No. 864,238. PATENTED AUG. 27, 1907.

F. J. FITZPATRICK.

CORN HUSKING MACHINE.

APPLICATION FILED NOV. 22, 1906.

3 SHEETS—SHEET 1.

Fig. 1.

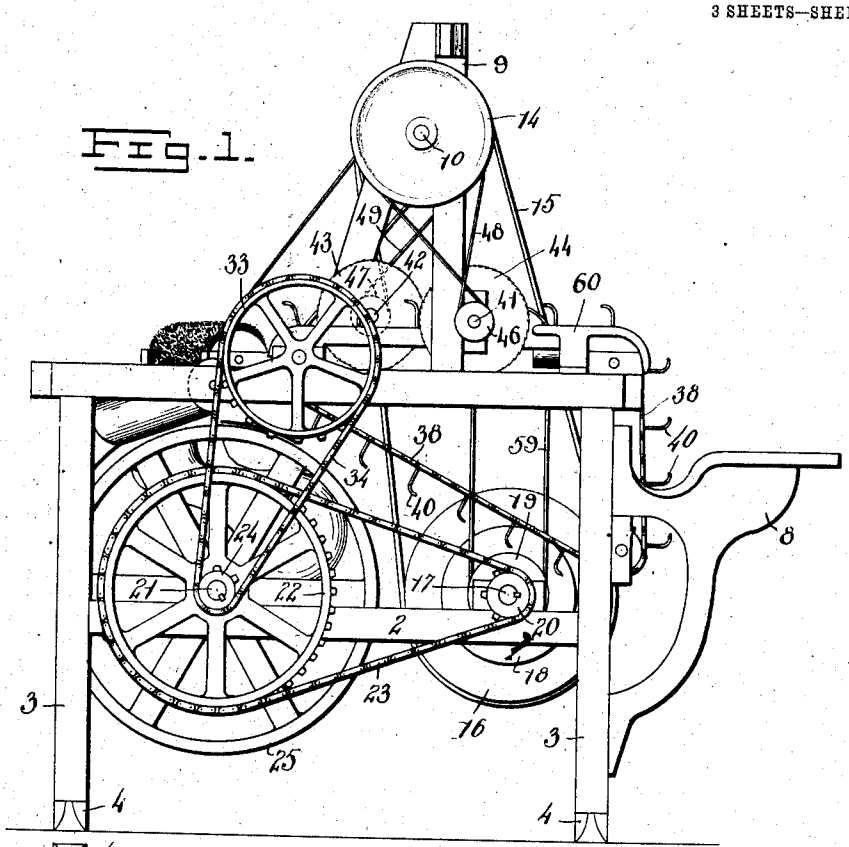
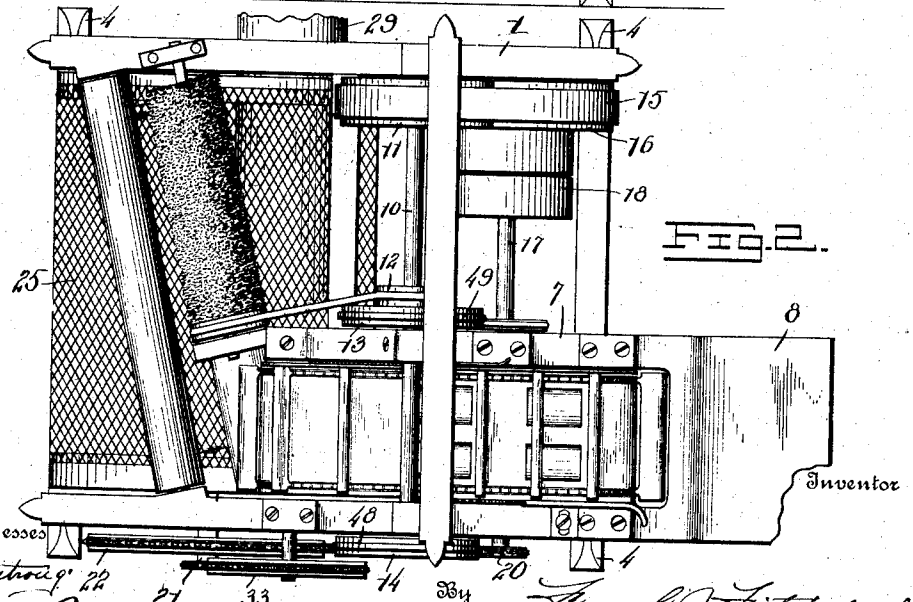


Fig. 2.



Witnesses

L. Armstrong

W. C. Balderston

Inventor

Frank J. Fitzpatrick

By

C. H. Fowler

Attorney

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3 SHEETS—SHEET 2.

Fig. 3.

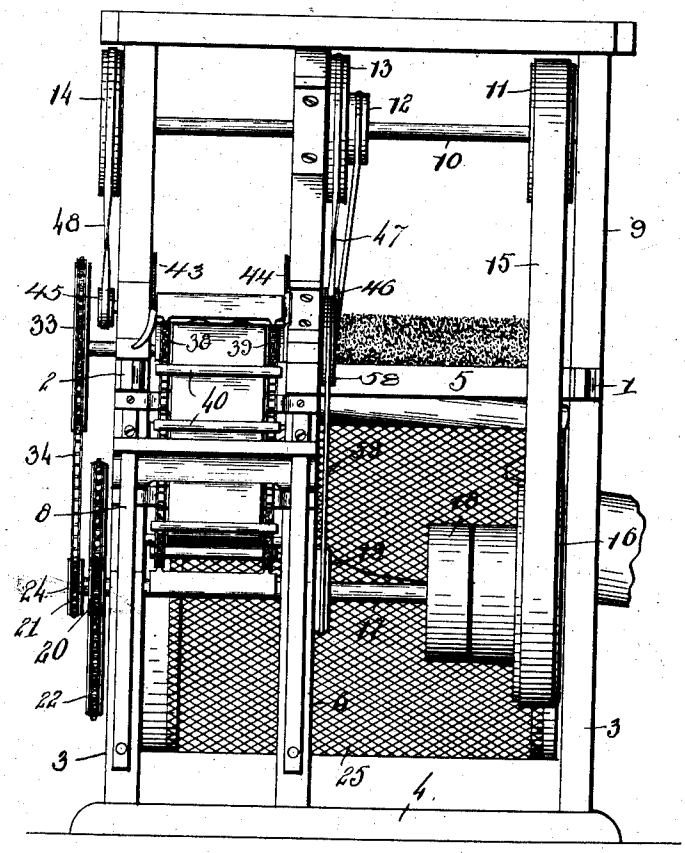
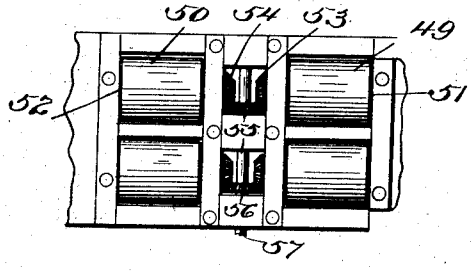


Fig. 5.



Witnesses

L. Armstrong.

W. C. Balderston

Inventor

Frank J. Fitzpatrick

By C. H. Fowler

Attorney

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3 SHEETS—SHEET 3.

Fig. 4.

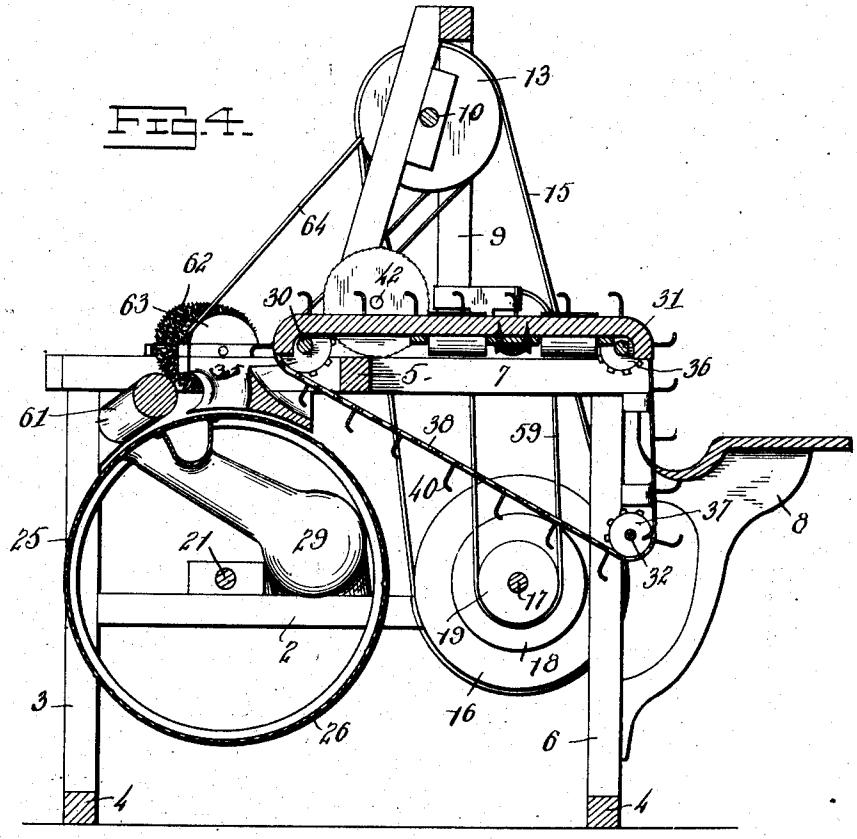
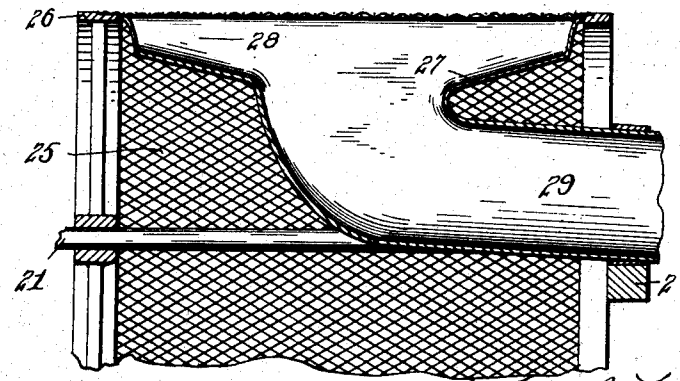


Fig. 6.



Witnesses

L. Armstrong.

W. C. Balderston

Inventor

Frank J. Fitzpatrick

By

C. H. Fowler

Attorney

UNITED STATES PATENT OFFICE.

FRANK J. FITZPATRICK, OF PONTIAC, ILLINOIS.

CORN-HUSKING MACHINE.

No. 864,238. Specification of Letters Patent. Patented Aug. 27, 1907.

Application filed November 22, 1906. Serial No. 344,617.

To all whom it may concern:

Be it known that I, FRANK J. FITZPATRICK, a citizen of the United States, residing at Pontiac, in the county of Livingston and State of Illinois, have invented certain new and useful Improvements in Corn-Husking Machines, of which the following is a specification.

It is a well known and established fact, that the corn husking machine now in use owing to the means employed for removing the husk and silk from ears of corn, the grain is damaged to a greater or less extent, thereby causing the loss of considerable nutritious substance. It is to overcome this objection that I have provided a machine for removing the husk and silk from ears of corn by suction.

Another object of this invention is to provide a machine of the character above described, with a conveyer having circular knives arranged upon opposite sides thereof, and longitudinal rollers parallel to the cutting edges of the knives adapted to bring the ears of corn in contact therewith.

With these objects in view and such others as may appear, my invention consists in the particular construction of the various parts, and in the novel manner of combination and arrangement of said parts, all of which will be hereinafter more fully described and specifically pointed out in the appended claims.

In the drawings forming a part of this specification:—Figure 1, is a side elevation, Fig. 2, is a top plan view, Fig. 3, is an end view, Fig. 4, is a sectional view, Fig. 5, is a bottom plan view of the rollers, and Fig. 6, is a detail view of the husk and silk remover.

The frame of the machine may be made of wood or metal, as may be desired, and is ordinarily rectangular in its general contour, comprising parallel upper side sections 1, parallel lower side sections 2, vertical corner sections 3, connecting the upper and lower side sections, and lower end sections 4, as clearly shown in the drawings. This frame is further provided with a transverse brace 5, a perpendicular support 6, a longitudinal brace 7, and a feeding chute or table 8, the object of which will hereinafter appear.

Mounted upon the top of the frame is an upright support 9, journaled upon which is a transverse shaft 10, carrying a series of pulleys 11, 12, 13, and 14, the pulley 11, being connected by a belt 15 to a pulley 16, mounted upon the main shaft 17 journaled upon the lower side sections 2, and provided with a drum 18, to which a power belt may be connected, also with a pulley 19, and a sprocket 20, the object of which will be hereinafter explained.

Journaled in suitable bearings upon the side sections 2, is a transverse shaft 21, having mounted thereupon a sprocket 22, connected by a sprocket chain 23, to the sprocket 20, mounted upon the main shaft. This shaft 21, i further provided with a sprocket 24, and a cylindrical screen or drum 25, supported at one end only by a wheel 26, keyed to the shaft. Arranged within the screen or drum and having a bearing upon the inner wall thereof is an oblong casing 27, open at the top as shown at 28, and connected at the bottom by a pipe section 29, through which a current of air may be drawn.

Journaled in suitable bearings upon the frame are three transverse shafts 30, 31 and 32, one of which 30 is provided with a sprocket 33, connected with a sprocket chain 34, to the sprocket 24, keyed to the shaft 21. Mounted upon these shafts are corresponding and oppositely disposed sprockets 35, 36 and 37, connected by sprocket chains 38 and 39, which are provided with transverse cleats 40, adapted to receive ears of corn from the feeding table or chute. Intermediate the shafts 30 and 31 is arranged a platform over which the conveyer moves. Journaled upon this platform upon opposite sides thereof are short shafts 41 and 42, each carrying a circular knife or saw 43 and 44, and pulleys 45 and 46, connected by belts 47 and 48, to the pulleys 12 and 14, mounted upon the shaft 10. Adjacent to and in front of each knife or saw beneath the conveyer are corresponding sets of longitudinal rollers 49 and 50, mounted upon longitudinal shafts 51 and 52, journaled in the platform and provided upon their adjacent ends with beveled gears 53 and 54, in mesh with beveled gears 55 and 56, mounted upon a transverse shaft 57, also journaled upon the platform and provided with a pulley 58, connected by a belt 59 to the pulley 19, on the main shaft, the arrangement and gearing being such as to revolve the sets of rollers in opposite directions in order to bring each ear of corn in contact with the respective knives, the movement of the ears transversely being limited by the adjustable guards 60, which are parallel to the knives or saws.

Journaled upon the frame at the end of the platform opposite the feeding table is a cylindrical guard 61, which is at an angle with respect to the circumference of the screen, and parallel to this guard 61, is a rotary brush 62, provided with a pulley 63, connected by a belt 64, to the pulley 12, upon the shaft 10. The space between the guard 61, and the rotary brush 62, being sufficient to receive an ear of corn, said space being immediately above the opening 28, in the casing through which air is drawn by any suitable pump or blower.

Mode of operation:—Corn is placed upon the feeding chute or table, and is received therefrom by the conveyer which passes it over the platform where the longitudinal rollers alternately force the respective ends of the ears in contact with the revolving knives or saws and thereby removes the said ends. The ear still remaining in the conveyer is carried forward and dropped upon the revolving perforated drum or screen, which revolves the ear between the rotary

brush and guard, immediately above the casing through which a suction is created by any suitable means. The relative position of the brush and guard being such with respect to the periphery of the drum or screen that the ear is forced across the screen and dropped at the free end of said screen.

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

1. In a machine of the character described, a conveyer, circular knives mounted upon opposite sides of the conveyer, longitudinal rollers adjacent to the knives, means for revolving the ears, and means for sucking the husk and silk from the ear, substantially as specified.

2. In a machine of the character described, means for cutting the ends off of an ear of corn, means for revolving the ear and means for sucking the husk and silk from the ear, substantially as specified.

3. In a machine of the character described, in combination with means for cutting the ends off of an ear of corn and means for revolving and brushing the ear, a revolving screen, means for sucking air through a section of the screen, and means for passing the ear to the suction section of the screen, substantially as specified.

4. In a machine of the character described, a frame, a conveyer mounted upon the frame, circular knives upon opposite sides of the conveyer, a series of longitudinal rollers adjacent to the cutting edges of the knives, means for revolving and brushing the ear, and means for sucking the husk and silk from the ear, substantially as specified.

5. In a machine of the character described, a frame, a conveyer mounted upon the frame, an inclined feeding chute in juxtaposition to the conveyer, circular knives mounted upon opposite sides of the conveyer, two sets of longitudinal rollers adjacent to and adapted to revolve toward the respective knives, means for revolving and brushing the ear, and means for removing the husk and silk by suction, substantially as specified.

6. In a machine of the character described, a frame, a conveyer mounted upon the frame, an inclined feeding chute in juxtaposition to the conveyer, circular knives mounted upon the opposite sides of the conveyer, longitudinal rollers adjacent to the respective cutting edges of the knives, the said rollers adapted to revolve in the direction of the knives, means for revolving and brushing the ear, a revolving screen, means for sucking air through a section of the screen, and means for passing the ear to the suction section of the screen, substantially as shown, and for the purpose specified.

FRANK J. FITZPATRICK.

Witnesses:
W. CRAWFORD,
ELLA G. SCANLAN.