

1893.

CANVASSERS'
PICTURE BOOK

SHOWING THE MECHANICAL PRINCIPLES

OF THE

DEERING

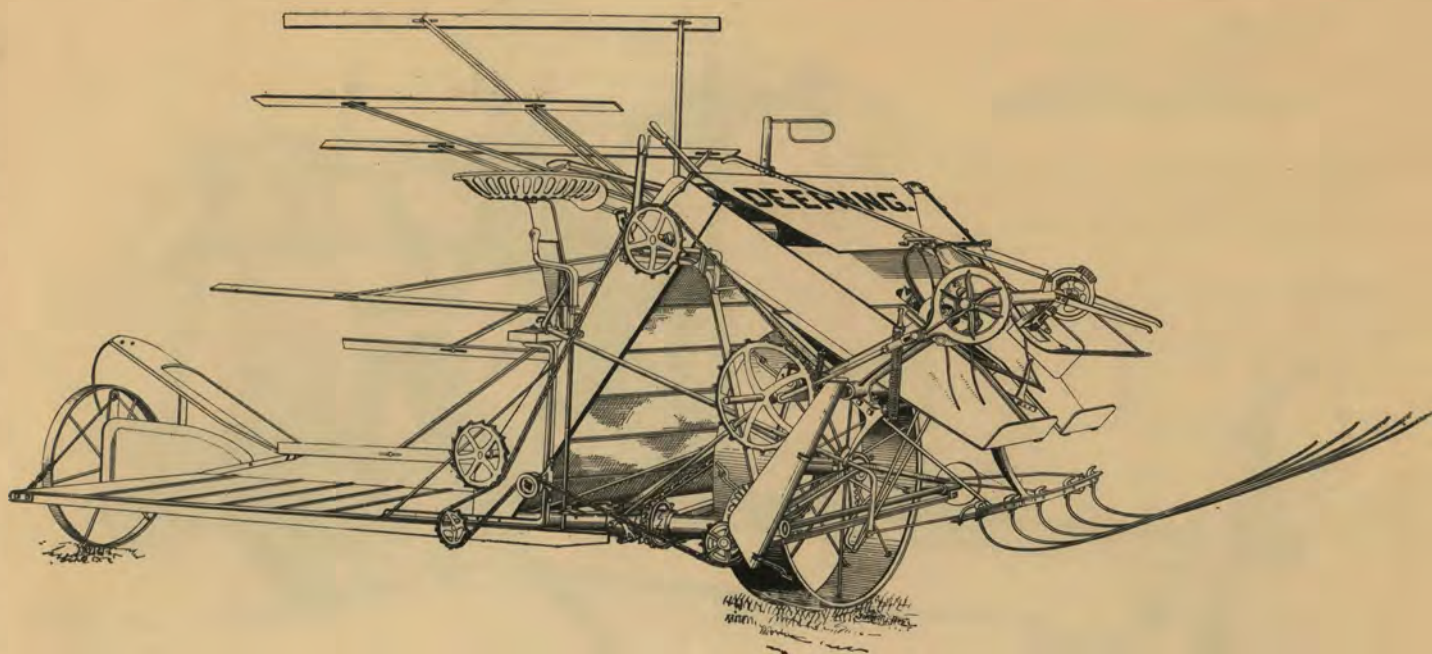
Improved Steel Binder

WM. DEERING & CO.

CHICAGO.

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THE DEERING IMPROVED STEEL BINDER

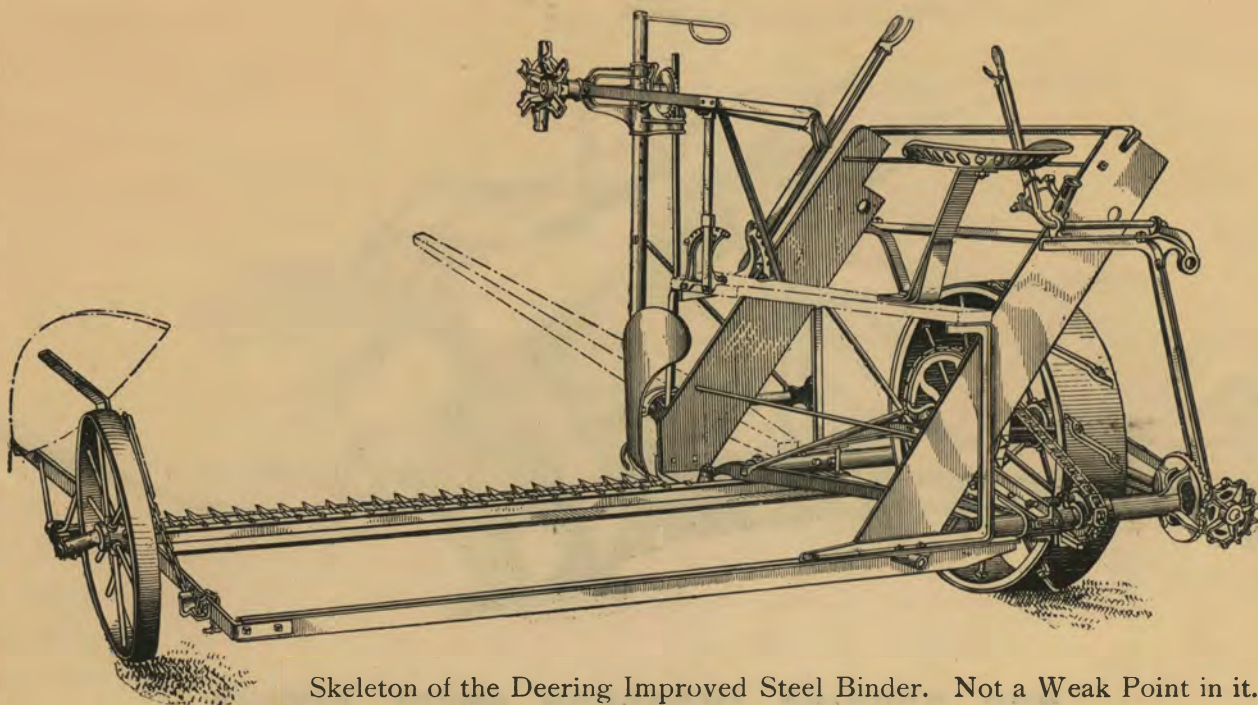
For the season of 1893, Wm. Deering & Co. present to the farmers of the world the above machine. It embodies all the excellent features of the Junior Steel Binder, to which are added several marked improvements which will be appreciated by farmers the world over. Notable among these are

I. SHEET STEEL DECKS.—Steel is stronger than wood in proportion to its weight. For this reason Wm. Deering & Co. have discarded the wooden deck, and in its place make a deck of highly polished sheet steel. For illustrations see page 30.

II. NEW BEVEL GEAR.—After exhaustive experiments, extending through several years of severe field trials, Wm. Deering & Co. have adopted the Bevel Gear for the Binder in place of the chain of intermediate gears formerly in use, and in preference to a chain and sprocket wheels as used by many competitors. By so doing Wm. Deering & Co. have materially decreased the weight of the machine, reduced friction and draft, and gained in strength. (See page 28).

III. DEERING BUNDLE CARRIER.—This differs from last year's carrier in the new method of attaching it to the Binder. (See page 13).

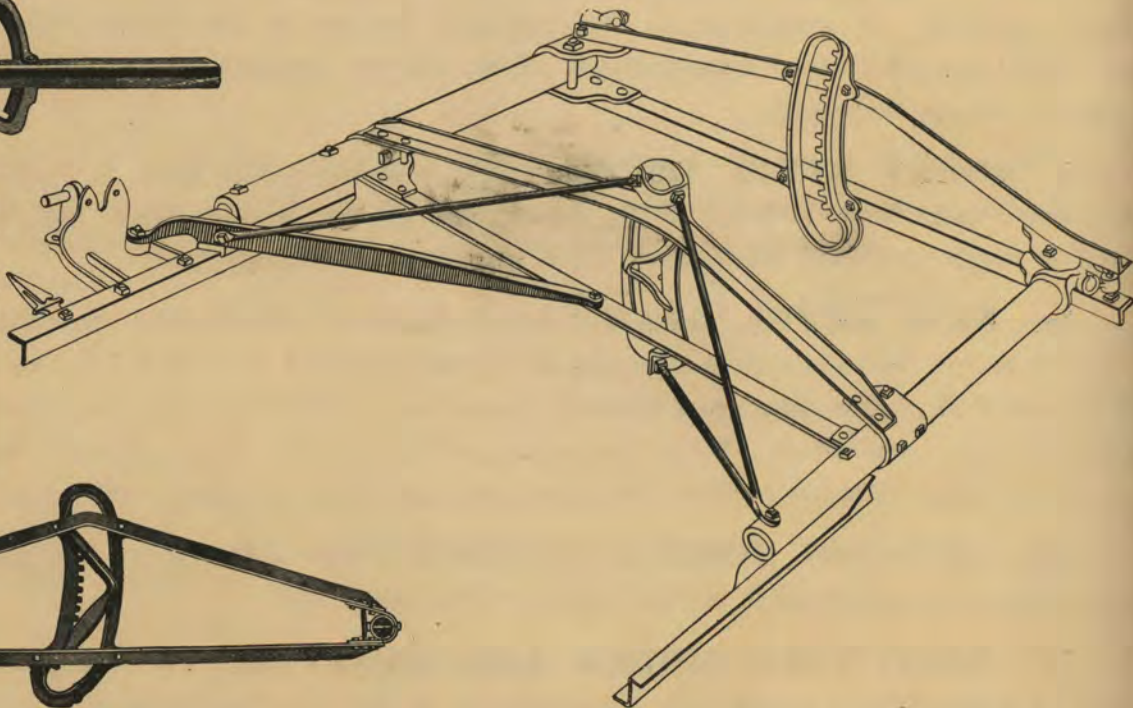
IV. SIMPLIFIED BINDER AND KNOTTER.—The changes here and the wisdom of them will be evident by a comparison of the Deering Improved Steel Binder with any and all other machines in the market. (See page 26).



Skeleton of the Deering Improved Steel Binder. Not a Weak Point in it.

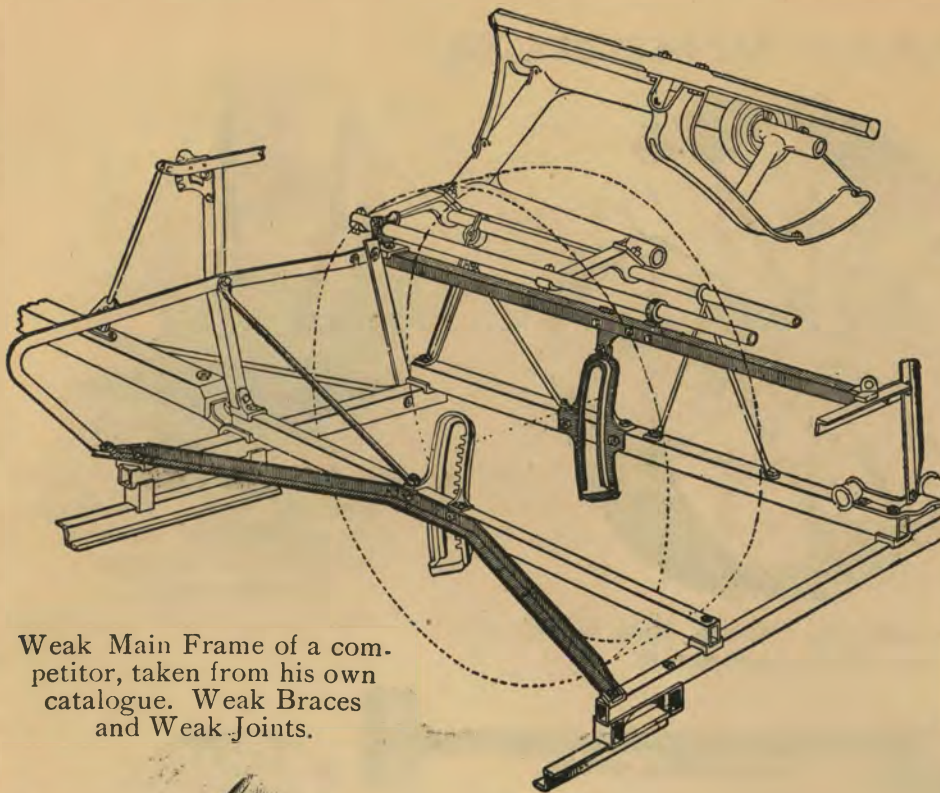


The weak, faulty substitute for a Truss used by a rival machine will bend at less than a ton pressure. (See next page).

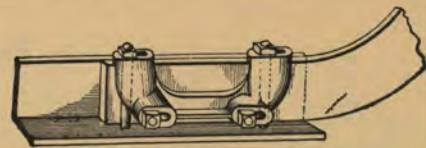


Deering Main Frame Truss. The Truss will sustain ten tons' pressure.

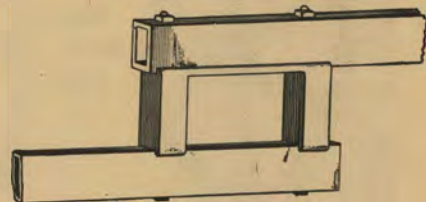
Deering Main Frame. Its strong Trusses and Braces speak for themselves.



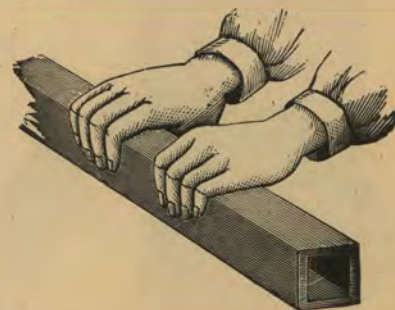
Weak Main Frame of a competitor, taken from his own catalogue. Weak Braces and Weak Joints.



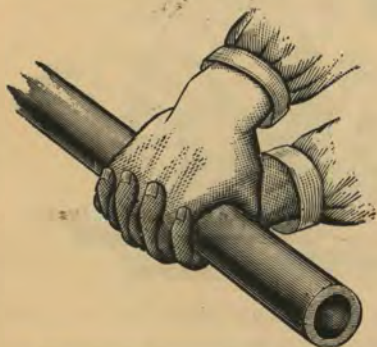
Weak joint connecting Platform and Main Frame of another rival; with fatally short lap.



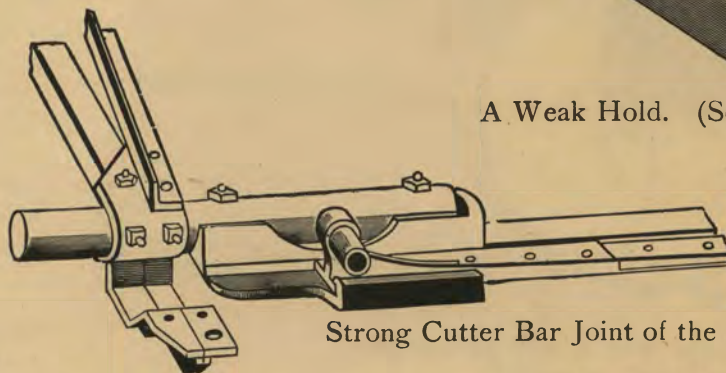
Weak joint on this competitor's Frame.



A Weak Hold. (See above).



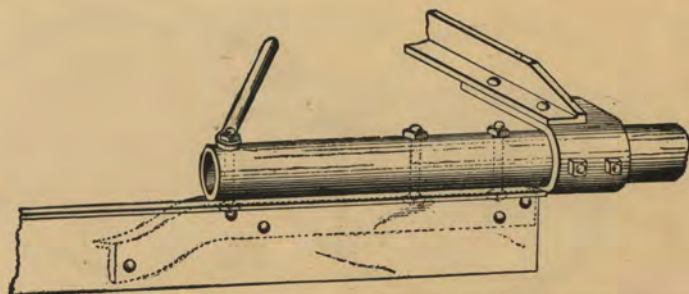
A Firm Grip. (See below).



Strong Cutter Bar Joint of the Deering.

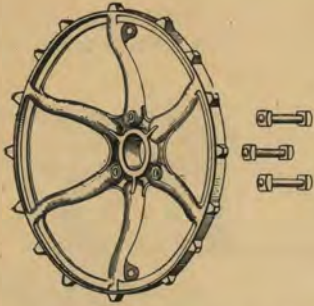


Strong Deering Cross Sill Joint.

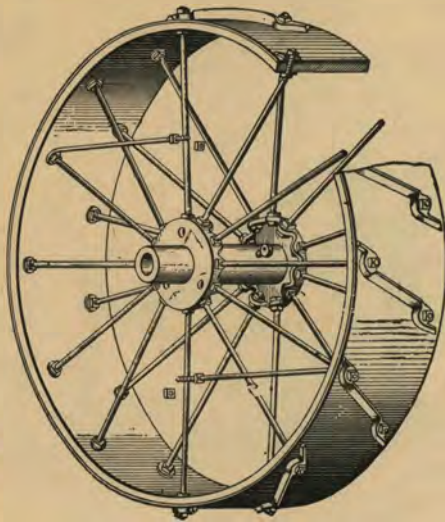


Strong Deering Joint of Main Frame and Platform, with long lap.

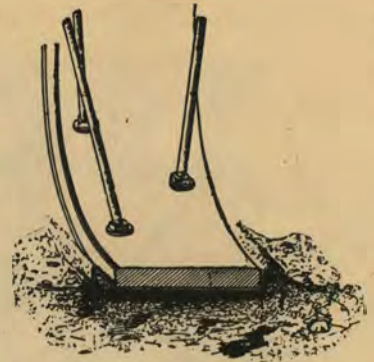
MAIN WHEELS.



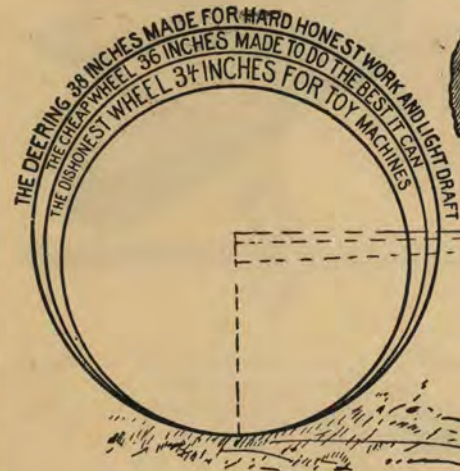
Large Deering Main Drive Sprocket. You can remove it from the Main Wheel.



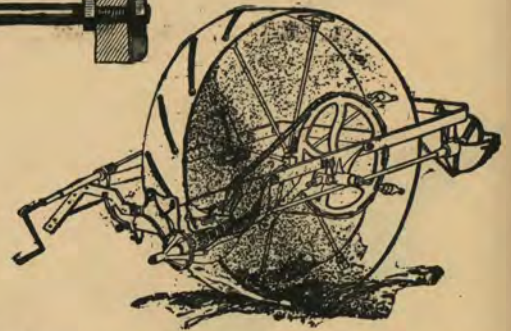
Large, wide tire Deering Main Wheel. Perfect in construction.



A thick sole keeps your feet out of the mud and dust. The thick Deering tire and wooden felloe do the same for the Harvester.

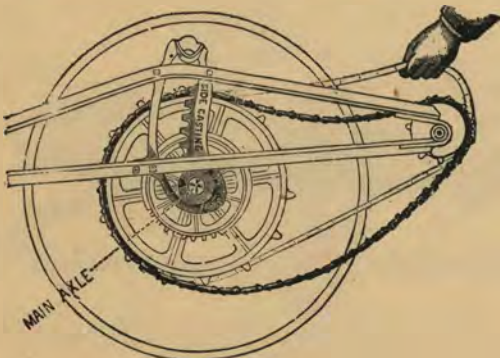


MAIN WHEEL SPOKE.

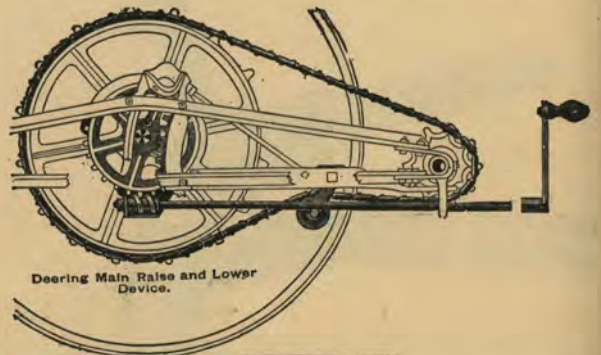


Thin steel felloe-less tire of a competitor takes up a ruinous collection of sand and mud.

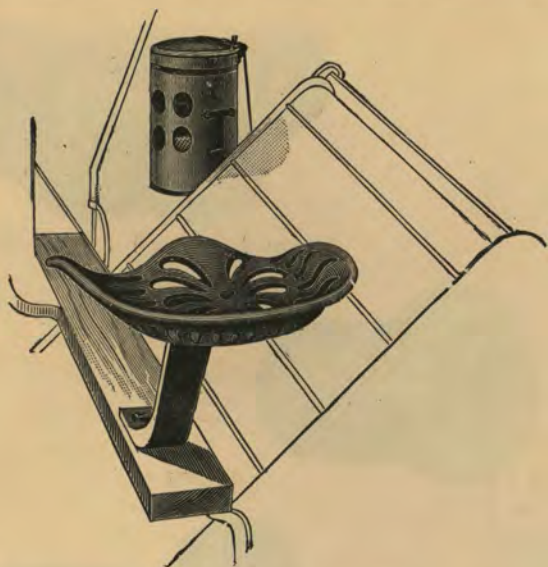
Which of these wheels will pull easiest over soft ground?



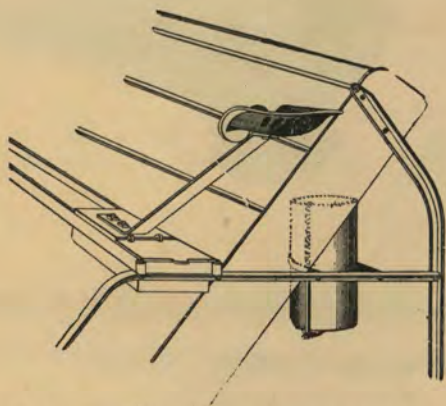
Deering Main Chain can be removed in an instant.



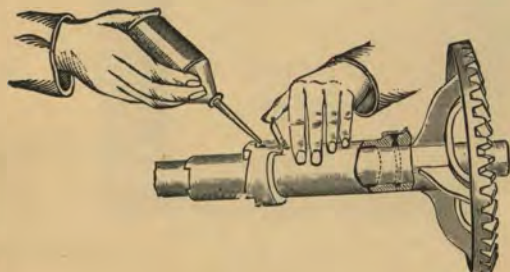
Only a few turns of the crank to raise and lower.



Deering Twine Can always in sight.

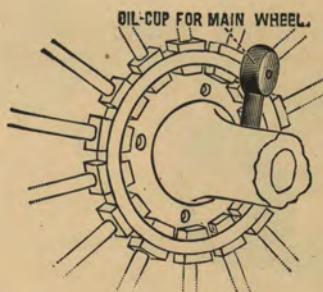
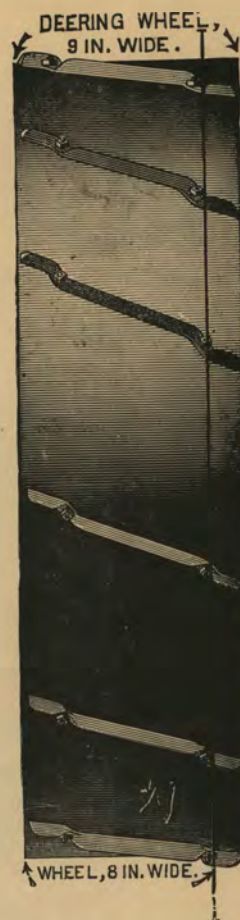


Twine Can of another machine carefully concealed. Worries the farmer, but saves the manufacturer the price of a lid.

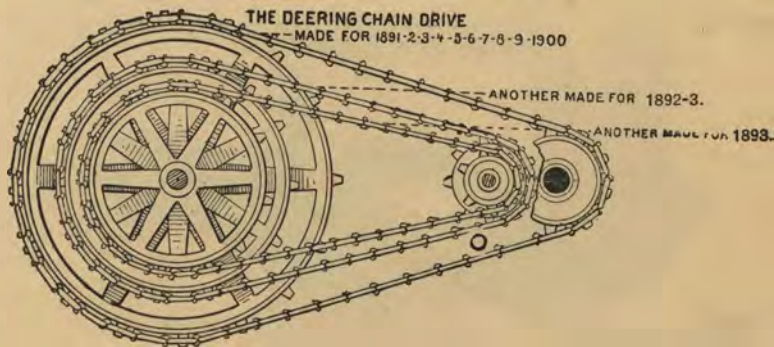


Dust-proof oil hole on Deering Main Bevel Gear.

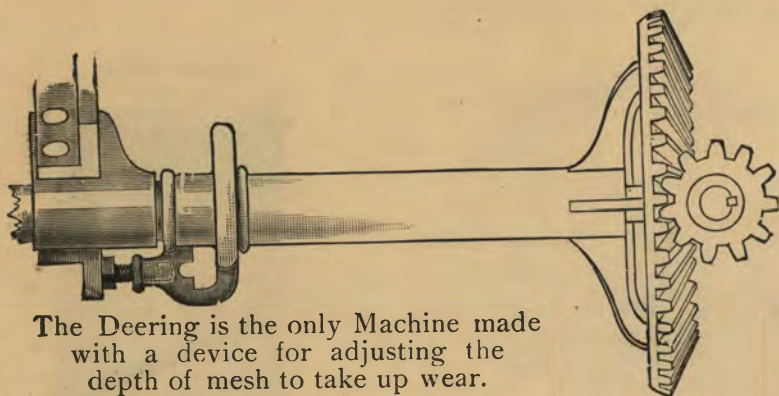
The Deering Main Wheel is one inch broader than its broadest competitor.



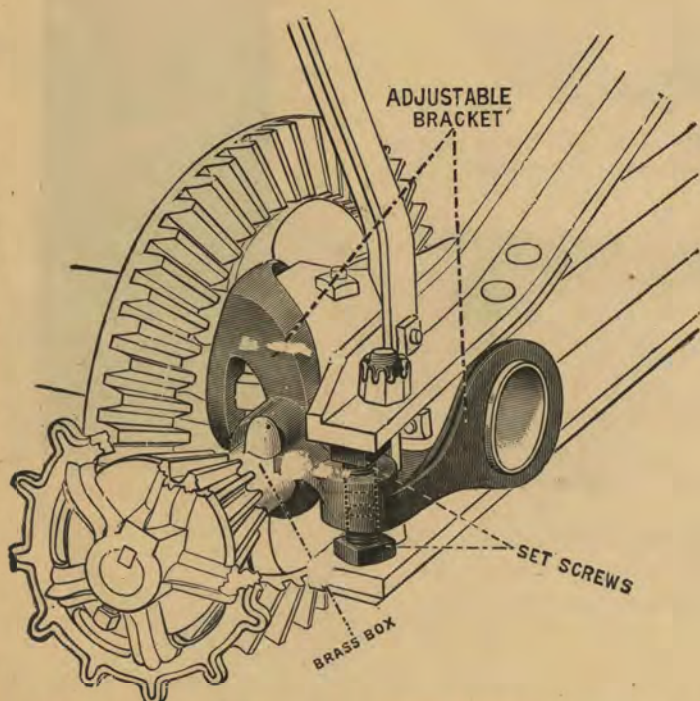
Deering Automatic Oiler. Keeps main wheel evenly oiled. Saves time and oil.



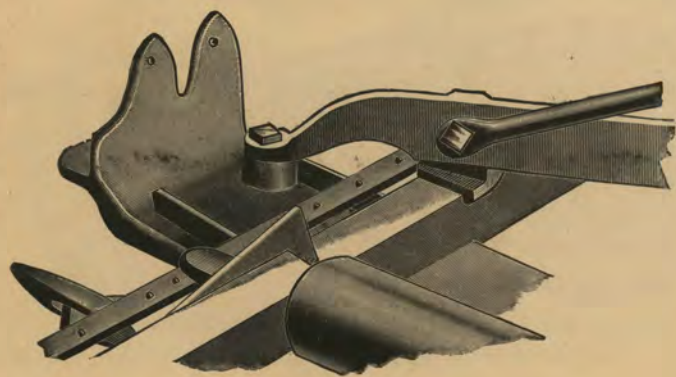
Where the Deering gets some of its unexcelled power, and reduces draft.



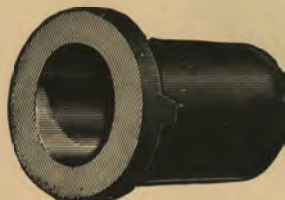
The Deering is the only Machine made with a device for adjusting the depth of mesh to take up wear.



Showing how Deering Gears can be adjusted.



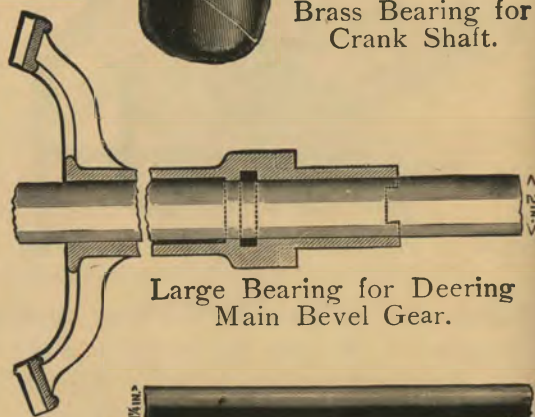
Brass Bearing for Reel Roller.



Brass Bearing for Lower Elevator.



Brass Bearing for Crank Shaft.



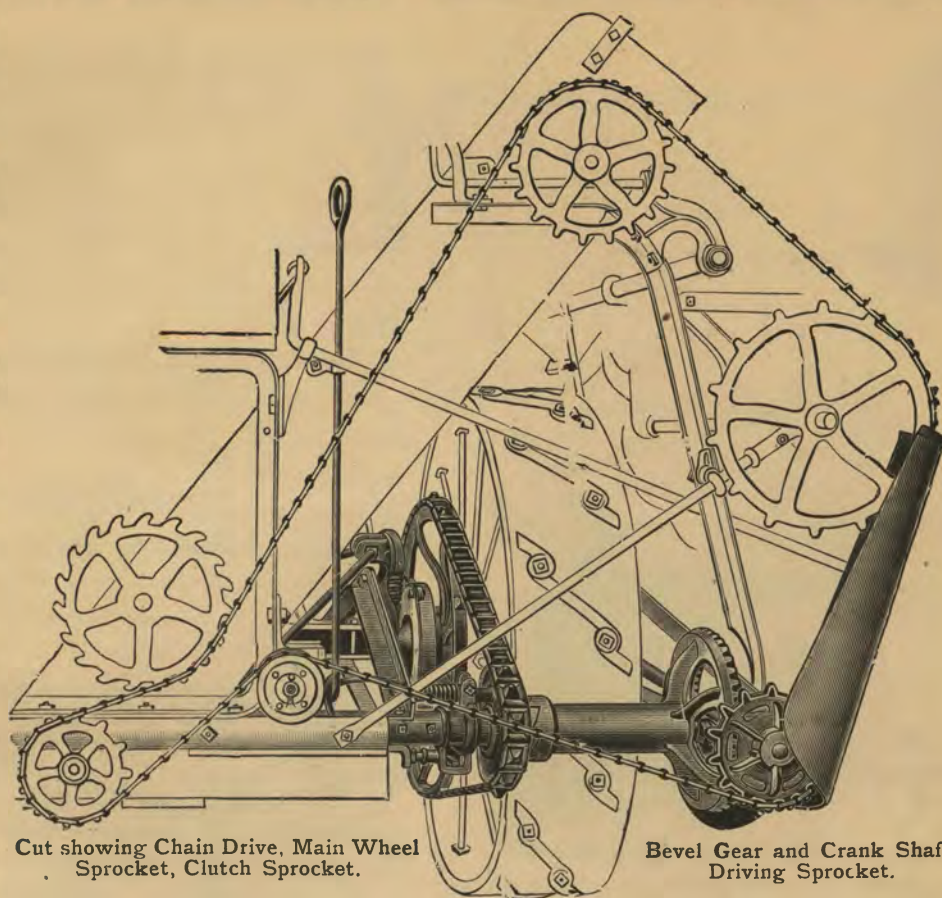
Large Bearing for Deering Main Bevel Gear.

Small Shaft on other Machines.

INNER SHOE OF THE DEERING IMPROVED.

The Inner Shoe of a Harvester Cutter Bar has to bear the weight of the Reel, the fore part of the Main Frame, and the Tongue Brace. For this reason Wm. DEERING & Co. have provided the strongest supports found on any machine. See the strong Main Brace.

CHAIN DRIVE OF THE DEERING BINDER.



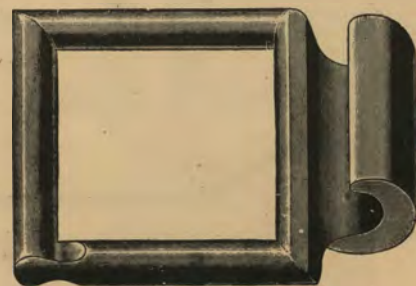
Cut showing Chain Drive, Main Wheel Sprocket, Clutch Sprocket.

Bevel Gear and Crank Shaft Driving Sprocket.

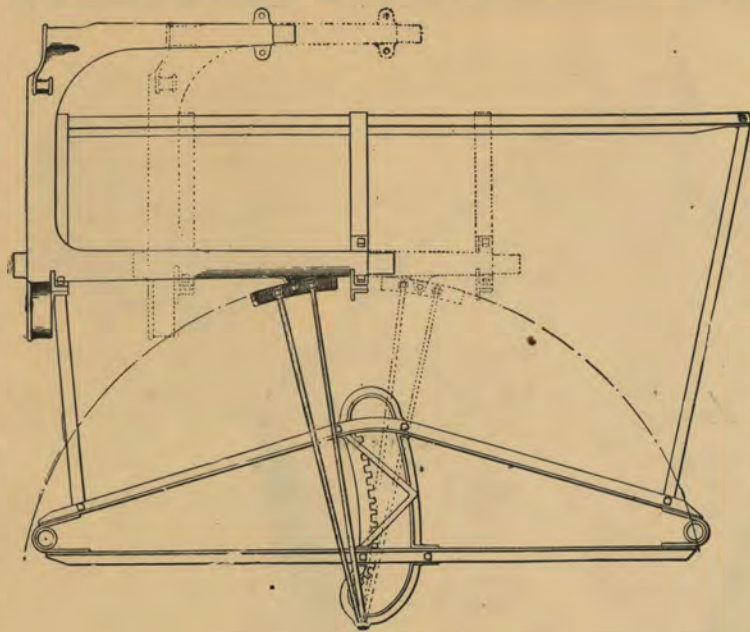
The Deering Single Chain Drive, as applied to the Deering Improved Binder, is a great mechanical triumph. Its use on the Deering Junior Steel Binder for the last three years has been attended with the most gratifying results. Competitors either use cumbersome cog gearing or a multitude of chains. By using one chain instead of many a great saving in draft is accomplished. Cog gears do well enough for a stationary engine, but for a machine that must be pulled over uneven ground nothing equals the Single Chain Drive. The Deering Main Chain is the strongest and has the largest links of all Main Drive Chains used on Harvesters. Its flexibility prevents lost motion and makes light draft.



Actual size of Link in Deering Main Chain. The largest Main Chain Link made.



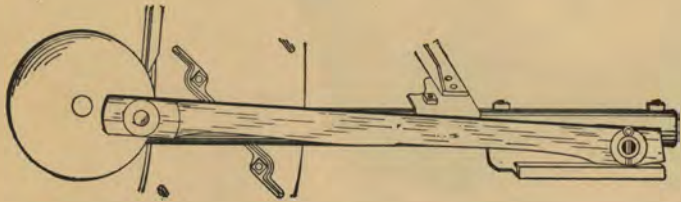
Size of same Link on a competitor's chain.



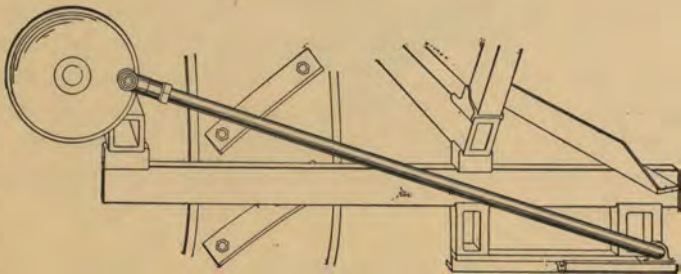
THE DEERING BINDER SHIFTER.

The Deering Binder in shifting really moves on a roller four feet in diameter instead of on little two-inch rollers or no rollers at all, as with all other machines. The Binder Supports or Rockers, pivoted in a socket at the foot of the Side Casting of the Main Wheel Truss, are radii of a circle upon the circumference of which the Binder shifts.

This is the only Binder that is shifted on this wheel principle; shifting is made easy and instantaneous. Short and long grain often grow within a few feet of each other, making it of the greatest importance that the Binder be instantly and easily adjusted for any length of grain.



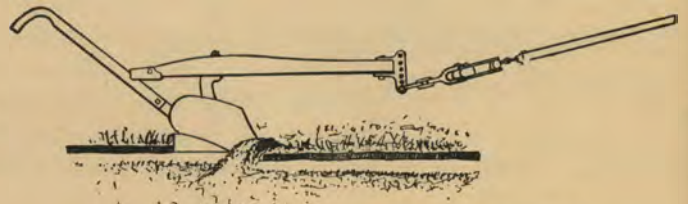
The Deering Pitman moves on a line with the sickle. Not an ounce of power wasted.



Pitman of another machine. Wastes power; increases draft.



The point of draft for the Deering Harvester is near the ground. This makes light draft and destroys neck weight.



Low point of draft makes easy plowing.

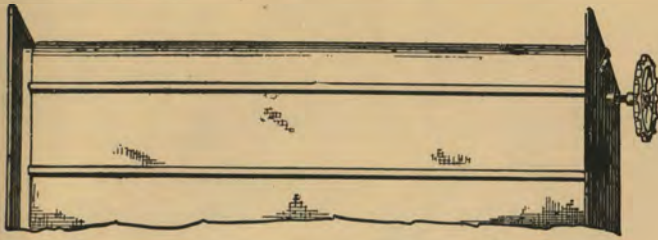


Here half the power exerted tends to pull the sickle upward out of the guards. Wears the sickle out in a short time and causes a noisy, jerking motion annoying to the driver, fatal to the machine, and severe on the horses.

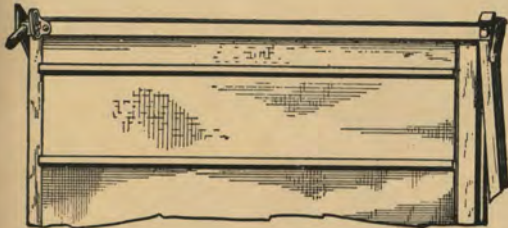


The high point of draft throws the plow deep into the ground. The same principle applies to the Harvester.

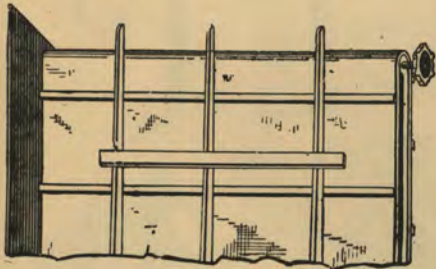
DEERING ELEVATORS.



The Deering Elevator, 55 inches wide.

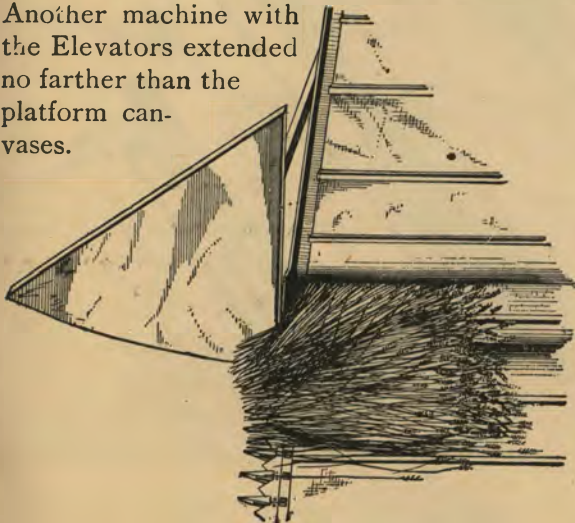


Narrow Elevator actually in use on another machine.

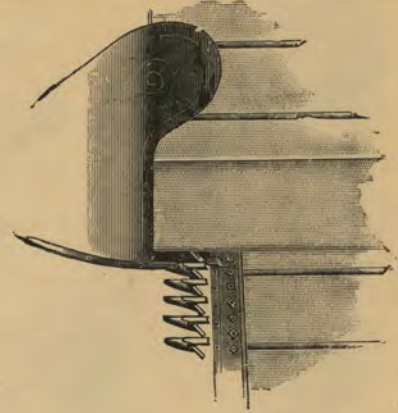


Still narrower Elevator actually in use.

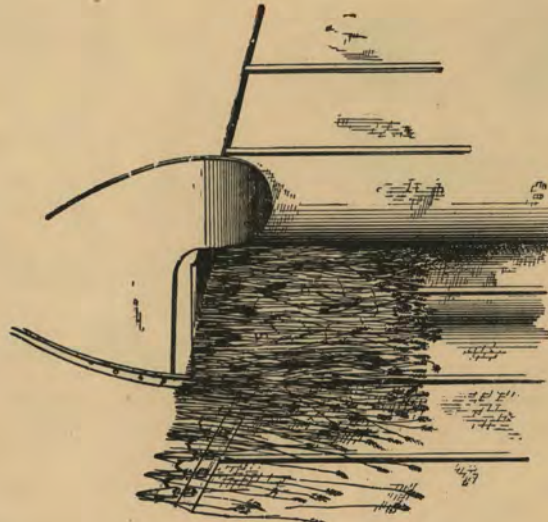
Another machine with the Elevators extended no farther than the platform canvases.



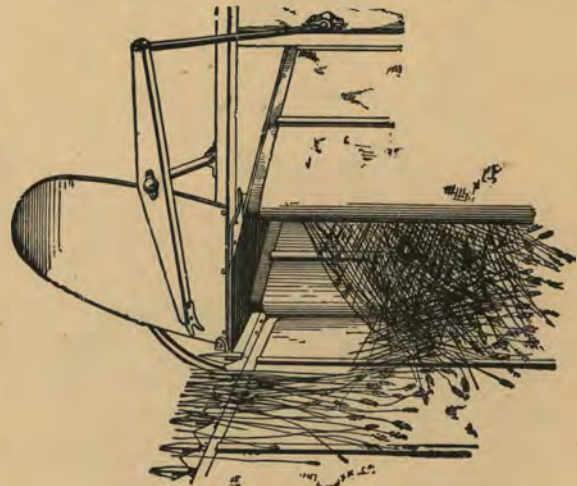
The grain soon becomes a tangled mass at this point.



No Relief Rake needed on the Deering.

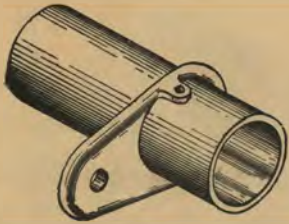


The Deering Elevators extend in front of the knives.



Still narrower Elevators of another machine. No capacity. The "Relief Rake" is no relief. It pitches the grain in every direction.

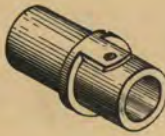
THE DEERING.



Another Machine.



Still Another.



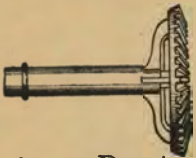
Bearing Boxes used for the same purpose on three different Machines. The same difference runs through all boxes.



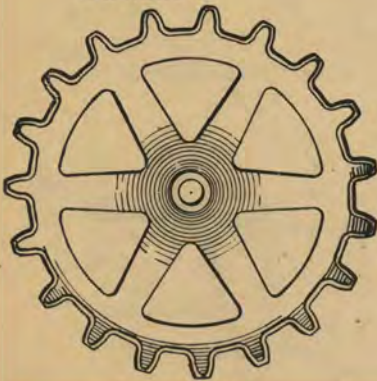
The Large Inner Platform Drum of the Deering.



Small Drums actually used on other Machines at the same point.



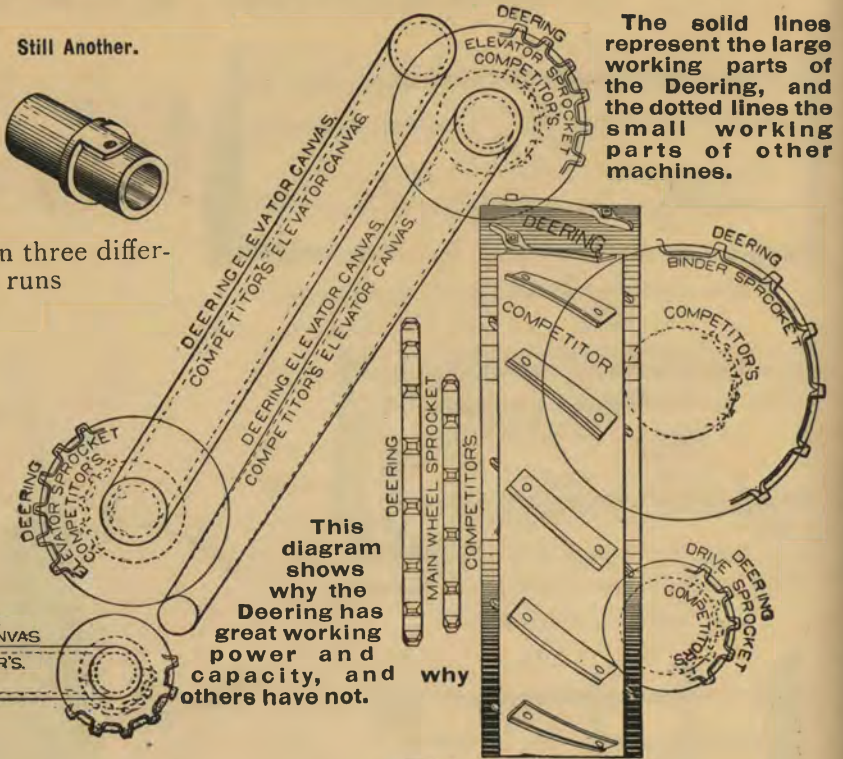
The large Deering Bevel Gear compared with small Gear actually in use on other Machines.



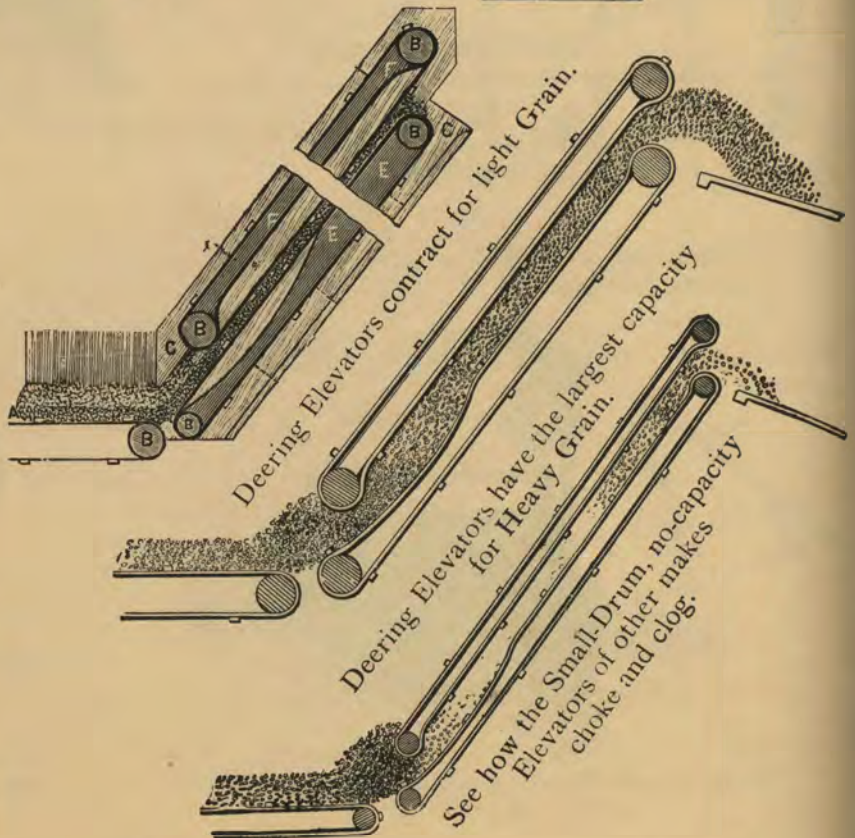
The Large Deering Elevator Sprocket Wheel.



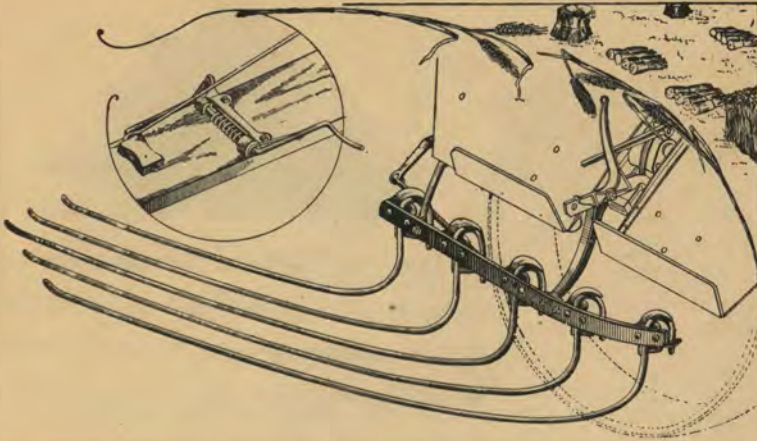
The small Elevator Sprocket Wheels in use on other Machines at the same point.



The solid lines represent the large working parts of the Deering, and the dotted lines the small working parts of other machines.

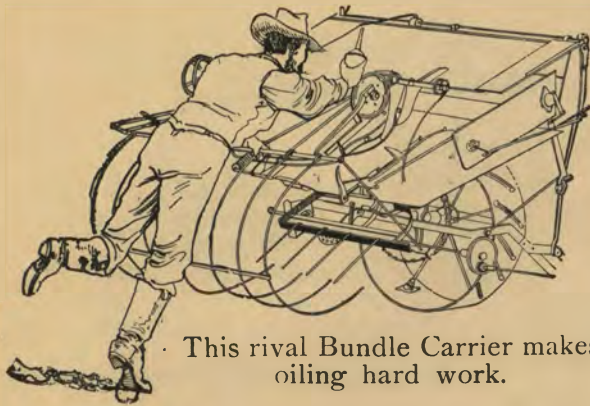


BUNDLE CARRIER.

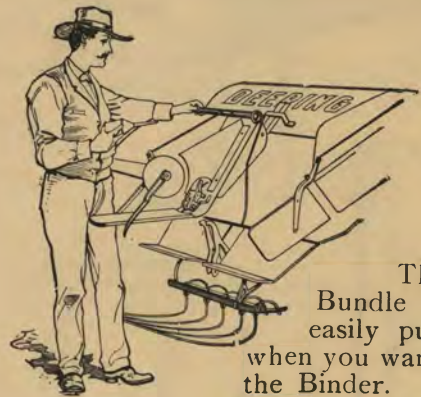


The Deering Bundle Carrier is firmly fastened to the Binder, and moves with it when the Binder is shifted.

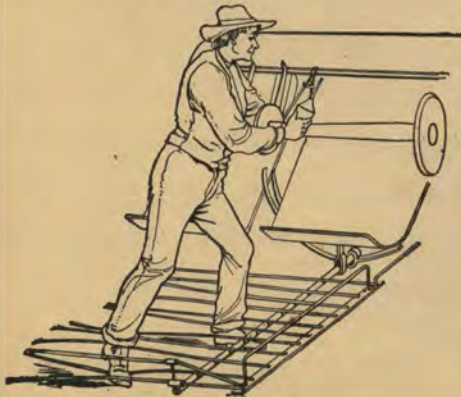
The Deering Carrier gets out of the way for any obstruction.



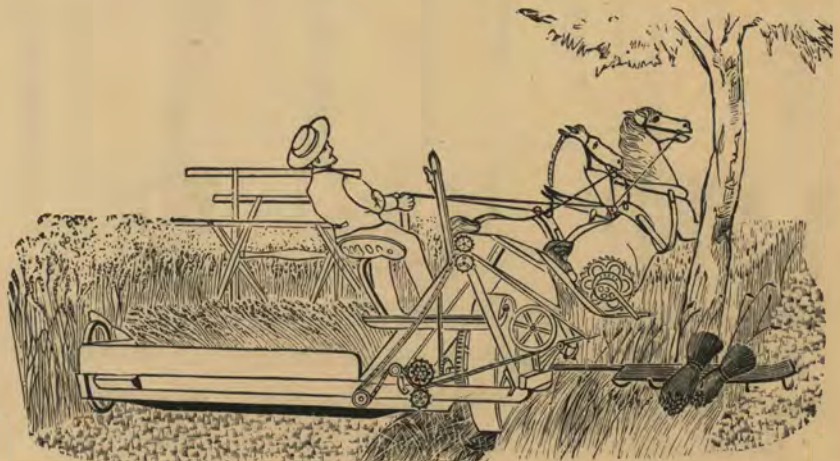
This rival Bundle Carrier makes oiling hard work.



The Deering Bundle Carrier is easily pushed aside when you want to get at the Binder.

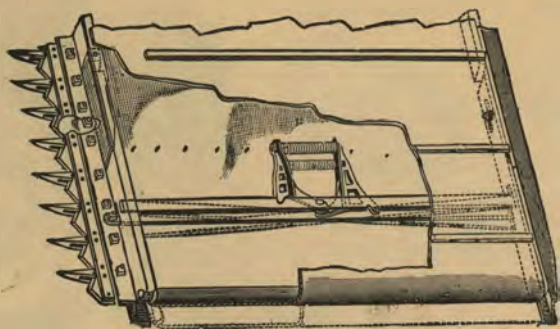


Another competitor. Hard on the farmer's shins, as well as on the fingers of the Bundle Carrier.

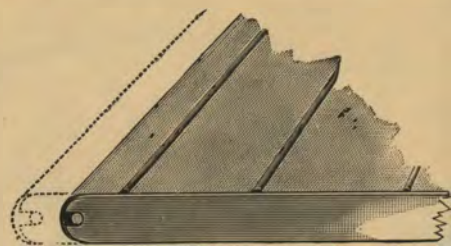
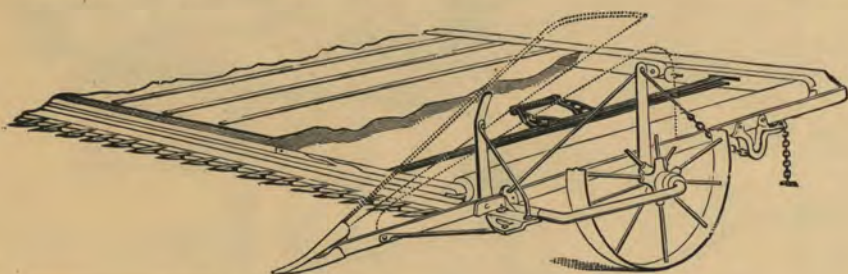


This farmer will have to waste bushels of grain to get around the tree with this kind of Bundle Carrier.

DEERING PLATFORM.



Wide, Staunch Deering Platform, with its admirable spring for tightening the Canvas.



The Deering Platform Spring allows a variation of four inches. It keeps the canvas uniformly tight by contracting when the morning and evening dampness shrinks the canvas, and by expanding when the canvas becomes dry at mid-day. Saves hours of time in tightening straps.



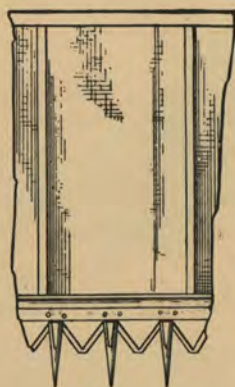
48 inches deep

THE DEERING PLATFORM.
Deep Enough for the Longest Grain.



38 inches deep

The Narrow Platform actually in use on another Machine, made only for Grain of Ordinary Length.



30 inches deep

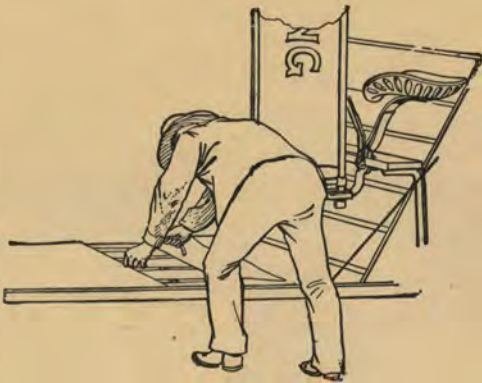
The still narrower Platform of another machine, fails utterly in all but the shortest and straightest Grain.



Manufacturers save money on each Machine by making narrow Platforms and Elevators, but they lose in the long run. Every poor Machine sold in a locality hurts its manufacturer ten times its value. Every good Machine sold will sell ten more.



DEERING FLAG.



Deering canvas straps don't often require tightening;
but when they do the flag is easily
hoisted out of the way.

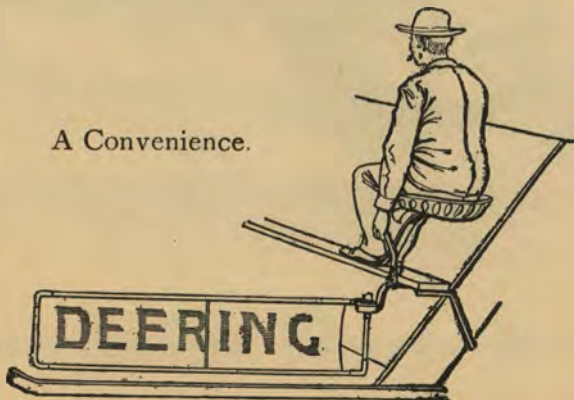


This man is swearing terribly, but nobody
could blame him for it.



No trouble to reach the Deering
Platform oil-holes.

A Convenience.



The Deering Flag is adjusted from the driver's seat.

An Inconvenience.

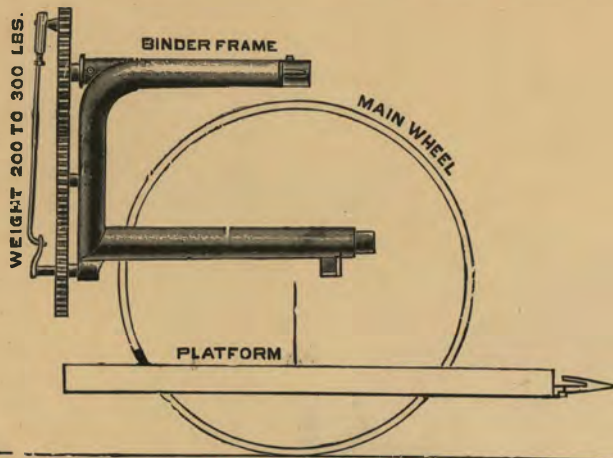


This is the way it is done on other machines.

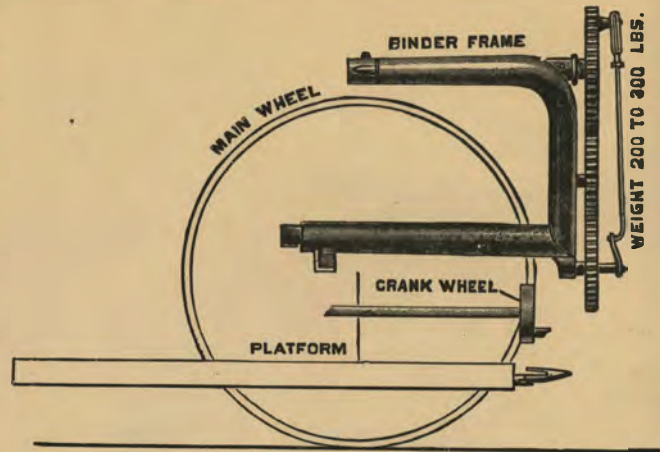


THE DEERING IMPROVED STEEL HARVESTER AND BINDER FOR 1893.

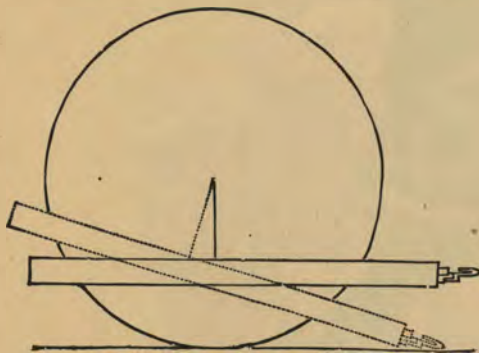
REAR vs. FRONT-GEARED BINDERS.



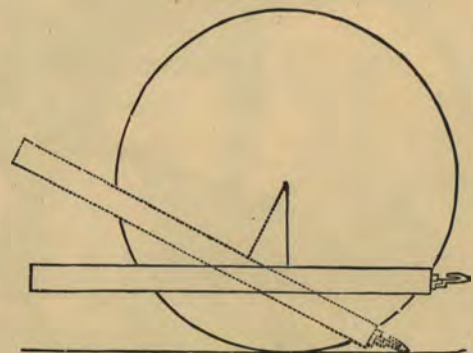
The Deering Rear-Gear Binder gives perfect balance and permits a large scope of adjustment.



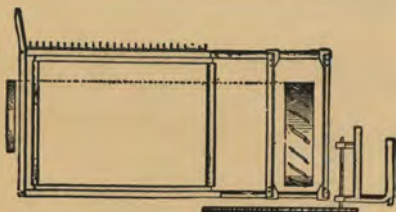
The Front-Gear Binder throws heavy weight on horses' necks at all times, especially when shifted forward.



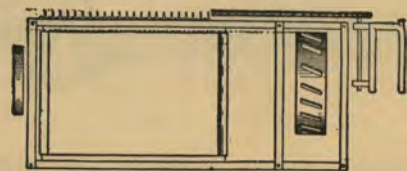
The Tilt of Deering Platform.



The Tilt of the Front-Gear Binder. Good for a Cultivator, but not exactly the thing for a Harvester.

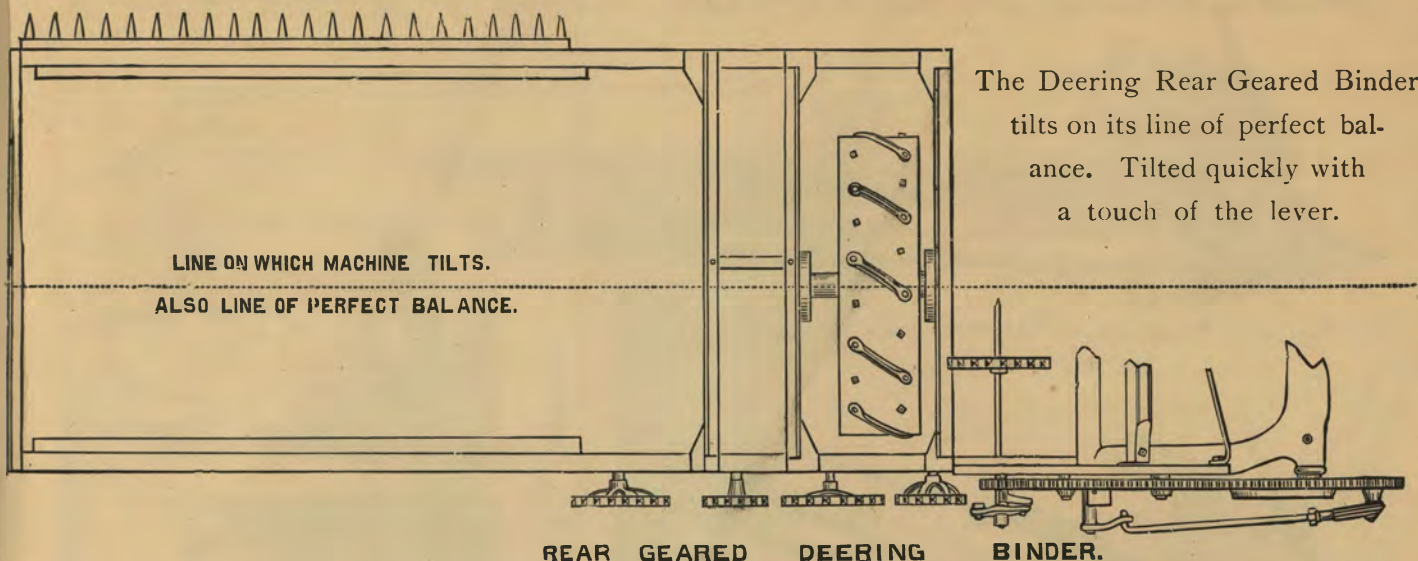


The Deering Main Wheel well to the rear, allowing a long gentle slope to the Cutter Bar when tilted.



Main Wheel of the Front-Gear Binder so far forward that the tilt is at a sharp angle.

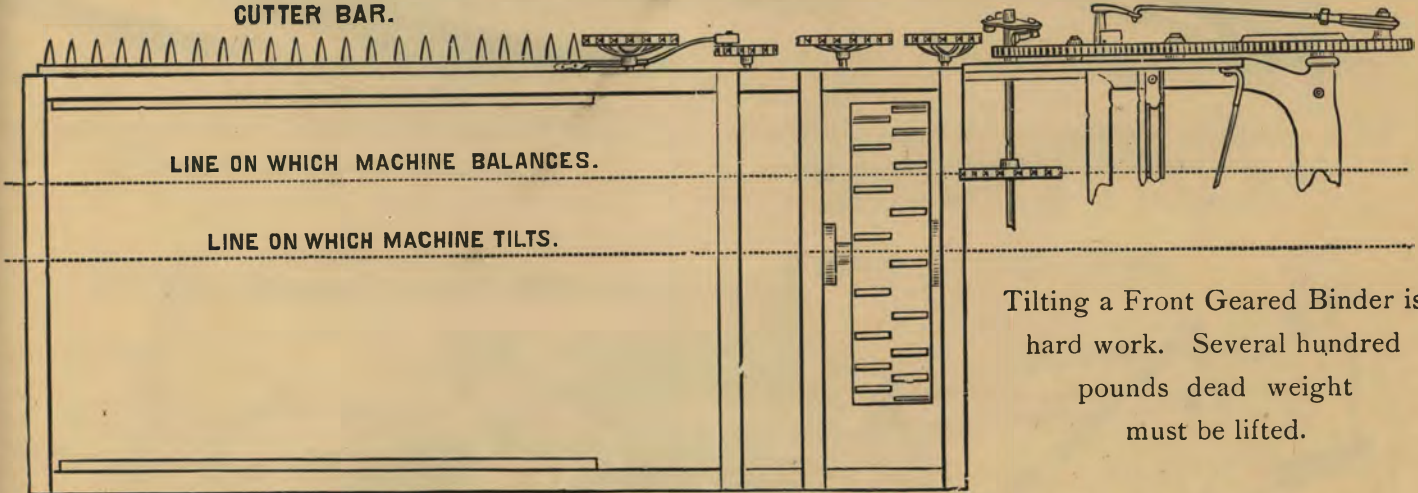
CUTTER BAR.



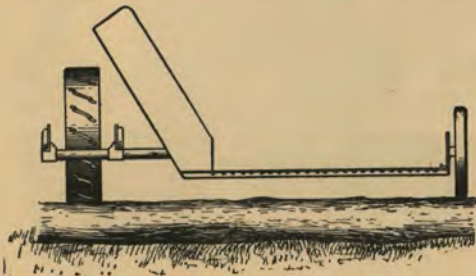
The Deering Rear Geared Binder tilts on its line of perfect balance. Tilted quickly with a touch of the lever.

CUTTER BAR.

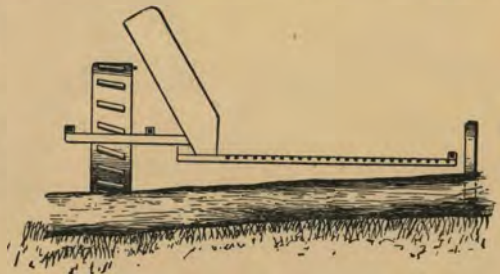
FRONT GEARED BINDER



Tilting a Front Geared Binder is hard work. Several hundred pounds dead weight must be lifted.



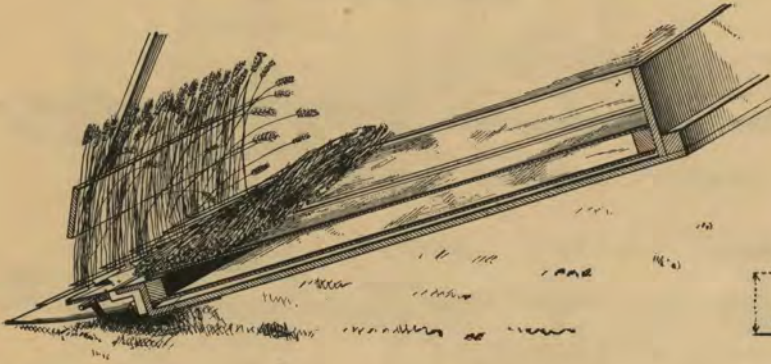
The Deering Binder advances easily over a back furrow or obstruction, because its wheels are in line.



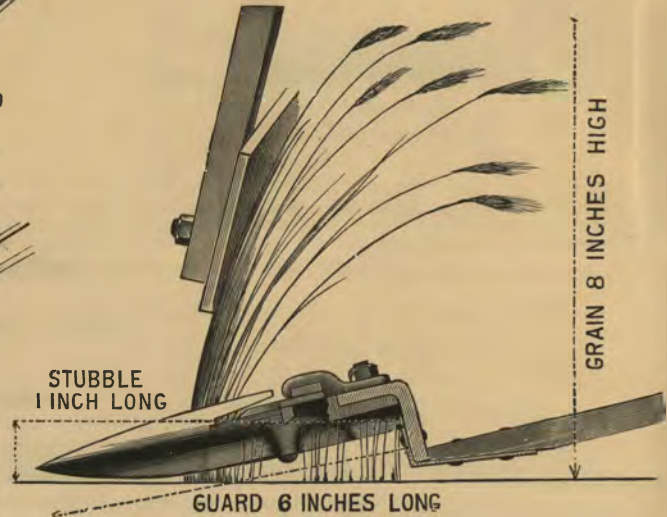
The Front Geared Binder strikes an obstruction with one wheel first, then lurches over it, wrenching and twisting the machine. The whipping of the tongue causes sore necks for the horses, and makes life miserable for the driver.



The Deering Easy Slope Platform handles short grain as neatly as long.

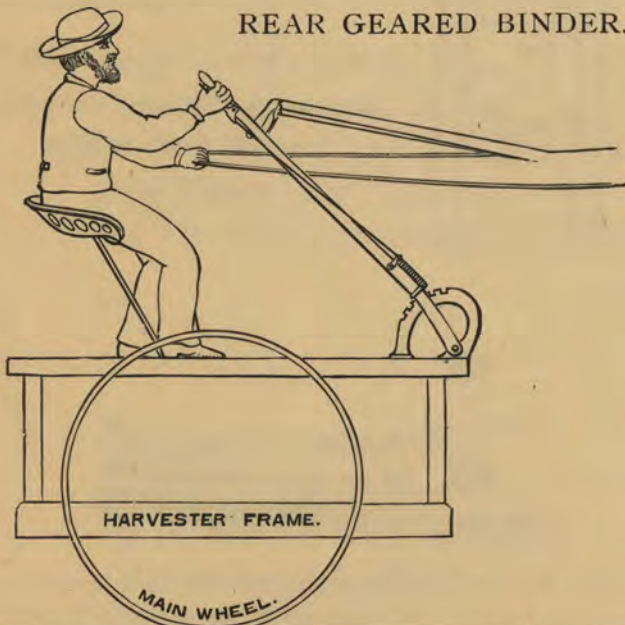


The Front Gear machine can't be tilted to handle short grain, without letting the straw slide forward on to the Finger Bar.



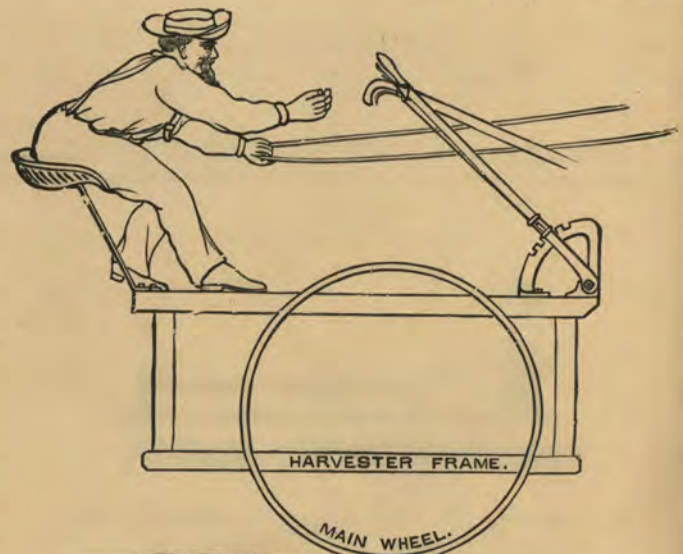
The Deering Guards can be brought close to the ground with perfect safety.

REAR GEARED BINDER.



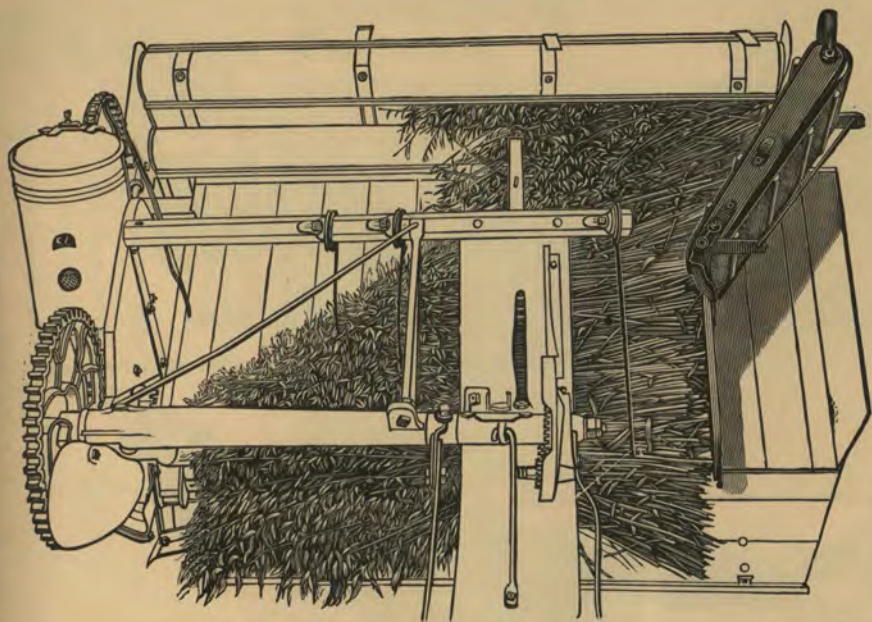
On the Deering Rear Geared Binder the levers are just where you want them.

THE FRONT GEARED BINDER.

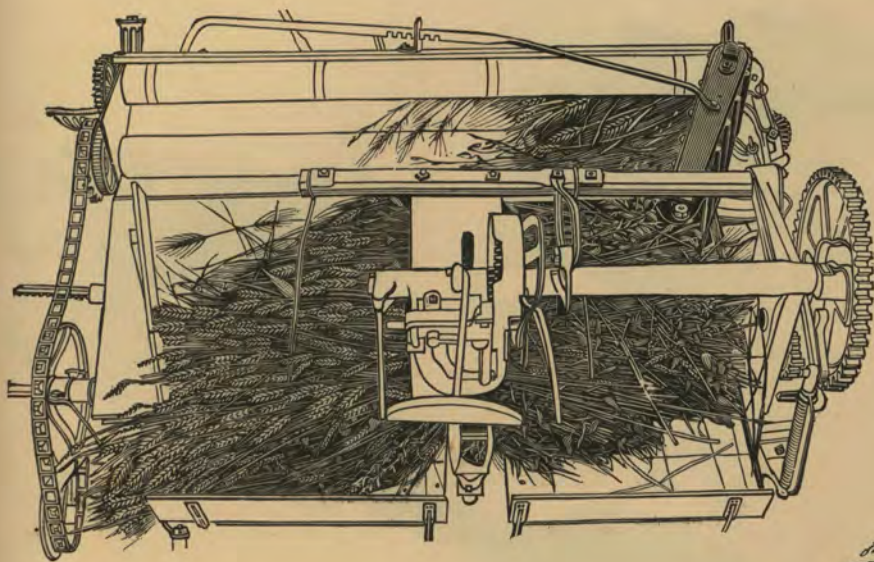
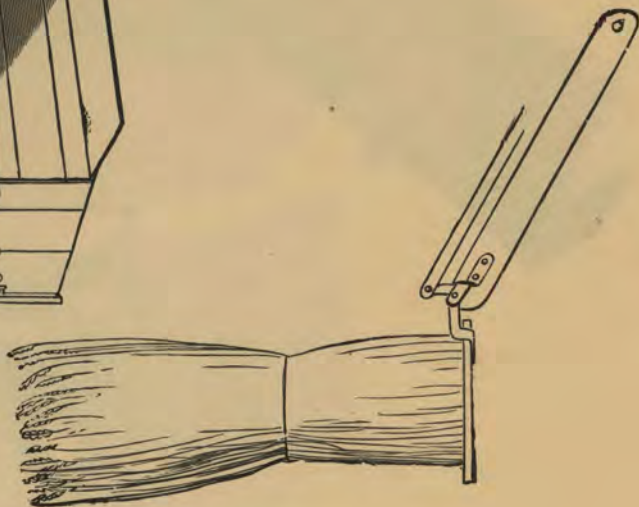


This poor man needs the patience of Job, and arms six feet long.

THE DEERING CANVAS ADJUSTER.



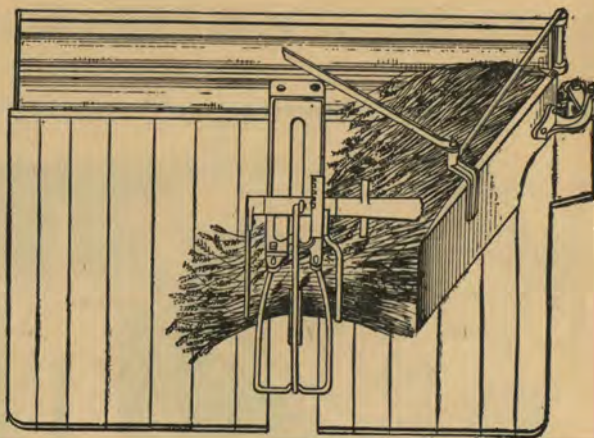
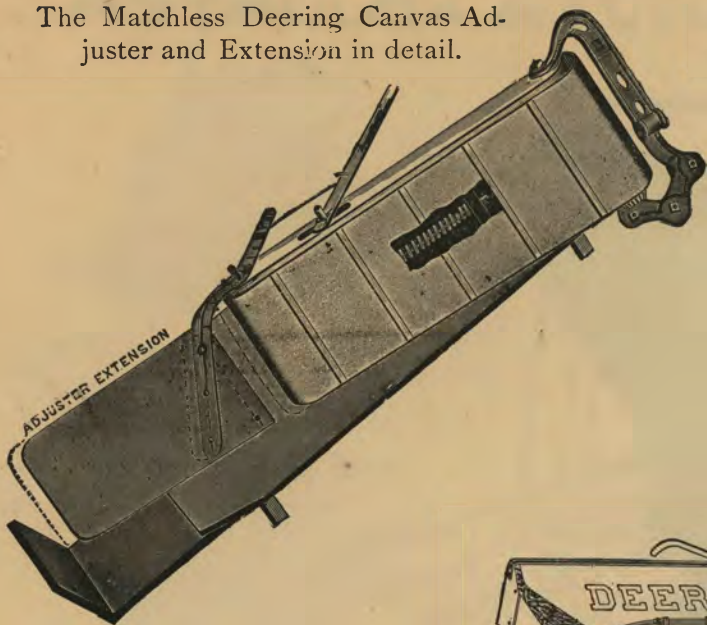
The long Canvas Adjuster is only possible with a Rear Geared Machine.



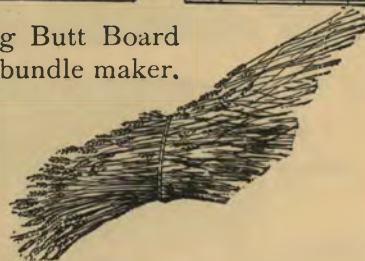
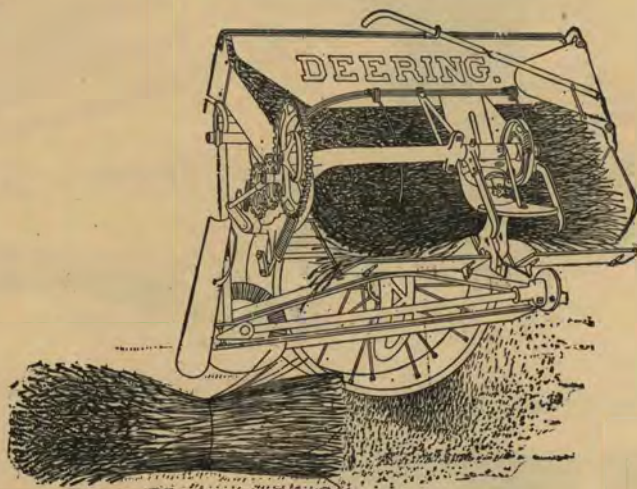
The Front Gear in trouble. Its short Adjuster cannot take care of the grain. The result, a tangled mass of straw and a bad bundle.



The Matchless Deering Canvas Adjuster and Extension in detail.



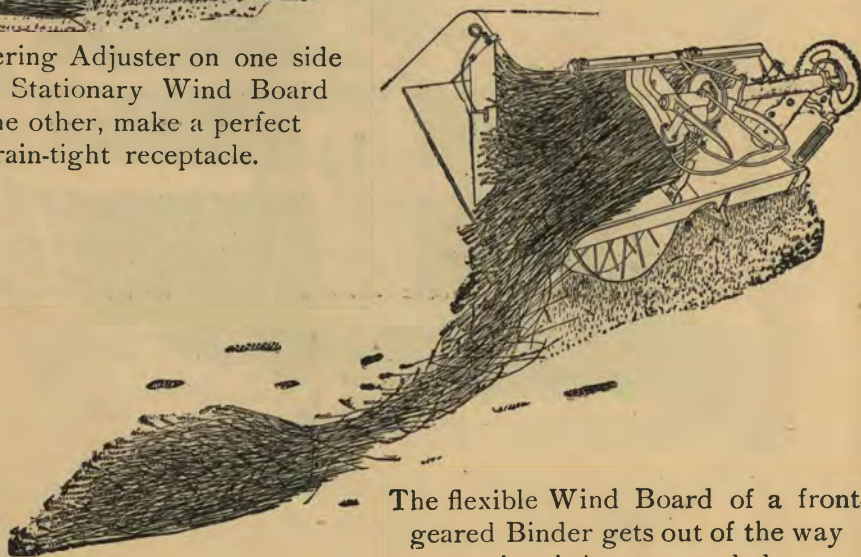
Vibrating Butt Board
a sorry bundle maker.



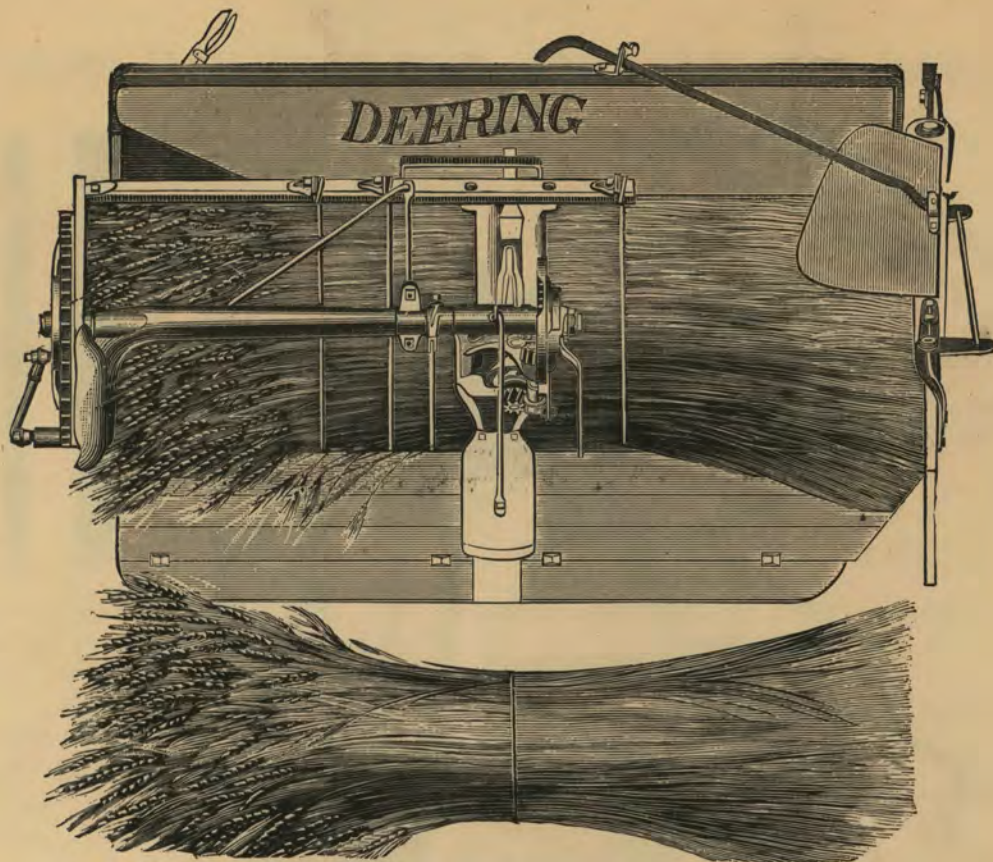
The Deering Adjuster on one side
and the Stationary Wind Board
on the other, make a perfect
grain-tight receptacle.



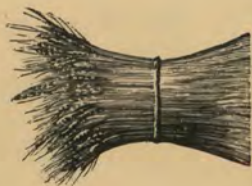
The Vibrating Butt Board as a
threshing machine.



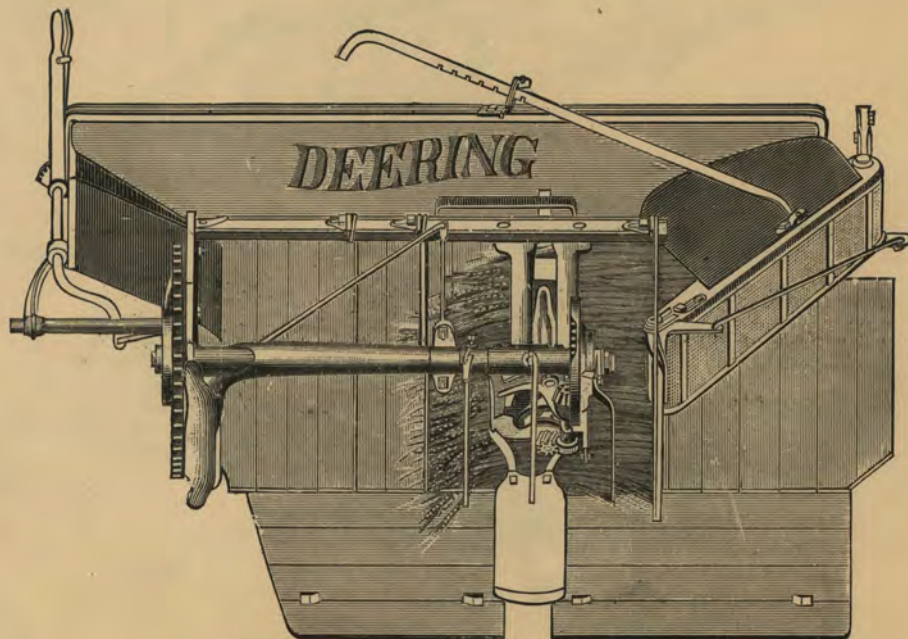
The flexible Wind Board of a front-
geared Binder gets out of the way
when it is most needed.



The greatest capacity for long grain.

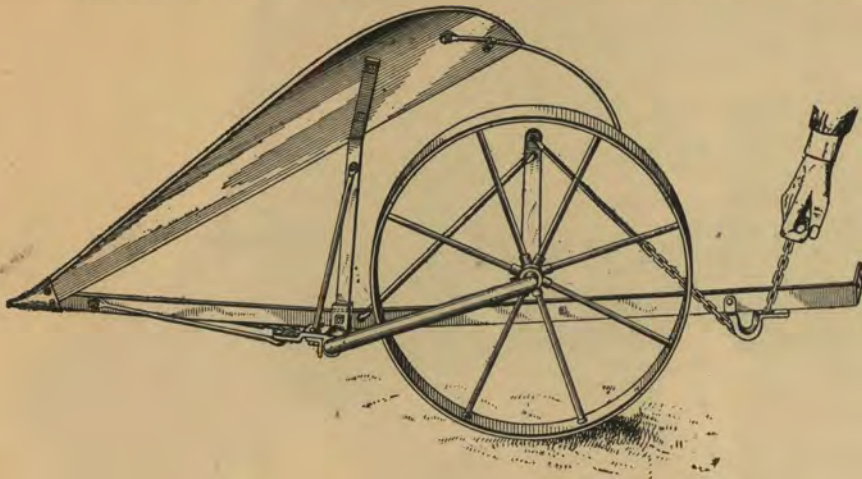


Can successfully bind shorter
grain than any other
Binder.



The Deering Binder has the greatest capacity for long grain, and can be shifted in a moment to grain
a foot long or even less.

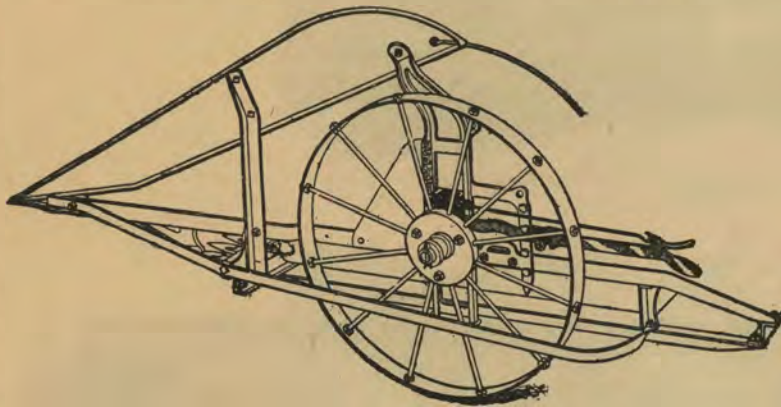
THE DEERING GRAIN WHEEL.



Light, Strong, Simple Deering Grain Wheel and Divider.

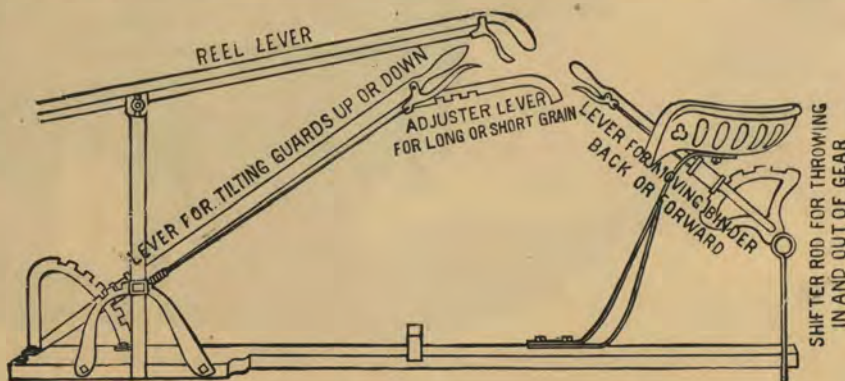


The Deering Grain Wheel has a $2\frac{1}{2}$ inch Oval Tire, or twice the width of other makes.

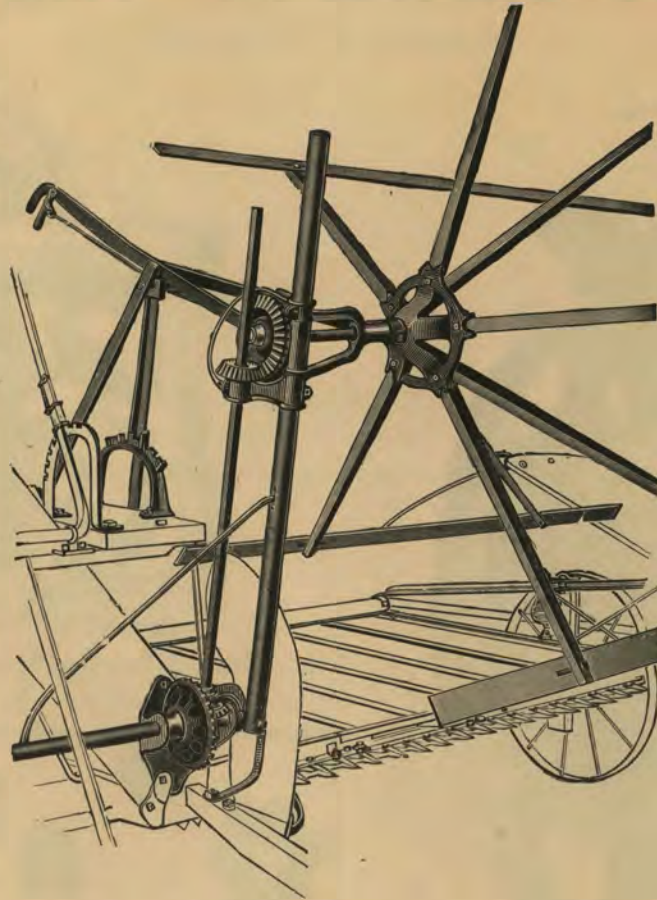


Complicated Grain Wheel of a competitor, taken from his own catalogue. The wheel is attached only at the center of the platform.

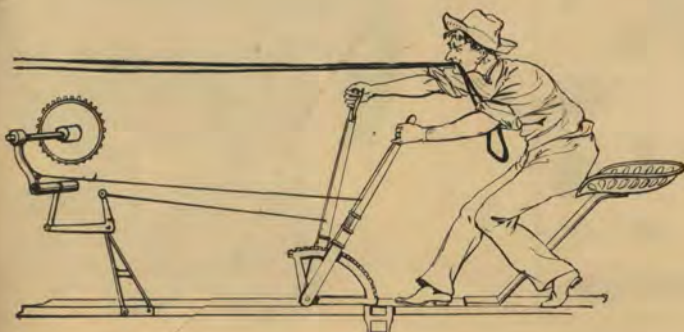
The Deering Grain Wheel is fastened firmly at both corners of the Platform, instead of being attached in the center as with other makes. With the Grain wheel attached in the center, the outside divider is almost sure to sag down, in time twisting the Cutter Bar in such a way as to prevent the Knives from lying flat in the guards, and warping the platform so that the slats on the canvas pass diagonally over the rollers, breaking the slats and tearing the canvas. A glance at any four year old Harvester with the Grain Wheel attached only to the center of the Platform will prove the force of this point.



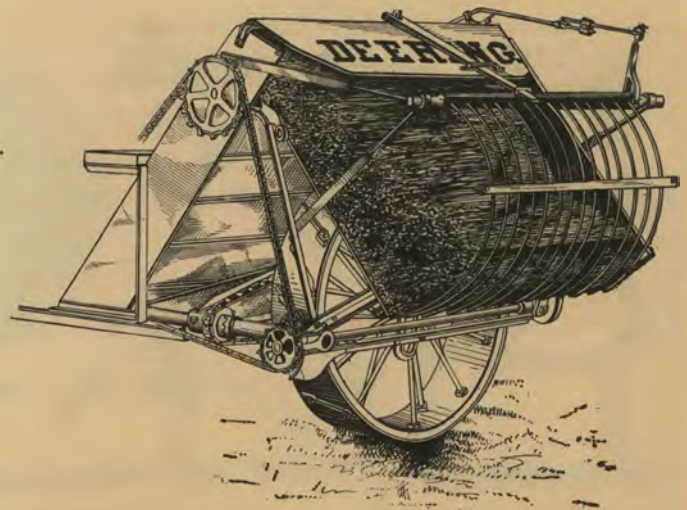
Convenience of all Levers and Adjustments on the Deering.



The Deering Reel can be put in 65 different positions with a single lever.

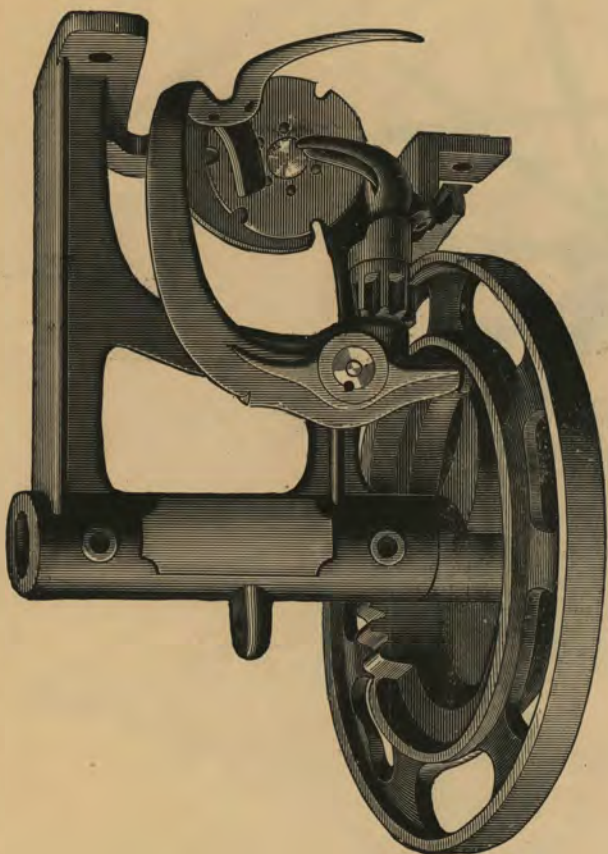


It takes four hands to adjust some reel levers.

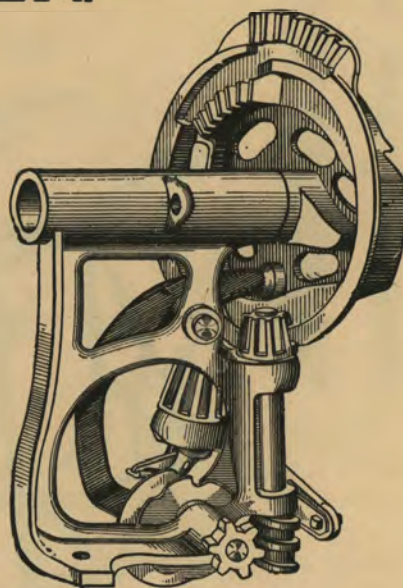


The Deering Flax Carrier.

DIFFERENT VIEWS OF THE DEERING KNOTTER.



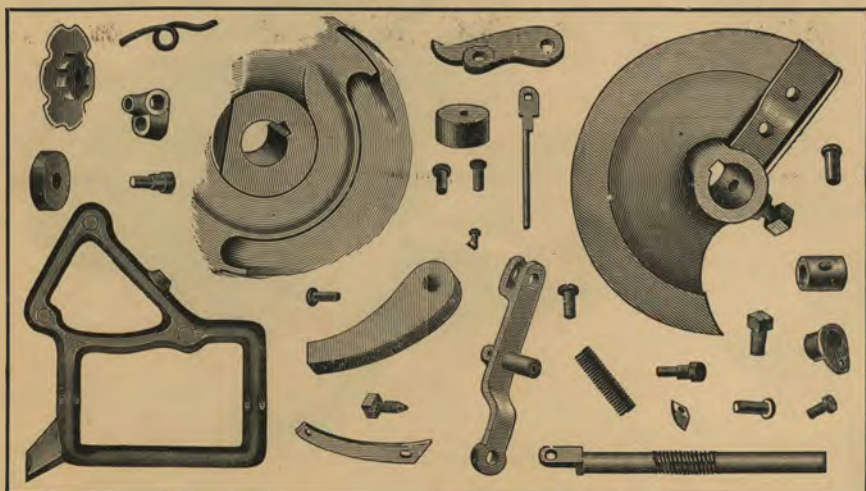
The Deering Knotter is simplicity simplified.



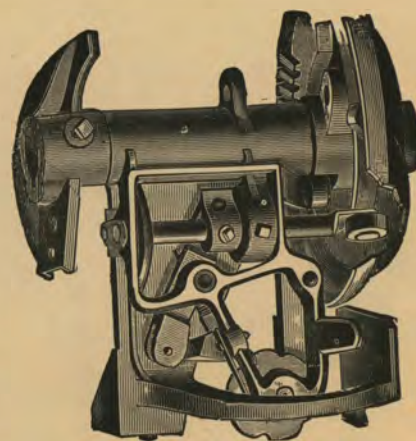
Deering Knotter in another position.



The Deering Cord Holder is composed of only six pieces.

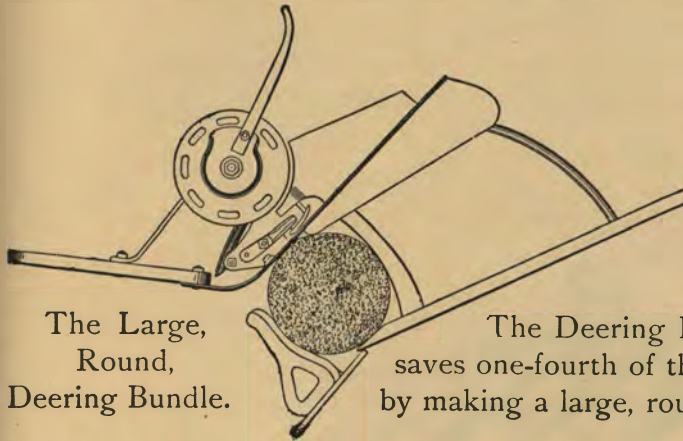


On another Knotter, thirty complicated pieces attempt to do the work done so well by the six simple pieces of the Deering.



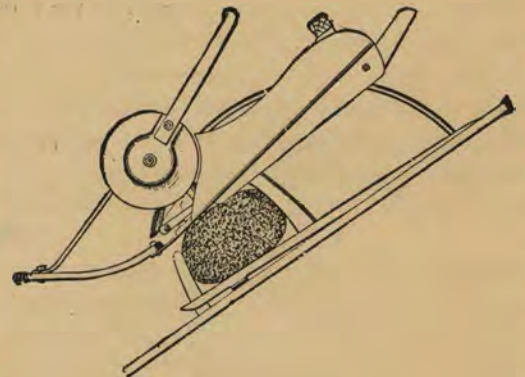
The complicated Knotter still in use on some machines.

TWINE SAVING.

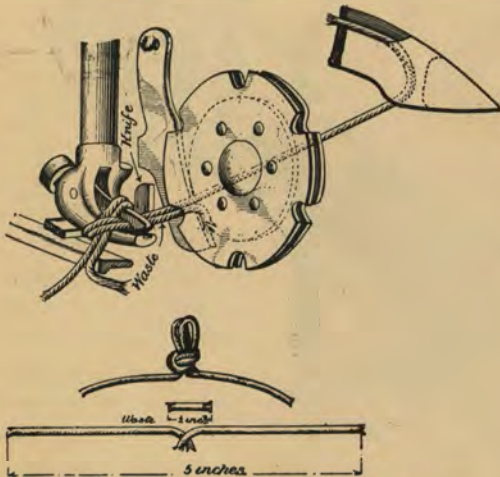


The Large, Round, Deering Bundle.

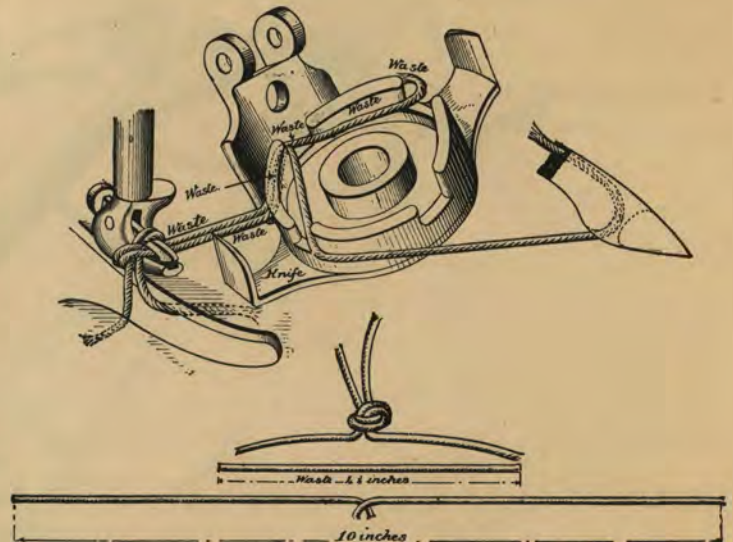
The Deering Binder saves one-fourth of the Twine by making a large, round bundle.



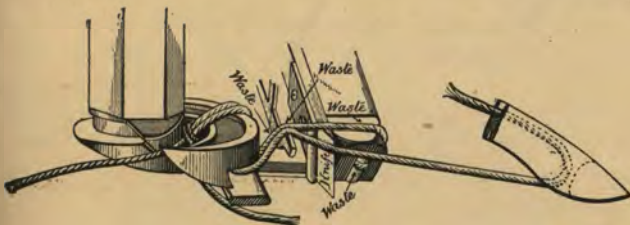
The small, flat, irregular bundle made by other Binders.



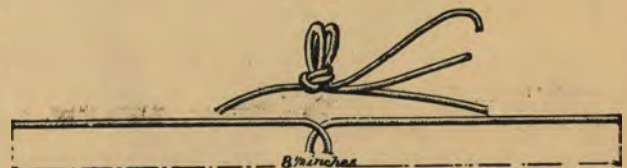
The economical Deering Knotter. $5\frac{1}{2}$ inches of twine used for each knot.



The wasteful knotter of another binder. $14\frac{1}{2}$ inches of twine used for each knot.

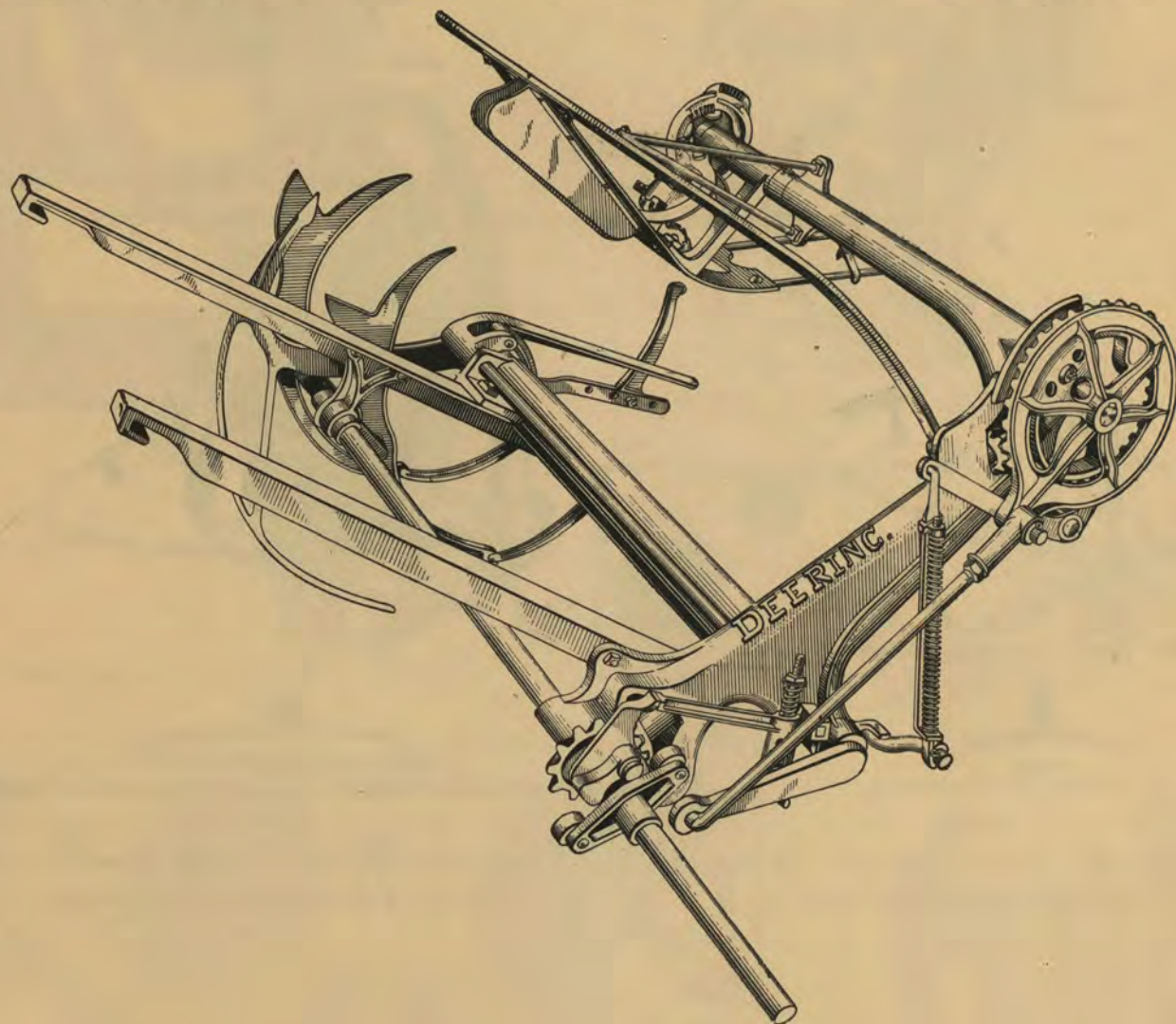


The extravagant knotter of another binder. $12\frac{1}{2}$ inches of twine used for each knot.



DEERING BEVELED BINDER GEAR.

With a view to determining the very best gearing for a Binder, Wm. Deering & Co. have carried on a series of merciless experiments, extending over several years, in the most difficult harvest fields the world over, and have finally decided upon a form of MALLEABLE BEVELED GEARING as embodying the very best mechanical principles for the purposes of a Binder. The chain of intermediate gears, and the chain and sprocket gearing, have been discarded as inferior to the Deering Beveled Gear used on the Improved Steel Binder for 1893.

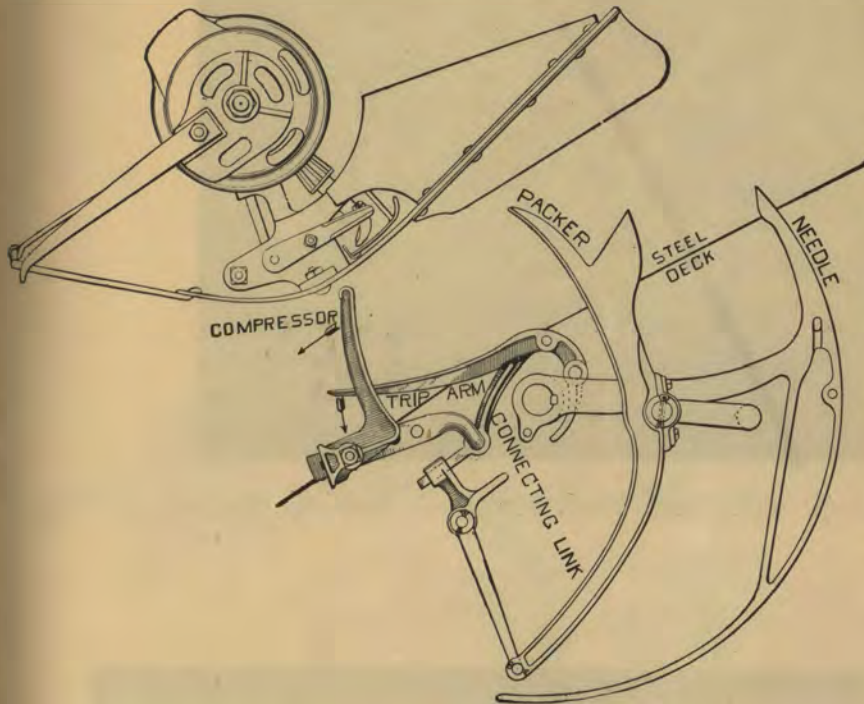


BINDER FRAME OF THE DEERING IMPROVED.

Every part of the Deering Improved Binder that can be made of steel IS OF STEEL. Of all parts which, from their character, must be cast, all that can possibly be made in malleable casting are thus made. Only such few parts as must absolutely be made of cast iron are cast iron. Compare the materials of which the Deering parts are made with the cheap materials used in other machines, and judge for yourself.

The Trip Spring is long and sensitive, and by it the size and density of the bundle can be regulated with ease.

COMBINATION TRIP.



A new era in self-binding harvesters will open up with the introduction of the Combination Trip found on the Deering Improved Steel Binder for 1893.

With this Binder the bundle is formed upon an entirely new principle. Each wisp of straw is forced against the compressor and tightly held there until another is forced down against it. This gradually increases the pressure on the Trip Arm, and, at the proper moment sets the Clutches free. The bundle is packed gradually and thoroughly while forming, instead of being compressed, as with all other machines, by an instantaneous pressure that is sure to slip the main wheel on soft or slippery ground.

METAL STRENGTH EVERYWHERE.

The Packers, the Compressor, the Needle, the Trip Arm and the various parts of the Knotter are made of an unsurpassed specially prepared grade of malleable iron, made in the Deering Malleable Iron Works. Other firms either use cast iron for these parts or buy their malleable iron parts from the foundry that will sell them cheapest. "If you want a thing done well do it yourself." That is why Wm. Deering & Co. have built the largest and most thoroughly equipped Malleable Iron Foundry owned by any manufacturer of grain and grass cutting machinery in the world.

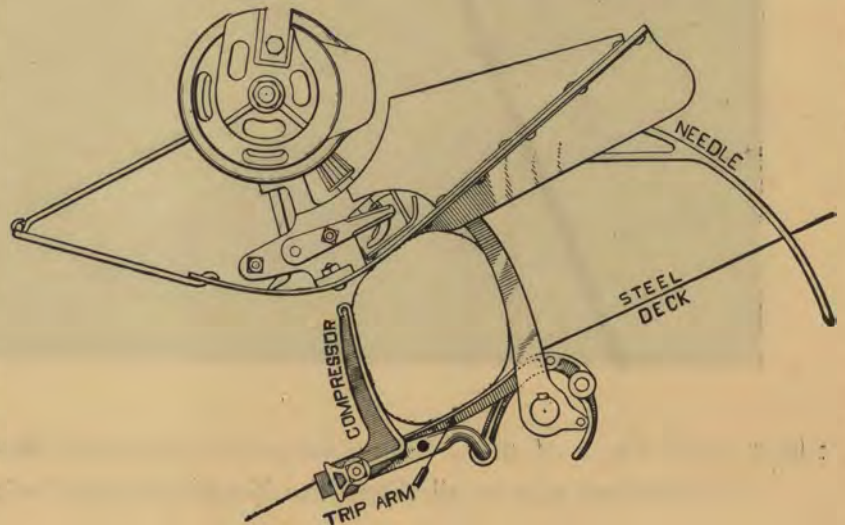
The Packer Cranks and Packer Shaft are one piece of forged steel, instead of two pieces of cast iron as with most machines.

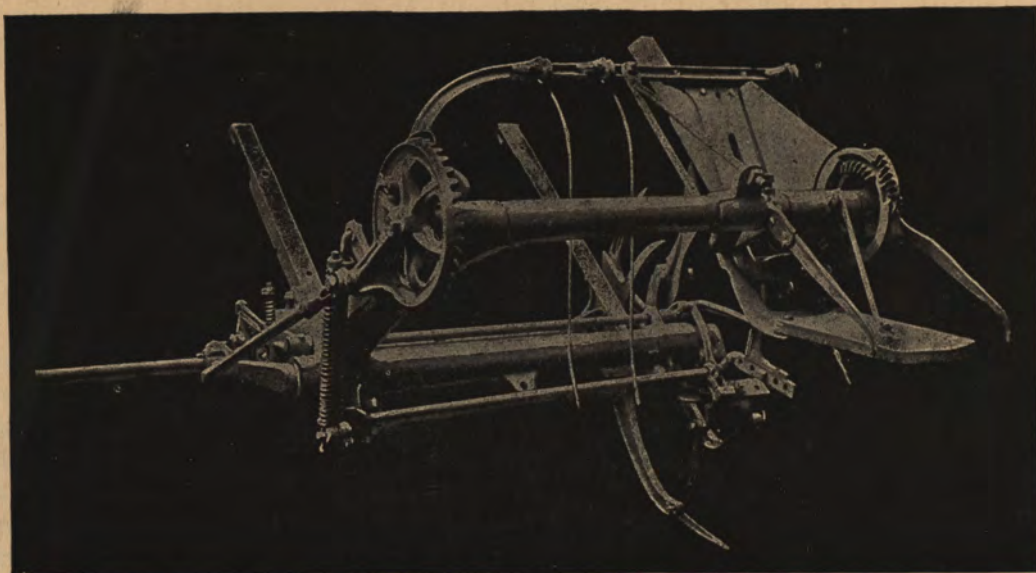
The Packer Shaft moves in brass bearings.

Its Pinions are of malleable iron, and are secured to the shaft by strong keys and taper-pins.

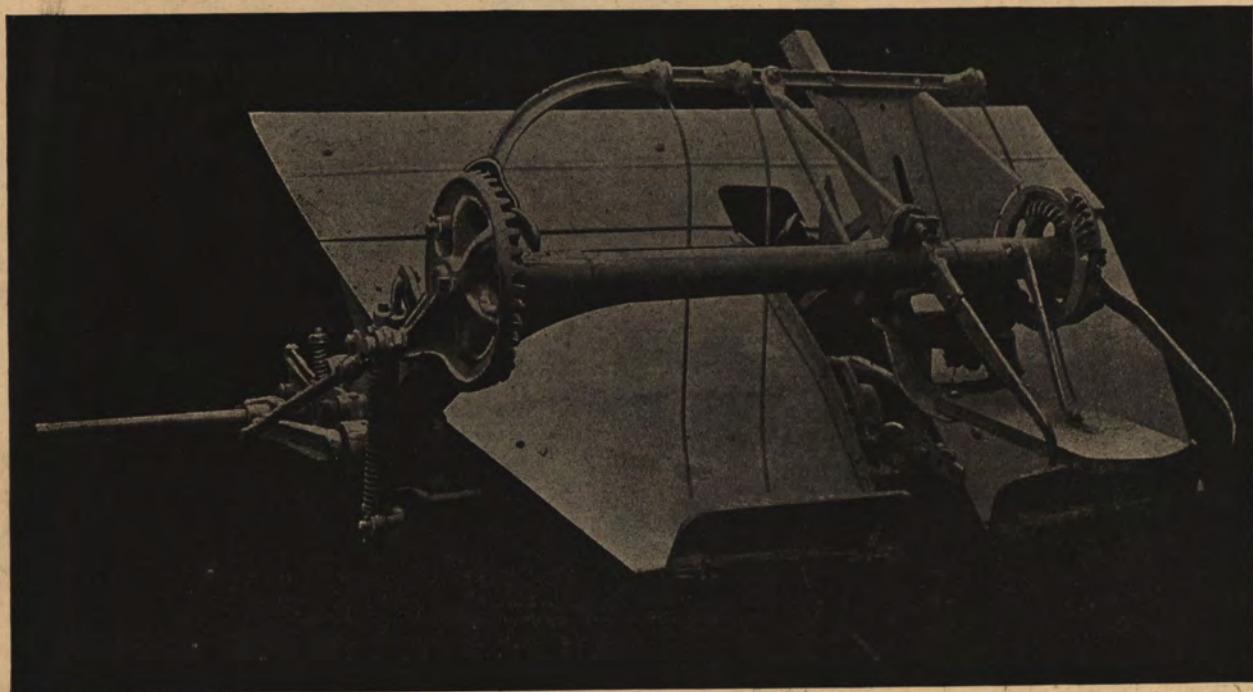
The Compressor Shaft is of forged steel.

The Trip Shaft is of forged steel, and is squared at each end to receive the Trip Arm and Trip Stop. It rocks in bearings cast in the frame.





Binder Frame of the Deering Improved, with Steel Deck removed, showing Beveled Gearing.

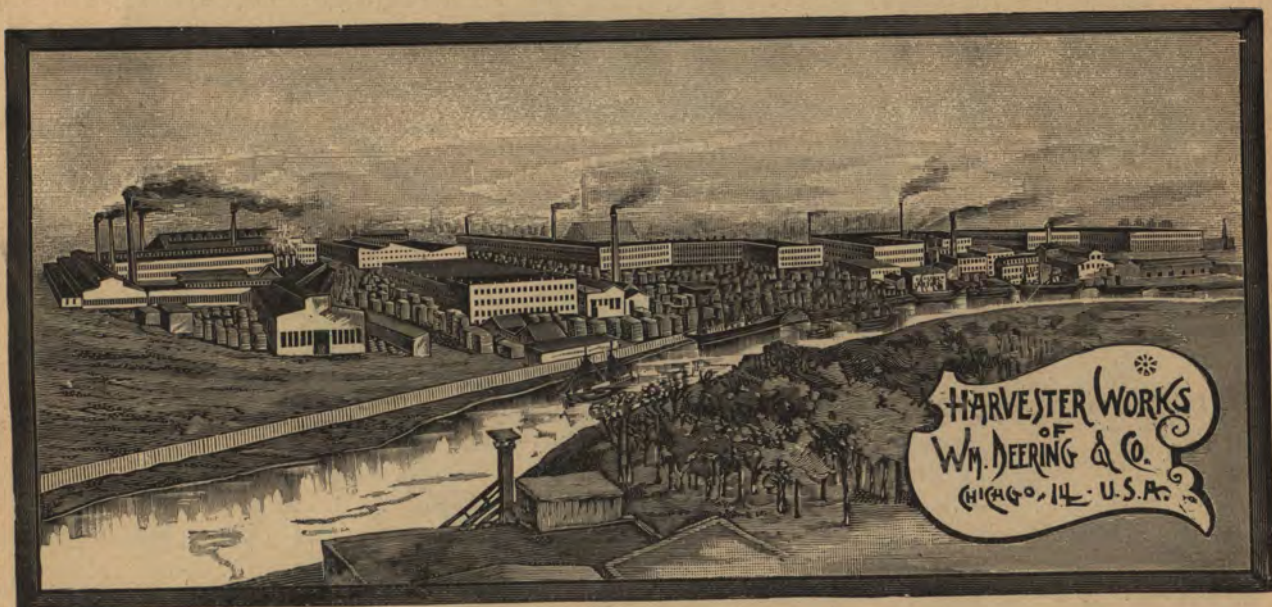


Sheet Steel Deck of the Deering Improved, Beveled Gear, Combination Trip Binder for 1893.
The Packers can be oiled and the Needle threaded without crawling under the machine.



THE DEERING BINDER TRUCK.

For convenience in hauling the Deering Binder on the road, getting it through narrow gates or over bridges, Wm. Deering & Co. make a light, staunch BINDER TRUCK.



HARVESTER WORKS
OF
WM. DEERING & CO.
CHICAGO, 14 U.S.A.