One of the Triumphs of the 19th Century.

QUEEN OF FAIRIES TO DISCOURAGED FARMER

Look up, poor, tired soul, look up
And see the image in the sky—
A **Helper** true and staunch and tried,
That bids all care and worry fly."

II

Be not Downcast, thou hast been brave
And Labored well, though all in vain,
Cast off that troublesome machine,
The **Deering** comes to cut thy grain.

III

From morn to noon and noon to night
I've watched thee strive against defeat.
'Twas nobly done—and thy reward
~~Shall be a~~ **Deering** all complete."

IV

(FARMER WAKING UP.)

"Good fairy, thou hast saved my life
My cares had brought me near death's door
I thank thee deeply and I vow
To cut with **Deerings** evermore

"THE FAIRY IS RIGHT!"

Deering Machines Save worry, Don't get out of order,
Cut right along without delays, Are easy alike on driver and horses.
Save crops by not wasting them, Save Twine, Save Time,
Have the greatest capacity, Have the lightest draft.
Last the longest and do the best work while they last

ONE OF THE TRIUMPHS OF THE 19TH CENTURY

THE nineteenth century is a century of industrial triumphs. Steam and electricity, and the thousands of useful inventions to which they have been applied, have made a complete revolution in society and changed the whole face of the world. Agriculture, the foundation of all civilization, has shared in this revolution. The United States of America is to-day the greatest agricultural nation in the world. The agricultural greatness of America is due to its perfect, labor-saving farm machinery. We lead the world because we use good tools.

William Deering & Co. manufactured the first twine binder that ever cut and bound grain. That was fourteen year ago, and ever since that day we have kept in advance of all competition in both binders and mowers. The mammoth manufactory of Wm. Deering & Co. in Chicago, and the machines made there may well be called one of the crowning triumphs of the nineteenth century. This plant, a bird's-eye view of which is given on the back cover of this book, covers fifty-one acres of ground, closely crowded with two and three-story buildings, employs 4,000 workmen, and turns out one finished machine every minute of every working day the year around. It is one of Chicago's greatest sights.

OFFICE OF WM. DEERING & CO.

THE DEERING HARVESTER WORKS.

One of the Triumphs of the 19th Century.

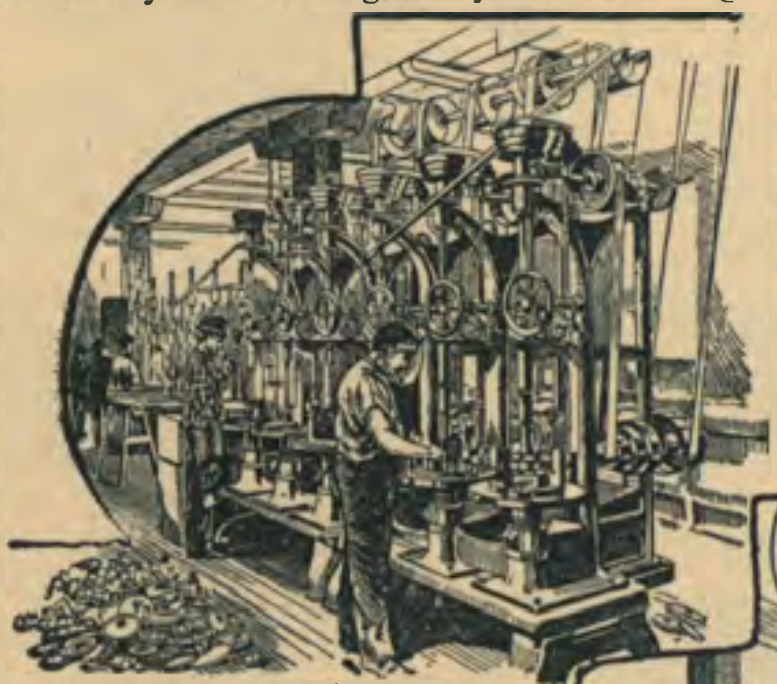
AS SEEN BY AN OUTSIDER.

I HAVE traveled the world over and seen many impressive sights, but I can remember few creations of modern civilization that impressed me as strongly as did the immense works of William Deering & Co., in Chicago. Armed with influential letters of introduction, I was cordially received at the extensive offices, where one of the superintendents kindly volunteered to pilot me through the works.

From the sharp, wintry air of the courtyard we entered one corner of an immense three-story brick building, nearly two blocks long. It was like entering a new world. I was the new Aladdin. Before me was a wilderness of clanking, whirring, grinding machinery. I stood rooted to the spot, and feared to advance lest I might get caught and ground to pieces in some of the wheels or gears.

"Come this way," said my guide, smiling grimly, "but look out for those wheels."

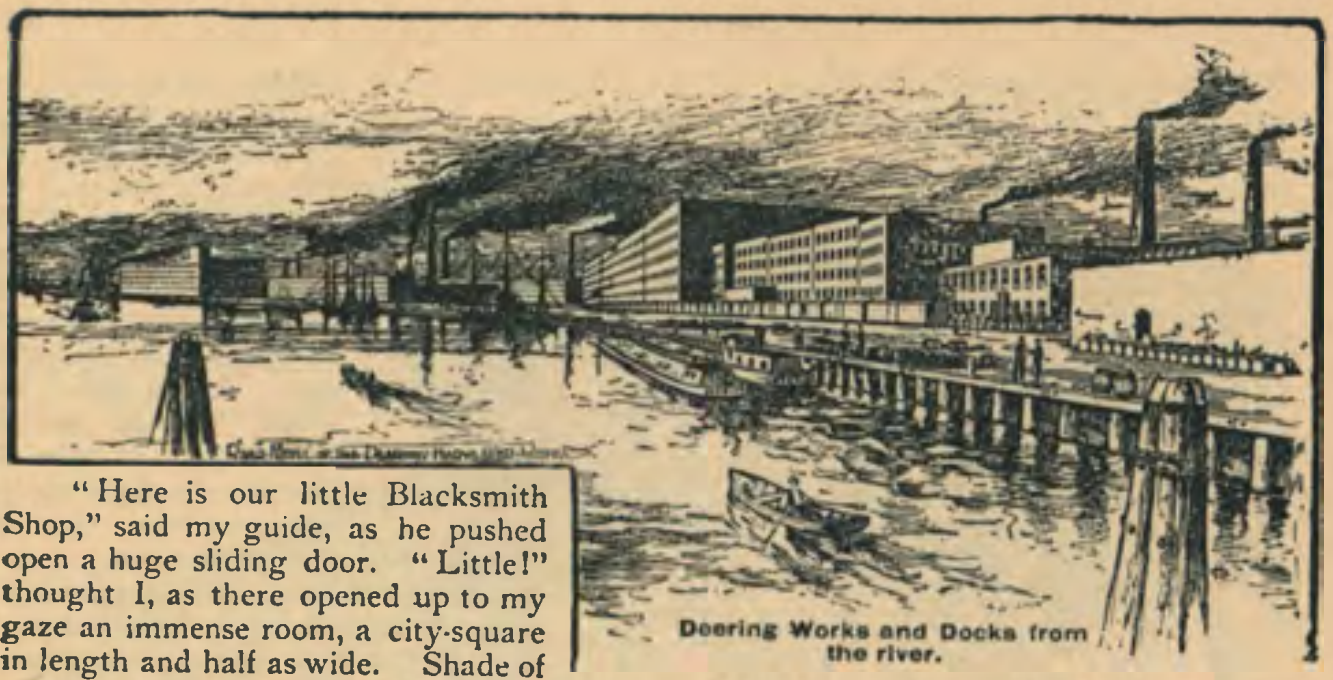
Not much assured, I followed



DRILLING GEARS IN DEERING WORKS

him down the long series of rooms. As we advanced, the machinery seemed to be set closer and closer together, the number of men multiplied, and the din increased. In every room the floor was piled high with castings of every conceivable shape and size, and drilling, smoothing and preparing these for use seemed to be the work of the six hundred men in this big machine shop.

ONE ROOM IN MACHINE SHOPS DEERING WORKS



Deering Works and Docks from the river.

"Here is our little Blacksmith Shop," said my guide, as he pushed open a huge sliding door. "Little!" thought I, as there opened up to my gaze an immense room, a city-square in length and half as wide. Shade of the learned blacksmith, what a din! Two hundred blacksmiths working at as many anvils; a hundred forge fires roaring savagely, and twenty steam trip-hammers raining down blows that sounded like cannon shots—all combined made a roaring, thumping din that nearly split my ear drums and shook the ground beneath my feet.

To heighten the bewildering effect, the incandescent steel and iron that was being hammered into shape shot out spiteful showers of sparks, as if in savage protest against surrender to the master-will of man. The red-hot iron seemed to squirm and spit like a naughty youngster under his mother's slipper-sole, while the old trip-hammers seemed to shake their heads and say, "Take that, and that, and that," as they rained down their well-directed blows. Human character and iron must, after all, be shaped by an education of hard knocks and a roaring furnace of experience that soften down the stubborn harshness of self-will.

DEERING KNIFE AND SICKLE WORKS.

From this Hand-forge Department, we threaded our way through a forest of machinery to the unique Deering Knife and Sickle Works. As we entered, my guide informed me that in the early days, William Deering & Co. had their knives and

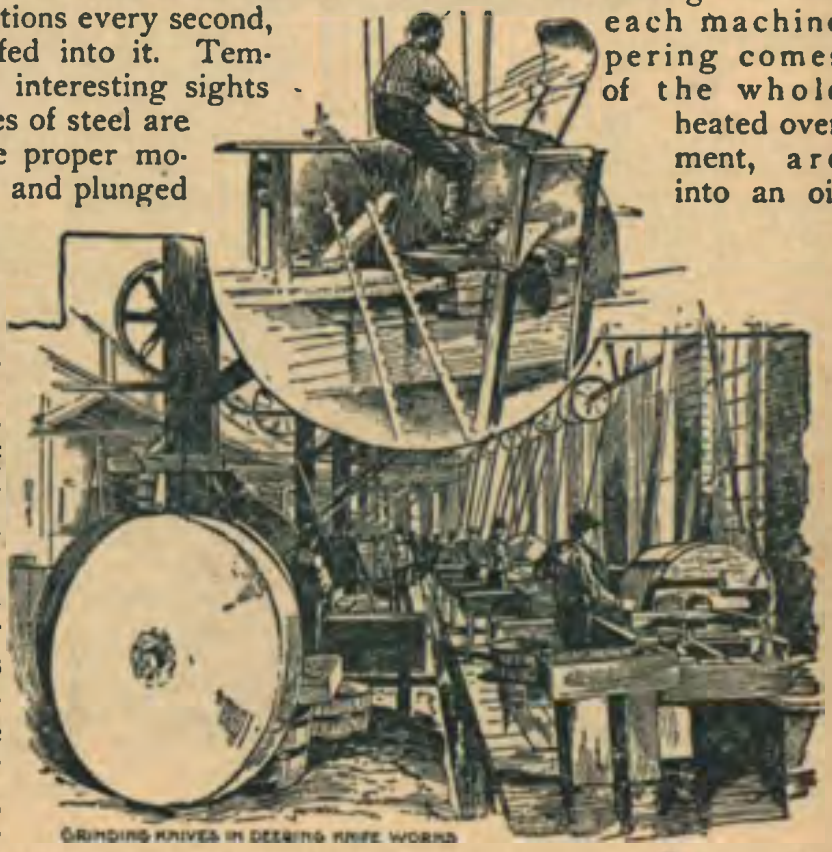
sickles made outside, by contract, as the other harvester companies do now; but, to be certain that they got just the grade of steel that was necessary to the best results, they erected and equipped their own knife and sickle plant years ago. It has been a marvelous success, and has done much to give the Deering machines the lasting quality that has brought them to the front.

From the time the long strips of shining crucible cutlery steel came in from another part of the works, to the time the finished Sections were riveted to the Knife-backs and ground to a razor's edge, the whole process was conducted with the most painstaking care by skilled mechanics; whose actions and appearance showed them to be men of high intelligence; and on top of that followed a most rigid inspection of every piece.

TEMPERING AND GRINDING.

Prominent in this plant stand a number of immense machines for cutting out the Sections. At the rate of two sections every second, each machine eats up the long strips of steel fed into it. Tempering comes next, and it is one of the most interesting sights of the whole place. The pyramid-shaped pieces of steel are heated over fires fed by crude oil, and, at the proper moment, are lifted off the tempering furnaces and plunged into an oil bath. From this, as soon as they are cool, they are fished out and shoveled into the tempering ovens which deprive them of all brittleness and make them as tough as Damascus sword-blades.

From this room they go to the Grinding Room, where a score of huge grindstones whirl noiselessly from dawn to dark. The Sections are fitted into swinging brackets that hold them at an angle against the stone. Water pours down over them in a stream, but so great is the friction caused by the hardened, tempered steel against the stone, that showers of sparks fly out and mingle with the water, giving the whole the appearance



GRINDING KNIVES IN DEERING KNIFE WORKS

of a stream of liquid fire. Once beveled and ground, the Sections are riveted to the Knife-backs and straightened by expert mechanics, whose eyes are trained to see the variations of a thousandth part of an inch.

From the straighteners they go back to the Grinding Room where men, perched high up in the air, astride of six-foot grindstones, give to the Knives the finishing touches of a perfect edge.

SETTING UP AND TESTING.

Returning to the machine shop, we took the elevator to the Binder department, on the floor above. Here we saw a succession of rooms extending eight hundred feet in length, devoted entirely to putting together or "setting up" the binder attachment of the Deering harvesters, and to the manufacture of tools and appliances that belong to them. From every direction come the pieces that make up this marvelous mechanism, and here they are put together by strong-armed, quick-brained men. who

Two corners of the Deering Canvas Room.

are as quick to detect flaws as the bank clerk is to "spot" the bogus coins or bank notes that come his way.

Every Binder, when set up, is connected with a running belt that makes it bind bundles with lightning speed. During the process of setting-up, every part is tested by an inspector with blows of a heavy hammer that would shatter any but the strongest steel and iron into a thousand pieces.

DEERING CANVAS ROOM.

One of the strong points about the Deering Binder is the superior quality of canvas used on its Platform, Elevators and Adjuster. To show me how the canvases are made, my guide led me across a bridge into the mammoth new building just erected. One end of the top floor was taken up with the Deering Canvas Room. Here again was a surprise.

Instead of the din of machinery and the now-familiar spectacle of grimy, greasy workmen, I saw before me a room white as my mother's kitchen, in which half-a-hundred rosy-cheeked girls worked with incredible speed. From floor to roof were piled hundreds of bolts of thick duck canvas, and the foreman informed me that that was but little more than one day's supply. This canvas is cut into the desired length by one set of girls, hemmed by another set who pass it farther on, where the slats and straps and buckles are tacked or riveted on. One part of this big room is devoted to Elevator Canvases, another to the Platform Canvases, and a third to the narrow canvas belt of the Deering Canvas Adjuster. Inasmuch as the canvas parts of a Binder are subjected to a great strain, Wm. Deering & Co. see fit to use a fine grade of duck. This accounts for the fact that Deering Binders bought ten years ago are still merrily elevating grain with their original canvases.

It has been estimated that if all the cotton duck canvas used on Deering Binders made in 1892 alone, were stretched out, it would make a strip 3 feet wide, 452 miles long. This means a total area of 7,364,680 square feet, or nearly 170 acres.

DEERING NUT AND BOLT WORKS.

To look at a Binder or Mower, one would think that the nuts and bolts on it were the least important parts of the mechanism. Yet Wm. Deering & Co. do not think so. The upper floor of one of the large buildings is devoted entirely to nut and bolt making, and hundreds of tons of wrought iron and steel are annually consumed in the manufacture of these seemingly trivial machine parts. There is a good old adage that "nothing is stronger than its weakest part." As the strength of machines depends upon the bolts and nuts that hold their parts together, special efforts are made to get them strong and true as possible. In the first place, a superior grade of wrought iron is specially prepared for making nuts and bolts. This iron comes in long rods and strips to the Bolt and Nut Department. For bolts the rods are heated red hot and fed into ingenious machines that cut them into desired lengths, "head" them and cut the thread on the lower end. Each machine makes 2,500 bolts an hour, and the long row of machines, combined, turns out many tons of bolts a day, or a total of 14,000,000 bolts a year.

BOLT-MAKING MACHINES, IN THE DEERING FACTORY.

Not less interesting are the "nut-tapping" machines, the machines that form a thread on the inside of the nuts. The "smooth bore" nuts are fed onto rapidly revolving spindles by skilled operators, and the machine does the rest. Two thousand nuts an hour can be made with each machine. Every year 18,000,000 nuts are made here especially for the Deering binders and mowers.

IMAGINE three acres of ground for a paint shop! One hundred and thirty thousand square feet of floor filled with machines, paintpots and painters! That is what the tourist sees who goes through the Deering factories. Hundreds of men work there with marvelous dexterity at painting and striping. In one room all is white, and the painters, like animated snow men, bend over their work. In another everything is blue; the floor, the posts, the machines, the paint kettles—everything is blue but the whites of the eyes of the scores of painters who wield their brushes with the lightning dexterity of men who have made the same series of motions day after day and week after week for many years. *Another room is stained a gory red. The very floors seem to run with* blood. The human beings working there are bloody red from head to heel. Like evil spirits from the lower world, they seem to revel in their gruesome work. Revolving the wheel of a mower, for instance, with one hand,

they paint the spokes and rims with the other, and do it with such speed that their hand is scarcely visible. These expert painters have been here for many years. Though their good earnings tempt hundreds of painters to attempt the work, all fail who have not been trained by years of practice to the particular set of motions required by the work.

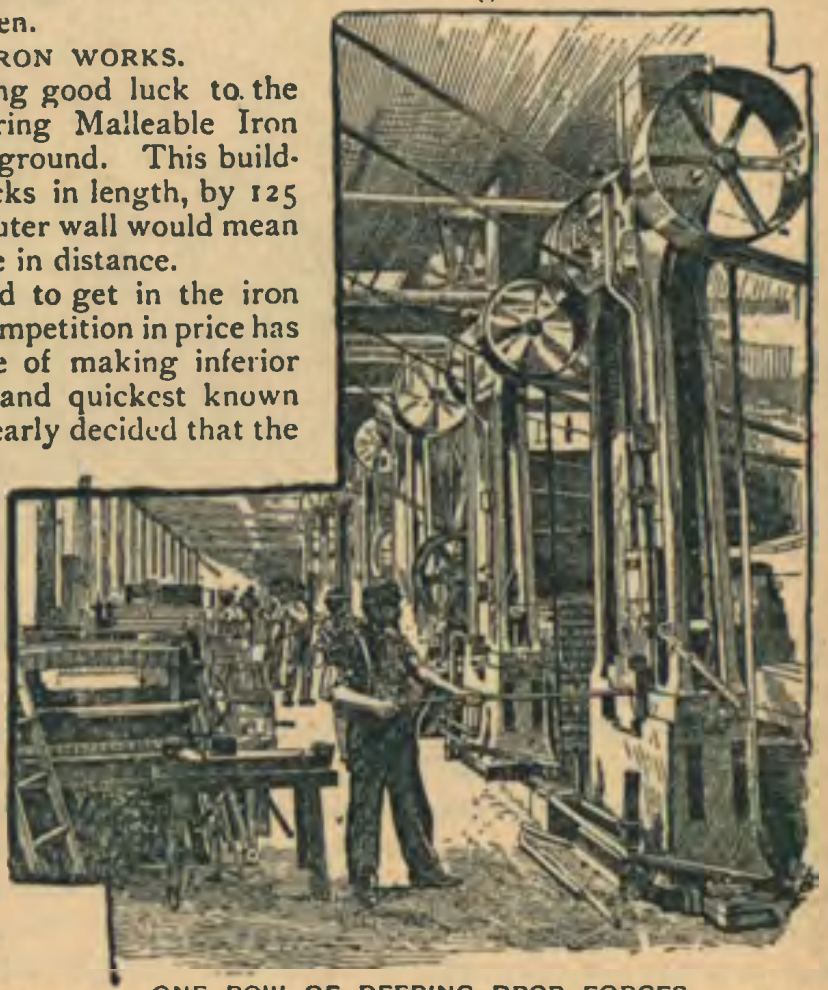
Six hundred machines a day are painted here The paint is put on to stay. To get it perfect, William Deering & Co grind and mix their own colors and oils at the rate of two tons or more a day. Paint is something more than ornament, at least William Deering & Co. so consider it. It is to the machine what the roof is to a house or clothing to a man—a protection To make it a protection that protects, the paint is made waterproof, heat proof, frost proof, rust proof, and proof against all the elements.

A NAVAL battle could scarcely surpass the Deering Drop-forge Department in uproar, in startling flash and glow of fire and in striking vividness of sight and sound. Huge bars of almost molten iron swing crackling through the air on creaking cranes. Though sputtering hot defiance they are seized by grimy workmen, bared to the waists, and guided to the ponderous drop forges. Down come the hammers with the crash of heavy artillery; the glowing bars greet them with a threatening face and hiss and dart out angry tongues of flame; trucks loaded with red-hot steel roll hither and thither, pushed by men with faces averted from the heat; furnaces roar, castings crash and drop-forges and trip-hammers keep up a deafening cannonade. It is a combination of sight and sound that once experienced can never be forgotten.

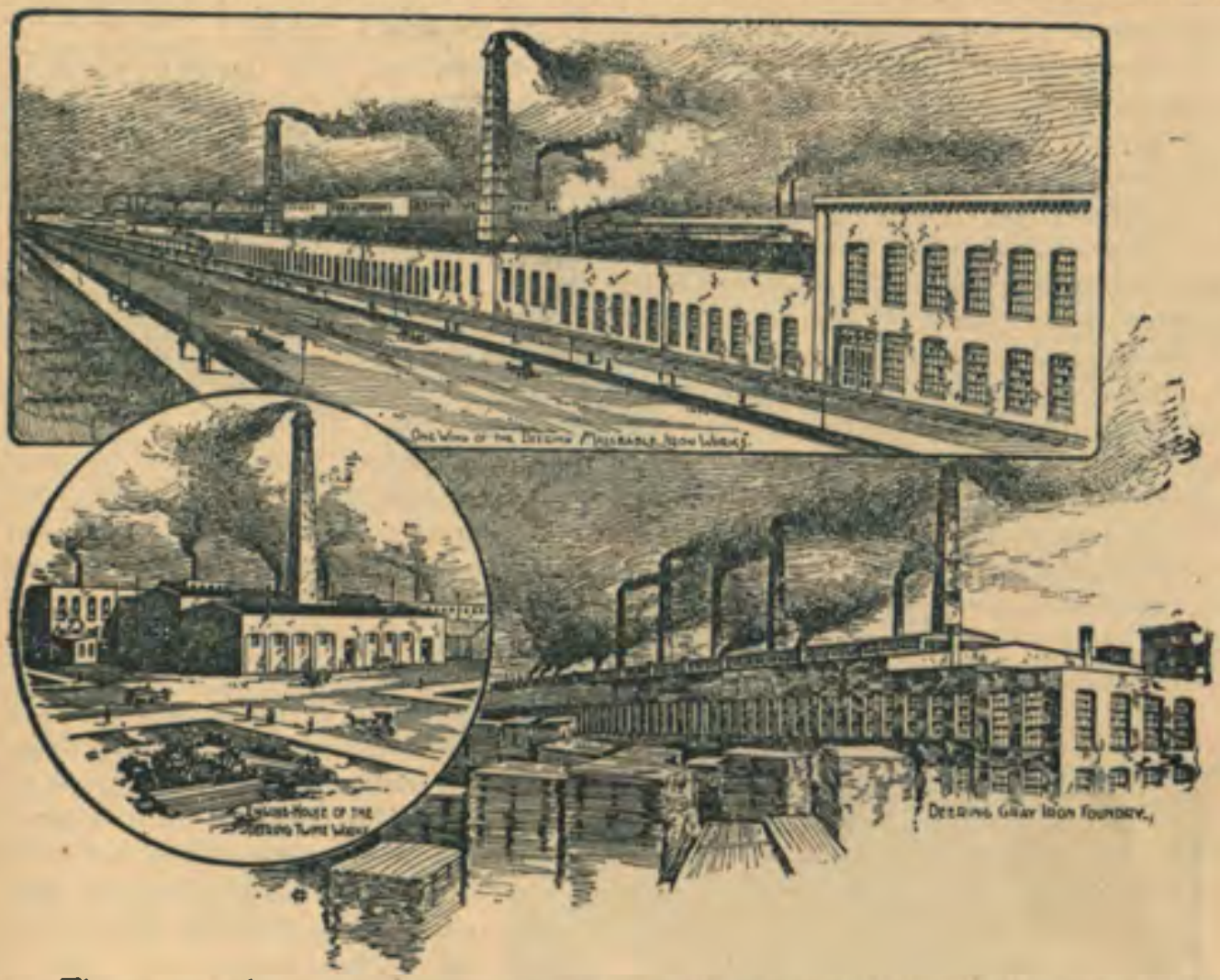
DEERING MALLEABLE IRON WORKS.

Like a huge horseshoe, giving good luck to the farmer, stretches out the Deering Malleable Iron Foundry over acres and acres of ground. This building is 1,600 feet or four city blocks in length, by 125 feet wide. To walk around its outer wall would mean a stroll of three-quarters of a mile in distance.

Good malleable iron is hard to get in the iron markets of the world. Severe competition in price has resulted in the general practice of making inferior grades of iron by the cheapest and quickest known methods. Wm. Deering & Co. early decided that the Deering patterns were worthy of being reproduced in a far better grade of malleable iron than could be obtained in large quantities from the general trade. A machine designed to be pulled by horses over rough ground must be unusually light, as well as unusually strong. To obtain such a metal, Wm. Deering & Co. equipped their immense Malleable Iron Foundry, and as a result, repairs from breakage are so rare that the repair or "extra" department of the Deering works enjoys a continual dull season.



ONE ROW OF DEERING DROP FORGES.

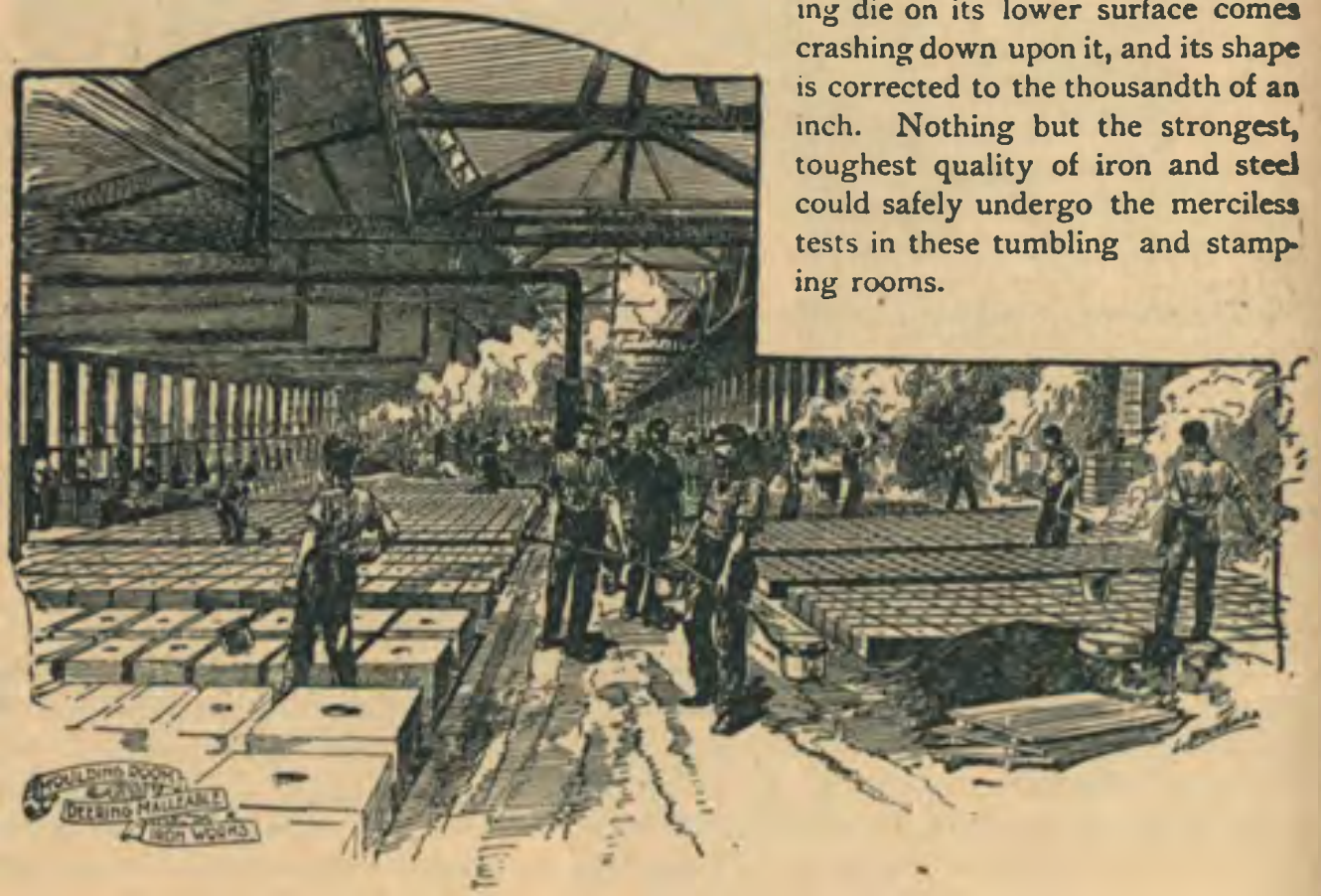


The process of making malleable castings is of engrossing interest. Great trainloads of pig iron are unloaded from side tracks that run into the foundry. Tons of the metal are then loaded into the immense hot air furnaces, where the mass is melted and cleared of undesirable substances. For many hours the most intense heat is applied before the iron melts. When it is at last melted, an opening is made in the spout and it comes forth into the molders' ladles in a liquid stream of fire. It is only by running a number of these furnaces that molten iron can be had thrice every day, month after month.

MAKING AND CLEANING THE CASTINGS.

Two large floors, each several acres in extent, are covered from wall to wall with molds. Thrice a day these are filled with molten metal. The castings once made, the next step is to smooth, clean and test them. This is the noisiest, dustiest, most violent process in the whole manufacture of the machine. The castings, which in this stage of their progress are almost as brittle as glass, are thrown into huge "tumblers" resembling gigantic barrel churns. These "tumblers" are slowly revolved, and the castings are pitched and tossed and tumbled about until all their rough edges and seams and corners are worn smooth. More

important still, only the absolutely flawless pieces get through this operation safely, the slightest flaw or fault in casting or quality of iron causing the casting to break in this merciless "tumbling" operation. From the Tumbling Room, the castings are transferred to the Annealing Room, in which they are to be transformed into malleable iron. For this purpose they are packed into annealing pots in the midst of a chemical composition that will unite with the carbon of the iron and pass off in gas. The carbon in the iron makes it brittle, just as carbon in the shape of coal or charcoal is brittle; and when this carbon is driven off the iron becomes tough or "malleable." These annealing pots full of castings are put into annealing ovens, where they remain for eight or ten days under an intense heat that is carefully regulated by trained furnacemen, who watch and regulate the variation of the heat. From these ovens the castings, now tough and malleable, are again put through the "tumbling" process. From the tumbling rooms they go to the army of men who complete the work of smoothing by grinding on swiftly revolving emery wheels. The final process before going to the drilling room is that of shaping or straightening. Each piece is fitted into a hollow space or die under a drop-forge; the huge steel weight with a corresponding die on its lower surface comes crashing down upon it, and its shape is corrected to the thousandth of an inch. Nothing but the strongest, toughest quality of iron and steel could safely undergo the merciless tests in these tumbling and stamping rooms.



HOW MOLDS ARE MADE.

THE work of preparing the molds is of fascinating interest to the spectator. Hundreds of skilled molders are constantly working at the delicate task of fashioning molding-sand into blocks so hollowed out on the inside that the space, when filled with molten metal, will make a casting of perfect shape, including all the sockets and irregularities in form made necessary by its future use. Every socket, rivet-hole and bearing in each of the castings is made by means of a Core made of sand, flour, rosin and other ingredients. So many thousands of cores are needed daily that hundreds of core-makers are required to do that seemingly trivial work alone. The Core Room reminds one in sight and smell of a bakery. The cores are molded out of the damp composition, put into huge pans and baked in the dozen mammoth ovens. They come out crisp and brown and fragrant, both smelling and looking as if they were good to eat.

CORE ROOM IN DEERING FOUNDRY

DEERING GRAY IRON FOUNDRY.

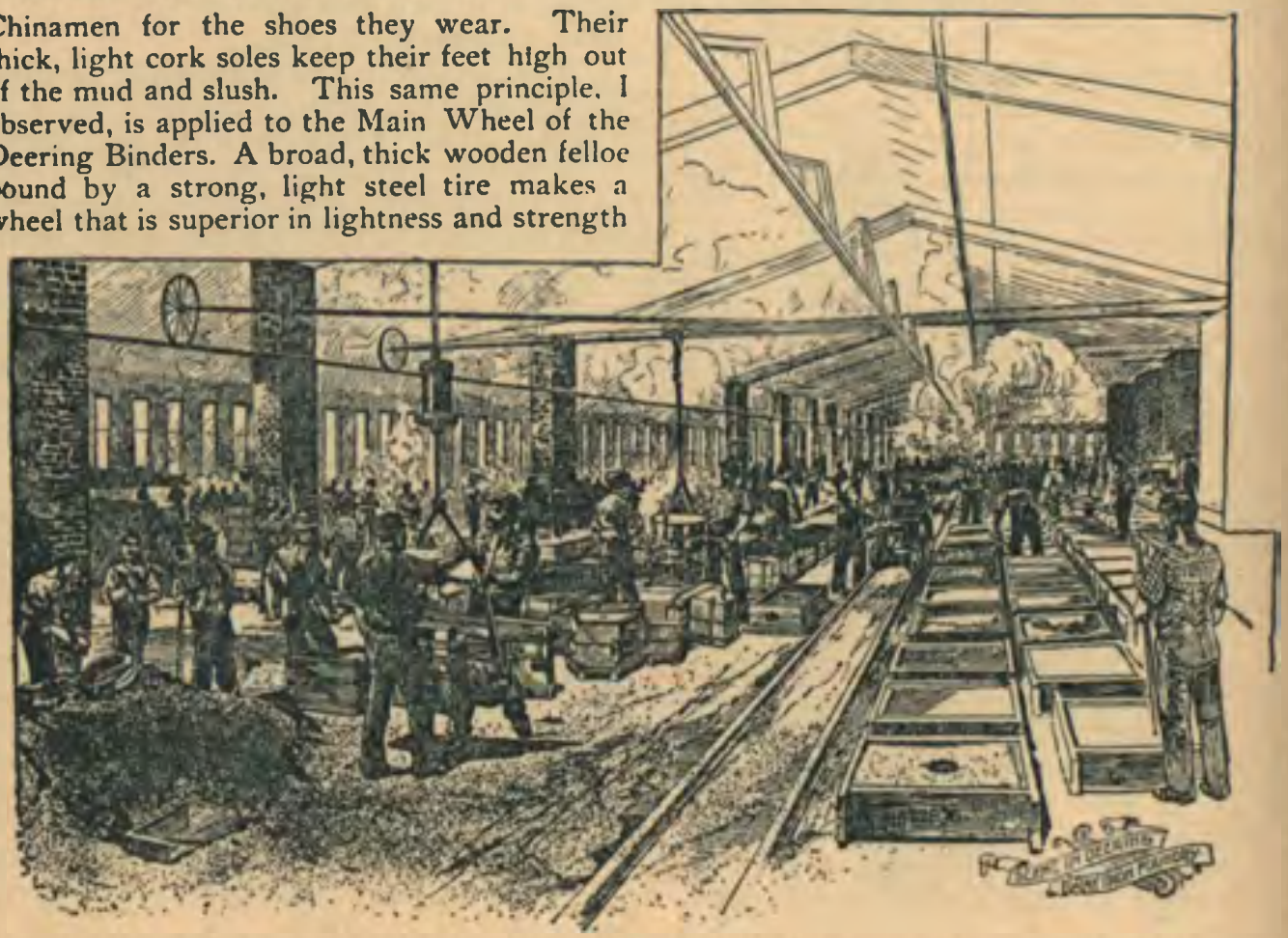
Adjoining the Malleable Iron Foundry is the Deering Gray Iron Foundry. Here the sights and sounds of the malleable foundry were repeated; at first glance the only difference being in the size of the castings. Gray iron is only another name for cast iron. Nothing has yet been discovered equal to cast iron for use on certain heavy parts of the framework of a machine where great rigidity is needed. In the Deering machines but little cast or gray iron is used, and that only where no other metal would do as well. Making gray iron castings is a simple operation. Pig iron is loaded into the immense cupolas by the hundred tons, and in course of time it pours out of the spout below in a seething, white-hot liquid, into the molder's ladles. It is then whisked to the "flasks," or molds, which growl, seethe and splutter, and shoot out blue flames from every pore the instant they have their hot meal inside of them. A healthy mold can stand hotter "fire-water" than any Indian that ever

stole a blanket. The these big molds is foundry entirely by lightening the labors reminds me that in

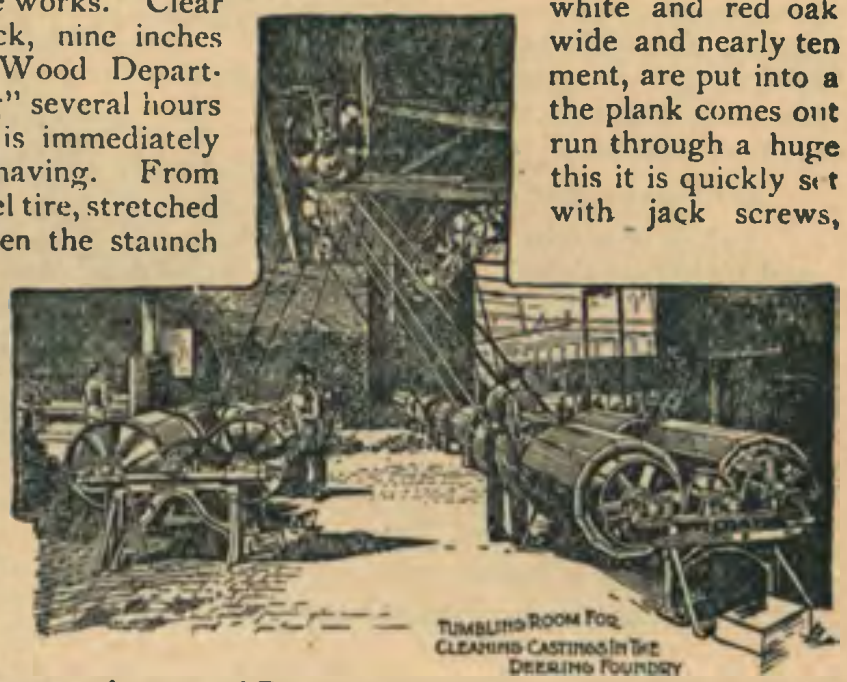
lifting and moving of done in the Deering compressed air, thus of the employes. That every department of the immense works, the comfort and safety of the employes were closely looked after. The foremen, too, seemed to be men who realized that their workmen were intelligent American citizens, and treated them accordingly. Perhaps these facts, together with the good wages paid, account for the fact that the Deering works have never been the scene of strikes or labor troubles.

MAKING THE DEERING MAIN WHEEL

I have often envied the nimble Chinamen for the shoes they wear. Their thick, light cork soles keep their feet high out of the mud and slush. This same principle, I observed, is applied to the Main Wheel of the Deering Binders. A broad, thick wooden felloe bound by a strong, light steel tire makes a wheel that is superior in lightness and strength



to the main wheel on any other binders. The construction of these wheels is a sight to see. Two large rooms are devoted simply to putting together the parts that come flying in on trucks from other parts of the works. Clear white and red oak planks an inch and a quarter thick, nine inches wide and nearly ten feet long, transferred from the Wood Department, are put into a huge steam-chest. After "cooking" several hours the plank comes out steaming like a hot potato, and is immediately run through a huge machine that curls it up like a shaving. From this it is quickly set on a block, surrounded with the steel tire, stretched with jack screws, and wedged tightly to place. Then the staunch steel Suspension Spokes are double-nutted into the hub and secured to the malleable Cleats or "Lugs" on the outside of the tire. The whole operation is done in less time than it takes to tell it, and the wheel, when completed, has strength, utility and beauty of which its makers may well feel proud.



TUMBLING ROOM FOR CLEANING CASTINGS IN THE DEERING FOUNDRY

WOOD IN THE DEERING MACHINES.

Wood enters but little into the manufacture of Deering machines, yet two full stories of an immense building in the Deering works are devoted entirely to sawing, planing, shaping and sand-papering the few wooden parts that belong to the machine. William Deering & Co. believe in making their own machines from top to bottom, instead of buying the parts where they can be made the cheapest, and putting them together, as so many of their competitors do. This is the case with the wood department. Hundreds of cars and dozens of ships bring the wood to the Deering factory direct from the saw-mills of the "forests primeval." Acres upon acres of ground in the Deering plant are piled up with choice grades of oak, second-growth hickory, ash, maple, poplar, cottonwood and pine that have journeyed hither from forests North, South, East and West, to season thoroughly, and then to emerge from the wood department in shapes and forms best qualified to serve their years of usefulness in fragrant harvest fields. This wood,

ANNEALING OVENS OF DEERING MALLEABLE IRON WORKS

once here and seasoned, the next step is to work it up into the parts for which it was intended. This is done by a long succession of saws and planers and shapers, operated by hundreds of workmen.


LIFTING BY COMPRESSED AIR IN DEERING FOUNDRY

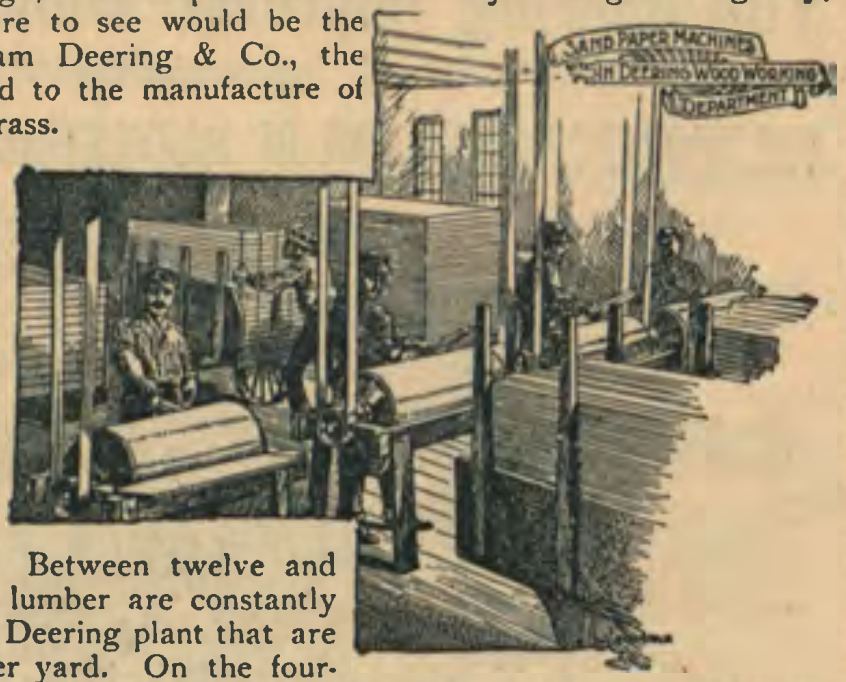
SAND-PAPERING MACHINES.

Before my visit to the Deering works I always had the idea that sand-papering was done by hand. But my eyes were opened to my mistake. In the course of our journeying we climbed to the second story of the wood department, where, among other things, I saw a long row of cylinders revolving at a high rate of speed. Before each machine stood a workman coated from head to foot with what looked like yellow snow. Looking a little closer, I observed that the men were sand-papering various wooden parts of Deering machines by holding them against these revolving cylinders. My guide stopped one of the cylinders and showed me that its entire surface was covered with sand paper. I am forty-five years old; but I learn something every day I live.

I expect to spend a week or more at the World's Fair next summer if I live, and if I see and learn as much there every two hours as I did the two hours spent in the Deering works, I fear that all my old hats will become too small for me, or that my head may be turned entirely with my surplus stock of knowledge. If I were a farmer, the first thing I would do would be to


TWO CORNERS IN WOOD DEPARTMENT

buy a full line of Deering machines, and the next thing would be to come to the World's Fair at Chicago. While in Chicago, I would spend one or two days seeing the big city, and the sight I should be most sure to see would be the great Harvester works of William Deering & Co., the greatest plant in the world devoted to the manufacture of machinery for cutting grain and grass.



DEERING LUMBER YARD.

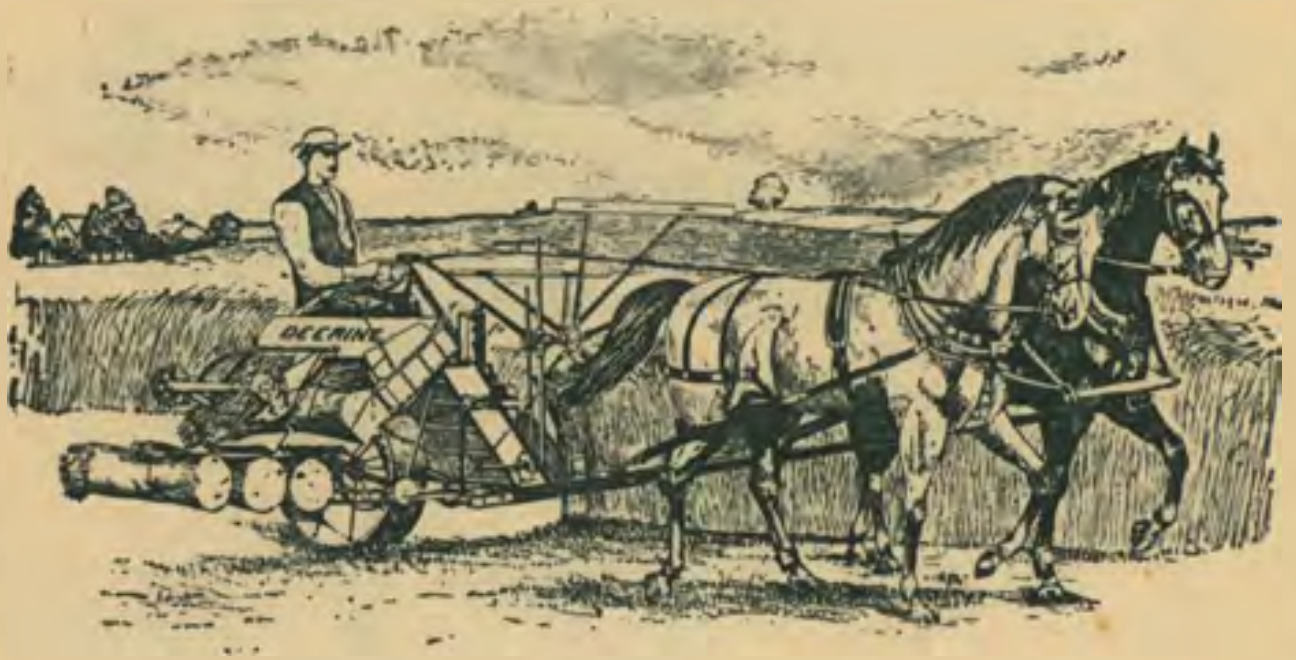
Though only the Tongue, Grassboard and Grass-stick of the Mower, and the Tongue, Reel and a few minor parts of the Harvester are made of wood, Wm. Deering & Co. have in their plant the largest, most carefully selected hardwood lumber yard in the city of Chicago. That is saying a great deal, as Chicago is the lumber center of the West. Between twelve and fifteen million feet of hardwood lumber are constantly seasoning in the eight acres of the Deering plant that are set apart for the hardwood lumber yard. On the four-acre lot devoted to soft lumber for crating Deering machines, millions of feet of pine are stored. Both these lumber yards change daily, as the insatiable appetite of the wood department consumes the piles; and the trains and ships replenish the supply. During the month of November, 1892, alone, six million feet of lumber, comprising the entire cargoes of thirteen large lumber vessels and 155 cars, were unloaded at the Deering lumber yard and dock.

My story of the Deering works is completed. As I look it over, I cannot help feeling that my words have done poor justice to my theme. To be appreciated the Deering Works must be seen.

The most wonderful feature of the great Deering enterprise is its rapid growth. Like the great city in which it is situated, these works have climbed from a modest position to their present eminence, in a few brief years. It is the energy and fearless push of firms like William Deering & Co. that have made the nineteenth century the banner century of all time.

The Deering Improved Steel Binder for 1893

THE HIGHEST PERFECTION OF HARVESTING MACHINERY OF THE AGE



LIGHTEST IN DRAFT ❁ LONGEST LIFE

MOST PERFECT WORK

SAVES GRAIN! SAVES TIME! SAVES TWINE!

Contains a Higher Proportion of Steel than any other Binder made.

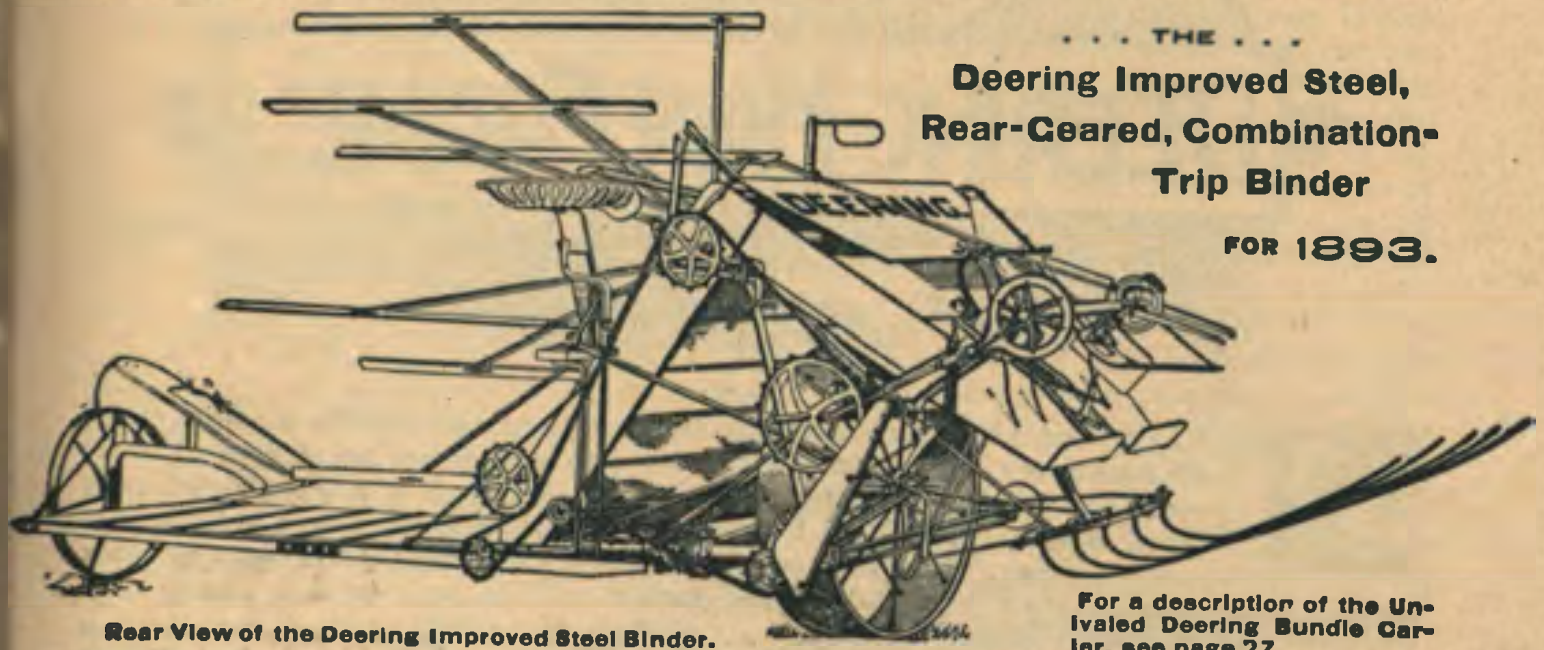
Is the Favorite with Farmers great and small, East, West, North and South.

A Triumph of Mechanical Perfection!

. . . THE . . .

Deering Improved Steel, Rear-Geared, Combination-Trip Binder

FOR 1893.



Rear View of the Deering Improved Steel Binder.

For a description of the Unrivaled Deering Bundle Carrier, see page 27.

FOR the season of 1893, William Deering & Co. offer to the farmers of the world the **Deering Improved Steel Harvester and Binder**, a machine that contains all the excellences of the harvesting machinery of the age It is the Deering Junior Steel Binder that the farmers know and like so well, with several marked improvements. These improvements are the result of years of actual field work in almost every grain-raising State in the Union. Chief among them are:

1 **The Combination-Trip**, a device by which the bundles are permitted to be better packed, wisp by wisp.

2 **New Beveled Binder Gear**, that adds to the strength and smooth action of the Binder, and reduces the weight of the machine

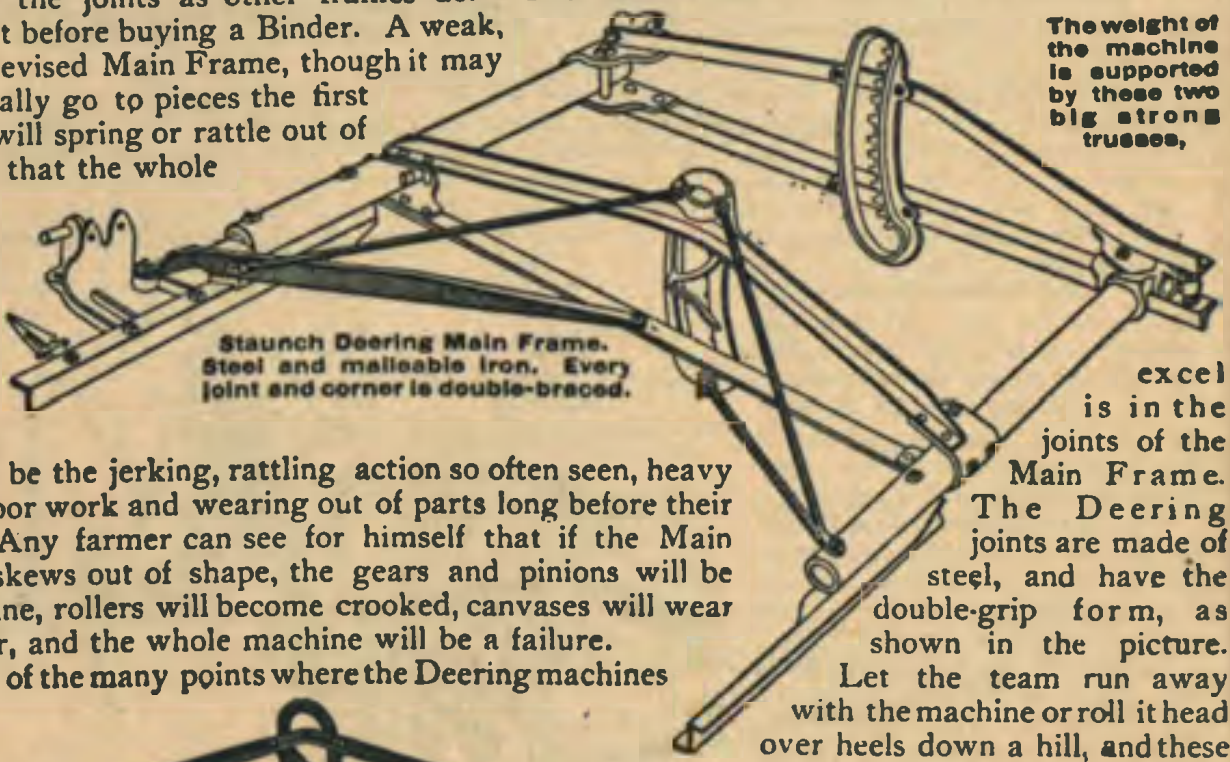
3. **Deering Bundle Carrier**, the same folding finger carrier that won such unparalleled popularity during the past seven years.

4. **The Deering Jointed Platform**, a device by which the Binder can be narrowed in five minutes' time by one man, so that it will travel through a nine-foot gate, over narrow roads and bridges, and can be stored over winter in a 7x9 corner of your barn. The platform is made in two pieces, which are held together by big steel pins fitting into steel sockets.

Without lifting the machine or even unhitching his horses, the farmer can make the change in five minutes, unaided. **It does away with the truck nuisance entirely.** No improvement put on a binder during the past five years has been received with such general favor as the Deering Jointed Platform. Nearly ten thousand of these machines have been used the last two years, and not a single complaint of any kind has been heard from any of them.

THE DEERING MAIN FRAME.

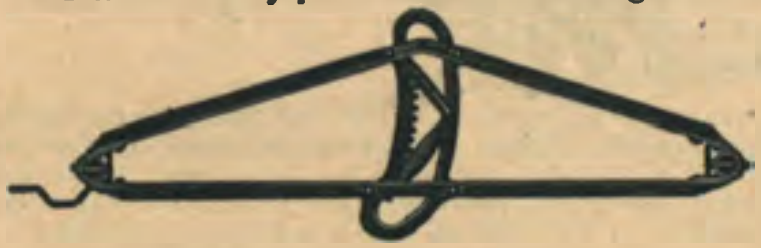
WHEN a contractor builds a bridge, the first thing he looks to is the strength of the main framework. His piers and trusses and girders are carefully tested for many times the strain that they will ever have to bear. It is the same with the Deering Binders. The Main Frame is made strong and staunch and durable. It can not break. It can not wear out. It can not twist out of shape or rattle loose at the joints as other frames do. The farmer will do well to look closely into this point before buying a Binder. A weak, poorly devised Main Frame, though it may not actually go to pieces the first season, will spring or rattle out of shape so that the whole running gear of the machine will be out of true. The result will be the jerking, rattling action so often seen, heavy draft, poor work and wearing out of parts long before their time. Any farmer can see for himself that if the Main Frame skews out of shape, the gears and pinions will be out of line, rollers will become crooked, canvases will wear and tear, and the whole machine will be a failure.



The weight of the machine is supported by these two big strong trusses.

Staunch Deering Main Frame. Steel and malleable iron. Every joint and corner is double-braced.

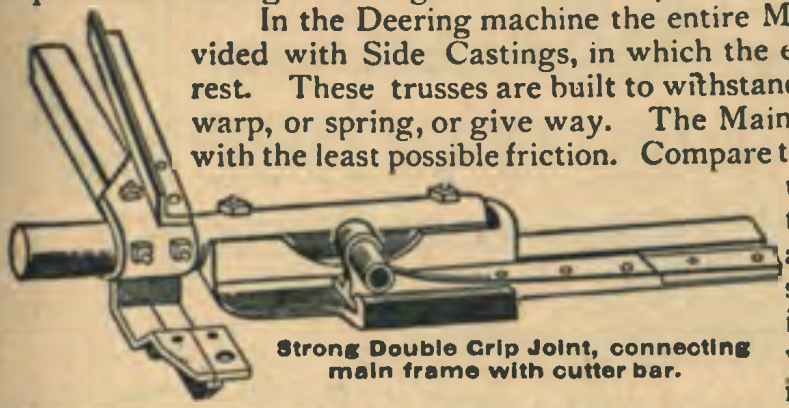
One of the many points where the Deering machines excel is in the joints of the Main Frame. The Deering joints are made of steel, and have the double-grip form, as shown in the picture. Let the team run away with the machine or roll it head over heels down a hill, and these



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

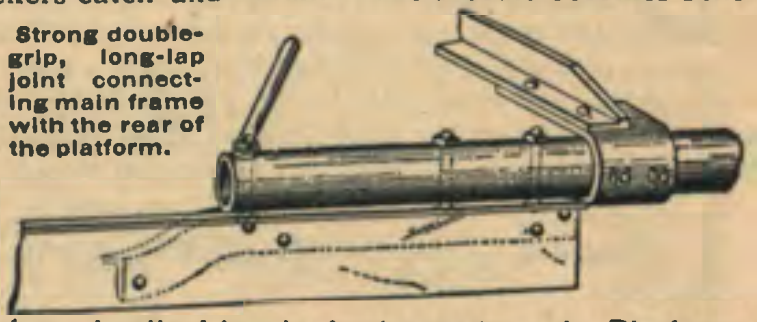
This substitute for a truss will break at one ton pressure.

joints will never give way. They can not. No joint on any machine in the market equals the Deering for strength and durability.



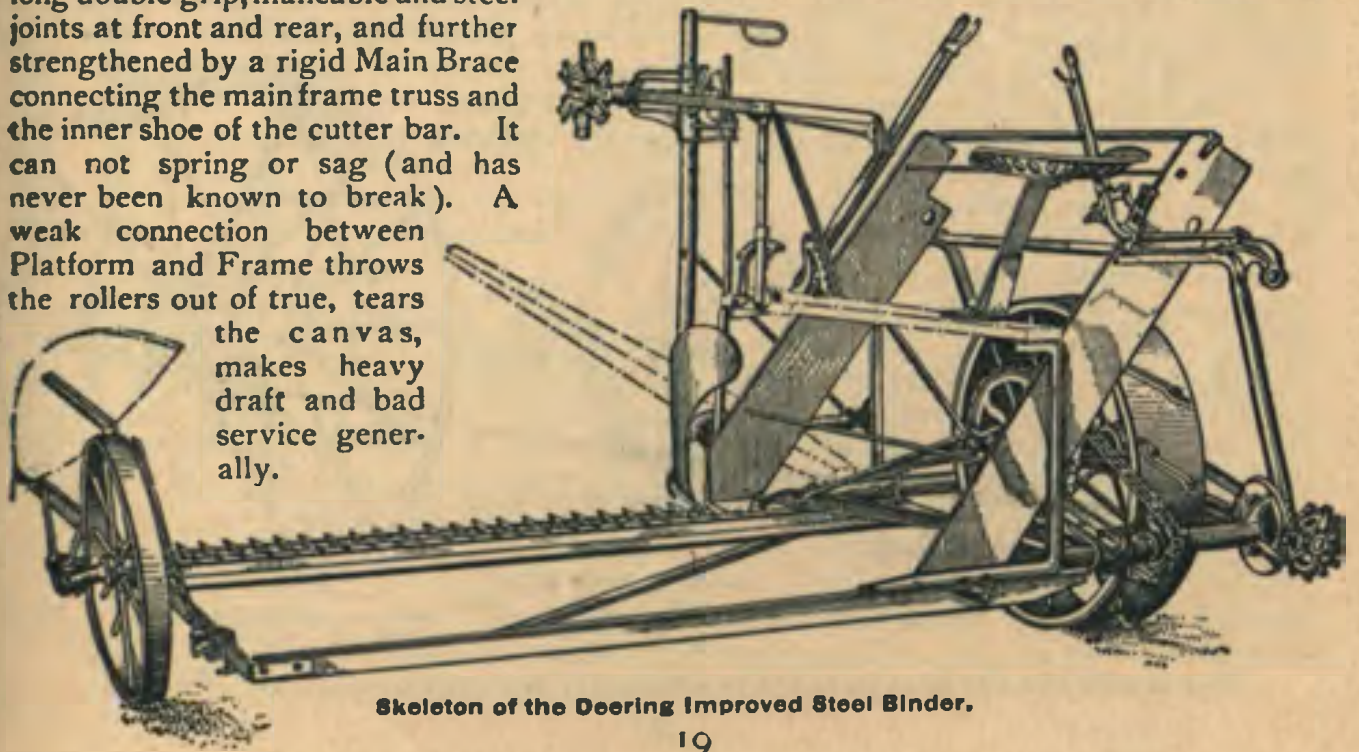
Strong Double Grip Joint, connecting main frame with cutter bar.

In the Deering machine the entire Main Frame rests on two trusses provided with Side Castings, in which the ends of the axle of the Main Wheel rest. These trusses are built to withstand a weight of ten tons. They can not warp, or spring, or give way. The Main Wheel always runs in true bearings with the least possible friction. Compare this scientific truss with the straight bar used by rivals, and a weak light bar at that. In a short time this weak bar is almost sure to bend or skew around so that the Main Wheel runs crooked in its bearings. The result is a fearful wear and tear and heavy draft. What is worse still, this faulty construction gives a lack of stability to the whole machine. Gears and pinions do not meet each other at proper angles. Chains run crooked. Packers catch and break. The Needle becomes bent and does not fit into the Knotter and the whole machine fails dismally, simply because its short-sighted makers see fit to save a dollar or so on this one important point.



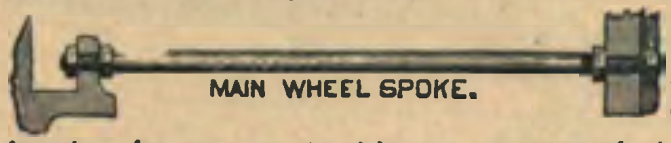
Strong double-grip, long-lap joint connecting main frame with the rear of the platform.

Another point. Before you buy a machine, examine how the Platform is fastened to the Main Frame. Owing to the fact that it must do its work at arm's length as it were, there is a backward pull of hundreds of pounds on the Platform, and unless it is fastened most securely to the Main Frame, it is sure to sag backward or break altogether. The Deering Platform is attached to the main frame by strong, long double-grip, malleable and steel joints at front and rear, and further strengthened by a rigid Main Brace connecting the main frame truss and the inner shoe of the cutter bar. It can not spring or sag (and has never been known to break). A weak connection between Platform and Frame throws the rollers out of true, tears the canvas, makes heavy draft and bad service generally.



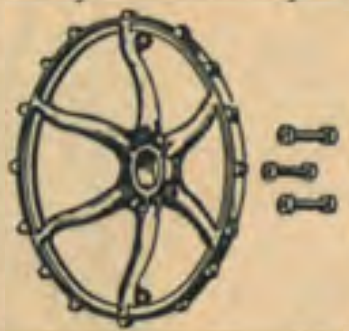
Skeleton of the Deering Improved Steel Binder.

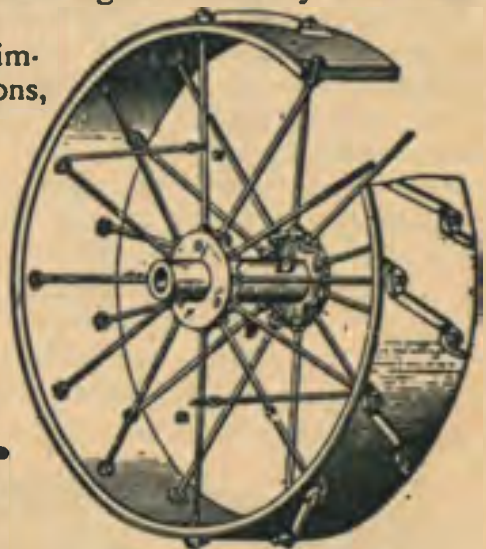
BUMPING over rough or stony ground under a weight of half a ton, the Main Wheel of a Harvester has a tough time of it, and it must be strong to stand the strain. The Deering main wheel *is* strong and it *does* stand the strain. Why? Because it is well made, out of sensible materials. Take a seasoned oak plank nine inches wide and an inch and a quarter thick, lay on it a sheet of steel the same width, bend them into the shape of a wheel, fit into this 24 adjustable spokes, double-nut them into the steel tire and hub, and you have the Deering Main Wheel. It is light and strong. Its adjustable suspension bicycle spokes exert a constant inward pull on the tire and felloe, thereby spreading the force of a blow on the tire throughout the whole wheel, and making it impossible for the wheel to buckle or the spokes to bend. The Deering steel and oak wheel can not break. It can not buckle or get out of shape. It is the tallest, the thickest and the broadest Main Wheel on any harvester. Its great breadth prevents it from sinking into the ground. Its thick oak felloe prevents it from taking up a collection of sand and mud. Its great height makes light draft. The large surface always on the ground gives it the greatest traction and prevents slipping. It is many pounds lighter than any rival Main Wheel and by far the strongest Main Wheel made.


MAIN WHEEL SPOKE.

The Raising and Lowering device of this wheel is simplicity itself. The ends of the axle are provided with pinions, the teeth of which fit into a series of cogs on the Side Castings of the Main Trusses. A few turns of the crank to the right or left runs the axle up or down in the side casting.

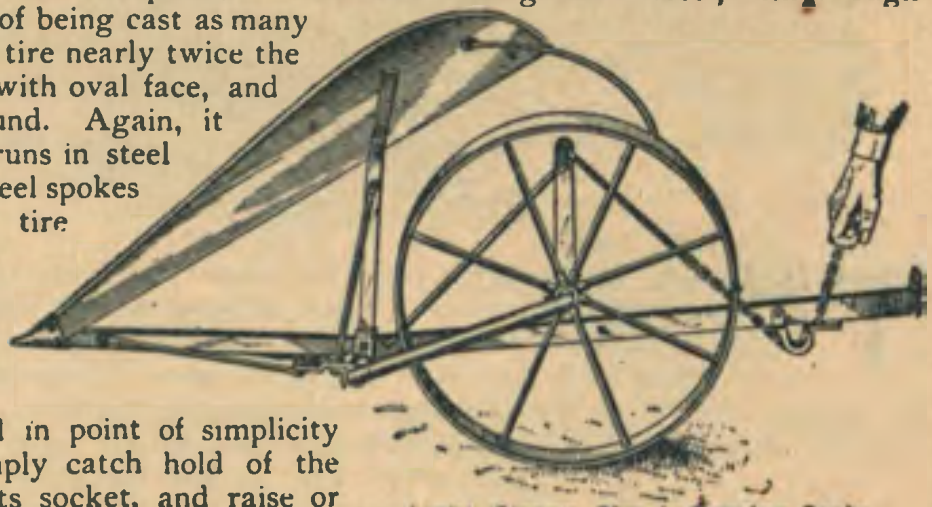
Should you want to remove the Main Chain, simply run the axle down to the bottom cog of the Side Casting, then with two more turns of the crank to the left the axle drops into a loop at the bottom of the casting, and you can lift off the chain with your hand.


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


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

This is a device that has no equal in simplicity, convenience and ease of operation.

DEERING GRAIN WHEEL.—Following their usual policy of thorough, honest work, Wm. Deering & Co. make a Grain Wheel that is worthy of the great machine of which it forms a part. In the first place, it is made of a fine grade of steel, with a tough malleable iron hub, instead of being cast as many others are. Next, it has a tire nearly twice the width of any competitor's, with oval face, and does not cut into the ground. Again, it has a big steel axle that runs in steel bushing in the hub. The steel spokes are fitted into the steel tire and malleable iron hub in such a way as to give the whole wheel the strength of a solid piece of steel.



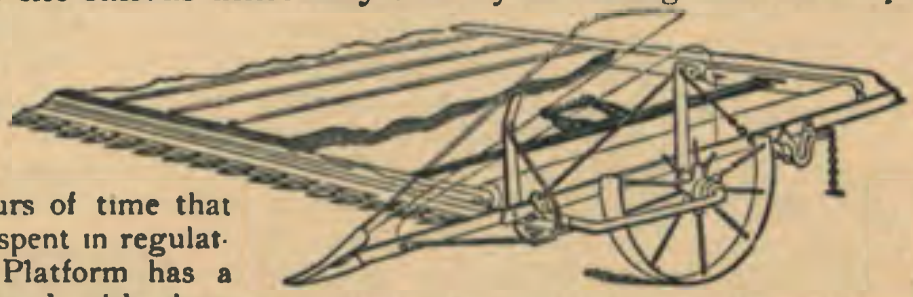
Light, Strong, Simple Deering Grain Wheel and Divider.

The Raising and Lowering device is unapproached in point of simplicity and ease of operation. Simply catch hold of the chain, slip the link out of its socket, and raise or lower to suit yourself.

But more important still, examine the method of fastening the Grain Wheel to the Platform. The Deering Grain Wheel is fastened firmly at both corners of the Platform, instead of being attached in the center as with other makes. With the Grain Wheel attached in the center, the Outside Divider is almost sure to sag down in time, twisting the Cutter Bar in such a way as to prevent the Knives from lying flat in the Guards, and warping the Platform so that the slats on the canvas pass diagonally over the rollers, breaking the slats and tearing the canvas. A glance at any four-year-old Harvester, with the Grain Wheel attached only to the center of the Platform, will prove the force of this point. The Deering Grain Wheel and Divider are many pounds lighter than any other similar parts in competing machines. A heavy Grain Wheel makes horse-killing side draft.

⅝ in. ¼ in.

WIDE DEERING PLATFORMS.—It pays to be liberal. It pays to give the farmer a Harvester Platform wide enough for the longest grain. This is one of the elements in the large capacity of the Deering machines that has led to their adoption almost without exception by the great bonanza farmers of the West. **The Deering Platform is forty-eight inches wide, or nearly a foot wider than its widest competitor.** It has an admirable spring that **keeps the canvas uniformly taut** by contracting when the dampness of morning and evening shrinks the canvas, and expanding when the canvas becomes dry at mid-day. **It allows a variation of four inches.** It saves hours of time that would otherwise have to be spent in regulating straps. The Deering Platform has a bottom of hardwood, reinforced with sheet steel. It is the strongest, lightest, most durable Platform made. The parts that come between the Cutter Bar and the ground are made thin, so that the Knives run close to the ground, thus getting beneath the down grain that other Harvesters lose, and giving the farmer long straw if he wants it.



Wide Deering Platform, showing Elastic Canvas Spring.

THE DEERING ELEVATOR

THE Deering Elevators are fifty-five inches wide, very much wider than those on any other harvester made. **They extend seven inches in front of the line of the platform,** thus doing away entirely with the clogging and choking at the inner end of the Cutter Bar that is the bane of all other machines. One manufacturer, whose Elevator is no wider than the Platform, seeks to cover up the defect with a wicked little "relief rake" that pitches the grain in every direction. If his machine was not originally sick and in trouble, it would not need this "relief." The single apron fallacy is even worse. It can be made cheaply; but it does not elevate.

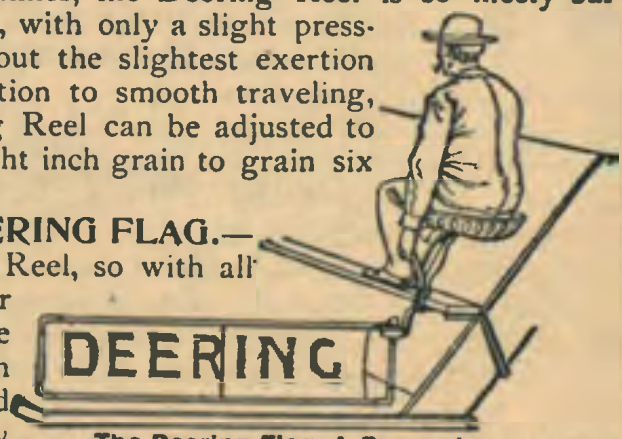

No clogging here.
Deering Elevator.

THE DEERING REEL.—Unless a Reel is easily adjusted, the chances are that the farm hand who runs the machine will leave it in the same position from morning to night. It is a fact that few farmers seem to appreciate the full value of the Reel. Now, with the Deering Reel, there is no excuse for negligence in this particular, and our experience has been that drivers of the Deering Binder make freer use of the Reel than on any other machine. The reason is plain. The Deering Reel responds to a touch of the lever like a thing of life. Instead of almost dragging the driver off his seat with its dead weight, as with most other machines, the Deering Reel is so nicely balanced that it comes up or down, forward or back, with only a slight pressure on the single Reel-lever. In an instant, without the slightest exertion or interruption to smooth traveling, the Deering Reel can be adjusted to go from eight inch grain to grain six feet high.


The Deering Reel.


A Rival Flag.
Bolted feet to the Platform.
A Great Inconvenience

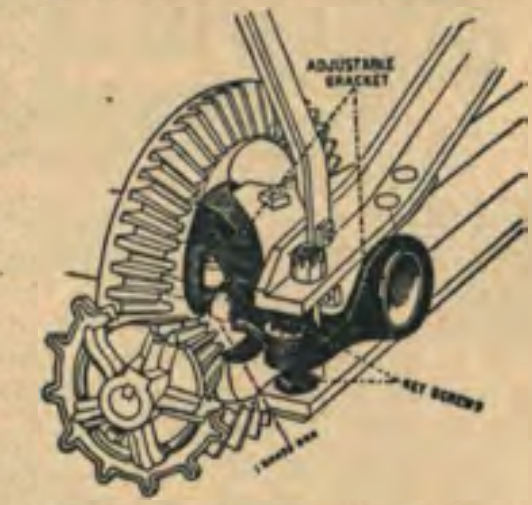
THE DEERING FLAG.—As with the Reel, so with all the other parts of the Deering Binder, provision is made for a quick and easy change to suit every condition of grain. Take the Deering Flag, for instance. By a single turn of his hand,



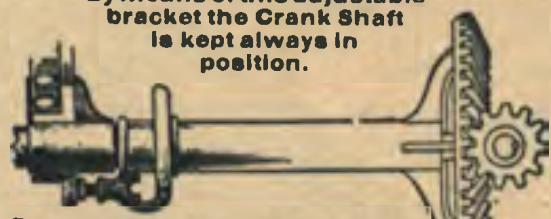
The Deering Flag—A Convenience.

without leaving his seat, or even slowing up, the driver can shift this Flag forward halfway across the platform for short grain, or backward to the very edge of the platform for the longest grain. A great saving is effected right here; for if the driver had to stop his team in the boiling sun, climb down, squat down behind the machine and loosen two bolts, as he has to do with any other machine, he would simply "let the old thing rip," and waste his short grain. Another good feature about the Deering Flag is the fact that it is easily hoisted out of the way when the farmer wishes to "oil up" or adjust Platform straps. This is considerably better tha having to double up over the Flag as operators on other machines are compelled to do.

DEERING ADJUSTABLE GEARS.—One admirable feature of the Deering gears that is not shared by any of their rivals, is their adjustability. Even the Deering gears may, if not kept in order, wear in time so that they will not "mesh" or fit into each other as deeply as they did at first. To remedy this wear, the Main Gear and Crank Shaft are fitted with adjustable devices for taking up wear. For the lack of some such feature, all other machines, after the first season or so, set up such a clattering and rattling that a passer-by might think a stone crusher, instead of a Binder, was at work in the field. This rattling is not only unpleasant, but every minute of it shortens the life of the machine more than an hour's smooth running would do. Not only is the machine being racked to death, but the horses too, for every unnecessary sound means so much lost power and so much increase in draft.

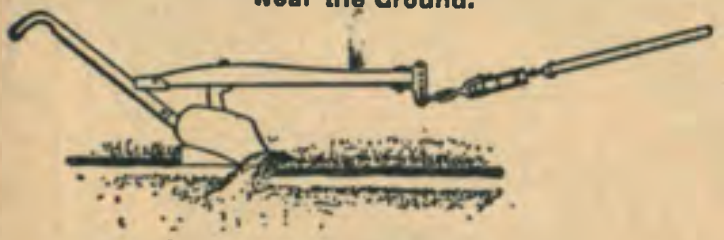


By means of this adjustable bracket the Crank Shaft is kept always in position.



By means of this adjustable Set Screw the Main Gear can always be kept in perfect mesh.

The Line of Draft of the Deering Harvester is Near the Ground.



Low Point of Draft Makes Easy Plowing.

High Point of Draft Throws the Plow Deep into the Ground.

Not only have the Deering machines the largest chain links, but the largest bearings on their gears and shafts and pinions, as any farmer can see for himself who takes the trouble to compare machines.

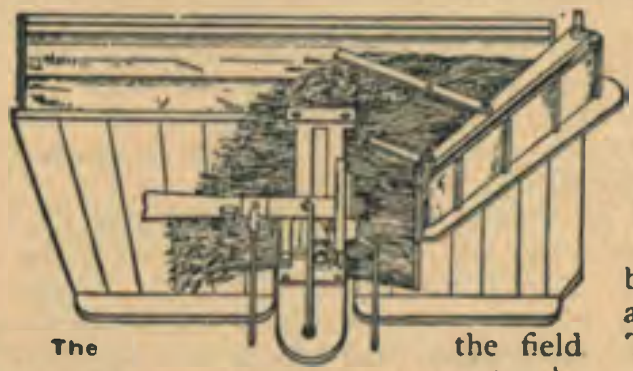
POINT AND LINE OF DRAFT.—The Line of Draft of the Deering Improved Steel Binder is where it belongs—down where the Main Wheel touches the ground. High Point of Draft tends to force the wheel down into the ground, greatly increasing draft, and often causing the Main Wheel to stall altogether.

THE DEERING CANVAS ADJUSTER

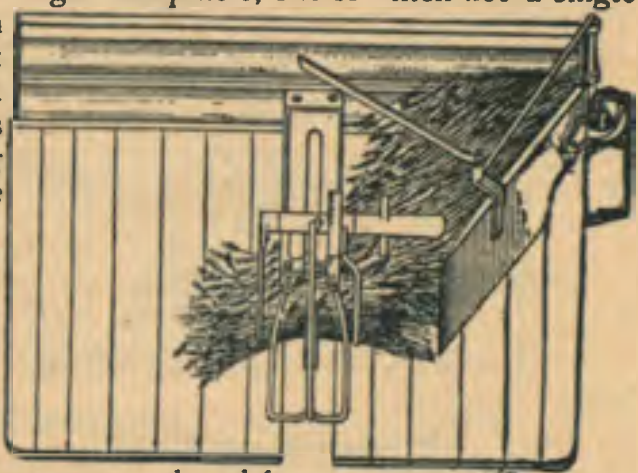
THE Deering Canvas Adjuster is a crowning triumph in the science of bundle-making. It stands alone and unapproached among all its rivals. From every quarter of the country rival machine makers are besieged with the demand, "Give us an Adjuster like the Deering or take back your machine." With dead stock of thousands of machines on their hands, agents of rival machines have been frightened into promising to give prospective buyers "Adjusters like the Deering," and their inability to do so when it came to the pinch has caused no end of litigation and hard feeling.

The Deering has the longest, strongest, most easy running Adjuster made. Its Extension holds the grain in place until after the bundle is tied. A long Canvas adjuster is seldom used with a Front-Geared binder. There is usually no room for it. The short Adjuster without Extension and the vibrating Butt Boards on all competitors' Front Geared binders have proved to be dismal failures. The Deering Binder, with its long Adjuster, has the greatest capacity for long grain and can successfully bind shorter grain than any other binder. No matter whether the Binder is shifted back for six foot grain or forward for eight inch grain, the Adjuster on one side and the stationary Wind Board on the other always hold the grain in a straw-tight receptacle, out of which not a single blade can escape, even in the highest wind. You don't need to go over the field with a hay rake after the Deering has cut it. The two accompanying machines and the bundles made by them were reduced from actual photographs taken in the field The Deering Canvas Adjuster has unusually large drums which make the canvas run easily and prevent it from slipping.

The Deering Adjuster in detail.



The Deering Adjuster makes a perfect Bundle.



The bundle made by a front-geared, butt-board machine.

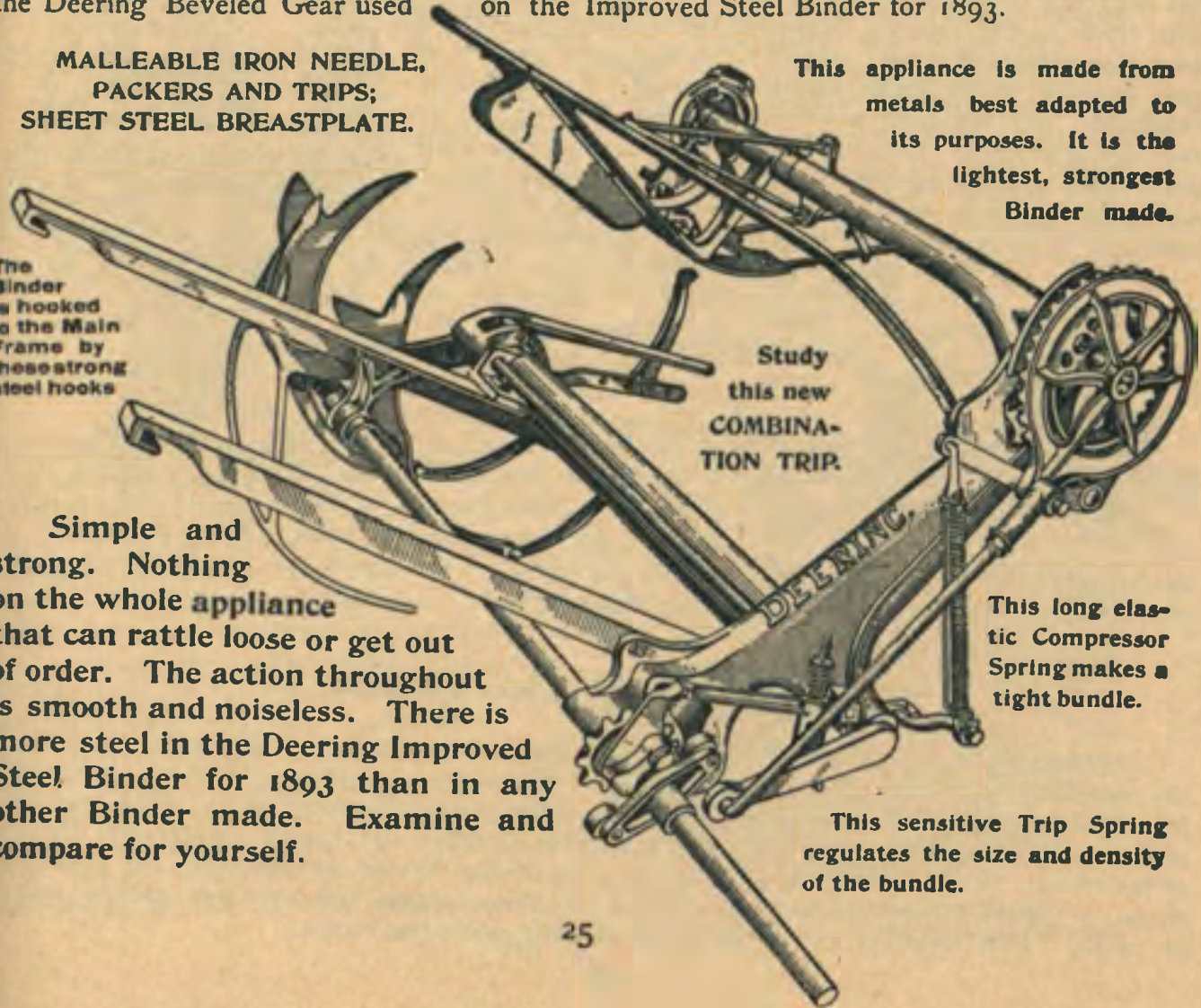
THE DEERING BINDER

HERE is a Binder to be proud of. It is such a combination of steel and malleable iron as can not be approached by any other machine.

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

MALLEABLE IRON NEEDLE, PACKERS AND TRIPS; SHEET STEEL BREASTPLATE.

This appliance is made from metals best adapted to its purposes. It is the lightest, strongest Binder made.



The Binder is hooked to the Main Frame by these strong steel hooks

Study this new COMBINATION TRIP.

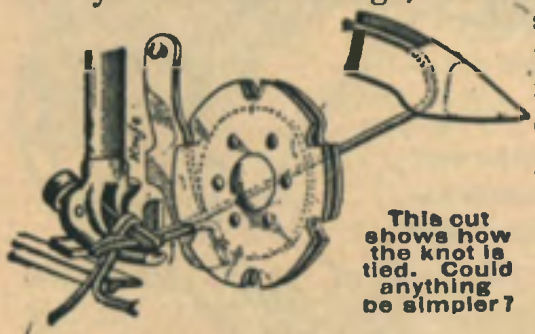
This long elastic Compressor Spring makes a tight bundle.

This sensitive Trip Spring regulates the size and density of the bundle.

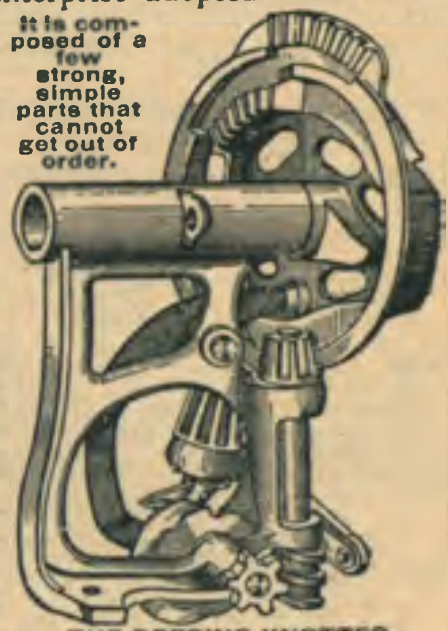
Simple and strong. Nothing on the whole appliance that can rattle loose or get out of order. The action throughout is smooth and noiseless. There is more steel in the Deering Improved Steel Binder for 1893 than in any other Binder made. Examine and compare for yourself.

THE DEERING KNOTTER

EVER since Wm. Deering & Co. gave the world its first device for tying bundles with twine, the inventive genius of an able corps of Deering experts has been at work on its improvement. From time to time important simplifying improvements have been discovered, and in every instance Deering enterprise adopted them without reference to cost, as it had done with the first Knotter. The result is the Deering Knotter, the simplest, strongest, most economical Knotter made. It is worth its weight in gold because of the twine that it saves. It is a marvel of simplicity, and the only wonder is that so few parts can do such delicate work. It is free from delicate or complicated mechanism, springs, ratchets, pawls and a dozen other loose and useless parts found on so many rival knotters. It is a knot tyer from the word go, and ties just as perfectly and surely the tenth year as it did the first. It has no cranky moods, and does not need to be adjusted for different kinds and conditions of grain, as all other knotters do. It does not break the twine, because it adjusts itself to the varying tension on the cord. It has the smallest Knotter Cam Wheel found on any Binder, and in every way the neatest, most perfect tying apparatus



This cut shows how the knot is tied. Could anything be simpler?



It is composed of a few strong, simple parts that cannot get out of order.

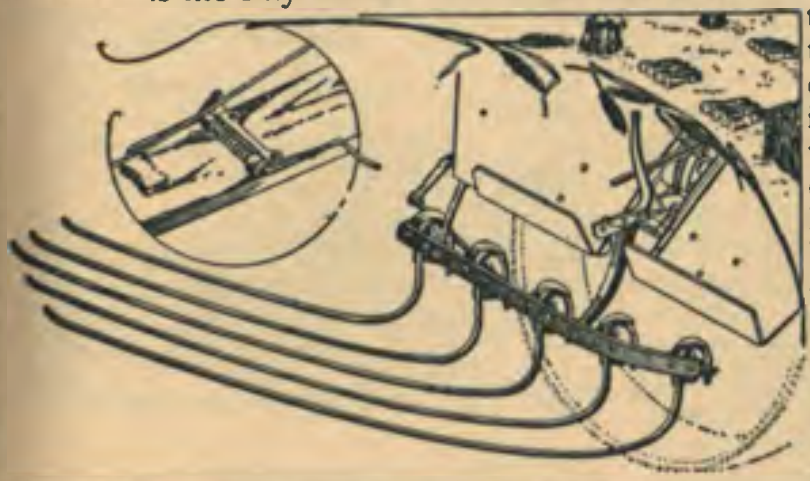
THE DEERING KNOTTER.

RELIABLE DEERING TWINE.

Probably no manufacturer of twine in the United States has made larger sales during the last five years than Wm Deering & Co. The reason is plain. Deering twine has from the first been long, strong and reliable, and the name "Deering" on a twine tag has come to be an absolute guaranty of the superior quality and honest weight and length of the twine The annual output of the Deering Twine Works mounts up to the amazing figure of fifteen billion, six hundred million (15,600,000,000) feet or three million miles of twine. This would be enough to go around the earth 120 times.

THE DEERING BUNDLE CARRIER

WE take especial pride in the Deering Bundle Carrier, the product of our own shops and the envy of our rivals. Wm. Deering & Co. have been granted eight patents covering folding carriers, giving them practical control of that form of device. It is the only Bundle Carrier that cannot be broken or injured by striking an obstruction. It is the only Bundle Carrier that does not, when folded, extend outside of the line of the deck. It is the only Bundle Carrier that will work equally well going up hill or down or around either side of the hill. Its fingers are made of the best tempered steel. It is the lightest, strongest, most flexible and perfectly self acting Bundle Carrier made. The Deering Bundle Carrier is firmly attached to the Binder Attachment itself instead of to the Main Frame, so that no matter how the Binder is shifted, the Bundle Carrier goes with it and is always directly under the bundles when they are discharged. When its load of bundles is dumped, the Deering Bundle Carrier gets completely out of the way as if it had neyer been there. It is completely and always under the control of the driver.



The Deering Bundle Carrier.

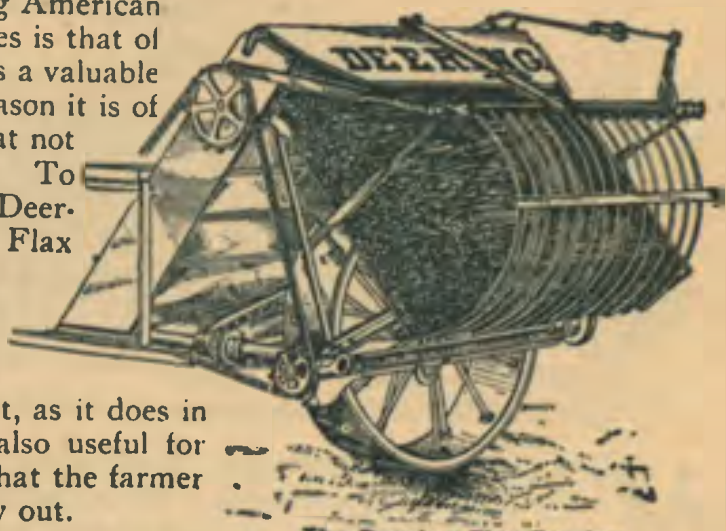
The strong steel spring on the Bundle Carrier Foot Lever tends to swing the carrier back into place after the bundles have been discharged, and to hold it there while it is being loaded up.

The Deering Bundle Carrier is envied by all rivals, some of whom have incautiously attempted to imitate it. Before long they may realize that honesty would have been the best policy We can scarcely keep up with the immense demand for this Bundle Carrier

THE DEERING BUNDLE CARRIER.
Its fingers fold when they strike an obstruction.

THE DEERING FLAX CARRIER

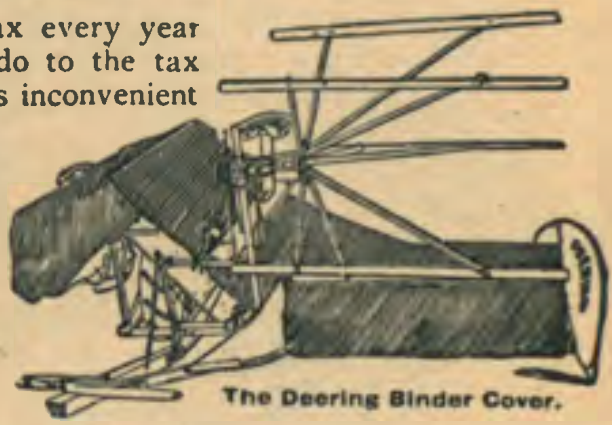
NE OF THE growing American agricultural industries is that of flax raising. Flax is a valuable crop, and for this reason it is of great importance that not a stalk be wasted. To avoid waste, Wm. Deering & Co. make a Flax Carrier that is easily attached to the machine. One essential feature is the fact that in putting on this attachment, the Adjuster is replaced by a wide light board that prevents the flax from dribbling out, as it does in all other machines. This attachment is also useful for cutting clover, timothy and other grasses that the farmer may wish to drop in gavels in order to dry out.



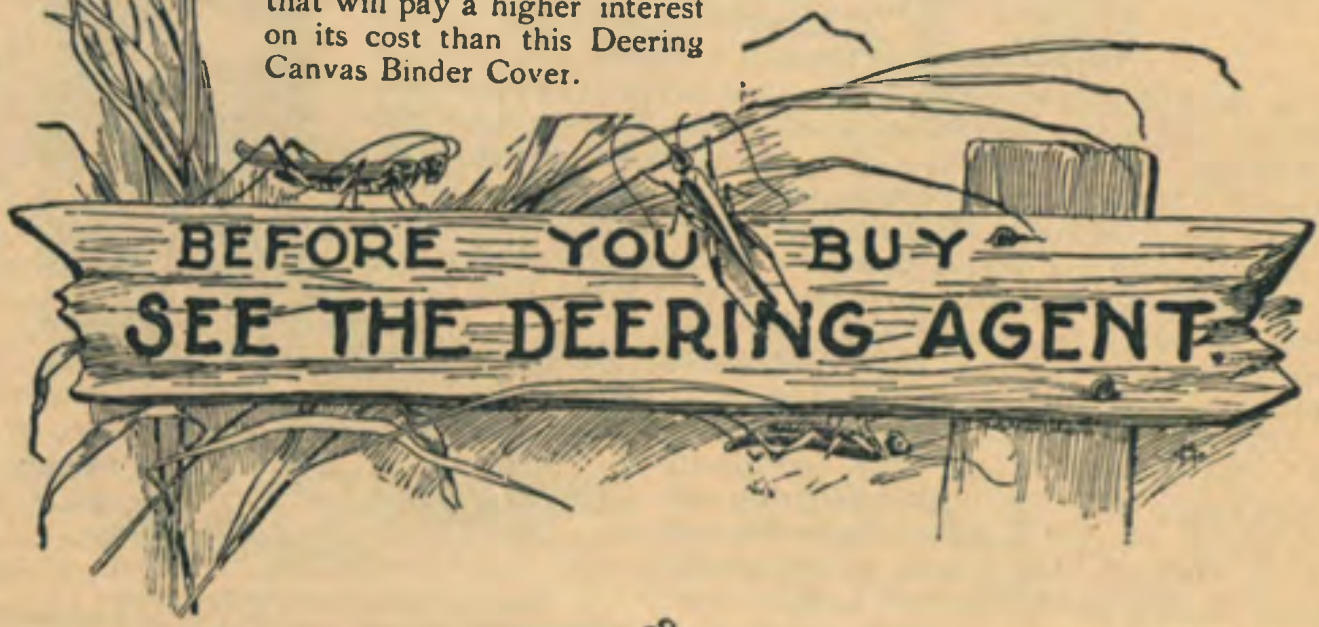
The Deering Flax Carrier.

THE DEERING CANVAS BINDER COVER.

Some farmers pay more "rust and rotting" tax every year by leaving their machines uncovered than they do to the tax collector on their whole farm. In mid-harvest it is inconvenient to haul the binder to the shed every night and out again next morning. To make this labor unnecessary, Wm. Deering & Co. provide at a small extra cost a cover that will completely shield the binder from dew or even from the hardest rains. A farmer can invest in nothing that will pay a higher interest on its cost than this Deering Canvas Binder Cover.



The Deering Binder Cover.



THE DEERING MOWERS.

THE DEERING MOWERS are broad-gauge and generous in their measurements and unexcelled in their mechanical workmanship. They excel all others in the following points:

1 Light Draft.
2 Thorough Work.
3 Shear Cutting Principle.
4 Adjustability.
5 Strength.
6 Durability.
7 Wide Tread.
8 High Drive Wheels.
9 Ease of Handling.
10 Large Bearing Surfaces.
11 Simplicity of Parts.
12 Keen Cutting Edges
13 Pitman Protection.
14 Materials.
15 Economy of Grass.

The Mowers possessing these strong points include the following TEN varieties, and range from a 3½ to a 7 Foot Cutter Bar:

New Deering Mower, 4¼, 4¾ and 5 ft. Cut.
Deering Jr. Giant Mower, 5 and 6 ft. Cut.
Deering Giant Mower, 5, 6 and 7 ft. Cut.
One Horse Mower, 3½ and 4 ft. Cut.

THE DEERING GIANT MOWER

THE Deering Giant Mower, 5, 6 and 7 foot cut, is manufactured to meet the demand for a large, wide-cut Mower. It is the most popular wide-cut Mower made. It is made larger and stronger throughout, in proportion to the increased width of cut. Its drive wheels are 36 inches in diameter and have faces 4¼ inches broad. Its Main Axle is 53 inches long, thus giving its wheels the widest tread of any mower made. It has the same everlasting gears as the New Deering Mower, only considerably larger and stronger; the same kind of Lifting Spring, only considerably larger and stronger; the same attachment of levers; same diagonal Push Bar; same style of Pitman and Pitman Protection; the same Gag Lever and Drag Bar Adjustment, and the same style of Foot Lever. The Deering Giant 7 foot cut is just as easy to handle as an ordinary 4 foot cut mower. Its draft is not appreciably heavier, and its levers are so adjusted that they are more easily operated than those on any rival 4 foot cut mower. The Giant Lifting Spring destroys the weight of the Cutter Bar, thereby making light draft and easy handling.

The Deering Giant Mower will outlast any two competing wide cut mowers.

THE DEERING JUNIOR GIANT MOWER.

Midway between the New Deering and the Deering Giant comes the Deering Junior Giant Mower, 5 and 6 foot cut. It is larger and heavier than the New Deering, and not so heavy as the Giant. It possesses all the essential features of the New Deering, all made, however, on a somewhat larger scale. The celebrated **Deering Cutting Apparatus** is found on all lengths of bar on all varieties of Deering Mowers.

The Deering Junior Giant finds a wide sale among farmers who wish a mower somewhat heavier and wider of cut than the New Deering

THE DEERING ONE-HORSE MOWER.

For farmers who have only a few acres of grass, and for use on lawns, parks, cemeteries and the like, Wm. Deering & Co. make the Deering One-Horse Mower. It has the same Cutting Apparatus as the New Deering Mower, and a Lifting Spring proportional to the length and weight of the Cutter Bar. This mower is no toy. It will cut any grass that grows. It is the lightest, strongest One-Horse Mower made. Its action is so perfect and its levers so convenient and easy of operation, that a child can run the machine. It is especially convenient for small fields. It is no trick at all to cut in and out of the corners of a zig-zag fence with this machine. It is made almost entirely of steel and malleable iron, and it is made to last. For very steep, rocky ground, it is often economy to use this little mower instead of a machine with a longer Cutter Bar. In proportion to its cutting width, the Deering One-Horse Mower has an extremely wide tread. This, and the wide range of motion of its perfect, floating Cutter Bar, make it of great service on rough and rocky ground.

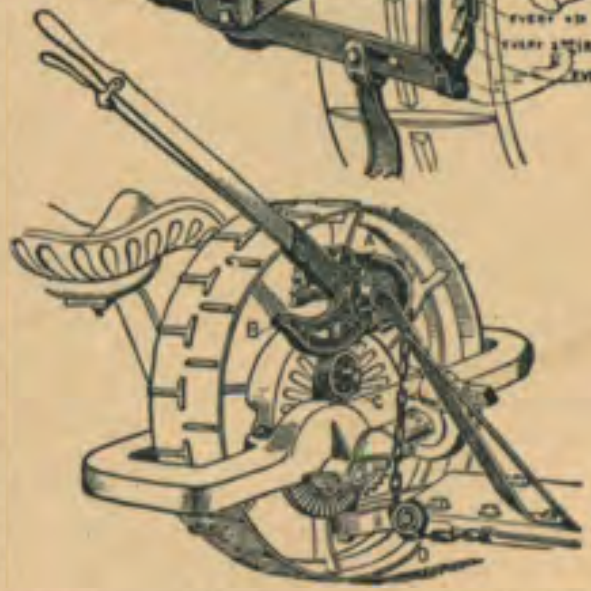
THE DEERING LIGHT REAPER.

THE AUTOMATICALLY ADJUSTABLE RAKE.

Though the Reaper has been almost entirely superseded by the Harvester and Binder, Wm. Deering & Co. continue to make the Deering Light Reaper for countries where hand binders can be cheaply employed. The Deering Light Reaper is the most perfectly and easily adjustable Reaper made. Its Platform can be folded in a few minutes' time. It has a staunch framework around the Main Wheel to prevent the gearing from cutting or wearing out. By a simple motion of the foot, the driver can set the Rake in any one of four positions:

1. So that **any** arm he wishes will rake.
2. So that every **fourth** arm will rake.
3. So that every **second** arm will rake.
4. So that **every** arm will rake.

Its raising and lowering device is admittedly the most simple, practical and easily operated of any reaper made.



RAISING AND LOWERING DEVICE.

THE GREAT HOUSE OF DEERING.

RANCH HOUSES of the great firm of William Deering & Co. are situated in thirty-six different cities of the Union. Each house transacts its own business, employs its own agents, has its well-equipped offices, and its warehouses filled with machines in spring and empty in the fall, and keeps on hand a full line of repairs or machine parts. To add to this, there is scarcely a farming community without its Deering agency or resident agent. Five thousand agents are now in active service in the United States alone. All this has been accomplished in less than a generation, from a small beginning.

In case you wish to communicate with Wm. Deering & Co. on any matter, you will find it convenient and desirable to address the one of the following houses that is nearest to you:

Wm. Deering & Co., Main Offices and Works, Clybourn and Fullerton Aves., Chicago.
Wm. Deering & Co. ..... **34 Green St.** ..... **Albany, N. Y.**
Wm. Deering & Co. ..... **Cedar Falls, Ia.**
Wm. Deering & Co. ..... **Cor. 1st St. and 3d Ave.** ..... **Cedar Rapids, Ia.**
Wm. Deering & Co. ..... **Cor. Seneca and Canal Sts.** ..... **Cleveland, O.**
Wm. Deering & Co. ..... **450-4 Dennison Ave.** ..... **Columbus, O.**
Wm. Deering & Co. ..... **Crowley, La.**
Wm. Deering & Co. ..... **Dallas, Texas.**
Wm. Deering & Co. ..... **203 Court Ave.** ..... **Des Moines, Ia.**
Wm. Deering & Co. ..... **1427-9 Wazee St.** ..... **Denver, Colo.**
Wm. Deering & Co. ..... **206 Railroad Ave.** ..... **East St. Louis, Ill.**
Wm. Deering & Co. ..... **Fargo, N. Dak.**
Wm. Deering & Co. ..... **Fond du Lac, Wis.**
Wm. Deering & Co. ..... **Freeport, Ill.**
Wm. Deering & Co. ..... **Box 314** ..... **Galesburg, Ill.**
Wm. Deering & Co. ..... **Grand Forks, N. Dak.**
Wm. Deering & Co. ..... **619-21-23 Walnut St.** ..... **Harrisburg, Pa.**
Wm. Deering & Co. ..... **192-200 W. Market St.** ..... **Indianapolis, Ind.**
Wm. Deering & Co. ..... **Jackson, Mich.**
Wm. Deering & Co. ..... **Kalamazoo, Mich.**
Wm. Deering & Co. ..... **State Line and Ewing St.** ..... **Kansas City, Mo.**
Wm. Deering & Co. ..... **Lincoln, Neb.**
Wm. Deering & Co. ..... **215 W. Main St.** ..... **Louisville, Ky.**
Wm. Deering & Co. ..... **Madison, Wis.**
Wm. Deering & Co. ..... **418 Third Ave., North** ..... **Minneapolis, Minn.**
Wm. Deering & Co. ..... **158 N. Market St.** ..... **Nashville, Tenn.**
Wm. Deering & Co. ..... **Newark Valley, N. Y.**
Wm. Deering & Co. ..... **801-3 Capitol Ave.** ..... **Omaha, Neb.**
Deering & Co. ..... **17 Preble St.** ..... **Portland, Me.**
& Co. ..... **21-23 S. 4th St.** ..... **Quincy, Ill.**
..... **99 W. Main St.** ..... **Rochester, N. Y.**
..... **316-18 Sylvania St.** ..... **St. Joseph, Mo.**
..... **108 Bluxome St.** ..... **San Francisco, Cal.**
..... **Sioux Falls, S. Dak.**
..... **Springfield, Ill.**
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RAISING AND LOWERING DEVICE.