S. E. AND W. W. MORRAL.

CORN HUSKING MACHINE.

APPLICATION FILED NOV. 2, 1916.

1,314,353.

Patented Aug. 26, 1919.

2 SHEETS—SHEET 1.

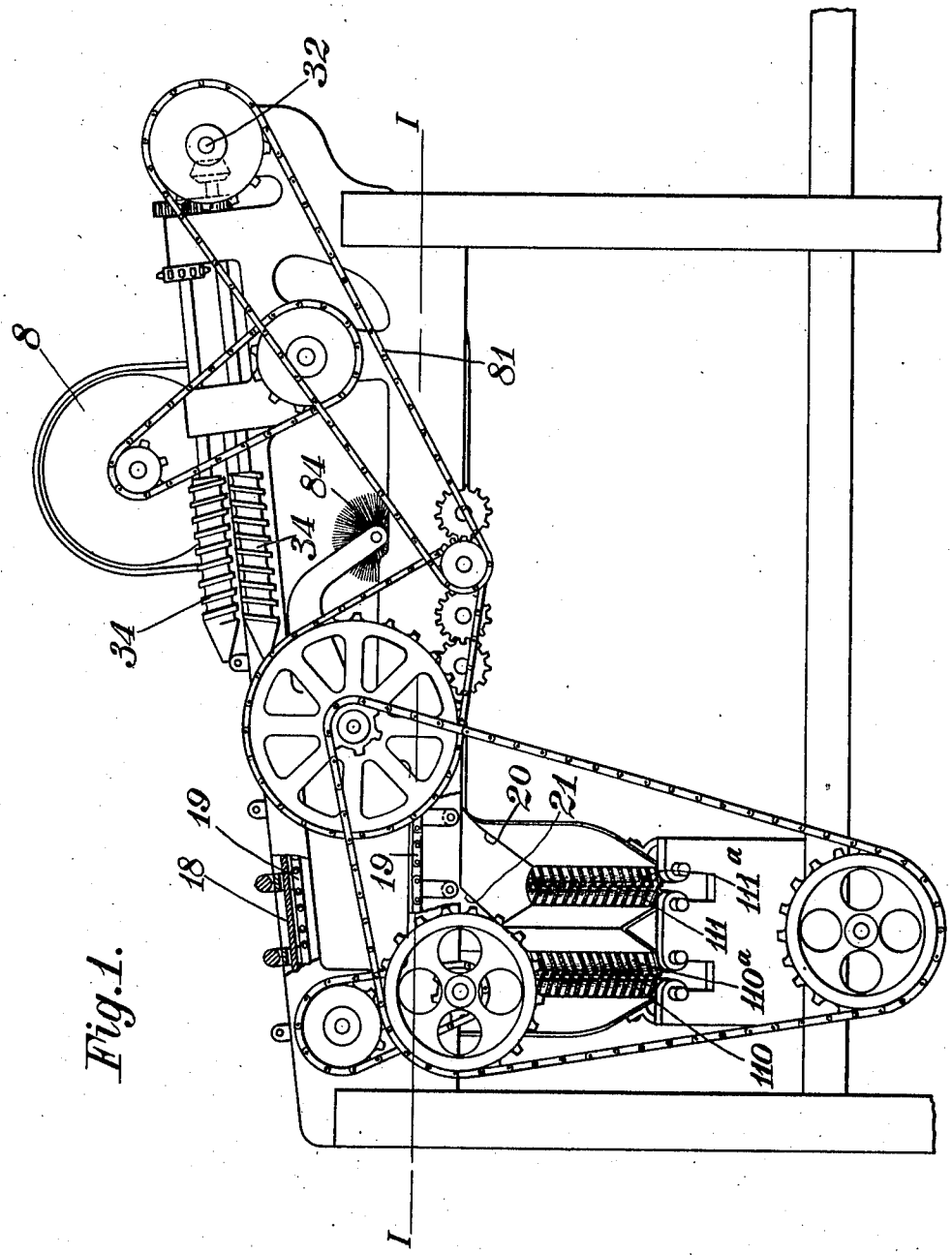


Fig. 1.

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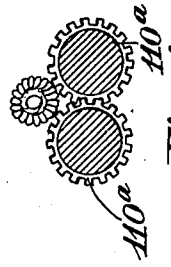


Fig. 4.

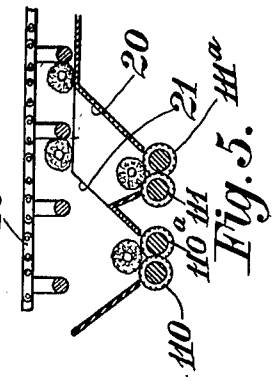


Fig. 5.

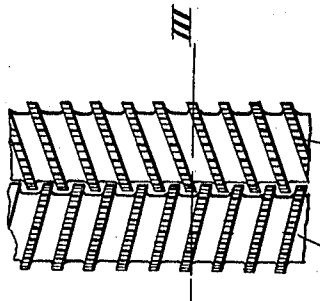


Fig. 3.

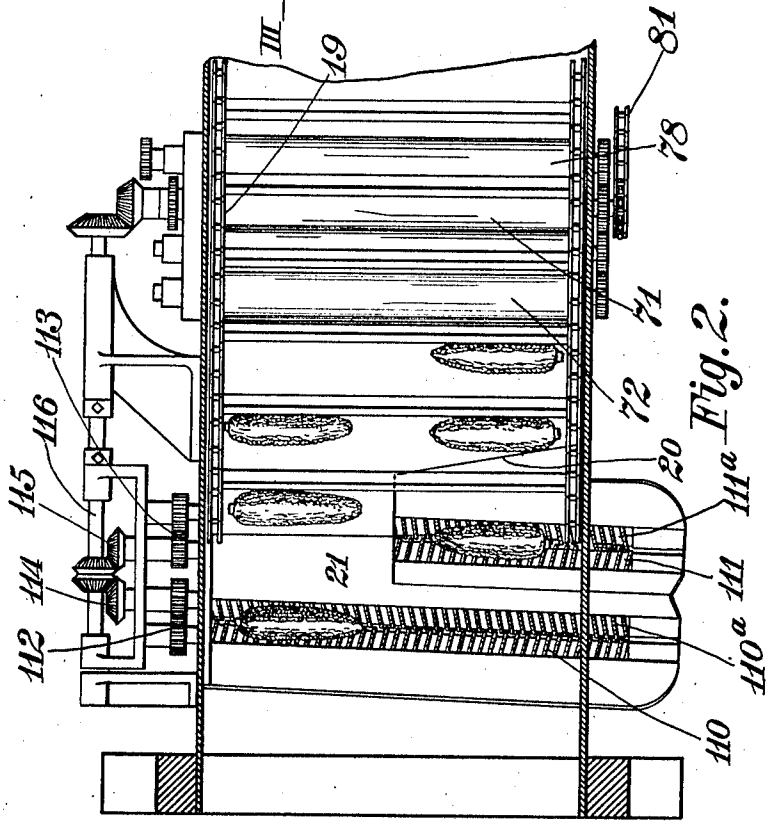


Fig. 2.

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UNITED STATES PATENT OFFICE.

SAMUEL E. MORRAL AND WILLIAM W. MORRAL, OF MORRAL, OHIO.

CORN-HUSKING MACHINE.

1,314,353. Specification of Letters Patent. Patented Aug. 26, 1919.

Application filed November 2, 1916. Serial No. 129,090.

To all whom it may concern:

Be it known that we, SAMUEL E. MORRAL and WILLIAM W. MORRAL, citizens of the United States, residing at Morral, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Corn-Husking Machines, of which the following is a specification.

This invention relates to corn husking machines and more especially to means for removing pieces of husk and silk from ears of green corn. The invention is designed more particularly as an improvement upon or supplement to a corn husking machine as shown in the United States patent issued to us December 22, 1914, No. 1,121,937. The machine of our said patent embodies means for husking the ears after the husk and silks have been roughly removed but one of the objects of the present invention is to provide improved means whereby the work of clearing the ears of pieces of husk and silk is carried to a greater degree of refinement than is practicable in said former machine. The invention also has for its object to provide means whereby a plurality of rows or files of ears fed by the same feeding means may be discharged onto different husking or silking means.

The invention is embodied in the features of construction herein shown and described and then particularly claimed.

In the accompanying drawings—

Figure 1 is mainly a side elevation of a combined butt removing and husking machine containing our present improvements.

Fig. 2 is a horizontal section through a portion of the frame on the line I—I, of Fig. 1, looking down.

Fig. 3 is a plan view of a portion of the cleaning and feeding rolls on a larger scale.

Fig. 4 is a transverse section of said pair of rolls as on the line III—III, Fig. 3.

Fig. 5 is a sectional detail to show the discharges from the table.

Like the illustration of our former patent the machine of the present drawings is a double machine, that is, it is a machine in which each side is equipped with means for butting, husking and silking ears, the ears being fed in two files or series by a single endless carrier traveling between the two sides. We deem it unnecessary to a sufficient explanation of our present improvement to minutely describe the details of construction of such prior machine because the same are fully set forth in our said former patent. However, it may be briefly and generally stated that in the present drawings, as in the drawings of our said former patent, the character 18 designates a table or bed and 19 represents the endless carrier which travels over the table. 34 designates the gaging rolls, 8 the butting knife; 71, 72 and 78 primary husking rolls, and 84 a silking brush. The main drive shaft is shown at 32, and from this shaft is driven the carrier or feed belt 19 and the husking rolls, the latter being driven by means of a belt 81.

Instead of discharging the ears directly through the chute or hopper 104 as in our said former patent we now arrange two pairs of husking and silking rolls or screws 110, 110^a and 111, 111^a, in the place of the hopper and in position to receive the ears after they have been treated by and are carried beyond the primary husking rolls. The husking and silking screws of each pair are of the right and left hand thread and their threads are kerfed on lines parallel to their axes to form teeth. The screws are arranged parallel to each other so that the thread of each works in the groove of its companion as best shown in Figs. 3 and 4. The two shafts of the members of each pair of screws are geared together as seen at 112 and 113 so that the driving of one screw operates the other. The husking and silking screws are driven by means of bevel gears 114 and 115 mounted on a counter shaft 116, said bevel gears engaging similar gears on the shafts of the screws 110 and 111 respectively. The counter shaft 116 is conveniently geared to the shaft of the primary husking roll 71 and is driven by the sprocket chain 81. The gearing is such that in the operation of the machine the adjacent sides of the members of each pair of the screws turn downward or toward the floor. The members of each pair of screws in the construction shown are arranged together so that the tendency is to feed the ear from the left hand to the right hand side of the machine and therefore to discharge ears that fall on the screws at the right hand side of the machine. To facilitate this discharging movement the screws are arranged at an incline to the horizontal. An important advantage of the particular form of husking rolls or screws here shown is that

they are self cleaning and do not become clogged with silk and husk.

In practice the sharp corners of the toothed interengaging threads of the screws very effectively catch and remove the portions of silk and husk still adhering to the ears after they leave the husking rolls and brushes. Oftentimes such silk and portions of husk are sunk between the longitudinal rows of grains and the screws such as herein described are particularly effective in removing such.

In order that the files of ears of corn as they are carried through the machine may drop onto different pairs of screws the table beyond the husking rolls is provided with two separate passages or escapes 20 and 21, one in advance of the other arranged so that the ears of one file or those at one side of the machine all fall onto one pair of the screws while those at the other side fall onto the other pair of screws.

Instead of the screw form of husking rolls other forms of husking roll, such, for example, as the primary husking rolls, can be used in connection with the separate escapes or discharges from the table.

The parts can be modified without departing from the gist of the invention as claimed.

What we claim is:

1. In a machine for husking and silking ears of corn, the combination with a table and means for feeding a plurality of parallel files of ears transversely of their lengths over the table, of a plurality of sets of husking and silking devices located below the table to receive the ears, said table provided with distinct passages to said husking and silking devices, one of said passages being located in advance of the other, substantially as described.

2. In a machine for husking and silking ears of corn, the combination with a table and an endless carrier for feeding a plurality of parallel files of ears transversely of their lengths over the table, of a plurality of sets of husking and silking devices located below the table to receive the ears, said table provided with distinct passages to said husking and silking devices, one of said passages being located in advance of the other, substantially as described.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."