

(No Model.)

2 Sheets—Sheet 1.

McCLINTOCK YOUNG.
CORN HUSKING MACHINE.

No. 529,094.

Patented Nov. 13, 1894.

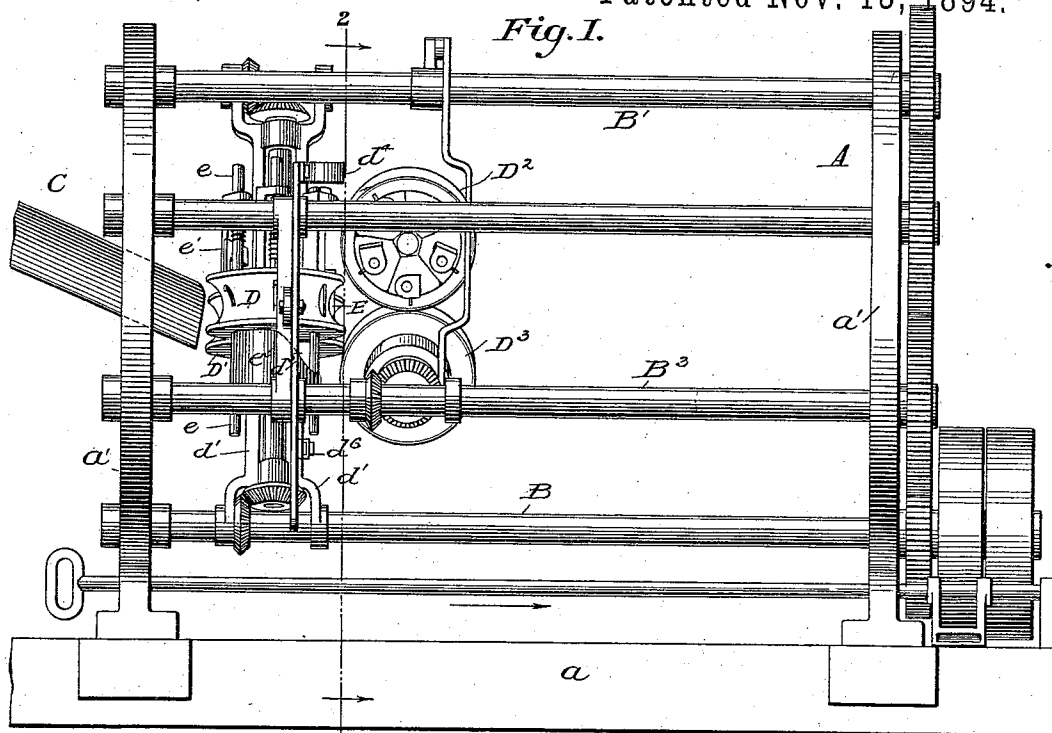
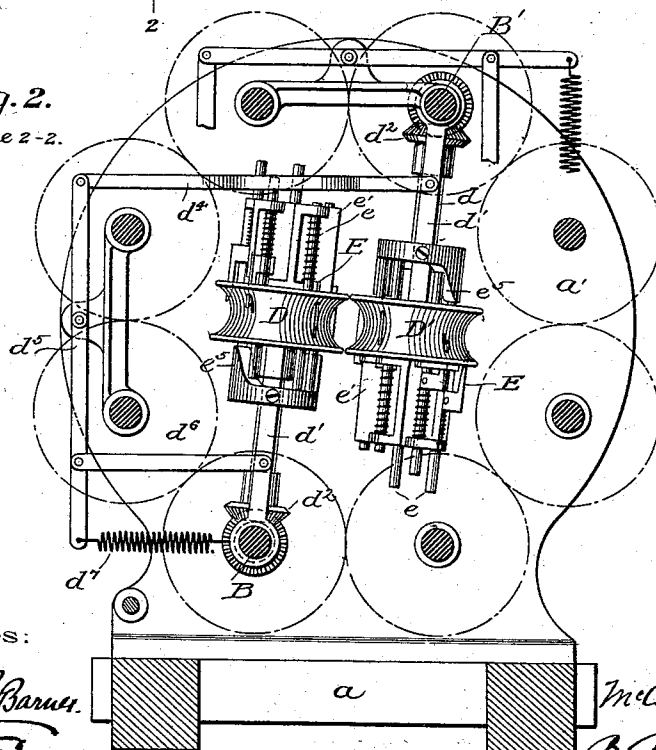


Fig. 2.
on line 2-2.



Witnesses:

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J. S. Elmore.

Inventor.

McClintock Young
By Philip T. Dodge
Attorney.

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Fig. 3.

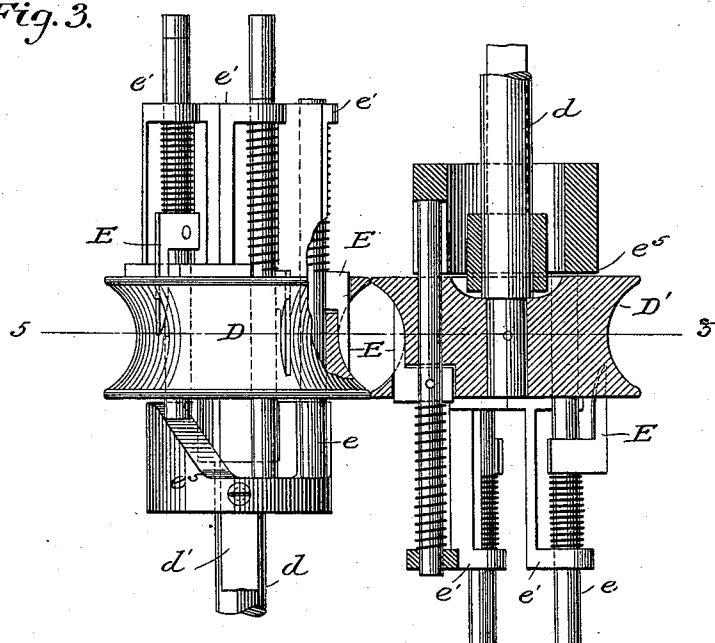


Fig. 4.

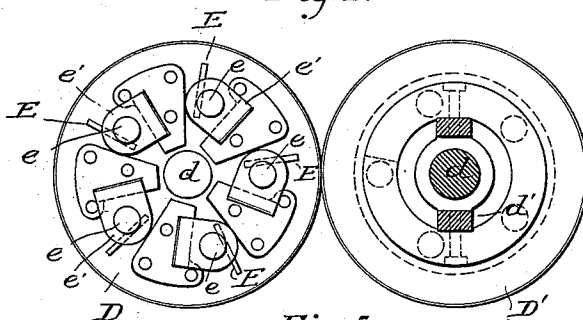
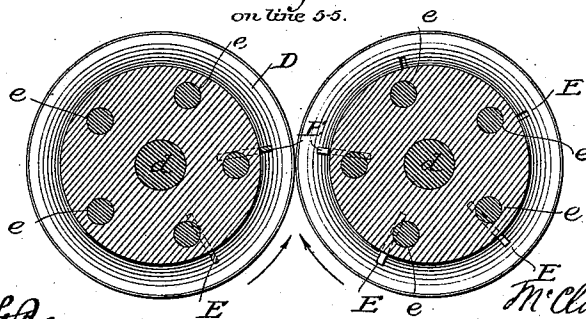


Fig. 5.
on line 5-5.



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UNITED STATES PATENT OFFICE.

MCCLINTOCK YOUNG, OF FREDERICK, MARYLAND.

CORN-HUSKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 529,094, dated November 13, 1894.

Application filed May 1, 1894. Serial No. 509,698. (No model.)

To all whom it may concern:

Be it known that I, MCCLINTOCK YOUNG, of Frederick, county of Frederick, and State of Maryland, have invented a new and useful
5 Improvement in Corn-Husking Machines, of which the following is a specification.

My invention relates to a machine for automatically stripping the husks from ears of corn and is based upon the employment of
10 co-operating rotary heads or carriers, provided with gripper fingers adapted to engage the husks and strip them from the ears, as the latter pass between the carriers. In the preferred form, represented in the drawings,
15 the carriers are in the form of circumferentially grooved wheels, arranged in opposition to each other, and urged together by a yielding pressure, the grippers being arranged to move in an axial direction, so that as the ears
20 are fed forward through the grooves between the wheels, the grippers are advanced and caused to engage the husks, which, by the continued rotation of the wheels, are stripped from the ears, the grippers being thereafter
25 retracted as they approach the distant side of the wheels to release the husks.

It will be obvious to the skilled mechanic, after reading this specification and considering the accompanying drawings, that the details of construction may be modified to a
30 very great extent, without passing beyond the limits of the invention, which includes any form of rotary carriers or feeders, provided with movable fingers adapted to engage
35 the husks and strip them from the advancing ears.

In the accompanying drawings, Figure 1, is a side elevation of my improved machine; Fig. 2, a vertical transverse section of the
40 same, on the correspondingly numbered line of Fig. 1, looking in the direction indicated by the arrows. Fig. 3, is a detail view, partly in section, of a pair of husking wheels. Fig. 4, is a plan view of the parts shown in Fig. 3.
45 Fig. 5, is a cross-section on the correspondingly numbered line of Fig. 3.

Referring to the drawings, A represents a rigid main frame which may be of any construction adapted to give support to the operative parts hereinafter described. It consists
50 in the present instance of a base *a*, having two upright frame plates *a'* fixed rigidly

thereto, in order to give support to the series of horizontal shafts B, B', &c. These shafts serve not only to impart motion to the husking wheels, but also as pivotal supports for
55 the wheel supporting arms or frames.

C represents an inclined trough, or conductor, through which the ears are introduced endwise, in order that they may pass
60 between the successive pairs of grooved husking wheels D D' and D², D³. There may be any desired number of pairs of wheels arranged in different angular relations, so that their gripping fingers may be certain to re-
65 move all portions of the husk. The first pair of wheels D D' are provided, as shown, with circumferential grooves of approximately semi-circular form, and the wheels are mounted with their edges opposing each
70 other, so as to prevent a round groove or opening through which the ears, gripped by the wheels, are advanced endwise.

The wheel D is fixed to a driving shaft *d*, provided with a beveled pinion *d*², through
75 which it receives motion from a corresponding pinion on the shaft B. The shaft *d* is mounted in a frame or support *d'*, which at its lower end is mounted upon and arranged to swing around the shaft B. The wheel D',
80 its driving shaft and its supporting frame, are precisely like those of the first named wheel, but are connected at their upper ends with the shaft B'. It will be observed that this arrangement permits the two wheels D
85 and D' to swing toward and from each other, in order to accommodate themselves to the varying sizes of the ears passing between them. The two wheels will be urged toward
90 each other by yielding pressure devices of any suitable character. A simple arrangement which effectively answers the purpose is shown in Figs. 1 and 2, in which *d*⁴, represents a link, extending from the supporting
95 frame of wheel D' to one end of a centrally pivoted lever *d*⁵, which is in turn connected at its opposite end through link *d*⁶, to the carrying frame of wheel D. A spring *d*⁷, connecting the lower end of the lever *d*⁵, with
100 one of the shafts, acts through the intermediate parts to urge the wheels together.

Each of the husking wheels is provided with a series of grippers or husking fingers or blades, E, arranged to slide in an axial di-

rection, through exposed slots in the periphery of the wheel, the ends of these fingers being pointed so that when thrust inward they will pass through and engage the husks without the danger of shelling the corn. These blades are advanced through the husk as the latter passes between the wheels. They continue to hold the husk and to carry it outward, away from the ear, as the latter passes forward between or beyond the wheels. The blades continue to hold the husks until they are advanced toward the outer or distant sides of the wheels, whereupon the blades are retracted and the husks released. This action may be effected by any suitable mechanism. As shown in the drawings, each blade is carried by a rod *e*, projecting beyond the two sides of the wheels and guided in arms *e'* fixed thereto. At one end each rod is encircled by a spiral spring which tends to force the blade backward out of the wheel. At the opposite end the rod is arranged to travel on a stationary cam plate *e''*, the surface of which is so shaped as to impart to the blade the necessary reciprocation during each revolution.

Behind the husking wheels D, D', is arranged the second pair of wheels D², D³, arranged to revolve in different planes. They are constructed, mounted and driven in all respects like the first named pair. If desired there may be a third, or even a fourth pair of wheels, arranged in like manner, the only requirement being that they shall revolve in planes in angular relations to each other, and that their relation shall be such as to permit the continuous passage of the ears through and between. At one end the various shafts are geared to the driving shaft B, which is provided at one end with fast and loose pulleys to receive a driving belt.

In action the ears are fed one after another between the wheels, which are rotated in the direction indicated by the arrow, the blades acting to successively engage the husks and strip them from the ears, at the same time feeding the latter forward to the next pair of wheels, and so on repeatedly.

It is manifest that the gripping fingers may be varied in form and that they may move in any desired direction in relation to the axis of the wheels, provided only they are adapted to engage and hold the husks. It will also be obvious that instead of the wheels, endless chains or belts could be provided, with husking fingers in like manner.

Having thus described my invention, what I claim is—

1. In a corn husking machine carriers for

positively feeding the ear endwise, in combination with reciprocating gripping devices sustained by the carriers and arranged to grasp the husks as the ear is advanced by said carriers and means for reciprocating the said gripping devices during the movement of the carriers.

2. In a corn husking machine coacting rotary carriers for positively feeding the ear endwise between them, in combination with gripping fingers sustained by said carriers and movable in the direction of the axes of said carriers and arranged to grasp the husk as the ear is advanced and means for operating said fingers.

3. In a corn husking machine two grooved coacting wheels, provided with gripping fingers or blades movable in a direction at right angles to the plane of rotation.

4. In a corn husking machine, rotary opposing wheels, gripping fingers or blades attached to said wheels, movable in an axial direction, and means for effecting the movement of such blades during the rotation of the wheels, substantially as described.

5. In a corn husking machine the combination of grooved co-operating wheels, axially movable blades or grippers therein, means for urging said blades in one direction and a cam acting to move them in the opposite direction.

6. In a corn husking machine and in combination with rotary carriers arranged in pairs and provided with movable gripping blades or fingers, supports for said carriers, adapted to move from and toward each other and connections for yieldingly pressing said supports and carriers together whereby they are caused to adapt themselves to the varying sizes of ears.

7. In a corn husking machine the rotary grooved carriers, their movable blades or grippers, means for actuating said blades, swinging supports for the carriers, and means for urging said carriers together.

8. In a corn husking machine the combination of a series of carriers provided with gripping devices, said carriers arranged in opposing pairs disposed at intervals around a common center; whereby the removal of all portions of the husk is insured.

In testimony whereof I hereunto set my hand, this 27th day of March, 1894, in the presence of two attesting witnesses.

McCLINTOCK YOUNG.

Witnesses:

MARSHALL FOUT,
J. MARSHALL MILLER.