
TRIUMPHS
OF THE
19th CENTURY
Compliments
of
Wm DEERING & Co.
GRAIN & GRASS
CUTTING MACHINERY
CHICAGO.U.S.A.
GLIMPSES OF THE GRAIN CENTRE OF THE WORLD.
CHICAGO THE MONUMENT THE FARMERS HAVE BUILT ON LAKE MICHIGAN.

QUEEN OF FAIRIES TO DISCOURAGED FARMER

I

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!

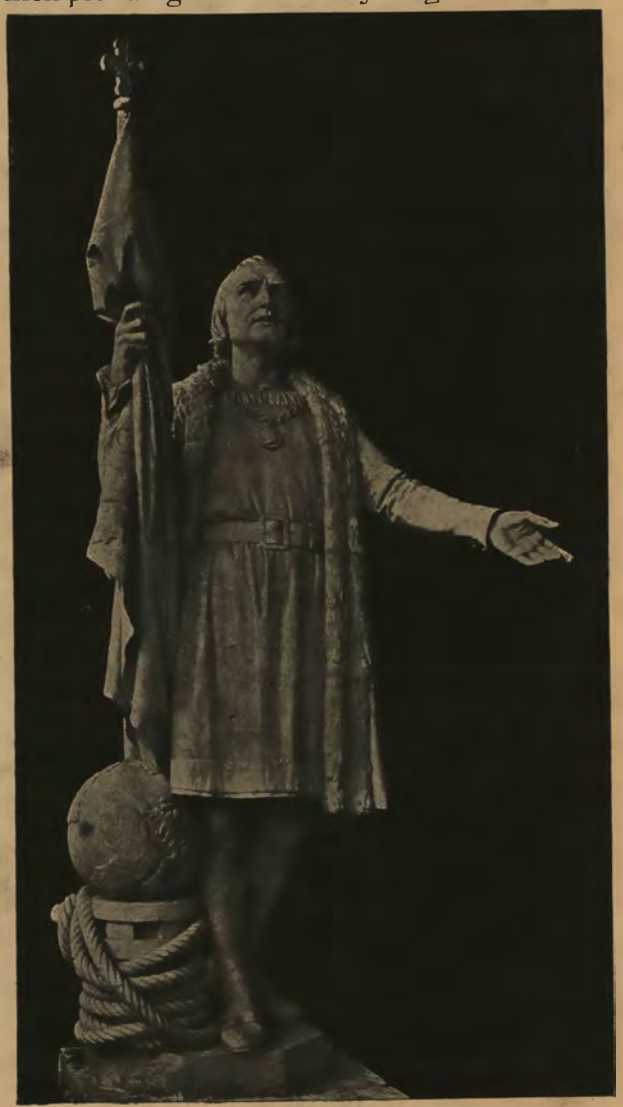
Deering Machines Save worry, Don't get out of order;
Cut right along without delays; Are easy alike on driver and horses,
Save crops by not wasting them; Save twine, Save time;
Have the greatest capacity; Have the lightest draft.
Last the longest and do the best work while they last.

TRIUMPHS OF THE 19TH CENTURY

THROUGH all time, the nineteenth century will be known as the century of progress; the century that found men plodding afoot on dusty wagon roads and lifted them to trains of palace cars that dart over the face of Mother Earth like ice needles on a freezing stream; a century that found the "Pony Dispatch" and left the globe grid-ironed with a maze of wires that annihilate time as well as space; a century that found the American continent for the most part an unexplored wilderness and left it the home of the greatest commonwealth on earth.

The United States of America has been the theater of the greatest advancement of this century of progress. Its people have been stimulated by breathing a free air. Our fertile valleys and broad prairies have furnished them wholesome, nourishing food, while they have been paid wages that have enabled them to buy all the necessaries and innumerable luxuries of life. Men are what they eat. Give them weak, insufficient food and they will become stunted in body and mind. The food producers are the bone and sinew of the nation.

It was not until the great West was filled up with brave-hearted, strong-bodied farmers that the country achieved its present eminence. The stout-hearted farmer lads from the Eastern and Southern States, who bravely pushed westward, and the frugal tillers of the soil from worn-out Europe, who endured the hardships of a five-thousand-mile journey by sail, steam, wagon and foot—these are the real builders of American



COLUMBUS.

greatness. They have made the railroads possible. Without them our great cities could not have been built and could not now exist. At this moment the colossal industries of America rest upon their shoulders and depend upon them for support.

Farmers of the East, you have built the cities that line the Atlantic seaboard, its rivers and the eastern lakes.

Farmers of the South, you have built your beautiful southern cities with all their wealth and culture.

Farmers of the West, you have built Chicago. In half a century you have made it a city surpassed in population by only three cities on the globe, and surpassing all in a thousand vital ways. You have made it

THE GRAIN CENTER OF THE WORLD.

In 1891 alone Chicago received 231,821,429 bushels of grain out of the 3,500,000,000 bushels raised in the whole country, these receipts being greatly in excess of any other market in the United States, 163,000,000 bushels more than were received by any other Western market, and 8,501,398 bushels more than were received here in 1890. There were 301,976 cars of grain inspected here in 1891, in addition to 4,700,000 bushels of grain received via lake and canal. Chicago has grain storage capacity in "regular" elevators for over 30,000,000 bushels of grain, the largest elevator capacity in the world. The total shipment of grain and flour amounted to 207,988,000 bushels in 1891.

From the following table of receipts and shipments for eleven months of 1892, furnished us through the courtesy of Mr. Geo. F. Stone, the talented Secretary of the Chicago Board of Trade, it will be seen that Chicago received almost as much grain as New York, Philadelphia and St. Louis combined, six times the receipts for Philadelphia, three times those of St. Louis and nearly twice those of New York. The real value of these figures is only appreciated when it is remembered that the great bulk of grain received by New York and Philadelphia comes from Chicago. This is illustrated by the shipment of over 182,000,000 bushels of grain from Chicago in eleven months of the year just closed.

GRAIN MOVEMENT IN ELEVEN MONTHS OF 1892.

Receipts of Flour and Grain at Principal Points, from January 1st to November 30th, 1892.					Shipments from Chicago, Jan. 1st to Nov. 30th, 1892.	
Articles.	Chicago.	St. Louis.	New York.	Philadelphia.	Articles.	Chicago.
Flour.....Barrels.	5,413,128	.....	7,023,370	.....	Flour.....Barrels.	5,214,818
Wheat.....Bushels.	45,906,927	25,590,903	60,469,410	10,328,742	Wheat.....Bushels.	42,998,823
Corn..... "	74,123,218	27,042,445	25,624,473	21,018,655	Corn..... "	63,858,084
Oats..... "	73,680,240	9,264,730	29,507,877	4,590,000	Oats..... "	63,705,892
Rye..... "	3,481,118	1,028,122	2,244,512	103,200	Rye..... "	2,676,657
Barley..... "	14,824,375	2,282,757	3,570,486	721,200	Barley..... "	9,035,676
Totals for Grain only...	212,015,878	65,208,957	121,416,758	36,761,797	Total Grain Shipment	182,275,132

In the same eleven months there were received at the Chicago Union Stock Yards, 3,282,476 head of cattle, 185,523 calves, 7,049,796 hogs and 1,967,142 sheep.

Chicago==A Triumph of the Century.

CHICAGO, one of the triumphs of the 19th century, has a population of 1,500,000 souls and the largest area (190 square miles) of any city in the world. Its longest street, Halsted street, is 19 miles long. The city itself is 26 miles long north and south, the longest way, by 12 miles east and west, and has a frontage of 22 miles on Lake Michigan. It has 3,163 miles of streets and boulevards, and has 2,597 acres laid off in parks and boulevards. In 1891 alone, 11,805 buildings, running from two to eighteen stories in height, were erected. These new buildings, if set in a solid row, would extend 53½ miles in length. They cost $54,000,000, or an average of $4,575 each, while the land on which they stand is worth more than the buildings themselves. To give an idea how great increase in land value has caused buildings to be built high from the ground, it is only necessary to state that over 6,000 passenger elevators were running in Chicago the day this book was written, and almost an equal number of elevators for hoisting freight.

IT LEADS THE WORLD.

Not many years from now Chicago will be the first city of America, and may one day lead the entire world. Already it is the largest grain market of the world, the largest cattle market of the world, the largest hog market of the world, the largest lumber market of the world, the largest stove market of the world, the largest railway center of the world, the largest packing center of the world. It has the largest stockyards in the world; it has the greatest agricultural implement plant in the world, that of Wm. Deering & Co., covering 51 acres and turning out 600 machines a day; the finest hotel buildings in the world; the largest and highest office buildings in the world; the largest commercial buildings in the world; the greatest retail dry goods houses in the world; the greatest wholesale dry goods houses in the world; the largest cold storage warehouse in the world; the largest library circulation in America; the most efficient fire department in America; the largest percentage of reserved bank capital in America; the most complete cable system in the world; the most

VIEW ON STATE STREET, SHOWING THE BIG MASONIC TEMPLE.

Chicago river as seen from the Fifth Ave. bridge.

Chicago river looking north from Lake Street bridge.

complete water system in the world; the largest postoffice net earnings in America; the greatest park area of any city in America; the most miles of dockage and wharfage of any city in the world.

STUPENDOUS SHIPPING INTERESTS.

Few people realize the magnitude of Chicago's shipping interests. It is one of the largest ports of the world. In 1891 a total of 10,294 vessels, representing an aggregate tonnage of 11,031,552 tons, entered the port of Chicago. This is as great a tonnage and as large a number of vessels as was required to carry on the foreign trade of New York, Boston, Philadelphia, Baltimore, New Orleans and San Francisco all combined; exceeds the foreign trade of London by 3,322,847 tons, Liverpool by 5,872,102 tons, and is five times the foreign trade tonnage of Havre, the chief port of France. This immense tonnage is due as much to its stupendous shipments of grain and livestock as to anything else. In considering these figures, it must be remembered that Chicago's shipments and receipts by water form but a small percentage of its total commerce. Navigation is closed almost entirely for four months of the year, and, owing to the ice that forms in the straits, is only open to through freights about seven months of the year. As a side remark, it may be of interest to state that the tonnage that passed through the Detroit river in 1891 was over three times the tonnage of the Suez canal, the ratio being 21,684,000 for the Detroit river to 6,890,000 for the Suez canal. Chicago's greatest commerce is by railroad, a total of 90,000 miles of railroad connecting it with the outer world and making it the greatest railway center on the globe.

THE REAL BUILDERS OF AMERICA'S GREATNESS.

All this would have been impossible without the farmers. But the farmers could not have become such a force in national advancement without the aid of the manufacturers of improved farm machinery. Imagine for a moment that the world moved back in time fifty years! How many acres of grain could be cut with the antiquated cradle? How many tons of hay could be cut with a scythe? No, the American farmer would be where the European peasants now are, if he had not the admirable labor-saving harvesting machinery such as Wm. Deering & Co. offer to him at a price within reach of even the smallest landholders.

The farmers make the country, and the manufacturers of improved farm machinery make the modern farmer.

Deering Clock Tower of Main Office

THE immense works of Wm. Deering & Co. are operated at an annual cost of millions of dollars in order that farmers from Alaska to the Argentine Republic, and all the world around, may have honest, reliable harvesting machinery. Fifty-one acres of ground, closely crowded with two, three and four-story buildings, are all within the big fence that surrounds the Deering works. This is the largest plant in the world devoted to the manufacture of machinery for harvesting grass and grain. It started in a small way with a dozen workmen, **but it started right.** In the face of rate-cutting and slavish imitation by competitors using inferior grades of materials, the Deering enterprise has risen to its present position of pre-eminence. Nothing but the policy of making the best, the strongest, the lightest machines, machines that would outlast all others, and do better work while they lasted—nothing but this wise policy steadily adhered to could have put the Deering company where it now is.

Office of Wm Deering & Co

In the last year alone the floor space of the buildings in this plant has been increased from last year's figure of forty-five acres to a present space of over sixty acres. The heavy down and tangled grain and grass of the past two seasons, while entailing serious loss to all but the repair departments of rival firms, has increased enormously the sales and popularity of the Deering machines. To meet the increased demand new buildings had to be put up. Chief of these has been an immense four-story brick structure 450 feet long and 100 feet wide, put up to meet the demand for greater storage room for machines made during the winter for the spring's selling campaign. In the front of this, an attractive addition to the large Deering offices, surmounted with a picturesque clock tower, has just been completed. Extensive additions have also been made to the Deering foundries and warehouses.

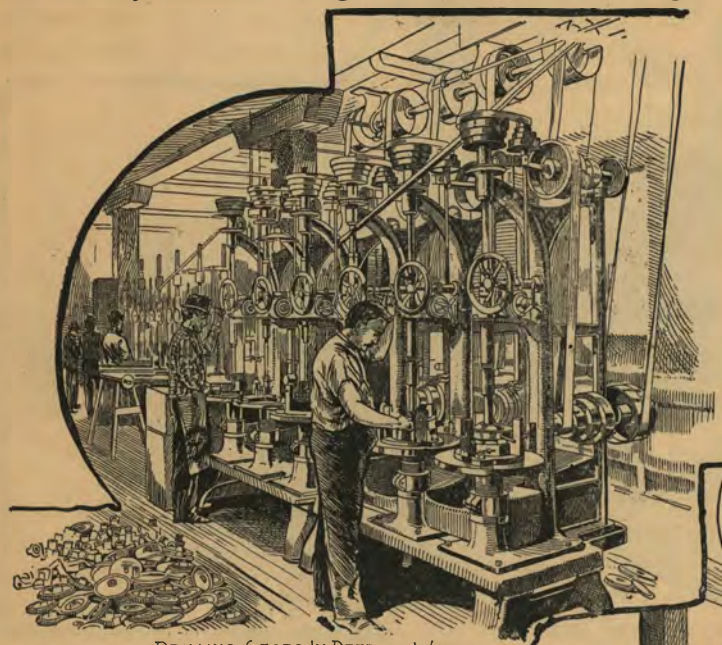
THE DEERING HARVESTER WORKS.

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.

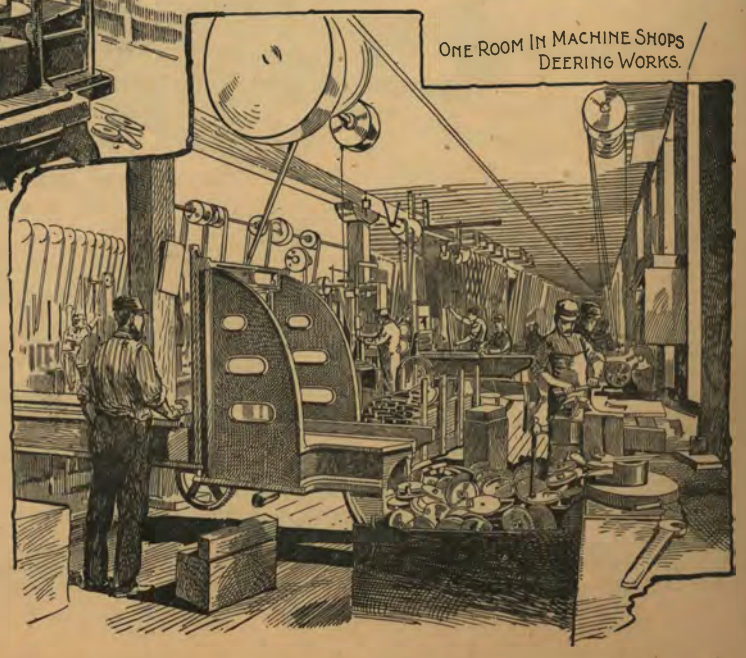
From the sharp, wintry air of the courtyard we entered one corner of an immense three-story brick building, nearly two blocks long. It was like entering a new world. I was the new Aladdin. Before me was a wilderness of clanking, whirring, grinding machinery. I stood rooted to the spot, and feared to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



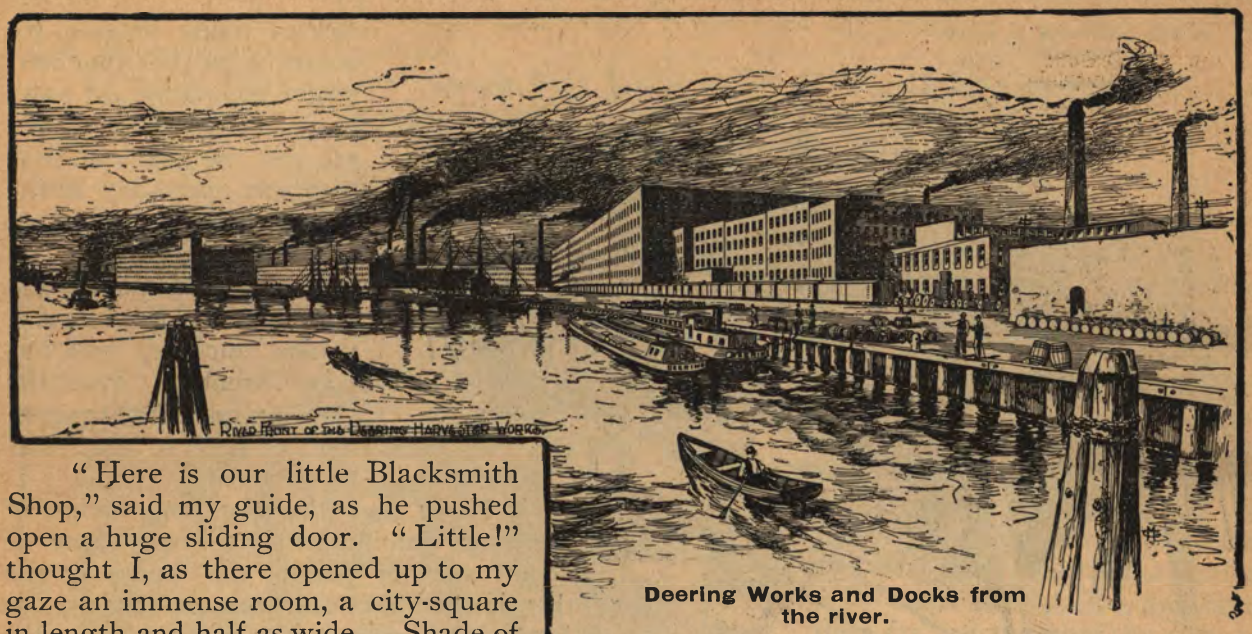
DRILLING GEARS IN DEERING WORKS

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

Not much assured, I followed 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.



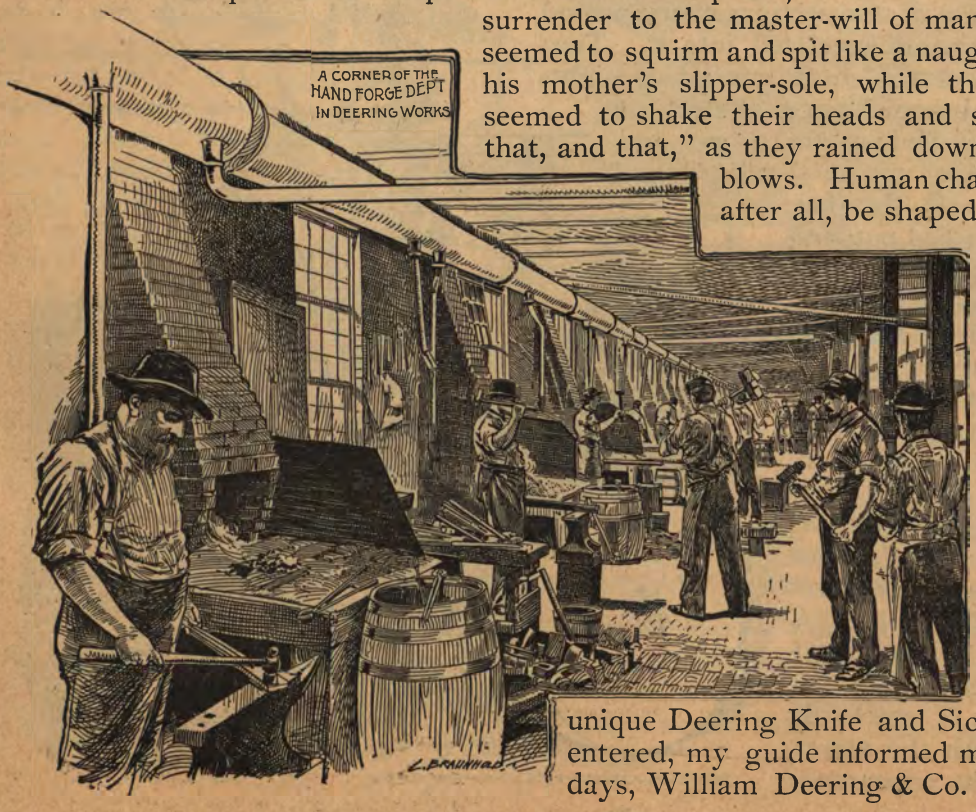
ONE ROOM IN MACHINE SHOPS DEERING WORKS.



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

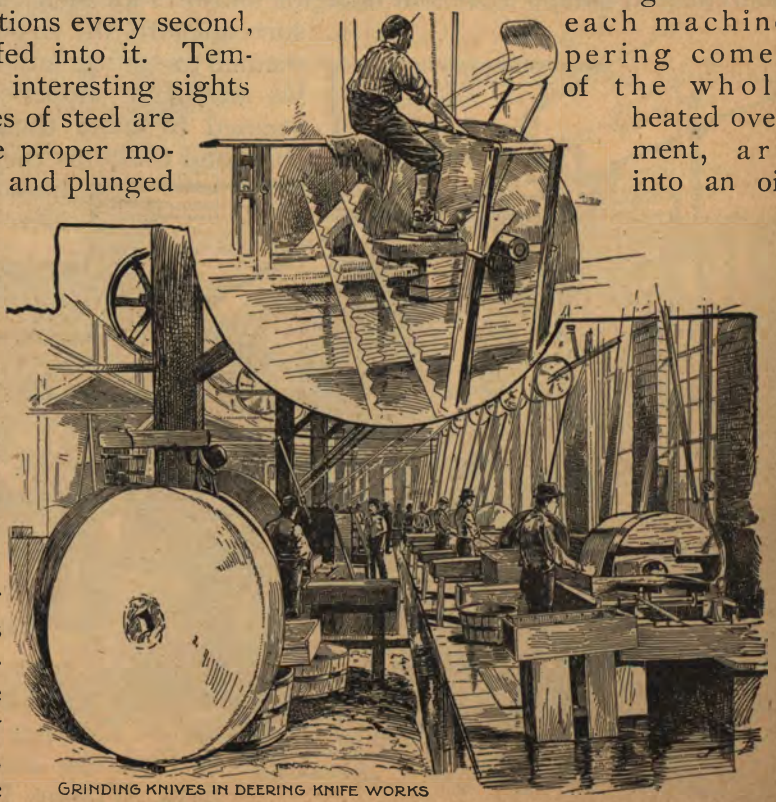
sickles made outside, by contract, as the other harvester companies do now; but, to be certain that they got just the grade of steel that was necessary to the best results, they erected and equipped their own knife and sickle plant years ago. It has been a marvelous success, and has done much to give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

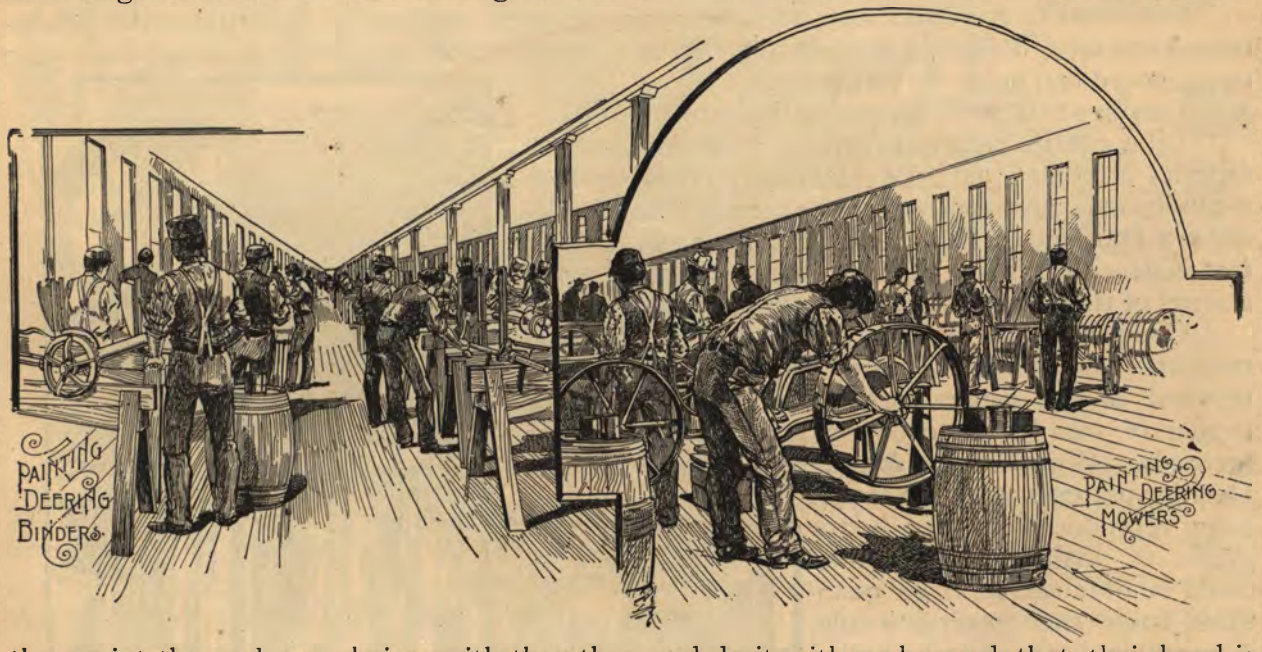
DEERING NUT AND BOLT WORKS.

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.

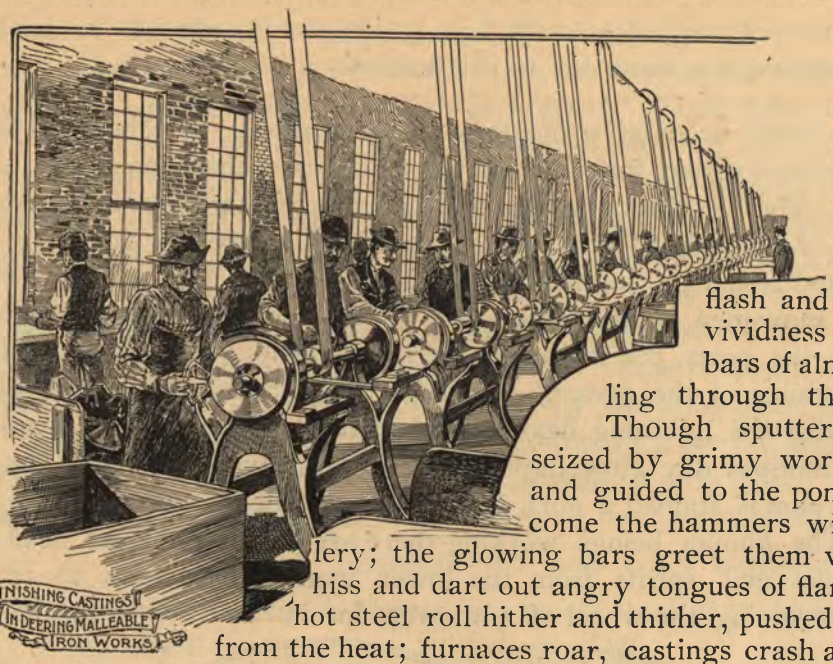
Not less interesting are the "nut-tapping" machines, the machines that form a thread on the inside of the nuts. The "smooth bore" nuts are fed onto rapidly revolving spindles by skilled operators, and the machine does the rest. Two thousand nuts an hour can be made with each machine. Every year 18,000,000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



FINISHING CASTINGS IN DEERING MALLEABLE IRON WORKS.

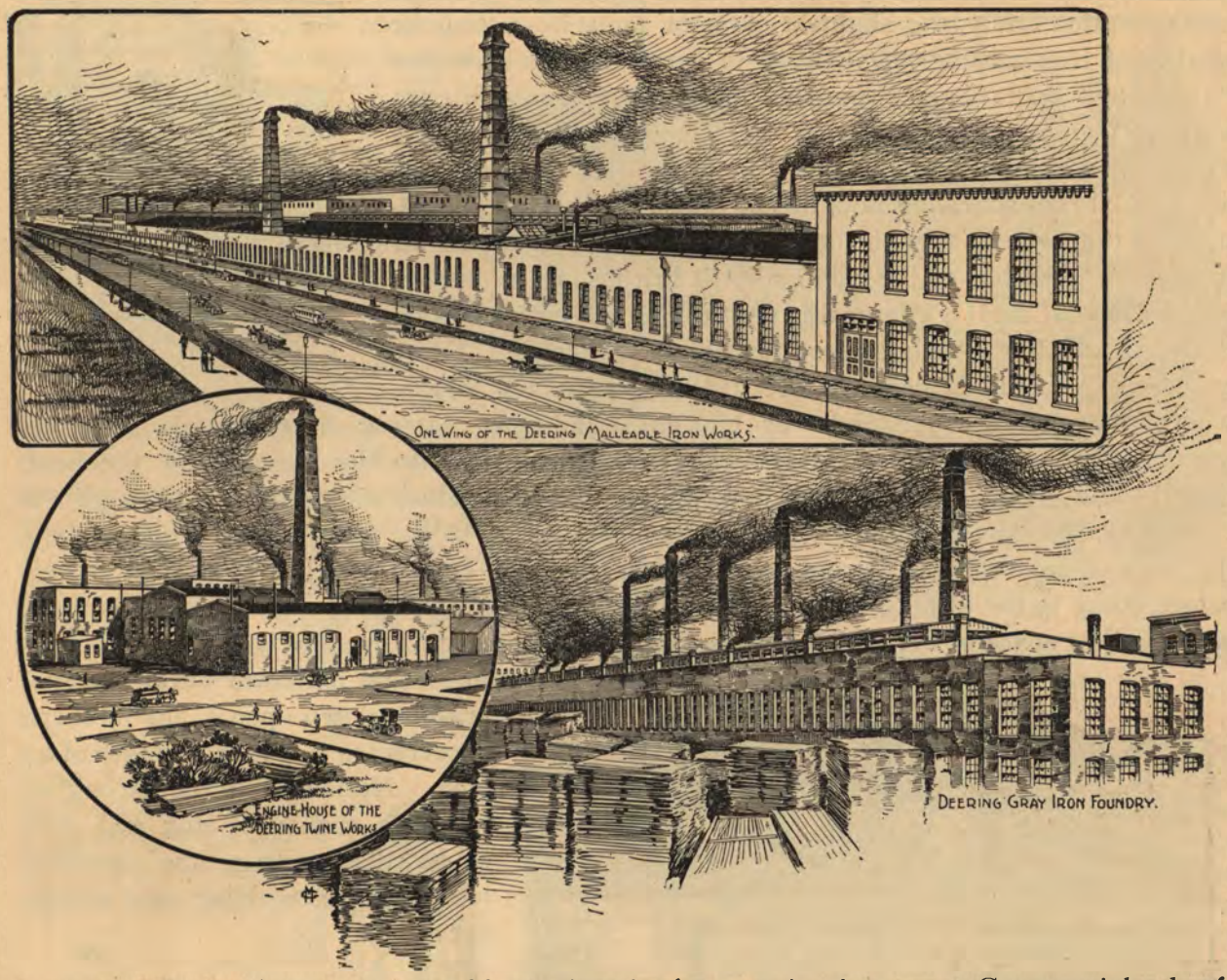
A NAVAL battle could scarcely surpass the Deering Drop-forge Department in uproar, in startling flash and glow of fire and in striking vividness of sight and sound. Huge bars of almost molten iron swing crackling through the air on creaking cranes. Though sputtering hot defiance they are seized by grimy 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.



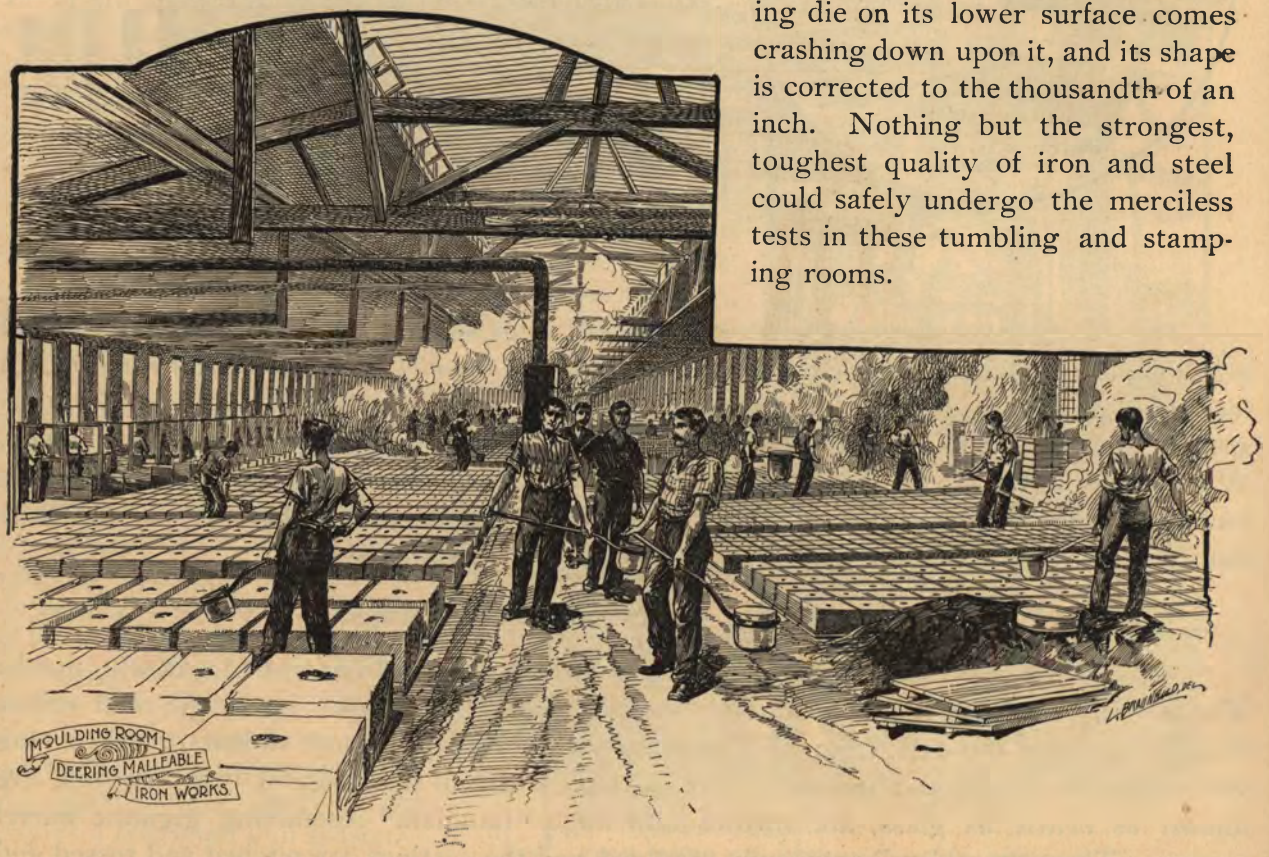
The process of making malleable castings is of engrossing interest. Great trainloads of pig iron are unloaded from side tracks that run into the foundry. Tons of the metal are then loaded into the immense hot air furnaces, where the mass is melted and cleared of undesirable substances. For many hours 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.

ONE OF THE SIX HUNDRED MOULDERS IN THE DEERING MALLEABLE IRON WORKS



MOULDING ROOM DEERING MALLEABLE IRON WORKS

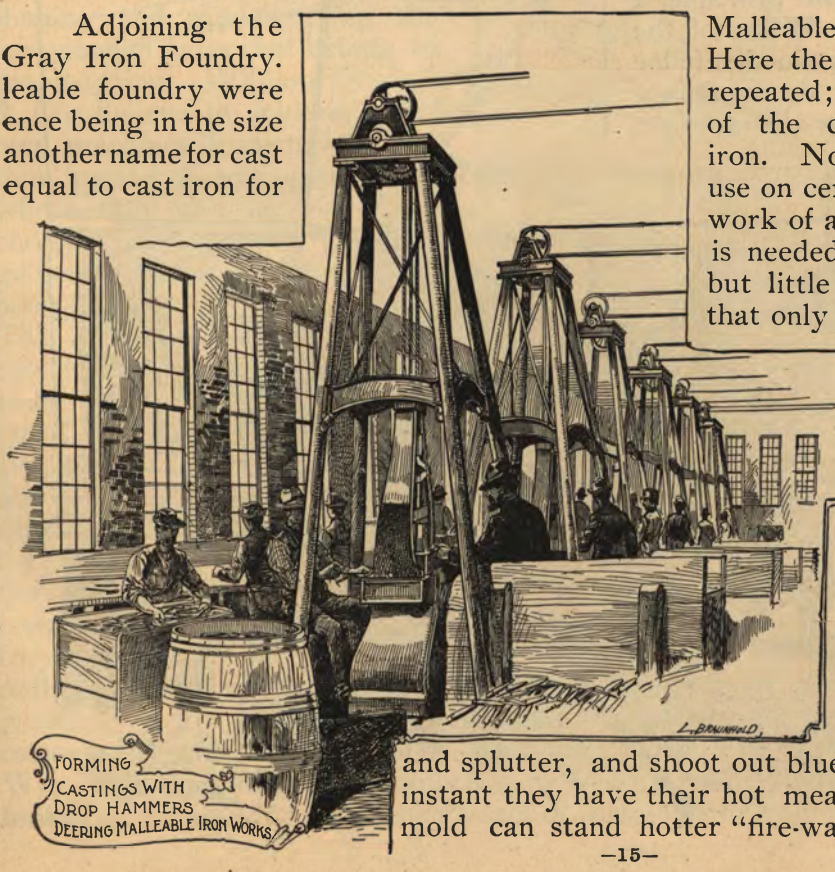
HOW MOLDS ARE MADE.

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 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



FORMING CASTINGS WITH DROP HAMMERS DEERING MALLEABLE IRON WORKS

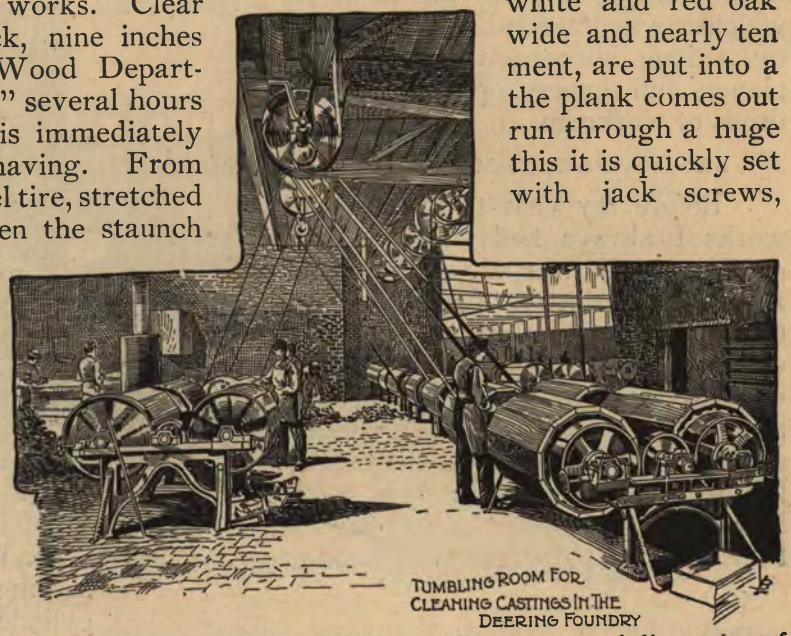
stole a blanket. The these big molds is foundry entirely by lightening the labors reminds me that in

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

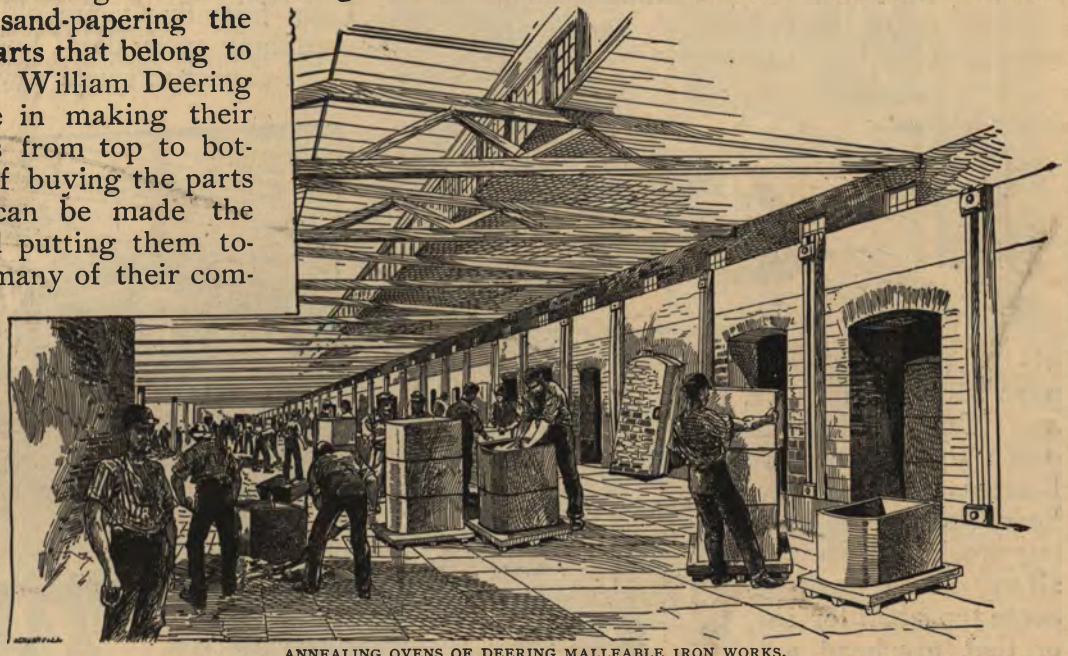
to the main wheel on any other binders. The construction of these wheels is a sight to see. Two large rooms are devoted simply to putting together the parts that come flying in on trucks from other parts of the works. Clear white and red oak planks an inch and a quarter thick, nine inches wide and nearly 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 sawmills 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.

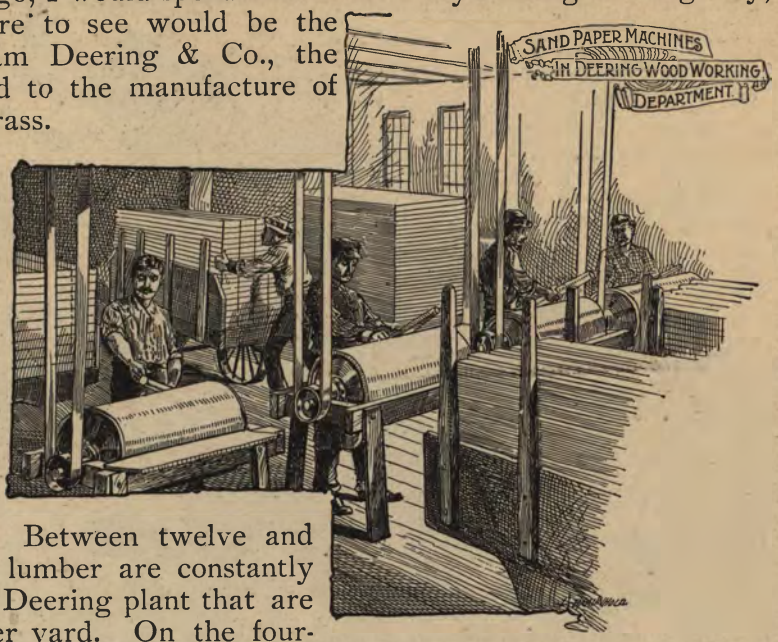
SAND-PAPERING MACHINES.

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

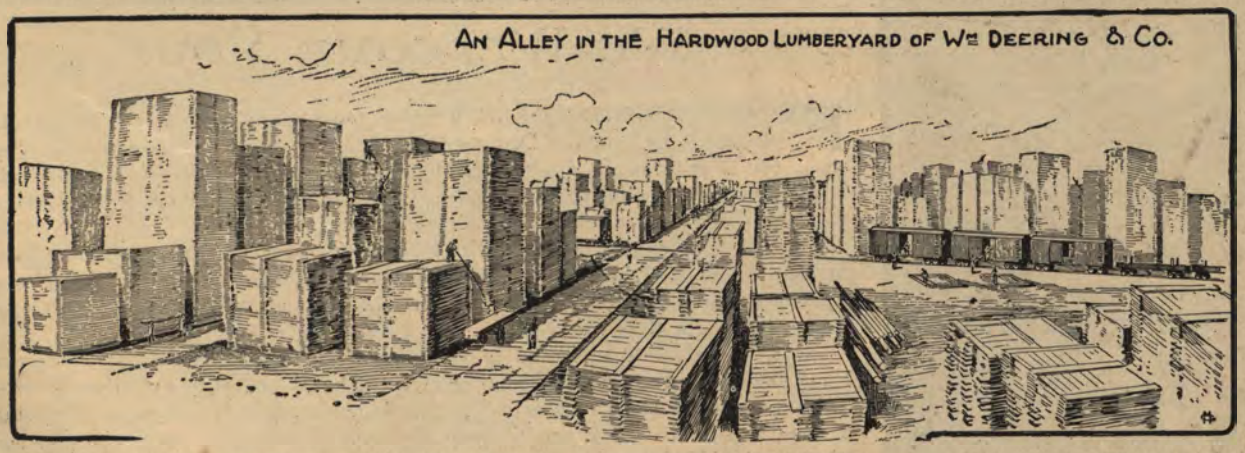

TWO CORNERS IN WOOD DEPARTMENT

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.



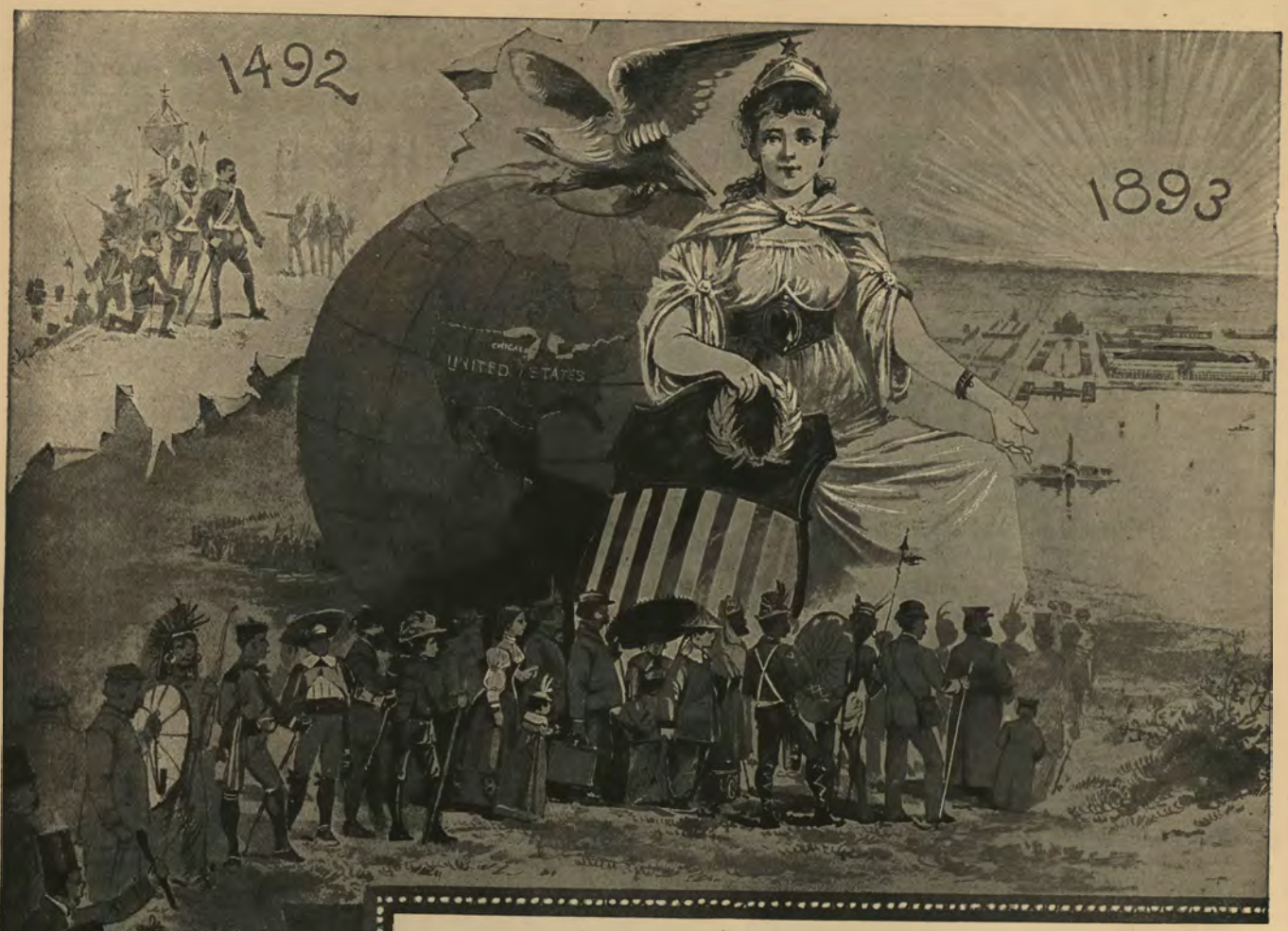
DEERING LUMBER YARD.

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.



WE WELCOME YOU!

FARMERS OF THE WORLD, we give you a hearty welcome to Chicago, the World's Fair, and the Deering Offices and Works. We have tried to give you, in these pages, a faint idea of the marvelous sights that await you here; but cold type can do only poor justice to Chicago's wonders. To appreciate them, you must come here and see them with your own eyes.

In the foregoing pages we have tried to tell you how Deering Binders and Mowers are made. Now come and see for yourselves. You will be astonished; and when you return home, you will remember the works of William Deering & Co. as the greatest sight of your whole trip.

A pleasant ride of three miles on the cable cars, at a cost of five cents, will bring you within two squares of our offices, which are at No. 16 Fullerton Avenue. Take a Clybourn Avenue cable car on La Salle, Monroe, Dearborn or Randolph Streets, and it will whisk you through the tunnel that runs under the Chicago River, and after thirty minutes' ride will bring you to Fullerton Avenue. Or, you will find trains on the Chicago & Northwestern Railroad almost any hour of the day that will take you to Deering Station, only a stone's throw from our office door, in fifteen minutes' time, and at a cost of only ten cents.

No farmer need feel homesick or alone in Chicago. You will all be welcomed as warm friends at the offices of William Deering & Co. Bring a letter of introduction from your nearest Deering agent, so that we may feel better acquainted with you.

Wishing you a happy and prosperous new year, and hoping to see you during the World's Fair, we are, Yours very truly,

CHICAGO, Jan. 1, 1893.

William Deering & Co.

The World's Columbian Exposition.

ANOTHER TRIUMPH OF THE CENTURY.

—:o:—

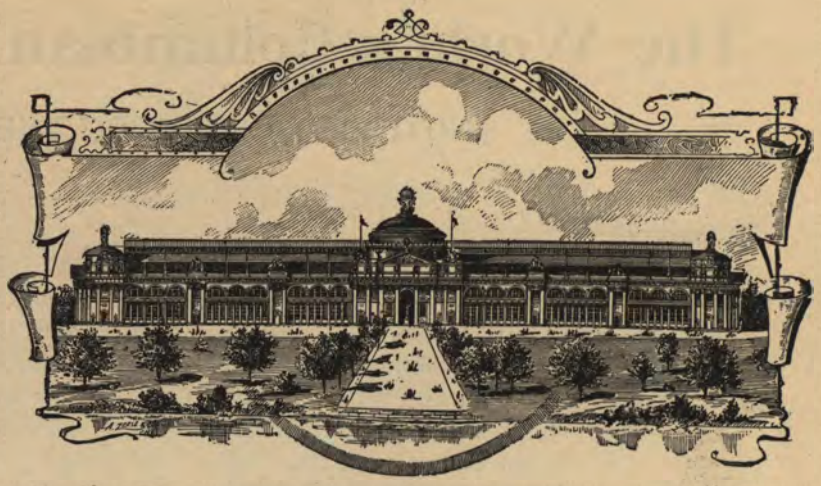
HISTORY tells us of twelve World's Fairs, beginning with the London Crystal Palace in 1851 and ending with the International Exposition at Paris in 1889. Of these, this country has had but two—one in New York in 1853 and the famous Centennial Exposition at Philadelphia in 1876. This year adds a mighty and mystical thirteenth World's Exposition, sublimer in conception and grander in execution than all that have gone before. It is one of the triumphs of the nineteenth century and a fitting climax to the marvelous achievements that the last hundred years have brought forth.

A better site could not have been found nor a city so well equipped to make the Fair a success. For a distance of 2½ miles the Fair grounds stretch along the beautiful shores of Lake Michigan, 6 miles south of the heart of the city, and cover 1,037 acres of ground. It is a beautiful white city such as was never dreamed of in the most extravagant fairy tales; and, as the sunset's rosy hue lights up the shining splendor of the minarets and

domes, and the crystal waves of grand old Michigan play their liquid music on the pebbly shore, and the gentle cooling breezes fan the sightseer's weary brow, the true grandeur and sublimity of the splendid scene elevate the mind above the sordid things of life and fill it

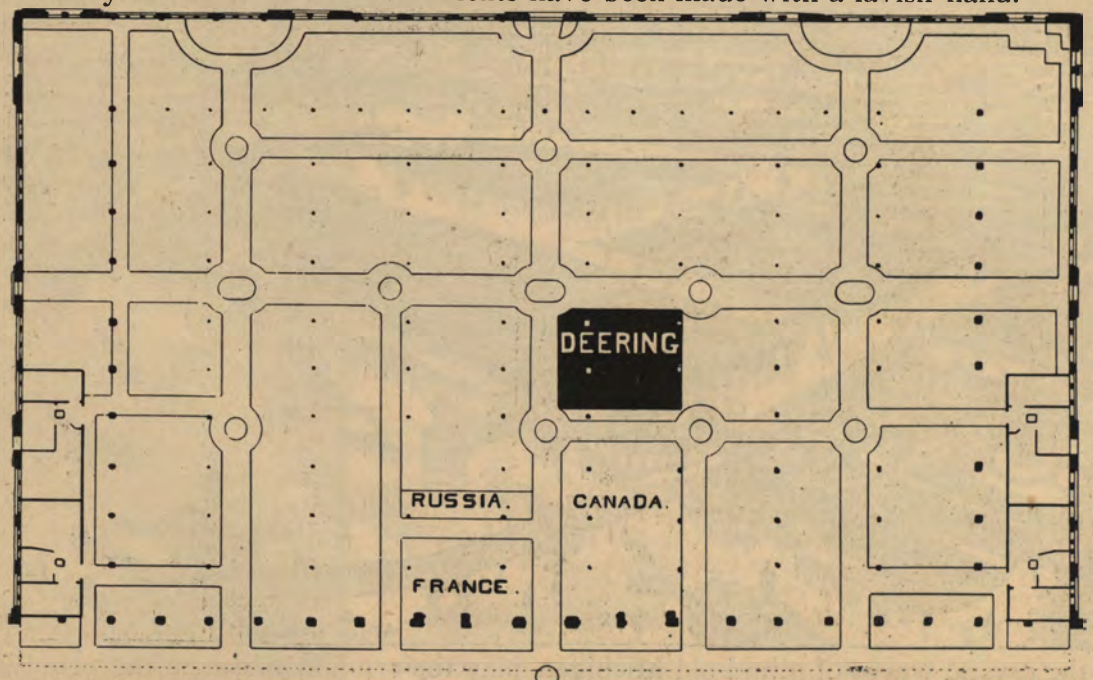
with a poem that words are too feeble to express.

This stupendous undertaking will have cost $25,000,000 to its builders the day it opens. A like sum will be spent by exhibitors in preparing their exhibits. To give some idea of the value of the exhibits, $300,000,000 in insurance on exhibits has already been contracted for, and the insurance companies are already beginning to refuse World's Fair risks for the reason that their capacity is already overstepped.



AGRICULTURAL BUILDING.

One of the most superbly beautiful buildings on the ground is the Agricultural Building, which, with its Dairy, Forestry and Machinery annexes, covers 25 acres of ground and cost $1,000,000. This building is in the southeast corner of the grounds. It is surrounded on two sides by beautiful lagoons, on whose sparkling waters gay gondolas, steam yachts and naphtha launches will skip about like ducks on a pond, while the eastern walls are almost washed by the waves of Lake Michigan. The main part of the building is 800 x 500 feet in dimensions with a roof 80 feet above the ground, surmounted by towers extending 140 feet into the air. The central dome is surmounted with the famous gilded figure of Diana, 16 feet in height, that caused Anthony Comstock so many sleepless nights when it towered above the Madison Square Garden in New York. Throughout the building, the statuary and frescoes and adornments have been made with a lavish hand.



Big Deering Exhibit in the Machinery Annex of the Agricultural Building.

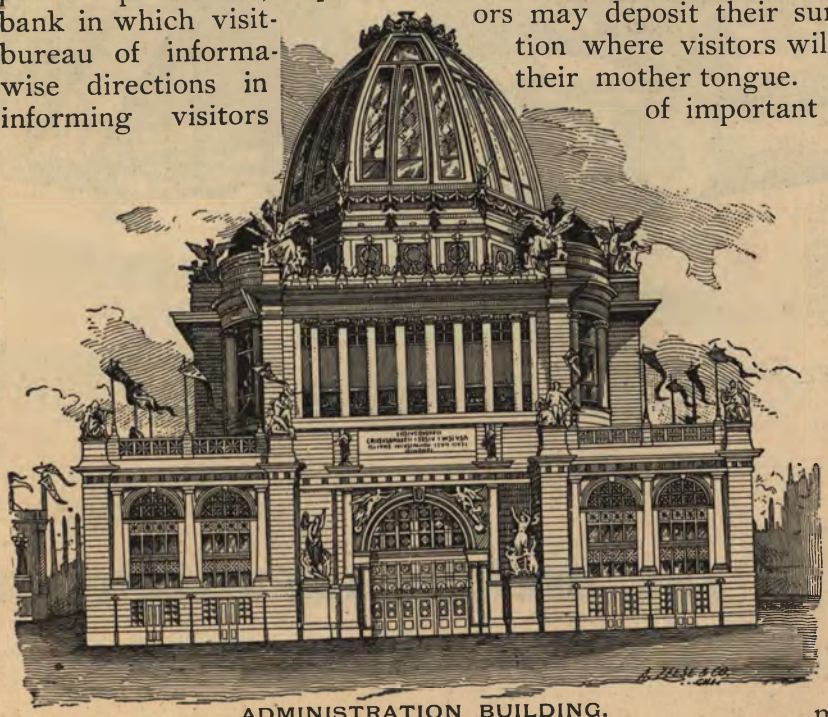
By the above diagram the Deering exhibit can be easily found. We cordially invite all of our friends and patrons who visit the Fair to call upon our representatives in charge of the Deering exhibit.

The Agricultural Building and exhibit will owe their success to the well-directed energies of Chief William I. Buchanan, of Iowa, who is already known to the world as the man who made the past Sioux City Corn Palaces so wonderfully successful.

MANUFACTURES AND LIBERAL ARTS BUILDING.

Among the most interesting structures to the farming world is the Manufactures and Liberal Arts Building, the largest building ever put under roof. It is 1,687 feet long by 787 feet wide, and covers 30½ acres of ground. Its roof rises to a height of 245 feet, and the whole 380 feet in breadth inside the galleries is covered by a single span of steel arches without supporting columns. These are the longest unsupported arches in the world. The main auditorium of this building seated 120,000 people on Dedication Day last fall. This building cost the immense sum of $1,600,000.

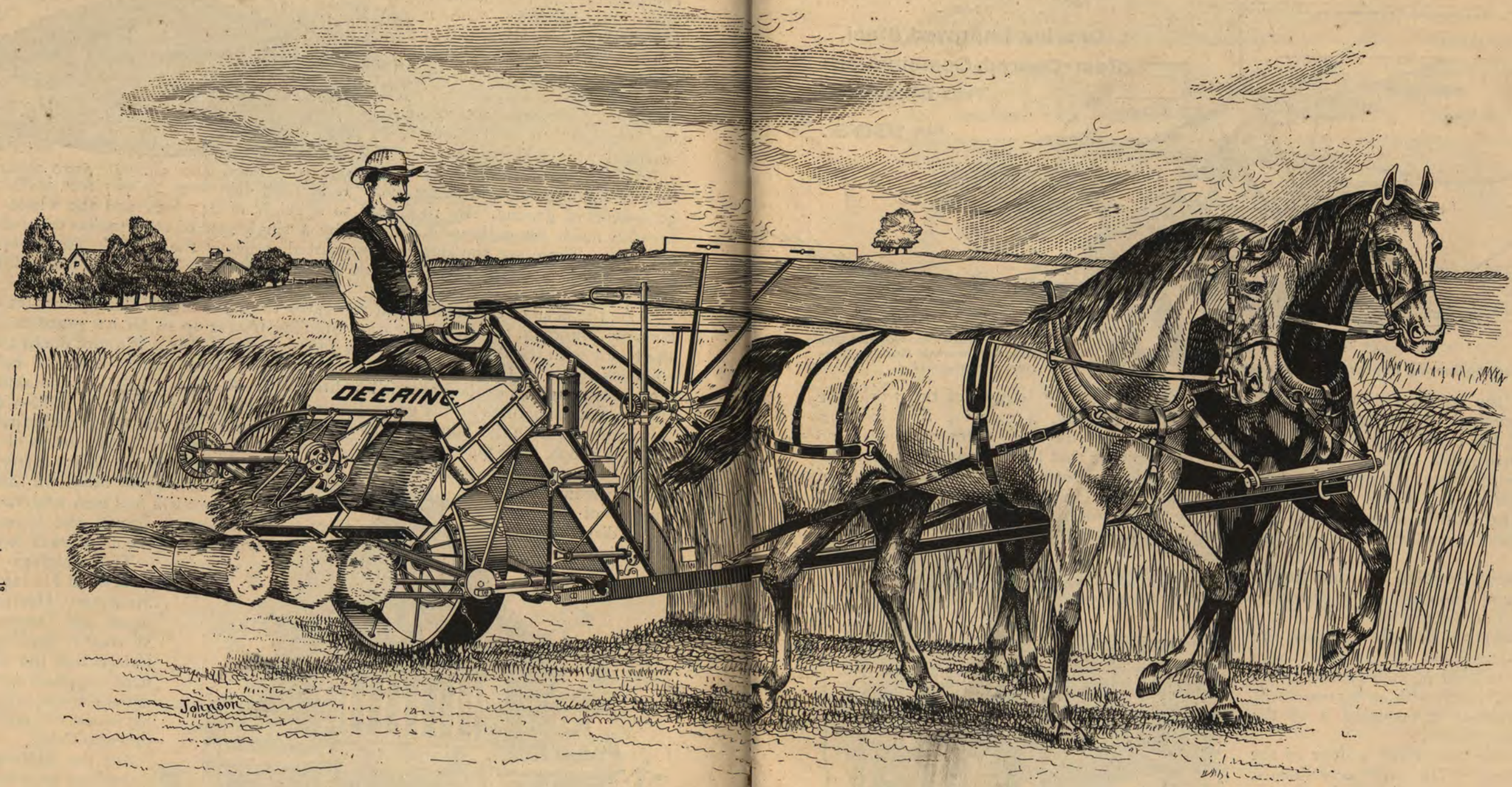
At the head of the lagoon that separates the Agricultural Hall from the big Manufactures Building, the Administration Building towers up in all its grandeur. It divides the honor with the Art Palace of being the gem of the Fair. Without doubt the most conspicuous object on the grounds is its massive gilded dome that rises to the height of 220 feet. Although its ground area is but little over one and a half acres, making it one of the smallest structures on the grounds, this building cost over half a million dollars. Its four stories will be the home of the Director-General and the other authorities in whose care the people have placed the Fair. It will also contain the headquarters of the fire and police departments; a prison for the temporary detention of criminals; a free hospital; a bank in which visitors may deposit their surplus funds for safekeeping; a bureau of information where visitors will find men who can give them wise directions in their mother tongue. It will also contain bulletins informing visitors of important events of each day's program.



ADMINISTRATION BUILDING.

The buildings devoted to Mines and Mining, Electricity, Machinery, Horticulture, Live Stock and Transportation, the Woman's Building, the Art Palace and the imposing edifices representing states and nations are equally interesting, but space will not allow us to describe them.

On the Midway Plaisance, extending for a mile westward from the grounds, will be an interesting array of exhibits of the arts, customs and merchandise of foreign nations. Though these are private enterprises, they will furnish some of the most interesting sights of the Fair.



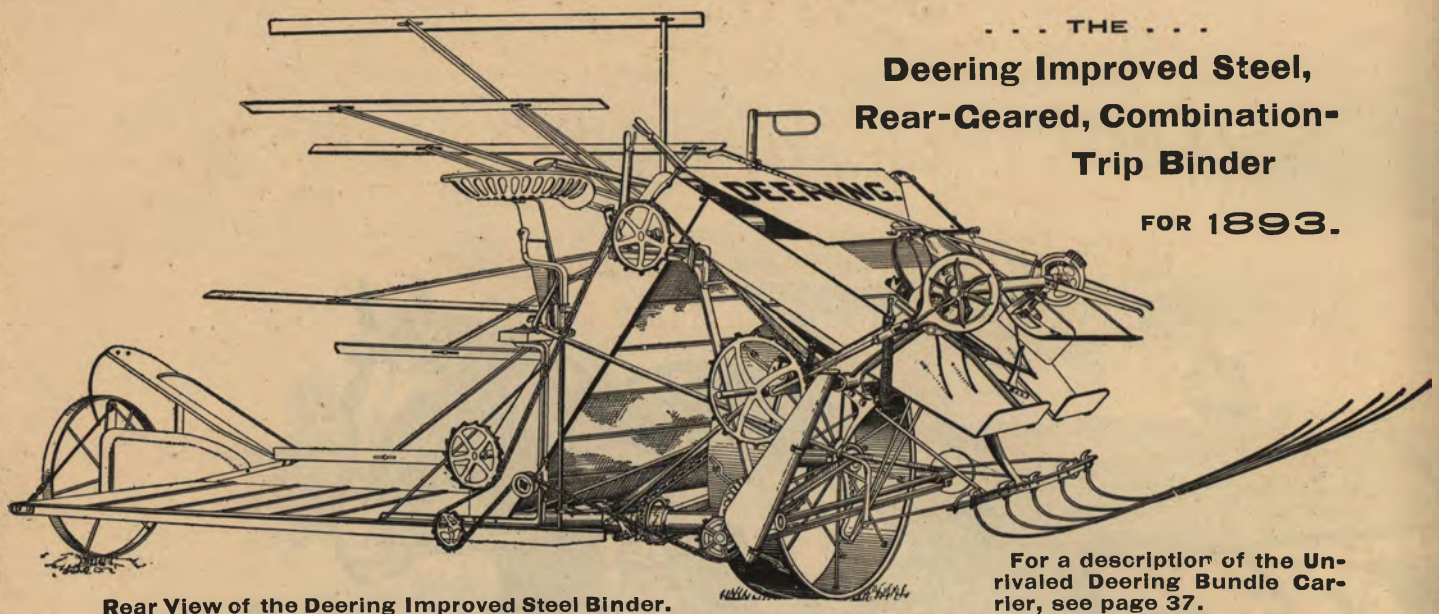
THE DEERING IMPROVED STEEL HARVESTER AND BINDER FOR 1893.

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 37.

FOR the season of 1893, Wm. 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. This machine is no experiment. 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 :

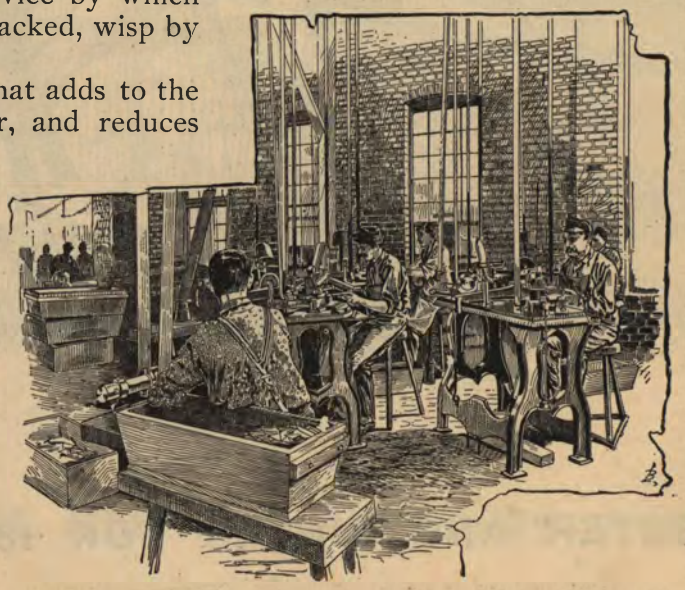
1. **The Combination-Trip,** a device by which the bundles are permitted to be better packed, wisp by wisp.

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, with an improvement in the method of fastening it to the Binder attachment.

All these points are worthy of the closest study. They will save dollars.

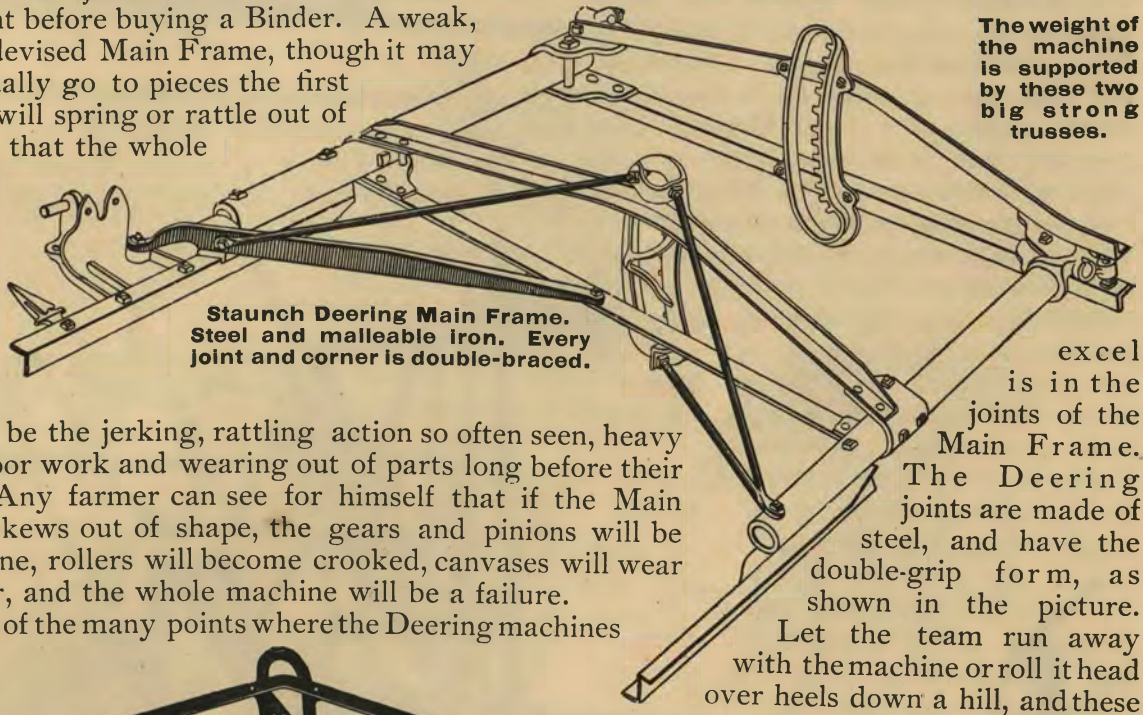
This machine has the same wide platform and wide, great-capacity elevators that have made the Deering Junior Steel Binder famous; the same 65-position, single-lever reel; the same unrivaled cutting apparatus; the same simple, reliable knotter; the same trussed, double-lap-jointed main frame, and the same high, broad-faced, steel-bound, oak-felloe main wheel.



Serrating Sickles in Deering Knife and Sickle Works.

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.

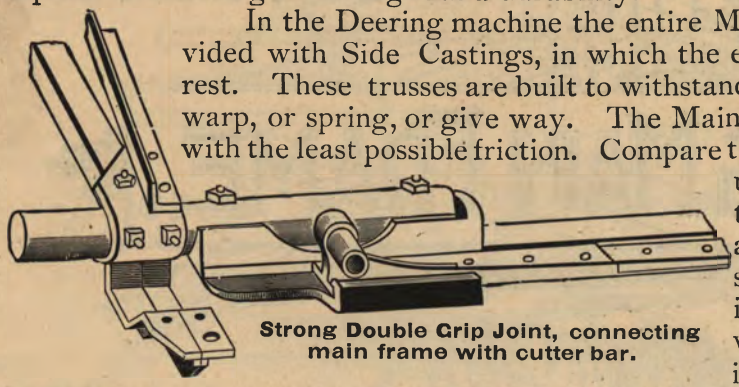
Staunch Deering Main Frame. Steel and malleable iron. Every joint and corner is double-braced.

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.

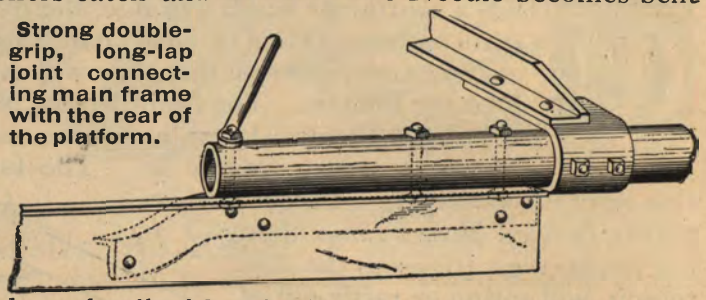
This substitute for a truss will break at one ton pressure.

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



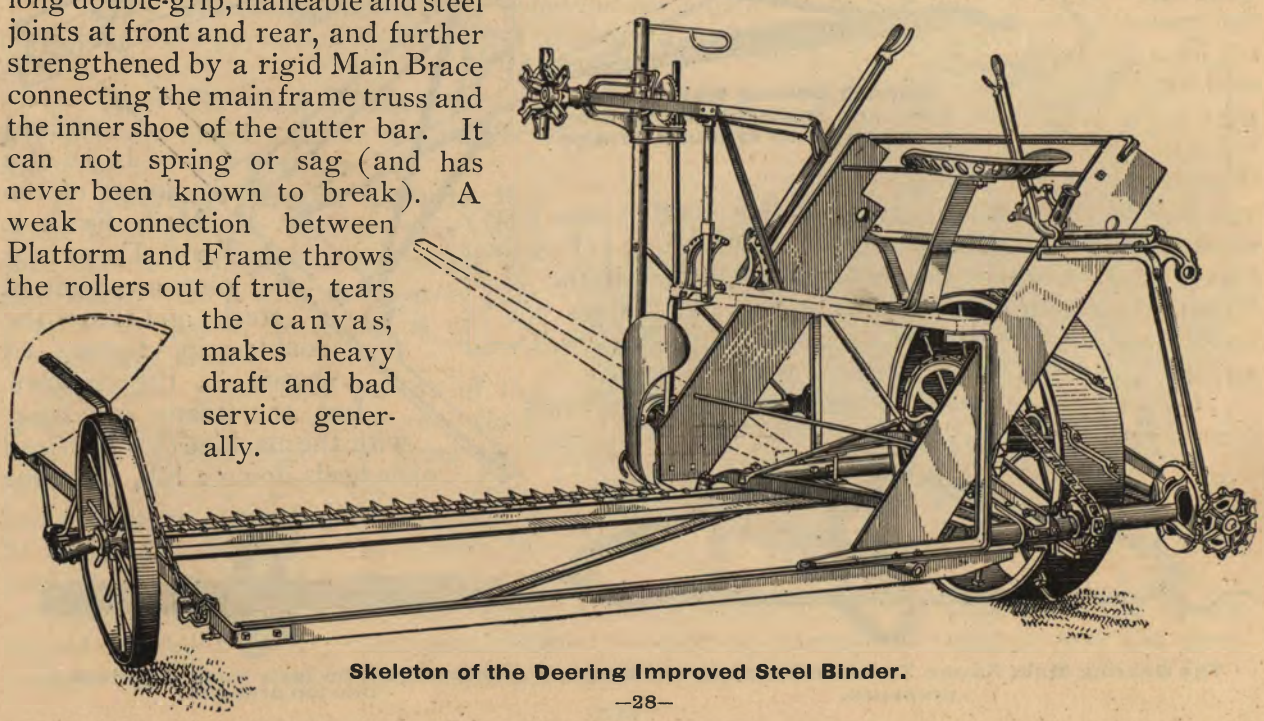
Strong Double Grip Joint, connecting main frame with cutter bar.

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.



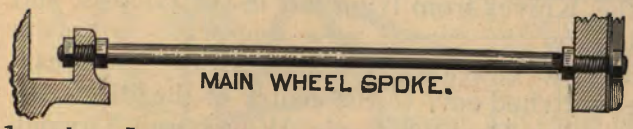
Strong double-grip, long-lap joint connecting main frame with the rear of the platform.

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.



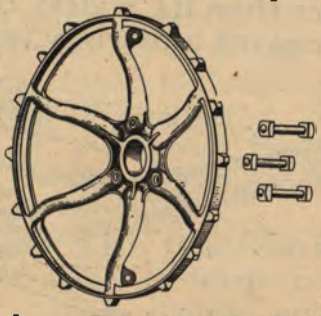
Skeleton of the Deering Improved Steel Binder.

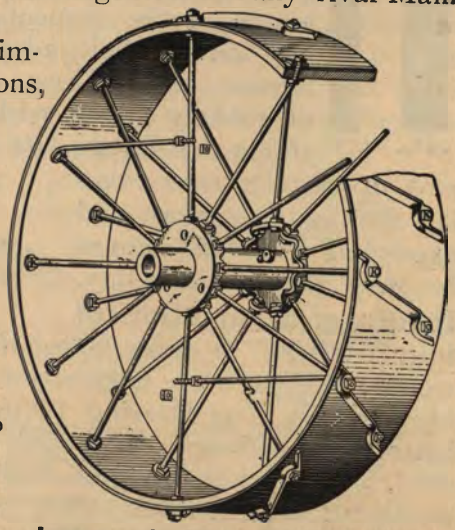
BUMPING over rough or stony ground under a weight of half a ton, the Main Wheel of a Harvester has a tough time of it, and it must be strong to stand the strain. The Deering main wheel *is* strong and it *does* stand the strain. Why? Because it is well made, out of sensible materials. Take a seasoned 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.

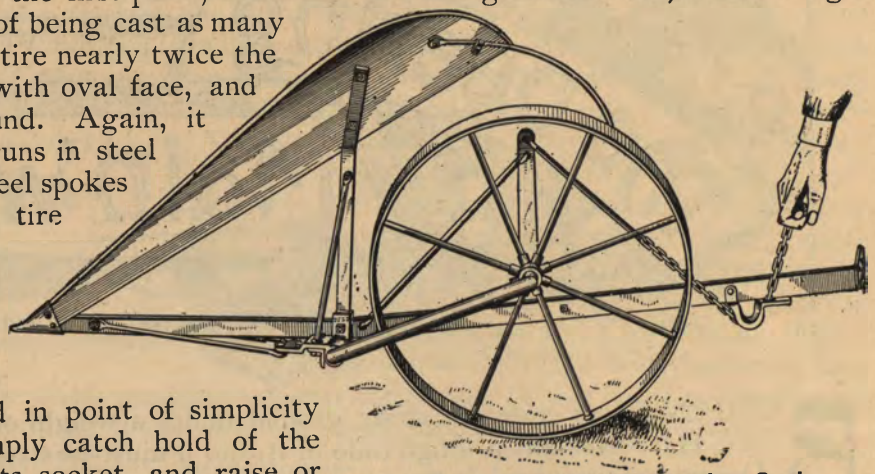
Should you want to remove the Main Chain, simply run the axle down to the bottom cog of the Side Casting, then with two more turns of the crank to the left the axle drops into a loop at the bottom of the casting, and you can lift off the chain with your hand.


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.



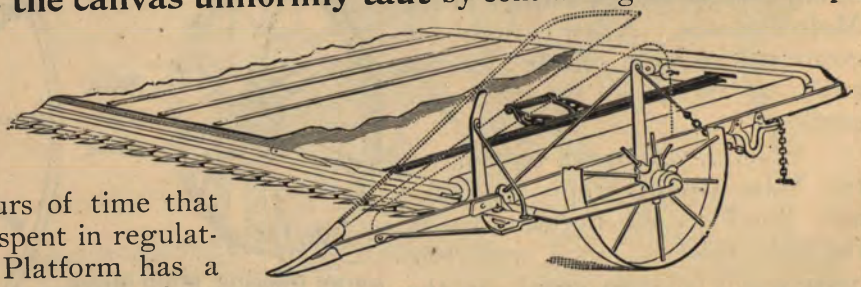
Light, Strong, Simple Deering Grain Wheel and Divider.

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.

2½ in. 1¼ in.

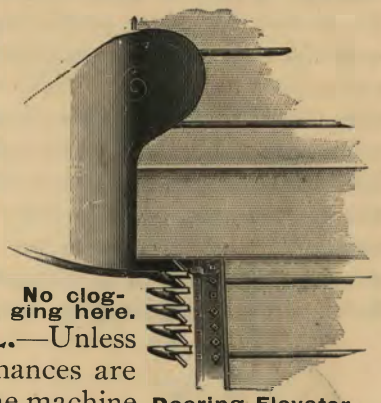
WIDE DEERING PLATFORMS.—It pays to be liberal. It pays to give the farmer a Harvester Platform wide enough for the longest grain. This is one of the elements in the large capacity of the Deering machines that has led to their adoption almost without exception by the great bonanza farmers of the West. **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

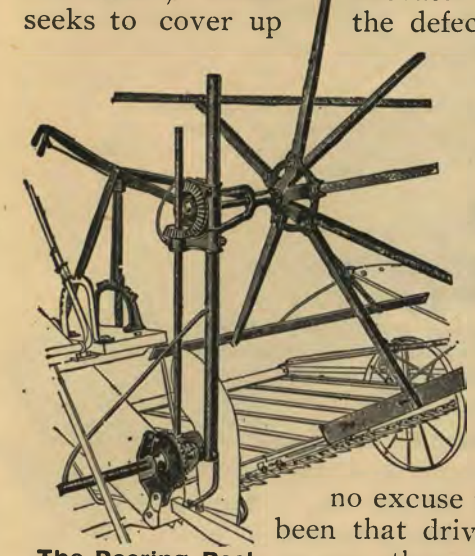
THE Deering Elevators are fifty-five inches wide, very much wider than those on any other harvester made. **They extend seven inches in front of the line of the platform,** thus doing away entirely with the clogging and choking at the inner end of the Cutter Bar that is the bane of all other machines. 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.



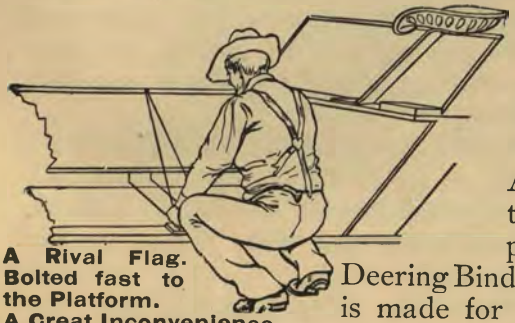
No clogging here.

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.

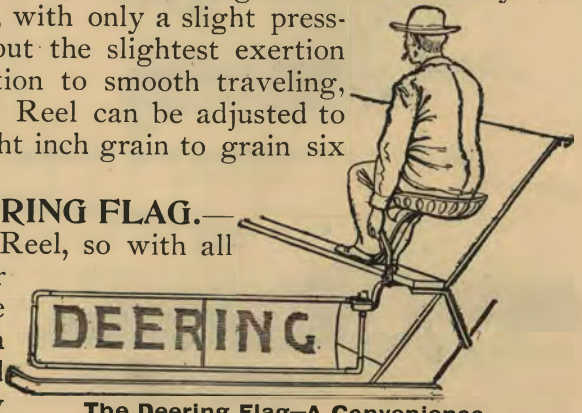


The Deering Reel.



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

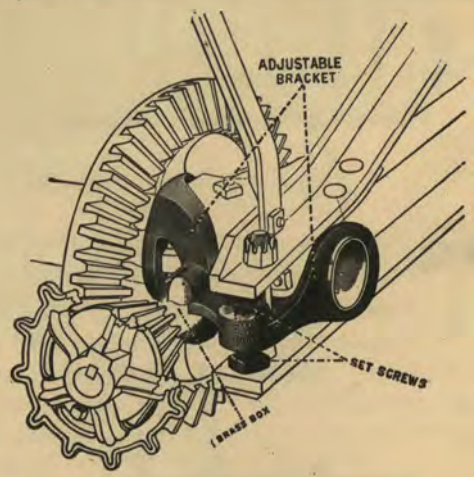
THE DEERING FLAG.—As with the Reel, so with all the other parts of the Deering Binder, provision is made for a quick and easy change to suit every condition of grain. Take the Deering Flag, for instance. By a single turn of his hand,



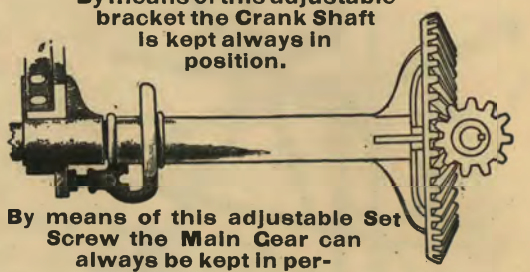
The Deering Flag—A Convenience.

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 than 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.

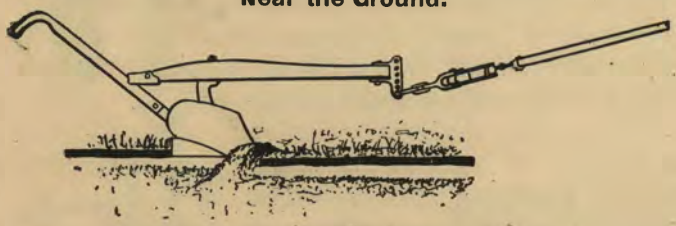


By means of this adjustable bracket the Crank Shaft is kept always in position.

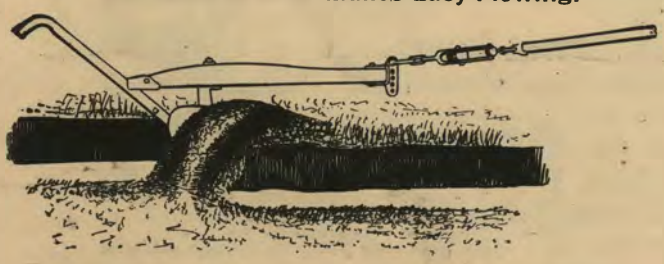


By means of this adjustable Set Screw the Main Gear can always be kept in perfect mesh.

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.

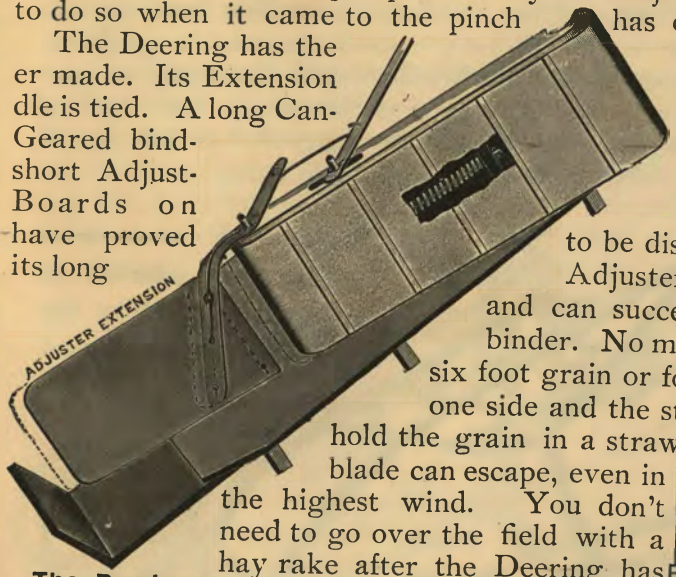
Not only have the Deering machines the largest chain links, but the largest bearings on their gears and shafts and pinions, as any farmer can see for himself who takes the trouble to compare machines.

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.

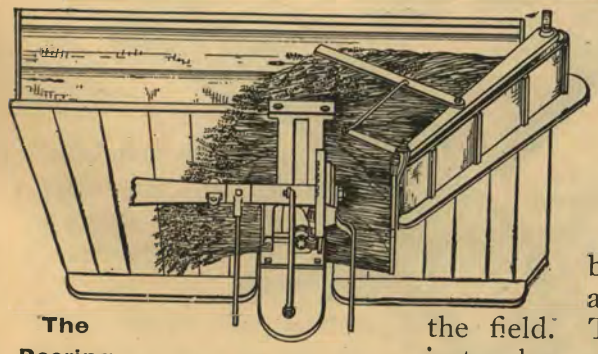
THE DEERING CANVAS ADJUSTER

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.

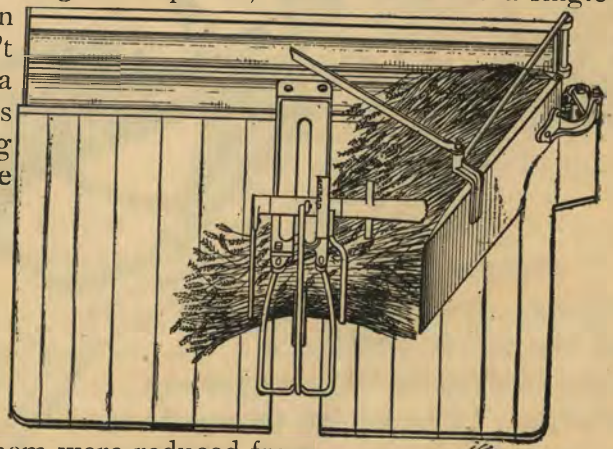
The Deering has the longest, strongest, most easy running Adjuster made. Its Extension holds the grain in place until after the bundle is tied. A long Canvas adjuster is seldom used with a Front-Geared binder. There is usually no room for it. The short Adjuster without Extension and the vibrating Butt 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.

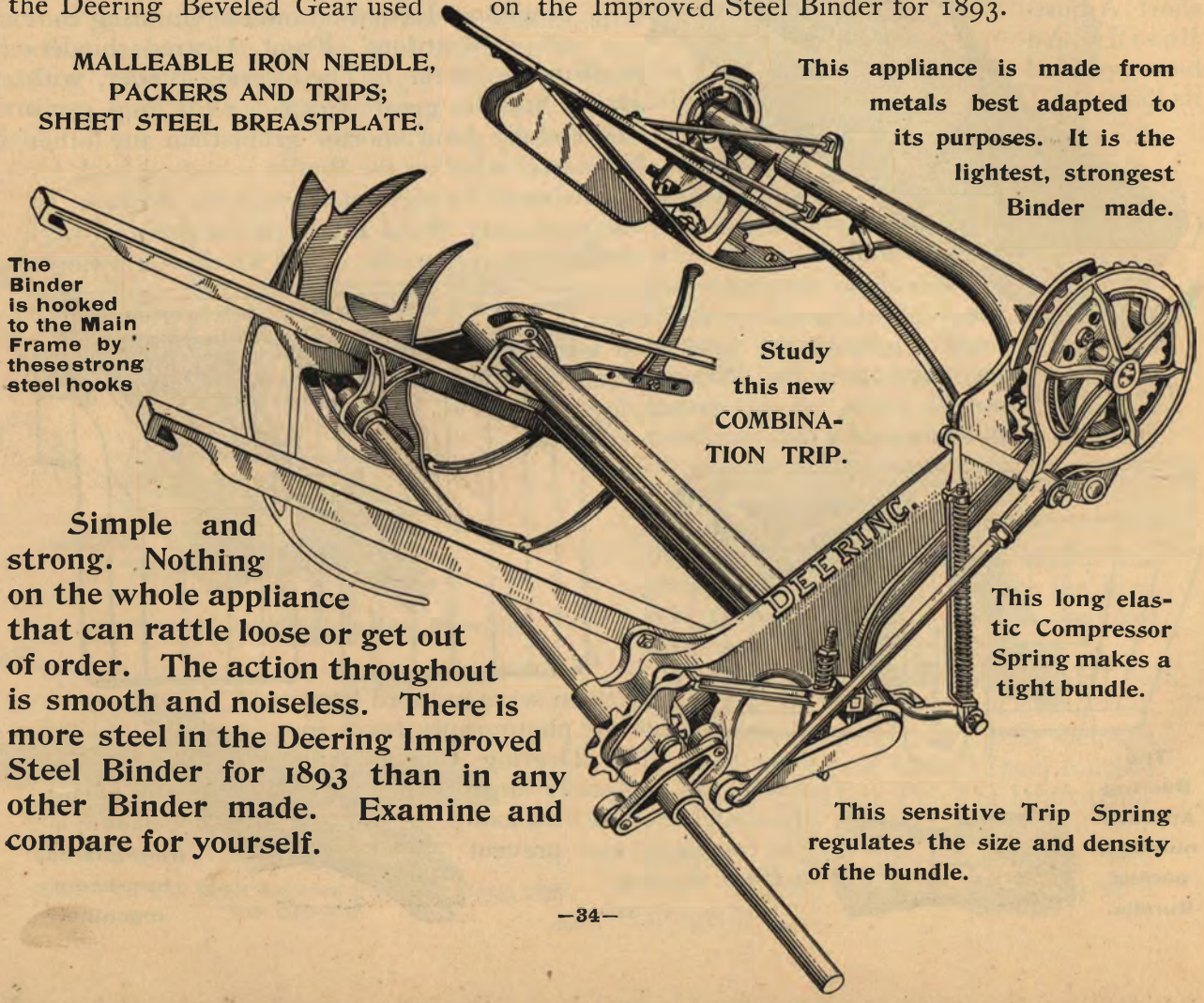
THE DEERING BINDER

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.

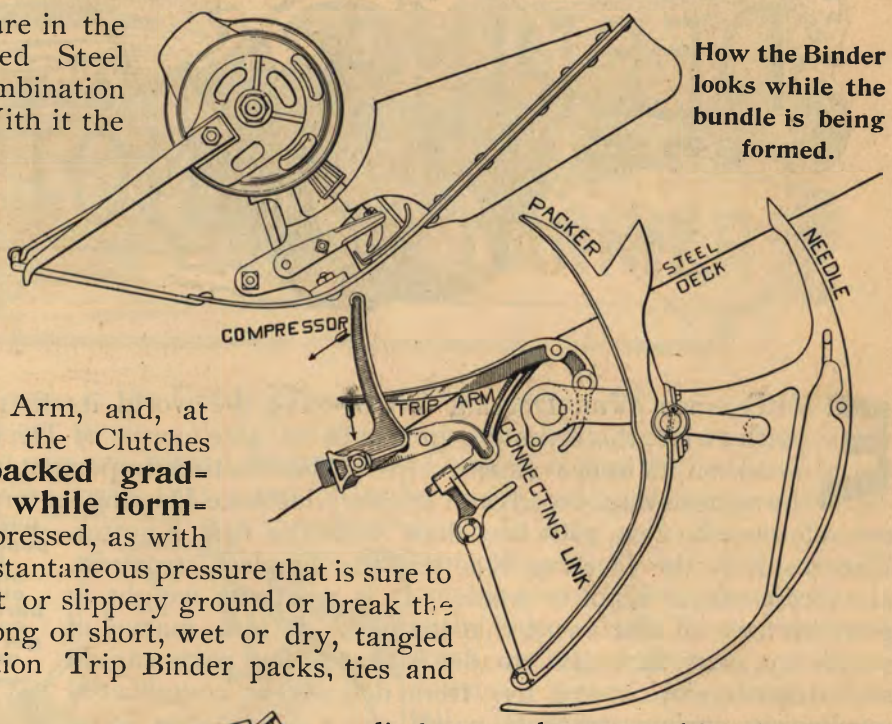
This long elastic Compressor Spring makes a tight bundle.

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

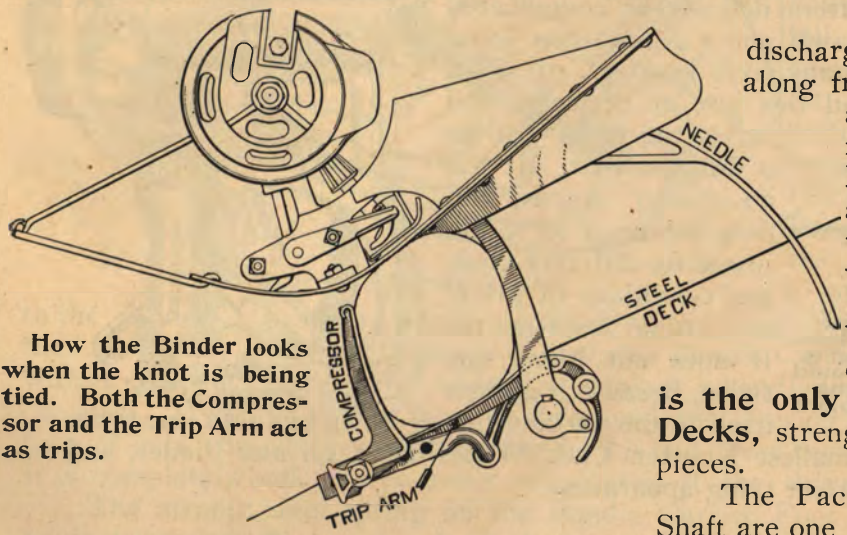
Simple and strong. Nothing on the whole appliance that can rattle loose or get out of order. The action throughout is smooth and noiseless. There is more steel in the Deering Improved Steel Binder for 1893 than in any other Binder made. Examine and compare for yourself.

THE COMBINATION TRIP.

A CROWNING feature in the Deering Improved Steel Binder is its Combination Binder Trip. With it the bundle is formed upon an entirely new principle. Each wisp of straw is forced against the Compressor and tightly held there until another is forced down against it. This gradually increases the pressure on the Trip Arm, and, at the proper moment sets the Clutches free. **The bundle is packed gradually and thoroughly while forming,** instead of being compressed, as with all other machines, by an instantaneous pressure that is sure to slip the main wheel on soft or slippery ground or break the twine. Let the grain be long or short, wet or dry, tangled or straight, this Combination Trip Binder packs, ties and discharges clean, round bundles right along from morning to night, without a balk. The Compressor moves up and co-acts with the Needle to compress the bundle, and drops away instantly, so that the bundle can be ejected without resistance.



How the Binder looks while the bundle is being formed.



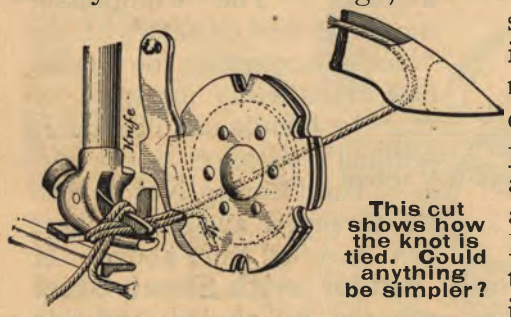
How the Binder looks when the knot is being tied. Both the Compressor and the Trip Arm act as trips.

The Deering Needle can be threaded and its Packers can be oiled from above. **It is the only Binder with Sheet Steel Decks,** strengthened by angled steel side pieces.

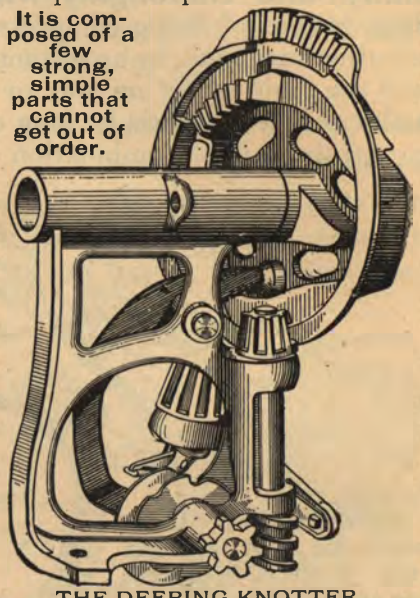
The Packer Cranks and the Packer Shaft are one piece of forged steel, and the shaft runs in brass bearings. The forged steel Compressor Shaft runs in malleable iron bearings. The Steel Trip Shaft is squared at each end to receive the Trip Arm and Trip Stop. It rocks in bearings cast in the frame, and hence ones that cannot become loose. All of the shafts and gears of the Deering Binder turn in fixed bearings cast in the Binder frame, hence they cannot possibly get out of adjustment. The pinions of this Binder are of malleable iron, and they are secured to the shafts by strong keys and tapered pins, the latter drawn tightly to place by nuts. This Binder has an improved Spring Latch that holds the binder home very positively. The wide steel Stripper Board strips the Discharge Arms perfectly. In all these, and many other points, the Deering challenges comparison.

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.

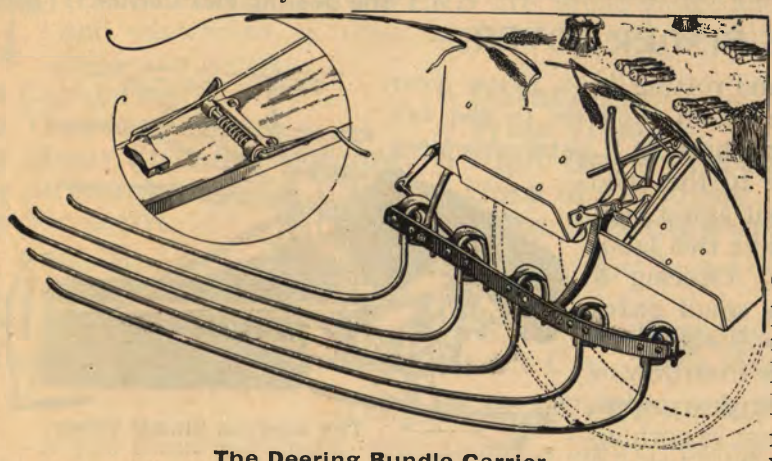
THE DEERING KNOTTER.

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 never been there. It is completely and always under the control of the driver.



The Deering Bundle Carrier.

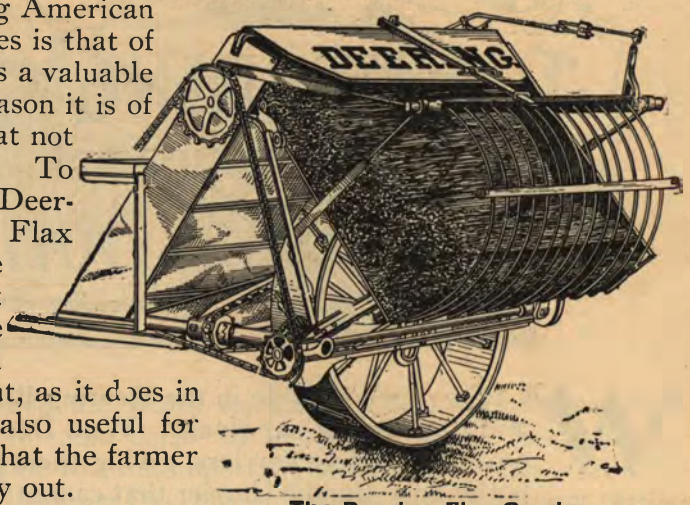
The strong steel spring on the Bundle Carrier Foot Lever tends to swing the carrier back into place after the bundles have been discharged, and to hold it there while it is being loaded up.

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.

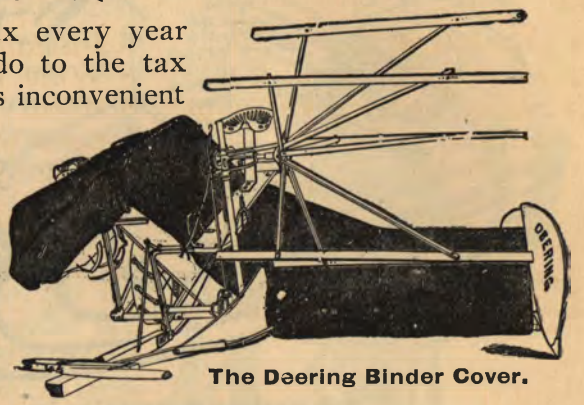
ONE OF THE growing American agricultural industries is that of flax raising. Flax is a valuable crop, and for this reason it is of great importance that not a stalk be wasted. To avoid waste, Wm. Deering & Co. make a Flax Carrier that is easily attached to the machine. One essential feature is the fact 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 Giant Mower,** 5, 6 and 7 ft. Cut.
Deering Jr. Giant Mower, 5 and 6 ft. Cut. **One Horse Mower,** 3½ and 4 ft. Cut.

THE NEW DEERING MOWER.

If you think of going to town to buy a Mower, take a tape line along with you and do a little measuring of axles and wheels and rims. You will find that in proportion to the width of cut, the **New Deering Mower excels all of its rivals in its width of tread, height of wheels** and **width of the rims.** The Wide Tread gives the Mower more perfect balance, prevents it from tipping, makes it possible to mow side-hills that no other Mower would dare venture upon. It does not need piecing out with so impractical a thing as an "axle extension."

High Wheels make light draft because a wheel is really a series of levers, and long levers make light work. The broad faces of the Deering wheels prevent the machine from sinking in the mud, making it possible to cut marshes in which any other Mower would stall. Wide Rims also give the wheels a firmer grip upon the ground and prevent them from slipping.

The Main Axle of the New Deering Mower consists of one solid round bar of accurately turned steel securely fastened to both wheels, the power, therefore, coming equally from each. This Main Axle is not only the most generous in its length and thickness and superlative quality of material, but also in its large Bearing Surfaces.

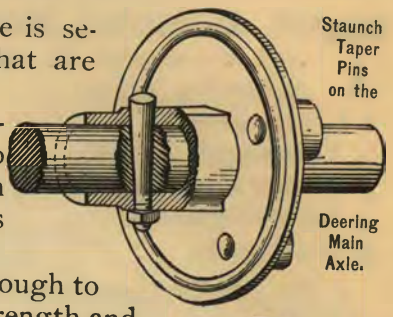
MAIN SHAFT OF NEW DEERING MOWER – WIDE TREAD

MAIN SHAFT OF COMPETING NARROW TREAD MOWER.

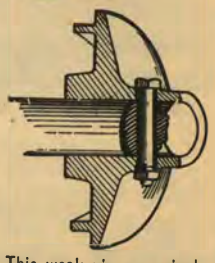
THE NEW DEERING MOWER.

As will be seen from the accompanying diagram, this axle is securely fastened to the wheel hubs by strong steel Taper Pins that are adjustable for wear and can always be kept firm and tight.

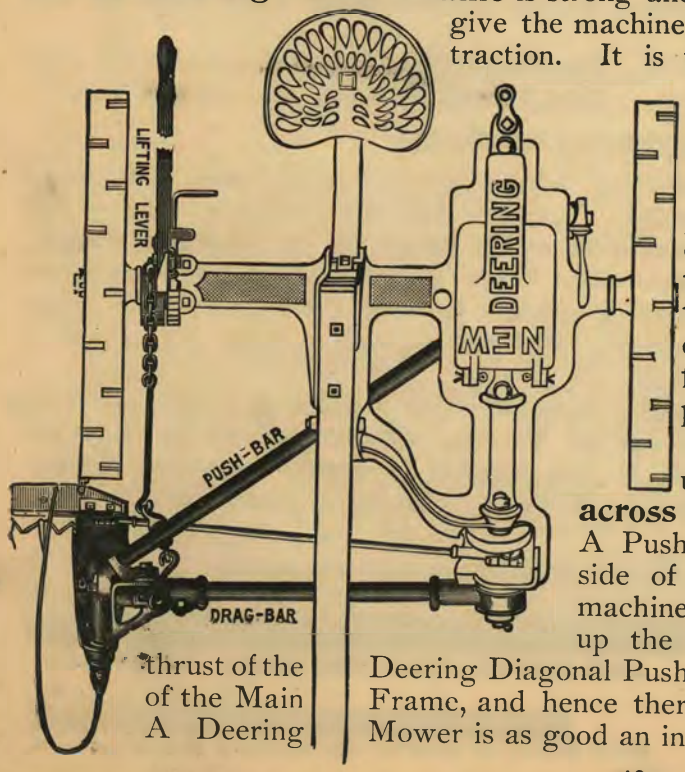
The same excellence in point of strength and large bearing surface that exists in the New Deering Main Axle is also found in its Crank Shaft. Deering Mowers excel all rivals in strength, simplicity, large bearing surfaces and easy, noiseless action. **Deering Gears never wear out.**



The Deering Mower Frame is strong and just heavy enough to give the machine the desired strength and traction. It is the most firmly braced Mower Frame made. It consists of two right-angled triangles, one side of each forming a perpendicular brace on the other. **The effect of this construction is to distribute every ounce of strain evenly over the whole frame,** no matter at what point it was applied in the first place.



This weak pin on a rival machine is sure to rattle loose.



The **Push Bar** extends from the under side of the Gear Box **diagonally across to the Inner Shoe of the Mower.** A Push Bar that passes directly backward to the side of the main frame, as found on competing machines, stands the driver on his head by tipping up the left side of the machine. All upward thrust of the Deering Diagonal Push Bar is directed to a point near the middle of the Main Frame, and hence there is no dangerous tipping of the machine. A Deering Mower is as good an investment as a life insurance policy.

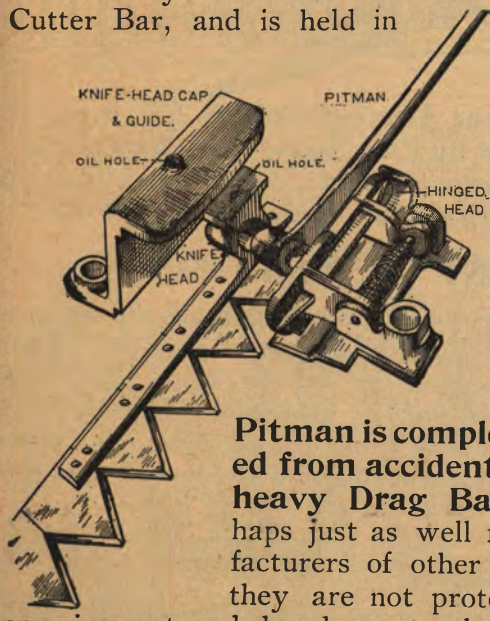
THE SIMPLE DEERING PITMAN.

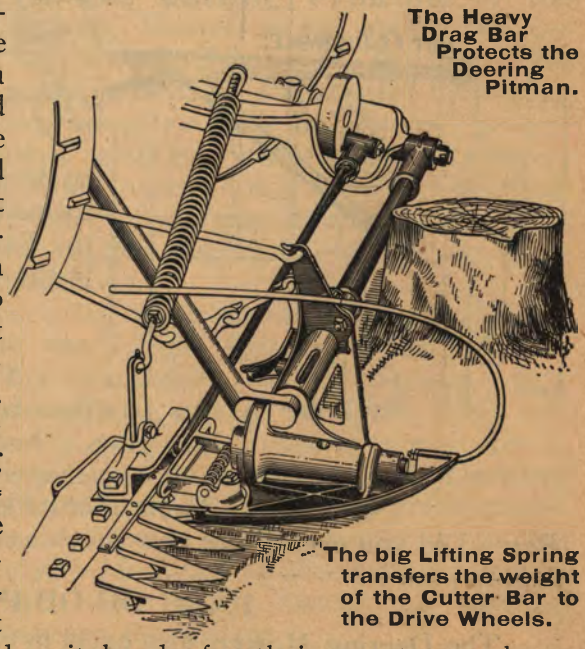
AS with the Deering Mower Gears, so with the Deering Pitman—the greatest possible strength is given with the least possible weight. **The Deering Pitman is the most simple made, as it consists of only two pieces;** one, the Pitman proper, of forged steel, and the other, the Pitman Head, of hard brass. The joint that connects the two is formed by screwing the threaded end of the Pitman deep into the brass Pitman Head. By examination it will be discovered that this thread is nearly 1/8 of an inch deep, and the entire wearing area of this joint is over seven square inches in extent, or three times the wearing surface on any other Pitman.

The Deering Two-Piece Pitman.

Who has not been troubled with heating and wearing out of Pitman boxes because they were too small for the work they had to do? How beautifully has this defect been remedied in the Deering! A large Wrist Pin of hardened, polished steel, moving in the generous brass bearing of the Pitman Head, and chambered to receive wool stuffing to prevent loss of oil—that is the Deering combination, and it cannot be bettered.

The Deering Pitman Hook at the knife end of the shaft is part of the same piece of forged steel. It is the largest Pitman Hook made and has many times the area of wearing surface possessed by its rivals. It fits into a case-hardened eye or socket at the inner end of the Cutter Bar, and is held in place by a hinged Knife Head Guide. It is the easiest Pitman made to connect and disconnect.



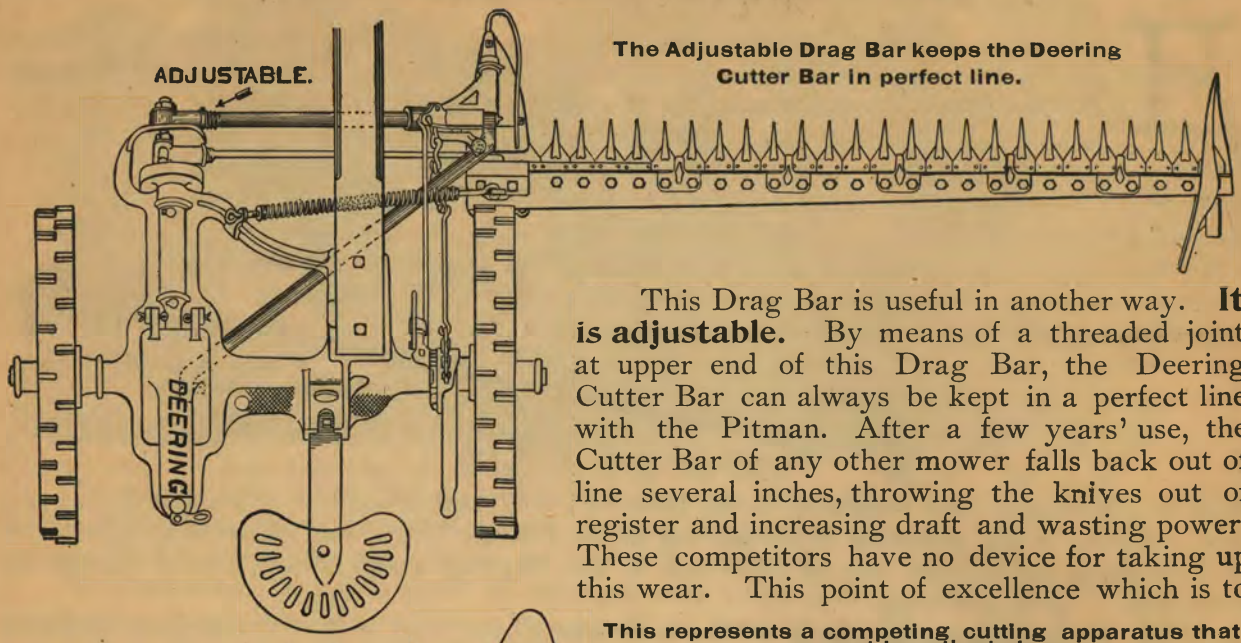

The Heavy Drag Bar Protects the Deering Pitman.

The big Lifting Spring transfers the weight of the Cutter Bar to the Drive Wheels.

The Deering Pitman is completely shielded from accident behind the heavy Drag Bar. It is perhaps just as well for the manufacturers of other Pitmans that they are not protected. It makes it handy for their agents to charge wearing out and breakage to the farmer's own carelessness in running against stumps and stones. No stump or stone, or anything else short of a railroad wreck, has ever broken the Deering Pitman, as far as we have ever heard.

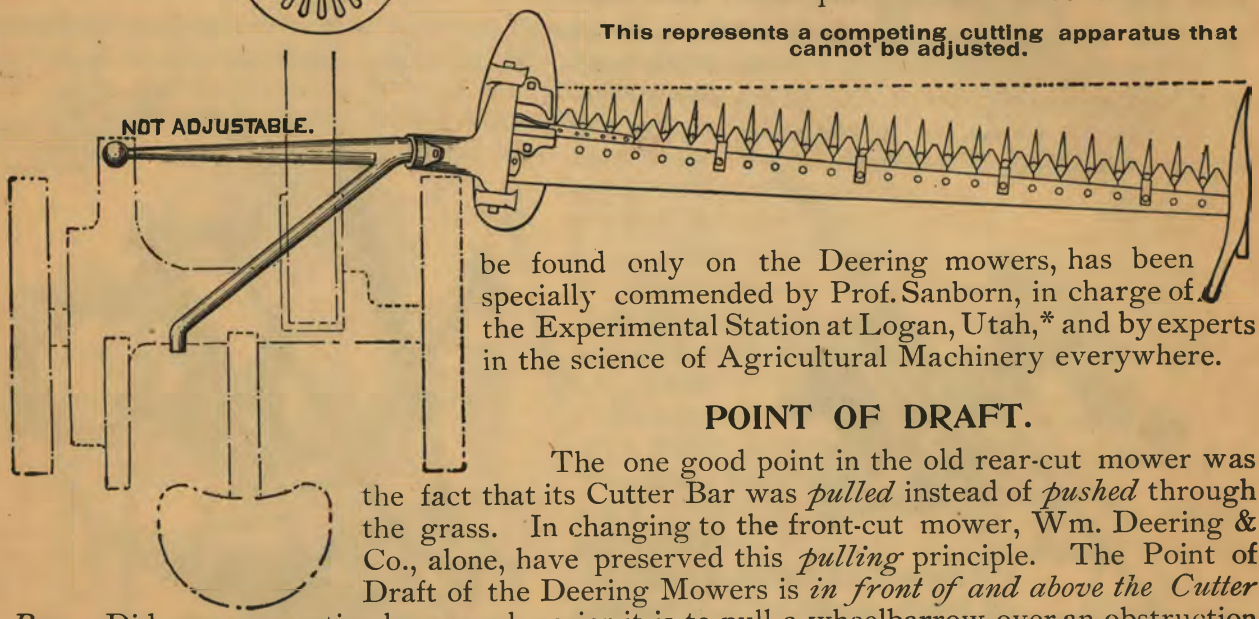
Notice the big, strong Lifting Spring found on all the Deering Mowers. It takes all but a few ounces of the weight of the Cutter Bar off the ground, thus lightening draft, destroying all side-draft and making easy work for horses and driver.

THE DEERING ADJUSTABLE DRAG BAR.



The Adjustable Drag Bar keeps the Deering Cutter Bar in perfect line.

This Drag Bar is useful in another way. **It is adjustable.** By means of a threaded joint at upper end of this Drag Bar, the Deering Cutter Bar can always be kept in a perfect line with the Pitman. After a few years' use, the Cutter Bar of any other mower falls back out of line several inches, throwing the knives out of register and increasing draft and wasting power. These competitors have no device for taking up this wear. This point of excellence which is to



This represents a competing cutting apparatus that cannot be adjusted.

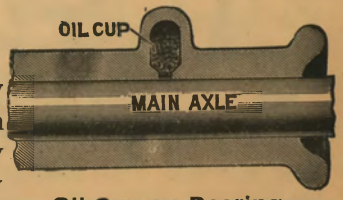
be found only on the Deering mowers, has been specially commended by Prof. Sanborn, in charge of the Experimental Station at Logan, Utah,* and by experts in the science of Agricultural Machinery everywhere.

POINT OF DRAFT.

The one good point in the old rear-cut mower was the fact that its Cutter Bar was *pulled* instead of *pushed* through the grass. In changing to the front-cut mower, Wm. Deering & Co., alone, have preserved this *pulling* principle. The Point of Draft of the Deering Mowers is *in front of and above the Cutter Bar*. Did you ever notice how much easier it is to pull a wheelbarrow over an obstruction than to push it?

EASE OF OILING.

The Deering Mowers also excel in ease of oiling and economy of time and oil. Notice the large, dust proof Oil Cup filled with wool. The farmer can be satisfied that one oiling will last nearly half a day, instead of being compelled to drench the thing every ten or fifteen minutes, as with other machines.

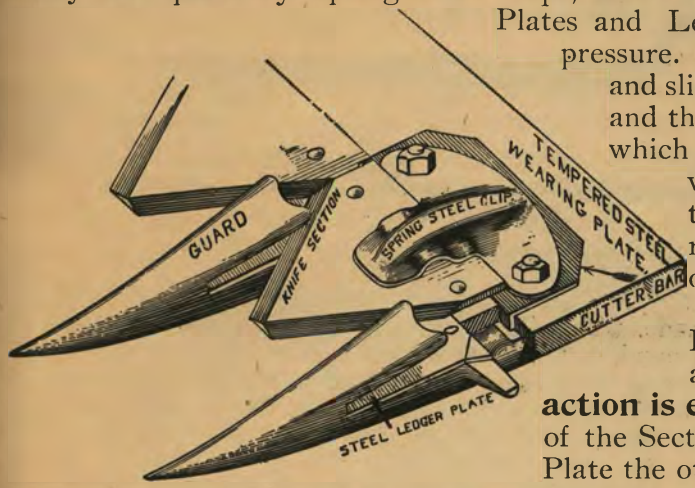


Oil Cup on Deering Main Axle.

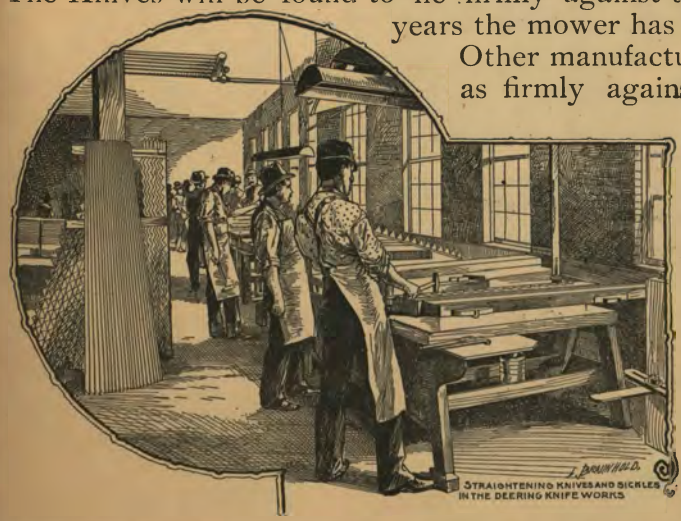
*OFFICIAL REPORT.—"On old machines, the cutter bar will not retain the same line with the Pitman rod that it originally had before the machine had worn in its parts. **The Deering machine has very well perfected the opportunity to change the relation of the parts to each other.** This is a point that deserves attention." *Bulletin No. 7, page 13. Utah Agricultural College, Government Experiment Station, Logan, Utah; July, 1891.*

KEEN CUTTING EDGES

THIS heading applies especially to the Deering Mowers. The Knives of Deering Mowers are made of fine Cutlery Steel, and are ground to a razor's edge. To counteract the natural wear, **hardened steel Wearing Plates** cover every inch of space where there is friction. The Sections are held firmly into place by Spring Steel Clips, which hold them down against the Wearing Plates and Ledger Plates with a slight but constant pressure. The rear surface of the Section rests and slides upon a hardened steel Wearing Plate, and the front surface upon a steel Ledger Plate, which is securely riveted to the Guard. To prevent the Knives from slipping backward, the Knife Back, to which the Sections are riveted, moves against the vertical surface of the Wearing Plate.



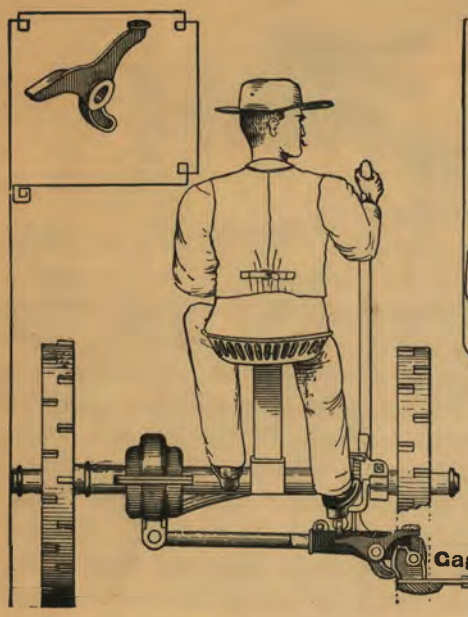
The Cutting Principle of the Deering Mowers is not approached by any other machines in the market. **The action is exactly that of shears,** the keen edge of the Section being one blade and the steel Ledger Plate the other, while the Spring Steel Clip answers to the stress of the hand in holding the blades firmly against each other. The whole action is that of steel against steel everywhere. It cannot warp, wear or get out of order. The Knives will be found to lie firmly against the Ledger Plates, no matter how many years the mower has been used.


STRAIGHTENING KNIVES AND SICKLES IN THE DEERING KNIFE WORKS

Other manufacturers fail to provide for holding the Knives as firmly against the Ledger Plates, and the result is that the Knives play up and down, in a short time ruining both the Knife and every part of the cutting apparatus with which it comes in contact. **Deering Guards** are made of a high grade of malleable iron, and are so curved on the under side that they slide over the ground like sled-runners, instead of plowing beneath the surface.

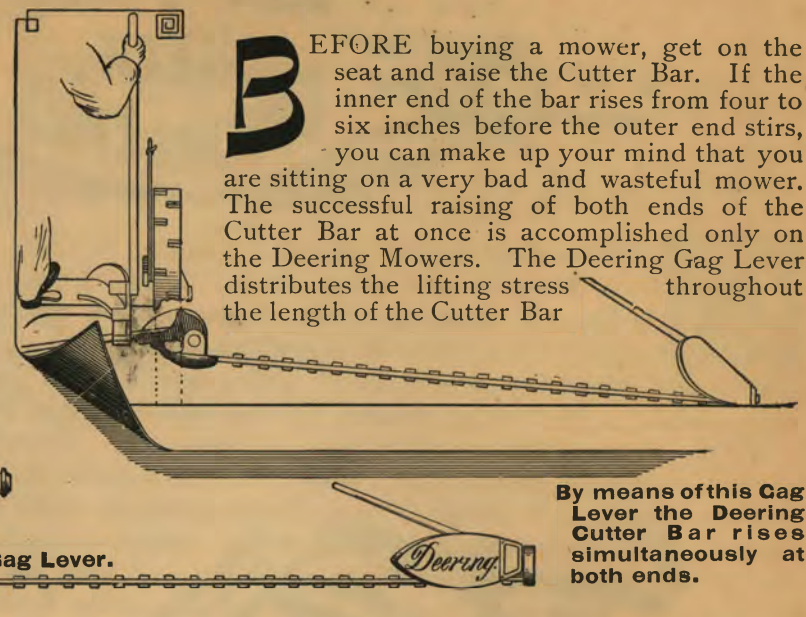
The Deering was the only mower that could cut a close stubble through the tangled network of dead grass left by the floods last season, and it went right through it without a balk, while other mowers, though cutting an inch higher from the ground, were clogging and breaking down. The Deering Mowers have a cutting apparatus adapted alike to good or bad grass.

DEERING GAG LEVER.



Gag Lever.

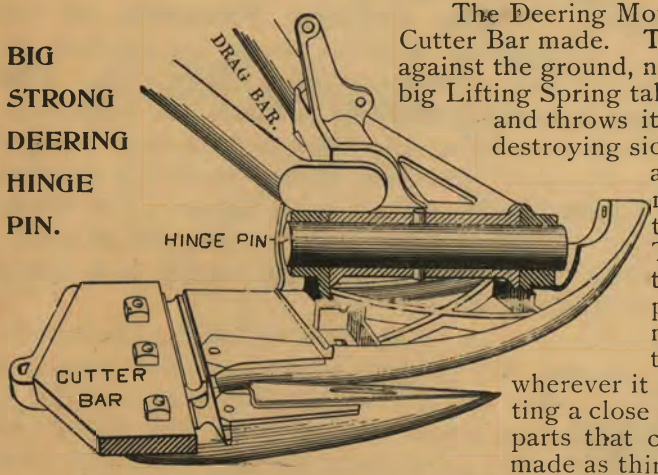
BEFORE buying a mower, get on the seat and raise the Cutter Bar. If the inner end of the bar rises from four to six inches before the outer end stirs, you can make up your mind that you are sitting on a very bad and wasteful mower. The successful raising of both ends of the Cutter Bar at once is accomplished only on the Deering Mowers. The Deering Gag Lever distributes the lifting stress throughout the length of the Cutter Bar



By means of this Gag Lever the Deering Cutter Bar rises simultaneously at both ends.

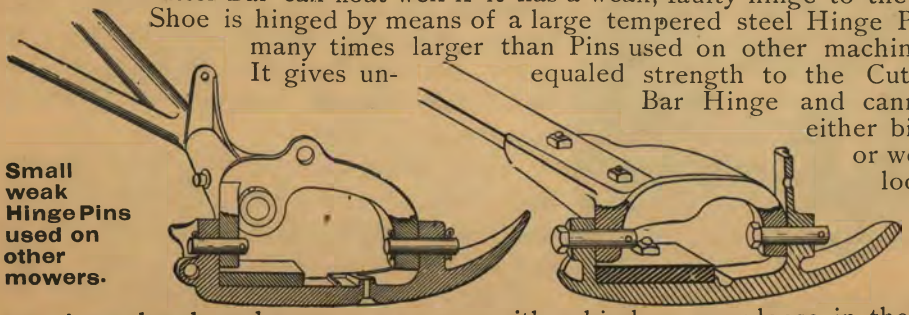
DEERING FLOATING BAR.

BIG STRONG DEERING HINGE PIN.

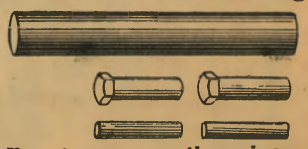


The Deering Mowers have the most thoroughly flexible Floating Cutter Bar made. This bar is so poised that it will always lie flat against the ground, no matter at what angle the wheels may be. The big Lifting Spring takes the weight of the Cutter Bar off the ground and throws it upon the drive wheels, thus lightening draft, destroying side draft, and increasing the traction of the wheels, and consequently the cutting power of the mower. The inner end of the bar is left free, so that it may drop below the level of the wheel. The Deering Mower is the only one that can do this. This highly perfected automatic floating principle saves tons of hay every season. No matter how the ground lies or how rough it is, the Deering Mower gets all the grass there is wherever it goes. The Deering Mowers save grass by cutting a close stubble. The Guards and the Shoes and all the parts that come between the Knives and the ground are made as thin as possible. **The result is that the Deering gets down much lower than any other Cutter Bar.**

No Cutter Bar can float well if it has a weak, faulty hinge to the Inner Shoe. The Deering Shoe is hinged by means of a large tempered steel Hinge Pin, many times larger than Pins used on other machines. It gives unequaled strength to the Cutter Bar Hinge and cannot either bind or wear loose in its bearings. How different it is with the small Hinge Pins used by competitors! They are almost certain to bend, and as a consequence either bind or wear loose in the bearings. The result is a "floating" bar that will not float.



Small weak Hinge Pins used on other mowers.



Exact comparative sizes, reduced by photograph.

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.

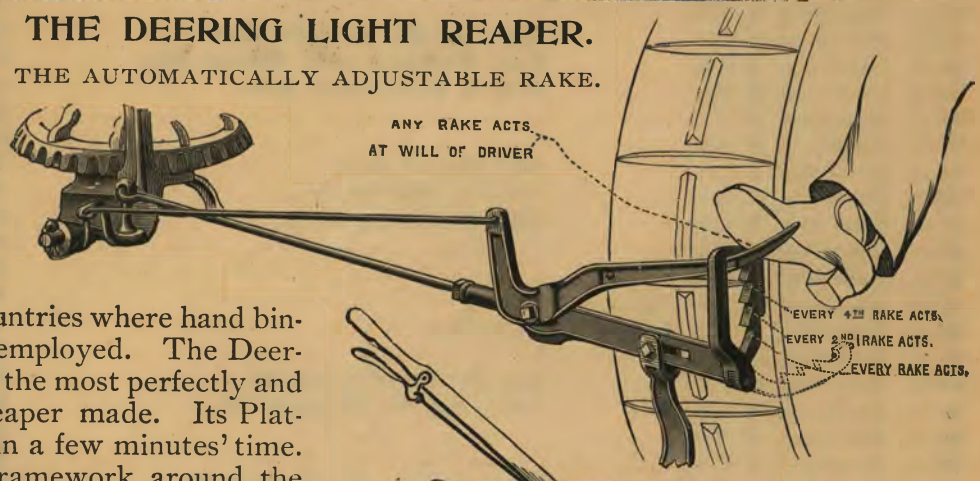
The Deering Junior Giant finds a wide sale among farmers who wish a mower somewhat heavier and wider of cut than the New Deering.

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.

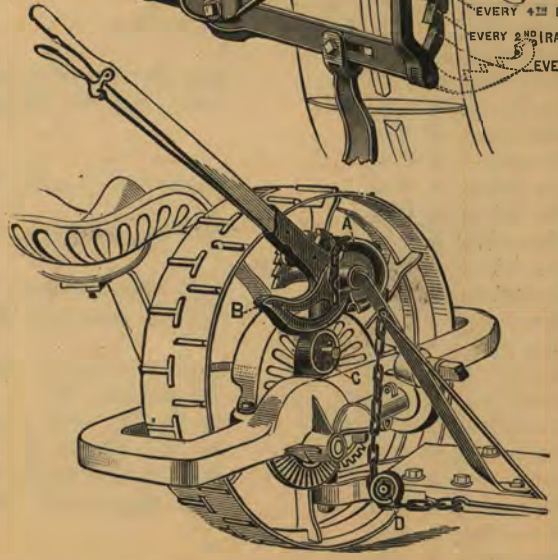
THE AUTOMATICALLY ADJUSTABLE RAKE.



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.

BRANCH 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.**
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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.**
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Wm. Deering & Co. ..... **192-200 W. Market St.** ..... **Indianapolis, Ind.**
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Wm. Deering & Co. ..... **108 Bluxome St.** ..... **San Francisco, Cal.**
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Wm. Deering & Co. ..... **Springfield, Ill.**
Wm. Deering & Co. ..... **Union City, Tenn.**
Wm. Deering & Co. ..... **Wichita, Kan.**

THE DEERING BINDER TRUCK.

(Carrying the Deering Binder on the road.)

TO GIVE owners of the Deering Binder a safe and easy means of transporting their machine over narrow roads and bridges or through narrow gates, Wm. Deering & Co. manufacture the **Deering Two-Wheeled Binder Truck.** It is a strong, light truck, that can be quickly put under the Binder. Wm. Deering & Co. were the first to make the two-wheeled truck, and the great success of this means of transportation has led to its wholesale imitation by rival firms. The truck axle is made of clear, tough hardwood, and the wheels are made of a fine grade of steel. On no Binder Truck will be found as large bearing surfaces for the axles as on the Deering.

No truck is so easy to attach as the Deering. 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.

Many farmers find this truck useful in heavy hauling of all sorts about their farms.

It is not given with the machine and must be ordered specially. It is not at all expensive and farmers will find that it pays for itself the first year, if time is worth anything.

W. B. CONKEY COMPANY, PRINTERS AND BINDERS, CHICAGO.

Sale by STIER & MYERS, AGTS.,
HOMEWORTH, O.