

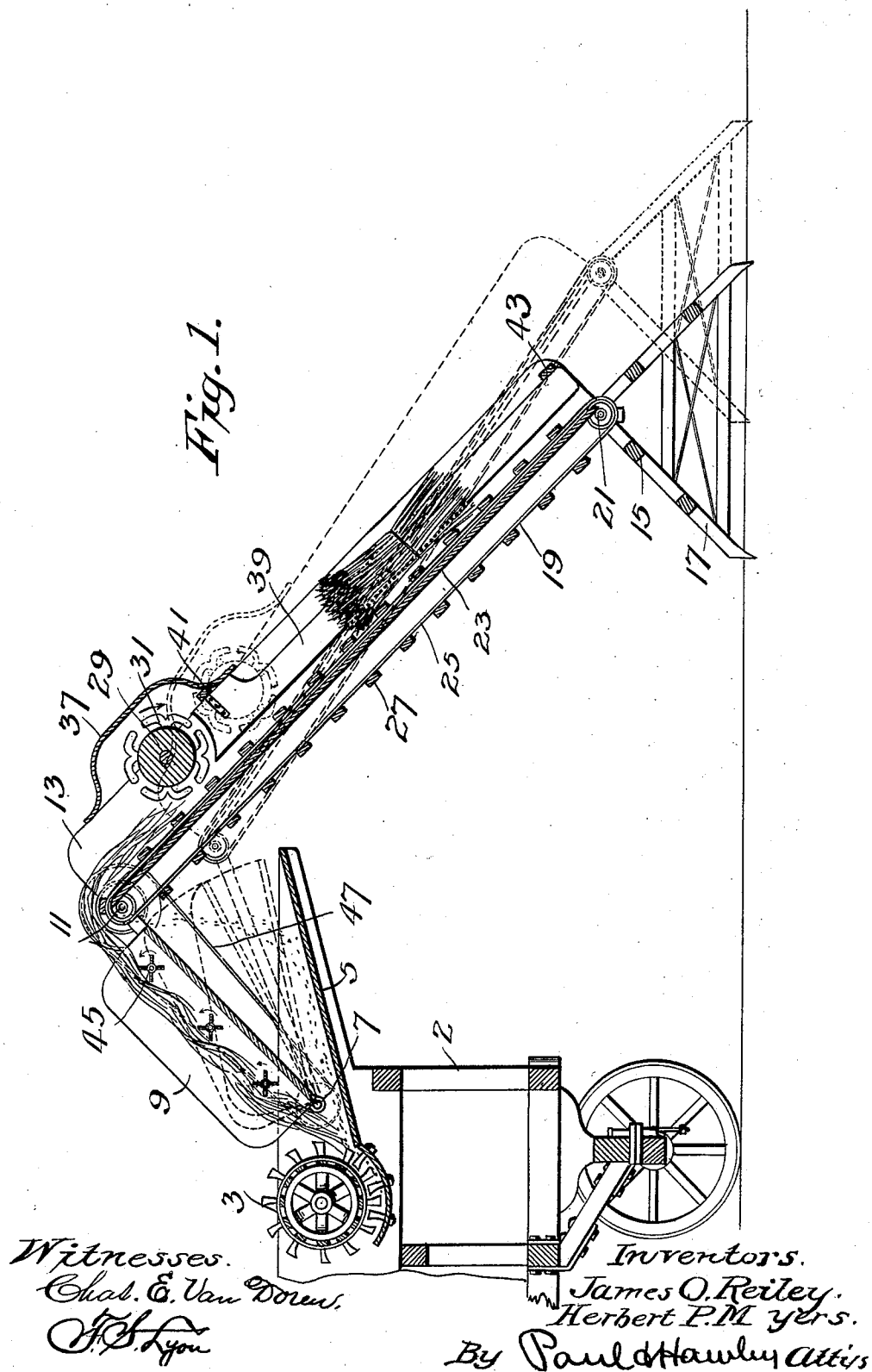
(No Model.)

2 Sheets—Sheet 1.

J. O. REILEY & H. P. MYERS.
BAND CUTTER AND FEEDER.

No. 513,143.

Patented Jan. 23, 1894.



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Fig. 2.

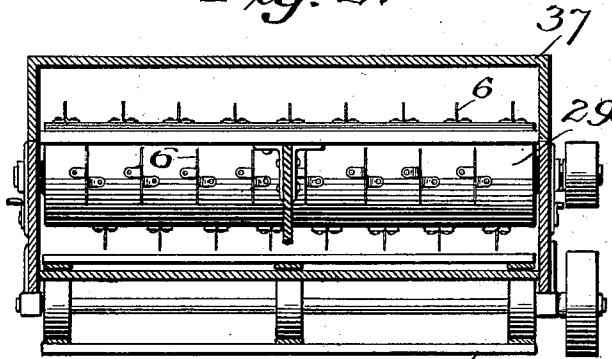


Fig. 3. Fig. 4. Fig. 5.

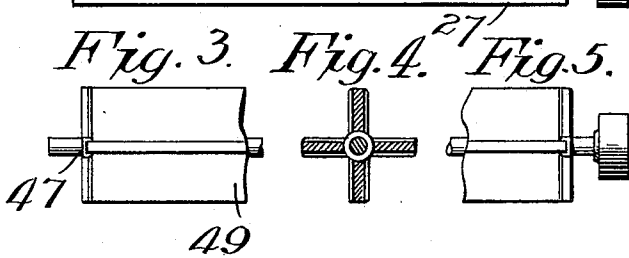


Fig. 6.

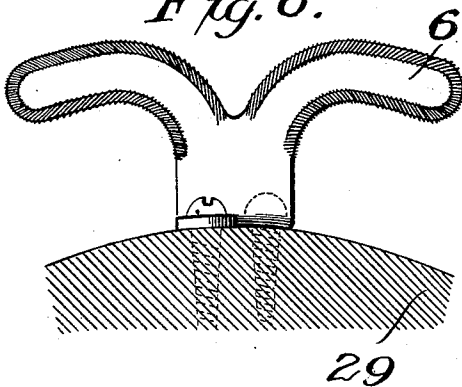
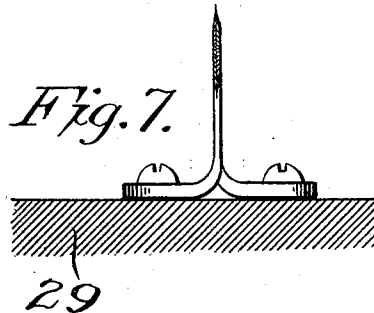


Fig. 7.



Witnesses.
Chas. E. Van Doren.
J. D. Lyon

Inventors.
James O. Reiley.
Herbert P. Myers
By Paul H. Hensley
Attorneys

UNITED STATES PATENT OFFICE.

JAMES O. REILEY AND HERBERT P. MYERS, OF BOWDLE, SOUTH DAKOTA.

BAND-CUTTER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 513,143, dated January 23, 1894.

Application filed June 12, 1893. Serial No. 477,289. (No model.)

To all whom it may concern:

Be it known that we, JAMES O. REILEY and HERBERT P. MYERS, of Bowdle, in the county of Edmunds, State of South Dakota, have invented certain new and useful Improvements in Band-Cutters and Feeders, of which the following is a specification.

This invention relates to improvements in machines designed for use in connection with thrashing machines, for automatically cutting the bands upon the bundles and for feeding the grain to the thrashing machine cylinder after the bands are cut; and the invention consists, generally, in the constructions and combinations hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification, Figure 1 is a longitudinal vertical section showing a machine constructed in accordance with our invention, and showing its position in reference to the thrashing machine when in use. Fig. 2 is a transverse section showing the means for supporting the cutting cylinder, and showing also the elevator and the central division board. Figs. 3, 4 and 5 are details of a beater that may be substituted for the cutting cylinder. Figs. 6 and 7 are detail views showing one of the knives.

In the drawings, 2 represents a portion of the frame of a thrashing machine provided with the usual thrashing cylinder 3 and feed table 5. A shaft 7 is mounted in bearings above the feed table 5 preferably so as to be capable of being removed therefrom, and above this shaft is pivotally supported the chute 9, its outer end being pivotally supported upon a shaft 11 secured upon the upper end of the elevator frame 13. The elevator frame and the chute or table 9 are thus hinged together by means of the shaft 11 so that the angle between the two may be changed at will by lowering or raising the elevator frame. The lower end of the elevator frame is preferably mounted upon the frame 15 which is provided with sharpened bars 17 adapted to strike into the ground and thus firmly anchor the lower end of the elevator frame while at the same time permitting it to be moved so as to change the angular inclination between the elevator frame and the chute 9 at will.

Mounted upon the elevator frame is an endless belt or elevator 19, whose upper end is supported upon suitable pulleys on the shaft 11 and its lower end upon suitable pulleys on the shaft 21.

The elevator frame is provided with the close bottom 23, and the elevator consists of the series of belts 25 provided with the slats 27 secured transversely upon said belts, and the upper side of said elevator is adapted to travel over the bottom 23 of the elevator frame.

Mounted in bearings in the elevator frame is the cylinder 29, having secured upon its outer surface the series of knives 31. These knives, as shown in Figs. 6 and 7, are constructed with the oppositely extending blades 6, making the knives of substantially T-shape, and these blades are serrated both above and below, as shown in Fig. 6. The lower end of the shank of each knife is split, and the parts are turned in opposite directions, as shown in Fig. 7, and are secured upon the outer surfaces of the cylinder 29. The knives are preferably arranged on this cylinder in alternating series, as shown in Fig. 2, so that it is impossible for any bundle to pass under the cylinder without the band thereof being subjected to the cutting action of one of the knives, and it is immaterial what the size or form of the bundle may be. If the knives project into the bundle so as possibly to hook under one of the bands, the band will still be cut by the sharpened edge of the knife that is toward the cylinder. In case the knife does not hook under the band, the band will still be subjected to the cutting action of the outer surface of one of the blades, and it is thus rendered impossible for a bundle to pass under the cylinder without the band being cut. We prefer to employ a hood 37 arranged over the cylinder 29, so as to prevent any of the grain from being thrown out of the machine. We also prefer to provide a center board 39 arranged over the conveyer 27 and this center board is preferably secured at its upper edge to the cross bars 41 and 43. The purpose of the center board is to separate the bundles and prevent them from turning around while they are being moved upward by the carrier, thereby causing them to be presented end first toward the cylinder. After the bands

are cut the knives plowing into the bundle tend to spread it open and the grain passing off from the elevator 27 falls upon the rotating beaters 45 arranged over the chute or table 9. A belt 47 is preferably arranged to drive the shaft 11 from the shaft 7, and this belt or other equivalent means is preferably used to drive the beaters 45.

When it is desired to have a machine operate upon loose grain a suitable beater 49 may be substituted for the cylinder 29. We have shown this beater in detail in Figs. 3, 4 and 5. As here shown, it consists of a central shaft provided with oppositely projecting wings, these wings being adapted to strike and spread the grain so as to cause any loose grain that is fed to the machine to be evenly distributed before it reaches the thrashing cylinder.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination, with the thrashing machine, of the shaft 7 mounted in suitable bearings, the chute 9 pivotally supported upon said shaft, the conveyer frame connected to the chute 9 and provided with a stand or support 15 at its lower end, and the cutting cylinder mounted in bearings in said frame, and the conveyer for passing the grain beneath said cylinder and delivering it to said chute 9, substantially as described.

2. The combination, with the thrashing machine, of the revoluble shaft 7, the chute 9 pivotally supported upon said shaft and provided with a series of beaters 45, the con-

veyer frame pivotally connected with the chute 9, the conveyer for carrying the grain up over said conveyer frame and delivering it to the chute 9, the support pivotally connected to the lower end of said conveyer frame, and the cutting cylinder provided with a series of knives arranged above said conveyer, for the purpose specified.

3. The combination, with the thrashing machine, of the pivotally supported chute 9, provided with a series of beaters 45, the elevator frame pivotally connected to said chute, the elevator mounted upon said frame, means for driving said elevator and for driving said beaters, the adjustable support for the lower end of said elevator frame and to which said elevator frame is pivoted, the cylinder mounted upon said elevator frame and provided with a series of knives, the hood arranged over said cylinder, and the center board 39 secured upon suitable supports upon said elevator frame, substantially as described.

4. The combination, with the elevator frame and the elevator arranged thereon, of the cylinder mounted in bearings upon said elevator frame and provided with the knives 31 having the oppositely projecting blades provided with serrated edges, substantially as described.

In testimony whereof we have hereunto set our hands this 27th day of May, 1893.

JAMES O. REILEY.
HERBERT P. MYERS.

In presence of—

C. E. LENNAN,
FRED. J. BOWMAN.