

(No Model.)

3 Sheets—Sheet 1.

H. D. JAMES & L. D. HART.  
CORN HARVESTER.

No. 543,485.

Patented July 30, 1895.

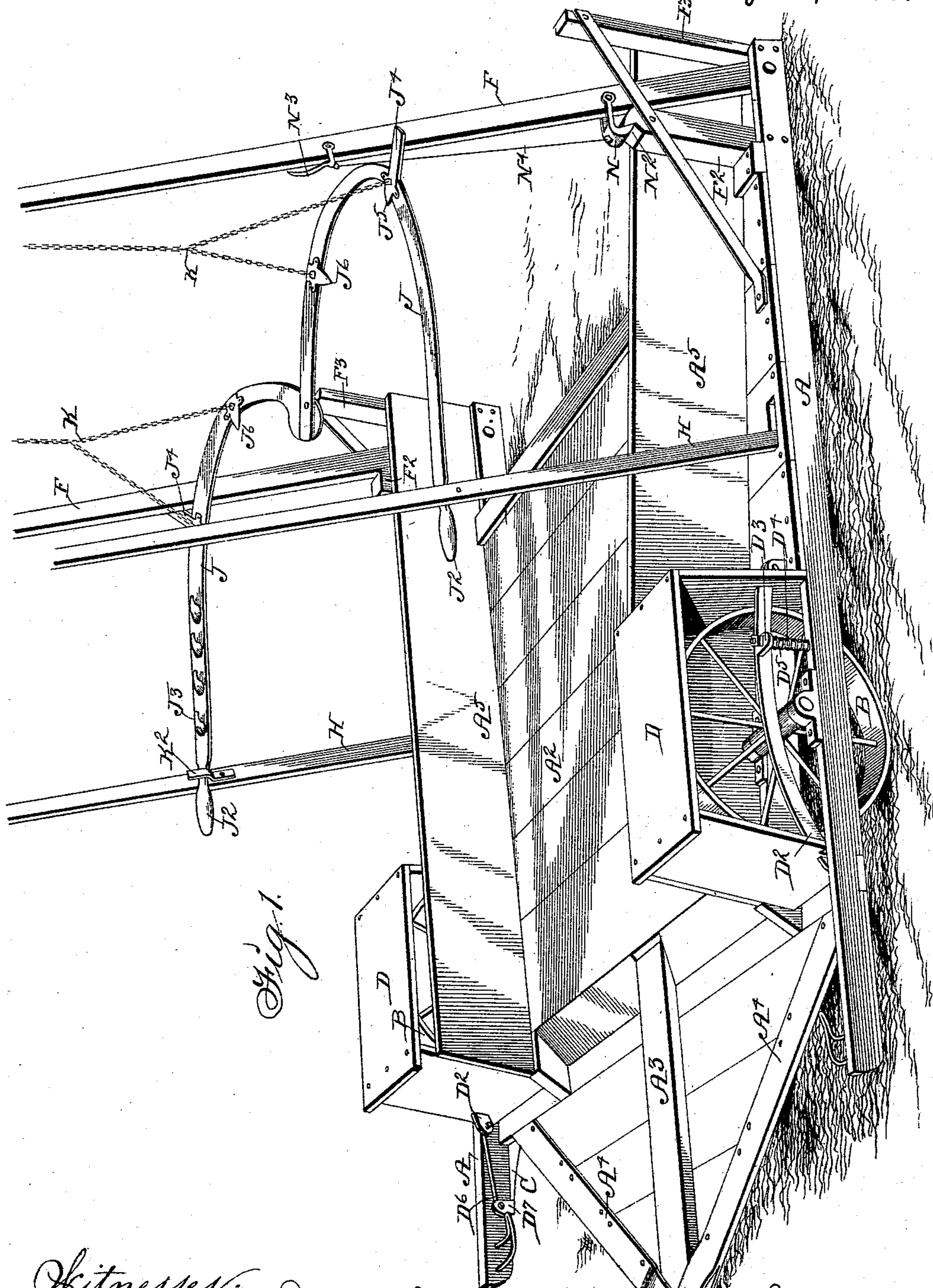


Fig 1.

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By Thomas C. <sup>am</sup> J. Ralph Orwig.

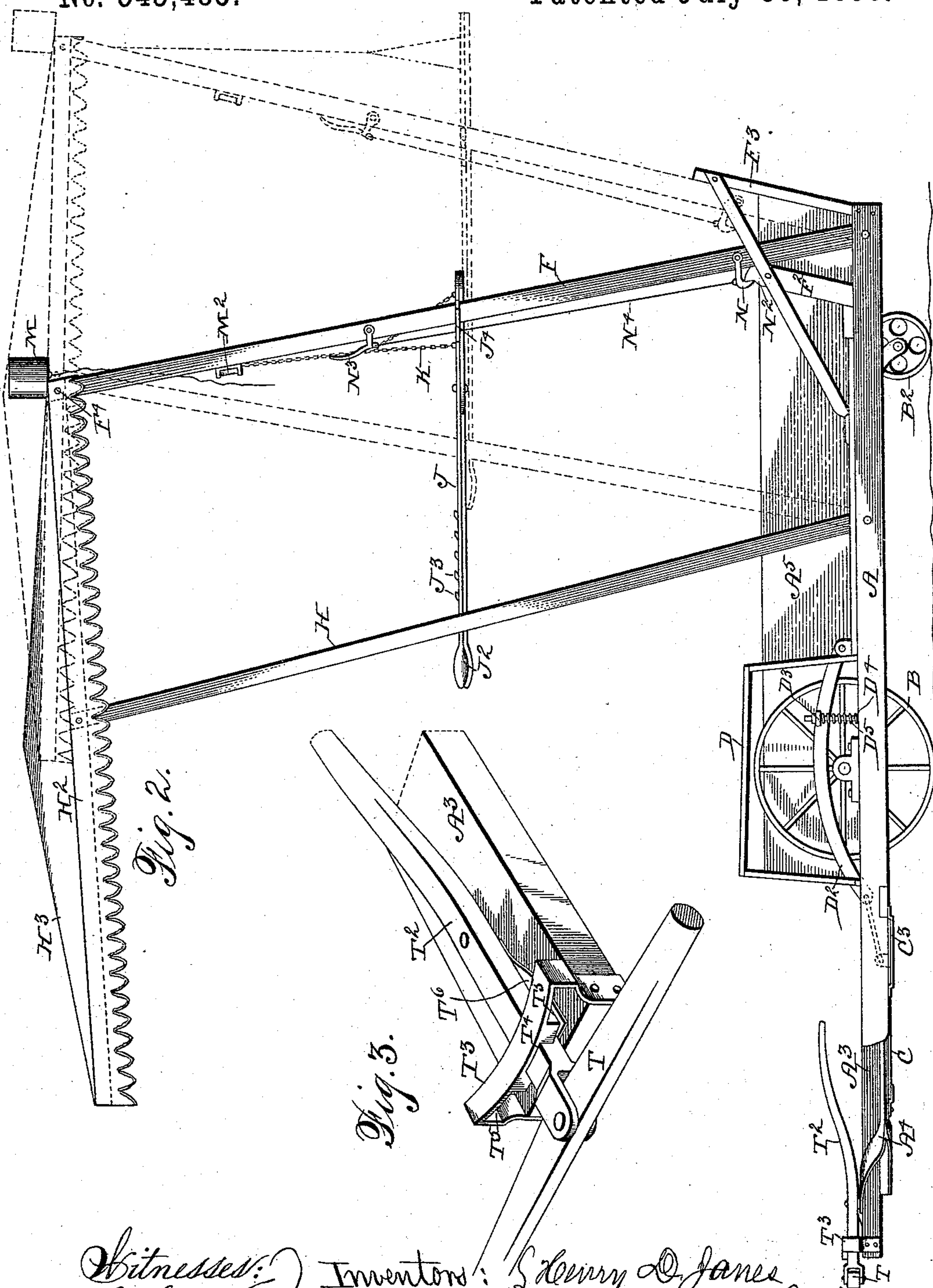
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3 Sheets—Sheet 2.

No. 543,485.

Patented July 30, 1895.



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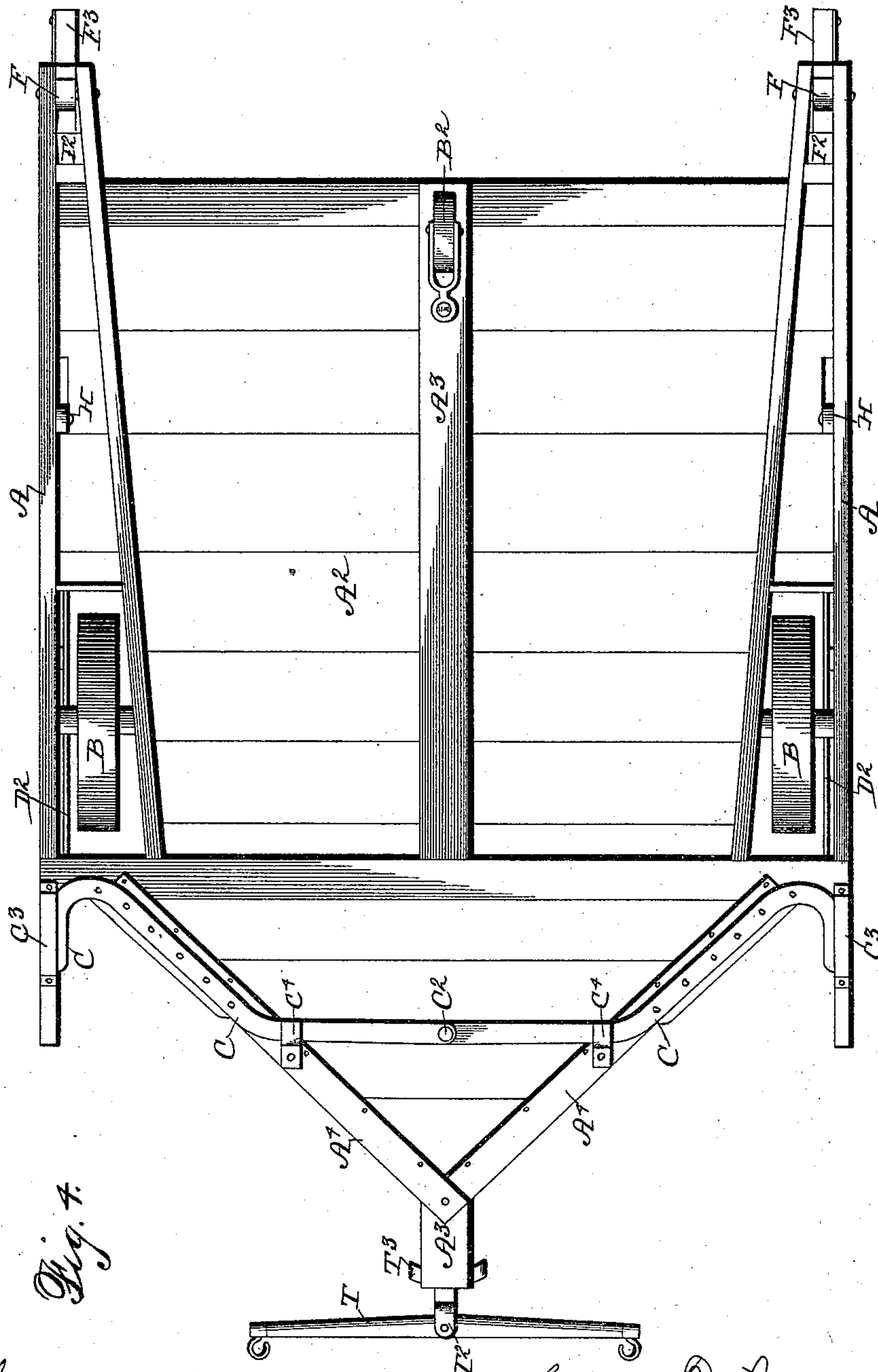
(No Model.)

3 Sheets—Sheet 3.

H. D. JONES & L. D. HART.  
CORN HARVESTER.

No. 543,485.

Patented July 30, 1895.



Witnesses:  
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R. H. Orwig.

Inventors: Henry D. Jones  
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By Thomas G. and J. Ralph Orwig,  
Attorneys.



# UNITED STATES PATENT OFFICE.

HENRY D. JANES AND LOREN D. HART, OF DICKENS, IOWA.

## CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 543,485, dated July 30, 1895.

Application filed December 1, 1894. Serial No. 530,555. (No model.)

*To all whom it may concern:*

Be it known that we, HENRY D. JANES and LOREN D. HART, citizens of the United States, residing at Dickens, in the county of Clay and State of Iowa, have invented a new and useful Corn Cutting and Shocking Machine, of which the following is a specification.

The object of this invention is to provide a corn-cutting machine with simple, strong, durable, and easily-operated means for forming a quantity of cornstalks in an upright position on the machine-platform into a compact shock to be tied, and for placing said shock from the harvester upon the ground surface.

Our invention consists in the improved construction, arrangement, and combination with the machine-frame of a device for shocking corn and depositing the same upon the ground, and further in the construction, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the complete device. Fig. 2 is a side elevation of the same. Fig. 3 is a detail perspective view of the steering apparatus. Fig. 4 is an inverted plan view of the machine.

Referring to the accompanying drawings, the frame is seen to be composed of the side pieces A, the platform A<sup>2</sup> at the central portion thereof, and the central brace A<sup>3</sup> projecting forwardly beyond the platform A<sup>2</sup>, and the metal braces A<sup>4</sup> fixed to the forward end of the part A<sup>3</sup> and inclined rearwardly and outwardly therefrom to the side pieces A, and A<sup>5</sup> are side pieces on top of the platform A<sup>2</sup>. This frame is supported upon the wheels B B at its sides and the caster-wheel B<sup>2</sup> at its rear central portion.

The corn-cutting mechanism comprises two knife-blades C C, pivoted at their forward ends to the central portion of the frame at C<sup>2</sup>, beneath the braces A<sup>4</sup>, then extended parallel therewith to the outer side pieces of the frame and then bent forwardly with their outer ends slidingly supported by the guides C<sup>3</sup>. By this arrangement it will be seen that the straight portions of the knife-blades will normally project beyond the braces A<sup>4</sup>, and that they may be drawn rearwardly by a pull upon the outer ends thereof, and the knife-blades be protected or sheathed by said braces A<sup>4</sup>.

C<sup>4</sup> indicate metal brackets secured to the under side of the braces A<sup>4</sup> to receive the knife-blades and limit their forward and vertical movement. These knives are automatically withdrawn when the driver's or operator's weight is removed from the seats, as follows: D indicates a flat-topped seat mounted on the machine-frame at the forward corner thereof and capable of tilting upwardly at its forward end. D<sup>2</sup> is a lever pivoted to the platform A<sup>2</sup> in the rear of the seat, passed through suitable openings in the rear and front of the seat, and having a perforated lug D<sup>3</sup> at its side. D<sup>4</sup> indicates a rod fixed to the side piece A and extended upwardly through said lug, and D<sup>5</sup> is an extensile coil-spring wound upon said rod and in engagement with the side piece A and the lug to normally hold the forward end of the lever D<sup>2</sup> upwardly and the seat tilted. D<sup>6</sup> is a link connected with the forward end of the lever D<sup>2</sup> and extended forwardly therefrom and attached to a perforated lug D<sup>7</sup>, fixed to the end of one of the knife-blades C. This link is so arranged that when the seat is pressed downwardly the lever and the link will be in alignment with each other, so that in cutting, if the knife should engage a comparatively solid obstacle, the impact would be transmitted in a straight line to the pivotal point of the lever, so that the seat will not be elevated and the knife allowed to pass under the braces. The arrangement of the seat on the opposite side is identical, and it will be obvious that when the weight of the driver is removed from either seat the lever D<sup>2</sup> will be elevated and the knives drawn backwardly, so as to be protected by the braces.

For shocking the corn we have provided the two uprights F, hinged at their lower ends to the side pieces of the frame and having their forward and rearward movement limited by the stops F<sup>2</sup> and F<sup>3</sup>, which are secured to the machine-frame. These uprights are so arranged that their tops may move from a position directly over the rear end of the platform to a point behind the machine. F<sup>4</sup> is a cross-piece connecting said uprights at their tops and sufficiently elevated so as not to engage the tops of cornstalks standing upon the platform.

H H indicate two mating uprights of ap-



proximately the same height as the uprights F, pivoted to the sides of the machine-frame at the approximate center of the platform and connected at their tops with the tops of the uprights F by the side pieces H<sup>2</sup>, which are preferably extended beyond the forward uprights and an awning H<sup>3</sup> secured thereto.

We have provided an improved device for drawing the stalks together to be tied as follows: J J indicate two levers, each approximately semicircular in shape and pivoted together at one end and having the straight handles J<sup>2</sup> at their free ends. J<sup>3</sup> is a series of projections formed on or fixed to the top of one lever near its free end to receive the end of the opposite lever. J<sup>4</sup> indicate auxiliary handles secured to the approximate central portion of the levers to extend outwardly. These handles have the inwardly-projecting points J<sup>5</sup>. J<sup>6</sup> are projections fixed to the lever between the handles J<sup>4</sup> and the pivoted ends to project inwardly.

K K indicate two chains or ropes secured to the cross-piece F<sup>4</sup> and each divided at its lower end and attached to the shocking-levers to suspend them, and K<sup>2</sup> are hooks secured to the inner faces of the uprights H H to receive the free ends of the shocking device. By this arrangement the shocking device is supported at any desirable height.

When the machine is advanced and the cornstalks severed, the operators occupy the seats at the side of the platform and gather the stalks in their arms until an armful is obtained, when the same is placed in an upright position leaning against the sides of the shocking device. When enough stalks have been gathered to form a shock, the machine is stopped and the operators remove the ends of the levers from the hooks and bring them together by grasping the handles at the ends of the levers and the auxiliary handles, at the same time the levers are drawn forwardly a slight distance to place the stalks in a vertical position, it being necessary to incline them rearwardly when placing them on the platform from the cutting-knives. The levers may then be secured by placing one handle in engagement with one of the projections on the other and the shock tied by hand.

M indicates a twine-holder located on the cross-piece F<sup>4</sup>, so that the twine may be within convenient access.

M<sup>2</sup> indicates a twine-cutter of common form secured to the back of one of the rear uprights.

N indicates a gravity-pawl pivoted to one of the rear uprights and adapted to engage a notch N<sup>2</sup> formed in the top of the stop F<sup>2</sup>, so that when said uprights are inclined forwardly they cannot be swung rearwardly by the wind or other power until said pawl is released. N<sup>3</sup> is a lever fulcrumed to the upright above the said pawl at a convenient height to be grasped by a person's hand, and N<sup>4</sup> is a wire connected therewith and to the said pawl, so that a depression of the

lever-handle will elevate the pawl from engagement with the stop.

To place the shock in an upright position on the ground surface it is only necessary to swing the uprights rearwardly, and as they are normally inclined forwardly this movement will elevate the cross-piece at the top of the uprights and also the shock of corn, which latter will be conveyed to a point in the rear of the platform, partially lowered and held suspended a short distance above the ground surface. The levers J J are then separated and the shock permitted to drop to the ground. This will place the shock on a much firmer base than if placed slowly on the ground, for the reason that any irregularities in either the bottom of the shock or on the ground surface will be equalized.

It will be obvious, further, that the awning at the top of the uprights is moved rearwardly or forwardly with the operators. When cutting the corn it will be at its forward limit to shield the operators on the seats from the sun, and when unloading the shock it will be moved rearwardly to protect the rear end of the platform.

We have also provided an improved device for steering the machine through a field, so as to bring the rows of corn into engagement with the knives when the draft animal walks to one side of the center of the space between the rows, as when the wind is blowing at right angles to the line of advance and bending the top of the rows of corn laterally. The singletree T is pivoted in the end of a lever T<sup>2</sup>, which is pivoted to the forward central portion of the machine with its handles projecting rearwardly and upwardly, and T<sup>3</sup> is a guard secured to said platform and arched over the forward end of the lever, having a central notch T<sup>4</sup> in its under side and side notches T<sup>5</sup> adapted to admit the forward end of the lever. The upward and forward pull upon the singletree will hold the lever in any notch in which it is placed, and this may be easily adjusted during the operation in a field. T<sup>6</sup> is a leaf-spring fixed to the part A<sup>3</sup> to normally hold the forward end of the lever upwardly.

Having thus described the construction, arrangement, and combination of the various parts of the device, what we claim as new therein, and desire to secure by Letters Patent of the United States therefor, is—

1. In a corn harvester, the combination of a suitable frame having a platform thereon, two uprights pivoted to the sides of the frame, a cross piece for connecting them, means for limiting the forward and rearward movements of said uprights, a shocking device comprising two approximately semi-circular parts hinged together at one end, projections on the top surface of one of said parts and two chains depending from the tops of the said uprights and divided at their lower ends and attached to said shocking device to support the same in a horizontal position with its hinged ends



in the rear, substantially as and for the purposes stated.

2. The combination in a corn harvester of a suitable platform, two uprights pivoted to the rear side portions thereof, a cross piece at their tops, two stops on each side of the machine frame to limit the forward and rear movements of the uprights, a gravity hook on one of said uprights to engage the forward stop and hold it to the forward limit of its movement, a shocking device composed of two approximately semi-circular levers, pivoted together, and having straight handles at their free ends, and projections on the top of one lever, and means for suspending said shocking device in a horizontal position from said cross bar, for the purposes stated.

3. The combination in a corn harvester, of a suitable platform, two uprights pivoted to the rear side portions thereof, a cross piece at their tops, stops for limiting their movement, two like uprights pivoted to the side of the machine frame in advance of the afore-said ones, a shocking device comprising two approximately semi-circular levers pivoted together at one end and having straight handles at their free ends and projections at the top of one lever, means for suspending the device from said top cross piece and hooks

attached to the inner faces of said forward uprights to receive the handles of the levers, for the purposes stated.

4. The combination in a corn harvester, of a suitable platform, four uprights pivoted thereto as set forth, stops to limit the movement of the rear uprights, a frame at the top of the uprights to connect them, and an awning on said frame, a gravity pawl adapted to engage the forward stop as set forth, the shocking device as shown and described suspended from the top cross piece and hooks for supporting the forward ends of the shocking device, substantially as and for the purposes stated.

5. A steering device, for corn harvesters and the like comprising a lever fulcrumed to the forward end of the machine frame, a stationary guard arched over the forward end of the lever, notches on the under side of said guard and a singletree mounted in the forward end of the lever, substantially as and for the purposes stated.

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