

(No Model.)

2 Sheets—Sheet 1.

J. J. SINGLEY.
CORN HARVESTER.

No. 486,132.

Patented Nov 15, 1892.

FIG. 1.

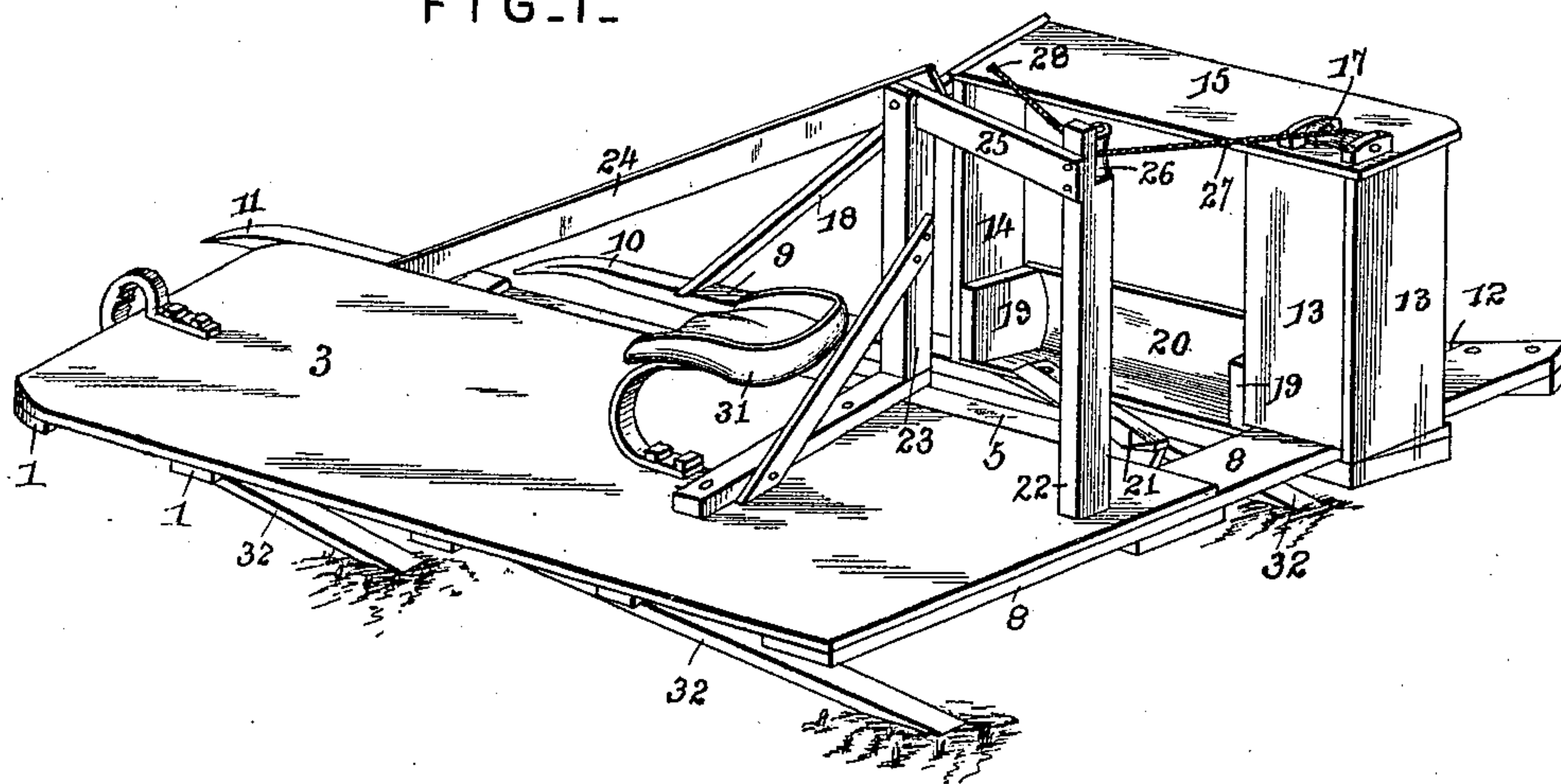
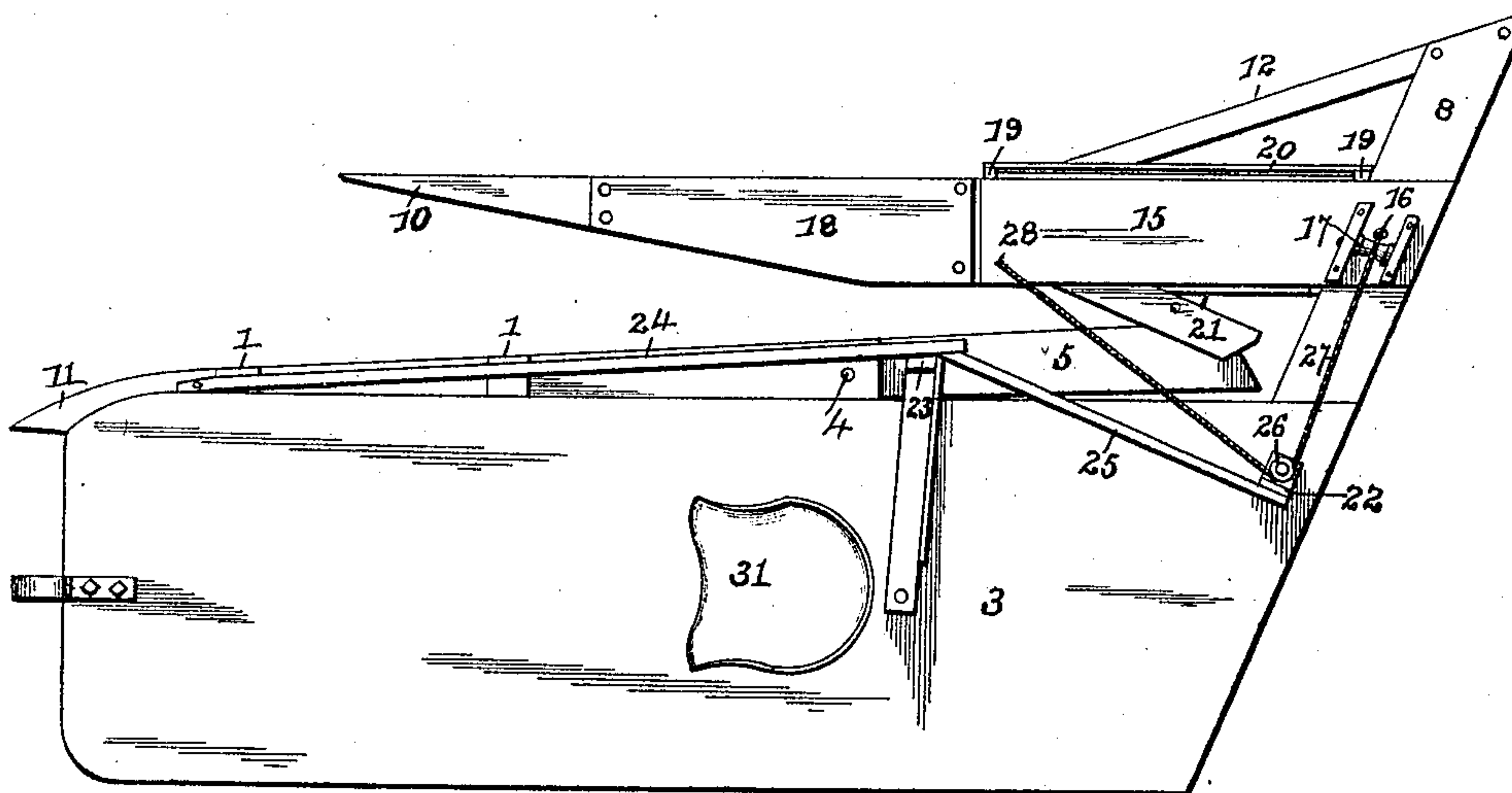


FIG. 2.



Witnesses

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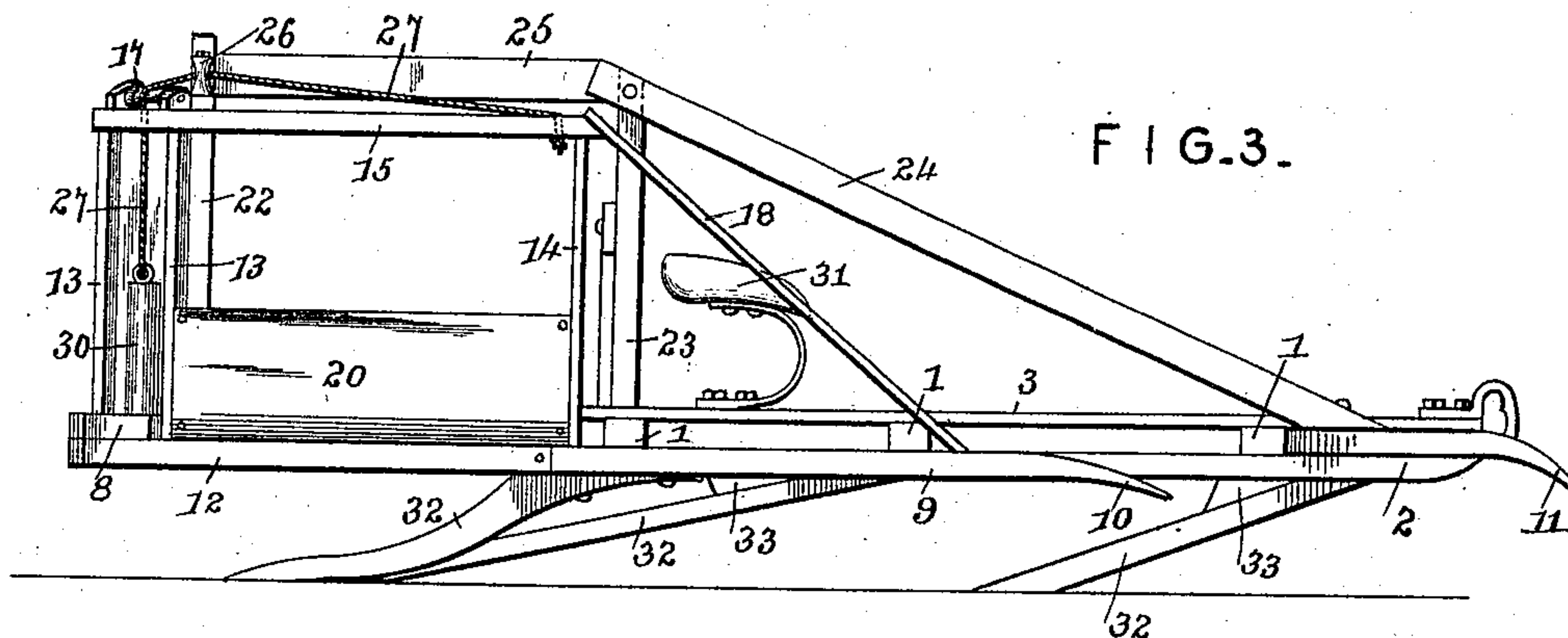


FIG. 4.

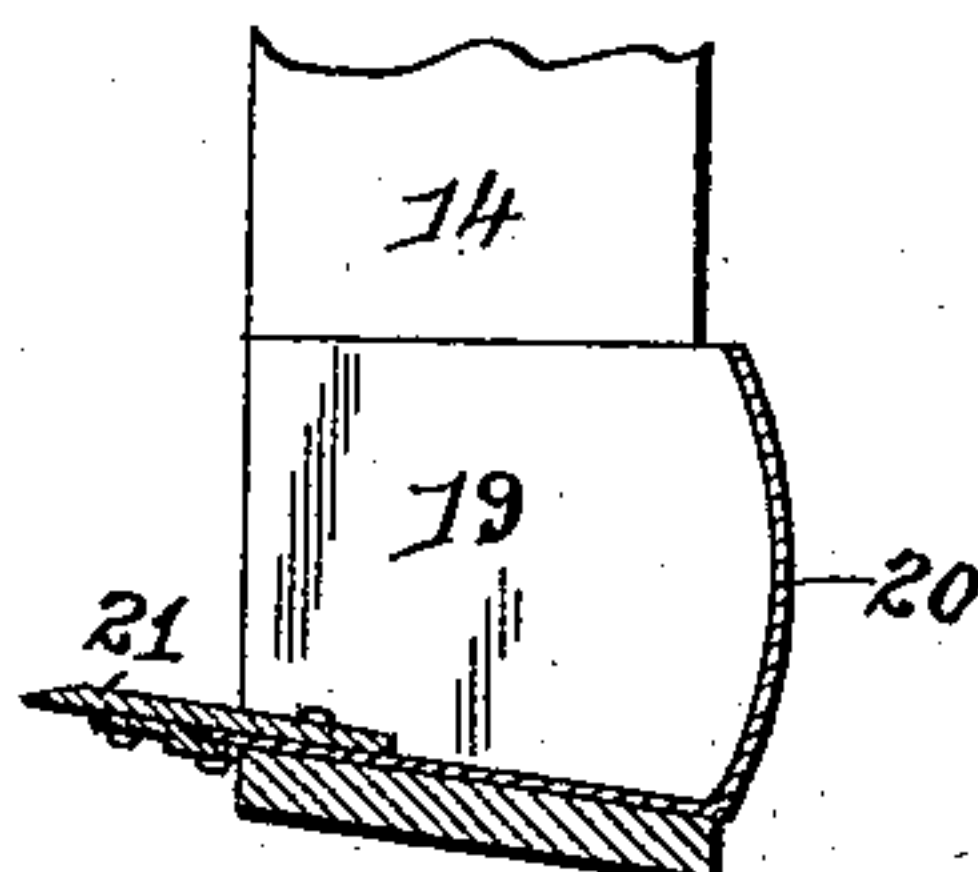
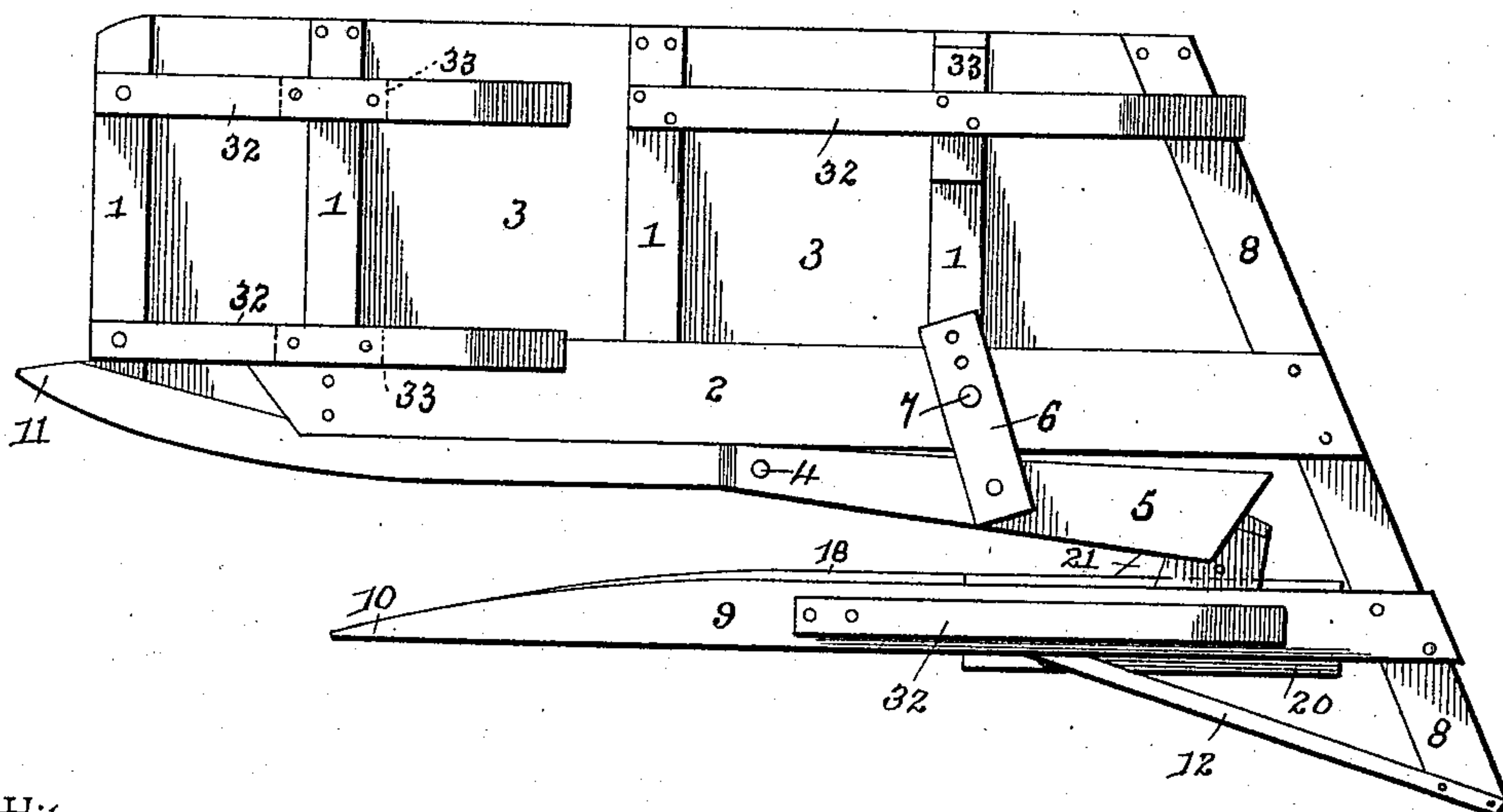


FIG. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH J. SINGLEY, OF EL DORADO, KANSAS.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 486,132, dated November 15, 1892.

Application filed April 23, 1892. Serial No. 430,370. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. SINGLEY, a citizen of the United States, residing at El Dorado, in the county of Butler and State of Kansas, have invented a new and useful Corn-Harvester, of which the following is a specification.

My invention relates to improvements in corn-harvesters, the objects in view being to provide a machine of cheap and simple construction that is adapted to harvest corn, form the same into bundles to be subsequently tied by the operator, that will permit of an easy removal of the bundles from the machine and will securely hold the stalks during tying, and the guide-bar of which is adjustable toward the knife, whereby the corn may be fed more or less toward the heel of the knife.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of a corn-harvester constructed in accordance with my invention. Fig. 2 is a plan. Fig. 3 is a side elevation. Fig. 4 is a transverse section. Fig. 5 is a bottom plan.

Like numerals of reference indicate like parts in all the figures of the drawings.

In constructing the machine I employ a series of transverse beams 1, located at intervals, and connect the inner ends thereof by a longitudinal beam 2. Surmounting these beams 1 is the platform 3. Pivoted, as at 4, to the inner recessed side or edge of the beam 2 is a guide-bar 5, to the under side of which is secured a perforated plate 6, that by a bolt 7 may be adjusted with relation to the cutting device hereinafter described and located at one side of the bar 5. Between the rear edge of the platform and the rear end of the beam 2 is a diagonally-disposed cross-bar 8, which is slanted rearwardly for a purpose hereinafter described. The cross-bar 8 has secured to its under side a forwardly-disposed guide-arm 9, which terminates at its extremity in a curved downwardly-disposed guide-finger 10, which is located slightly in rear of the front edge of the platform. A similar finger 11 is located between the platform and the front end of the beam 2. The end of the bar 8 projects beyond the side of the arm 9,

and the latter is braced against the end of the bar by a diagonal brace 12. Mounted upon the rear end of the arm 9 in front and in rear of the bar 8 is a vertical angular standard 13, and a second standard 14 is located in advance of the standard 13 and also upon the arm 9. These standards are connected by a cross-piece 15, which above the space formed between the angularly-disposed sides of the standard 13 is provided with a perforation 16 and at opposite sides of the same with bearings, in which a grooved pulley 17 is journaled. An inclined brace 18 is secured at its upper end to the front end of the cross-piece 15 and at its lower end to the arm 9. A pair of blocks 19 is secured to the inner sides of the front standard 13 and the standard 14, and a metal plate 20 is bent to fit the outer and under edges of the blocks, to which it is connected, the same forming a box or receptacle, to be hereinafter described. To this box there is rigidly secured a diagonally-disposed stationary knife or cutter 21. A post 22 rises from the inner rear corner of the platform 3, and a similar post (indicated as 23) rises from said platform opposite the standard 14, the post 23 being closer to the inner edge of the platform than post 22, and therefore out of longitudinal alignment therewith. An inclined brace 24 has its upper end secured to the post 23 and its lower end to the rear end of the finger 11. The posts 22 and 23 are connected by a diagonally-disposed bar 25. The post 22 has an offset upon its upper end, and a loose pulley 26 is pivoted or mounted for rotation in the offset. A light rope 27 is passed removably about the pulley, has one end connected, as at 28, to the front end of the cross-piece 15, so that it lies across the path of the incoming corn, and its opposite end passes over the pulley 17 and depends through the opening 16 into the box between the standards 13, where it is provided with a weight 30, which maintains the rope taut. The platform is provided with a seat 31 for the accommodation of the driver, and a suitable draft device is located at the front end of the platform. 32 designates a series of inclined runners, the front ends of three of which are bolted to the cross bars or beams 1, the fourth being bolted to the under side of the arm 9, thus making four runners in all.

These runners near their middles are bolted to blocks 33, which are interposed between them and the beams in rear of those to which the front ends of the runners are bolted, so that only the rear beveled ends of the runners come in contact with the ground and excessive friction is prevented, as is also the accumulation of mud and trash.

In operation the machine is drawn along in the usual manner, the stalks being gathered in by the fingers 10 and 11, which also elevate any that may have become bent or depressed, and by the bars 18 and 24 are guided to the guide-bar 5, which deflects the stalks toward the shearing-edge of the knife 21, where they are severed from the butts, said butts passing into the box or receptacle 20. The upper ends of the stalks rest against the bar 25 and are held in place by the rope, which, as will be understood, is held by the weight under tension. After a sufficient number of stalks has been accumulated the machine is stopped, the bundle tied to form a shock, the rope disengaged from over the pulley 26, and the bundle pulled from the machine onto the ground. The rope is then replaced over the pulley and the machine restarted to repeat the operation. The bottom of the box is slanted outwardly and downwardly, so that the butts or lower ends of the stalks readily follow the bottom and are maintained in the box during accumulation. The rear bar 8 is also slanted rearwardly, so as to permit of the withdrawal of the bundle or shock after having been formed. The knife terminates short of the bar 8, thereby leaving an intervening space through which the blades from the stalks may readily pass to the ground to prevent the choking of the knife during operation. As the stalks of corn come in contact with the guide-bar 5 they are carried toward the forward end of the knife, and, being severed, the butts are forced by the successive stalks into the box or receptacle 20. The tops of the stalks meanwhile, being crowded by the successive stalks, are forced to the rear between the bar 25 and the weighted rope 27, said bar and rope converging toward the rear, as shown clearly in Fig. 2. Although the weighted rope will yield slightly when pressed by the rearwardly-falling stalks, it will not release the latter, but will hold them in a snug bundle until a sufficient quantity has accumulated, when the operator stops the machine, ties the stalks together, disengages the weighted rope from the pulley 26, and stands the shock in rear of the machine. The outward inclination of the box or receptacle 20 enables the butts of the stalks to remain therein until a sufficient number has accumulated to form a shock. The weighted rope merely assists in holding the tops of the stalks together during the cutting operation by preventing the same from falling to the rear, and although, as shown in the drawings, the portion of the rope 27 which engages the stalks is slightly in front of the knife the

rearward pressure of the corn will cause said portion to be bowed, and thus hold the stalks in place until bound. The adjustable guide-bar 5 may be arranged to throw the stalks against any desired part of the knife and is designed especially to crowd them toward the heel thereof.

From the foregoing description, in connection with the accompanying drawings, it will be seen that I have provided a corn-harvester of simple construction that is light of draft, will not collect trash, and is very efficient in operation.

Having described my invention, what I claim is—

1. In a corn-harvester, the combination, with the main frame supporting a platform, of a bar extending laterally from the main frame at the rear end thereof, an arm extending forwardly from the bar and carrying a knife, a box mounted upon the arm adjacent to the knife, guides for conducting the corn to the knife, standards mounted on the arm and platform, a pulley mounted on the standard of the platform, a pulley mounted on the rear standard of the arm, a rope connected to the front standard of the arm, passed over the pulley on the platform, and thence transversely over and depending from the pulley of the rear standard, and a weight secured to the end of the rope, substantially as specified.

2. In a corn-harvester, the combination, with the main frame having the platform, the standard rising from the rear inner corner thereof and provided with a pulley, a beam extending laterally from the main frame, an arm mounted on the beam, a rear standard and a front standard rising from the arm, a cross-piece connecting the standards and having a perforation, and a pulley mounted over the perforation, of a rope secured to the cross-bar, passed rearwardly over the pulley of the standard and platform, and thence transversely over the pulley supported above the rear standard, depending through the opening in the cross-bar between the sides thereof, a weight located on the rope, a knife located upon the arm below the rope, and a box mounted on the arm adjacent to the knife, substantially as specified.

3. In a corn-harvester, the combination, with the main frame having the platform, the beam extending laterally therefrom, the guide-arm mounted on the beam and extending forwardly to a point near the end of the platform, and fingers mounted on the platform and guide-arm, of a knife bolted to the guide-arm and extending diagonally toward the platform and a guide-bar adjustably connected at its front end to the inner edge of the main frame and converging rearwardly toward the knife, substantially as specified.

4. In a corn-harvester, the combination, with the main frame having the platform, the rear cross-bar, and the arm extending forwardly from the latter, of a knife extending from the arm toward the platform and termi-

nating short of the cross-bar, so as to form an intervening space, and an angularly-adjustable guide-bar secured to the main frame and converging rearwardly toward the knife, substantially as specified.

5 5. In a corn-harvester, the combination, with the main frame comprising the longitudinal beam 2, the inner edge of which near its rear end is provided with an offset, a cross-
10 bar located at the rear end of the main frame, and an arm extending forwardly therefrom, of a knife bolted to the arm and extending diagonally across the space between the arm and the platform and a guide-bar pivoted to the
15 offset and provided with a perforated plate and bolt for adjusting it with relation to the knife, substantially as specified.

20 6. In a corn-harvester, the combination, with the main frame, the platform thereon, the rear transverse bar, the arm mounted thereon and extending forwardly opposite the platform, the standards 13 and 14, rising from the arm, the cross-piece connecting the same,

the inclined bar 18, leading from the front end of the arm to the upper end of the front 25 standard 14, the front and rear bars 23 and 22, respectively, the latter provided with a pulley 26, the inclined bar 24, leading from the front end of the platform to the upper end of the standard 23, the cross-bar 25 be- 30 tween the standards 23 and 22, the rope connected at its front end to the cross-piece 15, connecting the standards 13 and 14, and the pulley mounted on the cross-piece, said rope being passed over the pulley 26 and over a pul- 35 ley 16, mounted on the cross-piece, of a knife located between the bars 13 and 14 and a box adjacent to the knife, substantially as specified.

In testimony that I claim the foregoing as 40 my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH J. SINGLEY.

Witnesses:

J. M. TURNER,
C. C. WINGERT.