



GRASS

GRAIN

COMPLIMENTS OF

AND

GAIN

WILLIAM DEERING & CO

CHICAGO, U.S.A.

FOR FARMERS.

Index



The New Deering Mower,	cutting $4\frac{1}{4}$, $4\frac{3}{4}$ and 5	ft.	Page 36
The Deering Giant Mower,	" 5, 6 " 7	ft.	" 45
The Deering Junior Giant Mower,	" 5 " 6	ft.	" 47
The Deering One-Horse Mower,	" $3\frac{1}{2}$ " 4	ft.	" 48



The Deering Junior Steel Binder,	cutting 5, 6 and 7 ft.	-	Page 6
The Deering Bundle Carrier,	- - - - -	-	" 28
The Deering Binder Truck,	- - - - -	-	" 30
The Deering Flax Carrier,	- - - - -	-	" 31
The Deering Canvas Cover,	- - - - -	-	" 31
The Deering Binder Twine,	- - - - -	-	" 32
The Deering Light Reaper,	- - - - -	-	" 34



GAIN, - - - - - PAGES 1 TO 48 INCLUSIVE.

That is to say; the whole of this little book is devoted to the subject of "GAIN" — *your gain*. Read the following pages carefully and you will not fail to see where the gain comes in.

We present our compliments to the farmers of this country and all other lands where there is grain to bind and grass to cut. We congratulate you that during the past season crops have been abundant, and fair prices for your products have prevailed; and we hope, as you do, that the coming season will bring another bounteous harvest. We congratulate you and ourselves upon the fact that a large proportion of the crop of 1891 was gathered for you with Deering Binders and Mowers. Since we placed on the market the first successful grain and grass cutting machinery, we have used our very best efforts to manufacture binders and mowers that would handle your crops to your entire satisfaction. We feel sure that we have succeeded in this, our aim; and we offer as the best possible proof of this success, the fact that our sales for 1891 were undoubtedly far in excess of any sales ever made by any harvester manufacturer. Our Binders, Mowers and Binder Twine for the season of 1892 are better than ever before, and we feel sure that the farmers will profit by past experience and cause our sales for this year to be larger than ever before.

We respectfully present to you, our farmer friends, this little book. In it our kind old friend Mr. Mather has set out some of the reasons why practical farmers have fixed their choice upon Deering Binders, Deering Mowers and Deering Twine. This little book is called "GRASS, GRAIN AND GAIN," and if you will be kind enough to read it, it will show you, we think, how to handle your crops of "Grass and Grain" so as to produce for you the largest possible "Gain." Yours truly,

CHICAGO, January, 1892.

WILLIAM DEERING & COMPANY, Chicago, U. S. A.



GRASS · GRAIN & GAIN

THE FARMERS' MONEY. WHERE IT GOES & WHY IT GOES.

ON the platform of a little country station a well-dressed, keen-eyed man of about fifty-eight was walking up and down, listening for the train that was nearly due, and keeping a watchful eye on a span of well-kept horses that showed their mettle by an occasional start of surprise or curiosity, but were easily quieted by an assuring word from their master.

The whistle sounded, the rails clicked and the train came in, bringing the daily mail, a few express packages and one passenger for Remington, a tall young fellow who lingered on the platform of the car to bid good-bye to his companion, and say: "Well, Charley, let me hear from you; letters are a god-send on a lonely farm."

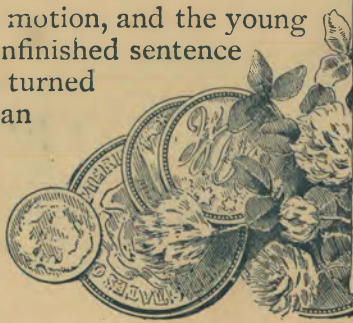
"All right," said his companion, "you shall have the letters. I hope you'll succeed in enlightening the natives."

"I shall try; science ought to count for something, even if a man hasn't grown up in a corn-field."

"Well, I don't know. I fancy farmers don't take much stock in scientific theories——"

The train was already in motion, and the young man on the steps took his unfinished sentence on with him, while his friend turned to the station and met the man who was still patting and coaxing his startled horses.

The two had not met for twelve years, but the recognition was instant.





UNCLE ROBERT!"

"Well, Dick, my boy, you look the same long-legged rascal that spoiled a clip of wool for me by climbing up to the straw-scaffold and tramping down dirt and hay-seed into it. Remember that, hey?"

"Don't I?" said Dick; "a little circumstance that happened afterwards helped to fix it in my memory."

"O yes; well, a touch of birch is a pretty good thing for a boy's memory. Where's your trunk? I brought the spring wagon so's to take it right out. Your Aunt Betsey's in a great hurry to see you. Since Milly was married and Edward's folks set up for themselves we kind of

miss young company. You knew we'd built, I suppose."

"Why no, I'd counted on sleeping in the old attic chamber. I wish I'd known you were going to build. I've got some plans for model farm-houses."

A queer little over the farm-said:

pose they've chock full of most things.

good things, work, but I've tiest kind of wouldn't hold you come to your papers all

"My diploma—I'm duly cer-finished article all wool and to shrink—without the manufactur-

"We'll see shrinking; you'd stand



smile flashed over his face as he

"Yes, I supplied you model ideas for Well, ideas are if they'll only seen the pret-theories that water when try them. Got right?"

ma?" Yes, sir; tified to as a first quality, warranted not none genuine stamp of the er."

about the seems to me considerable

more filling and not show it.

A few of your Aunt Betsey's good dinners will soon make you look a good deal less like a bean-pole, and I think I'll try to give you a few really practical ideas on farming to put along with theories they've loaded you with at college."

"All right, Uncle Robert. It will be a sort of post graduate course for me. What will you call your series of lectures?"

"I've got a first rate name for them already. I shall call my talks on farming—"Grass, Grain and Gain," or "The Farmer's Money, where it goes and why it goes." That covers the whole ground pretty thoroughly, and I will show you just how a practical old farmer handles his grass and grain in order to get out of it the biggest possible gain"



They drove several miles through a beautiful farming country, the fields of ripe wheat making a fine contrast of color with the light green of the oats, the deep emerald of the corn, and the rosy bloom of the clover fields.



HERE and there the harvest had already begun, and the yellow stubble shone in the sunshine.

"What's wrong over yonder?" said the young man, watching a group of men about a machine in the middle of a field.

"Nothing uncommon. Waterman's machine has balked, I reckon, or broken something. Yes; there goes Jimmy on the grey over to Baker's. He's a sort of universal tinker. Now they'll lose half a day, most likely, and all because Waterman is too pig-headed to take advice. I told him that machine would give him no end of bother."

"What is the trouble with it?" "The trouble? Well you could sum up the trouble with that machine and a good many others under the same head—*lack of capacity*."

"Last year's immense crop must have been a pretty severe test of machines?"

"Yes, indeed it was. The grain heavy, and a good deal of it badly. We'd had light grain and small harvests, and a good many badly rushed onto the market. Such a through the light harvests after a their Waterloo sure enough last try, over and over again, Deering out to cut fields that were too heavy I was at the Deering office they such failures for others, and victories machine made was on that list, and ures were due to *lack of capacity*, its *great capacity* the reason why Binder was successful where all



Three of a Kind

was unusually tall and blown down and lodged. vests for a number of planned machines were chines managed to pull fashion, but they met year. All over the coun- Machines were taken for others. Why, when showed me a long list of for the Deering. Every in most cases the fail- and just so surely was the Deering Junior Steel other machines failed."



THIRTY DEERING JUNIOR STEEL BINDERS ON A "BONANZA FARM" IN MONTANA.



H, there's the old place, or the new one, rather, though everything looks natural but the house; what a handsome house, and yet how perfectly in place it seems behind those splendid elms, and with that broad driveway. And there's Aunt Betsey waiting for us."

The sweet, bright-eyed woman who gave the young man a motherly welcome looked, indeed, as if some one were watching over her welfare, for the years that had passed since he saw her last had left slight traces upon her. Just a gleam of silver in her smooth hair, and a few faint lines on her thoughtful face, but the same sunny face, clear eyes and happy smile that he remembered so well as a little motherless boy when he came to add to her many cares, and share her generous love.

"Just the same Aunt Betsey," he said, swinging the little woman off her feet in his strong arms.

"And just the same Dick, I suppose, only more of him—but how thin you are, my boy; have they been starving you at school?"

"Well, not exactly, though a college club is not expected to live in luxury, but I'm in a condition to appreciate some of your good dinners."

Richard had graduated from the agricultural college with the usual confidence of a young man in his own attainments, and looked forward with a good deal of pleasure to his summer with his uncle, as an opportunity to put in practice some of his accumulated knowledge. He had not the smallest doubt but that he was equal to the management of a farm on scientific principles, and he expected to revolutionize his uncle's old-time methods. To his astonishment he found his uncle had fully kept pace with the times, and without departing from his



native caution had used his shrewd common sense in taking all that was best in machinery and methods, and turning it to his advantage. It occurred to him before they went in to dinner that his uncle Robert was doing most of the instructing, and he smiled to himself at the recollection of his own boast, "*warranted not to shrink.*" He felt himself shrinking already.

“LET’S go over to Edward’s,” said his uncle, as soon as they had finished dinner. “They are going to set up the new Deering machine.”

They walked across the field by a little foot-path that showed constant use, then through a gate into a fine young orchard, whose thrifty, well-shaped trees gave promise of an abundant crop of fruit.

“There now, look at that wheat, will you?” said Mr. Mather. “Aint that a sight for sore eyes? There’s Kitty, your old sweetheart, who married Dick; she’s as interested in the new machine as anybody; knows more about a harvester than half the men, too.”

As they came into the field the young woman saw them, and came to meet them with an affectionate greeting for the older man, and a hearty welcome for the younger, whom she remembered as the sharer in many a romp and frolic of earlier years.

“We’re all glad to see you again,” she said. “Ned has been looking forward all the spring to having you with him once more.”

“Who’s that over there with Ned?” said Mr. Mather; “Waterman? What’s he after?”

“Just looking on and envying, I suppose or perhaps he wants information. His machine has balked again, and they have sent for the agent.”

“I’m glad he’s here. I’ll improve the chance to give him a lesson on what a binder ought to be. Well, Edward, I see you’ve begun to set up—couldn’t wait for your slow old dad.”

“We’ve only just started on the frame. Hullo, if here isn’t Dick! Well, well, this takes me back to old times.”

“Glad to see you, Waterman. You remember the little rascal of a nephew I used to have hanging around the farm, don’t you?”

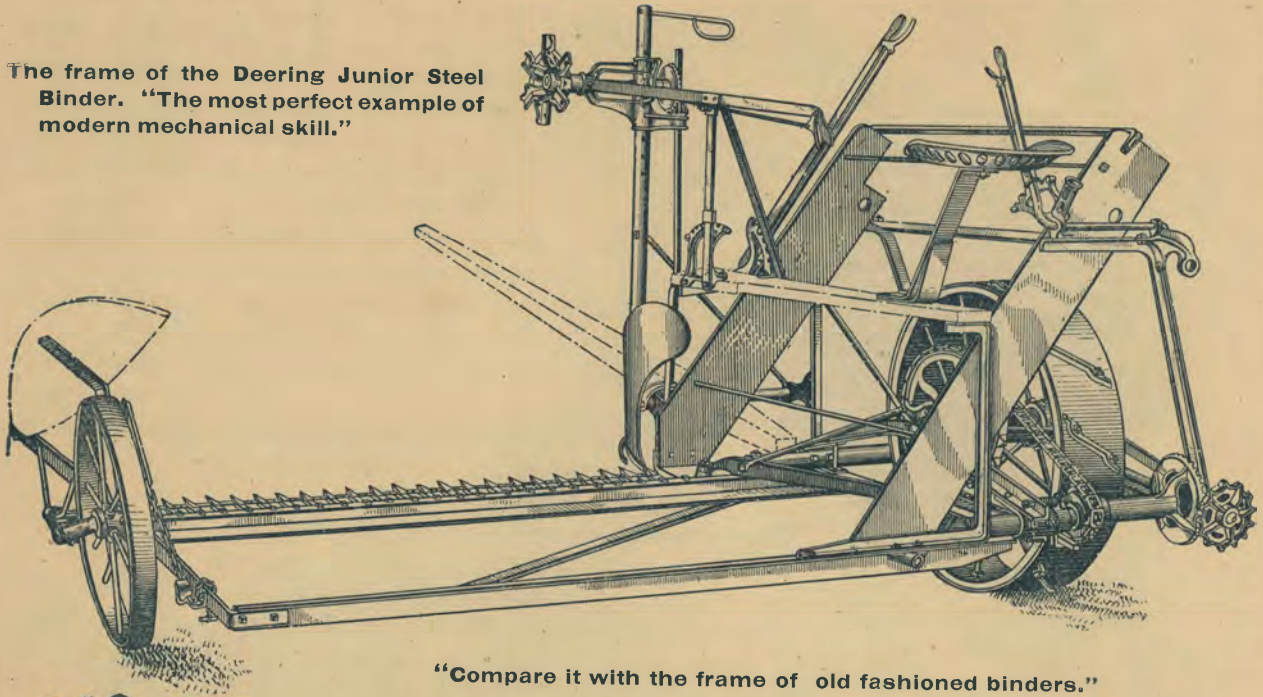
“We’re going to keep him till he gets thick enough to cast a shadow. He’s just out of college, and he’s come up to the old farm for a sort of finishing off—post-graduate course they call it nowadays. I’m going to give him his first lesson on this Deering Junior Steel Binder, and teach him all about it from *a* to *izzard*.”

“Well, if you don’t charge too much,” said Waterman, “I guess I’ll join the class myself; I’ve got a kind of vacation this afternoon, and I might as well improve my chance.”

“All right, neighbor,” said Mr. Mather; “you’re in ahead of us, for you saw the frame set up, but there’s lots to learn about the frame itself.”



The frame of the Deering Junior Steel Binder. "The most perfect example of modern mechanical skill."



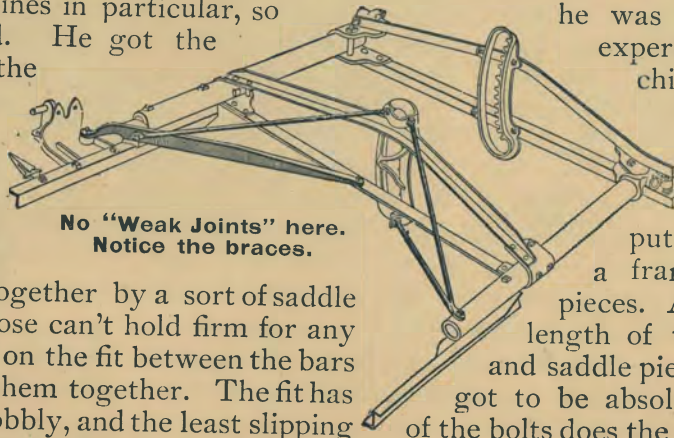
"Compare it with the frame of old fashioned binders."



HAT Deering Steel Frame is just the most perfect example of modern mechanical skill that can be brought forward.

Just compare it with the frame of the old fashioned binders some farmers are still using—the frames made of square tubes and bars, joined in all sorts of weak fashions, and some of them even boasting of having no frame at all, like that boneless man I saw at the dime museum—might do for a freak, and earn a living by showing off his weakness, but he couldn't get a job on *my* farm.

I can show you some of them without going very far; over there behind the barn you'll find a couple of machines that Edward bought when he first started in for himself. That was when he was young and green, and thought he knew more than his old father about farming in general, and machines in particular, so he was bound to get his experience first hand. He got the machines do for the experience all right, and chickens to roost on, but you see he is buying Deering machines now.

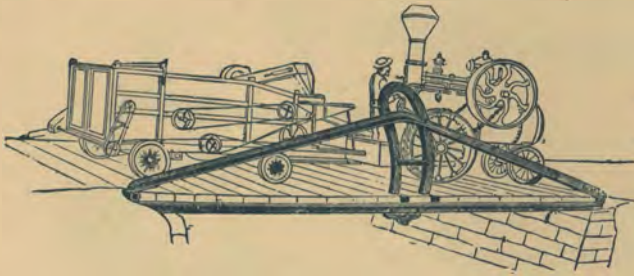


No "Weak Joints" here.
Notice the braces.

You just go and take a look at those two old cripples, Dick, and notice how the frames are made and put together. You see that one of them has a frame made of square hollow bars, joined together by a sort of saddle pieces. Any mechanic knows that such joints as those can't hold firm for any length of time. The strength and saddle pieces, and the strength of the bolts that hold them together. The fit has got to be absolutely perfect, or the joints are loose and wobbly, and the least slipping of the bolts does the same mischief. Now it is utterly impossible to roll a square hollow bar of thin metal with perfect regularity, and it's absolutely sure that a harvester frame made of such bars will soon grow loose at the joints, and lose all its strength and stiffness when it comes to the strain of work in the field."

take a look at those and notice how the put together. You see a frame made of square pieces. Any mechanic knows length of time. The strength and saddle pieces, and the strength got to be absolutely perfect, or the of the bolts does the same mischief. Now it is utterly impossible to roll a square hollow bar of thin metal with perfect regularity, and it's absolutely sure that a harvester frame made of such bars will soon grow loose at the joints, and lose all its strength and stiffness when it comes to the strain of work in the field."

“I SEE, Uncle Robert, that the Deering manufacturers in supporting the binder and main wheel and heavy parts of the machine, have made use of the experience of architects and bridge builders. You know they discovered long ago that the truss was the strongest form in which you could use metal for a structure supported at both ends.”

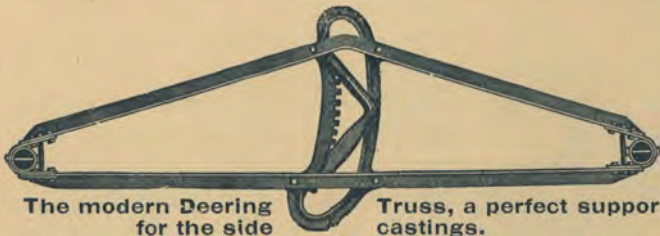


THE MODERN BRIDGE.



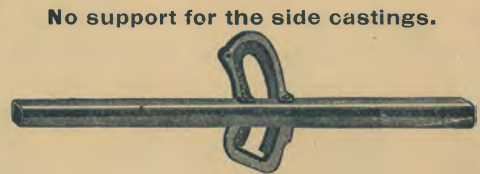
THE OLD FASHIONED BRIDGE.

“Yes, I dare say they have profited by the experience of the bridge builders—they’re the kind of men to keep their eyes open to everything they can turn to the improvement of the machine—at any rate they have arrived at the same conclusion, and got in their truss system the perfection of strength and durability. The thing they were after was to make these side castings that hold the axle to the main wheel perfectly rigid, and see how that is done.



The modern Deering for the side

Truss, a perfect support for the side castings.



No support for the side castings.

The old fashioned method used on another machine.

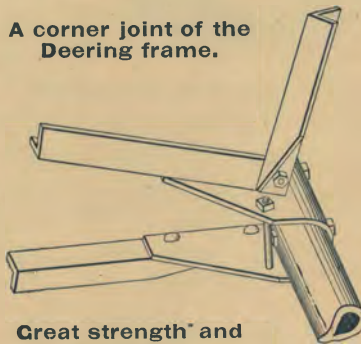
There you have the wide-spread arms of the truss firmly bolted to the castings near the top and the bottom, and then the brace-rod added, so that it is just impossible for the castings to tip sideways when you raise or lower the machine, as they are pretty sure to do when the side castings are bolted to machines.”

construction of the corner joints

“Well, my boy, you seem defects, for those are two of the frames. The strength or weak- the joints, and I can give you a difference between the weak frame, and the strong joints of

Just take this square bar barely over the edges to rep- see how easily I can twist

A corner joint of the Deering frame.



Great strength and durability.

“I have noticed the weak and the joining of the main two old machines.”

to have a pretty keen eye for weakest points about those ness of any frame lies mostly in practical illustration of the joints of that square tube the Deering.

in your hands with your fingers resent the saddle-pieces. Now the bar out of your hands.

Waterman may take hold too, if he likes.

But clasp your hands about this round bar, and lock your fingers. That’s the way the Deering joints are made and you find you can hold on in spite of all manner of twisting and pulling.”



A weak hold.



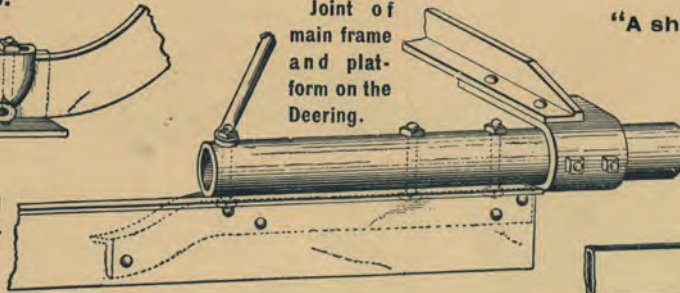
A sure grip.

"A very short lap."

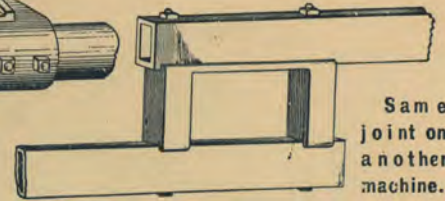


Joint of frame and platform on another machine.

Joint of main frame and platform on the Deering.



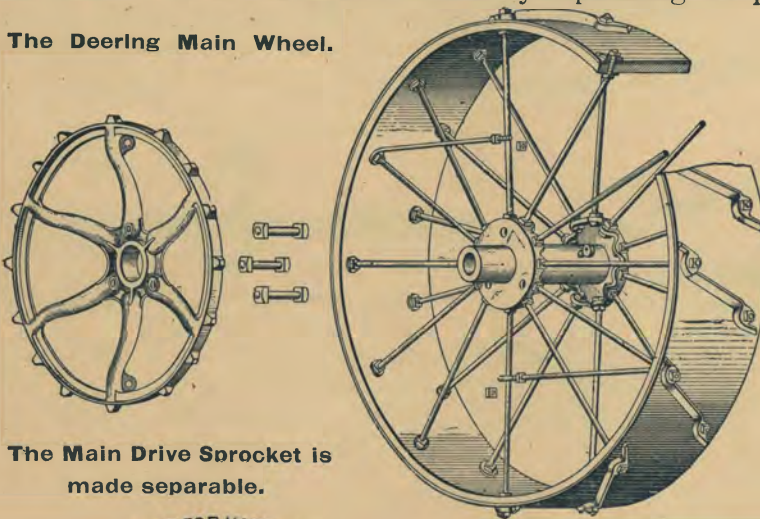
"A short lap made worse by a saddle piece."



Same joint on another machine.

"You spoke about the way that main frame over yonder was joined to the platform; just look at the way it is done on the Deering. You see this angle-bar forms the back of the platform and the joint is made by a long lap of the steel backbone on the bar. Then these parts are held together by three long bolts, and it is just impossible for the joints to loosen. The joint on both those old machines has been made by a very short lap, and on one of them matters are made worse by separating the parts with a saddle-piece."

The Deering Main Wheel.



The Main Drive Sprocket is made separable.

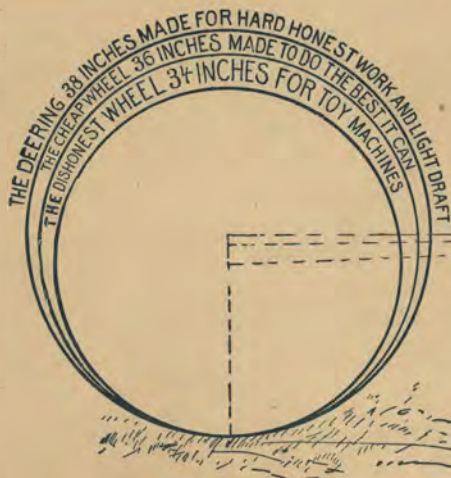
"That Deering main wheel seems to me to be unusually large and strong."

"And that's one of the strong points of the machine. The main wheel of a harvester is as important as the mainspring in a watch; it supplies the power for the work, and a weak main wheel means poor work every time. Right here in this big main wheel, that you'll find is from two to four inches higher than the main wheels of other machines, lies the secret of the easy regular motion of the binder

and the smooth powerful working of the sickle. There's a great loss of working power in a small wheel. Then you see this Deering wheel has a nine-inch face. Many wheels are made a good deal narrower so that they sink into the ground and the effort the horses have to make in getting them out is practically the same as pulling the machine up hill. See the way it's

made too, with a strong oak felloe surrounded by a thick steel tire."

"There are a good many ingenious devices about it for a simple wheel," said Dick. "this plan for adjusting every one of the steel spokes at the tire and hub, for instance, just by tightening the nuts—

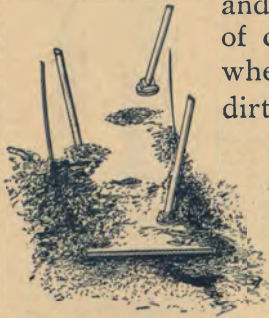


"The Deering main wheel is unusually large and strong."

I suppose that is in case of strains or accidents."

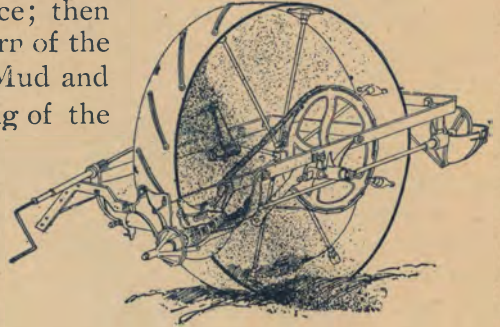
"Yes; and, you see the main drive sprocket is made separable from the hub of the main wheel, so that you only have to take out the bolts to slip it from the axle."

BUT what about an all-steel wheel? Isn't that better yet?" asked Waterman.
 "An 'all-steel' wheel seems nice to talk about and farmers that have never tried it, are apt to be taken by the idea. But I'll show you why a wheel with a wooden felloe is better in many ways, especially on muddy ground. The thin tire sinks into the mud



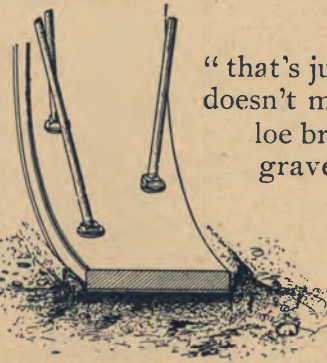
"The thin tire sinks into the mud."

and lets it gather on its inner surface; then of course it goes 'round with every turn of the wheel, and drops into the gearing. Mud and dirt are no improvement to the working of the gears, but it's worse yet when the machine runs in light sandy soil, full of small stones and gravel. The metal wheel picks them up and deposits its load in the gears, so that they are very soon worn and clogged."



"Mud and dirt are no improvement to the working of the Gears" "Sand and Gravel are still worse."

"Fact," muttered Waterman,
 "Well, the Deering wheel lessons: the thick wooden felloe off the soft ground, and the sand, where they can't damage the
 "See here," said Waterman, 'taint fair to use me for illus-



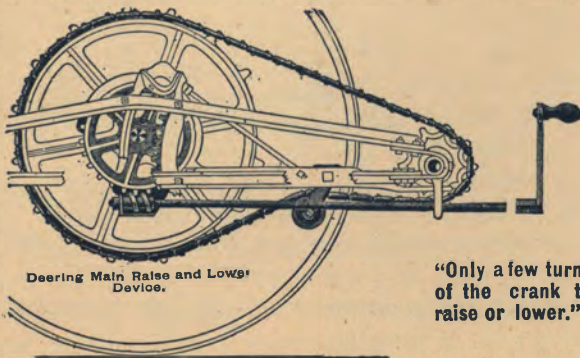
"The Deering wheel doesn't make a business of taking up collections."

"that's just what the plaguey thing does." doesn't make a business of taking up col-
 loe brings the inner surface of the wheel gravel and mud are left on the ground, gears and chains.

"if I'm going to be in this class tration quite so free."

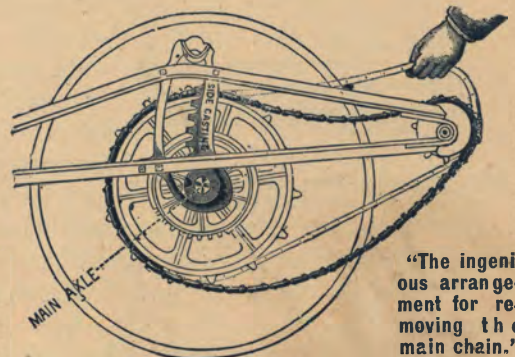
"Beg pardon, neighbor, I all. Now, Dick, turn that crank see how easily the machine is to the right and the axle of the cogs in the side castings, and desired height. Now turn the crank to the left, and the axle travels up in the same manner and lowers the machine. While you have the axle at the lowest cog of the side castings, notice the ingenious arrangement for removing the main chain. You need only give the crank a turn or two more to the left, when the axle of the main wheel rolls backward into the loops at the bottom of the side castings, and loosens the main chain so that it can be removed easily with the hand.

really wasn't thinking of you at at the rear of the machine, and raised and lowered. A few turns main wheel travels down the the machine is raised to any



Deering Main Raise and Lower Device.

"Only a few turns of the crank to raise or lower."



"The ingenious arrangement for removing the main chain."

EVERY pound of unnecessary weight about the grain wheel of a harvester simply acts as a drag to hold back that end of the machine and cause side draft," said Mr. Mather, "so you'll notice that the Deering Grain Wheel, and everything about it, have been made as light as possible and without any of the heavy complications seen in other machines.

Notice that the grain-wheel tire is twice the width of the tire of other grain wheels, and made oval instead of flat to keep the wheel from cutting into the ground. There's no weakness there, either. See how the spokes of the grain wheel are joined to the tire and hub, the whole wheel is as strong and solid as if cut out of one piece.

And look at the mighty simple arrangement for raising and lowering. Just take hold of the cross bar on

"You spoke awhile ago, Uncle Robert, about the forward faces of the two wheels being in the same straight line, I suppose there's an object in that."

"Yes, there's an object in every feature of the Deering machine, but you'll see better what this is when we see the work to-morrow. However it is easy enough to understand that when a machine strikes a furrow, or any obstruction in the field with the tire of one wheel ahead of the other as most machines do, there'll be a jar that will send the tongue

slapping first against one horse and then against the other, besides twisting the driver half off his seat, and racking the machine, and making it leave choppy irregular stubble. Now here you see both wheels strike an obstruction at the same time, and you have no such trouble."

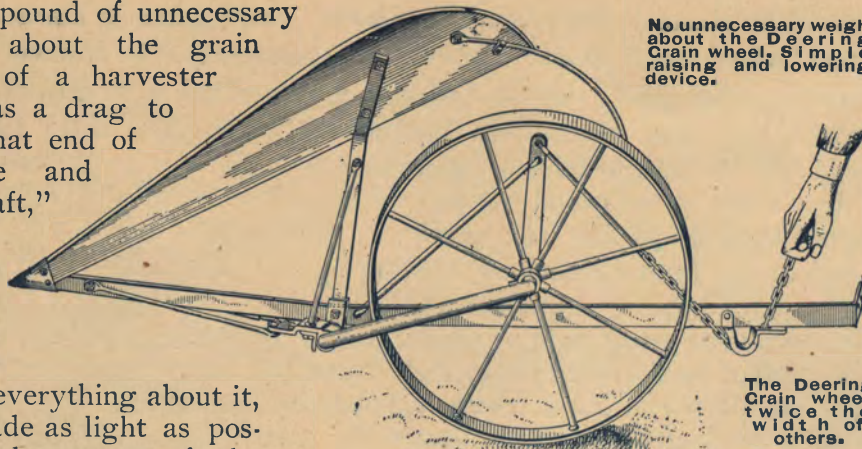
The Deering—The forward faces of wheels on the same line.

"Well, father," said Edward, "I don't want to interrupt this lecture, but we must get some cutting done before supper."

"All right. Don't forget, Edward, that you and Kitty are to come over to supper; mother counts on you."

And Mr. Mather walked back with his nephew to the house.

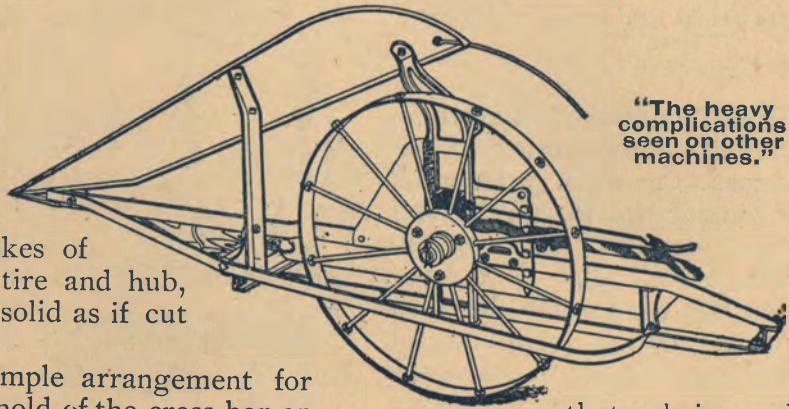
No unnecessary weight about the Deering Grain wheel. Simple raising and lowering device.



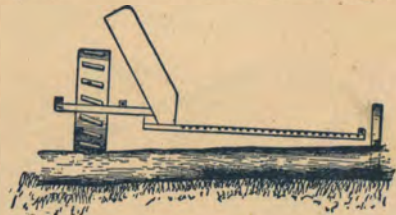
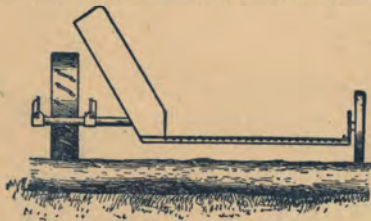
The Deering Grain wheel twice the width of others.



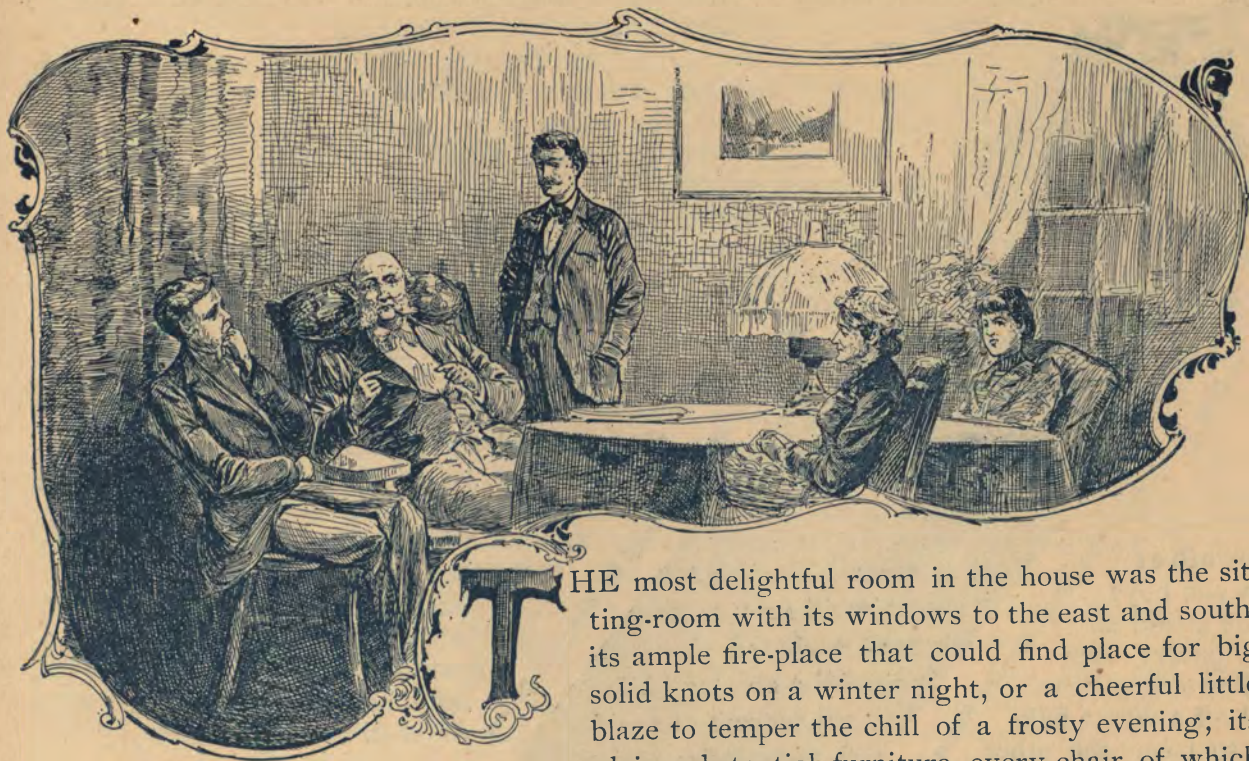
"The heavy complications seen on other machines."



that chain and



Another machine with face of one wheel ahead of the other.



THE most delightful room in the house was the sitting-room with its windows to the east and south, its ample fire-place that could find place for big solid knots on a winter night, or a cheerful little blaze to temper the chill of a frosty evening; its plain substantial furniture, every chair of which had been chosen for solid comfort, and the big center-table with its radiant lamp shedding a soft moonlight glow over Aunt Betsey's inseparable work-basket and the books and papers scattered about it.

There they all gathered in the evening, and Dick felt a twinge almost of envy as he looked at his handsome cousin, and saw his evident pride in his young wife, and the quiet content with which the elder couple looked upon them. He turned to the table and picked up a paper with a familiar face.

"You stick to your old favorite, I see, Aunt Betsey, and I declare if here isn't the 'Youths' Companion' that Ned and I used to draw cuts for, to see who should read it first. I suppose you keep that up for Uncle Robert?"

"I keep it up partly for myself and partly for my neighbors. It makes me feel young to have it about, and hear what folks are saying to the boys and girls, and then I like it to lend. I don't believe you'd hear so much of boys getting sick of farming and going off to the city if their fathers took more pains to get books and papers for them, and made them feel as if they were as much account as the calves and colts. Then of course your uncle wants his farm paper; he wouldn't think he could run the farm without it."

"And your Aunt Betsey thinks the world couldn't run unless she took the church paper, and kept an eye on things in general. I half suspect she writes for 'em herself."

"Poetry, or sermons, Uncle Robert?"

"Well, you might call it poetry *or* sermons either. They've got a house-keeper's department; papers nowadays have got to dipping into most everything, and some woman sent a receipt for mince pies that your Aunt Betsey said was calculated to deceive the inexperienced, and she really fretted over it, being in her paper. She didn't say anything to me, but I saw a receipt a couple of weeks after, that sounded just the way her pies taste."

can't tell whether a machine is likely to do it in the best way, and the fellow with the glibbest tongue usually gets him."

"That's where college training ought to help a man," said Dick, "because a machine works on mathematical principles, and you can figure it out like a sum in arithmetic. Leverage, and draft, and resistance to strain, and amount of friction can be measured up to a fraction."

"May be so, but when you've measured them up you ain't sure of your machine. We've had hired girls that would put the same stuff into a loaf of bread that your Aunt Betsey does, but there'd be a mighty sight of difference when it came to eating. And I saw a lecturer on chemistry last winter set out three or four kinds of stuff in cups and bottles and say that was all there was of a peck of the best wheat, but I reckon it would have taken a smarter fellow than he to put it together again. It's practical use and not figures that test a machine."

"Come Edward," said Kitty, "if father gets started on machines again we shall not get home till midnight, and I've got bread to set and ever so many things to do to-night."

"All right," said Mr. Mather, "we'll leave the machine till morning."

There's nothing like having your machine right at hand for a practical illustration."

"D^O you remember how you boys made a raid on the pantry one Hallowe'en and carried off a whole baking to treat the other boys? I declare I don't see how I ever got along with you two, for what mischief one couldn't contrive the other did, and father just encouraged you by laughing at you. Father always had a failing that way."

"Well, it saved me many a wrinkle and you too, I'll be bound. These folks that take things in such a solemn fashion are mighty uncomfortable to live with, and I never could see as they made anything by it, unless they enjoy being miserable."

"You must keep some extra hands on the place, I suppose."

"I have only my two men, but Edward and I plan to join forces; makes things a little lighter for both of us, though I could get through if I had to by myself."

"And of course you think you've got the only machines worth having; I know Ned does."

"Well, Ned and I agree about most things, and he's had the benefit of some pretty dear experiments I tried along at first. You see, a man that ain't posted in machinery don't know what the points of a good machine are. He knows what he wants done, but he



18 Deering Binders on the Great Cooper Farm in North Dakota.

These Deering Binders were purchased by Senator Cooper in 1882 and have cut every harvest since.

From a Photograph taken during the Harvest of 1891.



Deering Binders on a "Bonanza Farm" in North Dakota.



BEFORE the dew had begun to dry up Mr. Mather and Richard were on their way to the field where the harvesting was to begin.

The machine had not been brought out, but stood under the shed while the horses were being harnessed.

"Ned's slow this morning," said his father, "or may be I am early. I declare if there isn't Waterman coming over, and he hasn't got his agent after all. That's a pity, for I rather wanted a shot at him."

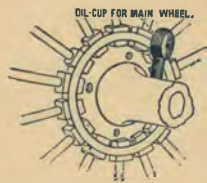
"There comes the machine now. I'd like to be up there myself. What beauties that white and black are, and they step off as if they knew what they were about."

"I dare say they do, a fine horse knows more than lots of men I've seen, and makes better use of what he does know. Hullo, Waterman! where's your friend Adams?"

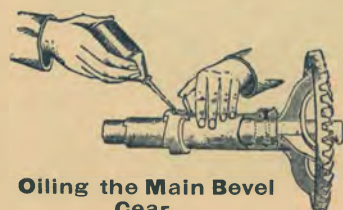
"Didn't come to time; sent word he should have to telegraph for something or other; that ties me up for another day, so I thought I'd come over and see how your Deering Binder got down to its work. If it works as well as it promises I'll buy one to-morrow."

"We'll soon show you. Start in Ned—wait a minute, though! I want Dick to notice the arrangement for oiling.

Now, Dick, you see this oil-cup on the main wheel; we fill

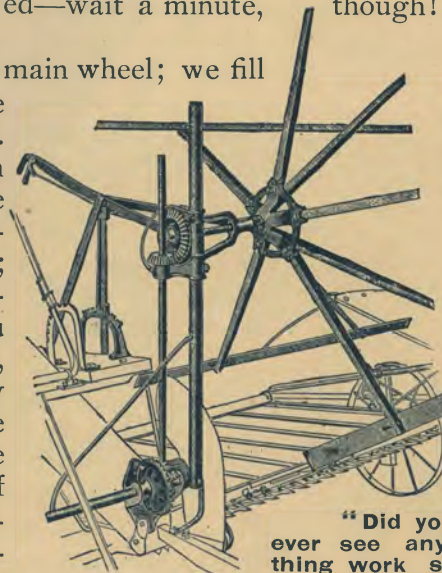


that first and then make the rounds of the other places. Of course Edward has been all over them, but just notice this spring cap over the oil-hole in the main bevel gear; no chance for dust or dirt to get into the bearings. Every spot is accessible too—you don't have to sprawl all over the machine, or get in among the sickles to do it. Now move on slowly to show the workings of the reel, because that's the first part of the machine to touch the grain—a sort of



Oiling the Main Bevel Gear.

master of ceremonies to introduce the grain to the sickle. See that now; neatly done, wasn't it?"



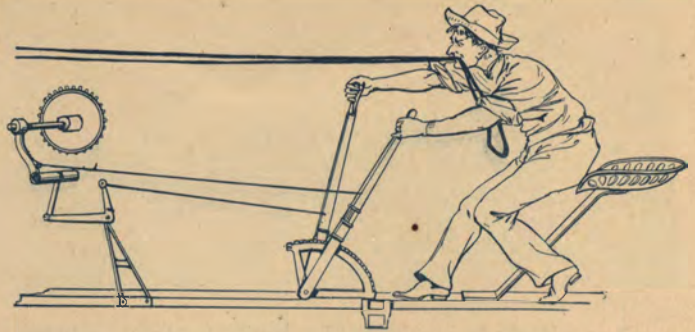
The Deering Reel.

"Did you ever see anything work so perfectly?"





“I’LL tell you, Edward, you let Dick try a few rounds himself, there’s nothing like having your



One of those awkward contrivances with two reel levers. on the lever, and I reckon Dick hasn’t forgotten a binder.”

you Dick, I’ll charge any damage to father.” man drove slowly at first, but soon became his work that he forgot the spectators until him and then he pulled up the horses. ster,” said Waterman, “anybody’d think racing sulky the way them horses

own hand how to run

“Up with

The young so fascinated by his uncle hailed

“Well, young- you was driving a stepped off.”

“That’s the lightest bound grain,” said Mr. couple of rounds that I am reason for it. Look at that anything work so perfectly? raise and lower it; only one lever or tilt the reel backward and for you were driving one of those with two reel levers—you would have each lever and then what would you

“Take them in your teeth,” said what I used to do with the other machine, quite an acrobat.”

“Here’s a nice point,” said his father, as came to a patch of short grain; “see what a adjustment the reel has; you can

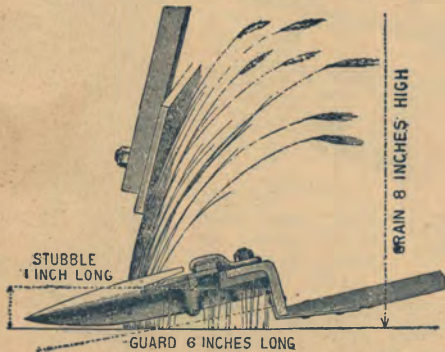
so as to almost the ground, or raise it high enough to handle the tallest grain.

Drive on, Dick, for a couple of rounds, and we’ll wait here for you. I’m most too stiff in the joints to chase a Deering Binder very

draft machine that ever cut and Mather. “You’ll see after a right, and I can show you the reel now? Did you ever see and see how easily you can to work to raise or lower, ward. But just suppose awkward contrivances needed a hand for do with the reins?”

Edward; “that’s and I got to be

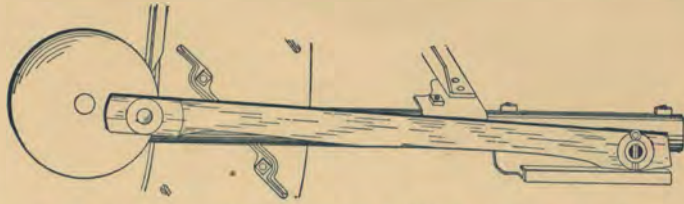
the Binder range of Deering adjust it touch



“You can adjust it to almost touch the ground.”

78 Deering Binders on the Famous Dairymple Farm in North Dakota.

"I SEE one strong point about the cutting apparatus," said Richard, "and that is the way the pitman moves in carrying the power to the sickle. You know, Uncle Robert, mechanics was always my hobby, and I can see what a gain of power there is in having the pitman move directly in a line with the sickle."



THE DEERING PITMAN MOVES ON A LINE WITH THE SICKLE.
"A GREAT GAIN OF POWER."

sary wear on the sickle head and on the guards by having the sickle pulled up against them.'

Waterman sat with his grizzly chin in his hands watching the Binder as it rapidly moved away and presently completing its round stopped again in front of them.

"Works well, doesn't it, Waterman," said Mr. Mather, with a satisfied nod of his head.

"Starts off all right," said the old man, going up to examine it.

"And it will keep on that same way as long as a fellow knows enough to sit still and drive. Here's Dick; I don't suppose he's touched a machine for ten years."

"O yes I have," laughed Dick; "they gave us some practice along with the theory."

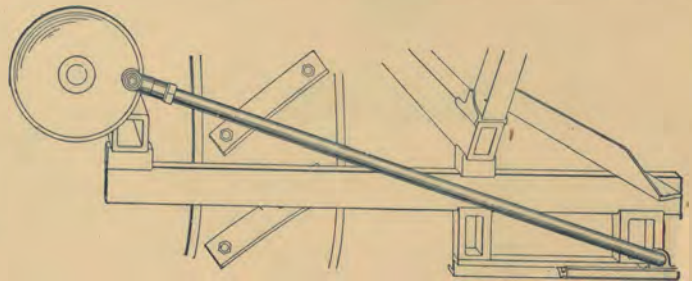
"Well, a Deering Binder will run to satisfy any reasonable man with half-way decent handling."

"Looks as if it might," said Waterman. "We've laughed a good deal about your bragging over the working capacity of the Deering machine, but I tell you 'taint every machine that's got working capacity, hang 'em."

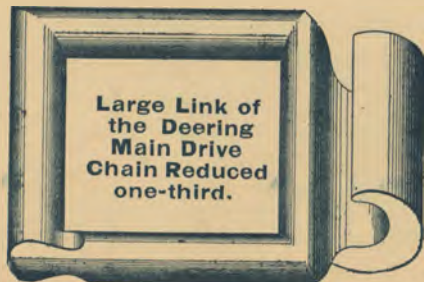
"That's it. You see every part has to be perfect. Now, you noticed the action of that reel, how it divided the grain exactly, and laid it back smooth and straight on the platform after it was cut. Then, there's the frame itself, the main wheel, and the other parts. You see how the parts that have to bear the heavy strains are made exceptionally large and strong."

"You'd suppose that would be a matter of course in any machine that could be patented."

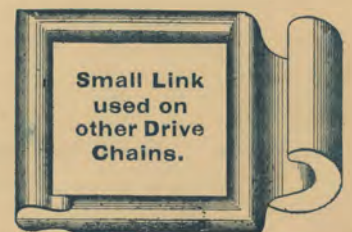
"Yes; you'd naturally suppose so, but just look here at this diagram. I made it when I was trying to convince Edward that his old father knew more about machines than he did."



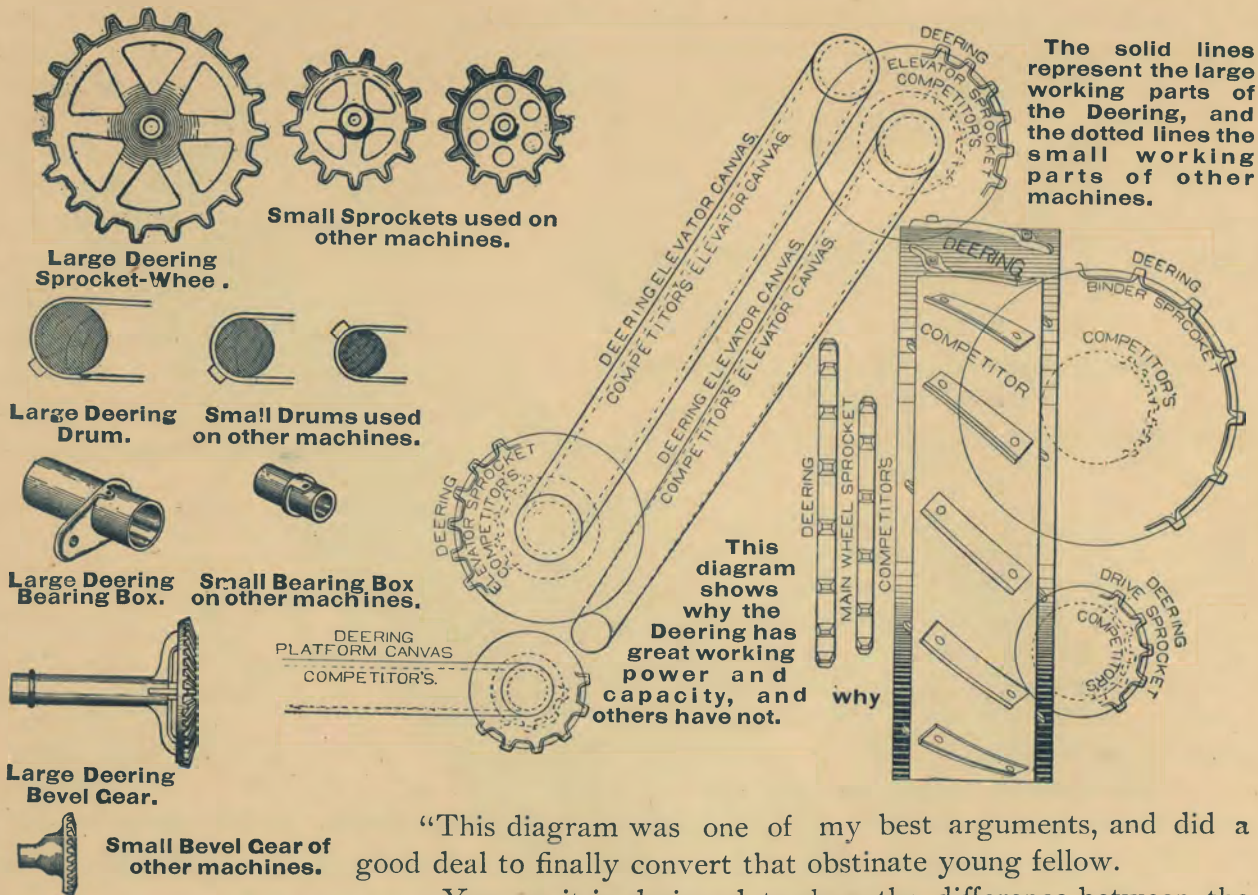
THE PITMAN OF ANOTHER MACHINE. "A GREAT LOSS OF POWER."



Large Link of
the Deering
Main Drive
Chain Reduced
one-third.

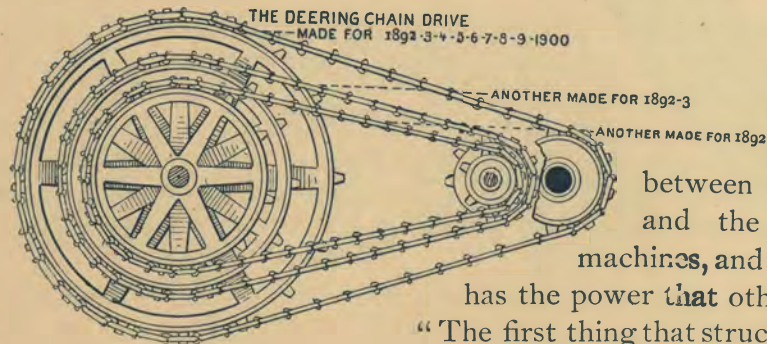


Small Link
used on
other Drive
Chains.



"This diagram was one of my best arguments, and did a good deal to finally convert that obstinate young fellow.

You see it is designed to show the difference between the large working parts of the the Deering machine and the corresponding small parts used on other machines.



Here is the big generous Deering main wheel compared with the mean little wheel used on other machines, and notice the comparison between the large Deering sprocket-wheel and the small sprockets found on other machines, and you can easily see why the Deering has the power that other machines lack.'

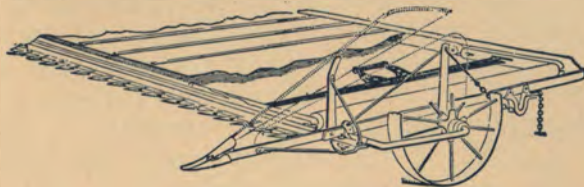
"The first thing that struck me when I saw your Binder," said Waterman, "was the large size of the drums, compared with the small ones on my machine."

"Or compared with any other machine, for that matter; and it explains the reason why the Deering canvases carry and elevate the heaviest grain with ease, while other machines clog from lack of power."

"That's about so," said Waterman, with a grin. "That machine of mine trying to handle a crop of long, heavy grain with its weak and poor elevators, reminds me of my old red cow trying to swallow a pumpkin."

"One thing that struck me was the width of the platform; room enough for the longest grain to lie straight without dragging the heads on the ground."

"Yes, and just compare this Deering platform 48 inches wide with the 38 inch platform on your machine, Neighbor Waterman, and there is actually a machine made with a platform 30 inches wide, and those machines are offered to farmers to handle tall, heavy grain. They might do on a pinch for farms where the soil is so hard they have to put in their grain with a shotgun, but last year's heavy harvest threw them pretty much out of the race wherever grain pays best for raising."



"Just Notice the Automatic Arrangement for Adjusting the Canvas."

with dew, or perhaps you are starting in after a rain. Then of course the canvas will be shrunk as tight as a drum-head, but will soon begin to loosen as the sun dries it. All this shrinking and stretching is automatically corrected by the Deering Platform Spring.

That flag at the back of the Deering platform has a good deal to do with the way it keeps grain straight and is particularly useful in windy weather; it is a capital idea having it so it can be adjusted to the extreme rear of the platform for long grain, or moved up close enough to the front to manage very short scattering grain.

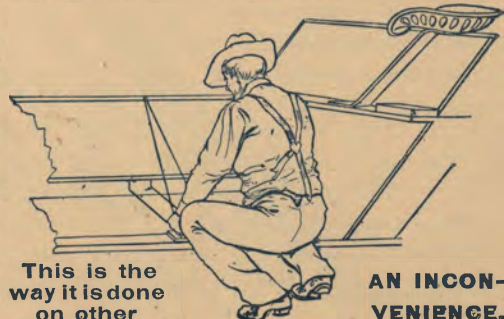
Compare it with the flags on other machines, where, to adjust the flag the driver must not only leave his seat, but squat down behind his machine and loosen two bolts. Anyone who knows how common it is for long and short grain to be found in the same field can see the importance of being able to adjust the flag instantly without stopping."

"That's so," said Waterman, "for I know by experience that with the other kind a driver is of the flag rather than stop and get down, and loosen the bolts for every change in the grain."

A Convenience.



The Deering Flag is adjusted from the Driver's Seat.



This is the way it is done on other Machines.

AN INCONVENIENCE.



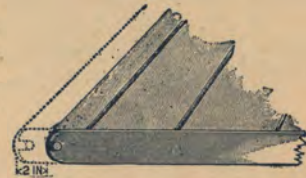
The Deering Platform 48 inches wide.



Platform of another machine 38 inches wide.



Another Platform 30 inches wide.



"But here's another thing while we are looking at the platform "This shrinkage is automatically corrected;" just notice the automatic arrangement, for adjusting the canvas so that it is perfectly taut at all times. You know that often when you start cutting in the morning, everything is wet

shrinkage is automatically corrected."

"Another point of convenience about the Deering Flag is seen when you desire to adjust the straps of the platform canvas. You will notice that the flag is hinged at the seat plank, so that all you need to do is to raise the flag to an upright position where it stands entirely out of the way.

To get at the canvases or platform of other machines, the operator is obliged to stretch himself across the top of the flag, a position that is apt to damage the flag, as well as the farmer's temper."

"Temper!" growled Waterman, "I used to think I was a pretty decent sort of Christian till I tried to run my binder, but I'll be hanged if I haven't come within an ace of swearing twenty times since we began to harvest."

"Well, a man has enough to try his temper, take things the best you can, and so it seems to me he ought not make life harder by unnecessary worries.

Now then, we have seen the way the Reel, Sickle, Platform and Flag do their work, and that brings us to the Elevators; let's take a look at them. They are certainly a very important part of a harvester and binder.

Frequently I see a machine stopped in the middle of a field of tall, heavy grain, and the farmer, with a troubled look on his face, seems to be trying to climb up between the narrow elevators after a mass of tangled grain that has lodged there and utterly refuses to either go through or be pulled out. After hard sweating, and perhaps



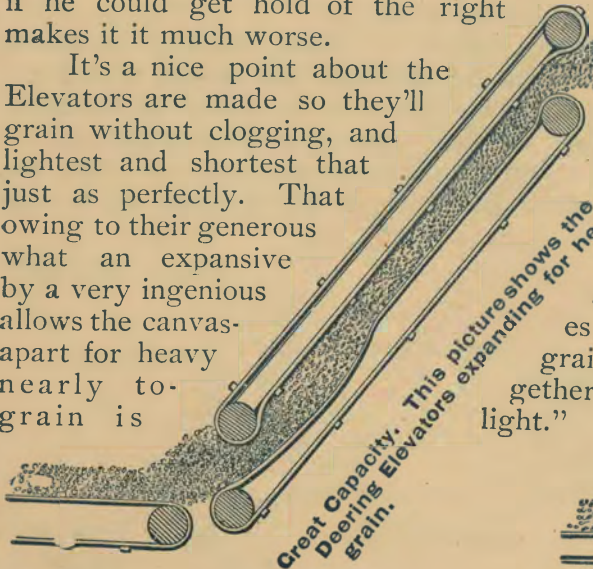
Trying to get at the platform of another machine—"A position that is apt to damage the flag, as well as the farmer's temper."

a little swearing——"

"Hold on, neighbor; no personal reflections before witnesses, or I'll have the law on you."

"Well, I'll take back the swearing; but when a man is mad enough to commit murder if he could get hold of the right fellow I don't know as a few plain words makes it it much worse.

It's a nice point about the Elevators are made so they'll grain without clogging, and lightest and shortest that just as perfectly. That owing to their generous what an expansive by a very ingenious allows the canvas-apart for heavy nearly to-grain is



Great Capacity. This picture shows the Deering Elevators expanding for heavy grain.



No Capacity. This picture shows the elevators of another machine refusing to carry heavy grain.

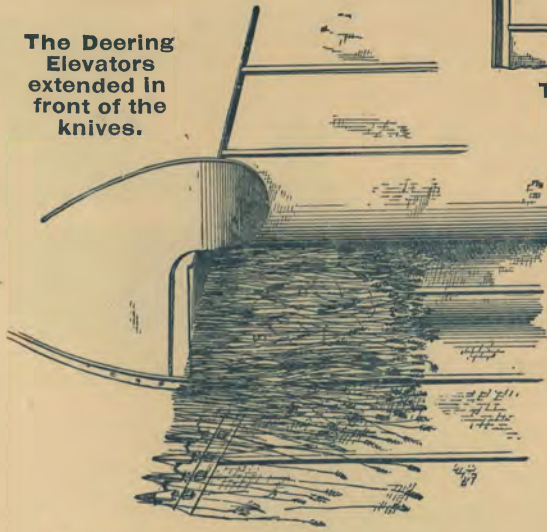
"Short grain or any grain is sure to gather at the inner end of the sickle, unless some means are provided for removing it. On machines where the elevators are extended no further than the platform canvases, the grain soon becomes a tangled mass at this point, and as the heads only are in reach of the elevators, the grain is taken up head first, if at all."

"I saw a machine at the Fair," said Waterman, "that had what they called a relief rake to remedy this trouble."

"Yes, and what does it do? Just

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

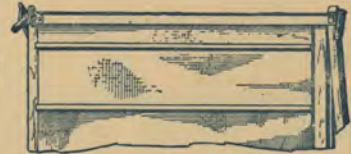
The Deering Elevators extended in front of the knives.



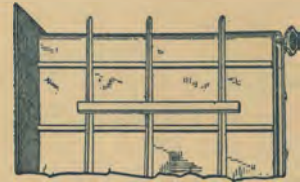
"See how the Deering guards against any such difficulty."



The wide Deering Elevators. Great capacity.



Narrow Elevators of another machine. Little capacity.

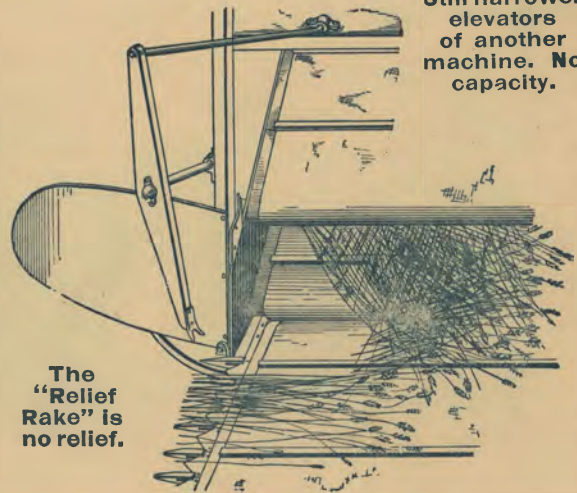


Still narrower elevators of another machine. No capacity.

"The grain soon becomes a tangled mass at this point."



The "Relief Rake" is no relief.



"Just pitches the grain in every direction."

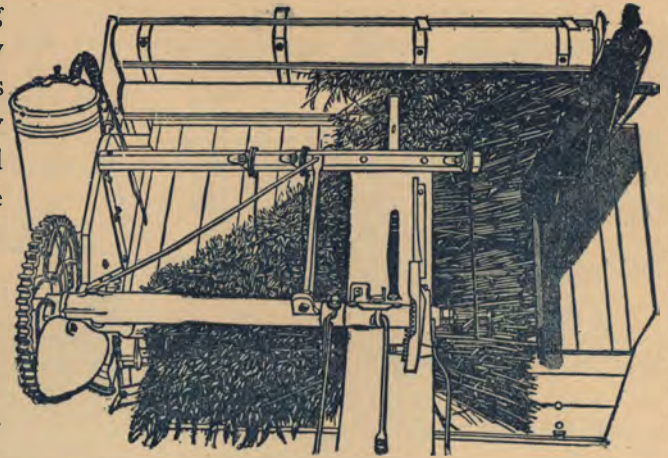
pitches the grain in every direction, so that it goes to the elevators, head first or the reverse, just as it happens, according to the way it chances to lie after the rake has tossed it up. It goes without saying that such a remedy as this only makes matters worse. But now see how the Deering guards against any such difficulty. By the simple expedient of extending the elevators a few inches in front of the knives the grain that falls at this point is grasped and elevated exactly the same as that which is fully on the platform. I suppose it is the additional cost of such an extension that prevents other manufacturers from using it."



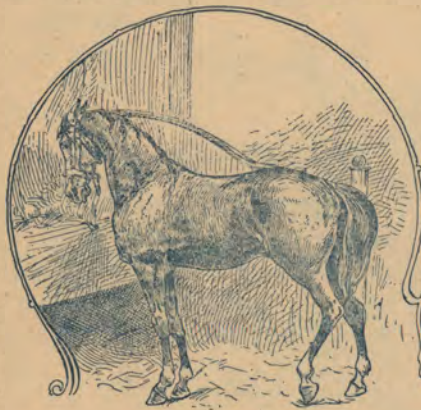
HERE'S a right and a wrong way of doing most every thing, and building binders is no exception. The *right* way is to place the weight and gearing to the rear of the main wheel, and then you have a Rear Geared Binder, like the Deering.

The *wrong* way is to place the weight and the gearing in front of the main wheel, and then you have what the manufacturers call a Front Geared Binder, though a better name for such machines would be Horse Killers." "Dunno's I'll agree to that," said Waterman.

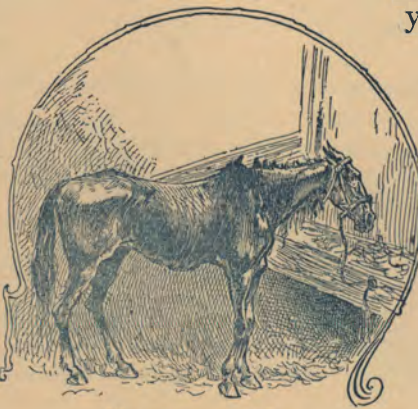
"Well, your horses would if you could put them up to testify. You could hardly get a farmer that had ever used a Deering Binder to take one of those front-gear'd affairs as a gift, and if horses could speak you'd hear some strong talking on the subject. Why, just look at my old Bob and your Tom. I raised them both, and there wasn't a likelier team of two-year olds in the country when I sold Tom to you. There's Bob now as strong and handsome as ever, and good for a dozen years more work, and there is Tom—well you know how Tom looks, poor fellow."



THE DEERING BINDER.

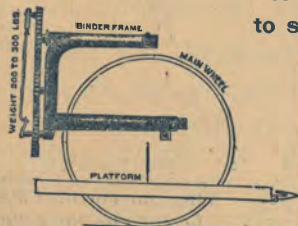


"BOB"

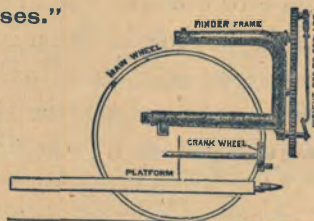


"TOM"

"A Man can't afford to spoil his Horses."



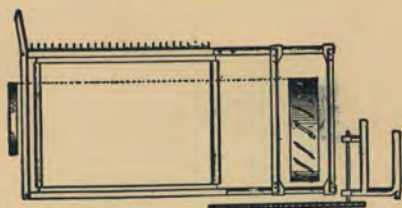
The Deering Rear-Geared Binder. No Neck Weight.



A Front-Geared Binder. All Neck Weight.

"Yes, Tom's about used up; you got the best of that bargain."

"There wasn't a hair to choose between them, as colts, but Bob has been worked on my Deering Binder, and Tom has dragged a front-gear'd machine till he's broken-winded and spavined, and sore-necked. Why it stands to reason if you put the heaviest part of a binder in front of the main wheel the weight has to be carried on the horses' necks. The longer the grain, the further forward the binder must be shifted, and the heavier the weight on the necks of the poor beasts. A man can't afford to spoil his horses that way, even if he hasn't any feeling or what they suffer."



PLAN OF THE DEERING.

The wheel well to the rear. Plenty of tilting room.



PLAN OF FRONT GEARED BINDER.

The wheel way in front. No room to tilt.

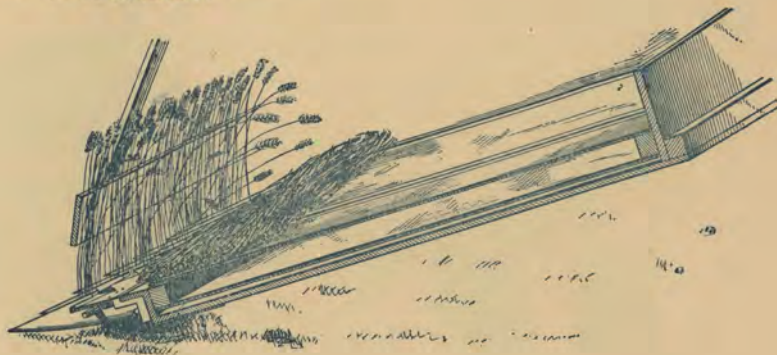
go to the elevators in that shape. But now you see in this Deering with all the heavy parts over and to the rear of the main wheel the balance is all right, so the horses don't carry any neck weight, and the platform can be tilted down so that the guards will almost touch the ground, and still be so near level the grain won't slide."

"One thing I'll own up to," said Waterman, "and that is a front geared binder is mighty hard on the driver, whatever it may be for the team."

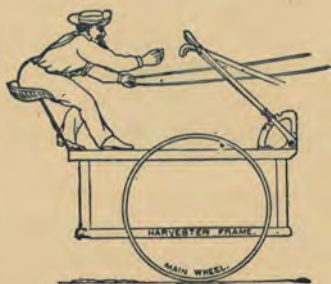
"Hard! I should say so; for in



The guards almost touch the ground and still the Deering platform is nearly level.



You can't handle short grain with the platform tilted like this.



"The front geared binder is mighty hard on the driver."

trying to balance the heavy parts in front of the main wheel, they have to put the driver's seat so far back he needs arms as long as fish-poles to hang onto the lines, and then he has to stoop forward or maybe get up to reach the levers."



The convenient Deering Levers in easy reach.

"The main wheel of my binder is set a good deal further forward than this Deering main wheel" said Waterman.

"Yes and that's another disadvantage: it has been put there in an attempt to balance the machine, and there the platform has so little play that when it is tilted down the guards dig into the ground and the other end is up in the air."

"I don't see how you could handle short grain on a platform tipped that way," said Dick.

"You can't do it: it slides down towards the sickle, and if it don't slip off onto the ground, the stalks turn sideways as they slide, and they

"The Deering makes handsome bundles," said Dick, examining one or two; "the butts are as square as if the grain had been standing on the barn floor while it was bound."

"Yes, and I wish I had some bundles made by a front gear to be compared with them. You'd see that the butts are ragged; some of the stalks drawn out half their length at one end and heads sticking out the same way at the other. Such bundles won't bear handling; lots of them fall to pieces before they get to the stack."

You see a machine with the gearing in front can't use a contrivance like this long Adjuster Extension on the Deering Binder. That extension holds the butts firmly in line while the knot is being tied, and at the same time there's the slickest kind of a contrivance to keep the heads from working off at the rear. See this Deering wind-board, right at the rear of the binder deck? Can't a straw get off."

"How about that spring wind-board? The agent for my machine claims that's ahead of any other because it can get out the way," said Waterman.

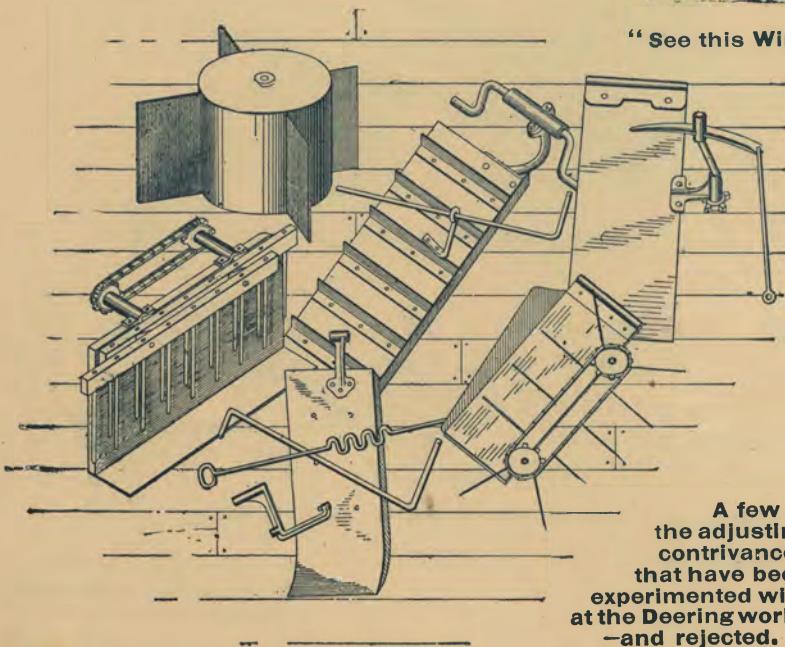
"Well I reckon he's right there; it does 'get out of the way,' but the trouble is it *gets* just at the wrong time, and lets the grain slide off, or so near off that half of it



"See how the wind-board gets out of the way."



"See this Wind-board; can't a Straw get off."

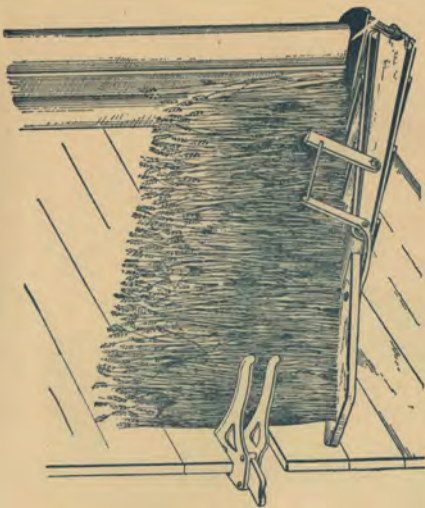


A few of the adjusting contrivances that have been experimented with at the Deering works—and rejected.

never gets into the band at all.

If I was going to name the part of the Deering Binder that has most to do with its success in handling all sorts of grain under all sorts of difficulties, I'd say the Adjuster. It's just as near perfect as a thing can be, and I can tell you lots of brain-work and money has been spent to bring it there. Why, they've experimented for years with all sorts of devices.

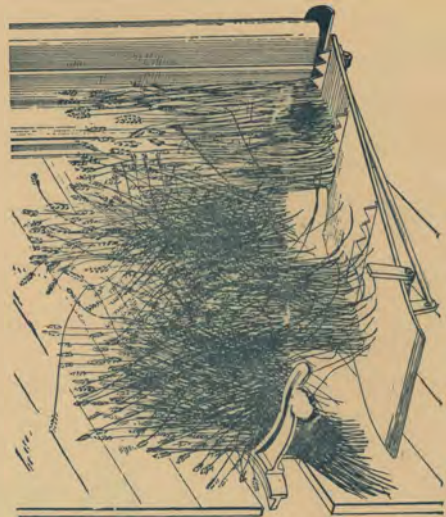
When I was at the Deering Works they let me take a look into the department where they make experiments—that's what I call the brains of the factory."



THE DEERING ADJUSTER AT WORK.

"Did they ever try the reciprocating butt-boards? 'Pears to me there's good sense in that idea."

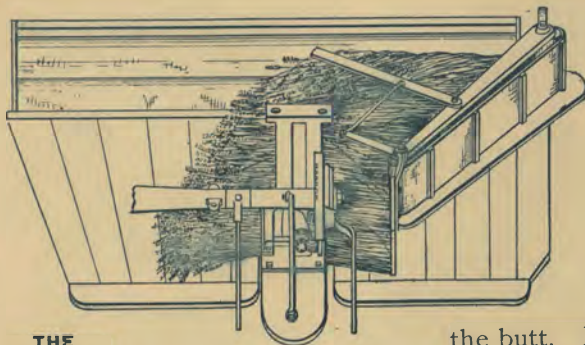
"They tried them thoroughly, and it seemed to me some of those that they had rejected were better than any I ever saw on other machines, but they were just nowhere in comparison with this Adjuster. Of course a butt-board is cheaper than a canvas adjuster, but they proved such a dismal failure, especially last year, I should not think a manufacturer would have the face to put one on another binder. Why I suppose there were thousands of farmers last harvest who would not settle for the



THE BUTT-BOARD "AN AWFUL FAILURE."

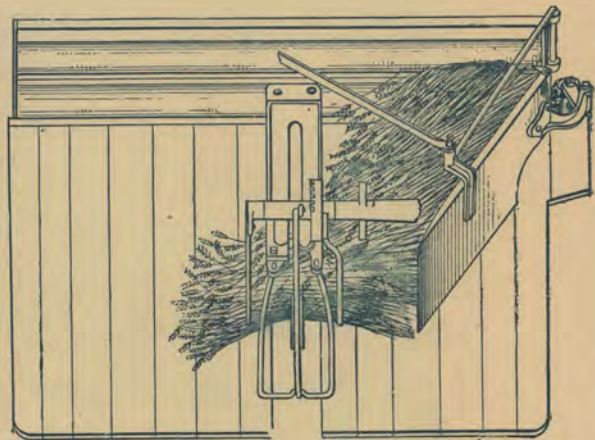
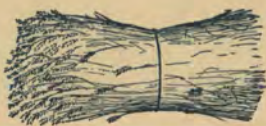
kind of machine like Waterman's until they were given an agreement in writing, that they should be furnished with a canvas adjuster. That butt-board was an awful failure.

To my thinking grain has to be managed pretty much like human critters. If you want a man to go a certain way it's a good deal easier to coax him along than to take a club and try to drive him. There is no clubbing about the Deering Adjuster. The canvas adjuster carries the grain smoothly down the binder-deck, and the extension keeps the butts square while the bundle is bound, and the result is a firm, compact, square-butted bundle whether the stalks are one foot long or seven. Take it the other way and the blows of the butt-board pound out ripe grain if the wheat is short and light, and drive the stalks half way across the deck, so that lots of them



THE DEERING BINDER.

"The result is a firm, compact, square-butted bundle."

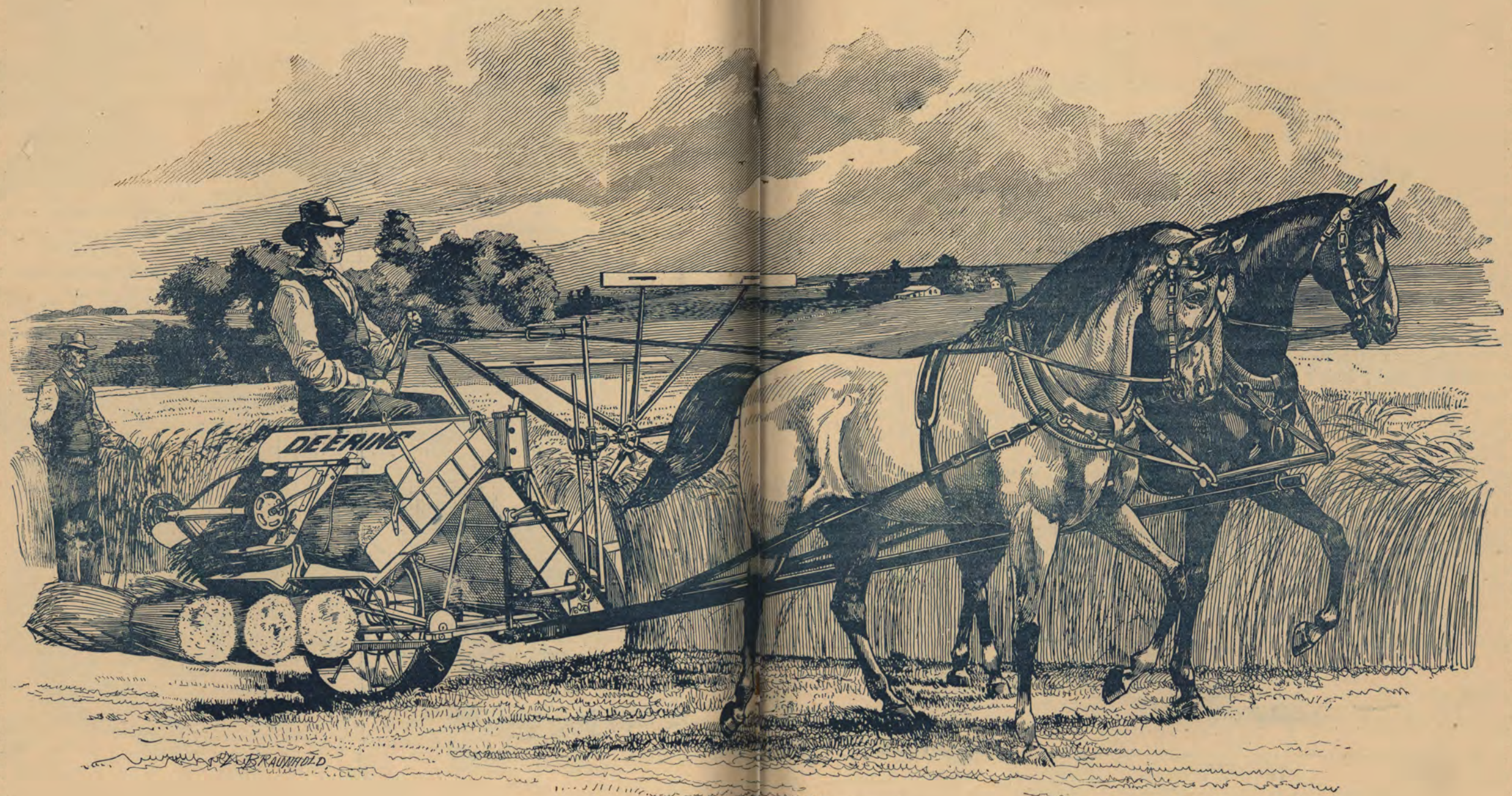


THE BUNDLE MADE WITH A BUTT-BOARD
"Sure to fall to pieces under handling."

escape the band entirely, or are tied an inch or two from the butt. I've seen bundles tied by these binders that were twice the length of the stalks of grain, and sure to fall to pieces under handling."

"How about long grain?"

"The pounding system is just as bad there for the ripe heads are jammed against the wind board, and, either the spring wind-board gets out of the way and lets the grain fall out behind, or it fails to get and the grain is thrashed out and lost. It makes the same irregular bundle out of long grain or short. No, sir, I don't want any butt-boards to shell my grain or make bundles that can't be handled. Nothing short of the Deering Adjuster satisfies me."



THE DEERING JUNIOR STEEL BINDER.

“**B**ut here now you’ve got the very brains of the machine, according to my thinking, and that’s the wonderful Deering Knotter. You may put that machine into any grain that ever grew, and from morning till night it won’t miss a bundle, or fail on a knot, so I set down as the first good point of the knotter ‘*Reliability.*’

And then if you’ll notice how few parts it has, how well made they are, and how carefully put together, so’s almost never to need any repairs, you’ll see where it scores another point by ‘*Simplicity.*’

And when you add to these: ‘*Economy of Twine,*’ you’ll have three counts in its favor that will weigh a good deal with a careful man.”

“I don’t take much stock in that last count. There can’t be any great difference in the twine it takes to tie a bundle,” said Waterman.

“I’ll soon show you if you’ll let Dick fetch over a bundle from your field.”

“All right, young man, go ahead; but you needn’t pick for the worst one you can find.”

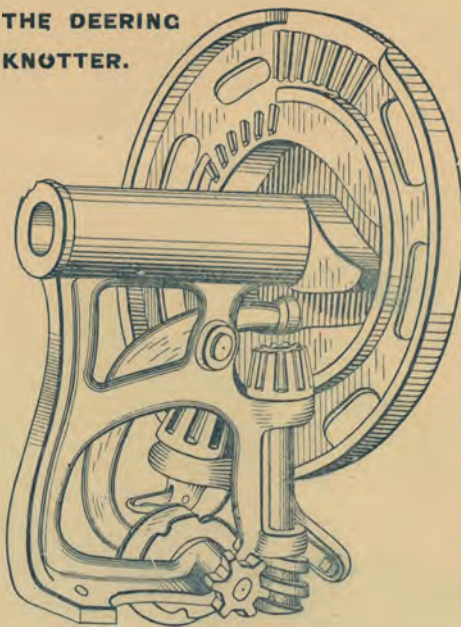
“Pick for the best, Dick; I ain’t afraid to match my Deering with the best. There; you see to begin with, your bundle is flat and irregular, and the Deering invariably ties a round bundle. Now measure the length of twine it takes just to go around this flat bundle—never mind the knot—we’ll come to that by and by. Now throw that same grain into the Deering Binder and let our machine make it up in a bundle.”

“Does look more ship-shape, that’s a fact, and the band’s so tight you can hardly get your finger under.”

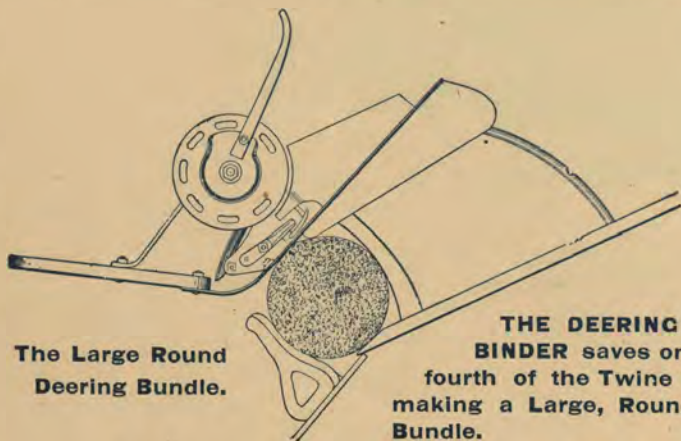
“Yes, and just notice that this bundle is *round*. Now if you’ll measure the twine used in the band of this round Deering bundle you’ll see it’s taken about a quarter less twine than it took for the same grain in the flat irregular bundle Dick fetched over.”

“A saving of one-quarter of the twine is a pretty good argument for the Deering Binder; guess I shall have to own up to the economy question.”

THE DEERING
KNOTTER.

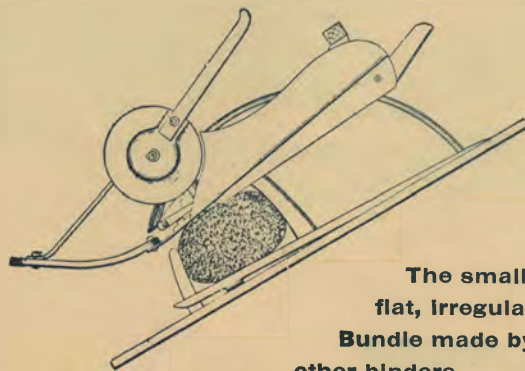


RELIABLE. SIMPLE.
ECONOMICAL.

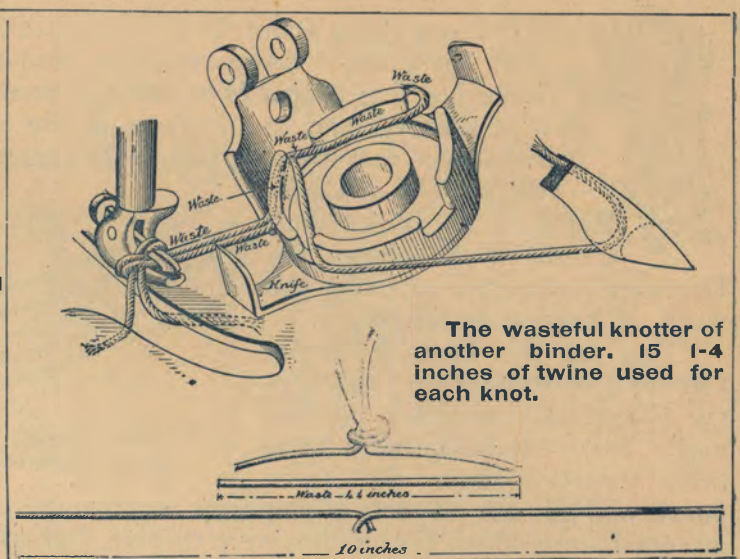
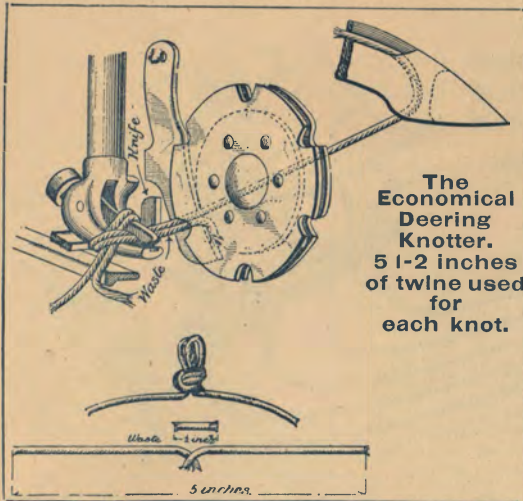


The Large Round
Deering Bundle.

THE DEERING
BINDER saves one-
fourth of the Twine by
making a Large, Round
Bundle.



The small,
flat, irregular
Bundle made by
other binders.



"Hold on, that's only half my proof, there's as much wasted by the other machines in tying knots as in making bundles. Measure up that Deering knot we have just made and you'll see there's about five inches used in making the knot and half an inch dropped in cutting, five and one-half inches in all.

Now try the rule on the twine your machine used for a knot and see what you find. Look at that, will you? Ten inches taken up in the knot, four inches and a half cut off and dropped, and at least another inch of unnecessary twine left in the long ends, making fifteen and one-fourth inches in all."

"By Jiminy! that's steep."

"Nearly ten inches saved by the Deering in the knot of every bundle, and one-fourth the twine in the band! what do you say now about economy of twine?"

Another machine that I could name uses eight and one-half inches in making the knot and leaves ends long enough to waste half as much again. These two machines are not the only ones that waste. There isn't a machine on the market that can make any showing for saving of twine compared with the Deering, and saving of twine means saving of money for the farmer."

"There seems to be more grain in your bundles than mine."

"Yes, and that's another point of economy. The large, round bundles of the Deering require fewer to the acre, and of course the fewer bundles the fewer knots, and so you have another saving."

"Now, Father," said Edward, "there's just one thing a Deering Binder can't do, and that is to harvest a crop while it's standing still in the field. You and Waterman can go on talking as long as you like, but this Binder is going to work now for all it's worth, to make up lost time."

"Go on, Edward. I've had my say for this time. See if you can practice as well as your old daddy can preach."

"Faith, and I can do that same every time with a Deering Binder to stand by me."

“**T**HERE is one thing about the Deering machines that has always taken my fancy, and that is the Deering people have always been the first to discover and to bring out all the little conveniences that are now placed on binders.

This BUNDLE-CAR-

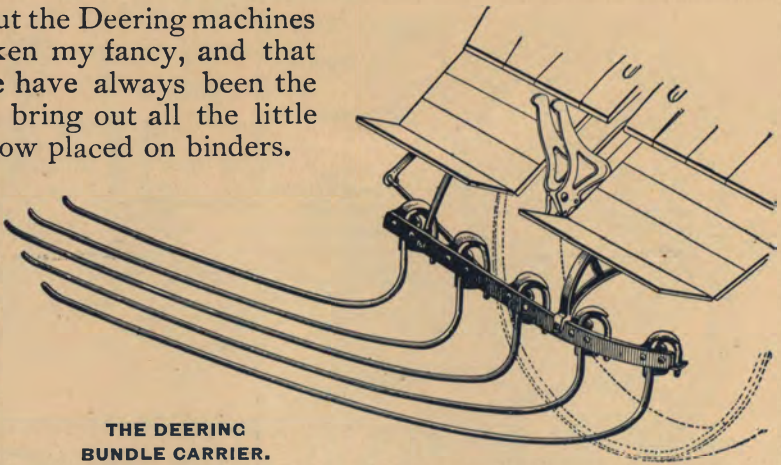
RIER is an illustration; it's one of the things the Deerings introduced to make the work of harvesting lighter.

You see this Deering Bundle Carrier does some of the hardest of the disagreeable work for the farmer. Other manufacturers have been sweating over the same puzzle and got out all sorts of clap trap contrivances. One machine had a traveling canvas attached, onto which the bundles were thrown, and when the canvas was started the bundles rolled off and were strung along the field. Another had a contrivance like an overgrown bird-cage that they dropped the bundles into, and a good many others tried to copy the Deering Bundle Carrier. They showed their good judgment in seeing that it was the best, but copying don't always work in machines. You see they ran across the Deering patents, and they concluded that when Uncle Sam told the Deering manufacturers they had a right to their own inventions, he meant just what he said. They've got three or four different ground patents on that Bundle Carrier, so I've been told, and I shouldn't wonder but some of these days some of the machine companies that seem to be trying to imitate it would have to settle matters with the Deering folks and Uncle Sam.”

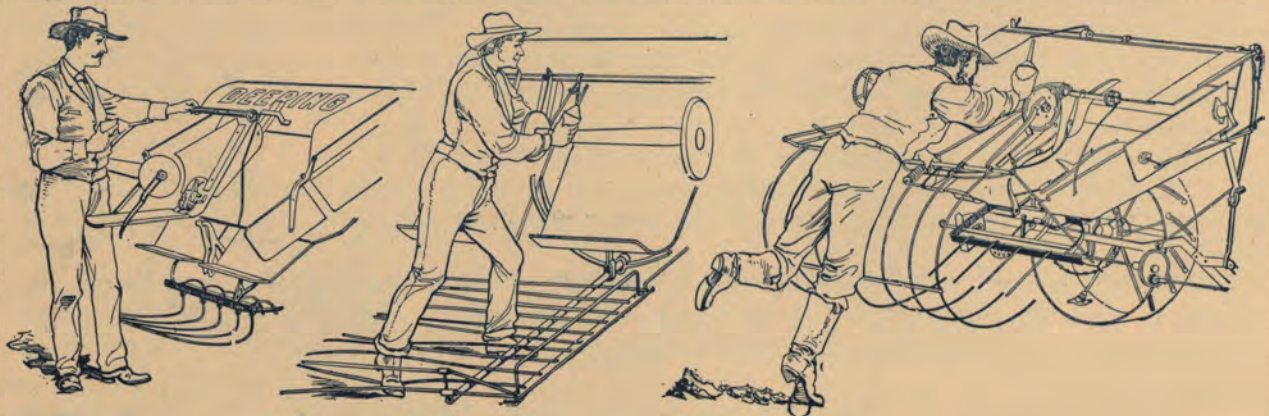
“Ned said the Bundle Carrier had been improved for '92,” said Waterman.

“Yes; we thought it was about perfect before, but this improvement is a neat little touch. Last year the Carrier was attached to the framework of the harvester, but this year it has been attached to the binder itself. So you see that when the binder is shifted backward or forward the Carrier goes with it and is always just where it should be to take the bundles.

Then you don't have to climb over it to oil the binder, as you do on some machines, or wade in among the fingers of the bundle-carrier. No wonder Waterman's Bundle Carrier looks as if a cyclone had struck it.”



THE DEERING
BUNDLE CARRIER.

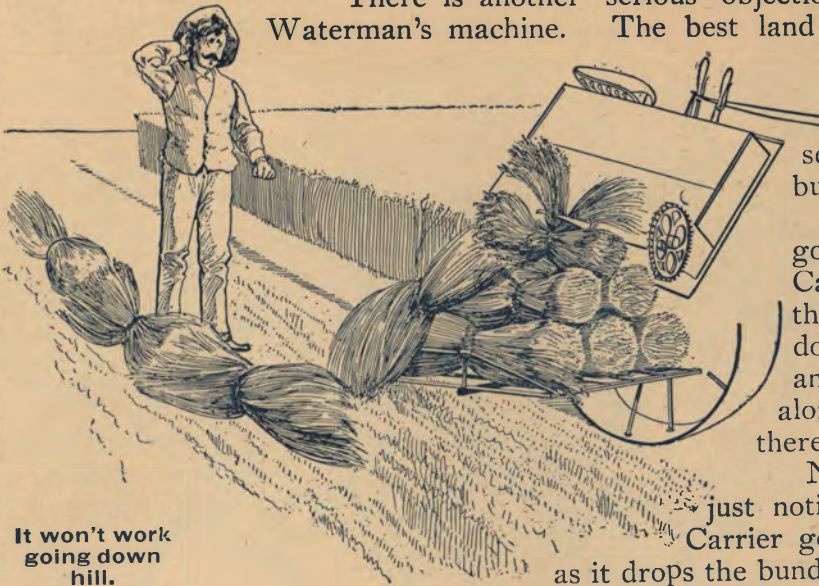


The Deering Bundle Carrier folds back entirely out of the way.

“No wonder Waterman's Bundle Carrier looks as if a Cyclone had struck it.”

You don't have to climb over the Deering Bundle Carrier like this, when you want to oil the Binder.

"There is another serious objection to that Bundle Carrier on Waterman's machine. The best land he has for grain is that hill



It won't work
going down
hill.

side yonder, but he can't use his Bundle Carrier there to any advantage, because you see it is made to dump the bundles by tipping to the rear.

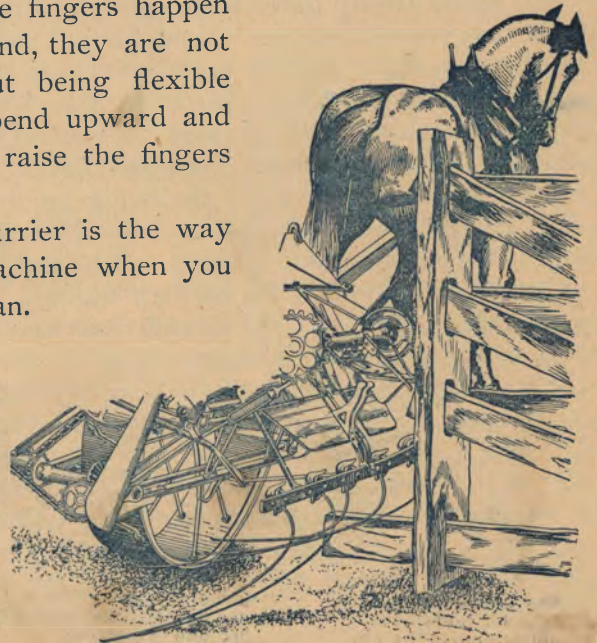
Now when his machine is going down hill the rear of the Carrier is so near the ground that there is no room to tip it down and the Bundles heap up on it and slide off one by one and string along in the same manner as if there was no bundle carrier.

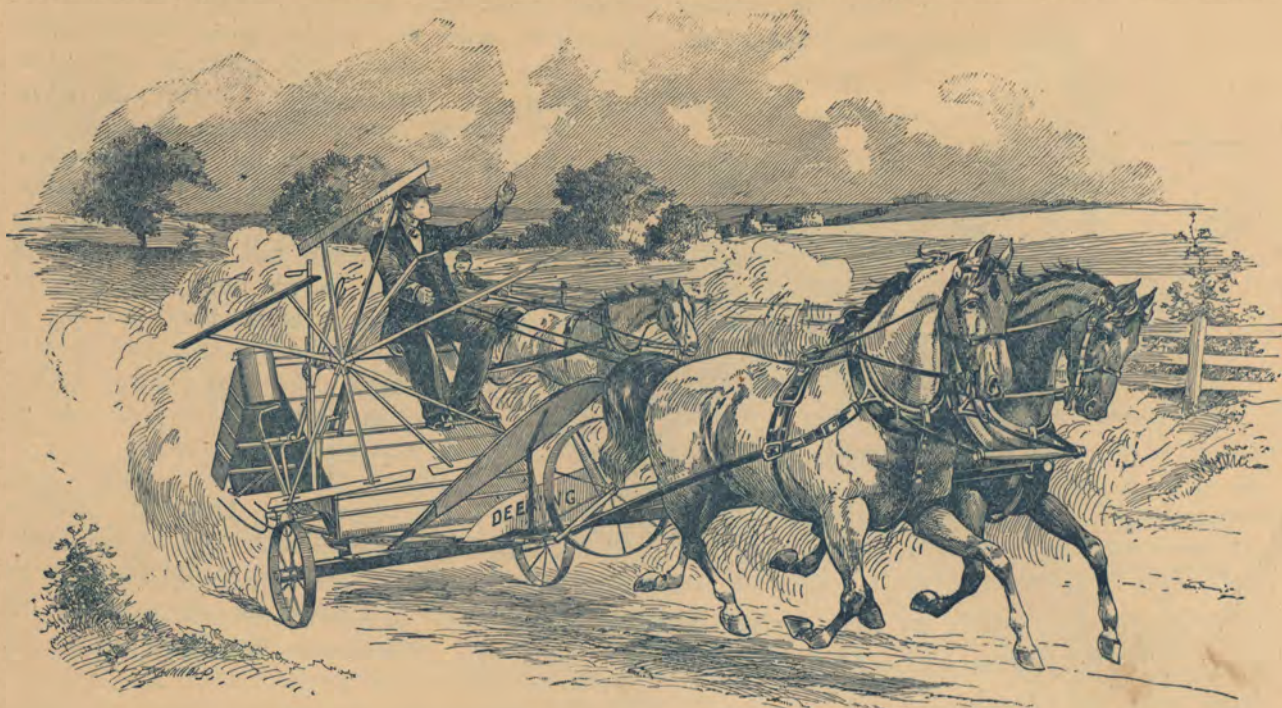
Now, then, drive ahead and just notice how the Deering Bundle Carrier gets completely out of the way as it drops the bundles. No chance for bundles or anything else to catch on that carrier because when folded it's gone as completely as if there were no Bundle Carrier on the machine. That's by all odds the best Bundle Carrier ever used on a binder."

"Another nice thing about the Deering Bundle Carrier is the fact that it always takes care of itself. You will notice, as you are driving along with the Bundle Carrier up, that if the Bundle Carrier runs across a stone or a stump you will feel the pressure, and even if you wanted to hold the Bundle Carrier in position, you will find that you are not strong enough to do so. The fingers will come back in spite of you, right clean out of the way of any obstruction. This isn't all, either. If the fingers happen to strike on a stone that is lying on the ground, they are not bent as they are in other Bundle Carriers, but being flexible in the joints, as you see, the rods or fingers bend upward and pass easily over the obstruction, and when you raise the fingers they are as straight as ever."

"One thing I like about that Bundle Carrier is the way the fingers fold up against the side of the Machine when you want to go through a gate-way," said Waterman.

"Yes; the Deering Carrier will go through any gate-way where the machine will go without it. I would rather pay for the Deering Bundle Carrier than take any other kind 'thrown in' with the machine. The few dollars saved by having a poor contrivance of a bundle carrier 'given to you,' are lost a good many times over when you count the delays and repairs you'll have to pay for."





THE DEERING BINDER TRUCK.

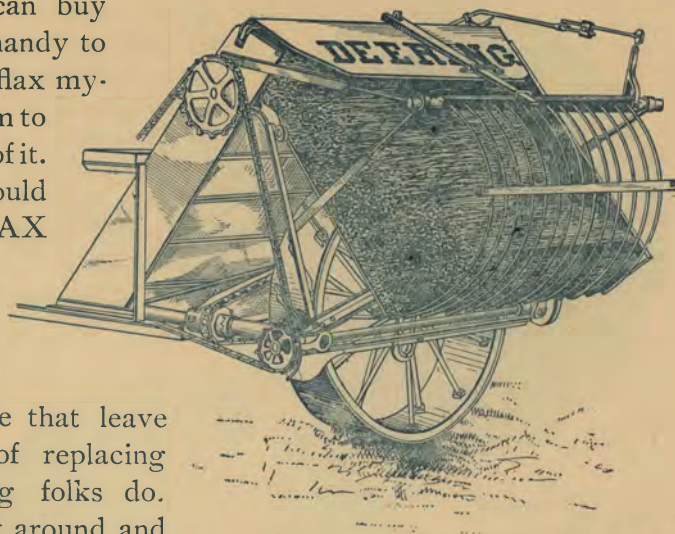
(Carrying the Deering Binder on the road.)

THERE is another thing of considerable importance to a man who runs a binder, and that is the **DEERING BINDER TRUCK**. Since I have been using binders I have made all my gates wide enough to run the binder right through, but there are a good many narrow places yet. And then, I sometimes want to take the binder along the road or across narrow bridges, and for such purposes I use the Deering Binder Truck.

The Deering people were the first to see that the quickest and easiest way to carry a binder on a truck was to use only two wheels, balancing the machine, and then starting off wherever you wanted to go. You know it is a good deal easier, on our country roads and through the fields, to drive around with a two-wheeled cart than it is with a four-wheeled wagon, and the Deering people took advantage of this fact. I understand that they have a patent on it, and I wonder that they allow so many other people to make use of imitations of their method. It is no bother with the Deering Truck to get the Binder out of one field and into another. All you have to do is to slip the iron part attached to the axle over one side of the frame, and then push the other side up to its place and stick in a pin, and your axle is made fast. Then you slip on the wheels, unfasten the pole, pass it through the grain-wheel and bolt it on to a strengthening framework on top of the platform, and there you are. On the Deering Machine you don't have to take off the platform canvas, as you do on a good many others.

Costs? Well, yes, it costs a fair price; but I would rather have a truck that is quickly and easily put on, and won't break down or give out, and pay an honest price for it, than to get some cheap and rickety affair that drops me down in the middle of the road, or plays out after a little use, and have it given to me, for the bother of constantly replacing these things is really more than the saving."

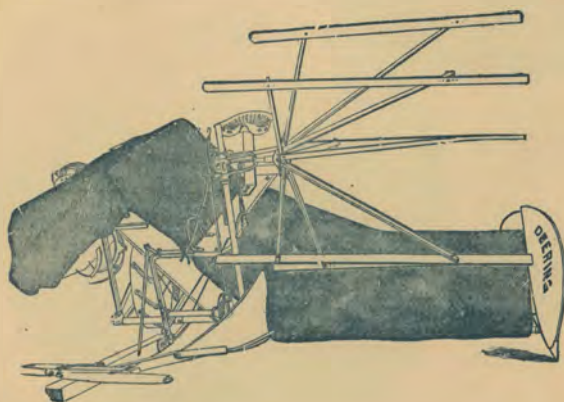
“THERE is another thing that you can buy with the Deering Machines that is handy to have about. I don’t grow much flax myself, but some of the people around here seem to be taking it up and making a good thing of it. Anyone who grows flax on his place would certainly want the DEERING FLAX CARRIER, to put on his machine. I have seen flax carriers on other machines, some of them evidently copied from the “Deering,” but most of them dribbled out the flax, especially those that leave the adjuster on the machine instead of replacing it with a wide board, as the Deering folks do. The adjuster, working in flax just turns it around and dribbles it out before it gets down to the Carrier itself. I use my attachment more for cutting clover and timothy and any other kind of grass that I want to drop in gavels so that it will dry out, and so that I can use it for seed.”



THE DEERING FLAX CARRIER.

“There’s one thing about your way of farming, Uncle Robert, that goes a good way in explaining why your machines always do their best, and that is the way you take care of your tools. You have a good storehouse and plenty of room for every piece of machinery about the place.”

“Yes, sir, and that’s one lesson you want to lay up for your own benefit. If I didn’t take care of my property even the Deering Machines wouldn’t have lasted me the way they have. But sometimes in harvest, when all hands are tired and hungry, it does seem pretty tough to go to the trouble of putting a machine on a truck and drawing it home to be under shelter. So I was pleased enough when I found that the Deering folks made a tarpaulin Canvas Cover to put over the machine that would keep off the dew, and even keep it dry in a rain-storm if one came up in the night. Now I can leave the machine in the field at night and find it the next morning dry and clean and all ready to start off. The cover fits snug, and sheds water like a duck’s back.



THE DEERING CANVAS COVER.

Every careful farmer will provide himself with this Deering Canvas Cover to protect his machine. It will save its cost many times over.”

But finally an order was given to the Philadelphia manufacturer and another small order was taken by a New York manufacturer, and this was the way the use of Manila and Sisal Twine in binding grain began. The twine wasn't particularly good at first, because it couldn't be spun even enough, but it was better than the other twine that had been used, and gradually the twine got better and better. Then the Deering people sent one of their binders down to the twine works, so that the twine makers could see for themselves just what was needed. Quite a quantity of this twine was used in 1880 by the Deering people. In 1881 the quantity increased, and gradually from that time on the amount of twine required to bind the

crops grew to the present enormous quantity;—and all this from the beginning that I have told you about.

William Deering & Co., through all of these years, have been the leaders, not only in furnishing the best, and because the best, the largest, number of self-binders, but they have also furnished the farmers with a larger quantity of twine than any other manufacturers.

The reason of this is not difficult to discover. It's

because the Deering Twine has always been the most reliable, has run the greatest number of feet to the pound, and has always represented the best value for the money."

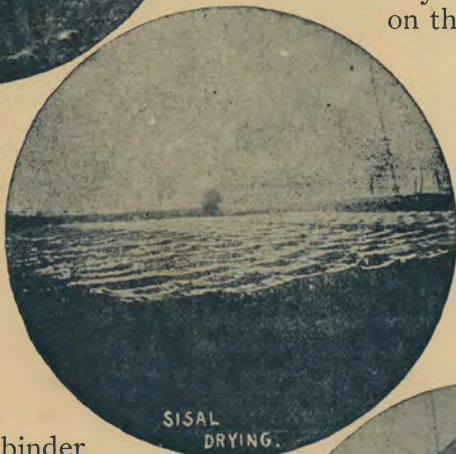


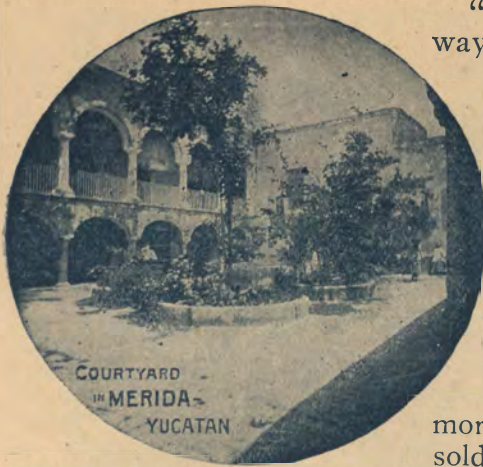
"WHEN I turn my thoughts away back to 1879, thirteen years ago, though it doesn't seem to me so long a time, it is very interesting to think that this whole binder business had its beginning in the Twine Binders manufactured by the Deering concern in 1879.

The only twine that seemed to be available then was American Hemp Twine, which was spun by hand down in Kentucky, and had lumps as big as robins' eggs in it, and little places that wouldn't hold up a fifteen-pound baby; and Flax Twine, which wasn't then a perfect article and hasn't yet come into use much. The American Hemp Twine and the Flax Twine that the Deering people had been trying to use on their machines in 1879 did not work very well.

So Mr. Deering himself went down to Philadelphia, where one of the large manufacturers of rope had his factory, and spent a good deal of time discussing with him the possibility of using for binder twine the same yarns which you'll find in any manila rope whether it is large or small.

Mr. Deering then visited New York to see the New York manufacturers of twine. Some of them weren't certain that it wouldn't be possible, but most of them said that it couldn't be done or else that it wasn't worth fooling with.





COURTYARD
IN MERIDA
YUCATAN

"The Deering people always furnish a variety of grades of twine, and any farmer that wants Deering Twine can buy the grade he wants; but when he gets Deering Twine he knows what he is getting, and he knows if he pays a little

more for it than the twine sold across the way he's

getting full value for his money, or if he buys a cheaper grade of Deering Twine he knows just as well then that he's getting the value of his money.

I understand that in 1891 the Deering people sold (13,000) thirteen thousand tons of Twine. Just think of thirteen thousand tons of Twine! Twenty-six million pounds!

When I was at the Deering Works, nothing interested me more than the Twine Works.

The Deering Works cover a piece of ground upwards of forty acres in extent. Just about in the middle of this great place I found the Deering Twine Works, and such a hive of industry I never before saw, and such noise I never heard. Some of the machines that were preparing the fibre for spinning were about as big as some of the houses we see people living in, and were making a noise that would almost make you deaf.

I was tremendously interested in the ways they have of preventing poor twine being sent out. I found that on some machines they had a bell that would ring when anything went wrong, and on other machines they had weights that would fall down and stop the machinery in case bad twine was coming through. Then, I found that every inch of twine as it was being made into balls was watched carefully, and in case any bad spots came along, it was rejected. Then, besides all this I found a thorough system of testing was going on all the time, and that a careful record was written down in a record book of just the length and the number of twists, and all the other details about the twine that is being made, every day, and every hour, and every minute. I

plainly saw that it was only by such care that the big

lumps, and the knots, and the very small places such as you're pretty certain to find in twine not furnished by William Deering & Co., could be avoided. I pin my faith to the Deering Twine.



HENEQUEN-
HACIENDA
OR SISAL FARM



RUNNING
DOWN SISAL TO
LOAD STEAMER



STEAMER
LOADING SISAL
FOR WM DEERING & CO.



THE DEERING LIGHT REAPER.

"Here's this DEERING LIGHT REAPER, a little machine I bought several years ago. When the harvest crowds me, and I've got plenty of hands I get out this Light Reaper, and start it into the field, and it does as pretty work as any machine of its kind you ever set eyes on. Runs right along like a clock, and I don't know but what it's easier to handle than a Binder. All a man has to do is to drive straight along and use the foot treadle once in awhile. Kitty can run it like a book. You change this lock with your foot, and you can fix it so that all the rakes will rake, or every second one, or every fourth one, or you can hold it till you get a gavel large enough to suit you, if the grain is very thin, and then let one of the arms rake it off.

It has a framework round the wheel to keep the wheel from tipping and prevent the gearing from cutting or wearing out.



On the Deering Light Reaper the operation of folding and unfolding the platform is done in almost no time. Instead of crawling under the platform to unbolt the connections, you have this handy latch-rod here at the rear of the platform. Disconnect it and fold the platform when you wish to start off on the road. When you wish to drop the platform, do so, and connect the parts with this handy latch-rod again. This is practically all there is to the operation belonging to tell about than to do. It is the best reaper

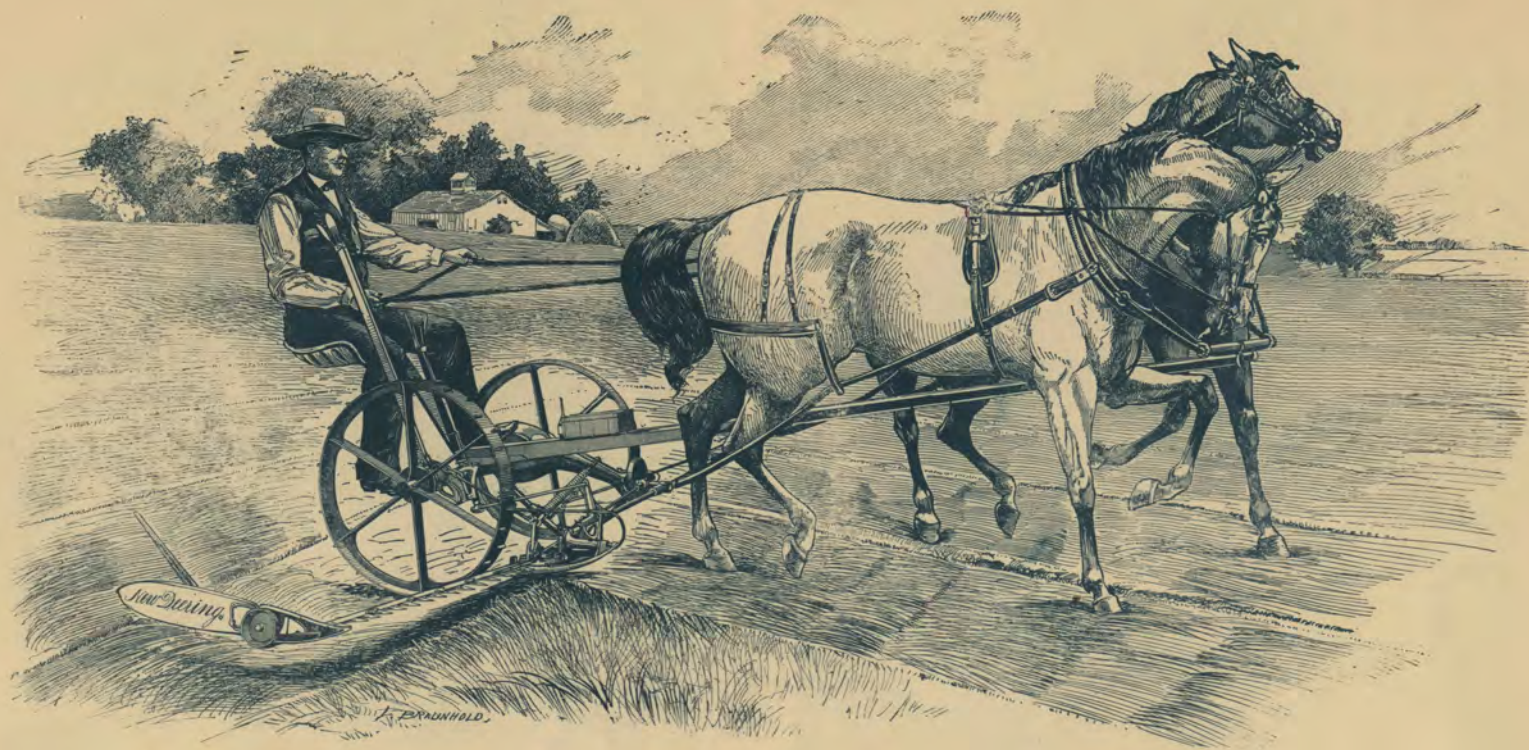
yond some trifling things that it takes to cut flax with that I ever saw."



TRIUMPHAL PROCESSION OF DEERING MACHINES PASSING MACHINERY HALL.



BIRD'S-EYE VIEW OF THE WORLD'S COLUMBIAN EXPOSITION, TO BE HELD IN CHICAGO IN 1893.
The Deering Machines will be there, and the latch-string of the Deering Office and Works in Chicago will be hanging out.



THE NEW DEERING MOWER.

"See Him Turn The Corner."

GRASS, GRAIN & GAIN

“YOU remember, Dick,” said Mr. Mather, “that I said I’d call my talks on farming—‘Grass, Grain and Gain.’”

“Yes, Uncle Robert, I remember, and you have stuck to your text pretty well, at least to the ‘Grain’ part of it.”

“Well, now we’ll take up the ‘Grass’ part.”

“If I caught the right idea from your talk about harvesters, the point you made was that in order to get the greatest gain out of a crop of grain, it must be harvested with the Deering Junior Steel Binder.”

“That’s exactly the right idea, my boy. And now I’ll show you that if a farmer wants

to make any ‘Gain’ in cutting his ‘Grass’ crop, there’s only one way to do it, and that is to cut it with the Deering Mowers. There’s lots of mowers made, but none of them can be compared with the Deering Mowers. The Deering people make four styles of mowers:

THE NEW DEERING MOWER, that cuts a swath $4\frac{1}{4}$, $4\frac{3}{4}$ or 5 feet wide;

THE DEERING GIANT MOWER, cutting 5, 6 or 7 feet wide;

THE DEERING JUNIOR GIANT MOWER carries a 5 or 6 foot cutter-bar, and

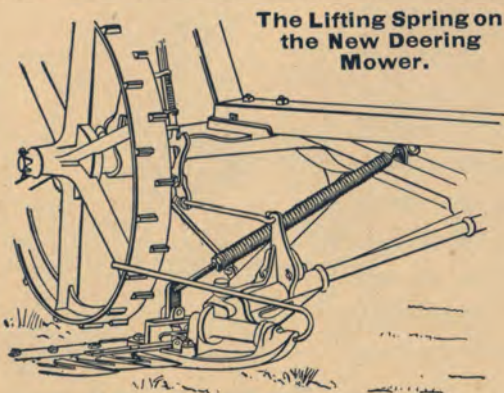
THE DEERING ONE HORSE MOWER, cuts $3\frac{1}{2}$ or 4 feet.

That’s the list of Deering Mowers, and there’s one for every kind of cutting. Now we’ll go out to the field where Edward is cutting.

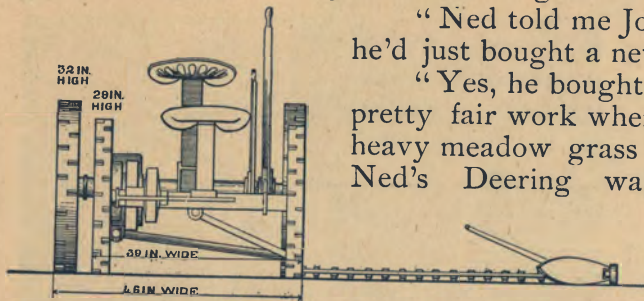
You’re in luck, Dick, to get a chance to see the New Deering Mower at work. We had only this field left when we got your letter, but it’s as heavy grass as ever I saw, and I told Ned we’d let it stand a day or two.”

“Ned’s horses seem to be wide awake this morning.”

“Yes, but he’ll handle them easy enough. Now see him turn a corner. You see he has full use of his hands for the horses; a touch of his foot on the lever under the seat lifts the cutter-bar high enough to clear it of the grass. It isn’t all muscle either: that spring that runs from the main frame of the mower down to the piece jointed onto the cutter-bar, does the main part of the work. It almost raises itself, and a boy could work it. One Deering Mower had a spring to raise the cutter-bar, far back as ’84. Since then some other folks have put them on what they call wide-cut mowers, but the Deering Mowers all have them, and it’s a big count in their favor. You’d say so if you tried it.”



"That spring, by the way, that helps raise the cutter-bar, does a good thing for the horses as well as the driver; it makes the machine draw light by taking the weight of the cutter-bar off the ground. All you want of a cutter-bar is to get down to the place where it will cut a close, clean stubble. Plowing the ground, as some machines do, causes a tremendous friction that is rough on mower and horses both, and this difficulty is overcome in the New Deering Mower by this same ingenious spring."



The New Deering Mower with its high wheels and wide tread compared with another mower that is expected to do the same work.

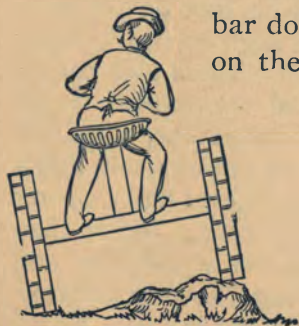
the same length, and the narrow tread machine is expected to do the same work as the wide-tread."

"I remember our old machine used to clog sometimes, and when it did, the wheel near the grass would rise up, and there was no way but to get off and clear the knives."

"Exactly, and that was just the way Jones' machine worked, or didn't work. The cutter-bar and drag-bar are held forward in place by the push-bar that runs directly back under the wheel next the grass.

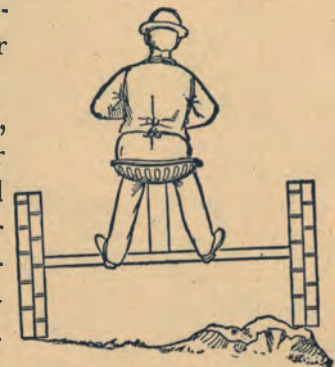
Then, when the horses pull on the pole, and the strain gets hard, the strain on the cutter-bar as it pushes back on the drag-bar, pushes up on the frame, and as the frame is light on the grass side, of course the wheel goes up in the air.

Now, you see that in the Deering Mower, the push-bar runs across diagonally under the framework where the gears are placed and where the heaviest weight is, so that nearly all the heft of the mower is used to keep the push-bar down, and this, of course, keeps the cutter-bar on the ground.

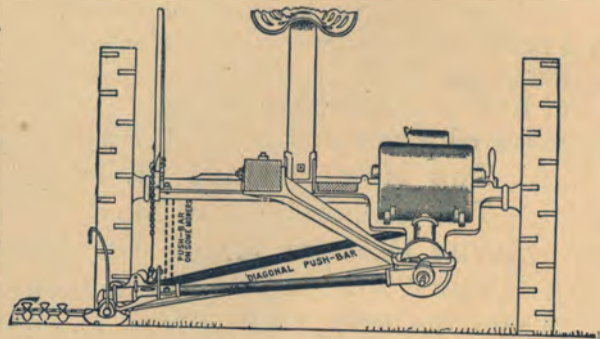


A Narrow-Tread Mower.

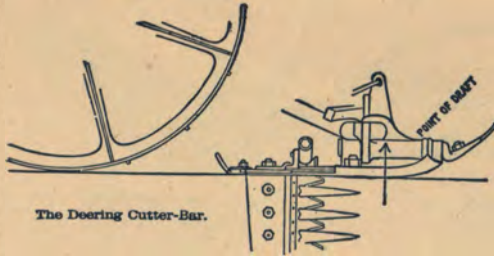
"Then Jones' meadows are pretty rough, and whenever his narrow-tread mower would strike a snag or a stone up would go the wheel in the air, tipping the driver right and left, and making the mower run in an unsteady fashion that was pretty sure to clog it. The Deering with its long axle don't mind such things at all."



The Wide-Tread New Deering Mower.



The Push-Bar of the Deering Mower.



The Deering Cutter-Bar.

The Cutter-Bar of the Deering Mower like a Rear-Cut is pulled through the grass—Not pushed.



A REAR-CUT MOWER

"Another good thing about this push-bar is that it is made in one solid piece with the drag-bar—all one solid piece of steel from the crank wheel back under the gear, not fastened together with joints and bolts that'll loosen and let them apart."

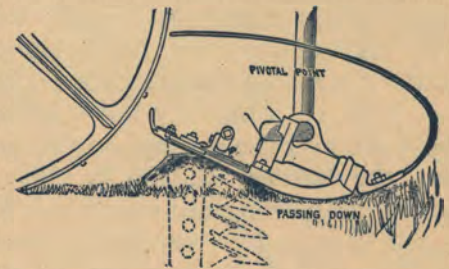
"Seems to me, I remember some rear-cut mowers you had when I was a little fellow."

"Oh yes, and as late as '84 I bought a Deering Rear-cut Giant Mower; fine mower it was too, only for the danger of being thrown off in front of the knife and getting injured or killed. The mechanical principle of a rear-cut mower is the true one—to pull the cutter-bar

through the grass instead of pushing it, and you'll see the Deerings have copied that part of their old Rear-cut Giant, and in their new machines the cutter-bar is still pulled through the grass and not pushed."

"Like pulling a wheelbarrow after you over an obstruction instead of pushing it ahead."

"Yes; most any stupid fellow knows enough to turn-around and do that. There—see how that Mower went over that big ant-hill? The guards and bar just turned up and went over it and then down to shave the ground again. These three things, the high wheels, wide tread and pulling instead of pushing the cutter-bar, are the main reasons why the machine pulls so easily—

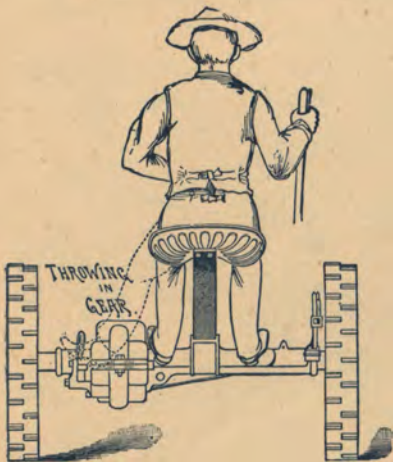


"See how that Mower went over that big ant-hill."

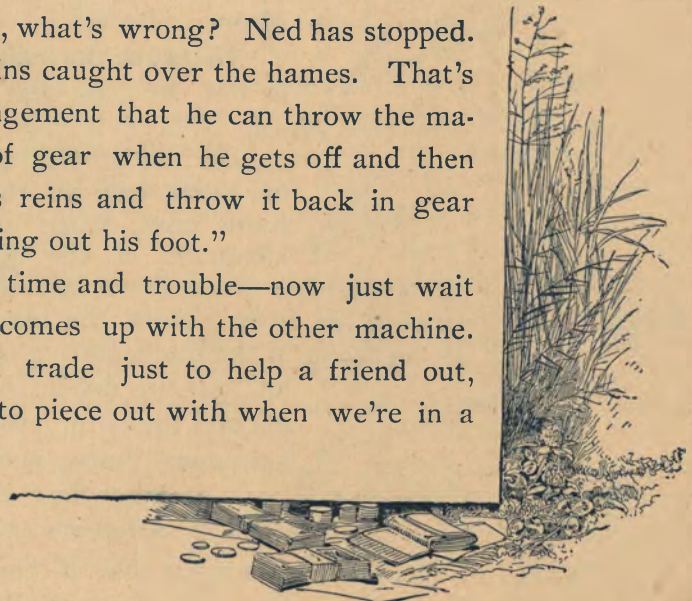
you can see the horses haven't turned a hair, for all it's middling hot."

"Hullo, what's wrong? Ned has stopped. I see, the reins caught over the hames. That's a neat arrangement that he can throw the machine out of gear when he gets off and then pick up his reins and throw it back in gear by just putting out his foot."

"Saves time and trouble—now just wait until Dan comes up with the other machine. I took it in trade just to help a friend out, and it does to piece out with when we're in a hurry."



THE DEERING MOWER CAN BE THROWN OUT OF GEAR BY A TOUCH OF THE FOOT.



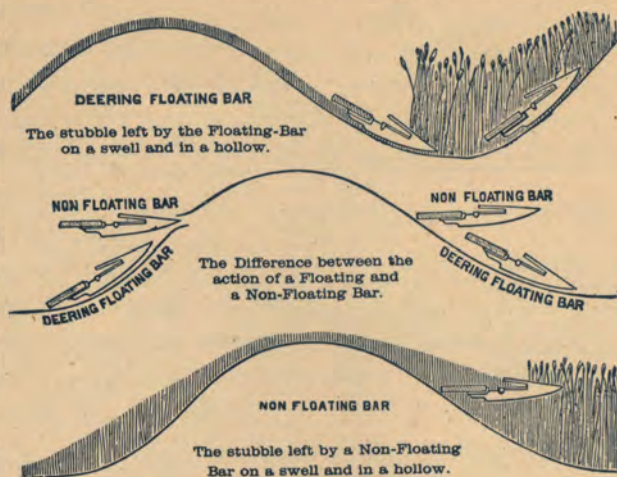
"The Deering Mowers have what is called a floating flexible cutter-bar. It works on a perfect swivel, and no matter how the land lies, or in what direction you turn the mower, the cutter bar is always ready to go up or down or take any position, and it makes every motion of its own accord without any attention from the driver. I've heard some other machine men claim their mower had this, but they don't have it. That mower Dan is working claims to have a floating cutter-bar, but now just watch and see the two mowers go over this mound and down into that hollow. There goes Dan; now you see the minute he came to the hummock his stiff cutter-bar began to tip up, and has left long stubble in the hollow. Now take a field full of such places and count the life-time of a mower, and you'll see the hay wasted would pay for a good machine."

"A mower that leaves long stubble wastes the best part of the hay. I've noticed cattle in grazing always pick for the thick short growths close to the ground."

"That's a fact my boy. The guards and the shoe and all the parts that come between the knife and the ground in the Deering are made as thin as possible for this very reason. But the hardest cutting is close to the ground, and so the bar on that other mower is raised high enough to avoid it. That is all that keeps it from choking in heavy grass. You

can look over this field and tell every has cut by the difference in the stub- things like that a farmer has to look for. the difference between a good farmer You could go right over that long stubble and cut it with the Deering Mower.

You see the inner end of is left free, so that it can low the wheel. There is not another mower made, with a cutter- bar that can do this. See there now, when he drives alongside of the ditch the the cutter-bar drops down into the ditch smooth as ever. Now the machine is going along in the ditch, cutting on a side- hill, but the inside shoe goes up, and the outer end of the bar goes down, and leaves close and clean as anywhere else. It a bit of difference about the mower cuts all the grass there is every time."

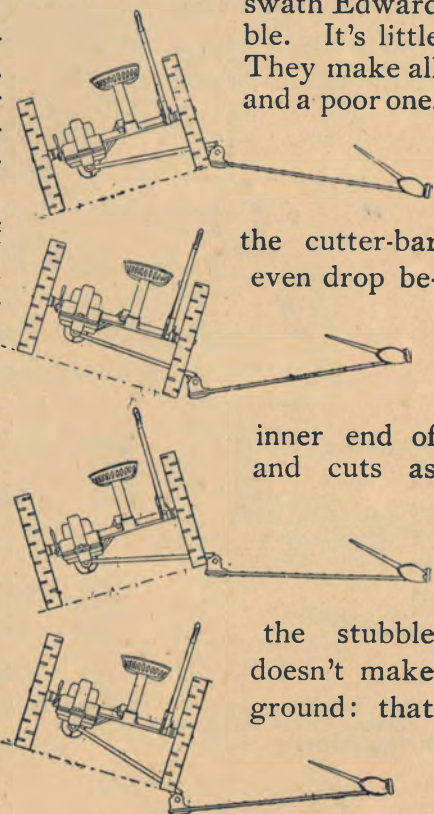
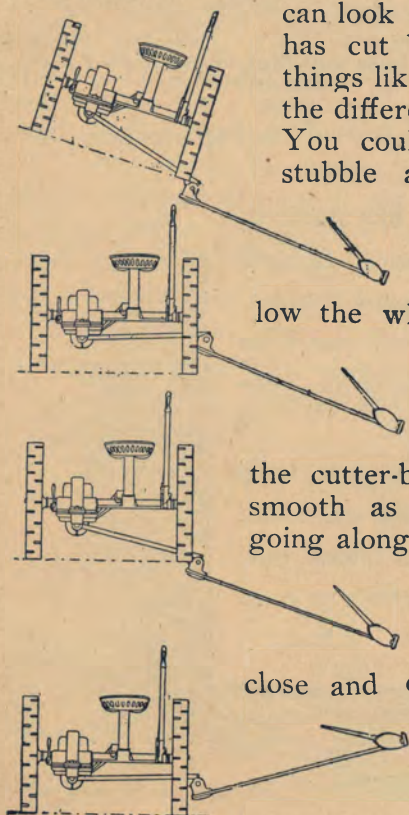


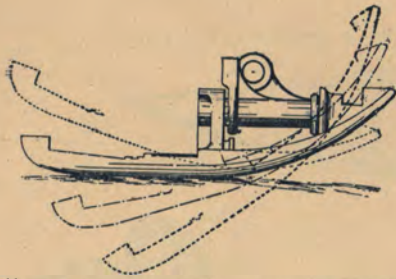
swath Edward ble. It's little They make all and a poor one.

the cutter-bar even drop be-

inner end of and cuts as

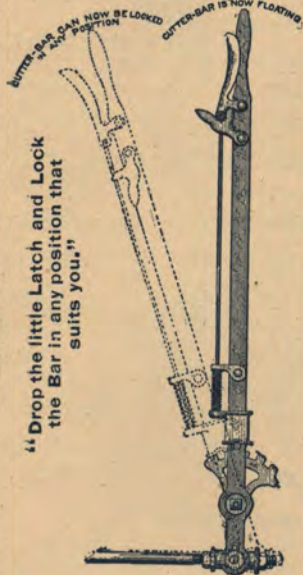
the stubble doesn't make ground: that



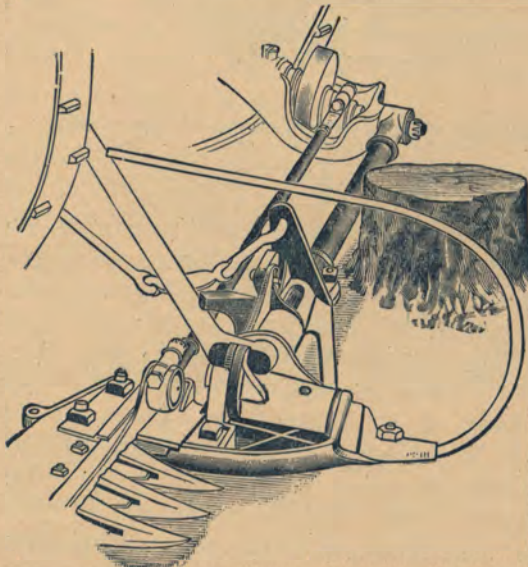


**"SEE HOW THE INSIDE SHOE
TURNS UP AND DOWN."**

along the ground before the heads come up into the air, you want to get the points of all the guards to graze the ground so as to get under the clover and bring it up to the knife.



Just notice the little latch on the tilting lever up by the handle that loosens the catch from the ratchet. You see, this little latch is holding the pawl, that catches into the ratchet, out of place. When it's this way the cutter-bar is free to float up and down just as it pleases. Sometimes, though, it's a good thing to be able to hold your bar so that it is just where you want it and want to keep it, in mowing quite a patch. If you want to do this on the New Deering Mower, all you have to do is just to drop this little latch out of the way and then lock your bar in any position that suits you."



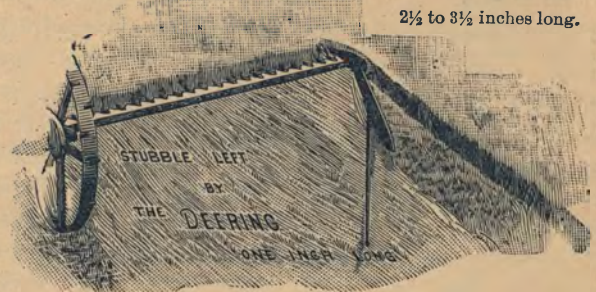
THE DEERING PITMAN PROTECTION.

"Here's an ugly little corner, but it shows off what I said about the cutter-bar adjusting itself so as to cut clean. See how the inside shoe turns up and down to get all the grass as it goes along the hollow and up that ridge."

"You said something to Ned about the Tilting-Lever as he drove past."

"That's an arrangement by which you can tilt the bar way up, or throw it clear down. Sometimes in a stony field you want to get your knife away from the stones and dirt. And then sometimes with rank clover, where the stalks crawl

STUBBLES LEFT BY SOME MOWERS.



**THE DEERING MOWER CUTTING THE STUBBLE
LEFT BY ANOTHER MOWER.**

"They've taken good care to protect that pitman from accidents, with that heavy steel drag-bar coming round in front of it from the crank-wheel down to the shoe. No danger of bending it every time you run into anything."

"That's so. You might run that drag-bar up against a stump and set your horses to pulling, and it would be a mighty strong team that could make any impression on it. I shouldn't think Ned would relish the way that off horse on Dan's machine tramps the grass down, walking on it. Doesn't seem to be the horse's fault, either."

"No, nor the driver's, for you see the horse is hitched up just like the horses on the Deering Mower. The trouble is, there is not enough room between the tongue and the grass for the horse to walk, but you see the Deering Mower has plenty of horse room."



**The Perfect Cutting Apparatus of the Deering Mowers.
Steel Against Steel Everywhere.**



**The Tempered
Steel Wearing
Plate.**



**The Spring Steel
Clip.**

"This Deering cutter-bar tells its own story as soon as you look at it; steel working against steel everywhere." "Yes, that's what it does; the knife runs on tempered steel plates, and these wearing-plates not only take the downward wear of the knife sections, but they are set so as to take the backward wear of the knife-back. Then here are these tempered steel clips that hold the knife down. After my Deering Mowers have cut hundreds of acres I have found the knife down practically as close to the ledger plates as the day they went into the field. When you buy a mower look at the cutting apparatus first thing; that's where an ordinary mower comes to grief, and that's where the Deering is as near absolute perfection as man's work can be."

"I believe that they make their own cutting apparatus for the Deering Machines, don't they?"

"Every inch of it : the knives for the mowers and the sickles for the harvesters, the guard-plates, and all, and I can tell you I had more respect for American mechanics than ever, after the man that showed me around the factory had explained just how carefully every knife was tempered and straightened and how exactly every operation was carried out.

This is the way the Cutter Bar of some Mowers looks after a little hard cutting.



"But when I came to look at the cutting apparatus I didn't wonder it hacked and mangled the grass."

Why I had a mower once that Jerry undertook to use in the meadow down by the river—you remember how sandy the soil is. I was busy at the house and didn't go over till he was nearly through, and such a mess as he had made of it. I felt like pitching him into the river and the machine after him. But when I came to look at the cutting apparatus I didn't wonder it hacked and mangled the grass. You see it was made to have the knife-section and the knife-back wear right against the cutter-bar. The sand and dirt had worked in until the knife had worn away its own back and the top corner of the cutter-bar, letting the knife blade come up at the forward point until it had almost cut off the top cap of the guards.

The malleable iron clips that should have held the knives down were nearly worn out and by looking along the bar you could see daylight all the way between the guard-plate and the knife, like spreading out your fingers and looking between them. You know how it is with a pair of scissors; of course you can't cut with them if the blades don't come together anywhere near, and that mower was in the same fix."

THE DEERING PITMAN AND ITS CONNECTIONS.

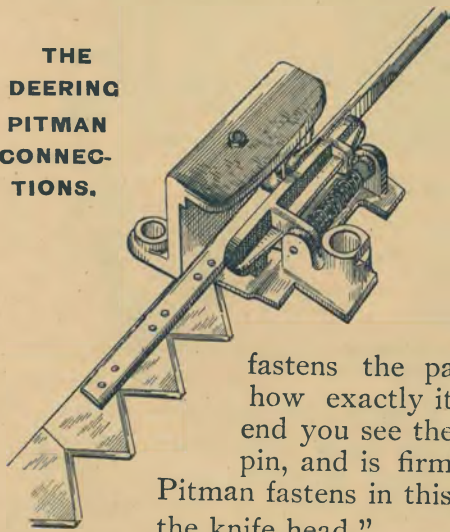


"Now we come to the part of a mower that I suppose has been the cause of more swearing and bad temper than any other one thing about a mower; that is the pitman connections."

"Worse'n a mother-in-law?"

"Yes, or any other connection. But when I was at the Deering factory two years ago they showed me some they had been working on, and they asked me to take a set of them home and give it the very hardest kind of a trial. Well sir, I did that very thing, and in two years they cut over 400 acres of the worst cutting I had to do, including that sandy meadow by the river, and for all I can see they are just the same in every wearing point as when they came out of the factory. Now they have put those connections on all their new machines and just see how they are made. There are just two parts: the Pitman itself, made out of forged steel, and the Pitman box made out of brass—the only thing fit to make a pitman-box out of. This big screw in the upper end of the Pitman

THE DEERING PITMAN CONNECTIONS.

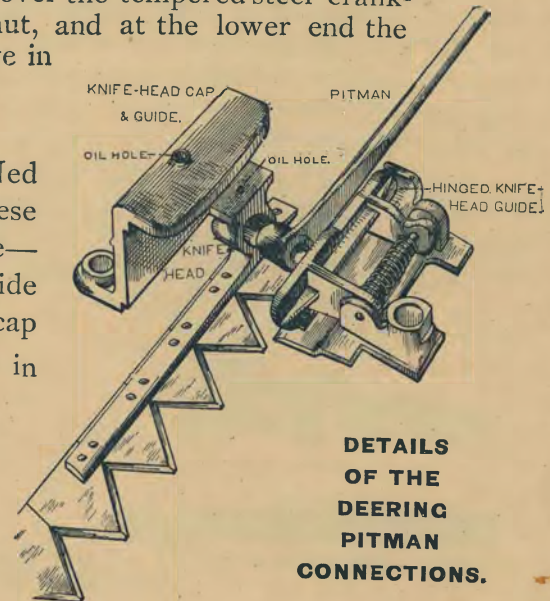


fastens the parts together; just see the size of the screw thread, and how exactly it's fitted to the thread in the brass box. Then at the upper end you see the brass box passes over the tempered steel crank-pin, and is firmly secured by a nut, and at the lower end the

Pitman fastens in this case-hardened eye in the knife head."

"Not much chance for wear there."

"Absolutely not a bit. And now while Ned is gone for the Giant I'd like to take out some of these bolts and show you a thing or two more. There—you see the top of that knife-head is long and wide and flat, and plays along under the knife-head cap and guide. Then in front here the Pitman is held in its place in the knife-head by another guide that it plays against so the knife can't possibly be strained or worked off the guards. Here's your oiling-place too, right in plain sight and no need of hunting for it."



DETAILS OF THE DEERING PITMAN CONNECTIONS.

"Suppose you wanted to sharpen the knife, or take it in to keep it from rusting; how do you separate it from the pitman?"

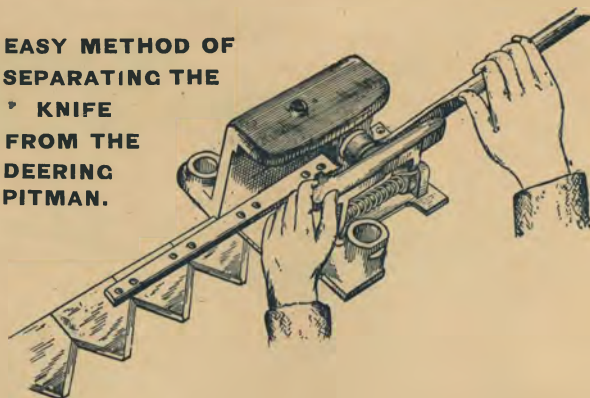
"Easy as falling off a log. You just turn up this knife-head guide—you see it's held in place by a spring—pull the pitman connection out of the knife-head and the knife will slip out of the bar as freely as you could pick it up off the floor. See?"

"I don't see how that could be improved. It's a master-piece of ingenuity."

"So it is, and see how accurately the knife can be centered in the guards. If you want to change it for any reason all you have to do is to loosen the lower end of your pitman, you see you can do it in a minute, turn it once around, and thereby move your knife a corresponding distance one way or the other in the guards."

On any machine large wearing surfaces and long life generally mean about the same thing. At any rate this is certainly true of Pitman connections.

**EASY METHOD OF
SEPARATING THE
KNIFE
FROM THE
DEERING
PITMAN.**



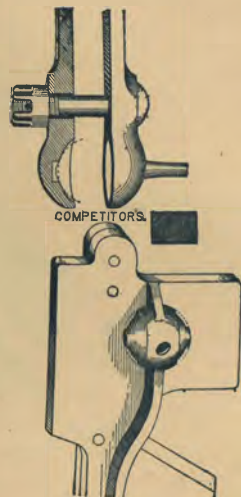
DEERING



COMPETITOR'S



COMPETITOR'S



COMPETITOR'S

**LONG WEARING SURFACE AT LOWER END OF DEERING PITMAN
COMPARED WITH SMALL WEARING SURFACE ON OTHER PITMANS.**

I was wondering why these Deering connections that I have been using for two years to test them showed no wear, while other pitman connections wear clean out in less time. So I measured up the wearing surface. Just look at these diagrams showing the surface at the lower ends of the different pitmans. The black surfaces underneath the connections show the comparative wearing surface. You see the one at the right side hooks over the ball, and not only hasn't much wearing surface but wears the ball out quickly.

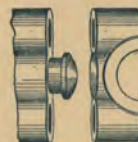
The upper end of the pitman has to resist the push and pull of the knife. When I figured out the wearing surface to resist this push and pull on the different machines, I was astonished. It is represented by the black surfaces. When I got these figures made, it didn't take me long to see the wonderful superiority of the Deering connection.



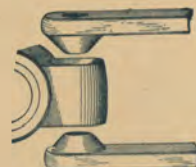
DEERING



COMPETITOR'S



COMPETITOR'S



COMPETITOR'S

**LARGE WEARING SURFACE AT UPPER END OF DEERING PITMAN COMPARED WITH SMALL
WEARING SURFACE OF OTHER PITMANS.**



THE DEERING GIANT MOWER.

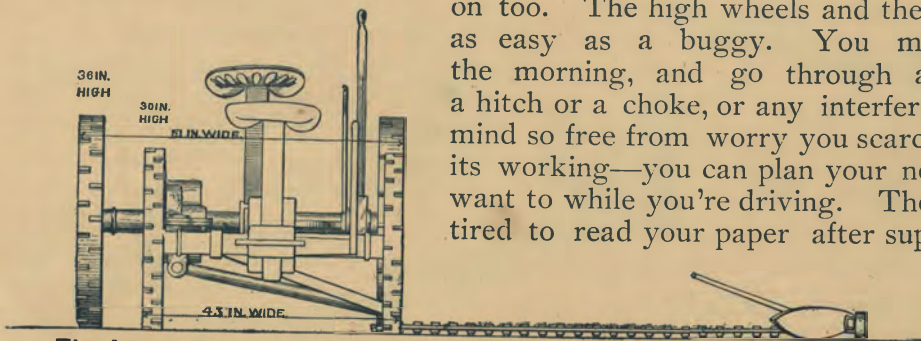
“**A**H, there comes the king of the hay-field, The Deering Giant Mower. That’s a splendid thing for a big ranch or any farm. Just see the grass go down before it—six feet at every stroke of the knife. It’s a regular giant every way, and not just in name. That’s a six foot cutter-bar, and those wheels are 36 inches high, with a wider tread than ever was seen on a mowing machine before.”

“I believe you said the wheels of the New Deering Mower were 32 inches high.”

“Yes, and four inches in the height of a wheel makes a mighty big difference; but it’s a fact that some folks make what they call ‘wide-cut-mowers’ with a six-foot bar, when the wheels are only 30 inches high, and the truck and frame only big enough for a bar 4 or 4½ feet long. They sell ’em too; but when it comes to working, that’s a different thing. The strain on the horses and on the machine is tremendous; but if you’ll look at those horses drawing the Deering Giant you’ll see they don’t appear to have any harder work than they did with the New Deering; if there is any difference it is so little I have never been able to notice it. The Deering Giant is the easiest mower to handle that I’ve ever driven, and the easiest to ride

on too. The high wheels and the wide tread make it ride as easy as a buggy. You may start off on it in the morning, and go through a day’s work without a hitch or a choke, or any interference whatever, and your mind so free from worry you scarcely need to think about its working—you can plan your next year’s work if you want to while you’re driving. Then at night you ain’t too tired to read your paper after supper, and you go to bed

with the feeling that a man always has, after he’s done a successful day’s work.”



The Large, Powerful Deering Giant Mower compared with the small “wide cut” mower made by others.

"Worry in running a poor working machine uses me up a sight quicker than work, and the saving in wear and tear on your nerves and your body, as well as the saving to your horses, count in for cash value when you come to figure up the profit of getting a good mower. Then, of course, there's the bigger day's work you can accomplish, and the real economy of buying a mower that you know will stand by you for years, instead of just scraping through with a poor machine that is always giving out, and trying to hang onto it long enough to get your money out of it."

"Isn't that one of Hopkins' boys driving?"

"Yes, that's Jack; the older boys both died. Jack is a little chap, but there's nothing about that Giant Mower that calls for strength; any boy, or girl even, that can drive a pair of horses, can handle it in spite of the six-foot cutter bar. The foot lever works easily, and the tilting lever is within easy reach."

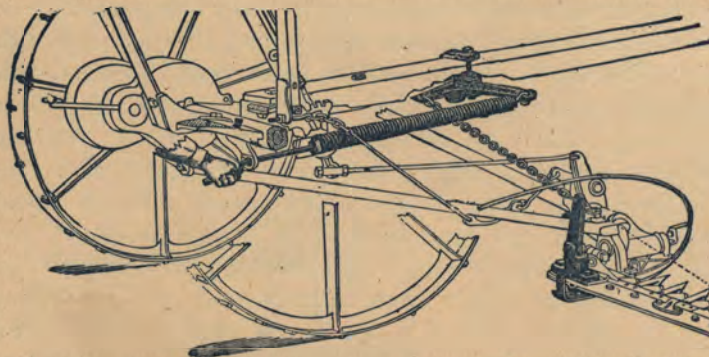
"The lifting spring seems to be somewhat different from that on the New Deering Mower."

"Yes, but I don't think it's any better, though maybe you can get a little more power from it. You see it is attached to a lever on the pole and arranged so as to be out of the way, and so that a long spring, constant in its power can be used. In that way you get the help of the spring to raise the bar all the way up, instead of having help only for the first few inches, as you do in some mowers."

Put your hand under that cutter-bar at any point and you'll see how easily you can raise it off the ground. You can vary the pressure of the spring too, by just turning the handle of the rod that runs through it."

"I see it has some of the special good features that you pointed out on the New Deering Mower."

"Every one of 'em. There's the push-bar running diagonally under the heaviest part of the frame, and the floating-bar that can be locked and made perfectly rigid. There's the same ample horse room, and protection for the pitman; the same perfect cutting apparatus, and the same wonderful pitman connections."

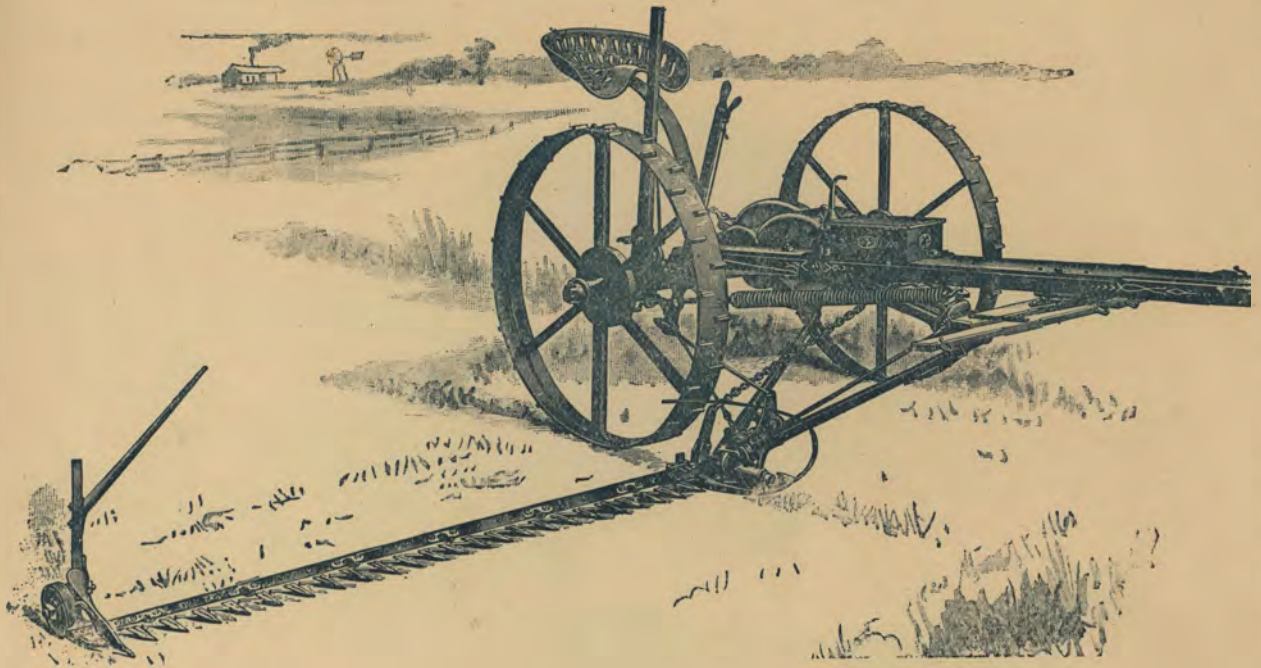


The powerful Lifting Spring on the Deering Giant Mower.
See how the Spring can be adjusted.



The Deering Giant Mower, Dick my boy, is an honest giant in every sense of the word, and it's worth a good deal in these days when thorough business honesty is so rare, to see people making a machine on honest principles that is exactly what it pretends to be, and fitted perfectly to do the work that it claims to be able to do. I don't know anything that gives

me more respect for William Deering & Co. than this honest Giant."



THE DEERING JUNIOR GIANT MOWER.

“WHEN we get up to the house I will show you another Deering Mower that I have. It is called the Deering Junior Giant Mower and it comes in between the Giant and the New Deering Mowers, being larger and stronger than the New Deering, but a bit lighter than the Deering Giant.

It is made to use either a five-foot or a six-foot cutter bar, and although it's a Junior Giant alongside the Deering Giant, it's a full grown Giant when you compare it with the so-called 'wide-cut mowers,' made by others.

Here is our Junior Giant Mower under the mower shed. Just catch hold and roll it out where you can look at it.

You see that the wheels are not quite so large as those on the Giant, and the tread not quite so wide, but you see it has the same lifting spring as the Giant to take the friction of the cutter bar off the ground and to help in raising it, the same cutting apparatus, pitman, floating cutter-bar and all the other splendid points we saw on the New Deering and Giant Mowers.

This is the second year I've used this Mower, for I bought it in 1891, the first year the Deering people made these Junior Giants.

I've given it a pretty thorough trial, and I don't see but what it works about as well as the Deering Giant, and that's praise enough for any mower.

I gave it the hardest cutting on my farm to do last season, and, as you can see, it's in as good condition now as if it were brand new.

You needn't run it back under the shed; just leave it out and I'll have Edward hitch onto it this afternoon in place of that old mower that's wasting so much of his grass.”



THE DEERING ONE HORSE MOWER.



DOU remember that little shaggy white pony we used to have when you and Ned were bare-footed youngsters?"

"Well I should say I did remember 'Jack.' We little fellows used both to get on his back and see who could ride all the way around the yard without getting pitched off. Jack enjoyed the sport fully as much as we did, and I really believe he used to choose the soft places to throw us in. Off we'd go, and the little rascal would canter away to the farthest end of the orchard before we could catch him and repeat the experiment."

"Well, your old playmate is pretty well along in years now, and not quite so frisky. Look over in the orchard there, and you'll see him now, pulling the Deering One Horse Mower, and he seems to enjoy the fun as much as little Gussie White, who is driving. That Deering One Horse Mower completes the list of Deering Mowers, and it's really just as fine a mower, in its place, as the New Deering or either of the Giants.

It's a Deering Mower through and through, and has every one of the adjustments and fine points found on its three big brothers, and it's so light and easy running that it's just fun for the pony to draw it, and that child can run it as easily as I can run the New Deering.

"Gussie comes over every day when there is any cutting, and we hitch up Jack and let her cut the grass in the orchard and around the yard. Some of the best grass on the farm is on the yard and the orchard and in other places where a two-horse mower can't get at it, and I wouldn't be without my One Horse mower for anything.

It's not a toy either, not by any means, and if I want an extra mower in the field, it can hold its place in the line with any of them.

It's a fine mower, too, for small farms, where only one horse is available, and they say a great many of them are used in cemeteries and for cutting city lawns."

“AND now, Dick,” said Mr. Mather, “I think you’ve had enough of your ‘post graduate course’ to see that a practical farmer can’t be made in a day. You’ve had a little real experience to mix in with your theories; I don’t know whether there’s enough to leaven the whole lump, but I think you’re in a fair way to make a first-rate farmer.”

“I hope so, Uncle Robert,” said Richard. “It has always been my idea that farming was a profession just as much as the practice of law or medicine.”

“Quite right, my boy,” said his uncle. “What the country needs most is professional farmers—men who will make a careful study of the business and follow the very best methods. Scientific theories make a first-rate soil to raise good farmers in, but you must not forget to harrow in a good deal of fertilizer in the shape of practical experience. You’ve had two weeks of such experience and I’ve tried to give you the benefit of some of mine in my talks on ‘Grass, Grain and Gain.’”

“You have my hearty thanks, Uncle Robert,” said Richard, “for what you have shown me about your methods of farming. I wish that every farmer in the country could have the same advantage.”

[THE END.]

A Few Last Words.



AND NOW AT THE END OF
THIS LITTLE BOOK, WE
HAVE A FEW
WORDS MORE TO SAY TO
OUR FARMER FRIENDS.....

If you have read these pages carefully, as we trust you have, you have probably discovered why this book is called “Grass, Grain and Gain,” and that the little tale has a moral.

The moral is this:

BUY A **DEERING BINDER,**

Bind your grain with

**DEERING BINDER
TWINE,**

And cut your grass with a

DEERING MOWER.

We told you in our introduction that our sales for 1891 were the largest ever made by any harvester manufacturer in the world.

In order to show that this statement is true, we call your attention to the picture on this page. Look at this picture carefully and draw your own conclusions.

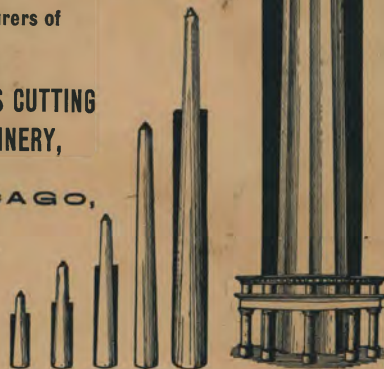
WM. DEERING & CO.

Manufacturers of

**GRAIN
AND GRASS CUTTING
MACHINERY,**

CHICAGO,

U.S.A.



These Towers represent the comparative **MACHINE** sales of the seven largest harvester manufacturers. The black shades behind the towers represent the comparative **TWINE** sales of the same manufacturers.

13000 TONS OF DEERING TWINE

137,665 DEERING MACHINES SOLD IN 1891.

SOLD IN 1891.



CALL ON

Watson & Campbell, Agts.
MACOMB, ILL.