

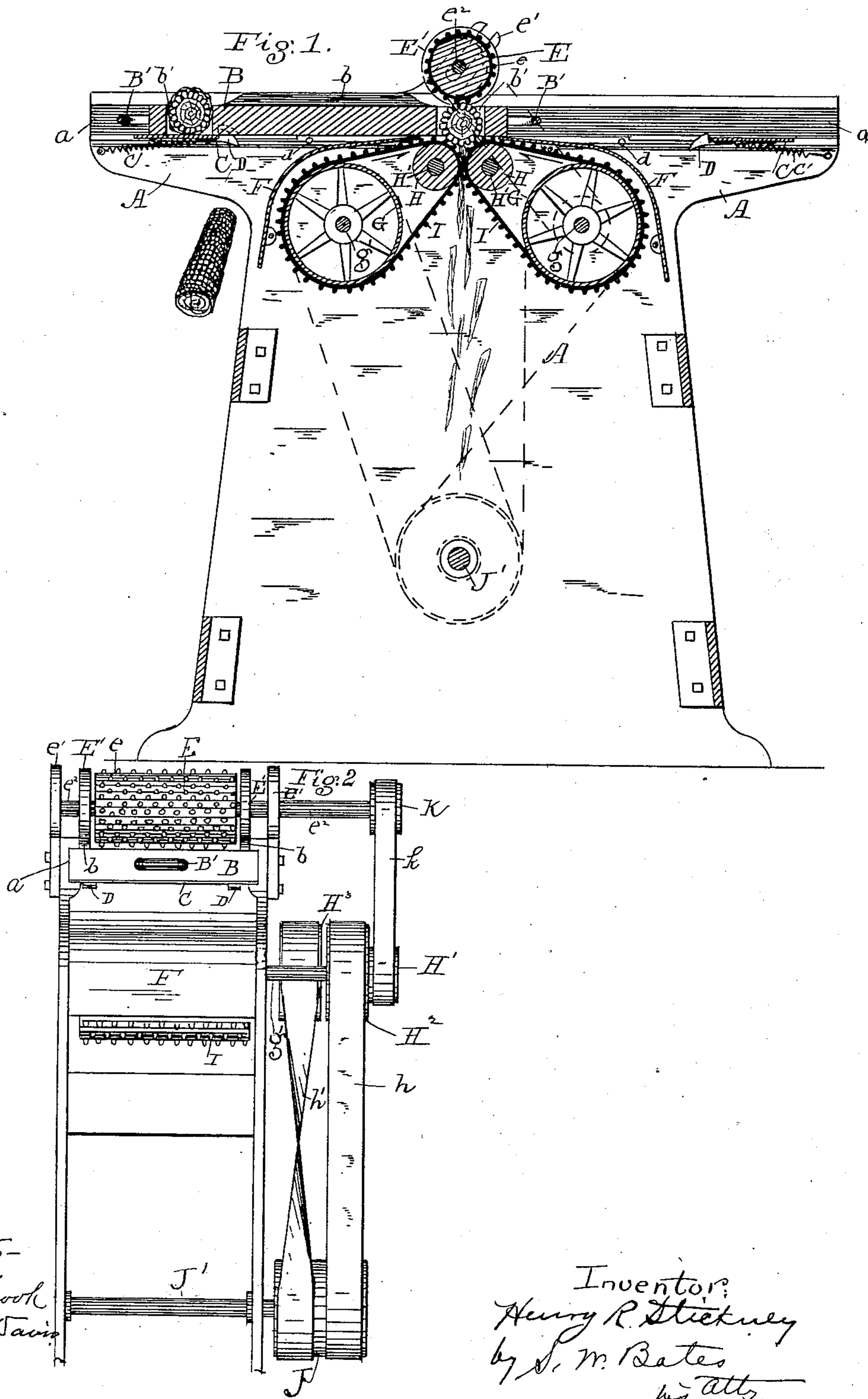
(No Model.)

2 Sheets—Sheet 1.

H. R. STICKNEY.
CORN HUSKING MACHINE.

No. 407,423.

Patented July 23, 1889.



Attest—
Chas. J. Cook
Robt. A. Davis

Inventor:
Henry R. Stickney
by S. M. Bates
his atty.

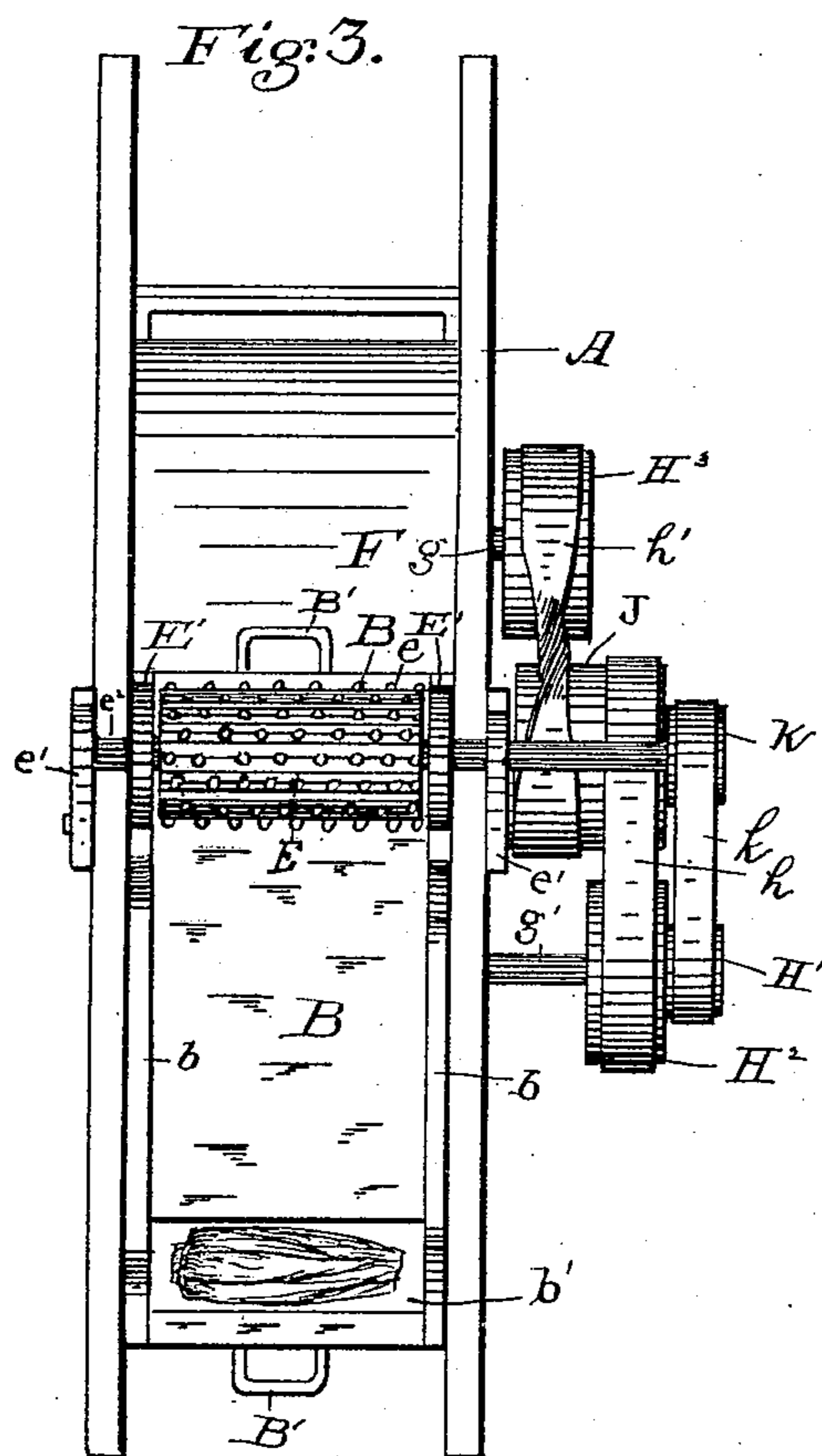
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2 Sheets—Sheet 2.

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Witnesses:

L. Deane,
Weston, Mass.

Inventor:

Henry R. Stickney
by S. M. Bates
his atty.

UNITED STATES PATENT OFFICE.

HENRY R. STICKNEY, OF PORTLAND, MAINE.

CORN-HUSKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 407,423, dated July 23, 1889.

Application filed September 14, 1888. Serial No. 285,385. (No model.)

To all whom it may concern:

Be it known that I, HENRY R. STICKNEY, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Corn-Husking Machines; 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 machines for husking corn, and more particularly green corn, such as is used for canning.

Various devices have hitherto been used for husking hard or dried corn; but the business of husking green corn in the operation of canning continues to be carried on mainly by hand labor. One of the principal difficulties with the husking-machines hitherto used has been in the matter of feeding the ear of corn to the husking device and removing it therefrom. This feed has mostly been continuous, and the ear having once come between the husking-rolls which have usually been employed for this purpose often remained there and stuck after the husks had been removed.

One of the main objects of my invention is to provide a sure and positive method of feeding the corn so that each ear will be husked and discharged before the next ear is fed in.

A further object of my invention is to provide a substitute for the rolls which have usually been employed for removing the husks, and which were liable to become clogged by having the husks wound about them.

A further object of my invention is to provide, generally, a husking-machine which shall be simple and sufficiently delicate in its action, so that the green corn will be uninjured during the operation of removing the husks.

The invention consists of various combinations of the following features pointed out in the appended claims, namely: a pair of husking-bands with yielding fingers moving in opposite directions over suitable rolls placed face to face, a reciprocating carriage having an open-bottomed receptacle which

brings the corn in contact with the bands, a sliding plate for closing the bottom of the receptacle during a part of the forward motion of the carriage, and other auxiliary features, as hereinafter pointed out.

In the accompanying drawings I illustrate a machine which embodies my invention; but I do not wish to limit myself to the exact features as herein shown and particularly described.

In the drawings, Figure 1 is a central longitudinal section of the machine, and Fig. 2 is a front elevation. Fig. 3 is a plan view.

A represents the frame-work of the machine, and on the inner side of each side piece, near the top, is a horizontal groove *a*, in which runs one of the sides of the reciprocating carriage B, the groove acting as a guide for said carriage. The carriage B, as here shown, has at each end an open-bottomed receptacle *b'*, of a size adapted to receive and hold loosely therein an ear of corn. It is also provided with a handle *B'*, by which it may be pushed back and forth; but it is obvious that power may be applied to reciprocate the carriage in any well-known manner. The bottom of each of the receptacles *b'* is closed at certain parts of its travel by means of the slide-plate C, the ends of which rest in the lower part of the groove *a*, and are adapted to slide therein. The plate C is independent of the carriage, except as it is locked to it by means of a catch D, which is secured to the under side of the plate and engages with a recess in the underside of the carriage. I have here shown one of these catches at each edge of the plate near the side frame of the machine. A pin *d*, as here shown, is inserted in the side of the frame for the purpose of releasing the catch when the plate has traveled about one-third the distance which the carriage moves, and a spring *C'* is provided for drawing the plate back after the catch has been released. Any suitable catch and releasing device may be used for those here shown.

In the center of the machine, and immediately under the receptacle *b'* when in operative position, are located two small rolls H, running on arbors *H'*. The rolls H extend the width of the carriage, and they are placed face to face and quite near each other. The

pulleys G are located below and away from the rolls H on arbors g g' , and passing over the pulleys G and the rolls H are two "husking-bands," as I shall term them for convenience. These bands are of some flexible material—as rubber, leather, or canvas—and on their exterior surface are flexible or yielding fingers, preferably composed of rubber. These bands may be made in a variety of ways; but I prefer to make them entirely of rubber, the fingers being formed in one piece with the main band. The fingers are so located in rows upon the band that as they pass down between the rolls H in the direction of motion indicated by the arrows the rows on one band will pass between the rows on the opposite band.

J' represents the main driving-shaft, which is run by a pulley, (not shown,) and on one end of the shaft is a wide pulley J, from which two belts h and h' run to the two pulleys H^2 and H^3 , located on the shafts g' and g , respectively. One of the belts h' is crossed, so that opposite motions are given to the two pulleys. On the end of the shaft g is a pulley H' , which is connected by a belt k with a similar pulley K on the end of the arbor e^2 . The arbor e^2 runs in slots in the inclined bearing e' . The bearing is inclined in such a way that the arbor may have a limited vertical or inclined motion without changing the distance between it and the arbor g , and hence without tightening or stretching the belt k which drives it.

On the arbor e^2 is a drum or cylinder E, having on its surface yielding or flexible fingers e , similar to those on the band I, only I prefer to make them somewhat shorter, since the object of this drum is simply to rotate the ear in its receptacle, as hereinafter shown.

Two trucks $E' E'$ are loosely secured on the arbor e^2 —one on each side of the cylinder E—and in line with these trucks and secured to the edges of the carriage are two rails b , having curved or inclined ends adapted to lift the trucks and permit them to run on the rails until the receptacle b' comes over the husking-bands, as hereinafter shown.

An apron F is secured to the frame of the machine, and it is placed between the carriage and the band I in such a way as to completely cover the latter except at that part where it passes over the roll H.

My machine is designed, as here shown, to be operated from both ends by having a receptacle at each end of the carriage, which is filled with an ear of corn at each motion of the carriage. It is obvious that this carriage may be made single; but I prefer to make it as here shown.

The ear of corn, after having its larger or butt end cut off, is placed in the receptacle, and is there held by the plate C, which is locked in place by the catch D when the carriage is drawn back. As the carriage moves forward, the plate C remains in position until the catch D strikes the pin d , when it is disengaged from the carriage and is drawn back

by the spring C' to its normal position. As soon as the slide is withdrawn the ear drops through the carriage far enough to rest on the apron F, along which it slides until it reaches the point where the husking-bands come together, when the cylinder, which had been previously elevated by the truck e' running on the rail b , drops onto the ear and rotates it in its receptacle, while the fingers of the two husking-bands tear off the husks and pass them downward between the pulleys H. This cylinder E and the mechanism which operates it may be dispensed with, for the reason that the action of the two bands, which move with great rapidity, will never be precisely alike on each side of the ear, and hence the tendency will be for the latter to turn until the husks are all removed. As the carriage moves back, the corn slides along the apron and falls down into a basket set to receive it, and not here shown. This operation takes place at each end of the machine, the ears being fed in alternately.

It will thus be seen that in my machine one ear is husked and removed before the next ear is put in, so that there is no danger of clogging up the husking apparatus, as in many machines of this kind.

The husking-bands which I employ, passing as they do over two pulleys and being of considerable length, have plenty of time to free themselves of the husks, and hence the tendency of husks to wind about the rolls is obviated.

I claim—

1. In a machine for husking corn, the combination of a reciprocating carriage, an open-bottomed receptacle therein for containing the ear of corn, rolls beneath said carriage, stripping-bands running over said rolls and provided with yielding fingers adapted to operate on said ear, a slide arranged to close the bottom of said receptacle during a part of the forward motion of the carriage, and an apron beneath said carriage whereon said ear is discharged, substantially as shown.

2. In a machine for husking corn, the combination of an open-bottomed receptacle for the ear, a pair of small rolls placed face to face beneath said receptacle, a pair of endless bands provided with yielding fingers adapted to run over said small rolls in opposite directions, and other supporting-rolls for said bands, substantially as shown.

3. In a machine for husking corn, the combination of a reciprocating carriage, an open-bottomed receptacle therein for containing the ear of corn, rolls beneath said carriage, and stripping-bands running over said rolls, and means for holding said ear in contact with said stripping-bands, substantially as shown.

4. In a machine for husking corn, the combination of a reciprocating carriage, an open-bottomed receptacle therein for containing the ears of corn, stripping-bands, substantially as shown, beneath said carriage, and a

rotating cylinder above said stripping-bands adapted to rotate said ear in contact with said stripping-bands.

5 In a machine for husking corn, the combination of a reciprocating carriage, an open-bottomed receptacle therein for containing the ears of corn, stripping-bands, substantially as shown, beneath said carriage, a slide for closing said receptacle while the same is
10 approaching the stripping-bands, and means for withdrawing the said slide.

6. In a machine for husking corn, the combination of a reciprocating carriage, an open-bottomed receptacle therein at each end for
15 containing the ear of corn, and stripping-bands beneath said carriage, substantially as shown.

7. In a machine for husking corn, the combination of a reciprocating carriage, an open-bottomed receptacle therein for containing
20 the ear of corn, a slide for closing the bottom of said receptacle, a spring for retracting said slide, a latch for locking the same, and a pin for disengaging said latch as the carriage moves forward, substantially as shown. 25

In testimony whereof I affix my signature in presence of two witnesses.

HENRY R. STICKNEY.

Witnesses:

S. W. BATES,
ROBT. A. DAVIS.