

(No Model.)

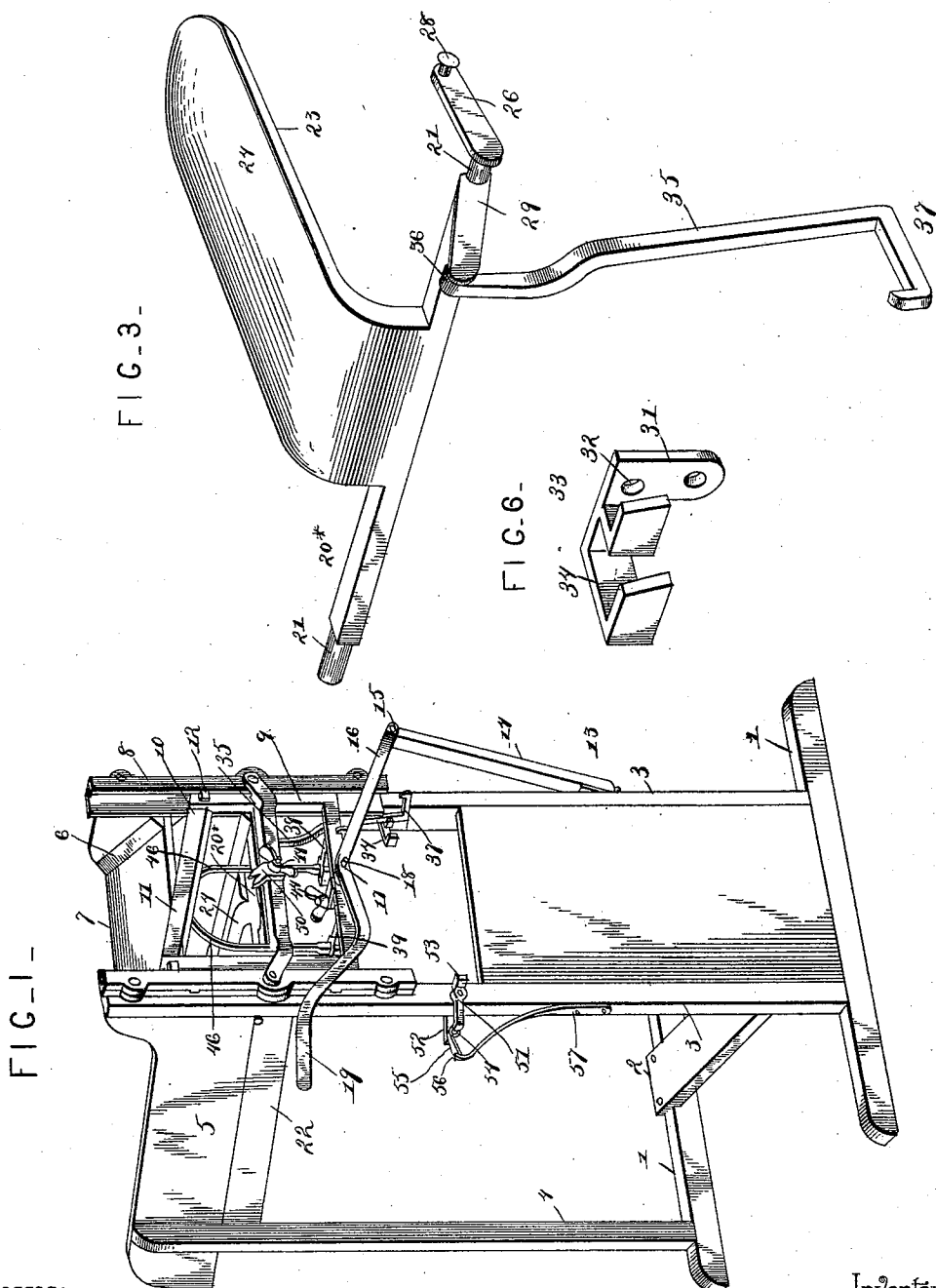
2 Sheets—Sheet 1.

G. W. CROSBY.

COMBINED FEED CUTTER AND CORN HUSKER.

No. 461,405.

Patented Oct. 13, 1891.



Witnesses:

Geo. C. French.

W. F. Duval.

By his Attorneys,

C. A. Snow & Co.

Inventor
George W. Crosby

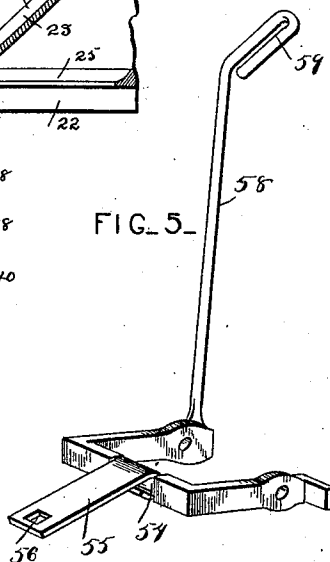
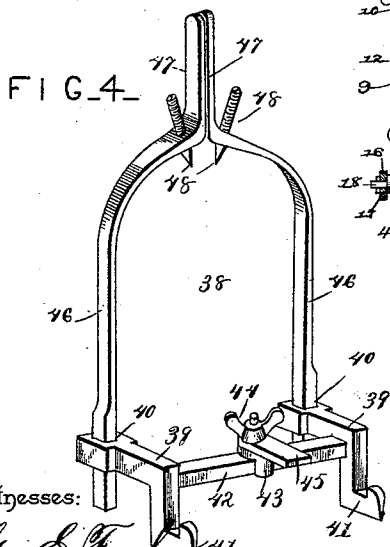
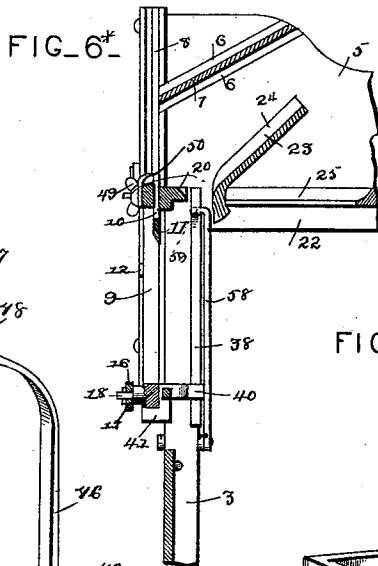
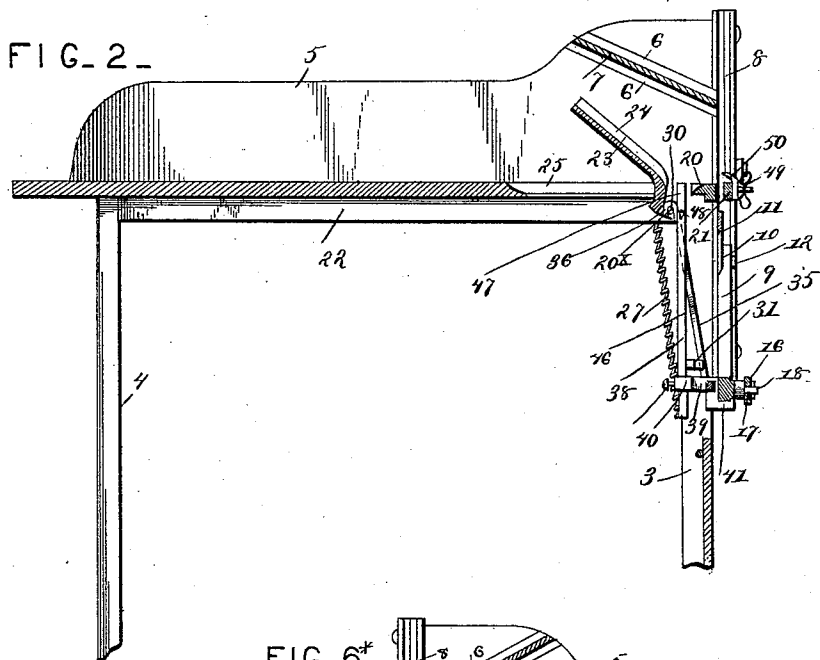
(No Model.)

2 Sheets—Sheet 2.

G. W. CROSBY.
COMBINED FEED CUTTER AND CORN HUSKER.

No. 461,405.

Patented Oct. 13, 1891.



Witnesses:

Geo. C. French
W. L. Duwall

By his Attorneys,

C. A. Snow & Co.

Inventor
George W. Crosby

UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON CROSBY, OF CLINTON, ARKANSAS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF THREE-FOURTHS TO W. J. PATE AND A. B. BRITTIN, OF SAME PLACE, AND A. H. JOBLIN, OF BATESVILLE, ARKANSAS.

COMBINED FEED-CUTTER AND CORN-HUSKER.

SPECIFICATION forming part of Letters Patent No. 461,405, dated October 13, 1891.

Application filed February 4, 1891. Serial No. 380,145. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON CROSBY, a citizen of the United States, residing at Clinton, in the county of Van Buren and State of Arkansas, have invented a new and useful Combined Feed-Cutter and Corn-Husker, of which the following is a specification.

This invention has relation to a combined feed-cutter and corn-husker; and the objects in view are to provide a machine of cheap and simple construction, that is adapted to serve as an ordinary feed-cutter and to provide attachments to be applied to the same, whereby said machine is converted from the ordinary feed-cutter to an improved corn-husker adapted to receive the ears of corn, sever the butts from the same, and simultaneously tear the husks therefrom and deliver the butts, corn, and husks.

Various other objects and advantages of the invention will appear in the following description; and the invention consists in certain features of construction and combinations of parts, hereinafter specified, and more particularly pointed out in the appended claims.

Referring to the drawings, Figure 1 is a perspective of a combined feed-cutter and corn-husker constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a detail in perspective of the corn-discharging apron. Fig. 4 is a detail in perspective of the corn-husking frame. Fig. 5 is a detail in perspective of the husk-discharging and husking-frame-clearing knocking-rod. Fig. 6 is a detail in perspective of the guide-bracket. Fig. 6* is a similar view to Fig. 2, looking in the opposite direction.

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

1 designates the transverse base-bars connected by the connecting-bar 2, and from said base-bars rise front standards 3 and rear standards 4, which in the usual manner support the feed-box 5, the opposite sides of which are provided with inclined grooves 6, in which is removably and adjustably mount-

ed a guide-board 7 for guiding the feed to the cutting mechanism, hereinafter described.

Secured to the opposite front standards 3 is a pair of vertical guides 8, in which there is mounted for reciprocation a U-shaped knife-carrying frame 9, one terminal of which is longer than the other, and said terminals are provided with aligning inclined recesses 10, opposite which are formed perforations, and in the pair of recesses is located an inclined knife or cutter 11, secured to the terminals of the frame by means of bolts 12.

To one of the standards 3 there is hinged, as at 13, an arm 14, to the upper end of which is pivoted, as at 15, a lever 16, bent near its center and provided with a perforation 17, which receives and is journaled upon a stud 18, formed upon the front face, and at the center of the U-shaped cutter-frame, beyond which the lever 16 terminates in a handle 19, located at the opposite side of the structure. By vibrating the lever 16 it will be observed that the knife and its frame may be raised and lowered between the cutting-bars 20, which connect the two vertical guides 8 at each side of the path of the knife, and the machine is thus adapted for use as an ordinary feed-cutter.

20^x designates a rock-shaft, which is provided at its ends with reduced cylindrical bearings 21, which are journaled in bearing-openings formed in the side bars 22 of the frame-work immediately below the feed-box. Cast integral with the shaft 20^x is an upwardly and rearwardly disposed tongue or apron 23, the upper face of which is concaved, as at 24, and the under face of which is convexed, so that said tongue is designed to be seated within a concavity 25, formed in the bottom of the feed-box 5. One of the bearings 21 terminates beyond the side bar 22, and is there provided with an outer crank-arm 26, to the end of which is connected by a pin 28 a coiled spring 27, the lower end of which is fastened to one of the side or front standards 3. The bearing 21, which carries the arm 26, also has projecting from its inner end a crank-arm 29, provided with a laterally-disposed pin 30.

To the standard 3 at that side of the machine at which the crank-arm 29 is located there is secured a bracket 31, comprising a securing-plate 32, through which are passed 5 screws into the face of the standard 3, and also a front guide 33 and rear guide 34.

35 designates an L-shaped rod which terminates at its upper end in a hook 36, adapted to removably engage the crank-pin 30, and at 10 its lower end is forwardly bent, as at 37, into the path of the cutter-frame 9. The rod 35, when in use, is located in the front guide 33 of the guide-bracket 31, but may be withdrawn therefrom and inserted in the rear 15 guide 34, by which it will be held out of the path of the cutter-frame 9.

38 designates the husking-frame, and is shown best in Fig. 4, the same consisting of a lower clamping-frame comprising opposite inverted-L-shaped side bars 39, which at their 20 rear ends terminate in angular sockets 40, and at their front ends in forwardly-disposed clamping members 41. The bars 39 are connected by a transverse bar 42, provided with 25 a central threaded stud 43, upon which is mounted a thumb-nut 44, and interposed between the nut and base of the stud a forwardly-disposed clamping-plate 45, adapted to coact with the clamping members 41 and 30 thus removably embrace the transverse bar of the U-shaped cutter-frame 9, and therefore move with said frame.

46 designates a pair of spring-arms, terminating at their lower ends in angular tenons 35 fitting the openings 40 of the side bars 39. Above the side bars the arms converge toward each other, and near their extremities are bent into parallelism, forming abutting-plates 47, immediately below which the arms are 40 perforated, and have threaded therein adjustable pointed husking pins or spurs 48.

Upon the front cutter-bar there is secured, by means of a screw and nut 49, a dog or stop 50, the upper end of which is rearwardly disposed, and terminates in sharpened points 45 directly in advance of the tongue or apron 23.

To that standard 3 opposite which is located the hinged arm 14 there is pivoted, as at 51, a U-shaped stirrup 52, one terminal of 50 which—that is, the outer terminal—is extended beyond its pivot and laterally bent to form a lug 53, located in the path of the cutter-frame. The cross-bar of the stirrup is reduced to form a cylindrical bearing 54, and 55 around the same is loosely passed a plate 55, which near its outer end is provided with an opening 56. A flat spring 57 is secured to the standard 3, just referred to, and at its upper end is loosely connected or engaged with 60 the opening 56 of the plate 55, the tendency of the spring being to maintain the stirrup at its rear end in an elevated position. The inner end of the stirrup or its opposite terminal has rising therefrom and rigidly secured thereto a vertical knocking-rod 58, the 65 upper end of which is bent to form a head 59. If desired, the spring may be removed or dis-

engaged from connection with the plate 56, so that the knocking-rod will remain inactive.

Having described the construction of the 70 apparatus as designed for both feed-cutting and corn-husking, and the operation of the same for the former purpose, I will now proceed to describe the operation of the machine for the latter purpose. 75

The ears of corn are introduced, butt-end first, upon the apron or tongue 23, the upper 80 face of which is concaved, so as to approximate and form a receptacle for the same. The knife is raised by the lever 19 and the 85 ear of corn moved forward until its butt is in contact with the teeth of the stop 50, by which means it is held and the knife lowered. The lowering of the knife causes the severing of the butt, and immediately there- 90 after or by the time the severing has been accomplished the husking pins or spurs 48 take at opposite sides of the husk and tear the same from the ear, the spring-arms 46 separating, so as to pass over the corn during 95 the operation. By the time the huskers have accomplished their function the lower end of the cutter-frame has come in contact with the lug 53 of the stirrup 52 and operated the 100 knocker-rod 58, which is thrown across the path of the knife and husker and serves to loosen any of the husks or butts that may be sticking to the pins 48 or the stop 50. At the 105 same time that this is done the lower end of the cutter-frame comes in contact with the bent portion 37 of the rod 35, thus rocking the rock-arm and suddenly elevating the tongue or apron 23, which dumps the husked corn and any husks or other refuse from the same to the 110 ground, after which the same is returned to its normal position by means of the spring 27. In this manner corn may be husked as fast as the ears may be handled and the husks and butts separated as well as removed from the ears. 115

It will be apparent that the various attachments may be either removed or thrown out of operative position as heretofore described, and thus the machine quickly converted into 120 an ordinary straw-cutter. When employed as a straw-cutter, the guide 7 may be retained; but when employed as a husker the guide is removed. 125

Having described my invention, what I claim is— 130

1. The combination, with a feed-cutter comprising opposite vertical guides, a reciprocating cutter-frame, and means for operating the same, of a bar connecting the guides in front 135 of the cutter-frame, and a toothed stop removably mounted on the bar, substantially as specified.

2. The combination, with a feed-cutter comprising a vertically-reciprocating knife-carrying frame, of a pair of spring husking-arms 140 connected thereto and provided with inwardly-disposed husking-pins, substantially as specified.

3. The combination, with the feed-cutter

comprising opposite guides, a reciprocating U-shaped knife-carrying frame, of the opposite inverted-L-shaped bars 39, terminating at their rear ends in sockets 40 and at their front ends in clamping members 41, the connecting-bar 42, the threaded stud 43, the nut 44, and clamping-plate 45, combining with the clamps 41 for connection with the transverse bar of the cutter, the upwardly-disposed curved spring-arms 46, mounted in the openings 40 and having their upper ends bent into parallelism for abutting purposes, and the pair of husking-pins 48, threaded in openings in the arms, substantially as specified.

4. The combination, with a feed-cutter comprising a transverse vertically-reciprocating cutter-frame and means for operating the same, of a husking-frame removably mounted upon and operated by the cutting-frame, substantially as specified.

5. The combination, with a feed-cutter comprising a reciprocating husking-frame having husking-pins and a reciprocating cutter-frame for operating said husking-frame, of a lever for operating the cutter-frame, and a pivoted vibrating knocking-rod operated by said lever, substantially as specified.

6. The combination, with a feed-cutter comprising a vertically-reciprocating cutter-frame, a lever for operating the same, and a husking-frame operated by the cutter-frame, of a stirrup pivoted to the side of the feed-cutter and extended to form a lug projecting into the path of and adapted to be operated by said cutter-frame, a vibratory knocking-bar secured to the stirrup, and a spring connected with the stirrup and adapted to retract the same, substantially as specified.

7. The combination, with a feed-cutter comprising a vertically-reciprocating cutter-frame, a lever for operating the same, and a husking-frame operated by the cutter-frame, of a stirrup pivoted to the side of the feed-cutter and extended to form a lug projecting into the path of and adapted to be operated by said cutter-frame, a vibratory knocking-bar secured to the stirrup, and a spring removably connected with the stirrup and adapted to retract the same, substantially as specified.

8. The combination, with a feed-cutter comprising a vertically-reciprocating cutter-frame, a lever for operating the same, of a stirrup pivoted to the frame of the feed-cutter and having a lug located in rear of its pivot and extending in the path of the cutter-frame, a knocking-rod secured to the stirrup, and means for throwing the stirrup out of operative position with relation to the lever, substantially as specified.

9. The combination, with a feed-cutter comprising a feed-box, a reciprocating cutter-frame, and a husking-frame located in rear of the cutter-frame, of means for operating the reciprocating cutter-frame and husking-

frame, an apron pivoted in front of the bottom of the feed-box, and means for operating the same after each downward movement of the cutter, substantially as specified.

10. The combination, with the feed-cutter comprising the feed-box, the vertically-reciprocating knife-frame and lever for operating the same, of the rock-shaft journaled in the feed-box and provided with a crank and a rearwardly-disposed tongue or apron, and an L-shaped rod terminating at its upper end in a hook loosely engaging the crank and at its lower end terminating in the path of and adapted to be operated by the lowering of the cutter-frame, substantially as specified.

11. The combination, with the feed-cutter comprising the feed-box having the concave surface and a vertically-reciprocating cutter-frame and husking-frame, of a transverse rock-shaft mounted in bearings in the frame-work of the apparatus and provided with an outer and an inner crank, a spring connected to the outer crank and secured at its opposite end to the frame-work, and an L-shaped rod bent to form a hook at its upper end for engaging the crank and terminating at its lower end in the path of the cutter-frame, substantially as specified.

12. The combination, with the feed-cutter comprising the feed-box and a reciprocating cutter-frame, of a transverse rock-shaft having a rearwardly-disposed concave tongue or apron and provided with a crank having a pin, an L-shaped rod bent to form a hook at its upper end and removably engaging the pin and at its lower end forwardly bent into the path of the cutter-frame, and a bracket having front and rear guides for the reception of the bar, substantially as specified.

13. The combination, with the feed-cutter of the pivoted tongue or apron, the cutter-frame, means for operating the same, a rod connected to the tongue or apron and terminating in the path of the frame, and means for supporting the rod out of operative position with relation to the cutter-frame, substantially as specified.

14. In a feed-cutter, the combination, with a vertically-reciprocating cutter-frame, of a stop located in front of the same, a vertically-reciprocating husking-frame, a knocking-rod located at one side of the same and adapted to vibrate, a pivoted tongue located in front of the feed-board of the feed-box, and means for simultaneously operating the knife and husker and subsequently operating the knocking-rod and apron, substantially as specified.

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

GEORGE WASHINGTON CROSBY.

Witnesses:

JOHN K. HATCHETT,
C. W. PATTERSON.