

No. 759,725.

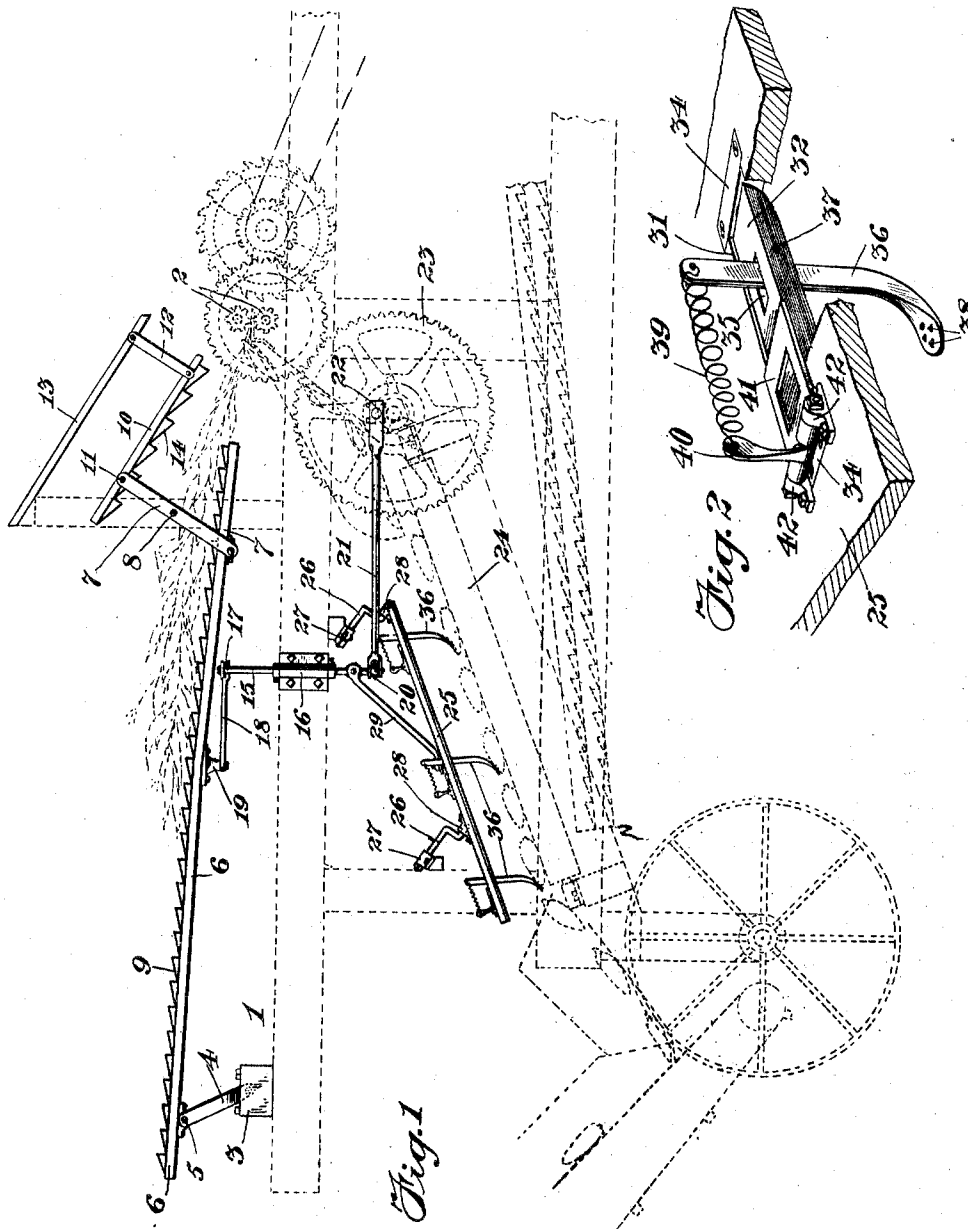
PATENTED MAY 10, 1904.

W. B. MARTINDALE.
CORN HUSKING AND SHREDDING MACHINE.

APPLICATION FILED MAY 18, 1903.

NO MODEL.

8 SHEETS—SHEET 1.



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3 SHEETS—SHEET 3.

Fig 7

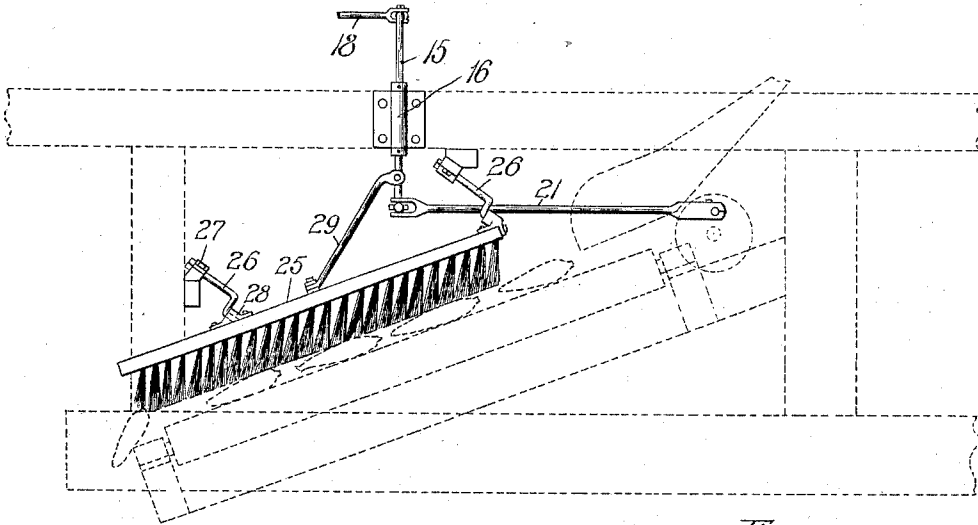


Fig. 8

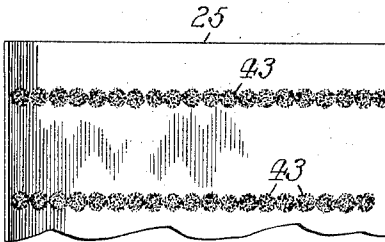


Fig. 9

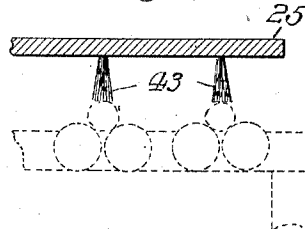


Fig. 10

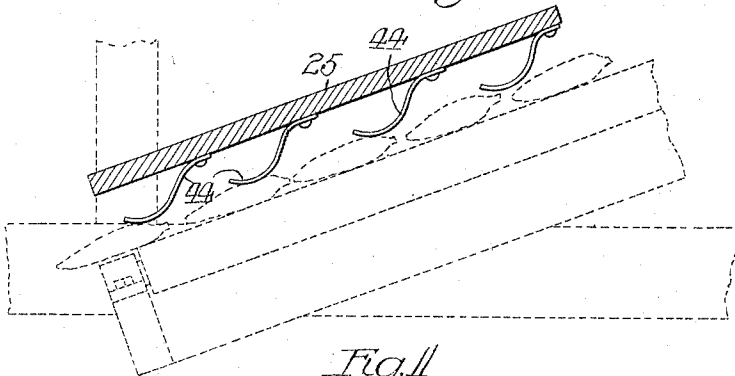
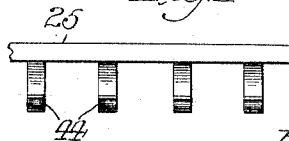


Fig. 11



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UNITED STATES PATENT OFFICE.

WARREN B. MARTINDALE, OF ROCHESTER, INDIANA.

CORN HUSKING AND SHREDDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 759,725, dated May 10, 1904.

Application filed May 18, 1903. Serial No. 157,650. (No model.)

To all whom it may concern:

Be it known that I, WARREN B. MARTINDALE, of Rochester, in the county of Fulton and State of Indiana, have invented certain new and useful Improvements in Corn Husking and Shredding Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which corresponding numerals of reference in the different figures indicate like parts.

The object of my invention is to provide improved means in connection with a corn husking and shredding machine for feeding the cornstalks to the snapping-rolls and for causing the ears of corn to be brought into proper contact with the husking-rolls, while at the same time they may be prevented from clogging.

A further object is to so protect and shield the husking-rolls that the clothing or limbs of the users of the machine may not be caught thereby and carried into the rolls, thus eliminating a serious danger to those who may be employed in operating the machine.

To these ends my invention consists in the combination of elements hereinafter more particularly described, and definitely pointed out in the claims.

In the drawings, Figure 1 is a side view of so much of the working parts of my improved machine as serve to illustrate my invention, the frame and other well-known parts with which the same are intended to coact being indicated in dotted lines. Fig. 2 is an enlarged detail view in perspective of the movable shield for covering the husking-rolls, a portion of the board being broken away to show one of the spring-controlled presser-feet. Fig. 3 is a plan view of the mechanism for feeding the cornstalks to the snapping-rolls. Fig. 4 is a plan view of a portion of the husking-roll shield and presser-foot mechanism supported thereby. Fig. 5 is a sectional view in detail, taken upon the line 5 5, Fig. 4. Fig. 6 is a perspective view in detail of the rock-shaft for actuating the husking-roll shield and stalk-feeding mechanism. Fig. 7 is a side elevation in detail of a modified form of husking-roll shield with the parts

for suspending and actuating the same. Fig. 8 is a bottom view in detail of a portion of said shield. Fig. 9 is a transverse sectional view in detail of a portion of said shield, showing the relation between it and the husking-rolls, which are indicated in dotted lines. Fig. 10 is a longitudinal vertical sectional view in detail of a still further modification of a husking-roll shield, and Fig. 11 is an end view thereof.

Referring to the drawings, 1 represents generally the usual framework of a corn-husking machine having snapping-rolls 2 mounted thereon and arranged to rotate in the ordinary way. Pivotaly attached to bearings upon blocks 3 3, secured to the top of the frame upon the opposite sides of the machine, are inclined bars 4 4, the upper ends of which are pivoted at 5 5 to an inclined stalk-feeding platform 6, extending from the forward end of the machine to within a short distance of the feed-rolls 2, the incline being toward said feed or snapping rolls. Said platform consists of a single unitary structure, and the end thereof nearest to the feed-rolls is pivotaly suspended from bars 7 7 upon opposite sides thereof, which bars are in turn pivotaly attached, as shown at 8 8, to vertical supports. (Indicated in dotted lines in Figs. 1 and 3.) Parallel serrated bars 9, the serrations of which project toward the snapping-rolls, are attached to and preferably constitute a part of said movable platform or feed-board. A short counterpart feed-board 10 is placed above the feed-platform 6 and inclined downwardly and rearwardly toward the feed-rolls. The upper end of the board 10 is pivotaly attached at 11 11, respectively, to the upper ends of the bars 7, while the lower end of said feed-board is pivotaly suspended, by means of bars or links 12 12, Figs. 1 and 2, to frame-pieces 13, one of which is shown in Fig. 1. The board 10 is provided with teeth 14, similar to those upon the feed-board 6. A rock-shaft 15, Figs. 1, 3, and 6, is mounted in a vertical bearing 16, attached to the upper portion of the frame, said rock-shaft being provided at its upper end with a horizontal arm 17, the free end of which is jointedly connected, by means of a pitman 18, to a wrist-pin or sta-

tionary bearing 19, rigidly attached to the bottom of the feed-board or platform 6. Upon the lower end of said rock-shaft is a horizontal arm 20, which is jointedly connected, by means of a pitman 21, to a wrist-pin 22 upon a gear 23, forming one of the usual train in communication with a source of power.

The mechanism described constitutes that for aiding the operator in feeding the stalks, the operation of which will be explained in describing that of the machine as a whole.

Located above the usual husking-rolls 24, which are indicated in dotted lines in Fig. 1, is a movable shield 25, (shown also in Figs. 2, 4, 5 and indicated in dotted lines in Fig. 6,) which shield consists of a board having a length preferably somewhat less and a width sufficient to cover the entire series of husking-rolls. Said shield is inclined, as shown, to conform to the usual incline of the rolls, and its lower end is by preference extended somewhat below that of said rolls. Said shield is preferably suspended by means of four crank-arm supports 26, the upper ends of which are journaled in stationary journal-bearings 27, the axes of said journal-bearings for the upper and lower supports being in parallel planes inclined preferably at an angle of about forty-five degrees and intersecting that of the shield 25. The lower ends of said supports are provided with like journals, which are fitted in inclined journal-bearings 28, rigidly attached to the top of said shield 25. It will thus be seen that said shield is so supported as to leave it free to oscillate upon said swinging supports 26 in the manner hereinafter described. In order to impart such oscillatory movement to the shield, I employ the following-described mechanism: Attached to the rock-shaft 15 is an arm 29, the end of which is jointedly connected to a pitman 30, Figs. 3 and 6, which is attached in turn to a suitable wrist-pin or other approved connection upon the top of the shield 25. The rocking of the shaft 15, therefore, serves to impart a lateral vibratory movement to said shield for the purpose hereinafter set forth.

In the vertical plane above the meeting faces of each pair of husking-rolls is formed slots or openings 31 in the board or shield 25, into which I insert rocker-bars 32, having journals 33, Fig. 5, supported in plates 34 34, fitted in the respective ends of said openings. Each of said rocker-bars is provided with a central longitudinal slot 35, through which is projected a presser-foot, (designated generally by 36,) which is pivotally sustained in said slot by means of a pin 37, loosely passed through bores in said rocker-bar and presser-foot, respectively. The lower portion of said presser-foot is bent backwardly more or less and is intended to remain in close proximity to the husking-rolls. Said presser-feet are preferably formed from sheet metal, substantially as shown in Fig. 2, and are provided with

teeth 38 to more effectually engage the corn-husks. The upper ends of the arms of the presser-feet are each connected, by means of a spiral spring 39, to an upwardly-projecting arm 40, attached to or integral with a flat plate 41, which is pivoted in bearings 42 at the lowermost end of the opening above the plate 34. The result of this construction is that the tension of the spring tends to hold the presser-feet downwardly against or close to the husking-rolls, while at the same time the plate 41 is held with an elastic pressure against the flat surface of the rocker-plate 35. This tends to hold the presser-feet in a vertical plane parallel to the axes of the rolls; but inasmuch as a lateral vibration is imparted to the shield 25, which cannot always be followed to its full limit by the lower ends of the presser-feet, it follows that any material resistance encountered by the latter when brought into contact with the ears of corn will cause the top edges of the rocker-bars 25 to press against the plates 41 with sufficient force to cause the springs 39 to yield and permit the bars to rock instead of breaking.

Having thus described the several parts of my improved device, I will now explain its operation and advantages. The vibratory movement of the rock-shaft 15 imparts a forward and reciprocatory movement to the feed-platform 6, which in turn actuates the feed-board 10, the movements of the two being reversed with respect to each other—that is to say, that with each backward movement of the part 6 there would be a forward movement of the part 10. The movements described serve to continuously agitate the corn-stalks and carry them to the snapping-rolls. The same movement of the rock-shaft serves, as stated, to vibrate the shield 25 in such a way as to cause the presser-feet to engage the ears of corn and roll them over in contact with the husking-rolls, while at the same time they serve to prevent the ears from clogging.

While I prefer to use the vibratory feed-table in conjunction with the vibratory feed-board above and at its forward end, I do not contemplate being confined to such construction, inasmuch as improved results may be accomplished by the feed-table alone, nor do I confine myself to the specific means shown for producing the vibratory movements of either the feed-table or those of the husking-roll shield, as it is evident that said parts, respectively, may be actuated by different mechanical means. Furthermore, I do not limit myself to the specific means above described in conjunction with the husking-roll shield for engaging the ears of corn as they pass beneath said shield, as it is manifest that other means may be employed for such purpose. For example, in Figs. 7 to 9, inclusive, I have shown brushes 43, attached to the bottom of the shield-board, said brushes being inclined rearwardly, substantially as indicated, or in

lieu of said brushes flat curved springs 44, Figs. 10 and 11, may be attached to the bottom of said shield-board and extended downwardly and rearwardly, substantially as shown in the last-named figures.

Having thus described my invention, I claim—

1. The combination with a corn-husking machine, of an inclined unitary feed table or platform mounted upon swinging supports, a superposed feed-board at the forward end of said feed-table, having forwardly-inclined teeth upon its under face and means for imparting a reciprocatory movement to said feed-board and feed-table respectively.

2. The combination with a corn-husking machine, of a unitary feed table or platform having rigid serrations upon its upper face, said table being mounted upon movable supports, a movable superposed feed-board located at the forward end of said feed-table having forwardly and downwardly inclined teeth upon its lower face, and means for imparting a longitudinal reciprocatory movement to said feed-table and feed-board.

3. The combination with the snapping-rolls of a husking-machine, of a unitary feed table or platform mounted upon movable supports, a superposed feed-board located at the forward end of said table in close proximity to said rolls, and having forwardly-inclined teeth upon its under face, said feed-board being likewise mounted in movable supports, said feed table and board lying in inclined intersecting planes with respect to each other, and means for simultaneously imparting a longitudinal reciprocatory movement to said feed-table and feed-board in opposite directions.

4. The combination with the snapping-rolls of a husking-machine, of a unitary forwardly and downwardly inclined longitudinally-movable feed-table having teeth or serrations upon its upper surface, a longitudinally-movable forwardly and downwardly inclined feed-board located in close proximity to said snapping-rolls above said feed-table and means for simultaneously imparting a longitudinal reciprocatory movement to said feed-table and feed-board in opposite directions.

5. The combination with the snapping and husking rolls of a corn-husking machine, of an inclined shield or board movably suspended above said husking-rolls, and means for imparting a movement to said shield up and down, longitudinally and laterally.

6. The combination with the snapping and husking rolls of a corn-husking machine, of an inclined movable husking-roll shield-board located above said husking-rolls, spring-controlled presser-feet depending from said board in the vertical plane of the meeting faces of said husking-rolls, and means for imparting a vibratory movement to said shield, up and down longitudinally and laterally.

7. The combination with the snapping and husking rolls of a corn-husking machine, of a husking-roll shield-board suspended in swinging bearings the axes of which are in vertical planes parallel to those of the husking-rolls, and also in planes at an angle to the axes of said rolls.

8. The combination with the snapping and husking rolls of a corn-husking machine, of a husking-roll shield-board movably suspended from crank-arms, the axes of which are inclined at an angle to the axes of said husking-rolls.

9. The combination with the snapping and husking rolls of a corn-husking machine, of the shield 25 suspended upon the inclined hangers 26, spring-controlled presser-feet 36, and means for vibrating said shield.

10. The combination with the snapping and husking rolls of a corn-husking machine, of a shield movably suspended above to cover the area over said rolls, means for vibrating said shield, and means upon the bottom thereof for contacting under spring tension with the ears of corn as said shield is vibrated, said contacting means being arranged to yield laterally and longitudinally.

In testimony whereof I have signed this specification, in the presence of two subscribing witnesses, this 14th day of May, 1903.

WARREN B. MARTINDALE.

Witnesses:

D. H. FLETCHER,
CARRIE E. JORDAN.