(No Model.) 2 Sheets—Sheet 1.

J. EBERSOLE.

CORN MASHER AND CUTTER.

No. 605,704. Patented June 14, 1898.

Fig. 1

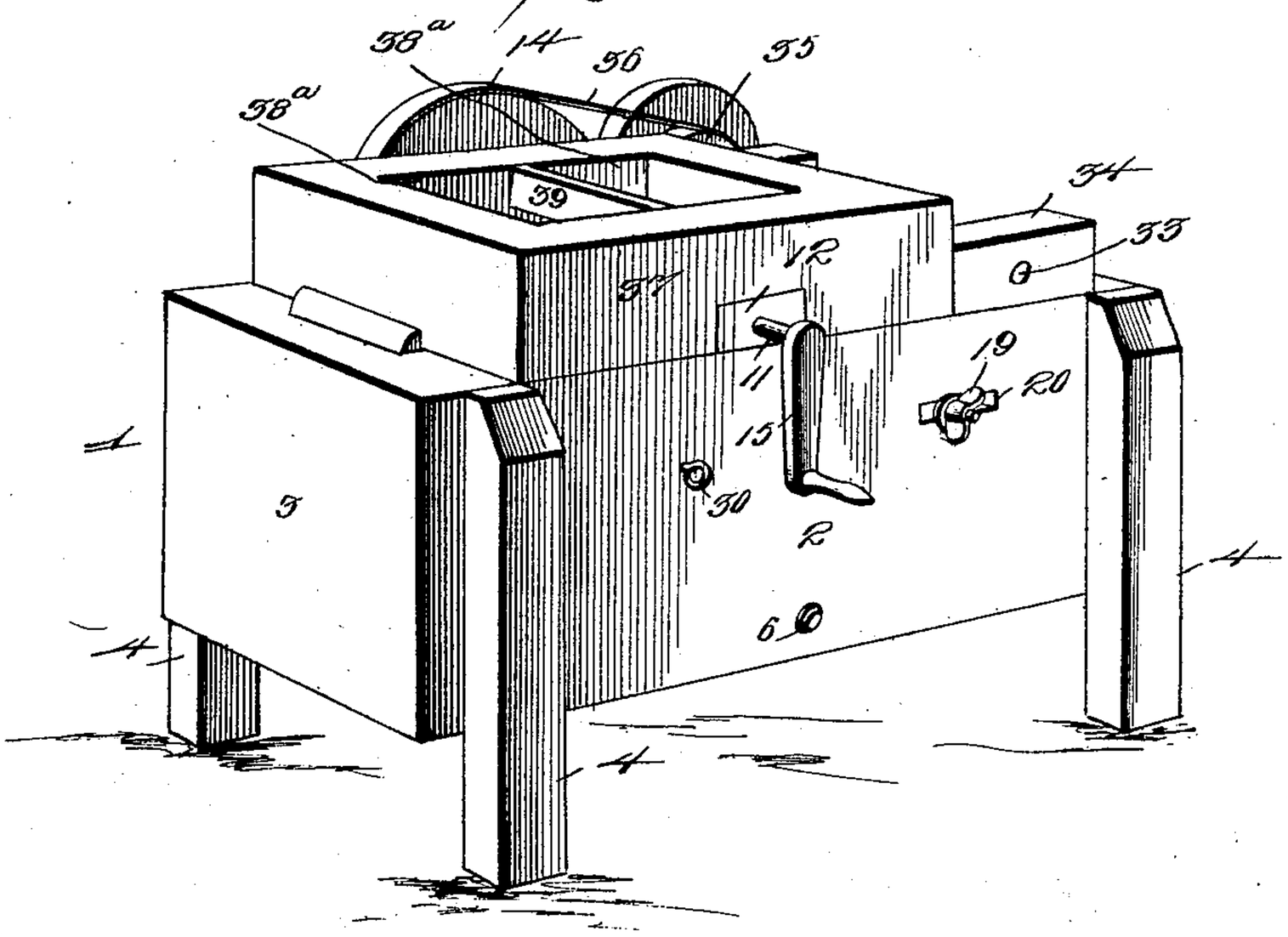
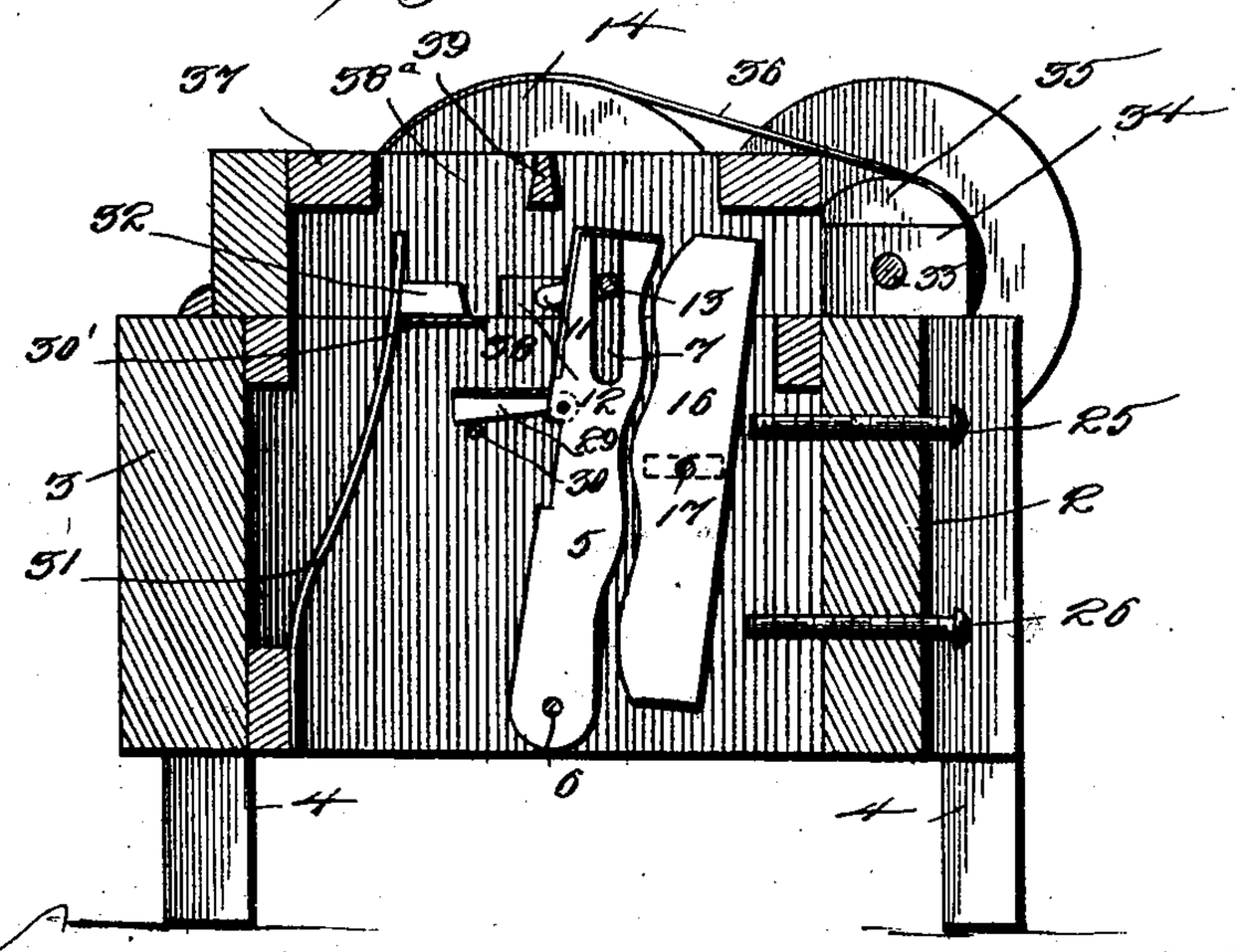


Fig. 2



WITNESSES

L. Loerth.

Victor J. Evans

INVENTOR

John Ebersole,

By John Wedderburn.

Attorney

(No Model.)

2 Sheets—Sheet 2.

J. EBERSOLE.

CORN MASHER AND CUTTER.

No. 605,704. Patented June 14, 1898.

Fig. 3

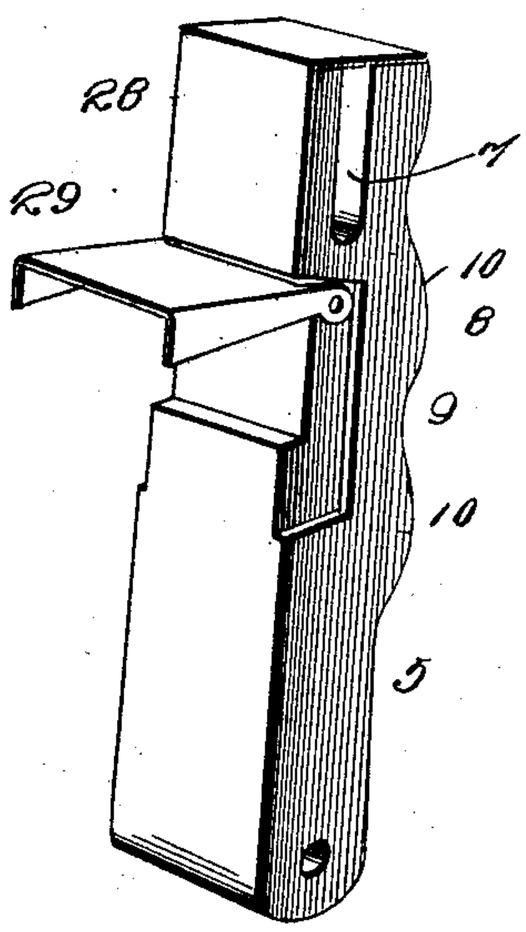


Fig. 4.

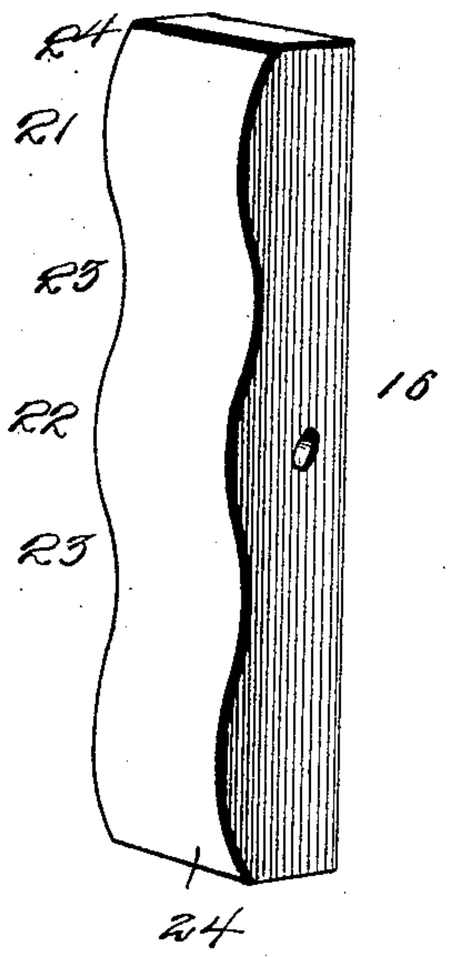
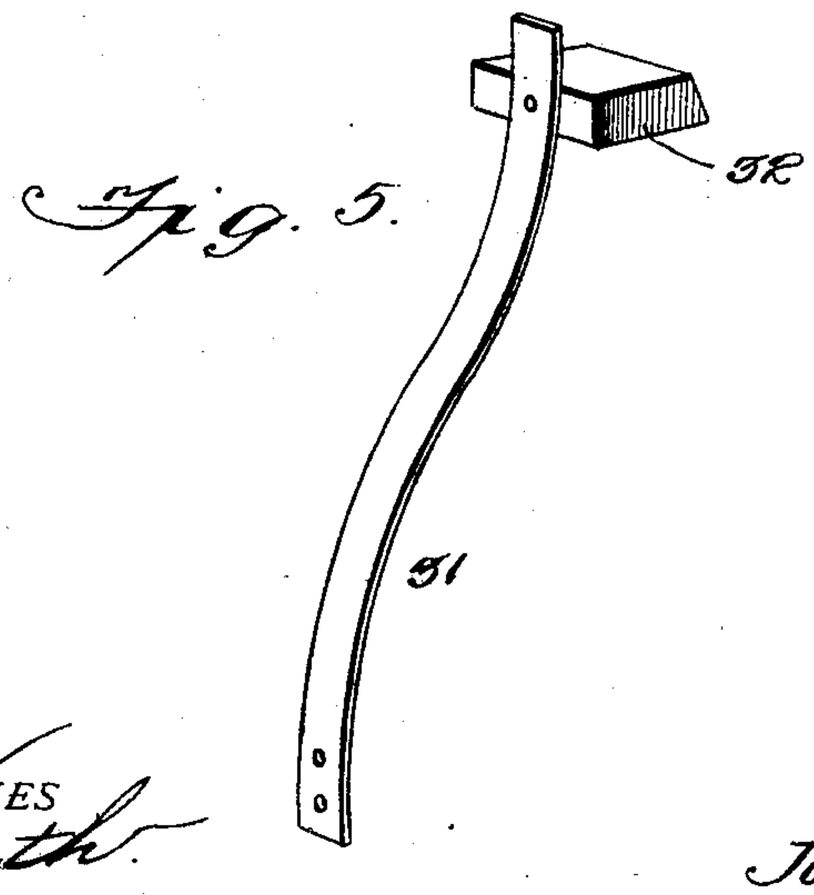


Fig. 5.



WITNESSES

Victor J. Evans

INVENTOR

John Ebersole,

By U. D. Stockbridge

his Attorney.

UNITED STATES PATENT OFFICE.

JOHN EBERSOLE, OF CHAMBERSBURG, PENNSYLVANIA.

CORN MASHER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 605,704, dated June 14, 1898.

Application filed June 18, 1897. Serial No. 641,222. (No model.)

To all whom it may concern:

Be it known that I, JOHN EBERSOLE, of Chambersburg, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Corn Mashers and Cutters; 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.

My invention relates to a machine for cutting and crushing ear-corn; and its object is to provide improved mechanism for cutting and crushing the corn to prepare it for stock-feed and dispense with the ordinary operation of grinding the corn for this purpose.

With this and other objects in view the invention consists in the novel constructions and combinations hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, illustrating the invention, Figure 1 is a perspective view of a machine embodying my invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a detail perspective view of the oscillatory crushing-jaw. Fig. 4 is a detail perspective view of the balanced jaw, and Fig. 5 is a view of the push-block and spring-arms by which it is carried.

Referring now more particularly to the accompanying drawings, the numeral 1 designates the frame of the machine, which in the present instance is shown as rectangular and consisting of side boards 2 and end boards 3. The machine is supported upon standards or legs 4, secured to the said side boards. Within this frame is mounted an oscillatory crushing-jaw 5, pivoted at the lower end thereof by a pivot pin or bolt 6 and provided at the upper end thereof with a longitudinal slot 7. This jaw is provided at one side with a crushing-face 8, having a central concavity 9 and convex portions 10 above and below said concavity. A crank-shaft 11 extends transversely of the frame and is mounted in bearing-blocks 12 at the top thereof, and this crank-shaft is provided with a central offset portion 13, operating in the said longitudinal slot 7 of the oscillatory jaw. The crank-shaft is provided at one end with a balance or drive wheel 14 and at the other end with a crank-handle 15, by which it may be operated.

16 designates a crushing-jaw arranged adjoining one end of the frame and pivotally mounted loosely, so as to tilt back and forth upon a pivot-bolt 17, which is capable of adjustment in a slot 19 in the side walls 2 of the frame in the direction of the length of said frame, and is provided with a wing-nut 20, which engages the threaded end thereof and is adapted to clamp the bolt in fixed position. The crushing-face 21 of the jaw 16 is adapted to coact with the crushing-face of the oscillatory jaw 5, and is provided at the center thereof with a convex projection 22 in line with the central concavity in the said oscillatory jaw, and above and below said convex portion with concavities 23 in line with the convex portions 10, arranged above and below the concavity of the oscillatory jaw. The face of the balanced jaw is beveled, as shown at 24, at the top and bottom.

By means of the slot 19, in which the bolt 17 fits, the jaw 16 may be adjusted to and from the oscillatory jaw to suit different sizes of ears of corn, and I have provided means for limiting the pivotal tilting movement of the jaw 16. This comprises two set-screws 25 and 26, projecting through one end wall of the casing and adapted to bear, respectively, upon the said jaw above and below its pivotal point and serving to limit the tilting movement. When the jaw 16 is in its vertical position, the inner ends of said screws are located a short distance from the side of said jaw, so that when the latter is tilted it will engage one or the other of said screws.

In the operation of the device the ear of corn is forced down between the two jaws, the beveled upper portion of the face of the jaw 16 and the tilting movement thereof serving to readily admit it. The crank-shaft is then operated with the result that the oscillatory jaw is moved toward the balanced jaw 16, the meeting concave and convex portions of the faces of the jaws serving to split the ear of corn lengthwise and also to crush it and break it crosswise. When the oscillatory jaw recedes, the lower end of the balanced jaw 16 tilts back or moves away from the jaw 5 to permit the crushed corn to drop

down below the frame or into a receptacle beneath the said frame, if desired, the tilting action of the jaw being effected by the weight of the cord on the lower end of said jaw below the pivot 17. The oscillatory jaw 5 is provided on the opposite side from its crushing-face with a head 28 and a pivoted table 29 below said head, said table being normally held up by a removable pin or bolt 30, passing through openings in the side board of the frame. Extending across the top of the frame, adjoining the oscillatory jaw, is a cutting-blade 30', having its cutting edge 38 facing the head of said jaw. Connected with the end board or wall of the frame in rear of said cutting-blade is a spring-arm 31, which projects above the frame and carries at its upper end a removable push-block 32, which is normally adapted to rest upon the upper surface of the blade, as shown. If it is desired to cut the corn, the ear is inserted down between the head of the oscillatory jaw and the cutting-blade, resting in an upright position on the table 29, and the jaw is then operated by the crank-shaft, so as to cause it to force the corn against the edge of said blade. The table 6 acts as a guide and enables the corn to be cut in pieces of uniform length. The lower end of the ear of corn drops down upon the pivoted table 29 upon the jaw receding, and the push-block, which has been forced back during the operation of cutting the ear of corn, forces the corn again back against the jaw by the spring-tension of its arm. When the oscillatory jaw is again moved back toward the blade, the pivoted table inclines downwardly and the piece of corn thereon is released and drops down below the frame. By removing the pin or bolt 20 the table may be dropped to permit any corn thereon to drop down independently of the movement of the oscillatory jaw, and this is especially useful should the parts become choked.

33 designates a drive-shaft mounted in bearings 34 on the frame and carrying at its outer end a belt-wheel or drive-pulley 35, which may be employed to impart motion to the balance-wheel by means of a belt 36 when it is desired to drive the machine by power. The belt-wheel may be driven by means of a pinion connected therewith or a belt extending around its circumference.

A cover-frame 37 may be employed, if desired. This cover is provided at each side with slots or openings 38^a, whereby it may be set over the bearings 12 and rest upon the upper surface of the frame. This cover may also be provided with a cross-bar 39, dividing it into two hopper-openings, whereby the ear of corn may be fed to the crushing apparatus independently of the cutting apparatus, and vice versa.

I desire it understood that I do not limit my invention to the special construction and arrangement of parts herein shown and described, but reserve to myself the right to make such changes in the construction and arrangement of parts as fairly fall within the spirit and scope of the invention.

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

1. In a machine of the class described, the combination of a frame, an oscillatory jaw mounted at the lower end thereof upon a pivot-bolt in said frame and provided at its upper end with a slot and at one side with a working or crushing face, a tilting jaw adjoining one end of the frame and pivoted centrally upon an adjustable pivot-bolt and provided with a working or crushing face beveled at the upper and lower end thereof, and set-screws projecting through said end wall of the face and adapted to bear upon the said tilting jaw above and below the pivotal point thereof, for limiting the tilting movement of said jaw, substantially as described.

2. In a machine of the class described, the combination of a frame, an oscillatory jaw pivotally mounted in said frame and provided at the upper end thereof with a slot and at one side with a working or crushing face and at the other side with a head, an adjustable tilting jaw acting in conjunction with the said working or crushing face of the oscillatory jaw, a crank-shaft operating in the slot of the oscillatory jaw, a cutting-blade on the frame adjoining the head of said oscillatory jaw, and a push-block acting in conjunction with said blade and jaw, substantially as described.

3. In a machine of the class described, the combination of an oscillatory jaw, and a crank-shaft for operating said jaw, a cutting-blade adapted to cut the corn forced toward it by said jaw, and a spring-actuated push-block normally resting upon the blade and adapted to force the corn toward the jaw, substantially as described.

4. In a machine of the class described, the combination of a frame, an oscillatory jaw mounted therein, a crank-shaft for operating said jaw, a cutting-blade extending transversely of the frame in juxtaposition to said jaw and adapted to cut the corn forced toward it by the jaw, and a push-block carried by a spring-arm and adapted to yield or give when the corn is pressed toward the cutting-blade, and to automatically press the remaining part of the corn-ear forward, so that it will drop between the jaw and blade, substantially as described.

5. In a machine of the class described, the combination of a frame, an oscillatory jaw mounted in said frame and provided with a table, a crank-shaft for operating the said jaw, a cutting blade or bar extending transversely of the frame and adapted to cut the ear of corn pressed toward it by the jaw, and a spring-arm projecting upward from the interior of the frame and carrying at its upper end a push-block normally resting upon the surface of the cutting-blade and adapted to press the corn toward the jaw as the said jaw

recedes from the cutting-blade, substantially as described.

6. In a machine of the class described, the combination of a frame, an oscillatory jaw mounted in said frame and provided at the upper end thereof with a slot, a head at one side and a working face at the opposite side, a tilting jaw mounted upon an adjustable pivot-bolt adjoining one end of the frame and provided with a working face adapted to act in conjunction with the working face of the oscillatory jaw, a tilting table mounted on the oscillatory jaw, a crank-shaft operating in the said slot of the oscillatory jaw, a cutting-blade extending transversely of the frame adjoining the head side of the oscillatory jaw and adapted to guide the ear of corn pressed toward it by said jaw so that the lower portion thereof will drop upon the said tilting table, and a spring-arm secured to the frame and provided at the end thereof with a push-block normally resting upon the said cutting-blade and adapted to push the uncut portion of the ear of corn toward the oscillatory jaw as the latter recedes from the cutting-blade, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN EBERSOLE.

Witnesses:
JOS. E. LEHMAN,
JOHN M. SEIDERS.