


Our elevator drive chain drives only two sprockets, while on other machines the elevator chain drives four or more sprockets, some of which are driven by the wrong side of the chain, causing unnecessary and rapid wear and frequent jumping from the sprockets. The *Milwaukee* chain never winds straw, as the lower sprocket is provided with a protecting flange.

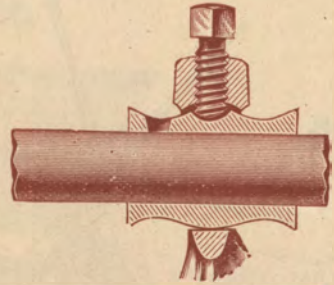
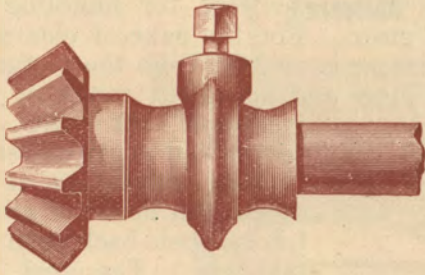
The gear-shifting lever, shown at top of cut, cannot be thrown out of place by accident. The clutch is moved to clutch sprocket, instead of sprocket to clutch,

so that the sprocket is never thrown out of line. This removes the principal cause for cutting and wear of chain and sprockets.

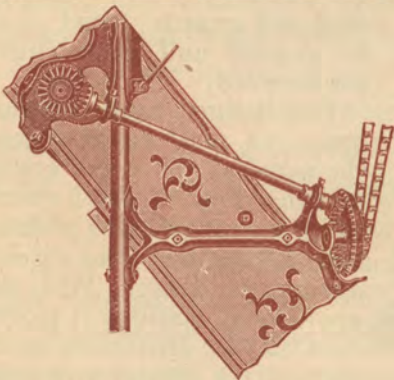
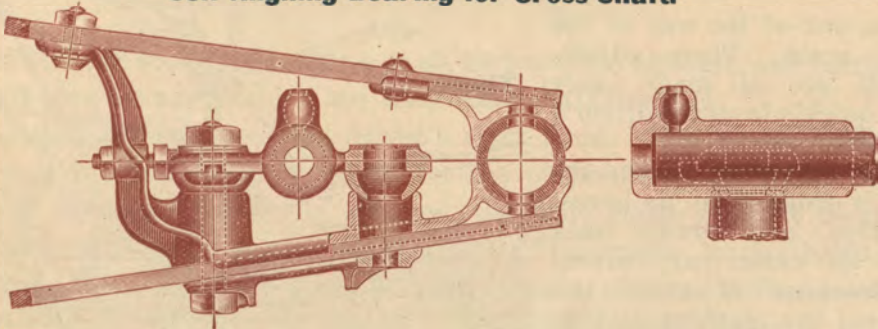
The adjustable throat of our elevator offers a great advantage in heavy or tangled grain. The dotted lines in cut give some idea of the range of adjustability for heavy grain, and show why our elevators do not choke. At the same time, this flexibility causes the elevators to close upon light or short straw and elevate it without waste. This adjustment is entirely automatic, the elevators accommodating themselves instantly to any quantity of grain delivered to them.



Elevator Side.

Self-Aligning Boxes.

We employ very long bearings for all shafts, with self-aligning boxes at all necessary points, examples of which are shown in the cuts. These effectually prevent cramping, and consequent cutting. The cross-shaft and crank-shaft are provided with these self-aligning or swivel boxes, and the power is conveyed from one to the other through accurately designed and simple gearing, running in a dust-proof case.

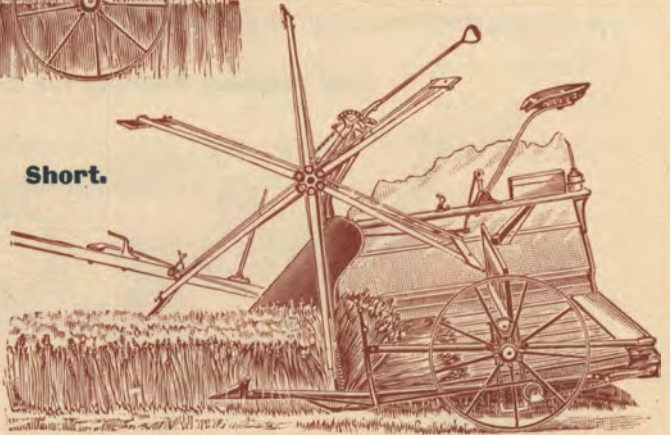
Self Aligning Bearing for Cross Shaft.**Reel Drive.**

The diagonal shaft in our reel-drive mechanism runs in these swivel bearings, transmitting power through an internal gear and sprocket directly to the reel chain. This simple device causes no lost motion and dispenses with worm-gearing, universal joints, etc., used by others for driving the reel.

Tall.

form, out of the way of the long grain. These adjustments are all made easily and quickly from the driver's seat.

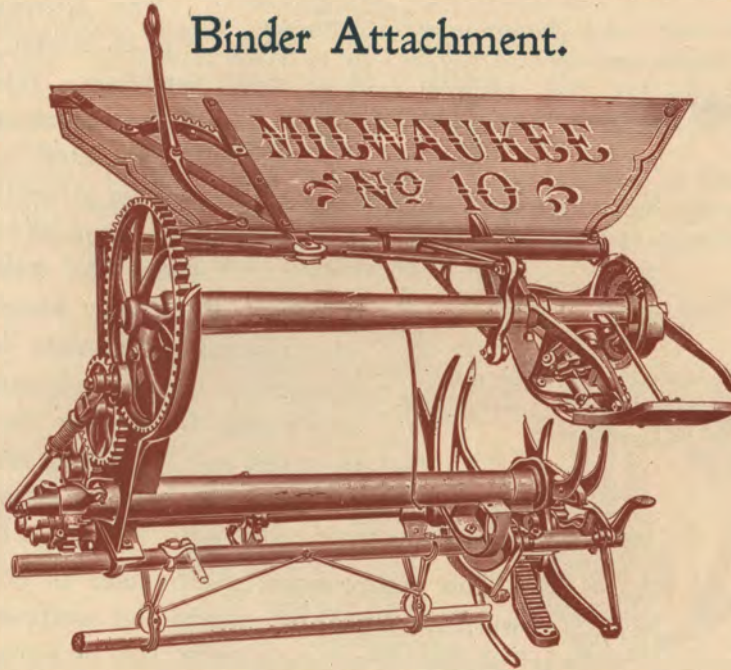
For very short grain the reel is dropped to its lowest position and drawn back over the cutter bar, leaving a clearance of about two inches; the platform is low-

Short.**Tangled.**

ered and guards tilted close to ground and grain shield set forward.

For lodged and tangled grain the platform is placed the same as for short grain, and the reel is set forward at its lowest point to pick up and straighten the grain against the knife. With the above combinations it is evident that the *Milwaukee* gathers in all the grain—no matter what its condition may be.

Binder Attachment.



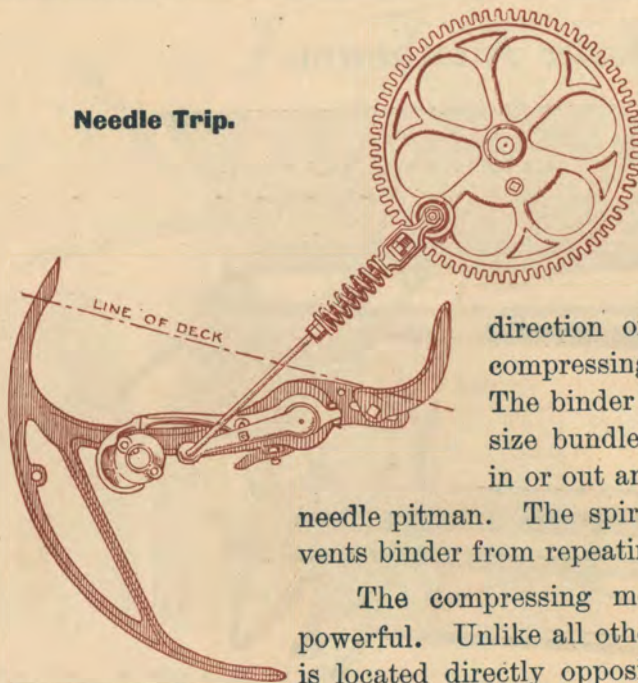
The binding attachment shows in all its parts the strength and lightness and handsome modeling which are *Milwaukee* characteristics.

The shift lever is near the driver's right hand. The binder shifts on rollers, and is therefore easily moved for the purpose of placing the bands in proper position around the sheaves, the wide range of shift insuring satisfactory bundling of any length of grain. The bundle carrier holds the sheaves in plain view of the operator, and a glance at them suffices to show him if the bands are correctly placed. The weight of the binder is so well balanced and distributed upon the frame that its extreme forward position throws no neck-weight upon the horses.

The binder is held in position above the decks by an anti-friction roller on the breast-plate pipe, which avoids a complication of parts below the decks. The driving sprocket is located between the packer boxes, so that there are no overhung bearings to cut out the rear packer box; a more expensive construction, but more positive, and less annoying to operator.

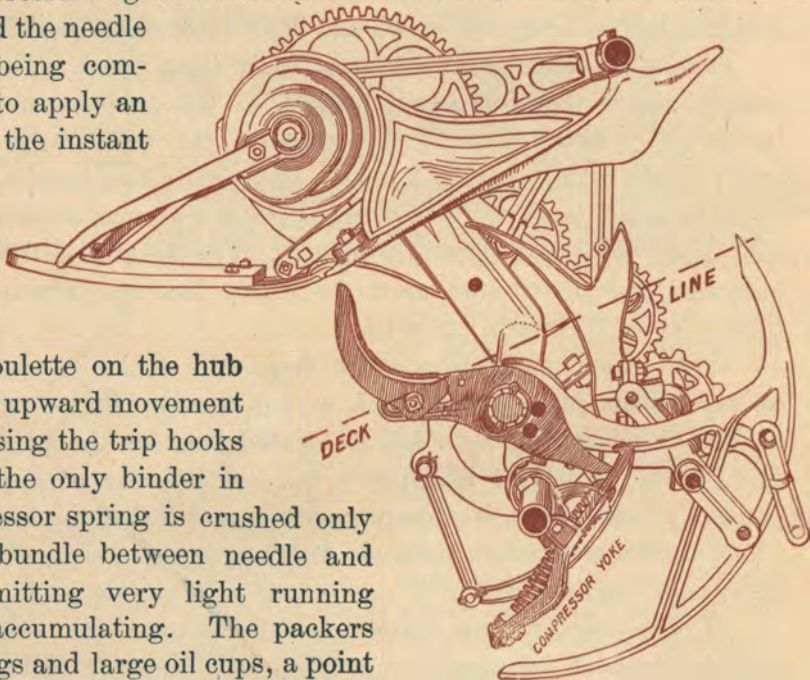
The binder arm is extremely long, enabling operator to center his bands upon any length of grain.

If necessary, to pass through a narrow gate, the stripper board can be quickly removed by unscrewing thumb nut on brace rod and unhooking the board from breast-plate.

Needle Trip.

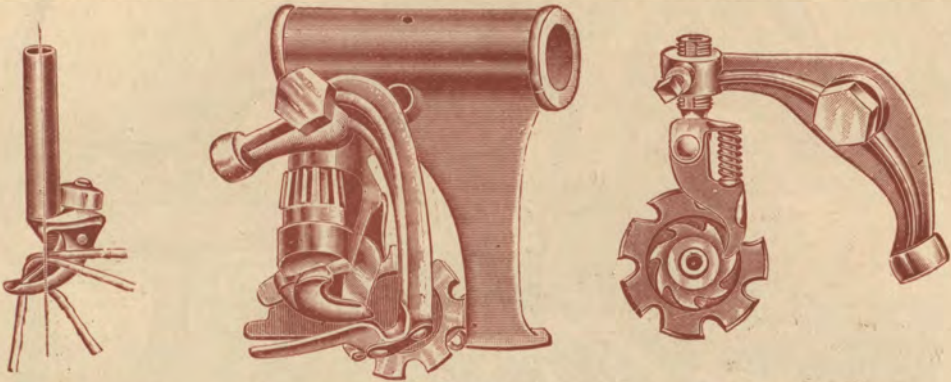
direction of closing, which trips the compressing mechanism into action. The binder is easily adjustable for any size bundle by moving the trip hooks in or out and regulating spring on the needle pitman. The spiral cam on large gear prevents binder from repeating.

The compressing mechanism is compact and powerful. Unlike all others, the compressing spring is located directly opposite the compressor hooks and has a direct pressure against the bundle. The trip hooks are arranged to draw up toward the needle when bundle is being compressed in order to apply an extra pressure at the instant of forming the knot. This is accomplished by means of a cam on the compressor, and a roulette on the hub of the needle, the upward movement of the needle causing the trip hooks to rise. Ours is the only binder in which the compressor spring is crushed only when there is a bundle between needle and compressor, permitting very light running while bundle is accumulating. The packers have large bearings and large oil cups, a point generally neglected on other machines.

**Compressor.**

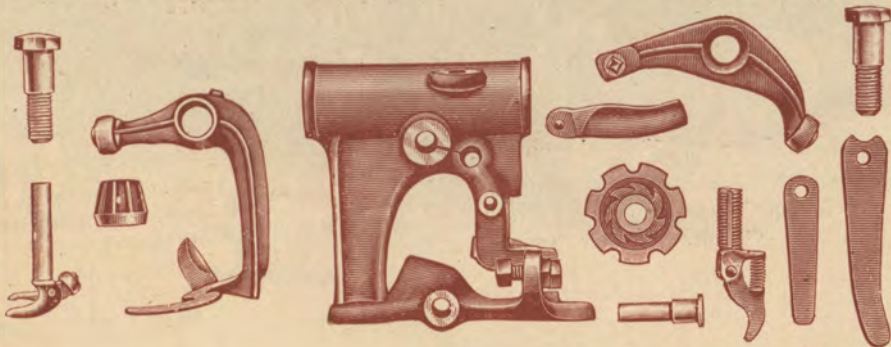
The *Milwaukee* knotter, practically unchanged, has stood the test of twelve harvests. It is composed of as few parts as are consistent with durability and effective work. The knotter is light, but has ample strength where strength is needed. It is solidly made, and therefore accurate—and is compact, but not complicated.

A convincing proof of the superiority of our knotter is the fact that several of our competitors have purchased shop-rights and are now manufacturing it for use on their own binders. This further substantiates our statement that **"THE MILWAUKEE LEADS."**

**Knotting Hook.****Knotter—Complete.****Disk Mechanism.**

The knotting hook is set off-center to pass around the twine when tying, which prevents straining the band, and saves twine. The disk is revolved by a positive mechanism which has little motion and is adjustable for wear.

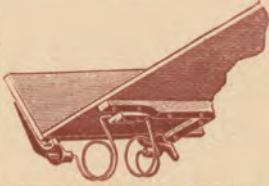
The twine knife is made of the best tempered steel, and can be easily removed for sharpening.

**Knotter—Dissected.**

The above cut shows all the component parts of the *Milwaukee* knotter; there are few pieces, and they are strong and accurately adapted for reliable and durable operation.



The Milwaukee in Operation.



**Binder Deck
Drop Leaves.**

Spring Controlled Drop Decks.

The *Milwaukee* drop-leaves, at ends of decks, are self-acting and positively separate the bound sheaves. They can be instantly depressed for the free passage of tangled grain.

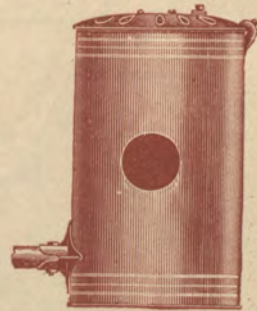


Twine Can.

The twine can is attached to the binder in such manner that it guards the grain in the binder from entanglement with chain or sprockets. A hole in the side toward driver permits him to see the twine ball. The tension device adjusts itself automatically to uneven twine.

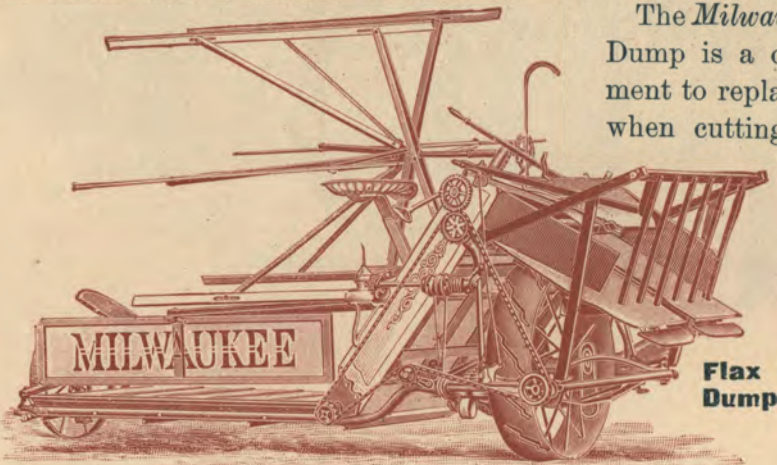


Top View.



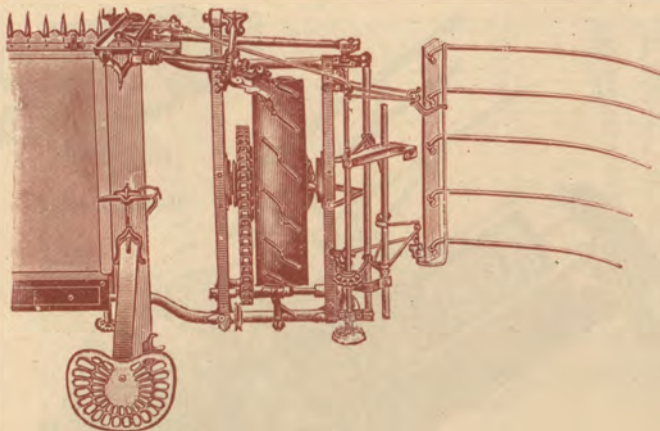
Side View.

Flax and Clover Dump.



**Flax
Dump**

The *Milwaukee* Flax or Clover Dump is a convenient attachment to replace the binder part when cutting crops for seed. It discharges the grain or grass in bunches. This attachment is extra, and is furnished only when ordered.

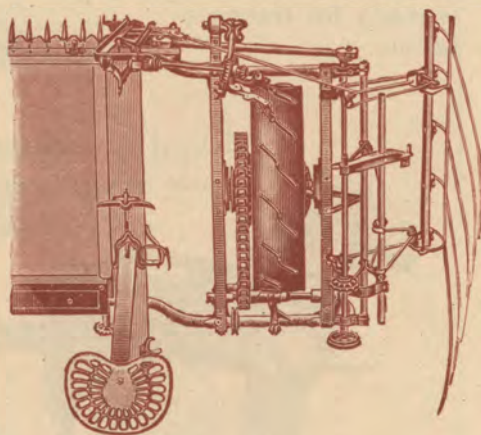
**Receiving.**

shocking easy and quick. Extra, and furnished only when ordered.

The carrier fingers fold backward and downward, swinging the bundles gently to the ground and trailing from under them without loss of kernels of grain. This carrier works equally well on hilly and level land.

Milwaukee Transportation Truck.

The extreme simplicity of our truck is shown in cut. The machine can be mounted upon this truck by one person, without the use of a wrench and

**Dumping.**

without unhitching the team, in a fraction of the time required to place other trucks in position or to fold a jointed platform.

The operation of placing the binder on truck is illustrated in detail on the next page.

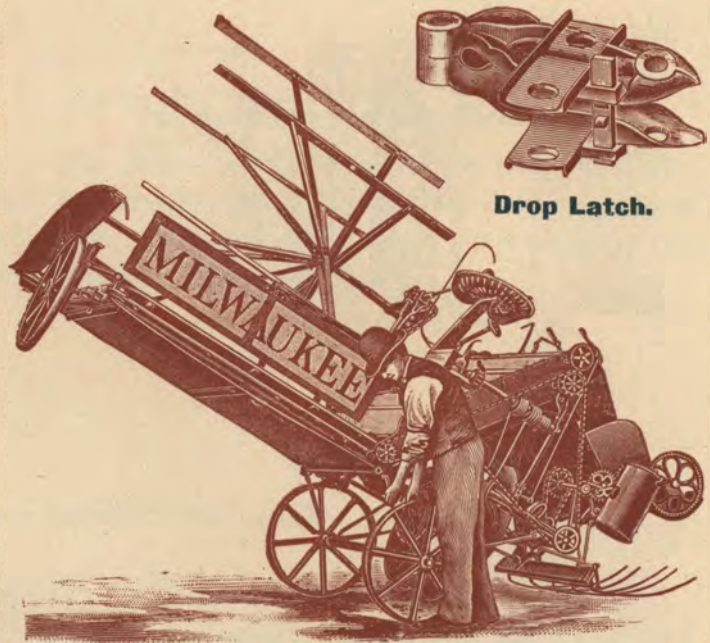
Extra, and furnished only when ordered.

**Binder Truck.**

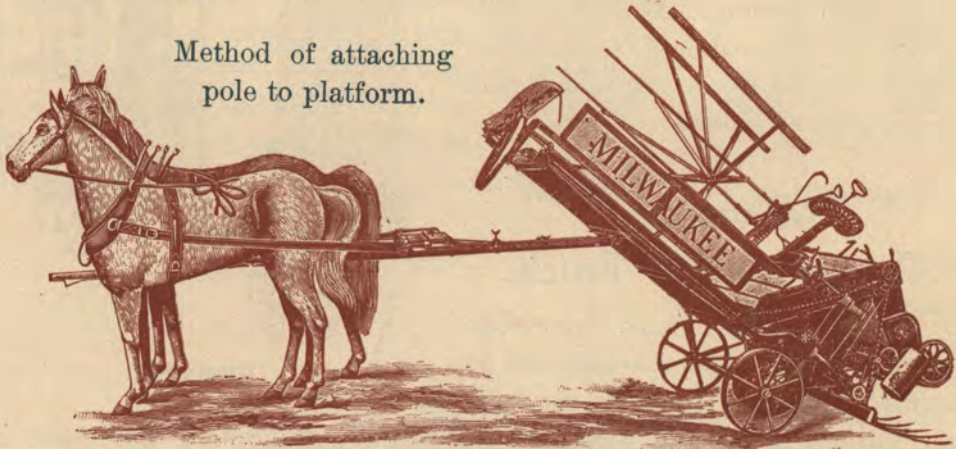
Mounting Truck.

The operator, having raised the machine on its wheels with his lift lever, and having tilted it at the light end and put the truck in position, hooks the truck rods into their proper places upon the main frame of binder, as shown in cut, and secures the hooks with our simple drop-latches.

The pole is then brought round and secured to end of platform, and the machine is ready for transportation.



Method of attaching
pole to platform.



Perfectly
Balanced.



Machine
loaded
on truck.



Mower in Operation.

The Milwaukee Chain Drive Mowers.

In these mowers are embodied all the elements necessary to the production of a perfect grass-cutter. Like the *Milwaukee* binders, they are a combination of strength, easy operation, lightness and graceful outlines.

The mower trucks are made in three sizes, to carry bars for five widths of cut— $3\frac{1}{2}$ ft., $4\frac{1}{2}$ ft., 5 ft., 6 ft. and 7 ft. The general size and strength of the trucks, and the speed of the crank wheels, are carefully adapted to the swath widths.

*Milwaukee No. 6 Mower.
For Heavy Work.*



The frame, being cast in one piece, is strong and rigid, and holds the mechanism in perfect and permanent alignment. There are no parts to work loose.

The wheels are large with well lagged, wide rims, and will not slip on any condition of soil. They are connected by an unusually large axle, made of cold rolled steel. The seat spring is easily adjustable to prevent neck weight. The levers are like all *Milwaukee* levers—simple, convenient and easily operated.

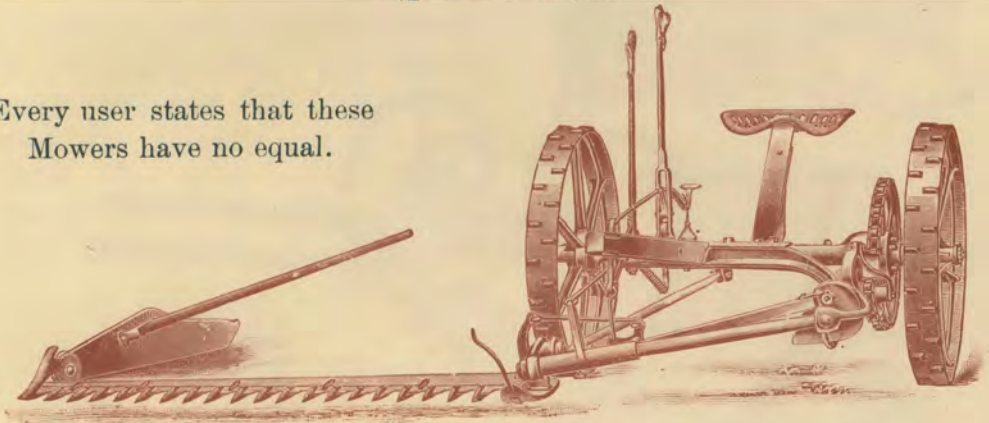
The chain-drive permits the use of a genuine horizontal crank-shaft, avoiding absolutely all side motion of the pitman connection.

The Milwaukee No. 6 Mower, shown on this page, is a big machine built for heavy work, and it will carry a 7 ft. bar through the heaviest cutting.

Milwaukee No. 5 Mower.

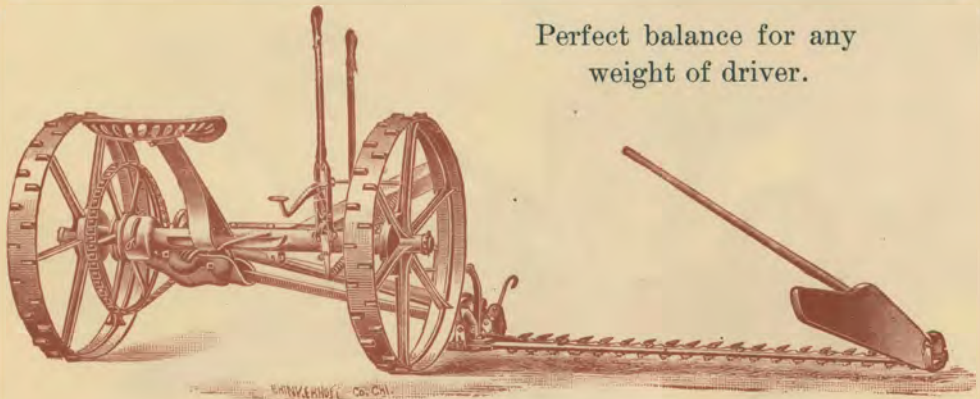
4½ and 5 ft. Cut.

Every user states that these
Mowers have no equal.



No. 5. Front View.

This is our medium-size mower—the most popular machine for ordinary cutting. It is modeled like the No. 6 mower, but is somewhat smaller and lighter. It has ample capacity for a full 5 ft. swath.

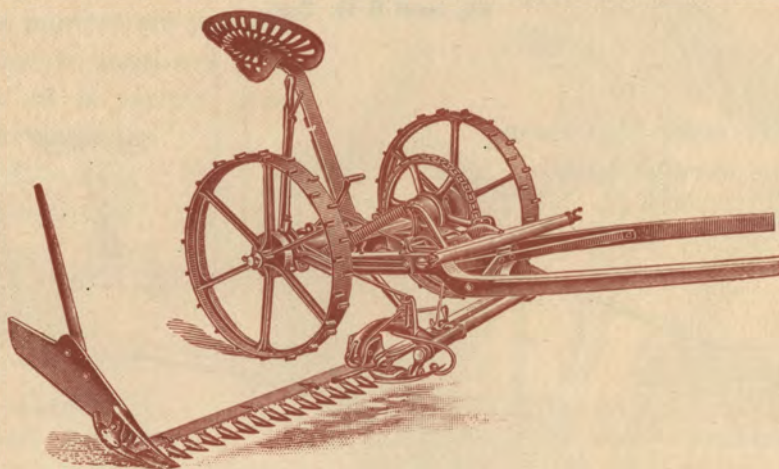


Perfect balance for any
weight of driver.

No. 5. Rear View.

Milwaukee No. 3 Mower.

3½ ft. Cut.



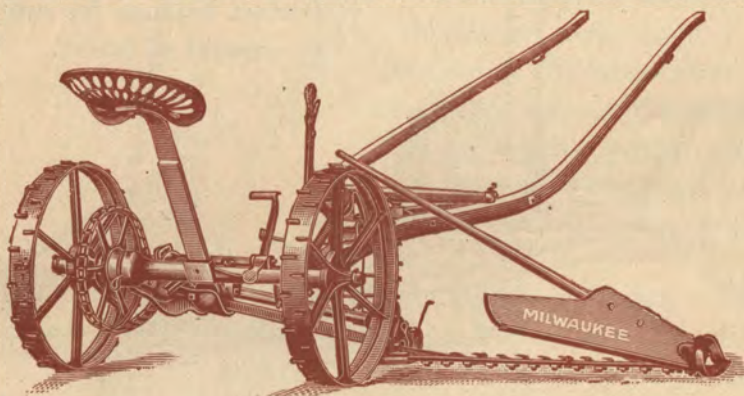
Front View—No. 3 Mower.

Our No. 3 Mower is modeled upon the lines that have proved so successful and popular in our larger machines, but it is lighter and is adapted to be drawn by one horse.

On account of the short cutter bar, we have been enabled to dispense with the hand lever for raising cutter bar, a simple, self-locking foot-lever taking its place. The tilt is controlled by a hand lever.

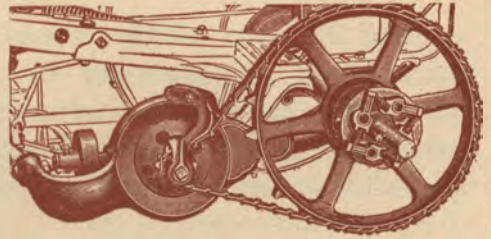
The thills are so placed that the horse can walk close to the standing grass, following the path made by the swather.

This is a very light, compact and durable mower, and will meet the demands of many who have not enough work for a larger mower. It will save the grass in many difficult places where a longer bar cannot be used.



Rear View—No. 3 Mower.

The *Milwaukee* Mower, like the Binder, is driven by a chain instead of cog gears, reducing the number of bearings, and causing the mowers to run more quietly, with greater power and less wear. The chain runs with a guide, adjustable for slack. The power is communicated through a bevel gear directly to the crank-shaft pinion. The latter is large, with reinforced, wide teeth which will not strip.



Complete Gearing.

The gear-shifter handle on main axle can be operated by driver's hand or foot.



**Crank
Shaft
Pinion.**

Bevel Gear.



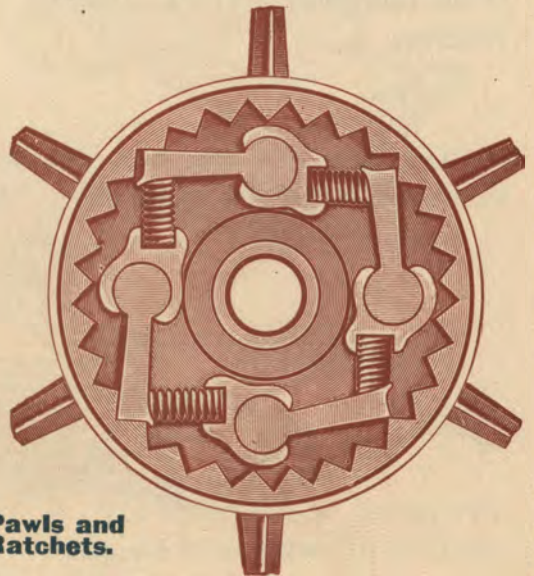
**Removable
Crank Shaft Box.**

The crank-shaft runs in long bearings in an easily-removable box. The shaft has a bearing on both sides of the pinion, which prevents twisting strain.



Gear Shifter.

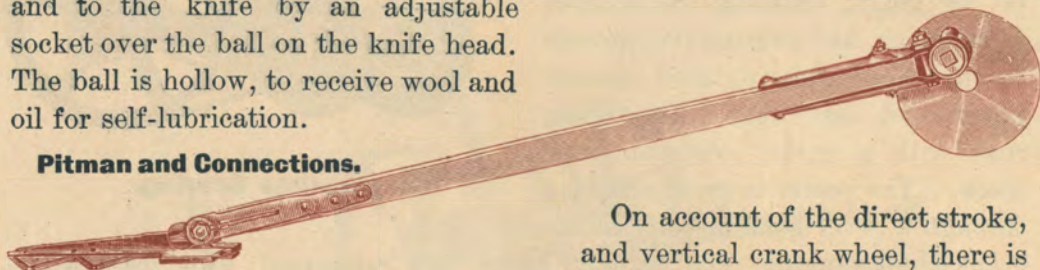
The *Milwaukee* clutch has more teeth, and the wheels more pawls, than can be found on other mowers. The pawls are so arranged that one is always engaged, which insures the knife moving instantly when the mower starts ahead. This prevents clogging.



**Pawls and
Ratchets.**

The *Milwaukee* pitman is made of selected hickory, and is very long. It is attached to the wrist-pin box by an adjustable cone-bearing connection, and to the knife by an adjustable socket over the ball on the knife head. The ball is hollow, to receive wool and oil for self-lubrication.

Pitman and Connections.



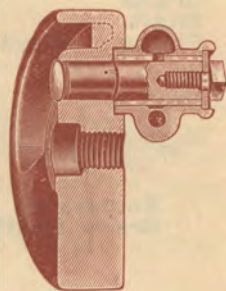
On account of the direct stroke, and vertical crank wheel, there is no wobble at either end of pitman.

The wrist-pin is cold-rolled steel. It provides a long bearing for the light malleable pitman-box with its hard brass bushing. The bushing can turn on the pin or in the box, making essentially a double bearing. The



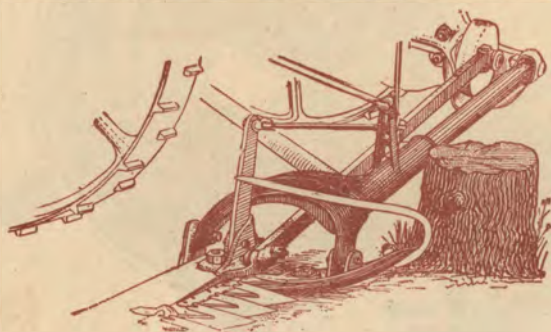
Knife Head.

pitman-box has a very large oil chamber, shown in section in the cut, so constructed that oil is forced to the bearing and cannot be thrown out of chamber when rotating.



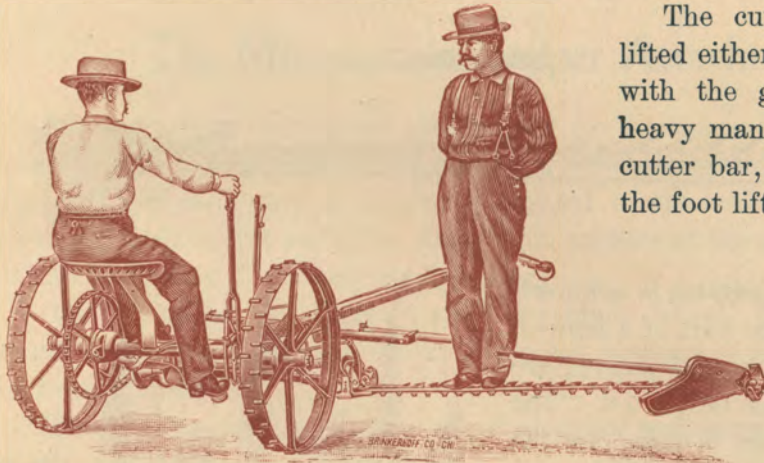
Crank Wheel.

Our large steel drag bar, with its self-adjusting end connections, yields to movements of the main shoe. It positively holds the cutter-bar in



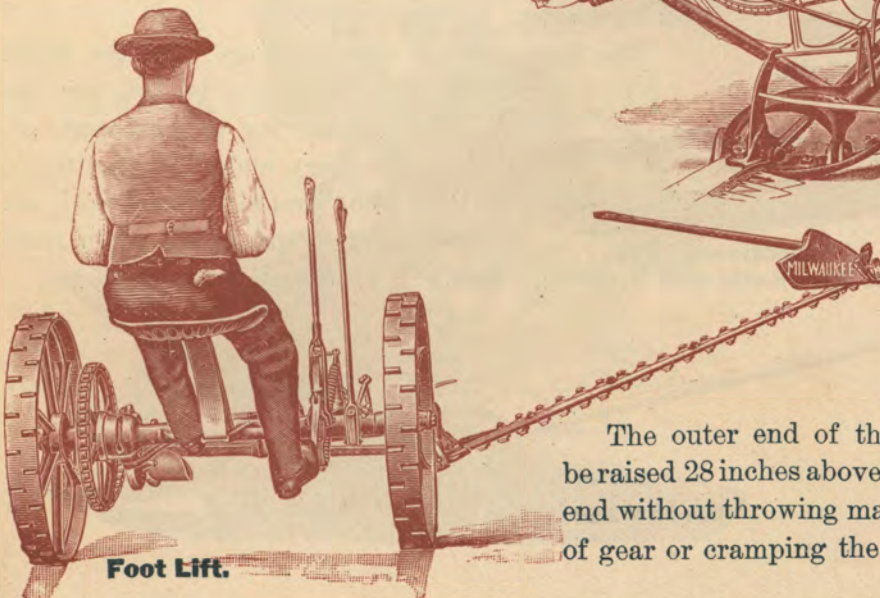
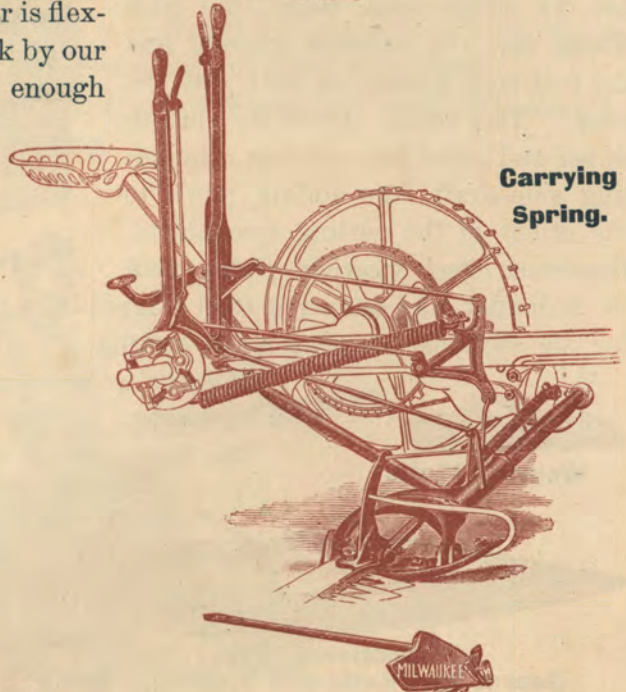
Drag Bar.

line with pitman. We consider it better to make a very strong, durable, well-designed drag-bar, than to provide a complicated adjustment for taking up the wear and lost motion of a flimsily constructed bar. Our drag-bar is located in front of the pitman, protecting it and the pitman connections from all obstructions.

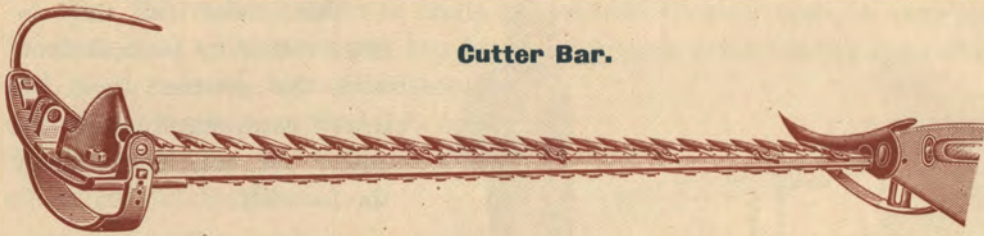


The cutter bar may be lifted either by hand or foot, with the greatest ease. A heavy man, standing on the cutter bar, can be raised by the foot lift.

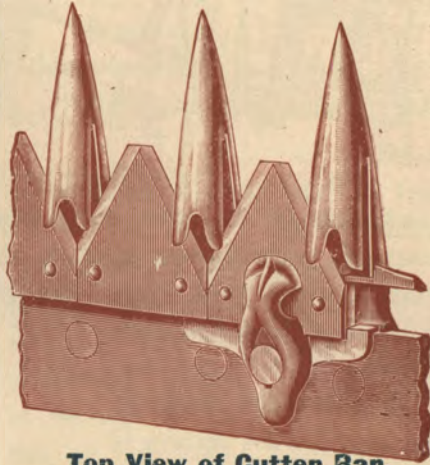
The weight of the cutter bar is flexibly carried on the mower truck by our carrying spring, with just enough ground friction to enable both ends of the bar to follow any surface, however inclined. The traction of the mower is thus increased, while no additional neck-weight is caused by lifting bar from the ground.



The outer end of the bar can be raised 28 inches above the inner end without throwing machine out of gear or cramping the pitman.

**Cutter Bar.**

The cutting apparatus is acknowledged to be the vital part of a mower. The *Milwaukee* bars and knives are the best that can be made. The guards and clips are secured to the bar by countersunk bolts, the nuts fitting into the recessed guards, and the bolt ends ground off flush with the nuts. This forms absolutely smooth upper and lower bar surfaces, eliminating side draft, and adding much to the utility of the cutting mechanism. Hardened steel wearing plates hold the knife flat, and tempered steel ledger plates afford a durable shear contact for the sections, insuring clean cutting.

**Top View of Cutter Bar.****Wearing Plate.**

The steel subsoles at each end of bar are adjustable in height.

**Sectional View—
Guard, Bar, Knife and Wearing Plate.**

The shape of the swather board, and the angle at which it is set, are designed for the greatest efficiency under all conditions. The swather board will not catch and break when team is backed.

**Swather Board.**

The Milwaukee Dropper Attachment.

This is a very convenient attachment for cutting grain with a mower and dropping it in gavels. The cutter-bar and grain-basket are carried on wheels. The steel outside divider is pivoted to the end casting in such a manner that it is free to follow the uneven surface of the ground, a valuable feature in cutting down and tangled grain.

The operator sits directly over the inner wheel, throwing no extra weight on horses' necks, and is in a correct position to handle the grain to the best advantage.

The bar can be raised and lowered at either end so as to cut any desired length of stubble.

The dropper basket or platform is operated by a steel foot lever, which is held in position by the foot and released when gavel is dropped.

The grain is kept out of the inner mower wheel by a long, wide fender, supported by the foot-support casting.

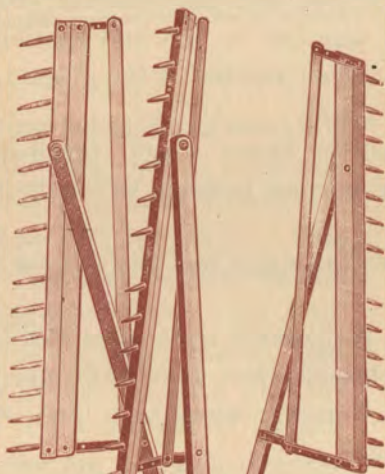


Dropper Attachment.

The Milwaukee Reaper.

Our Five Rakes.

With four rakes, high speed is necessary, resulting in bad delivery. Our FIVE rakes travel slowly and deliver gavels in superior shape.

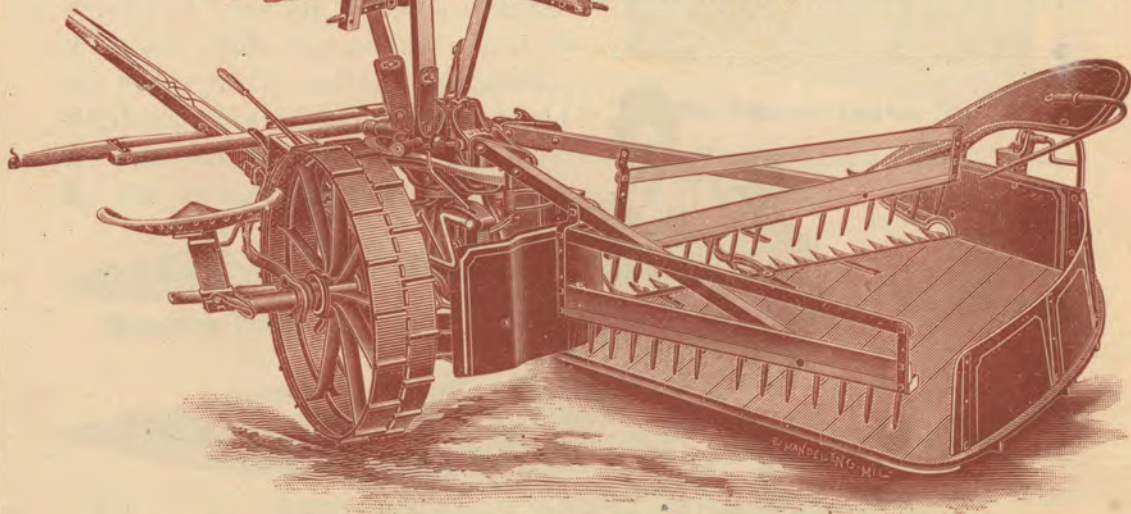


The rakes fall so as to pick up tangled grain before it is cut—an essential feature in saving grain that leans away from the platform. They rise after passing well behind the knife, which prevents short grain from sliding back and being cut again.

Dividers.

You handle long, tangled grain with ease with our high and long dividers.

The inside divider can be taken off for folding platform by simply removing one thumb nut.



Platform.

The platform is heavily timbered, strong and rigid. The cutter bar is formed of angle steel, with steel wearing strips for the knife. The raising and lowering device at both ends of the machine consists of bevel gears and threaded connecting rods operated by convenient cranks. A child can raise or lower it. The tilting device is strong, rigid, and easily adjusted by a convenient lever. The platform is easily and quickly folded for transportation, without disconnecting pitman, by our peculiarly constructed ball joint. The seat and foot rest may also be folded.

Rake Control.

A conspicuous feature—it is simple, effective. Shielded from dust and dirt. Frictionless, durable. Regulated by convenient hand latch. With latch in notch No. 1, every rake will rake off a gavel; in notch No. 2, every second rake; No. 3, every third; No. 4, every fourth; No. 5, every fifth; No. 6, every sixth rake; and placed at No. 0, the rakes all act as beaters only, and allow the grain to accumulate on the platform. The rakes can be controlled by the foot lever, independently of the automatic control, by pressing down lever and releasing it whenever it is desired to rake off a bundle. Thus, any desired interval can be obtained.

Rake Control.



Features of Our Rake Construction.



Our rake heads have removable boards, which are used only to meet certain conditions, such as tangled grain. At other times, the heads are open, offering no resistance to the wind.

A broken rake tooth may be quickly replaced by driving out the old stub, as the hole is bored entirely through the head. On other reapers it is necessary to drill out the stub, requiring much time and trouble.

**Rake
Arm
Casting.**

The rake arms can be put on correctly by anybody, as either side up is right side up. They are adjustable, and can be set close to platform or with clearance.

The rake arm casting, with friction roller, is constructed in a manner peculiar to the Milwaukee. The pivot stud is clamped with two bolts in the casting, has a bearing on each side, gives more leverage and makes a substan-

tial, solid coupling. The friction roller is larger and has more wearing surface than those of our competitors.

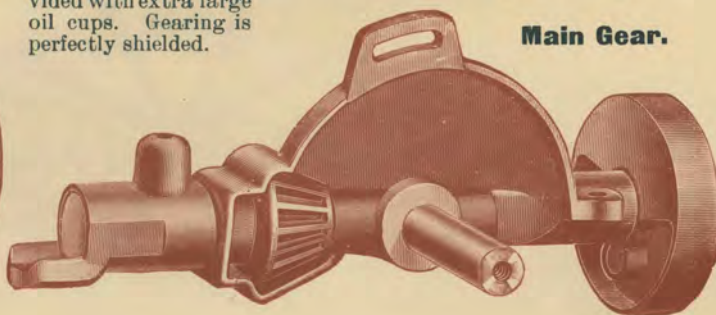
Main Gear.

Is separate from the main frame, and can be repaired separately. Strong bevel gears give steady motion to rakes. The machine can be thrown out of gear by a touch of the foot upon either of the three prongs at the hub of the main wheel, one of which is always in reach; pushing a prong in opposite direction throws machine in gear. Our shafts are large and long. Provided with extra large oil cups. Gearing is perfectly shielded.

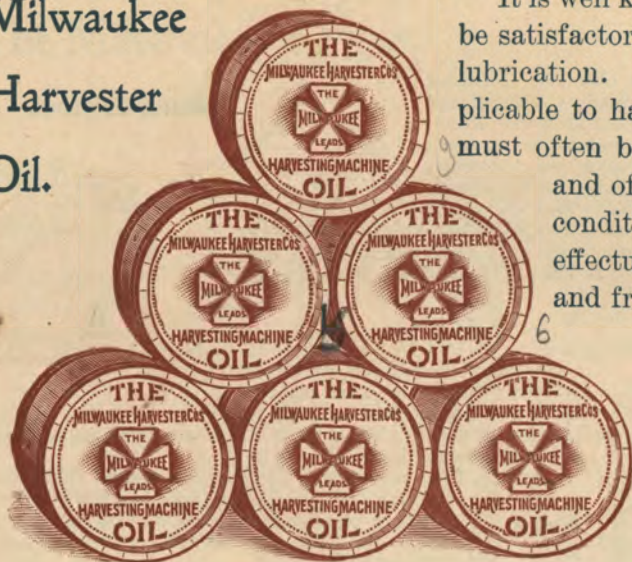
Bevel Gear.



Main Gear.



Milwaukee Harvester Oil.



It is well known that no machinery can be satisfactorily operated without proper lubrication. This fact is particularly applicable to harvesting machinery, which must often be run in extremes of heat and of dry weather. Under such conditions, common oil fails to effectually reduce the friction—and friction means more work for the horses, and shorter life for the machines. The oil generally offered for farming machinery is little better than kerosene; running off the bearings like water.

Milwaukee Harvester Oil is the best lubricant to have in the field, because it is compounded especially for use on agricultural machinery. It is strictly high grade, and is the result of a series of carefully conducted tests in our laboratory and in the field. Among its good qualities are: freedom from grit and impurities, requisite fluidity, and the property of maintaining smooth, cool bearings wherever applied.

To harvest your crops quickly and satisfactorily, buy the light-running Milwaukee machines, and lubricate them with the best oil.

Milwaukee Harvester Oil can be obtained at any of our agencies in barrel and half-barrel lots, and bears our trade mark.



The Milwaukee Harvester Company's Branch Offices

AND

DISTRIBUTING POINTS FOR MACHINES AND REPAIRS.

Chicago, Ill.	Columbus, O.	Cleveland, O.
Cedar Rapids, Ia.	Des Moines, Ia.	Fond du Lac, Wis.
Fargo, N. D.	Harrisburg, Pa.	Indianapolis, Ind.
Jackson, Mich.	Kansas City, Mo.	Madison, Wis.
Minneapolis, Minn.	Nashville, Tenn.	Omaha, Neb.
Peoria, Ill.	St. Louis, Mo.	

Alton, Ill.	Baltimore, Md.	Burlington, Ia.
Buffalo, N. Y.	Chillicothe, Mo.	Clinton, Ia.
Crookston, Minn.	Cincinnati, O.	Creston, Ia.
Charles City, Ia.	Charleston, Mo.	Dallas, Texas.
Dubuque, Ia.	Decatur, Ill.	Eldorado, Ill.
Elmira, N. Y.	Evansville, Ind.	Ft. Wayne, Ind.
Fleetwood, Pa.	Ft. Dodge, Ia.	Henderson, Ky.
Hannibal, Mo.	Kalamazoo, Mich.	Louisville, Ky.
Muscatine, Ia.	Marshalltown, Ia.	Mason City, Ia.
New Hampton, Ia.	Portland, Oregon.	Paducah, Ky.
Pittsburg, Pa.	Quincy, Ill.	Rochester, N. Y.
San Francisco, Cal.	St. Joseph, Mo.	Sioux Falls, S. D.
Sioux City, Ia.	Union City, Tenn.	Vincennes, Ind.
Watertown, N. Y.	West Detroit, Mich.	

FOREIGN.

Hamburg, Germany.	Berlin, Germany.	Danzig, Germany.
Koenigsberg, Germany.	Kiel, Germany.	London, England.
Liverpool, England.	Havre, France.	Norrköping, Sweden.
Moscow, Russia.	Gjovik, Norway.	Helsingfors, Finland.
Buenos Aires, So. Am.	Montevideo, So. Am.	Sydney, N. S. W., Aus.

Miss Maud Mauden C.M. Greenfield Tenn.

Miss

