

W. W. MORRAL.
MACHINE FOR BUTTING EARS OF CORN.
APPLICATION FILED FEB. 25, 1914.

1,376,720.

Patented May 3, 1921.
2 SHEETS—SHEET 1.

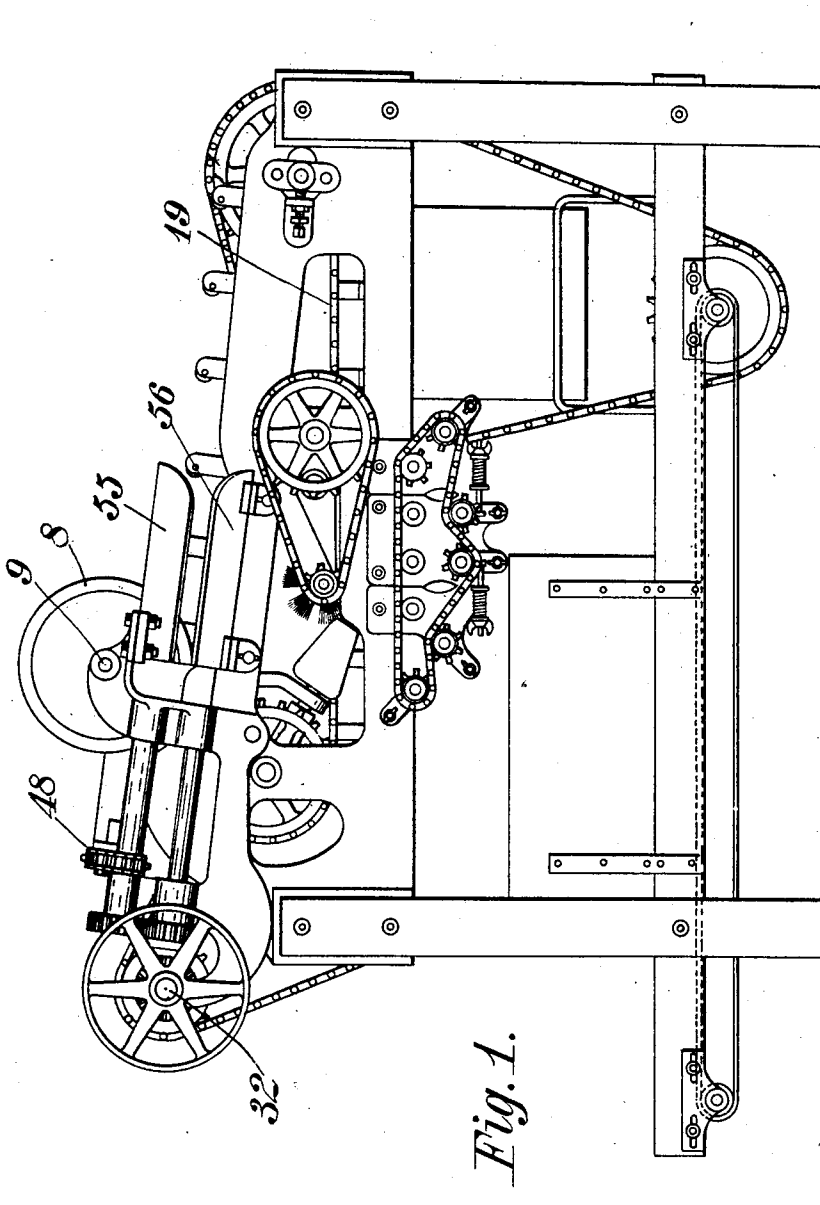


Fig. 1.

Witnesses
Benjamin Finckel
M. Ricetto

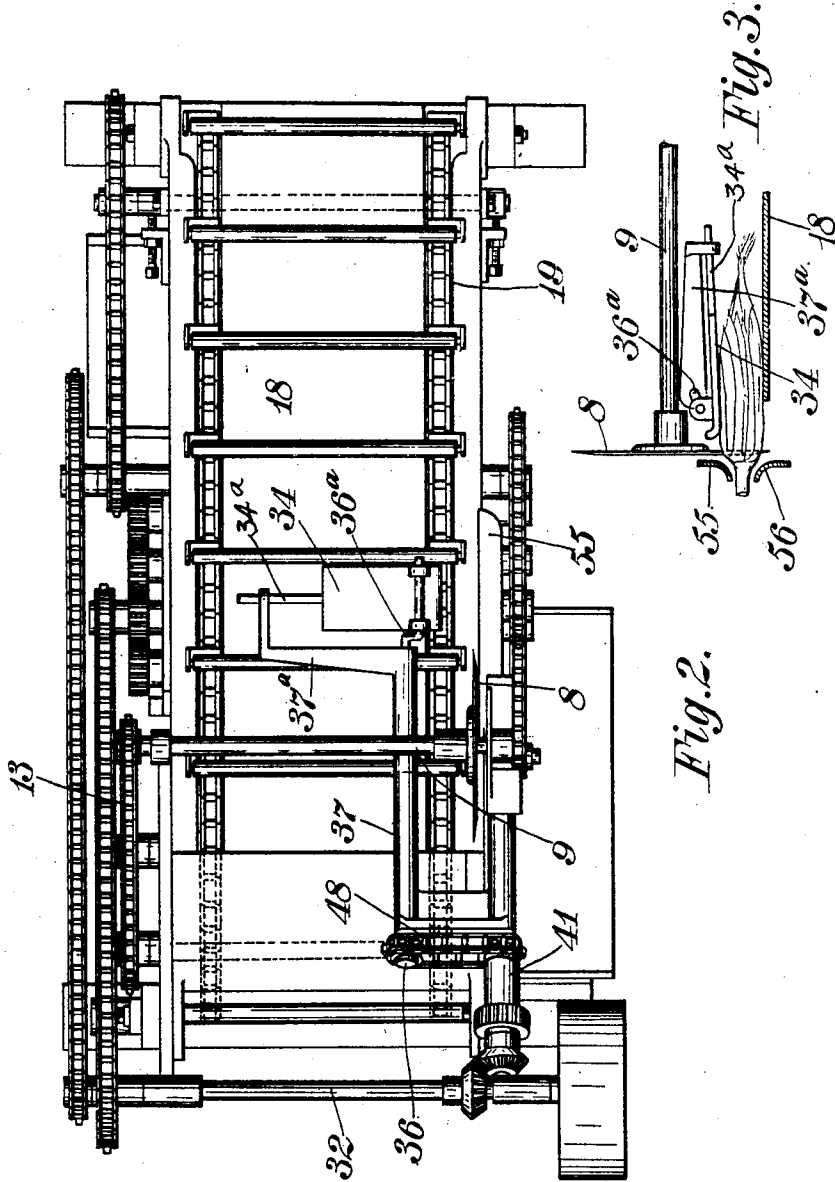
Inventor
William W. Morral
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his Attorneys

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UNITED STATES PATENT OFFICE.

WILLIAM W. MORRAL, OF MORRAL, OHIO.

MACHINE FOR BUTTING EARS OF CORN.

1,376,720.

Specification of Letters Patent.

Patented May 3, 1921.

Application filed February 25, 1914. Serial No. 821,066.

To all whom it may concern:

Be it known that I, WILLIAM W. MORRAL, a citizen of the United States, residing at Morral, in the county of Marion and State of Ohio, have invented a certain new and useful Improvement in Machines for Butting Ears of Corn, of which the following is a specification.

This invention relates to machines which include butt removing means, a guide leading to the butt removing means, means for carrying the ear to the butt removing means and means for feeding or holding the ear against the guide as the ear is carried toward the butt removing means.

In the present invention, as herein shown, the means for feeding or holding the ear against the guide consists of a shoe, rubber or wiper and means for imparting an oscillatory reciprocating movement thereto.

In the accompanying drawing—

Figure 1 is an elevation of that side of the machine which contains the guide and cutter.

Fig. 2 is a plan view, and

Fig. 3 is a detail illustrating the ear feeding or holding device of the present invention.

In the said views 18 designates the table upon which the ears are carried by a belt 19 suitably equipped with means to engage the ears.

The character 8 designates the rotary knife which is on a shaft 9 that is driven by a chain belt 13 receiving power from the main power shaft 32.

55 and 56 are guiding members leading to the knife 8, said members being spaced apart to permit the protrusion of the butt of the ear. 36 is a shaft journaled longitudinally of the table 18 and driven by a chain 48 from a counter shaft 41 driven by the main power shaft 32. The shaft 36 which has a crank extension 36^a extends through a bracket arm 37, the latter having at its lower end a lateral and horizontal extension 37^a over the belt 19. The character 34 designates the plate or rubber which is a wide plate and may be of any suitable form or material as for example rubber or roughened metal adapted upon impingement and movement to frictionally engage and move the ear of corn. The upper side of one end of this plate, rubber or feeder is shown as provided with a pair of eyes through which the cranked end 36^a of the shaft 36 journally ex-

tends while the other end of the plate, rubber or feeder is provided with a rod 34^a that extends loosely through and is fulcrumed or pivoted in an eye on the bent end of the bracket arm 37. From this construction it will be clear that when the shaft 36 is thus rotated the plate 34 is swung or rocked upon the pivot of the rod 34^a and in a path intersecting the path of movement of the ear, and that because the pivotal support of the plate in the bracket arm 37 is substantially in a horizontal line with the operating crank 36^a, said plate swings or reciprocates back and forth in a plane substantially parallel with the conveyer. It will also be observed that because the plate is wide it will continue to or repeatedly engage the ear for a considerable period while the ear is being carried by the conveyer. The shaft 36 is rotated so that the lower arc of movement of the crank is toward the guide; therefore when the shaft 36 is thus rotated the shoe is rocked or moved with an oscillatory reciprocating movement, the movement toward the guide taking place when the shoe or feeder is in depressed position. Hence when an ear is carried toward the cutter and under the rubber the latter member impinges upon the ear and urges it by frictional engagement toward the guides and in proper position to have its butt removed by the knife all as best depicted in Fig. 3.

The invention is susceptible of some modification without departing from the gist of the invention as herein claimed. For example means other than a knife can be used to remove the butt end of the ear, a knife being shown herein for the purpose of illustration.

What I claim is:

1. In a machine for butting ears of corn, the combination with a carrier for the ears, butt removing means, a guide leading to the butt removing means, yielding means independent of the carrier for engaging the ear with a rubbing contact to move the same toward the guide and means for reciprocating said ear engaging means.

2. In a machine for butting ears of corn, the combination with butt removing means, a guide leading to the butt removing means, means for moving the ear toward the guide, and means for imparting an oscillatory reciprocating movement to the means for moving the ear.

3. In a machine for butting ears of corn,

the combination with butt removing means,
a guide leading to the butt removing means,
ear feeding means, and a crank shaft for
rocking the same to feed an ear toward the
5 guide.

4. In a machine for butting ears of corn,
the combination with butt removing means,
a guide leading to the butt removing means,
ear feeding means, means for supporting the

ear feeding means at one point and a crank 10
shaft engaging the said ear feeding means
at another point to rock the same to cause
it to engage an ear of corn to move the latter
toward the guide.

WILLIAM W. MORRAL.

Witnesses:

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