

CATALOGUE OF GRAIN CUTTING MACHINERY.



W.M. DEERING & CO.
Manufacturers of
HARVESTING MACHINERY, Chicago, U.S.A.

Three Decades of Progress.

THIRTY years ago, the methods employed to harvest the grain crops of the world were comparatively crude. Round and round the field went the clumsy wooden reaper, leaving a row of loose gavels, all to be bound and gathered into shock by some half dozen men—hired for the most part. The wages and board for this class annually took thousands of dollars from the pockets of agriculturists. As the market price of cereals declined, the necessity of improved harvesting machines became more urgent.

In 1860, the Deering Works met this need, by producing the Marsh Harvester. For 15 years it did good service, and practically superseded the self-rake reaper, to which competing manufacturers clung so stubbornly, though all in vain.

In 1875, the time seemed ripe for another advance. As before, the hopes of the farming public were to find fulfilment in the Deering factory. The Deering Wire Binder did more to popularize the automatic binding of grain than any other invention. The opposition of envious competitors soon gave way to servile imitation, as they noted the enthusiasm that was shown on every hand for the Deering machines.

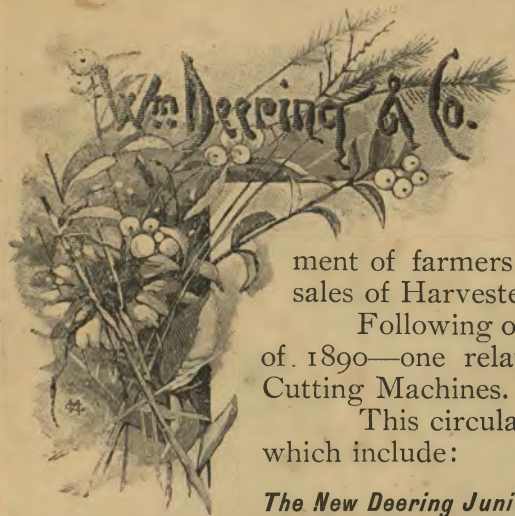
Stimulated by the encouragement of their many patrons, Wm. Deering & Co. completely eclipsed all previous efforts by offering to the world their Twine Binder—the first of its kind. Never did a labor-saving implement so well justify the encomiums it received from farmers in every quarter of the globe.

The history of harvesting machinery during the last ten years is summed up in the improvements made by Wm. Deering & Co. on the above machine. Keenly alive to every demand of the farming community, they were the first to put on the market a binder made of wood and steel and malleable iron, light of weight and draft—the Deering Junior—which was accepted as fully meeting all requirements.

In bringing out the All-Steel Binder in 1886, the Deering Works created a new departure in harvester building. To-day there is not a concern that dare make or offer to farmers anything but a close imitation of it.

The year 1890 will mark another great step forward in our successful career. As the result of experiments and severe tests, carried on for several years past, we take pleasure in introducing the new Junior Steel Harvester and Binder—the most perfect Binder ever offered for sale. While the farming public has never yet failed to accord an instantaneous and hearty recognition of our efforts, we venture to say this handsome and well-built machine will prove a greater and more agreeable surprise to them than any yet produced by us. Made from the best materials, fashioned and combined to secure enormous strength and yet be handsome and light, it embodies all the best ideas in harvester building. It is no experiment, but an assured success, as the coming harvest will amply demonstrate. Careful inspection of this—the latest and best achievement of the mammoth Deering Works—will amply repay a visit to our nearest agent's warehouse.

Our Annual Catalogues for 1890.



THE farming public exercises keen discrimination in the selection of harvesting machinery. In the circulars published by us from year to year, it has ever been our aim to set forth in the clearest manner some of the peculiar features of the Deering Machines. In numerous illustrations, accompanied by brief and plain description, we have appealed to the reason and judgment of farmers. To this fact do we largely attribute our enormous sales of Harvesters, Binders, Mowers, Reapers and Binder Twine.

Following our usual custom we issue two catalogues for the season of 1890—one relating to Grain-Cutting Machines, the other to Grass-Cutting Machines.

This circular is devoted to the Deering Grain-Harvesting Machines which include:

		PAGES
<i>The New Deering Junior Steel Harvester and Binder</i> (5, 6 and 7 foot cut),		2 to 28
Attachments {	The Deering Steel Bundle Carrier (for any Deering Binder),	29
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The Deering Binder Twine also forms the subject of illustration and description on different pages in this circular.

Our other Catalogue contains illustrated descriptions of all the remaining machines made in the Deering Works, which are: **The New Deering Mower** (4¼ and 4¾ foot Cut); **the Deering Giant Mower** (5, 6 and 7 foot cut); **the Deering One-Horse Mower**. This latter circular can be obtained of any Deering Agent or by writing to us.

The above list of machines is without exception the most complete and perfect of its kind ever offered to farmers. No pains or expense has been spared to make each one the best for the purpose. They contain better material, put together in a more skillful manner than any others with which they can be compared. As a result, they sell in greater numbers and at higher prices than those of our competitors.

The great improvements noticed in the following pages furnish ample reason why the Deering Grain-Cutting Machines excel all others. They have always been in the lead.

We thank the farming public for their generous patronage in the past and can assure them that for the coming season all our machines will be found worthy of the utmost confidence.

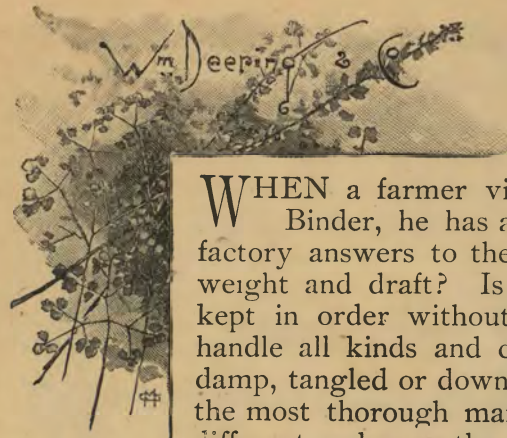
WM. DEERING & CO., CHICAGO, U. S. A.



THE NEW DEERING JUNIOR STEEL BINDER, WITH STEEL
BUNDLE CARRIER, AT WORK IN THE FIELD.

THE NEW JUNIOR STEEL HARVESTER AND BINDER.

CUTTING 5, 6 AND 7 FEET.



WHEN a farmer visits the dealer's warehouse, or is solicited to buy a Binder, he has a right to ask some questions and to insist upon satisfactory answers to them ere he makes a purchase. Is the machine light in weight and draft? Is it simple and easy to operate and adjust? Can it be kept in order without the aid of a mechanic? Is it durable and able to handle all kinds and conditions of grain, be it long or short, green, heavy, damp, tangled or down? The Binder that combines these prime essentials in the most thorough manner is the one wanted. Among the score or more of different makes on the market, farmers have singled out the Deering as their ideal of what a Binder should be.

The performances of the Deering Binder long ago gave it precedence of all others. More of them are in use to-day in this country than of any other kind—this too despite the well known fact that competitors have offered their machines at much lower prices. With the farmer, however, accustomed as he is to criticise every mechanical appliance designed for his use, *merit* is the first consideration. This is why the products of the Deering factory have always been tried, tested and cordially approved.

A glance at the illustration on the opposite page will convey some idea of the splendid machine we are making for the coming season. Like its wonderful predecessor, the Deering All-Steel Binder, it has the same indestructible and rigid steel framework, large main wheel, adjustable reel, durable and powerful cutting apparatus, simple and never failing knotter, large sprocket wheels, wide and elastic elevators. In addition, it has features entirely new and very valuable, among which are: Large, enduring and easily adjusted main chain drive for transmitting power, broad and oval-tired steel grain wheel, protection to outer end of sickle, strong canvas springs in platform and adjuster, light and handsome binder attachment, twine box attached to front "A" frame and in full sight of driver, simplest and most easily operated raise and lower devices ever put on a Binder, large and carefully fitted shafts, brass boxes and other features hereafter to be mentioned.

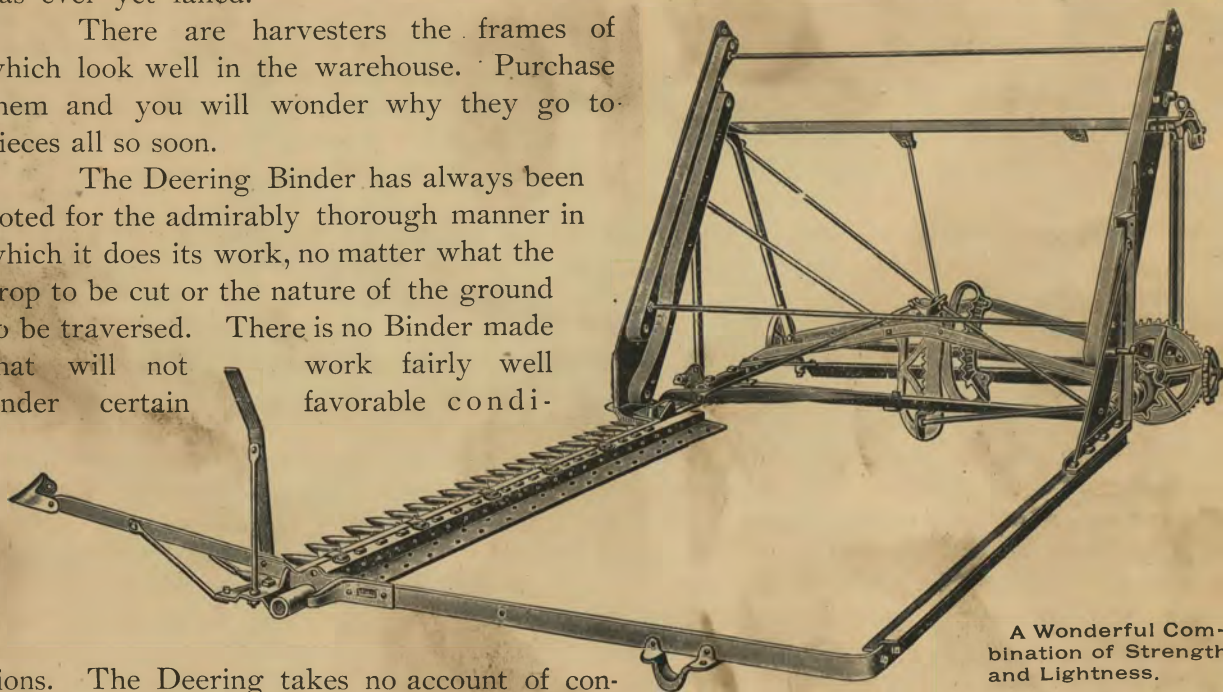
The Deering Binder went through the difficult harvest of 1889 without betraying a single weak point in its construction. While other machines failed to cut, elevate and bind, or required a host of experts to keep them running, the Deering did its work with little or no attention from agent or expert. Not content with its faultless work, we have determined to make the new Junior still more efficient. The motto of the Deering factory has ever been "Not how cheap, but how good." The new Junior Steel Binder will prove this truth in a greater degree than anything we have ever yet done.

The Steel Framework of the New Deering Junior Binder.—The

framework in a Binder is what the foundation is in a house—on it depends the stability and permanence of the whole structure. The new Junior has a steel framework that is practically indestructible. It will not bend, wear, nor can it be twisted or racked to pieces. It is put together in such a way as to be handsome in appearance and wonderfully strong. Among the thousands of frames we have made similar to this in material and outline, none has ever yet failed.

There are harvesters the frames of which look well in the warehouse. Purchase them and you will wonder why they go to pieces all so soon.

The Deering Binder has always been noted for the admirably thorough manner in which it does its work, no matter what the crop to be cut or the nature of the ground to be traversed. There is no Binder made that will not work fairly well under certain favorable condi-



A Wonderful Combination of Strength and Lightness.

tions. The Deering takes no account of conditions. It is strong enough and light enough to cut, elevate and bind any crop of grain grown in any country and on any soil. Other Binders in attempting to do as much have so far invariably failed. Why? Simply because they are not as good as the Deering.

This steel frame, as compared with the wooden frame still made, marks the extreme of progress in harvester building, as opposed to ideas long since exploded. The splendid method in which all the parts of the Deering Binder are built up on the solid steel foundation here shown is the true reason for its well-deserved reputation. During the season of 1890 the new Deering Junior Binder will more than repeat the triumphs of its predecessors.

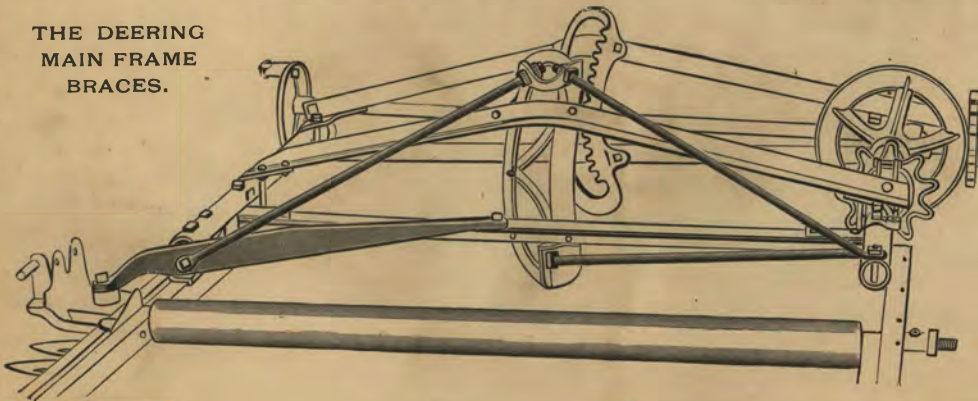
Corner Joint of Main Frame.—The illustration shows in detail a corner joint of the main frame. Observe how firmly the tubular frame, trusses, and upright post “A” are bolted together. There is no form in which steel can be combined that is at once so light, strong and rigid.

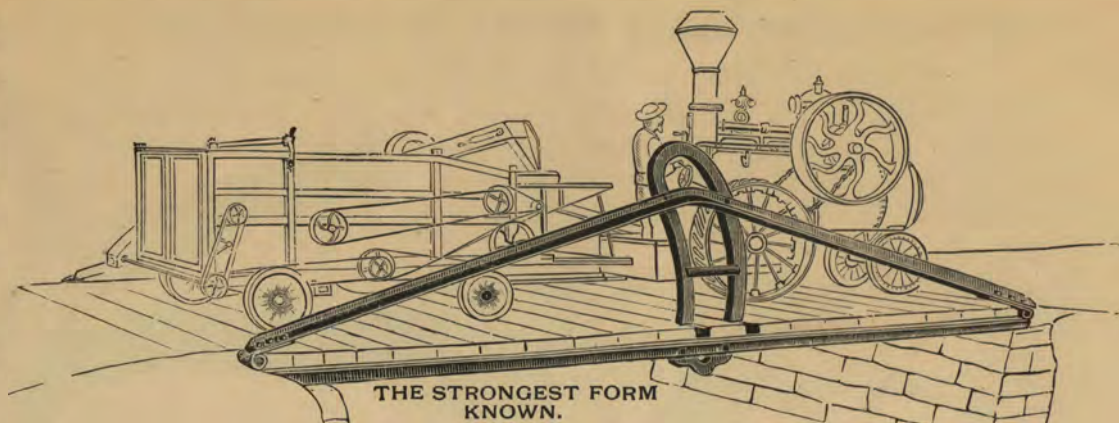


A firm system of bracing constitutes one of the unique and unequalled features of the new Junior. An architect in planning a building calculates the amount of weight or degree of strain at every point, and must devise means to overcome it. We have done a similar thing in building the frame of the new Junior. Many so-called steel machines collapse because there is no such provision made. It is not enough for us to use the best quality of steel, and more of it than in any other Harvester frame, but we put it together so that it will outlast any other frame. The main braces will effectually overcome the severest strain. The double crotch brace shown keeps the front and the rear sills of platform always parallel. Other manufacturers are chary in the use of braces, as their machines are too cheap or complicated to admit of their use. As well expect rails loosely laid on the ties not to spread beneath the weight of the engine, as to suppose that a Harvester frame unsupported by braces will bear the strain on it without giving way. Examine the main

frame of the average Binder and you will look in vain for any bracing worth mentioning. There is nothing to keep such a frame, with its intricate gearing, from yielding to every strain.

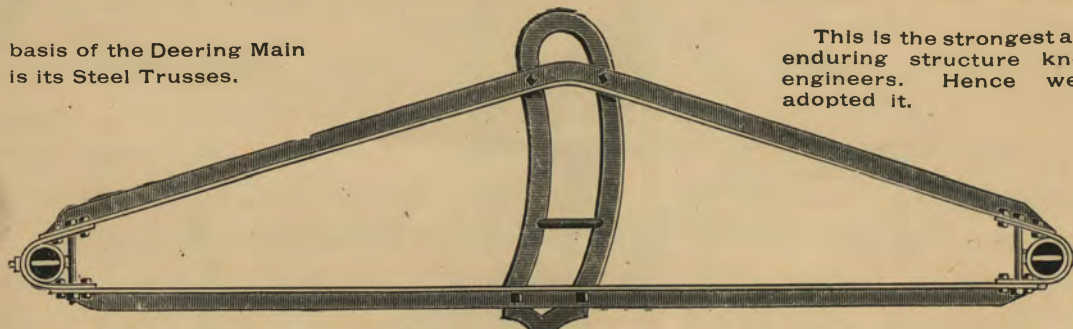
THE DEERING
MAIN FRAME
BRACES.





The basis of the Deering Main Frame is its Steel Trusses.

This is the strongest and most enduring structure known to engineers. Hence we have adopted it.



SHOWING THE VALUE OF A TRUSS AS UNIVERSALLY USED IN CONSTRUCTION.

Sound Mechanical Principles underlie the construction of the Deering Machines, and especially of our Junior Binder. We have applied to Harvester building the common-sense ideas that prevail in other kinds of construction—notably the modern steel bridge. This is plain from a glance at the above pictures.

The framework of a Harvester and Binder, as it stands in the warehouse, has nothing but a certain amount of weight to sustain. It is only while at work in the field that one can witness the powerful forces that bear continually upon every part of the main frame and in every direction. This is why the frame must be capable of withstanding the thousand and one different kinds of strain to which it is liable. The truss is the method adopted to achieve this result. That is what makes the Deering frame of longer life than all others.

The Side Castings being attached to the truss, no amount of downward or side pressure can displace them in the least. The main wheel is firmly and forever fixed in its position. It cannot tip or wobble with such a rigid support.

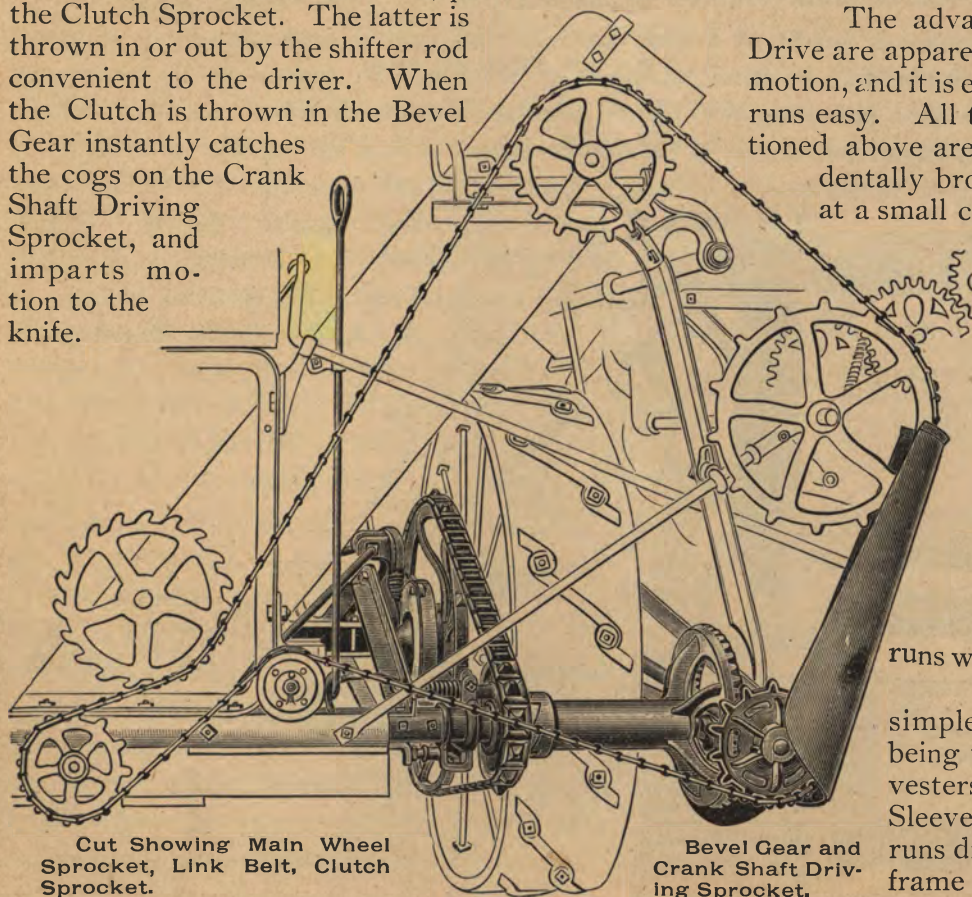
THE CHAIN DRIVE OF THE DEERING JUNIOR STEEL BINDER.

THERE is no feature of our new Junior that will be more thoroughly appreciated than the Main Chain Drive. Simple, strong, lasting and free from liability to get out of order, it is by far the best mechanism for transmitting power that was ever put on a harvester. Cog gears have done good service, but after thorough experimental and practical tests of five years, we take pleasure in offering something better. Cog gears may be fitted very nicely in the shop, but they are liable to lose their relative positions to each other, to grind and to increase the draft of the machine. The Chain Drive here shown is open to none of these objections. It is the simplest, strongest and most efficient device of the kind in existence. By means of a link belt, power is communicated from the Main Wheel Sprocket to the Clutch Sprocket. The latter is thrown in or out by the shifter rod convenient to the driver. When the Clutch is thrown in the Bevel Gear instantly catches the cogs on the Crank Shaft Driving Sprocket, and imparts motion to the knife.

The advantages of the Chain Drive are apparent. There is no lost motion, and it is extremely flexible and runs easy. All the other parts mentioned above are durable, and if accidentally broken, can be replaced at a small cost, and without the aid of a mechanic.

There are no "wheels within wheels" to get out of adjustment, and soon wear out. Even if by any improbable accident the frame of the Harvester is racked or springs, the Chain Drive remains unimpaired and always runs with little or no friction.

The gearing is very simple, no countershaft being used as on some harvesters; the Bevel Gear Sleeve, as will be noticed, runs directly on the tubular frame as a bearing.



Cut Showing Main Wheel Sprocket, Link Belt, Clutch Sprocket.

Bevel Gear and Crank Shaft Driving Sprocket.

THE illustration below presents a front view of the apparatus used on the Deering Junior Steel Binder for driving the sickle. The parts to which we invite attention are the Crank Shaft, Crank Wheel, Pitman and Braces.

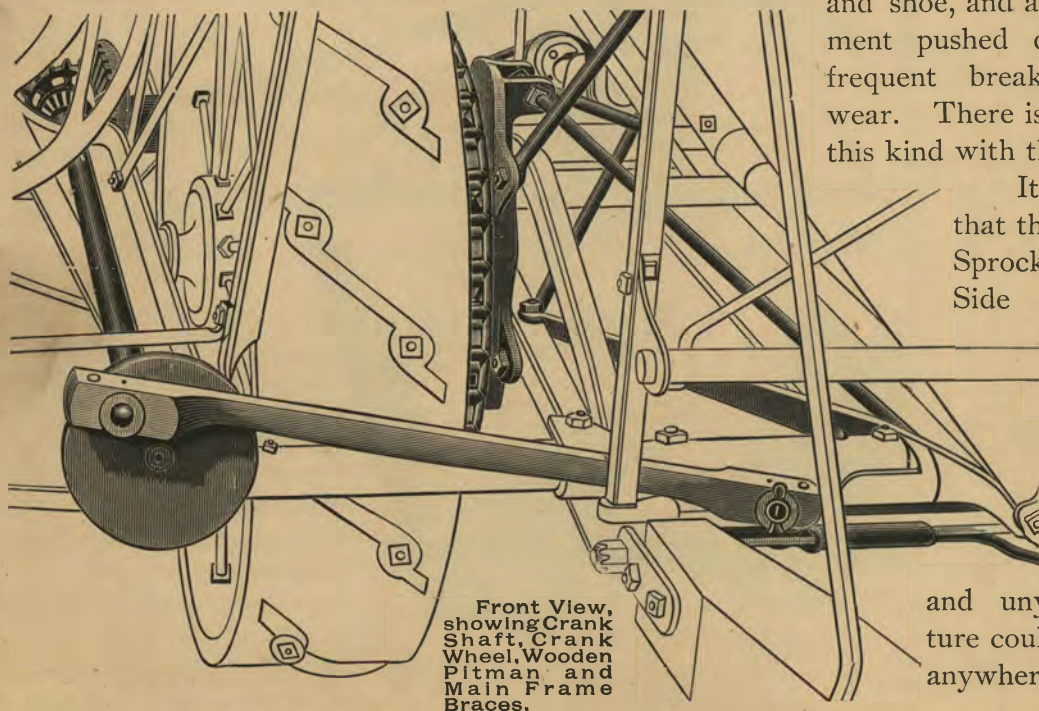
The steel Crank Shaft is $1\frac{1}{8}$ inch in diameter, and at both ends runs in long bearings which are very firmly bolted to the main frame of the Harvester. The shaft is carefully fitted to the bearings, and therefore runs with the utmost possible facility.

The Crank Wheel is well above the ground, to avoid obstructions and to run clear of the stubble. The wrist pin to which the Pitman is attached is almost on a level with the sickle. The result is that a direct powerful stroke is given the sickle at all times.

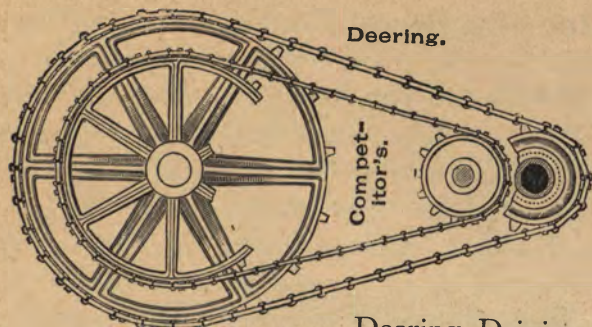
The long Pitman is made of wood, and so constructed as to be very durable. It gives a steady, uniform and positive motion to the sickle. By reason of the position of the crank wheel there is no pounding. On some Binders the crank wheel is so high above the plane of the knife that the sickle is at one moment pulled up against guards, clips

and shoe, and at the next moment pushed down. Hence frequent breaks and rapid wear. There is no trouble of this kind with the Deering.

It will be noticed that the Main Wheel, Sprocket Wheel and Side Castings are rigidly supported by braces, so that they cannot shift or get out of position. A more solid and unyielding structure could not be found anywhere.



Front View,
showing Crank
Shaft, Crank
Wheel, Wooden
Pitman, and
Main Frame
Braces.



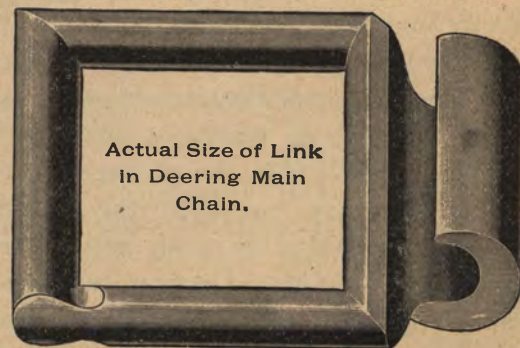
Comparison between Deering Sprocket Wheels and a Competitor's.

THE success of the Deering Binder has been largely due to the fact that all of its wheels and working parts have been large in proportion to the labor required of them. In adapting the Chain Drive to our machine we use large Sprocket Wheels, in order to reduce friction and consequent wear. The adjoining illustrations show the comparative sizes of the

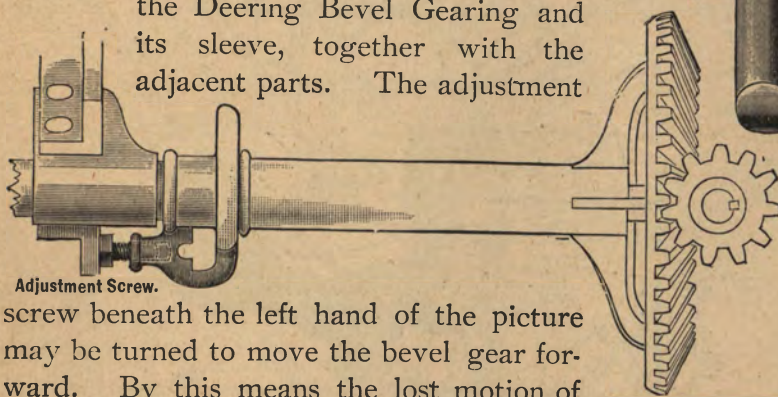
Deering Driving Sprocket Wheels and Chain, and the same parts on a competitor's machine. The diameter of our Main Sprocket Wheel is fully five inches greater. This, taken with the fact that the Deering Chain is much stronger and larger, makes our chain drive fully twice as durable.

By actual computation it can be proven that if a strain of 1000 pounds is required to break the Deering Main Chain, it would take a strain of but 550 pounds to break competitor's chain.

On account of the constant tendency of gearings to press apart, it sometimes becomes necessary to set them deeper in gear so that they will mesh perfectly. The illustration below shows the Deering Bevel Gearing and its sleeve, together with the adjacent parts. The adjustment



Actual Size of Link In Deering Main Chain.



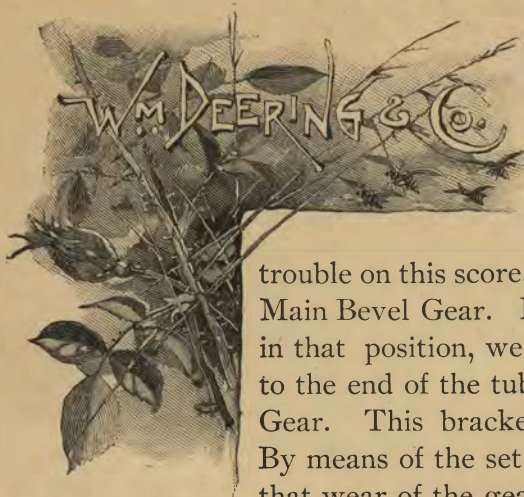
Adjustment Screw.

screw beneath the left hand of the picture may be turned to move the bevel gear forward. By this means the lost motion of the gearing can be taken up at once, and it must remain so.

The adjustment secured by this screw will forever prevent any trouble with the gearing and goes to show the perfect construction of this remarkable machine.



Size of Link in same Chain on a Competitor's Machine.

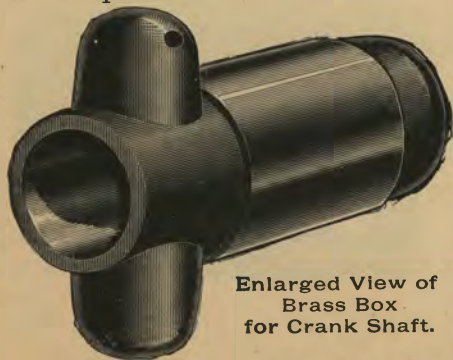


The Deering Bevel Gears.—The one great

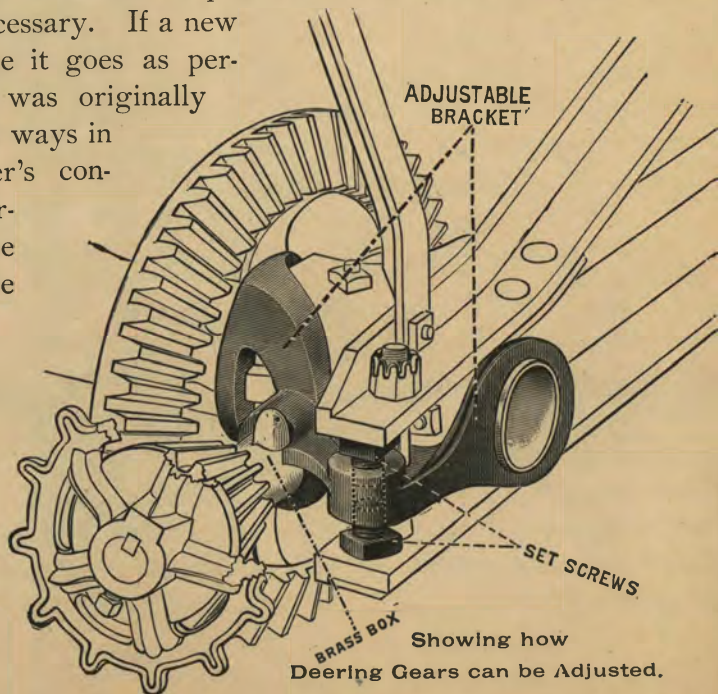
objection to cog gears is that they are liable to get out of true and run hard, thus increasing the draft of the machine, causing lost motion and wearing themselves out quickly. We have so successfully overcome this difficulty that the purchaser of the new Deering Junior need fear no

trouble on this score. We have already shown our method of adjusting the Main Bevel Gear. In order to make both gears fit perfectly and continue in that position, we have provided a movable or *adjustable bracket*, fitted to the end of the tubular shaft that serves as a bearing for the Main Bevel Gear. This bracket holds a brass box in which runs the Crank Shaft. By means of the set screws shown, the bracket may be so nicely adjusted that wear of the gears and box is reduced to a minimum. This ingenious

device makes it an easy matter for any farmer to keep the shaft in line. A few turns with the monkey wrench is all that is necessary. If a new brass box is applied to an old machine it goes as perfectly to place as when the machine was originally made. This is only one of the many ways in which we have consulted the farmer's convenience in using this handy and enduring binder. With a Deering Junior he can be his own mechanic and dispense with experts.

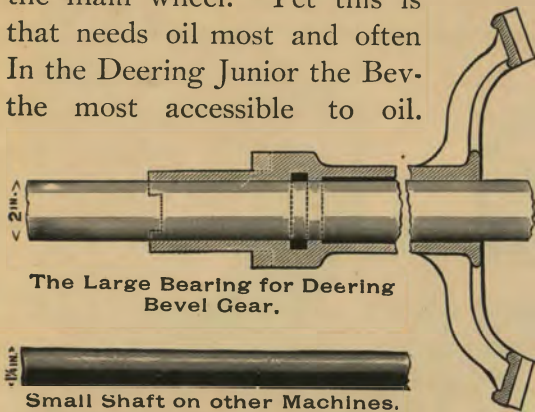


Enlarged View of
Brass Box
for Crank Shaft.



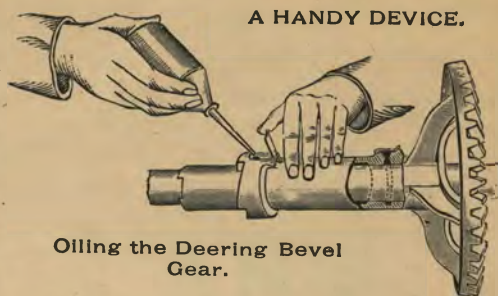
Showing how
Deering Gears can be Adjusted.

Deering Oil Cups.—In most Harvesting Machines, the most inaccessible part to oil is and always has been the shaft which receives motion from the main wheel. Yet this is that needs oil most and often. In the Deering Junior the Bevel gear shaft is the most accessible to oil.



just the part gets the least. The cut shows also how the

oil cups are capped over with covers, held down securely with springs. They retain the oil, distribute it as wanted to every part of the bearings, and exclude the grit and particles of dirt that cause shafts or bearings to run hard and wear. Compare with this handy arrangement the screw plugs or open holes still found on some Binders.



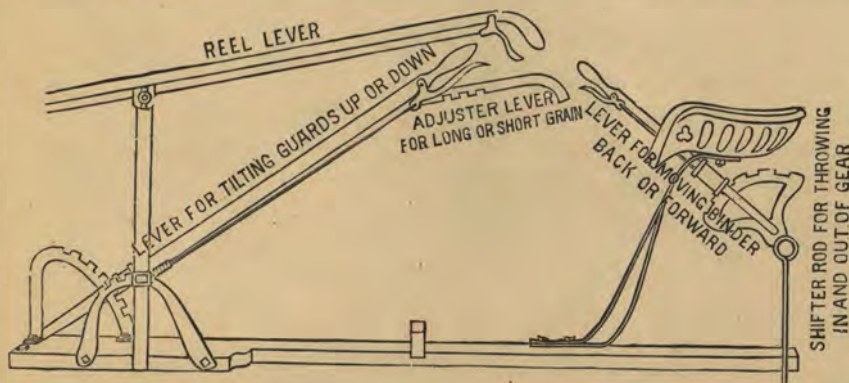
A HANDY DEVICE.

Oiling the Deering Bevel Gear.

The Deering Bevel Gear Sleeve runs on the tubular steel frame as a bearing. This bearing is 2 inches in diameter. Compare with this long bearing the one usually found on other Binders, which is but 1¼ inches in diameter at most, and short in length.

The Adjustments of which the Deering is capable are as numerous as they are simple. A boy can reach and quickly handle every lever and adjuster without rising from his seat.

No stoppages need be made, even on the roughest and most uneven ground, or in grain difficult to cut, so quickly and freely do the levers respond to the touch. The dogs drop readily and fit close into the ratchets, while breakage or bending of the various parts cannot occur. The Deering Junior is pre-eminently a machine easy to handle.

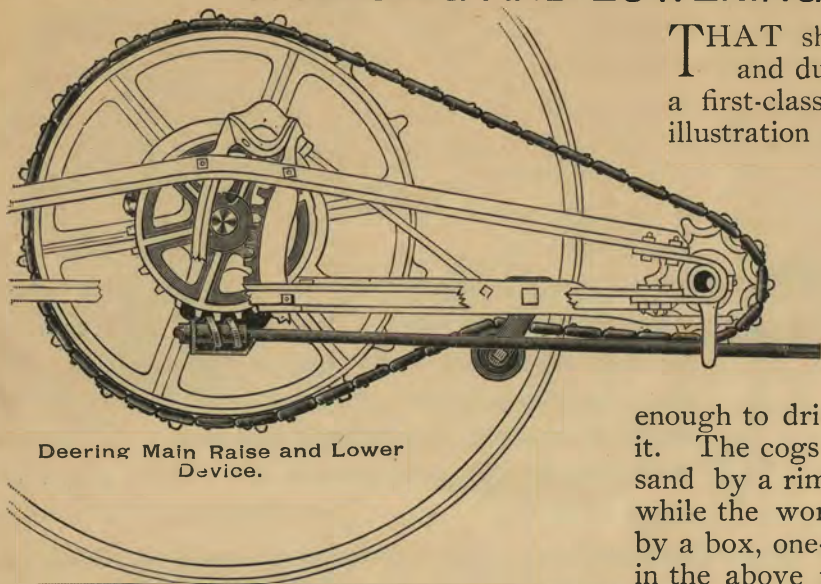


Convenience of all Levers and Adjustments on the Deering.

A RAISING AND LOWERING DEVICE

THAT shall be perfect in its operation and durable is one of the essentials of a first-class Harvesting Machine. This illustration indicates how well we have succeeded. The main axle rotates in raising and lowering the machine. The power required to turn the crank is notably small—so much so that any boy strong

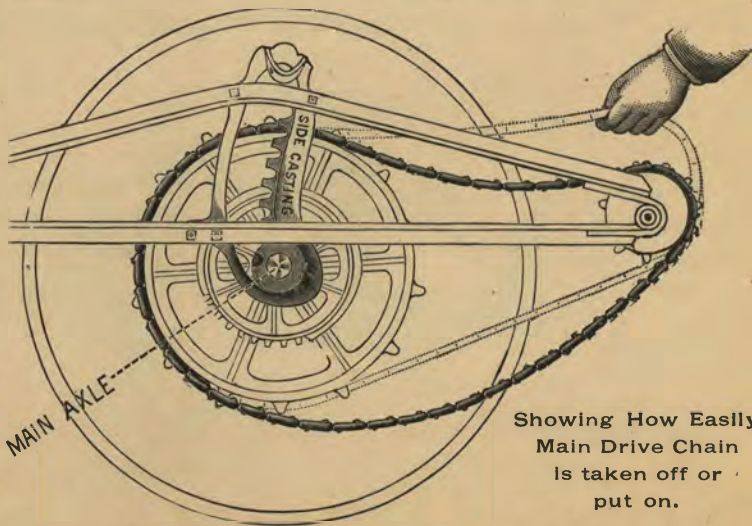
enough to drive a team of horses can work it. The cogs are protected from dust and sand by a rim running all the way around, while the worm screw is similarly covered by a box, one-half of which is broken away in the above picture to give a better view. The crank shaft is locked at its outer end in an



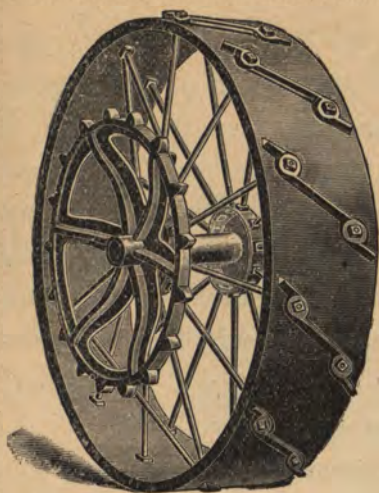
Deering Main Raise and Lower Device.

instant, to prevent machine from running down.

The Main Driving Chain, by reason of its large size and strength, cannot break, yet it is sometimes desirable to take it off, and necessary, of course, to put it on when setting up the machine. In order to do this easily, it is only necessary to raise the machine to its highest point, when the axle pinion is rolled back an inch or more. This allows the chain to be thrown off or on at pleasure. Lowering the machine a little distance brings all the parts into working order. There is no machine made in which the chain can be so quickly taken off or put on, nor will there ever be without infringing our patents covering this device.



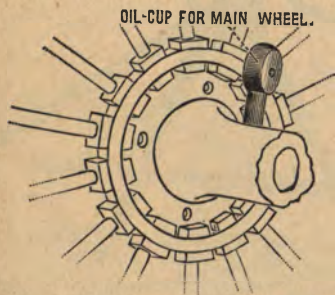
Showing How Easily Main Drive Chain Is taken off or put on.



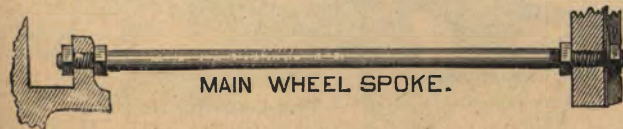
The Deering Main Wheel is made of steel in every part except in its wooden felloe. The felloe consists of one piece and not two, as in other machines, and therefore it will never warp. The Deering main wheel is 38 inches high and 9 inches wide, while many competitors put under their machines a wheel 34 to 36 inches in diameter, and only 8 inches wide. Every spoke in our wheel has four nuts, by which it is virtually made as one piece with the felloe and hub. The wheel is thus kept always rigid. In proportion to the work done, there is no main wheel on any other

Harvester so well adapted to impart motion to all the working parts. In this cut is also shown the largeness of the sprocket wheel which carries the main driving chain. It is braced to the felloe of the main wheel by two double-nutted stay rods.

Oil Cup on Main Wheel.—It goes without saying that



the main wheel should be always kept well supplied with oil. The device used on the Deering for the purpose is at all times easy to get at and excludes all dust from the main axle.



This Enlarged View of main wheel spoke shows the four nuts. It is impossible for the wheel to break down or warp out of shape with these steel spokes. It will stand any climate or ground.



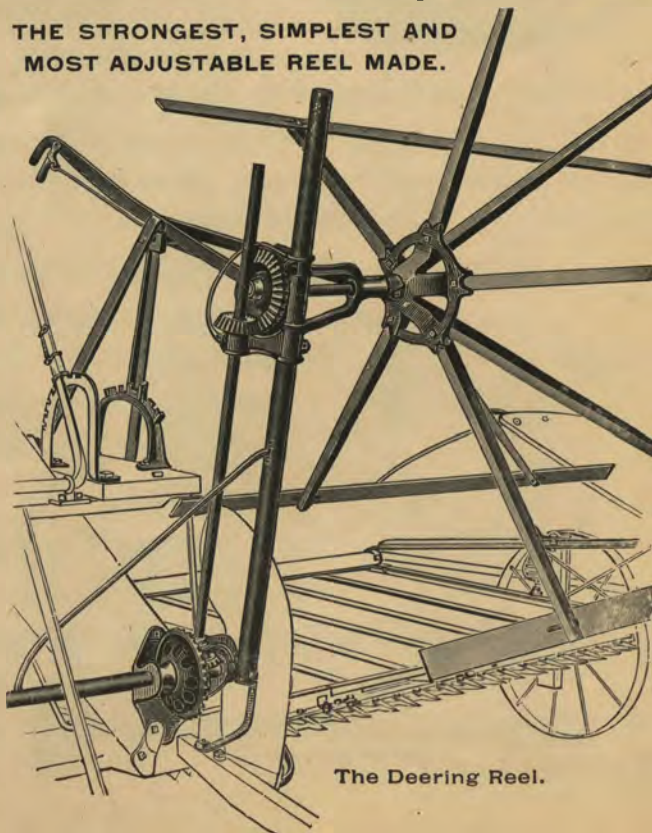


The Shoe of a Harvester always has to carry the weight of the reel, the weight of the forepart of main frame, as also the weight of the tongue brace. In view of this we have provided means whereby the shoe is thoroughly supported. One of the main braces is extended for this purpose. Nothing can twist the shoe and the parts it supports out of position.

We have no hesitation in saying that a more durable structure was never produced.

The Deering Reel.—We ask you to compare the Deering Reel with any other, no matter on what machine it is found. You cannot fail to notice how few parts it has and how easy and convenient it is to operate. There is no network of chains about it to run off, wear and give trouble. Being hinged, not at the seat-board, as are other reels, but at the inside shoe of platform, it has a greater scope of movement, up and down, back and forth, than any other. *Only one lever is required to move it in all its 65 different positions.* It will bring any grain to the sickle without bearing it down or tearing off the heads. When the machine is tilted down this reel will literally pick up grain that leans away from the sickle. It is made with five or six arms to suit different localities.

THE STRONGEST, SIMPLEST AND MOST ADJUSTABLE REEL MADE.



The Deering Reel.

A Perfect Knife-Head Guide is essential in a harvesting machine. We have provided one that cannot be broken. This guide has never been equaled, much less excelled. It is made of steel and has large bearing surface.

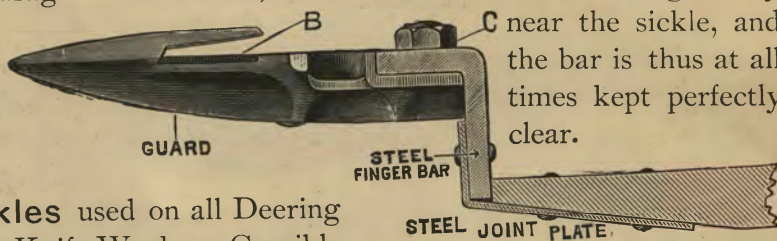


The Deering
Knife-Head
Guide.

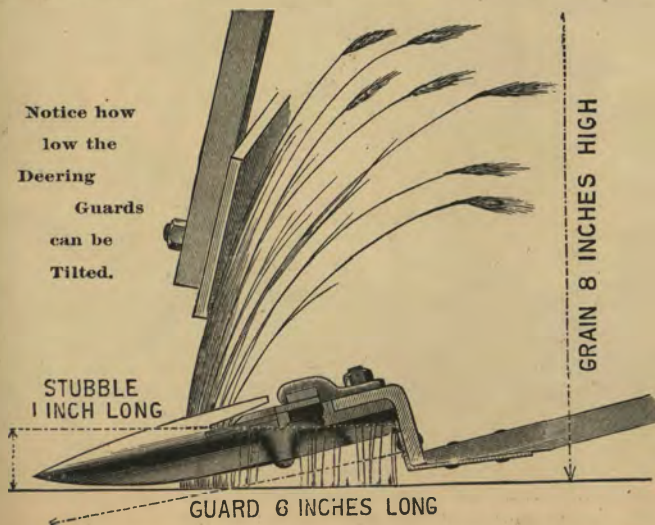
The Deering Guard and Finger Bar are here shown. The guard is of malleable iron, and has a steel ledger plate. The finger bar is of steel throughout. The plate joining the Finger Bar to the Platform Boards is also of steel, and will stand any

amount of rough usage. The canvas, it will be noticed, can be brought very near the sickle, and the bar is thus at all times kept perfectly clear.

The Deering Guards can be tilted very low, when it is necessary to cut short grain or pick up fallen grain. The reel can also be let down very low.

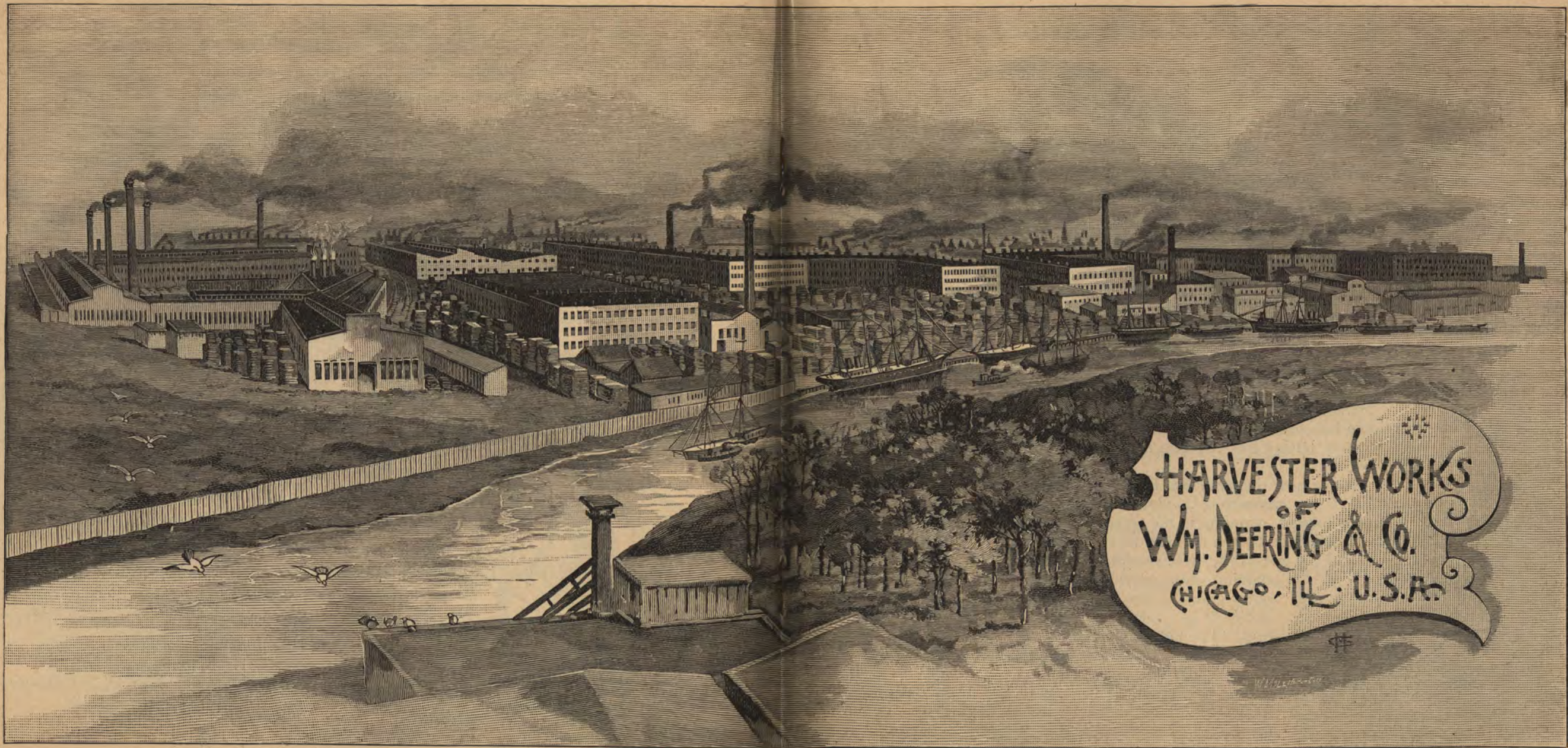


The Knives and Sickles used on all Deering Machines are made in the Deering Knife Works. Crucible Cast Steel of the best quality is the material used in every section, which is tempered to the very limit of hardness and toughness.



WM. DEERING
& CO. manufacture
their own
Knives, and can
guarantee them
in every respect.





THE growth of the Deering Works is without a parallel among Harvester concerns. It has but kept pace with the ever-increasing popularity of the Deering Machines. Less than 30 years ago the Works consisted of a small two-story frame building located in an Illinois village. From the date of their removal to Chicago, in 1880, they have been yearly spreading over a wider area, until the buildings and lumber yards embraced in the present plant occupy fully 40 acres of ground, and constitute the best equipped establishment of its kind in the world. Three thousand (3000) workmen are employed, and over four thousand (4000) agents are kept busy selling and distributing Deering Machines in every civilized quarter of the globe. A very large part of all the Binders in use in this country have been made in the Deering Works.

THE DEERING OUTSIDE DIVIDER.

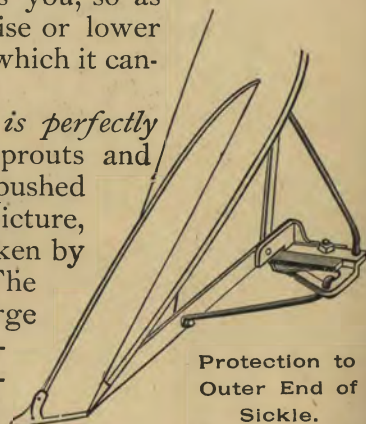
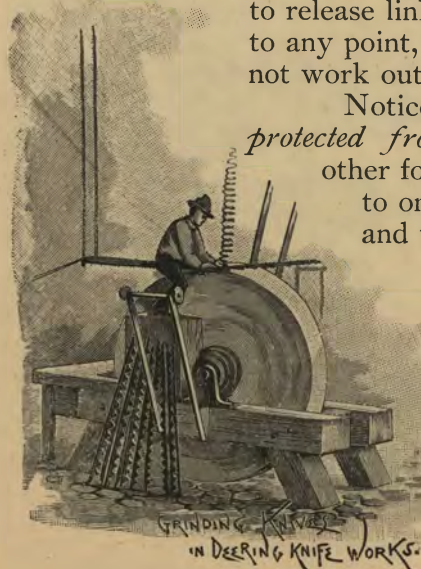
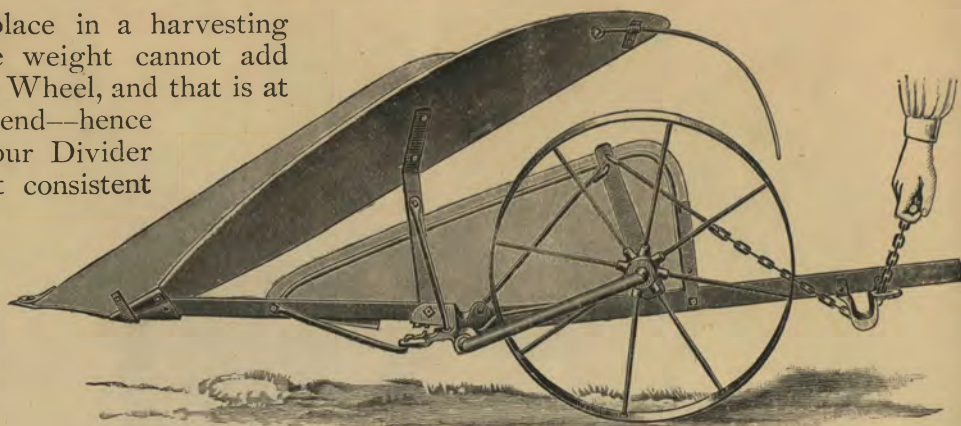
THERE is one place in a harvesting machine where weight cannot add traction to the Main Wheel, and that is at the Grain Wheel end—hence we have lightened our Divider to the lowest point consistent with strength and durability. It is stronger than any other in the market, and does not weigh half as much. It has an all-steel wheel that is extremely durable. The Divider guards the knife perfectly.

Raising and Lowering.—Both the inner and the outer end of the new Junior can be quickly and easily raised or lowered. The above picture shows how this is done at the grain wheel end. The platform can be placed at any height desired in a few seconds.

Grasp the handle of chain, pull towards you, so as to release link from notch that holds it and raise or lower to any point, letting link slip into notch, from which it cannot work out.

Notice how the *outer end of the sickle is perfectly protected from obstructions*. Corn stalks, sprouts and other foreign growths in the grain, are pushed to one side by the rod shown in the picture, and the end of the knife cannot be broken by

running into anything. The outer guard is also made large and long as a further protection. The new Junior Deering is built throughout on the principle that trifles constitute perfection. Every part has been designed to secure the best effect, without regard to the cost involved. The result is that it bears evidence of the most careful construction from the best materials.





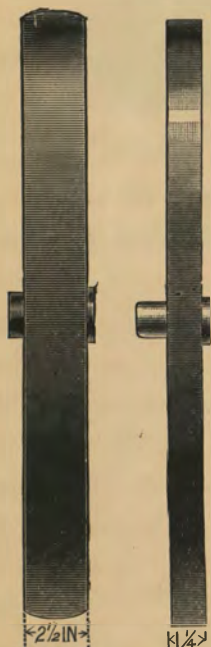
The Deering Steel Grain Wheel.

—There is no part of a Binder that will show the effects of wear or of poor construction sooner than the grain wheel.

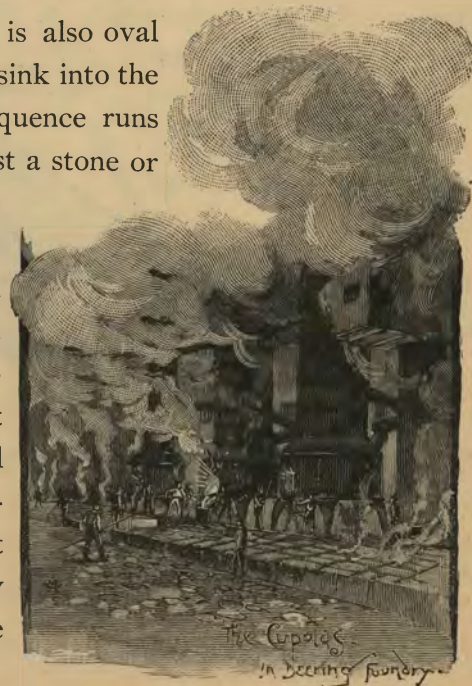
In the first place, the rim of the wheel is usually very narrow—some $1\frac{1}{4}$ in. wide.

What is the result? In running over uneven or stony ground the wheel receives many severe jars, while on soft or even dry bottoms it plows into the ground and carries up large

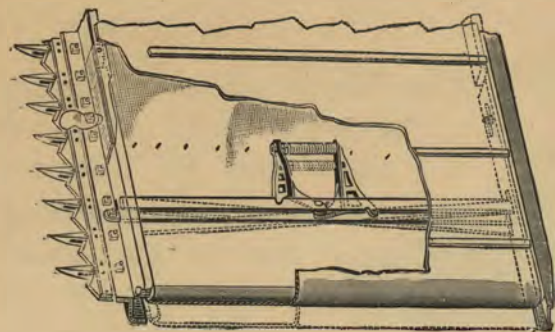
quantities of earth. *The Deering Steel Grain Wheel has a tire $2\frac{1}{2}$ inches wide.* This tire is also oval shaped on the outside, so that it does not sink into the ground. The whole machine in consequence runs easier. Should the wheel strike against a stone or other obstacle, the force of the shock is greatly lessened. The steel spokes are connected to the other parts of the wheel by enlarged tenons, which are fitted tightly into the mortises by heavy pressure and while cold. Sand rims protect the axle, and the latter can be kept well supplied with oil. The bushing is of extra hard steel and removable, so that when worn it can be quickly and cheaply replaced. A stronger, more durable grain wheel has never been made.



Wide, Oval Tire of Deering Grain Wheel contrasted with Narrow, Flat Tire of Grain Wheels on other Binders.



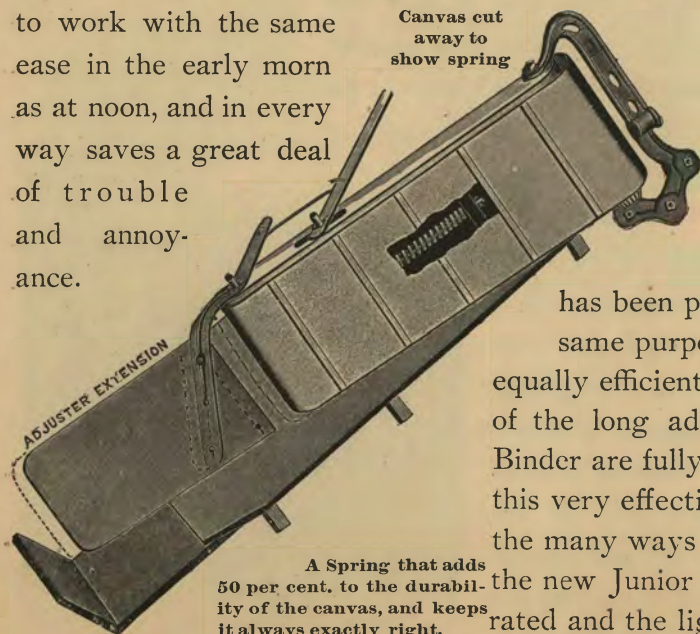
THE DEERING PLATFORM CANVAS SPRING.



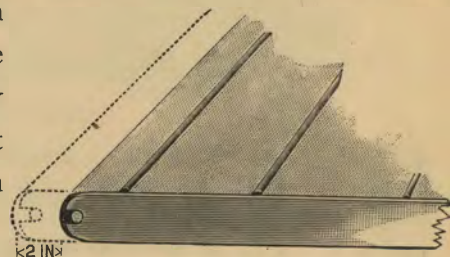
THE alternate shrinking and stretching of the canvases is a source of considerable trouble on many Binders. If the canvases are too tight the rollers run hard; if the canvases are too loose they slip. It is impossible to keep them at the proper tension, even by frequently pulling up or letting out the buckles in the straps. To remedy all trouble on this score, we have placed a spring

in the platform which keeps the canvases so that they run with the least friction, and always remain at the same degree of tension. The pictures presented herewith show the scope of movement given by this excellent device. It adds greatly to the durability of the canvases, allows them to work with the same ease in the early morn as at noon, and in every way saves a great deal of trouble and annoyance.

Canvas cut
away to
show spring



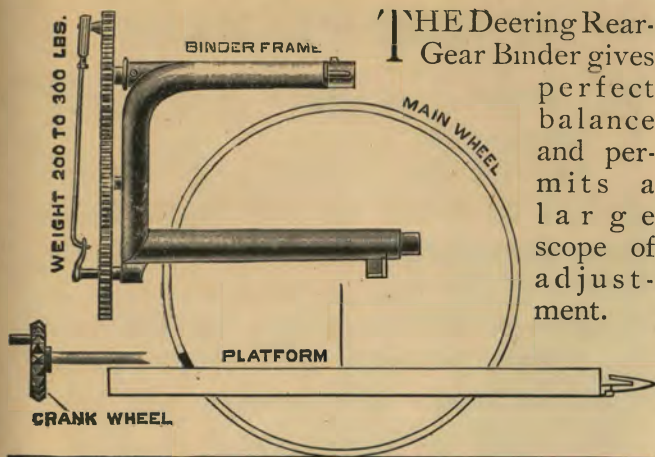
A Spring that adds
50 per cent. to the durabil-
ity of the canvas, and keeps
it always exactly right.



Scope of movement afforded by the Deering
Platform Canvas Spring.

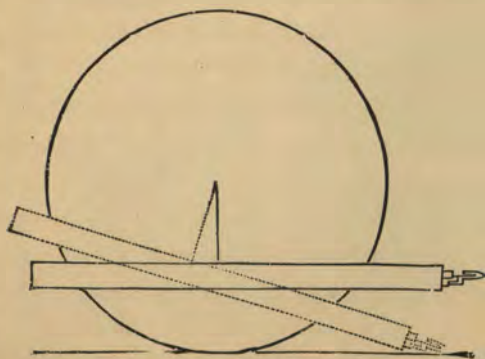
The Adjuster Canvas Spring.—

In order to insure the durability of the adjuster canvas, as well as to relieve the operator from tightening it, a spring has been placed in the adjuster also. It serves the same purpose as the platform canvas spring, and is equally efficient, simple and durable. The advantages of the long adjuster extension placed on the Deering Binder are fully illustrated on page 23. The placing of this very effective spring in every adjuster is only one of the many ways in which we have succeeded in making the new Junior the most durable, the most easily operated and the lightest draft binder ever seen.

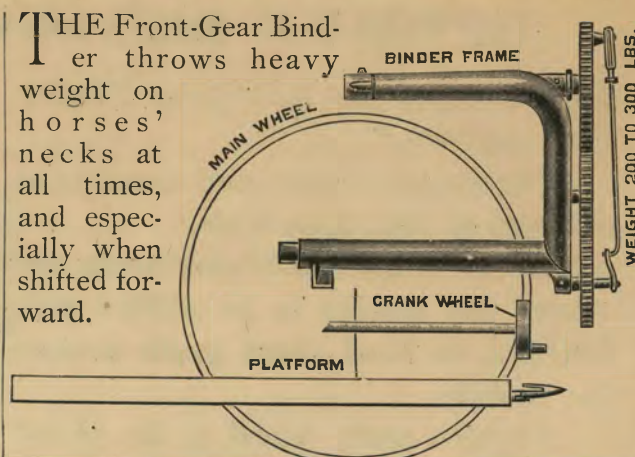


THE Deering Rear-Gear Binder gives perfect balance and permits a large scope of adjustment.

THE Deering Wheel is placed well to the rear, allowing great scope of tilt to the guards to pick up down, tangled or twisted grain. The new Deering Junior is an easy machine for the driver to operate and for the horses to pull.

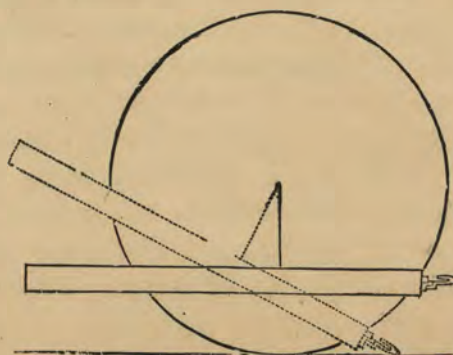


The Tilt of the Deering Platform.



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

THE Cutter Bar of the Front-Gear Binder, being on a line with the face of the main wheel, there is little or no tilt. To get any at all, the back of the platform has to go up so high that it cannot hold the cut grain. The result is that grain is wasted by falling on the ground.



The Tilt of the Front-Gear Binder.

THE REAR-GEAR BINDER Contrasted with THE FRONT-GEAR BINDER.

THE Deering is a Rear-Gear Binder; therefore it

Carries its weight and Gearing at the rear of the Main Axle.

Keeps weight off horses' necks and allows the Binder to be shifted well forward, to bind short grain around the middle.

Permits main wheel to be placed well to the rear, giving a wide scope of tilt.

Leaves room for a long adjuster to make square-butted bundles.

Enables Binder to handle long or short grain, placing the band at the proper place on the sheaf in either case.

THE Front-Gear Binder is unpopular because it

Carries its weight and Gearing always in front of the Main Axle, thus throwing a burden on horses' necks.

Has small capacity for shifting the Binder forward, and allows small space between the needle and the front of the Binder.

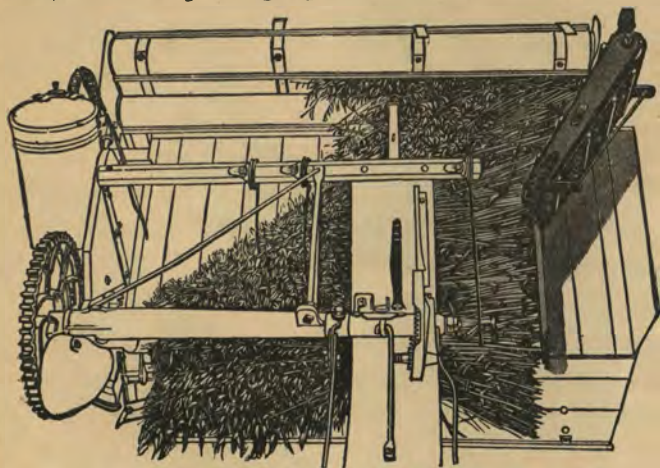
Necessitates placing the main wheel far ahead, making the tilting capacity very small, and literally shooting the rear of the platform into the air and allowing cut grain to fall over on the ground.

Makes an untidy bundle when working in very long or very short grain.

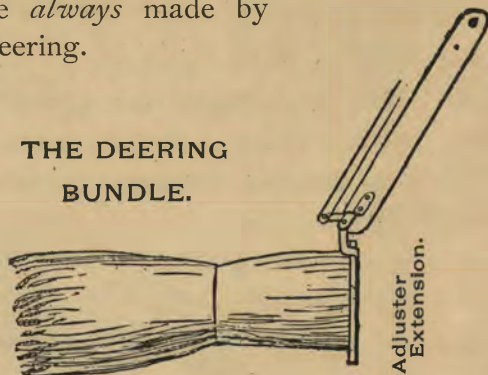
The manufacturers of Front Gear Binders have tried to overcome the above objections by dispensing with cog gearing and substituting various make-shift devices that cause their binders to "miss" bundles. This is the reason why a certain manufacturer of both rear and front-gear binders admits that the former are "fast becoming the favorites." The Deering Rear-Gear Binder Attachment has always been noted for its lightness, simplicity, reliability, great range and ease of adjustment, and capacity to bind the longest and shortest grain. There is no shelling of grain, nothing to obstruct the free passage of the heads in their downward course to the binder. It makes tight, uniform bundles, saves twine and never misses or chokes. There are no superfluous parts to add to its weight, no intricate mechanism to get out of order. The few parts it has rarely get out of order, and in any case, a novice can set them right. No wonder it has been pronounced by farmers generally the best working, as it is the best looking, binder attachment made.

THE REAR AND THE FRONT GEAR BINDER.

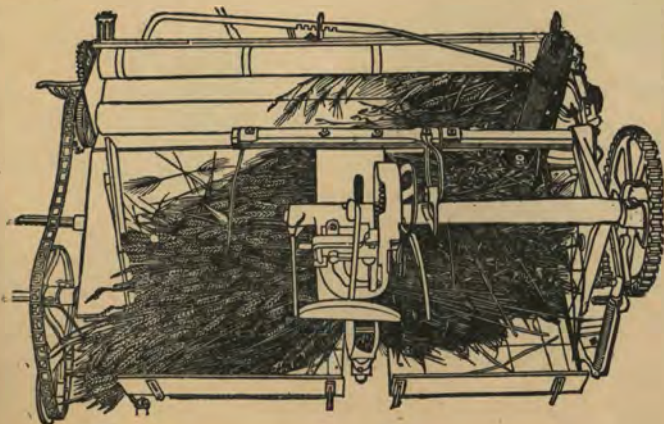
OBSERVE the good effect of having an adjuster extension which it is possible to put on the Rear Gear Deering. The picture below is taken, without change or addition, from a photograph of the Deering in the field. Notice the butts of the grain now forming into a bundle. The square-butted compact sheaf, shown below, is the kind of bundle *always* made by the Deering.



THE DEERING
BUNDLE.



SHORT grain cannot be properly adjusted on a Front Gear Binder, as the gearing, being in the way, prevents a long adjuster from being used. Hence the untidy bundle. The picture below is taken, without change or addition, from a photograph of a Front-Gear competitor in the field. It fully explains the awkward bundle shown below. The short adjuster is of little or no value. What you may save in money by getting such a machine is soon more than spent in the grain wasted.



COMPETITOR'S
BUNDLE.

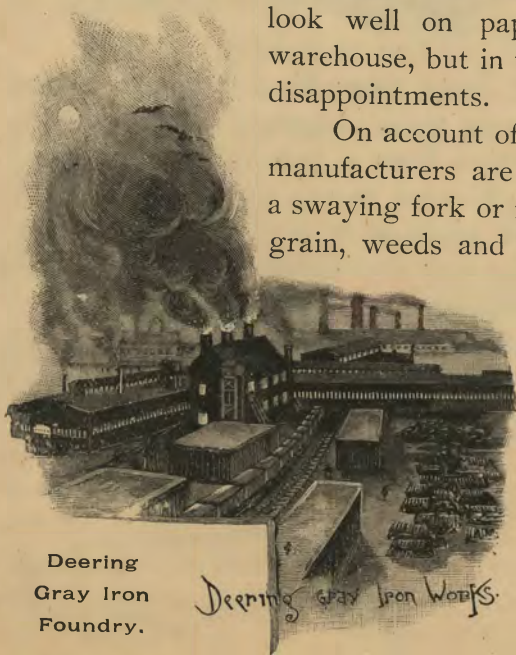


The Deering Elevators.—Almost any binder will work in ripe standing grain and on smooth ground, but it is in emergencies such as were numerous during the harvest of 1889 that the real working capacity of a machine is measured. In wet, heavy, green or down grain, many machines last year found it *difficult* to cut and *almost impossible* to elevate the grain. Not so with the Deering. It was equal to the worst kind of grain in elevating as well as in cutting and binding it. The elastic and wide elevators on the new Junior never fail to do what is claimed for them; nor do they choke, but carry up the grain smoothly without shelling, breaking or tearing off the heads. Observe that these elevators are low and slope up gently, instead of abruptly, as on some machines.

The illustrations show how thin grain and heavy grain crops are handled equally well by the Deering Elevators. Beware of open end and other similar elevators. They look well on paper or in the warehouse, but in the field prove disappointments.

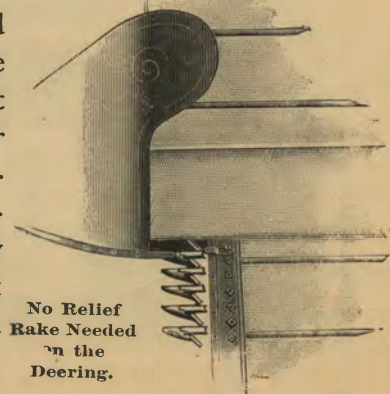
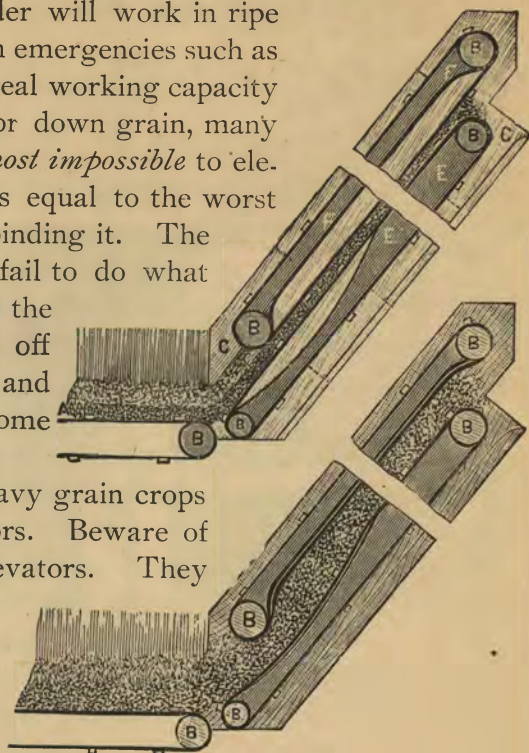
On account of patents, many manufacturers are obliged to put a swaying fork or rake at the knife heel to keep this point free from short grain, weeds and grass. It is a nuisance.

Look at this picture and you will see why the Deering Binder does not need one. The elevator canvases extend considerably beyond the cutting line, and quickly catch everything that falls on the platform canvas.



Deering
Gray Iron
Foundry.

Deering Gray Iron Works.



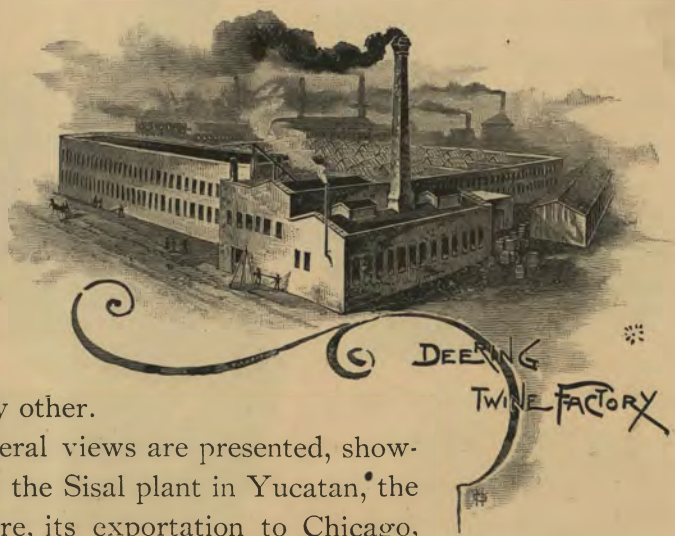
No Relief
Rake Needed
in the
Deering.



THE DEERING TWINE WORKS.

WM. DEERING & Co. are the only Harvester manufacturers in the world who make their own twine. It is made so carefully and conscientiously that those who use it may know that they will have no trouble either with machine or twine. Other Harvester manufacturers buy the twine they sell wherever it can be bought the cheapest. While the reputation of the Deering Binders does not depend on the kind of twine used, we would urge the users and purchasers of our Machines to consult their own interest by demanding Deering Twine. In getting twine bearing the Deering tag, they will avoid the delay and vexation caused by the use of poor twine, a considerable amount of which is palmed off on unsuspecting farmers. The Deering Twine is made in our own factory by skilled workers and with the most improved machinery. It is strong, evenly spun, and, considering the number of feet to the pound, worth more than any other.

In this and the following pages several views are presented, showing the various stages in the growth of the Sisal plant in Yucatan, the process of extracting and drying the fibre, its exportation to Chicago, and manufacture into twine at the Deering Twine Works.





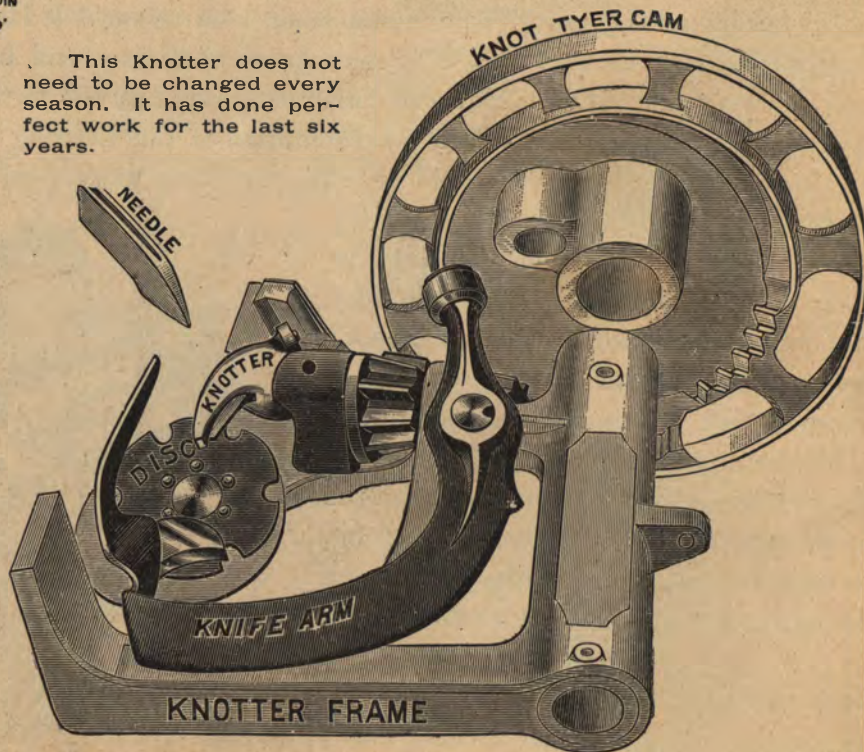
WM. DEERING & CO. are the only Harvester
manufacturers in the world who make their own
Binder Twine.



A SAFE, SIMPLE AND SURE KNOTTING DEVICE.

ANYONE can understand the adjoining
knotting device. It has
fewer parts and is less
liable to get out of order
than any other. Being
also stronger, simpler and
surer in tying the knot, it
has greatly contributed to
the wonderful success of
the Deering Binder. It
has stood the test of years
and no knotter equal to it
has yet been invented.

All the parts of this
knotting device are ad-
justed at the Deering factory. They cannot get out of order.



This Knotter does not
need to be changed every
season. It has done per-
fect work for the last six
years.

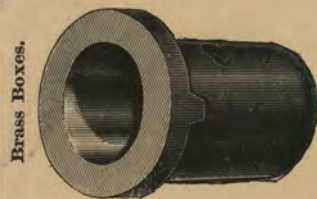


WM. DEERING & CO, are the only Harvester manufacturers in the world who make their own Binder Twine.

The Deering Twine Box.—The position of the Twine Box on the front “A” frame will be appreciated by every farmer. No stopping of the horses, climbing down from the seat and lifting the lid to see how much twine is in the box, or why it does not come out properly. The ball in the Deering Twine Box, the tension spring, and the twine as it comes out are all in full view, instead of being hidden away out of sight, as on most Binders. A step forward on the seat board, and a new ball of twine can be put in or any slight adjustment made.

BRASS BOXES.

The elevator rollers of the Deering Junior run in brass bearings. The latter are made large and long to stand a great amount of wear and keep the rollers always true.



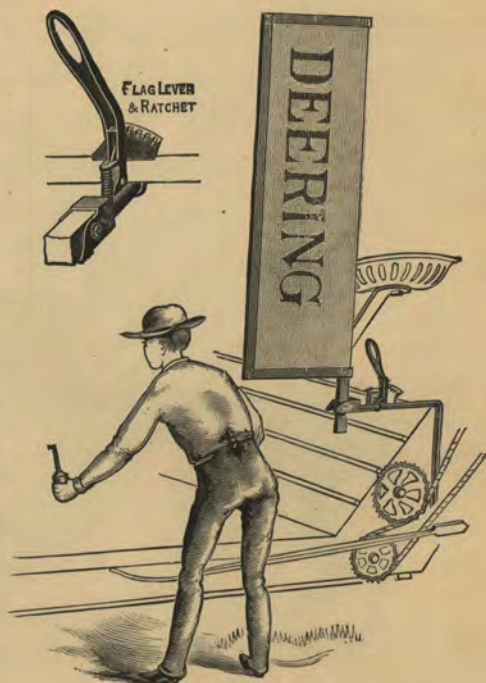
Brass Boxes.



WM. DEERING & CO. are the only Harvester manufacturers in the world who make their own Binder Twine.

THE Deering Flag can be swung forward or back (and locked in any position), and causes the grain to go to the elevator properly, whatever its condition. The great beauty of the Deering Flag is peculiar to it—it can be raised out of the way, where it will securely remain, as shown by the picture on this page, until it is put in place again. This is a very great advantage, especially if anything has to be done to the platform or canvases.

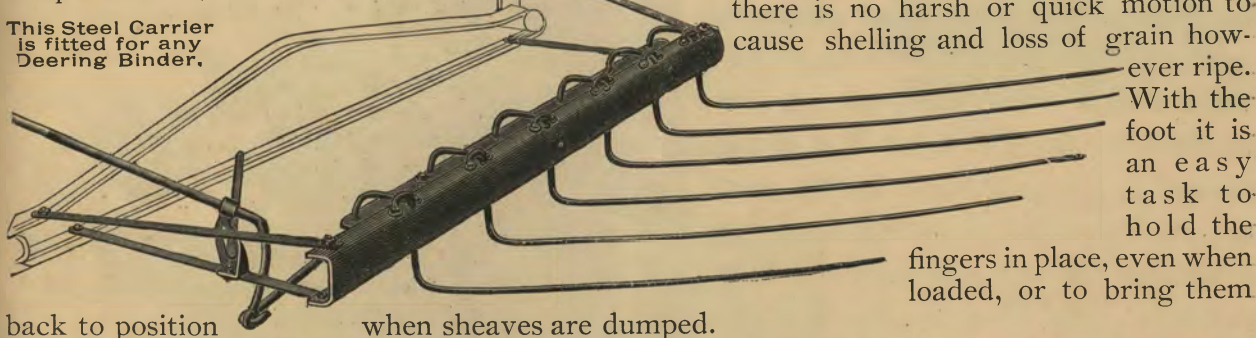
The Deering Flag, when set forward for short grain, keeps all the straws together, so that they go up the elevators and through the Binder making a compact, square sheaf. The Flag also prevents the wind from scattering the short straw, or the reel from tossing it to the back of platform. In short grain especially a Flag is an absolute necessity.





THE Deering Steel Bundle Carrier is a trifle so far as cost is concerned, but there is no more convenient or economical implement used on the farm. It saves more than the work of one man every day of harvest, and makes the work of shocking easy and rapid. Its use dispenses with the necessity of tramping over almost every square foot of ground in a field to gather the sheaves. Having smooth even butts and lying in perfect windrows the bundles are readily handled. The Carrier is made *throughout* of steel, and there is no other Carrier as strong, light and enduring. The fingers, being the best quality of strain. In receiving and depositing bundles there is no harsh or quick motion to cause shelling and loss of grain how-

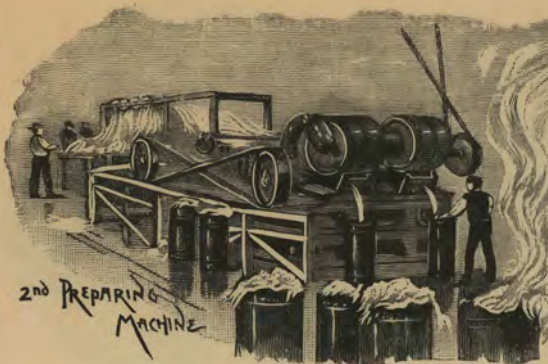
This Steel Carrier is fitted for any Deering Binder.



back to position when sheaves are dumped.

The fingers of the Deering Bundle Carrier can be folded back so that any obstruction may be easily passed. When thus folded they are loosely held in their sockets and readily yield if one or more of them strike a stone. This great advantage becomes still more evident in traveling with the machine on the road, passing through gates, over bridges or in storing the machine. It also allows the driver to get at the binding apparatus.

The Deering Bundle Carrier must be ordered separately from the machine. In ordering do not fail to state what machine it is required for.



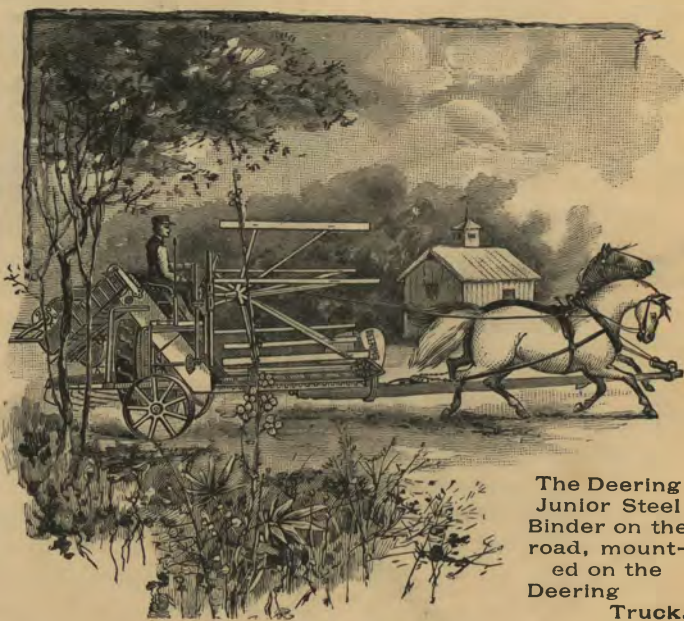
WM. DEERING
& CO.

Are the only Harvester manufacturers in the world who make their own Binder Twine

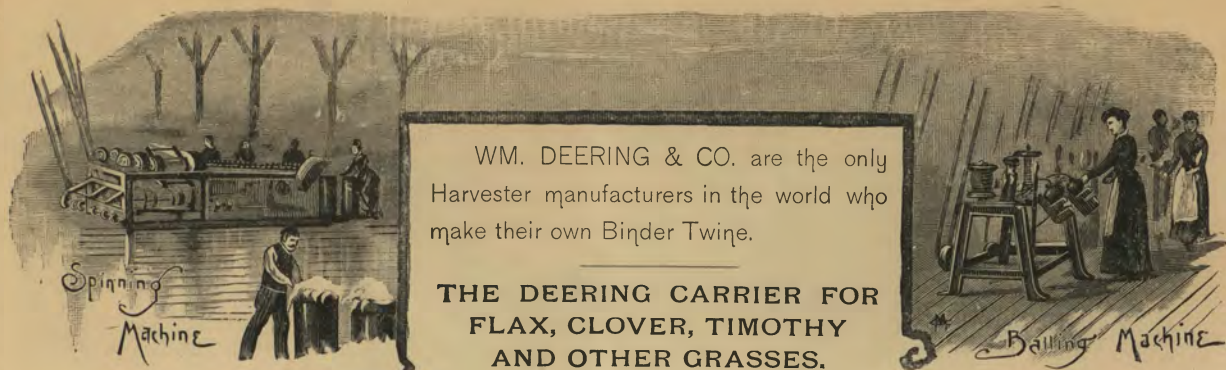


The Deering Binder Truck.—The illustration shows the Deering Binder mounted on the Deering Two-wheel Truck. The latter consists of a pair of heavy, strong wheels at the end of a stout hickory axle. This truck can be easily and quickly removed from or attached to the Binder. Place the axle under the main frame of the Harvester, slip the wheels on, attach the pole to the grain-wheel end with appliances provided for the purpose, and drive ahead. The axle may be left fastened to the Harvester if it is not desired to cut very low. In this case, all that is necessary is to slip the truck wheels on the axle and put the pole in position. The Deering Truck is the simplest and most convenient truck ever put under a Harvester.

This picture shows the Deering Harvester mounted on the truck. No amount of jolting can unseat the machine in the slightest degree.



The Deering Junior Steel Binder on the road, mounted on the Deering Truck.

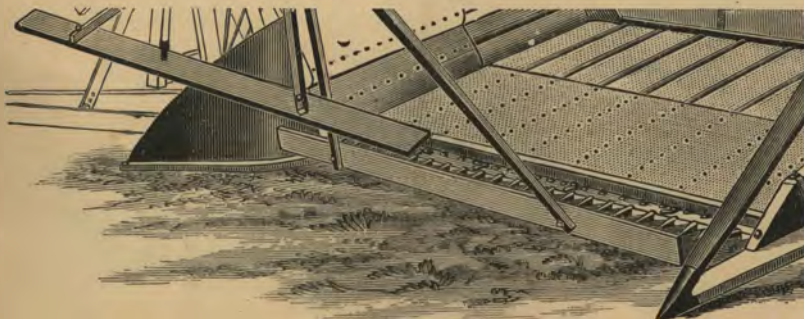


THE Deering Harvester is strong and has a powerful cutting apparatus. This is why it readily cuts and elevates flax, clover, timothy and other grasses. The carrier shown in the illustration is intended to hold these crops. When enough has accumulated, the carrier drops it in a neat pile to dry, after which it can be handled in any manner desired. This carrier is made of *steel* and fitted for any Deering Binder. For the coming season it has been greatly improved and strengthened. A flax knife will be furnished for any one of the Deering Binders, in addition to the regular sickle, when specially ordered and paid for, but width of cut must be mentioned.

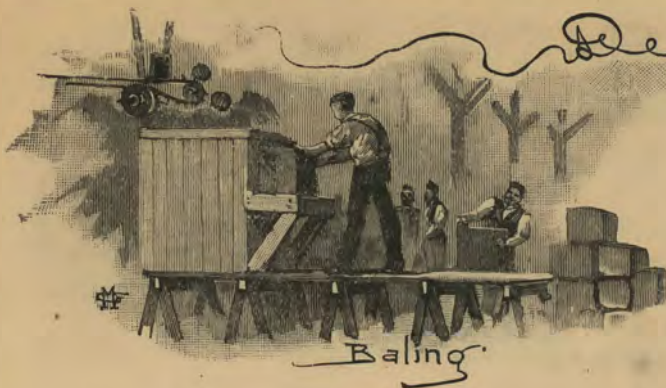


DEERING FLAX CARRIER.

To prevent flax from combing out and accumulating on the ends of the canvas slats, we furnish cloth and tacks with which to muffle the canvases. This can be done by tacking or sewing the strips of cloth, which are about two feet wide, over the front ends of the canvases, as shown in the picture. This work can be easily done by the owner of the machine.

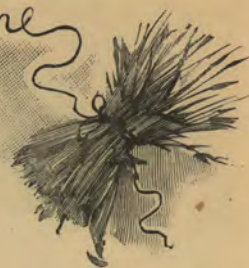


SHOWING HOW CANVASES ARE MUFFLED.



Deering Twine

WM. DEERING & CO.
Are the only Harvester manufacturers in the World
who make their own Binder
Twine.



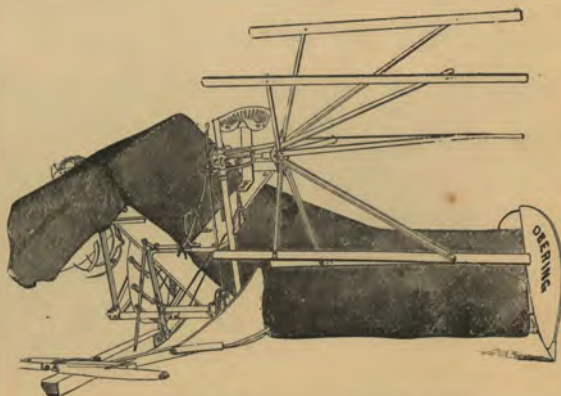
THE DEERING CANVAS COVER.

A BINDER, however well made, requires a certain amount of care from the owner, to insure its good work and long life. There are many parts that cannot be exposed in wet weather or to a heavy fall of dew without some damage. The Deering Canvas Covers, by protecting the whole machine and prolonging its usefulness, will pay for themselves ten times over. These Covers are made of the best quality of duck, and are of two kinds, according to the weight of duck used—10-ounce covers and 8-ounce covers. Fitting the machine closely, no water can reach any vital part.

Be sure to state whether 10 ounce or 8 ounce are wanted, and exactly what machine the cover is wanted for, giving its name, width of cut and width of elevator.

The Canvas Covers are not furnished with machines, but must be ordered and paid for separately.

Every owner of a Deering Binder will at once perceive the prudence of providing himself with one of these covers. To put it on or to remove it from the machine is the work of a few minutes.



THE DEERING CANVAS COVER.



THE DEERING LIGHT REAPER.

(MADE WITH AND WITHOUT FOLDING PLATFORM.)

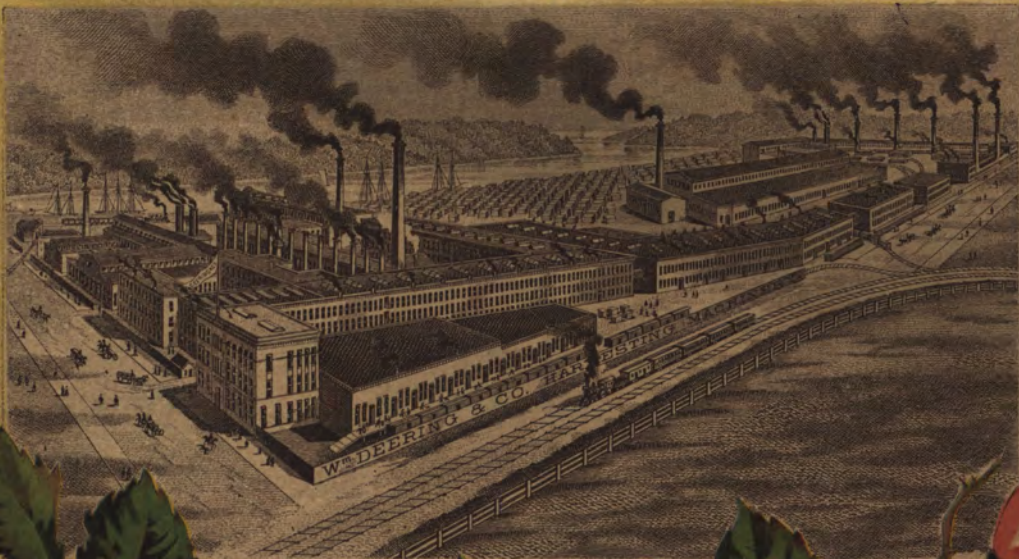
THIS machine is made of the best materials throughout, and will do rough work, such as flax cutting, no less satisfactorily than grain cutting. A strong iron main frame cast in one piece encircles and strengthens the main wheel and gearing. This makes the machine strong, rigid and lasting. The entire platform is easily raised or lowered by means of a lever convenient to the operator, while the perfect tilt allows the guards to pick up the most tangled or down grain or clover.

The rake arms are adjusted by a foot treadle, so that every fourth or second, or every one will rake, or so that *any one* will rake as the driver pleases. The rake is in fact the most thoroughly and quickly adjustable of any in the market. The bundles can thus be made of any size desired. The Deering Light Reaper is a Center-Cut and easily backed or turned, or driven over furrows and ridges.

In perfect tilt and balance, strong cutting mechanism, in ease of handling and lightness of draft this machine is perfect, and it cannot fail to give satisfaction in every particular.



Talbot & Randolph
LOGANSPORT, IND.



FOR SALE BY

Talbot & Randolph
LOGANSPORT, IND.