No. 716,905. Patented Dec. 30, 1902.

B. H. LAWTER.

CORN HUSKING AND FODDER SHREDDING MACHINE.

(Application filed Jan. 21, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

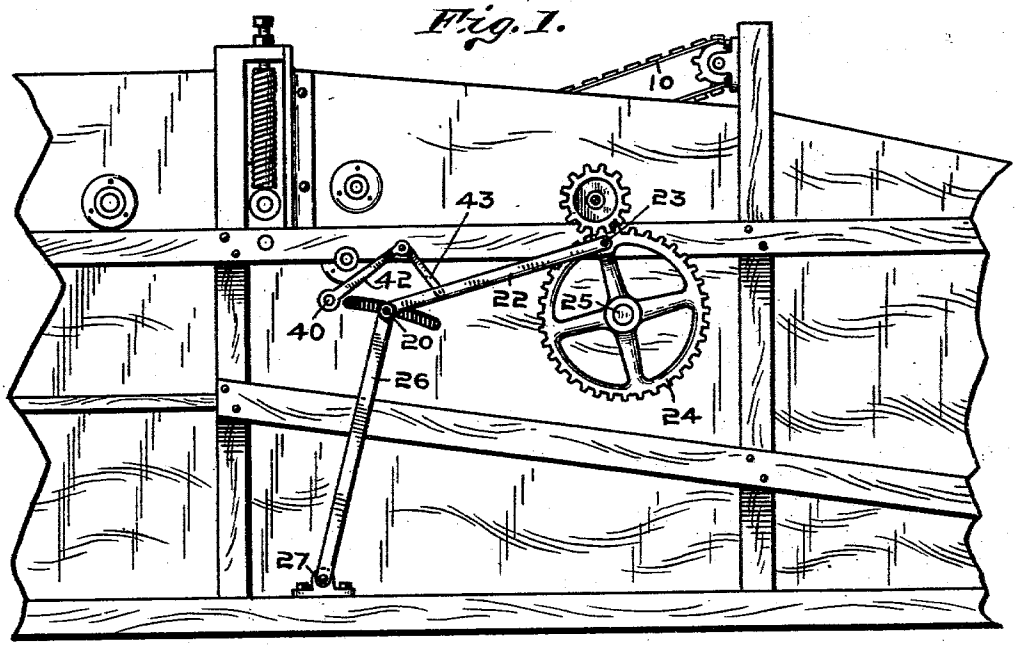
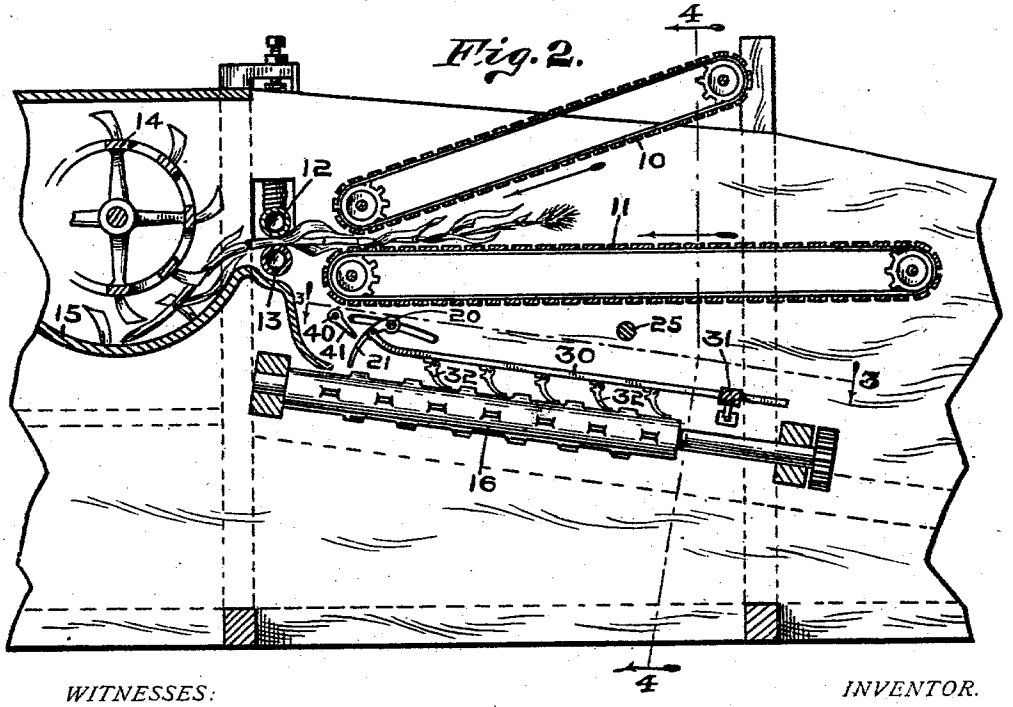


Fig. 2.



WITNESSES:

F. W. Woerner.

Albert F. Gearing.

INVENTOR.

Benjamin H. Lawter,

BY

Chester Bradford.

ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 716,905. Patented Dec. 30, 1902.

B. H. LAWTER.

CORN HUSKING AND FODDER SHREDDING MACHINE.

(Application filed Jan. 21, 1902.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 3.

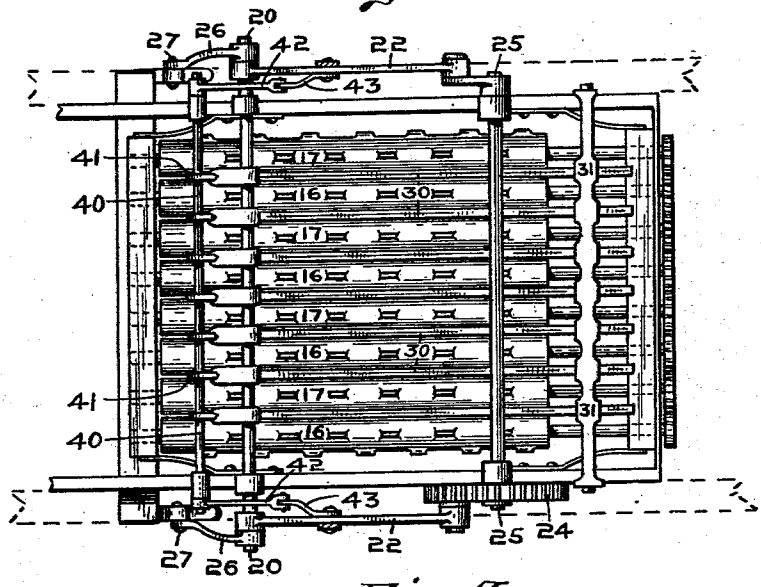


Fig. 4.

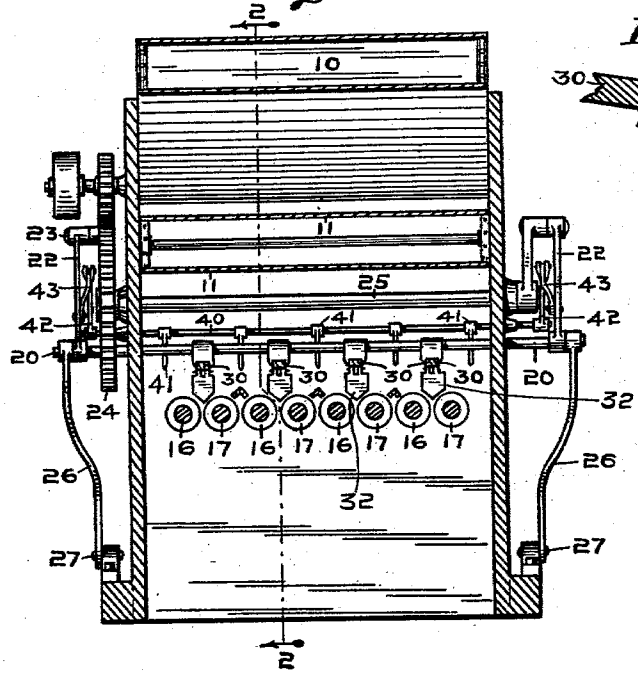
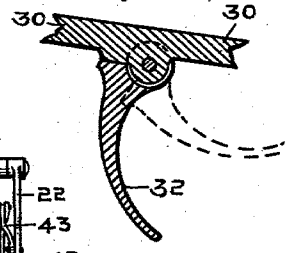


Fig. 5.



WITNESSES:

F. W. Woerner.

Albert F. Gearing.

INVENTOR.

Benjamin H. Lawter,

BY

Chester Bradford.

ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

BENJAMIN H. LAWTER, OF NEWCASTLE, INDIANA, ASSIGNOR TO SAFETY SHREDDER CO., OF NEWCASTLE, INDIANA, A CORPORATION OF INDIANA.

CORN-HUSKING AND FODDER-SHREDDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 716,905, dated December 30, 1902.

Application filed January 21, 1902. Serial No. 90,684. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN H. LAWTER, a citizen of the United States, residing at Newcastle, in the county of Henry and State of Indiana, have invented certain new and useful Improvements in Corn-Husking and Fodder-Shredding Machines, of which the following is a specification.

My present invention relates especially to that class of machines which are used in separating the ears of corn from the stalks, husking said ears, and converting the stalks and husks into fodder, such as are shown and described, for example, in Letters Patent of the United States No. 577,466, dated February 23, 1897, and No. 627,547, dated June 27, 1899, which were issued upon the application of Freeman M. Teeguarden; and it consists especially in a new and improved mechanism for keeping the ears of corn and husks in motion, and thus accelerating and rendering more certain the husking operation, all as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of a machine provided with a mechanism of the character in question embodying my said invention; Fig. 2, a central longitudinal vertical section through so much thereof as illustrates the mechanism involved in said invention and the immediately adjacent parts; Fig. 3, a plan view of said mechanism and the parts below it; Fig. 4, a transverse vertical sectional view as seen when looking in the direction indicated by the arrows from the dotted line 4 4 in Fig. 2; and Fig. 5, a detail sectional view, on an enlarged scale, of a fragment of one of the finger-carrying bars and one of the fingers attached thereto, showing the construction thereof more plainly.

As above stated, the machine, generally speaking, is of the type illustrated in the Teeguarden Patents Nos. 577,466 and 627,547 and embodies the feeding-conveyers 10 and 11, the snapping-rolls 12 and 13, a shredding-cylinder 14, the concave 15, and a series of pairs of husking-rolls 16 and 17. These, as well as other parts of the machine not mentioned, not being peculiar to my present invention, will not be further described herein, except incidentally in describing said invention.

In machines of this character, where no means for accelerating the movement of the corn ears and husks is provided, the movement thereof down the husking-rolls is apt to be sluggish, and frequently said husking-rolls become clogged, especially where the corn-husks are wet, and considerable attention is required to keep the machine in continuous operation and doing efficient work. My invention is designed to overcome these difficulties and consists in means for keeping the corn ears and husks in motion after they leave the feeding devices and snapping-rolls and pulling them out from between the husking-rolls in case they become jammed therein.

Upon a rock-shaft 20 I mount rigidly a series of fingers 21, which extend forward so as (when in operation) to pass into the path of the corn as it falls from the snapping-rolls and force the same down along the husking-rolls. A connecting arm or rod 22 is also rigidly mounted on the rock-shaft 20 and extends back to and is mounted upon a crank-wrist 23 on the wheel 24, which in turn is mounted on a shaft 25 and is driven by a suitable power connection from any desired point on the machine. The rock-shaft 20 is pivotally mounted in the upper ends of the swinging standards 26, which are mounted at their lower ends on pivots 27, carried on the framework. The movement of the fingers 21 which results from this connection or mounting and means of driving closely approximates the movement which would be given the human hand in reaching and seizing upon and drawing out the husks and ears should the work be done in that manner. Bars 30 are pivoted to the arms 21 a short distance from their hub ends, where they are mounted on the shaft 20. Said bars extend back over the husking-rolls and substantially parallel therewith, and their rear ends rest upon suitable bearings, as 31, at a point at or near the lower or outer ends of said rolls. These bars are each provided with several downwardly-projecting fingers 32, which contain "jackknife-joints," so that in the forward movement of the bars said fingers will fold up and drag over the

ears and husks, while in the rearward movement they will swing down and engage with said ears and husks and force them along down the husking-rolls. These fingers are flat and broad on their faces and are pointed at their lower ends, (see Fig. 4,) so that the extreme points pass down between and close to the husking-rolls, so that they are enabled to engage with the entire amount of husks and ears carried from said rolls and keep the rolls in operation free from being clogged. The bars and their connections, together with the fingers thereon, constitute a reciprocating structure, by means of which the work is continuously and efficiently accomplished.

Just below and immediately at the front of the feed-carrier 11 I place a second rock-shaft 40, and upon this I mount a series of fingers 41. On the outer end of the rock-shaft 40 is an arm 42, and this in turn is connected by a link 43 with the pitman 22. The result is that the shaft 40 is rocked back and forth and the fingers 41 operate to shake up and level the corn and husks as they pass down through the husking-rolls, keeping the mass agitated and from becoming clogged. These arms cooperate with the other parts of my invention in keeping the mass of corn in motion, so that the machine shall be able to continuously and efficiently operate.

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

1. The combination, in a corn-husking machine, with the husking-rolls thereof, of a reciprocating frame arranged above said husking-rolls and carrying fingers which extend down to near said rolls, said fingers being jointed and adapted to yield while the frame carrying them is moving up the roll and thus pass over the husks and corn, but to be held rigidly while the frame is passing down the rolls, and thus engage with and move the husks and corn, and means for reciprocating said frame.

2. The combination, in a corn-husking machine, with the husking-rolls thereof, of a rock-shaft mounted on the upper ends of swinging standards, said standards, a crank, a pitman running from said crank to and rigidly connected with said rock-shaft, and fingers also rigidly mounted on said rock-shaft and adapted when actuated by said crank to be carried out into the path of the corn as it descends onto the husking-rolls and engage with and draw said corn down said husking-rolls, substantially as set forth.

3. The combination, in a corn-husking machine, of the husking-rolls, a reciprocating structure arranged above said rolls, suitable means for driving the same, and jointed fingers mounted on said structure and extending down into close proximity to said rolls, the joints in said finger being "jackknife-joints," and means for reciprocating said frame, substantially as and for the purposes set forth.

4. The combination, in a corn-husking machine, of the husking-rolls, a rock-shaft, means for driving said rock-shaft, arms rigidly mounted on said rock-shaft, bars pivoted to said arms and extending back over said husking-rolls, and jointed fingers mounted on said bars.

5. The combination, in a corn-husking machine, of the feeding devices, the husking-rolls, a rock-shaft situated at the point where the feeding devices deliver to said husking-rolls, fingers thereon for keeping the corn agitated and in motion as it descends from the feeding apparatus to the husking-rolls, and suitable means for rocking said shaft about its own axis and for oscillating said shaft about an external axis, substantially as set forth.

6. The combination, in a corn-husking machine, with the husking-rolls thereof, of a rock-shaft arranged above said rolls and mounted in bearings on the ends of swinging standards, said swinging standards, cranks arranged in suitable relation to said rock-shaft, a pitman extending from said cranks to said rock-shaft, a second rock-shaft, arms rigidly connected thereto one or more of which extends down into the path of ears of corn as they fall onto the husking-rolls and another of which extends back over the pitman, and a link connecting said arm to said pitman, substantially as set forth.

7. The combination, in a corn-husking machine, of the feeding apparatus, the snapping-rolls, the husking-rolls onto which the corn is delivered after it is snapped off the stalks, a rock-shaft situated at the delivery-point from the other mechanism to the husking-rolls having arms or fingers for agitating the corn as it descends, and reciprocating rods extending lengthwise above the husking-rolls and provided with fingers for accelerating the movement of the corn and husks down the rolls, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Newcastle, Indiana, this 15th day of January, A. D. 1902.

BENJ. H. LAWTER. [L. S.]

Witnesses:
ELLIS J. MORELAND,
HENRY H. STUART.