(No Model.) 2 Sheets—Sheet 1.

R. E. WITT.

CORN SHOCKING MACHINE.

No. 561,249. Patented June 2, 1896.

Fig. 1.

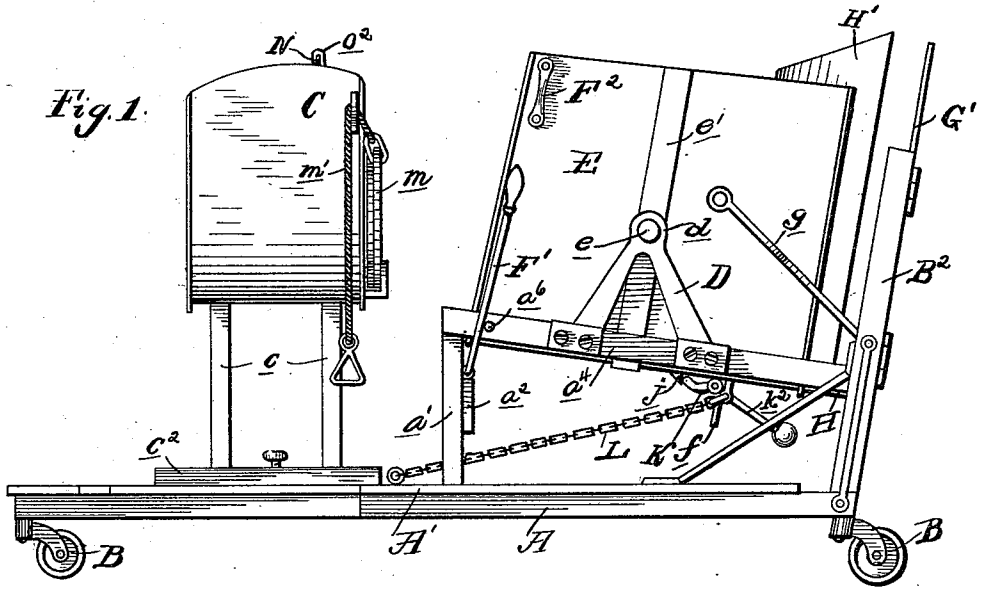
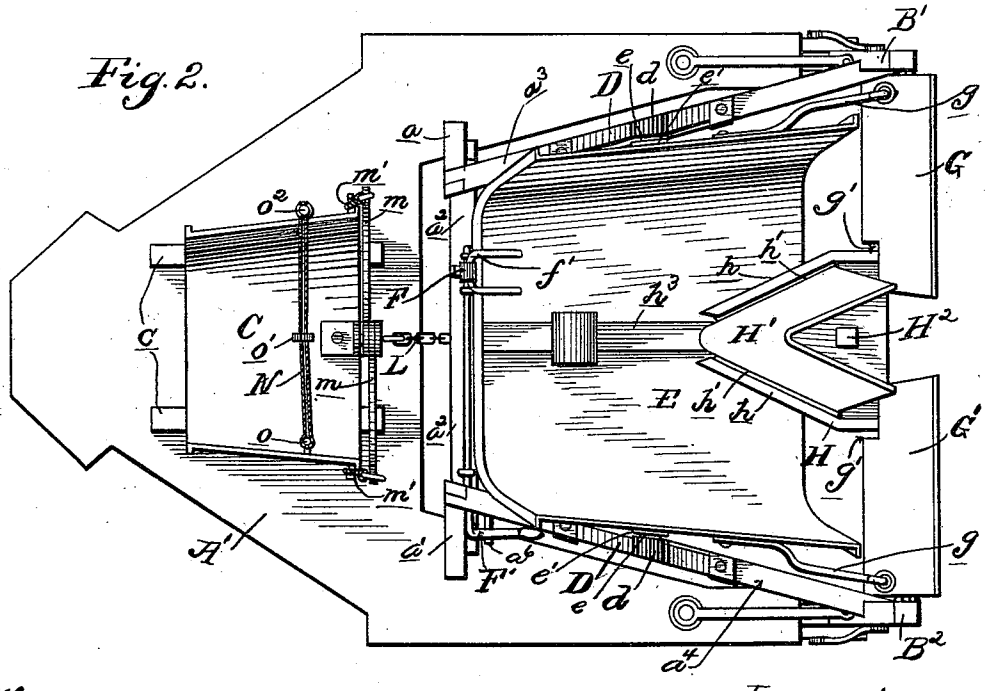


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3

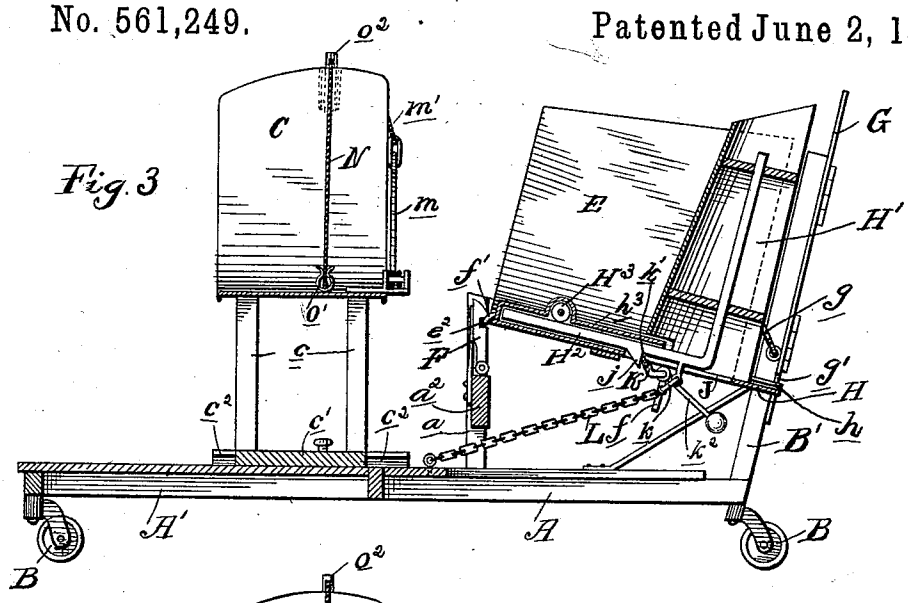


Fig. 4.

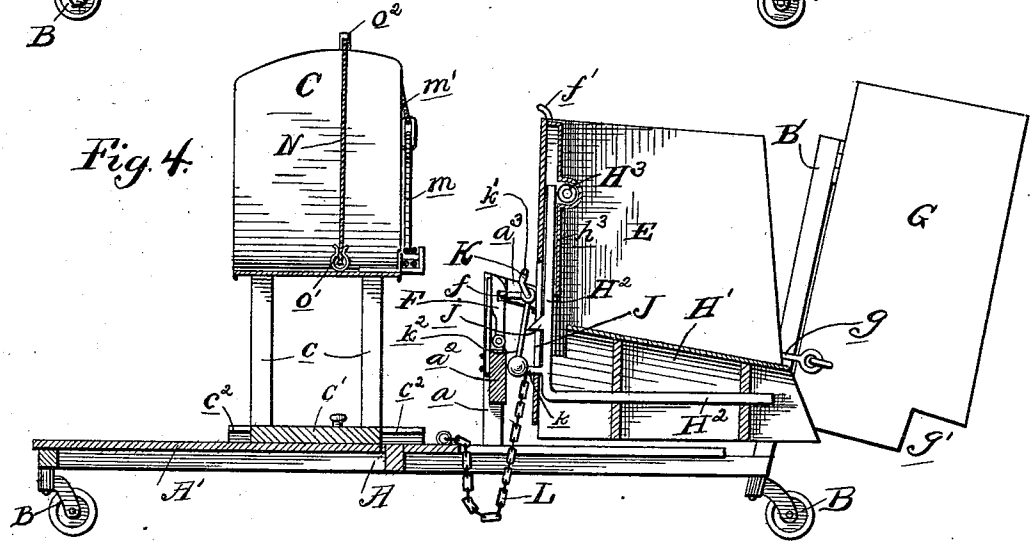
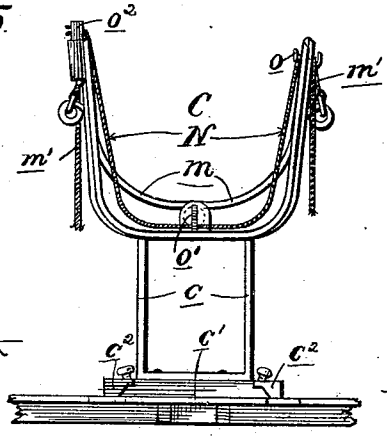


Fig. 5.



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UNITED STATES PATENT OFFICE.

ROSS E. WITT, OF CLARKSVILLE, IOWA.

CORN-SHOCKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 561,249, dated June 2, 1896.

Application filed December 13, 1895. Serial No. 572,025. (No model.)

To all whom it may concern:

Be it known that I, ROSS E. WITT, a citizen of the United States, residing at Clarksville, in the county of Butler and State of Iowa, have invented certain new and useful Improvements in Corn-Shocking Machines; and I do hereby 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.

This invention relates to an improvement in corn-shocking machines, and it is embodied in the construction and arrangement of apparatus hereinafter described, and definitely pointed out in the claims.

The invention consists, first, in the special form and arrangement of the shock-former; second, in the adjustable means for adapting the former to stalks of varying lengths; third, in means for spreading the butts of the stalks and causing a positive delivery of the shock without drawing, and, fourth, in special features of construction which render the machine simple, effective, and practical in operation.

In the accompanying drawings, wherein like letters of reference designate corresponding parts in the several views, Figure 1 is a side elevation of the machine. Fig. 2 is a plan view. Fig. 3 is a longitudinal section. Fig. 4 is a similar view showing the parts in position to discharge the shock. Fig. 5 is a front elevation of the adjustable section.

It is to be understood that the machine shown and hereinafter described is for use more particularly in connection with a cutting attachment or corn-harvesting machine.

In the drawings, A designates the base-frame mounted on suitable wheels B. The wheels may, however, be replaced by suitable runners, if desired. On the platform A′ of the frame is mounted the adjustable portion C of the shock-former, while on a suitable superstructure is mounted the tilting member. The superstructure consists of the standards a a', connected at points intermediate their ends by the cross-bar a^2. At the rear of the frame A are the vertical posts B′ B^2, suitably braced. Connected to the upper ends of the standards a a' and extending rearward, outward, and slightly downward are the side bars a^3 a^4, their rear ends being connected to the lower portion of the posts B′ B^2.

Mounted on the bars a^3 a^4 are the uprights D, having suitable journal-boxes d at their upper ends, in which are journaled the stub-shafts e of the tilting former E.

The former E is constructed, preferably, of sheet-iron and tapers from its rear, the same being reinforced by a strengthening-band e', extending transversely around its center, and to which the shafts e are secured.

The former E has a tilting movement in its bearings from a horizontal to a perpendicular position, as shown, and it is held in its positions by a spring-catch F, pivotally mounted on the cross-bar a^2, which engages a locking-lug f on the under side and a locking-loop f' on the rear edge of the former. The catch has a recess e^2 with horizontal shoulders, against which the parts f f' engage, and are prevented thereby from moving.

F′ designates a withdrawing-lever pivotally mounted on the cross-bar a^2 and rigidly connected with the catch at its inner end. The outer end of the lever is cranked or turned up to a point in convenient reach of the operator and by the spring of the catch is normally held in a forward position against a stop a^6. By drawing the cranked portion of the lever back the catch is withdrawn from the parts f f' and the former released.

F^2 designates a handle, which may conveniently be employed for tilting the former E when loaded. The same, however, may be dispensed with.

Hinged on the posts B′ B^2 are the swinging gates G G′, which are arranged to close the end of the former E. These gates are connected to the former by connecting-rods g, pivotally secured to the former at points above and in advance of the center thereof, and preferably to the lower edges of the gates. The lower inner corners of the gates are cut away, as at g', to permit the guide extension H of the former to pass beyond the gates.

To spread the butts of the shocks and to form a ventilating-space at the base, it has been suggested to employ a V-shaped spreader. I have taken advantage of such

suggestion and employ the V-shaped spreader H'. These spreaders have generally heretofore been fixedly secured to the tilting former, and thereby the discharge of the shock is materially interfered with and is wholly dependent on the butts striking the ground and drawing the shock out from the former and off from the spreader. I have devised means for overcoming such objections and have illustrated a convenient form of device for accomplishing the result, which consists, primarily, in slidingly mounting the spreader on the former.

On the base of the former is the tapering guide H, having the overhanging edges h, in which are placed the flanges h' on the inclined rear edges of the spreader H'. The rear portion of the guide is straight and the flanges h parallel, as shown. By this means the spreader is permitted a longitudinal movement in the channels formed by the flanges or overhanging edges h, and when pressed forward is wedged in between the flanges and held firmly from lateral movement.

To the under side of the spreader is attached a guide-bar H^2, which is extended along and secured to the spreader, the same serving as a support and brace. Its forward end is bent at right angles and passed into a guide-tube h^3, formed in the bottom of the former. The strain or pressure on the outer end of the spreader is thereby resisted and the spreader held in perfect alinement. Conveniently I arrange an antifriction-bearing in the guide-tube, which consists of the roller H^3, journaled transversely in suitable bearings in the bottom of the former.

In the lower face of the former is an elongated groove J, through which passes a latch j, rigid on the under side of the angle-arm of the guide-bar H^2. This latch has an eyebolt or stud h^3 secured thereto and is the means for limiting the movement of the spreader by coming in contact with the end walls of the slot J.

To hold the spreader in its forward or elevated position, I provide a gravity-catch K, consisting of a bar journaled in suitable ears on the under side of the former, spanning the slot and latch and provided with a lip or offset k', with which the catch engages. The end k^2 of the bar K extends back and downward and is suitably weighted, so that the offset is normally held in the catch of the latch.

L designates a chain or other flexible band connected to the eye k of the latch at one end and to the front platform at its other end. This chain is of a length sufficient to act to draw the latch forward as the former is tilted, so that the latch will engage the catch or offset k'.

As the former is tilted into a vertical position the arm k^2 strikes the cross-bar a^2, which forces the arm back, disengaging the latch, and the load will press the spreader down to a point in close proximity to the ground and the load will quickly slide from the former, the gates having been thrown open during the movement of the former.

The forward member C of the former is wholly independent of the tilting member. It is mounted on standards c, which in turn are mounted on a sliding base c', secured in between longitudinal cleats c^2 on the platform. By this means the part C can be moved toward or from the part E to suit the machine for different lengths of corn. Suitable means may be employed to lock the member C in its adjusted positions.

Mounted on the rearward edge of the member C are the curved compressor-arms m, pivoted at their lower ends and suitably curved to conform to the shape of the shock. These arms have the drawing-cords m' attached to their ends.

N designates a section of binding-twine looped over the hook o and passing into the spring-clamp o' at the base of the former C, while its opposite end carries a suitable implement o^2, normally fitted in a pocket on the side of the former.

In operation the stalks are placed in the former and the compressor-arms drawn up to compress the ends of the stalks. The twine is then tightly tied around the compressed ends. The operator now presses the crank-lever forward, permitting the former E to be tilted, and thereupon the shock is deposited on the ground in an upright position.

It is to be understood that I do not limit myself to the special mechanism described and shown, as I desire it understood that many minor changes and alterations can be made in the construction without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a corn-shocker, the combination with a frame, of a tilting former, and a longitudinally-adjustable former in advance of the tilting former, substantially as described.

2. In a corn-shocker, the combination with a tilting former member, of a longitudinally-adjustable former member in advance thereof, and compressors carried by the adjustable former.

3. In a corn-shocker, the combination with a frame, of a tilting former, an adjustable former in advance thereof, a slidingly-mounted base on which the adjustable former is mounted, and cleats on the frame between which the base is secured, substantially as described.

4. In a corn-harvester, the combination with a frame, of a tilting shock-former, and an independently-sliding spreader at the rear of the former, substantially as described.

5. In a corn-shocker, the combination with a frame of a tilting shock-former, an inde-

pendently-sliding spreader, and means for positively drawing the spreader back as the former is tilted to a horizontal position.

6. In a corn-harvester, the combination with a frame, of a tilting shock-former, an independently-movable spreader, means for locking the spreader while the former is in a horizontal position, and means for releasing the spreader when the former assumes a vertical position, substantially as described.

7. The combination with a tilting former, of a sliding spreader, and an antifriction connection between the spreader and former, substantially as described.

8. The combination with a tilting former, of a sliding spreader, a guide on the former in which the spreader works, means for locking the spreader in the guides, and means for releasing the spreader upon the movement of the former, substantially as described.

9. The combination with a tilting frame, and the gates, of a sliding spreader and means for governing the movement of the spreader, substantially as described.

10. The combination with a tilting former, of a sliding spreader, a supporting-bar slidingly connected with the former, a latch thereon, and means for releasing the latch upon the former assuming a vertical position.

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

ROSS E. WITT.

Witnesses:
CHAS. A. VAN VLACK,
J. Y. HAZLETT.