

No. 688,630.

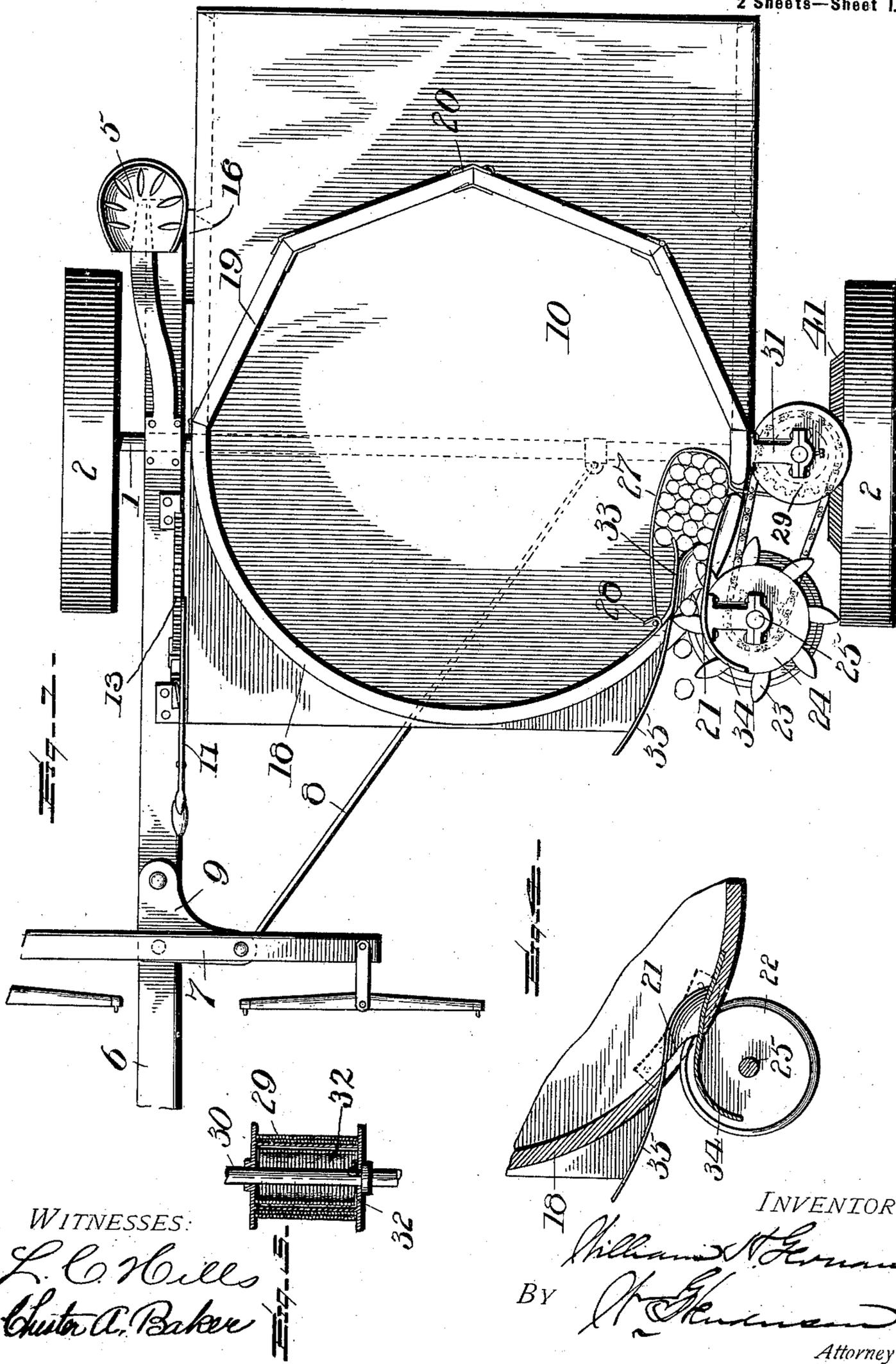
Patented Dec. 10, 1901.

W. H. GERNAND.
MACHINE FOR SHOCKING CORN.

(Application filed May 5, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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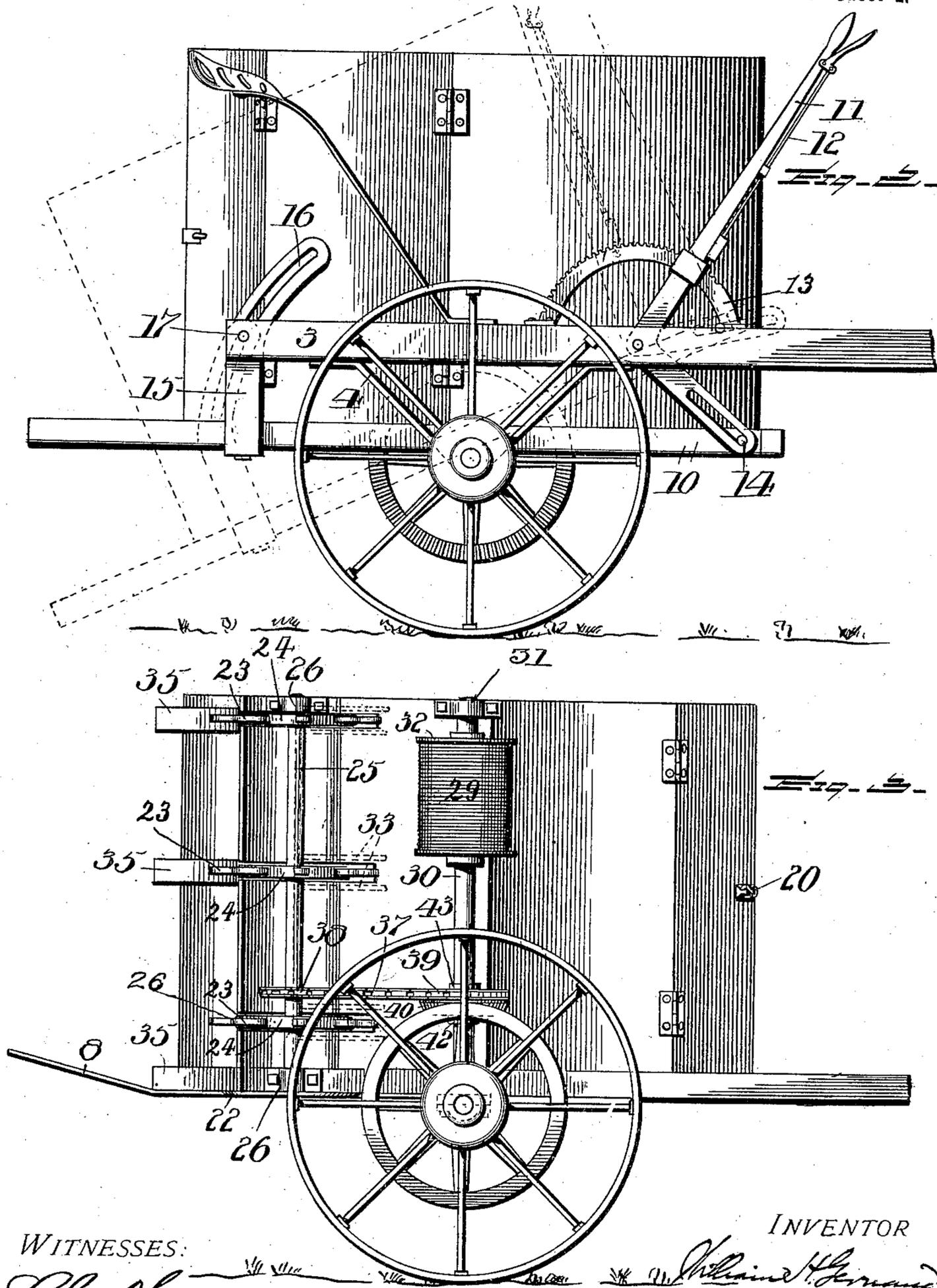
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UNITED STATES PATENT OFFICE.

WILLIAM H. GERNAND, OF ALVIN, ILLINOIS.

MACHINE FOR SHOCKING CORN.

SPECIFICATION forming part of Letters Patent No. 688,630, dated December 10, 1901.

Application filed May 5, 1900. Serial No. 15,625. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. GERNAND, a citizen of the United States, residing at Alvin, in the county of Vermilion and State of Illinois, have invented certain new and useful Improvements in Machines for Shocking Corn; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to corn-shocking machines; and it has for its object to provide such a machine in which as the machine advances the cornstalks will be cut and then guided in a vertical position into a crib adapted to hold the stalks until the shock of the desired dimensions is formed, the strand which is to bind the shock being gradually fed or paid out as the stalks accumulate in the crib, the strand thus being in position to bind the stalks of the shock together when the shock is completed, the crib being then tilted so as to permit the shock to slide therefrom and stand in an upright position upon the ground as the machine is moved forward.

It has also for its object to provide improved features in construction, arrangement, and combination of parts, whereby a simple and efficient machine of the character mentioned is formed.

To the accomplishment of the foregoing and such other objects as may hereinafter appear, the invention consists in the construction and also in the combination of parts hereinafter particularly described and then sought to be clearly defined by the claims, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a plan view of the machine; Fig. 2, a side elevation showing in dotted lines the position of the crib when tilted to discharge the shock. Fig. 3 is a side elevation looking at the opposite side from Fig. 2. Fig. 4 is a detail sectional view through a portion of the crib at the point where the stalks enter the crib, and Fig. 5 is a detail view of the spool which carries the binding-strand.

The numeral 1 designates the axle; 2, the

drive-wheels; 3, a frame supported upon the axle by a bracket 4, upon which frame is mounted the seat 5, while 6 designates the tongue or pole, 7 a whiffletree, and 8 a draft-rod connecting the axle to a casting 9, secured to the pole.

The numeral 10 designates a platform, which is pivotally supported on the axle 1, so that it may be tilted by means of a lever 11, fulcrumed to the frame 3 and having a pawl 12 to engage a segment-rack 13, so as to hold the platform and the crib which it supports in proper position, the short arm of the lever 11 being slotted and connected by a pin 14 with the platform 10, as indicated in Fig. 2, the platform also having secured to it a bracket 15, the upper portion of which is curved and formed with a slot 16 for the passage of a pin 17, said bracket thus serving to brace the connection of the platform with the frame 3 and also to guide the platform in its tilting movement. Upon the platform is placed the crib 18, one side of which toward the rear of the platform is composed of hinged sections 19, adapted to be swung or moved apart when the shock is to be discharged, so that the shock may pass out of the crib and slide down the rear portion of the platform, which forms an inclined platform or board to the rear of the crib, down which the shock will slide when it is to be deposited on the ground, the rear lower end of the shock coming first in contact with the ground, thus permitting the platform to be moved from under the shock and causing the shock to stand on end when discharged from the machine. While the crib is being filled the hinged sections thereof are held together by any approved form of staple 20.

The crib at one side toward its front has a portion cut away from top to bottom to form an opening or mouth 21 for the entrance of the cornstalks, the platform at such point being provided with a knife or cutter 22 for cutting the stalks as the machine is advanced, said stalks as they are cut one after another being moved in an upright position into the crib through the mouth or opening therein, the stalks being fed therein by means of fingers 23, secured by hubs 24 or otherwise to a vertical rotatable shaft 25, supported in boxes 26, supported from the crib and the platform,

any desired number of these feed-fingers being located at appropriate points in the length of the rotatable shaft. As the cut stalks are moved in an upright position into the crib by means of the rotating fingers they are pressed against a binding-strand 27, which has one end secured to a hook 28, attached to the inside of the wall of the crib, which strand is unwound from a reel or spool 29, supported so as to rotate upon a shaft 30, mounted in a fixed position in boxes or brackets 31, secured to the outside of the crib and platform, said strand being unreel by the pressure of the cornstalks against the same as the stalks are accumulated in the crib, the strand being held under tension by means of a spring 32, secured at one end to the shaft 30 and at the other end to or bearing against the reel or spool 29, and in the manner described the strand is caused to encircle the bunch or shock of stalks and also to hold the same in an upright position while being accumulated or assembled within the crib to form the shock. When the shock of desired dimensions is formed, the strand is severed from the spool and its ends tied together, so as to bind the stalks in shock form, or, what is preferable, a separate binding-twine will be passed around the shock to bind the same and the strand 27 then released from the hook 28, when the spring-tension spool will wind up the strand, so that it may again be extended across the inlet-opening to perform again its function of supporting the stalks in an upright position while being accumulated for the formation of another shock.

To the inside wall of the crib, along one side of the opening or mouth 21, are secured any desired number of spring-fingers 33, which are designed to press against the stalks as they are moved into the crib, and thus assist in holding them in an upright position, and on the opposite side of said opening or mouth there is secured to the crib a shield 34, which extends to the outside of the crib and curves partially around the shaft 25 and the hubs 24 of the feed-fingers, the fingers working through suitable slots in said shield, this shield serving to prevent the corn-blades from entwining around the shaft or entangling with any part of the mechanism which feeds the cornstalks into the crib and also serving to guide the blades inwardly or to draw them together as the machine advances. Curved deflectors or guides 35 are provided in front of the crib at one side of the opening therein and opposite to the feed-fingers, as indicated in Figs. 1, 3, and 4, the forward portion of the platform being cut away at that point, so as to aid in directing inwardly cornstalk-blades as the machine advances.

The shaft 25, which carries the feed-fingers 23, is rotated by means of a sprocket-chain 37, which passes around the sprocket-wheel 38, secured to the shaft 25, and also around a sprocket-wheel 39, mounted loosely upon the shaft 30, the sprocket-wheel 39 being

formed as a part of a bevel-pinion 40, which meshes with a bevel-gear 41, attached to one of the drive-wheels 2, the bevel-wheel 40 and sprocket 39 being held in position by the collars 42 and 43 on the shaft 30.

The end of the platform 10 where the knife or cutter 22 is located is cut away on an incline or bevel, as indicated in Figs. 1 and 4, so that the stalks will ride up said incline as they are moved into the crib.

Under the construction and arrangement of parts specified the cornstalks are severed from the ground as the machine is drawn forward, and they are then by the positive feed of the fingers moved into the crib, each succeeding stalk pressing against the stalks which have preceded it, and these stalks are held in an upright position within the crib by the binding-strand, which is progressively unreel from the spool as the stalks accumulate until the shock of the desired dimensions is formed, whereupon the ends of the binding-strand are tied together, the hinged sections of the crib thrown open, the platform tilted, and the completed shock deposited upon the ground in an upright position, and so the operation continues in succession until the whole field of cornstalks have been made into shocks.

The machine is composed of comparatively few parts, each of which is simple in construction, and the parts are so combined as to make the machine most satisfactory in performing its work.

I have illustrated and described with particularity the preferred details of construction and arrangement of the several parts; but it is obvious that changes can be made in the details and essential features of my invention be retained.

Having described my invention and set forth its merits, what I claim is—

1. In a machine for shocking corn, the combination with a platform and a crib mounted thereon, said crib having a vertical opening formed in one side thereof at its forward portion for the passage of cornstalks, of means for severing the cornstalks, means located at one side of the opening into the crib for positively feeding the stalks in an upright position into the crib, a deflector located at the opposite side of the opening into the crib and extending forward of said opening outside of the crib, and means for holding the stalks in an upright position as they are passed through the side opening in the crib, said means consisting of a strand secured at one side of the opening in the crib, and a spring-tension rotatably-supported spool located at the opposite side of the opening in the crib and having the strand secured thereto, the spool end of the strand and its other end both being at the same side of the crib, substantially as described.

2. In a machine for shocking corn, the combination with a platform and a crib mounted thereon, said crib being formed at one side

with an opening for the passage of corn-
 stalks, of means for severing the stalks, means
 for feeding the stalks through the opening
 into the crib in an upright position, spring-
 5 fingers extending into the crib and located
 at one side of the opening into the crib, a
 strand passing around the stalks to sustain
 the same in an upright position on the plat-
 10 form, said strand extending across the open-
 ing into the crib and having one end secured
 adjacent to one side of the opening, and a
 "paying-out" device for the strand located
 at the other side of the opening and to which
 15 the opposite end of the strand is secured,
 said sustaining-strand normally lying adja-
 cent to the opening into the crib to prevent
 the first stalks from falling as they enter the
 crib, said "paying-out" device and the end of
 20 the strand secured to the crib, both being on
 the same side of the crib and adjacent to the
 opening through which the stalks enter where-
 by the strand will prevent the stalks from
 falling as they enter the crib, substantially
 as described.

25 3. In a machine for shocking corn, the com-
 bination with a platform and a crib mounted
 thereon, said crib having an opening for the
 passage of cornstalks, of the rotatable shaft
 provided with fingers for feeding stalks in an
 30 upright position through the opening into the
 crib, a strand passed around the stalks to
 support them in an upright position in the
 crib, a shaft having a spool mounted loosely
 thereon from which the strand is paid out as

the stalks accumulate in the crib, a driving- 35
 gear mounted on said shaft and deriving
 power from a drive-wheel of the machine,
 and means for transmitting motion from said
 gear to the shaft carrying the fingers which
 feed the stalks to the crib, substantially as 40
 described.

4. A machine for shocking corn comprising
 a tilting platform, a crib mounted thereon
 and formed with an opening for the entry of
 cornstalks, an inwardly-extending deflector 45
 located at one side of said opening, a rotata-
 ble shaft provided with fingers located op-
 posite to said deflector and at the opposite
 side of the inlet-opening into the crib, means
 for driving said shaft, spring-fingers extend- 50
 ing into the crib from one side of the inlet-
 opening therein, a strand for supporting the
 stalks in an upright position as they accu-
 mulate within the crib, said strand being se-
 cured at a point to one side of the inlet-open- 55
 ing into the crib, and a spring-tension spool
 for carrying the supporting-strand and from
 which the strand is fed as the stalks accu-
 mulate, said spool being supported at the
 opposite side of the opening to where the 60
 strand is secured, substantially as described.

In testimony whereof I affix my signature
 in presence of two witnesses.

WILLIAM H. GERNAND.

Witnesses:

WILLIAM H. COLLINGS,
 CHESTER A. BAKER.