

2 Sheets—Sheet 1.

BAND CUTTER AND FEEDER FOR THRASHING MACHINES.

Patented Aug. 27, 1889.

Fig. 1

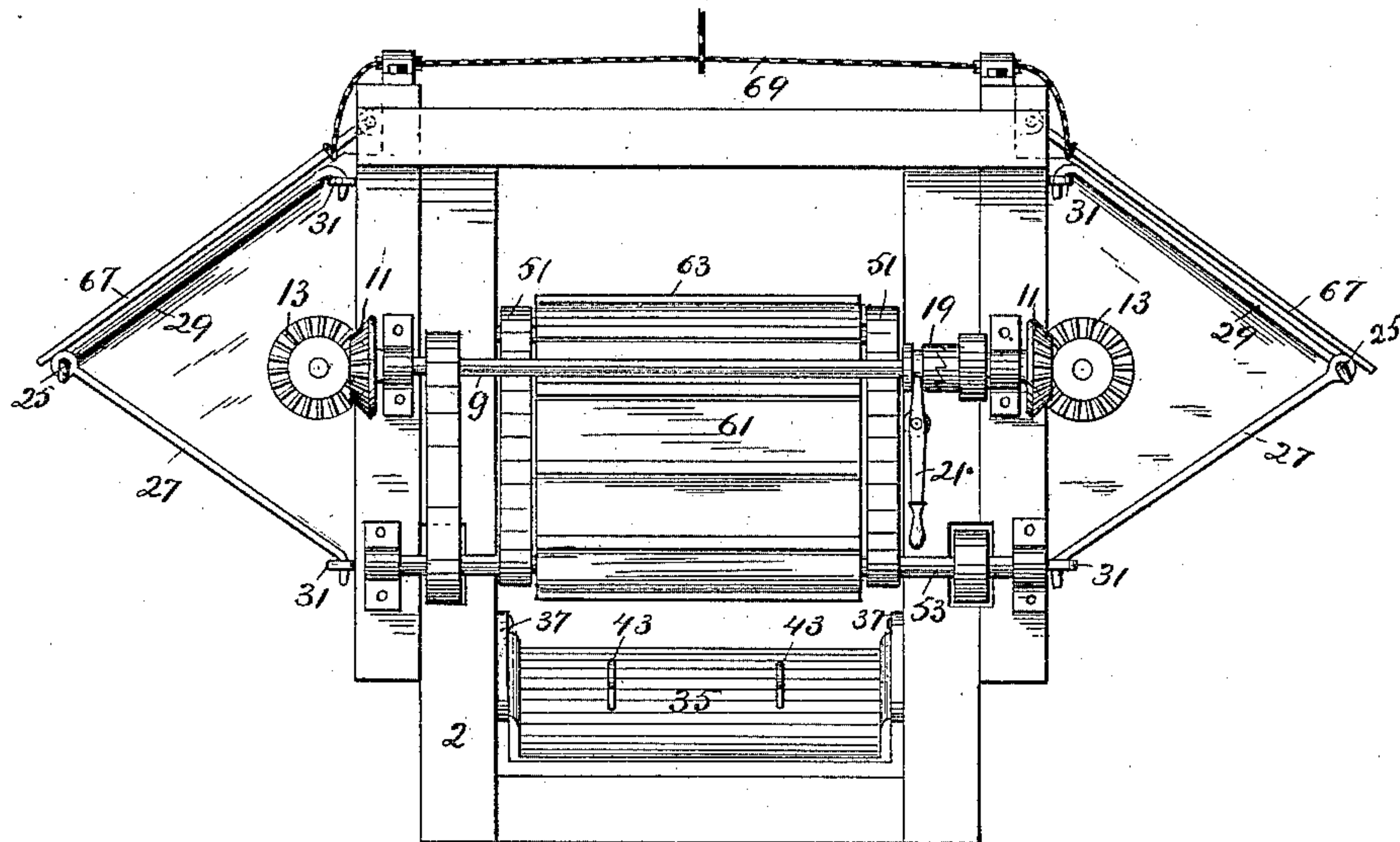
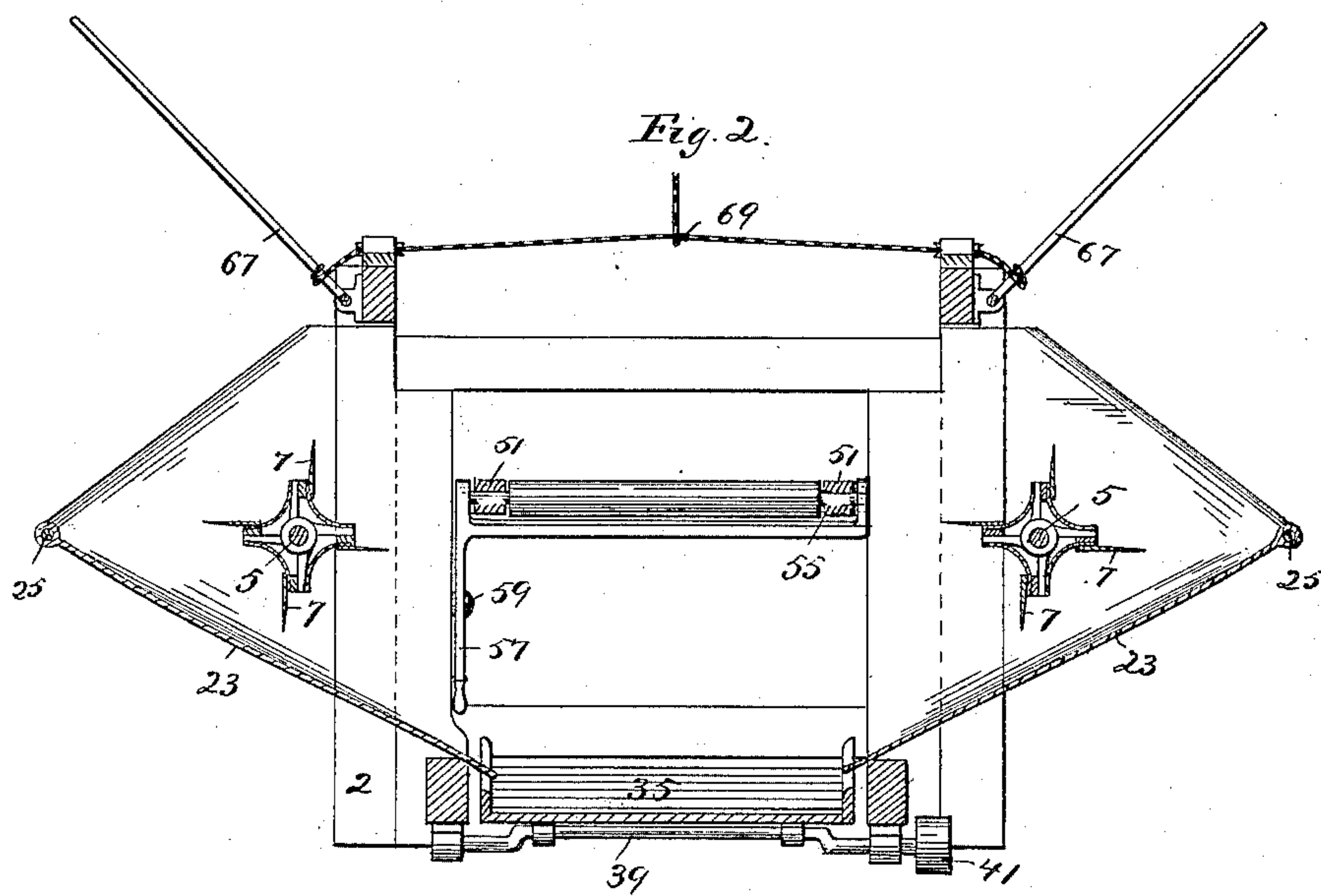


Fig. 2.



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(No Model.)

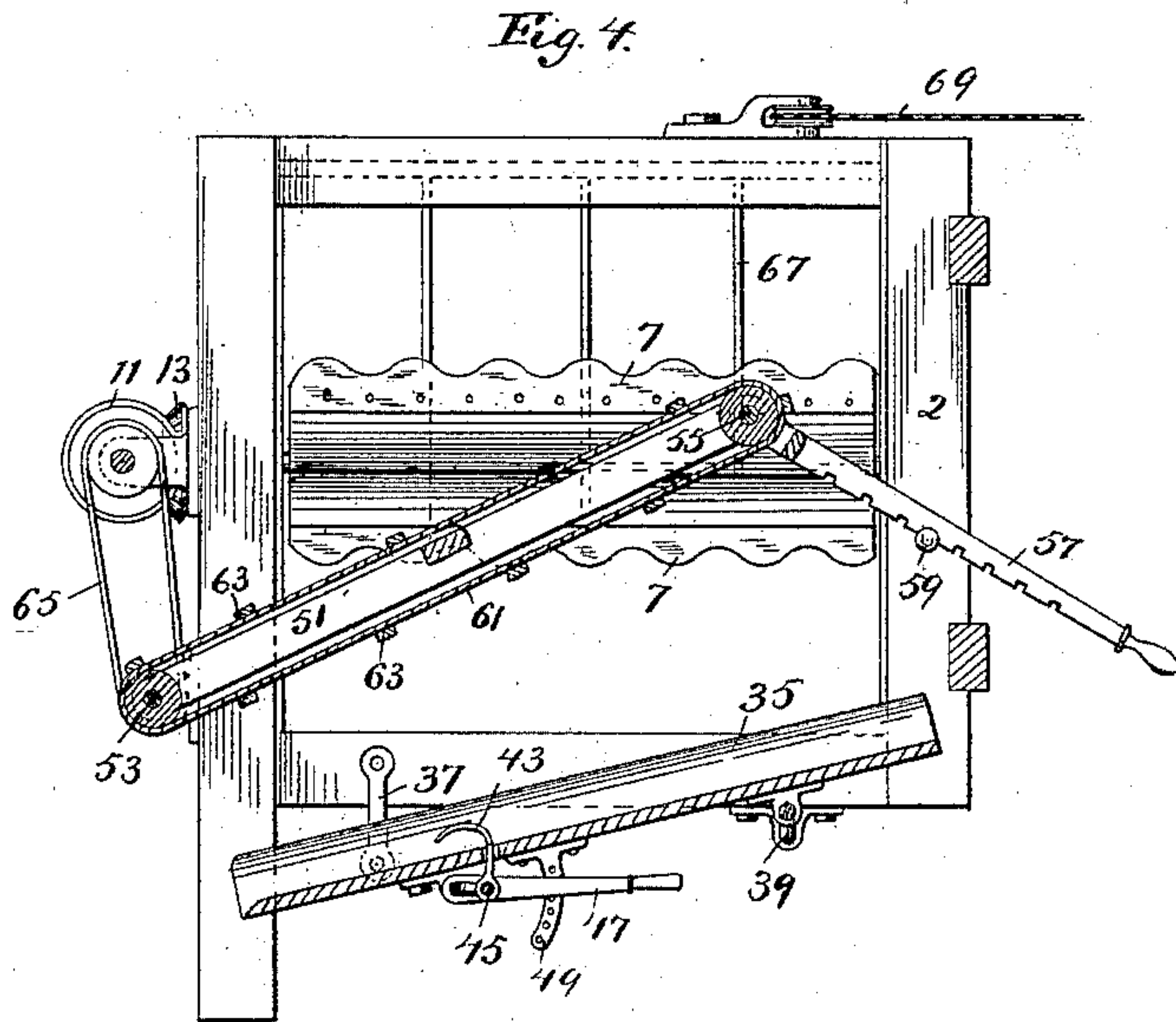
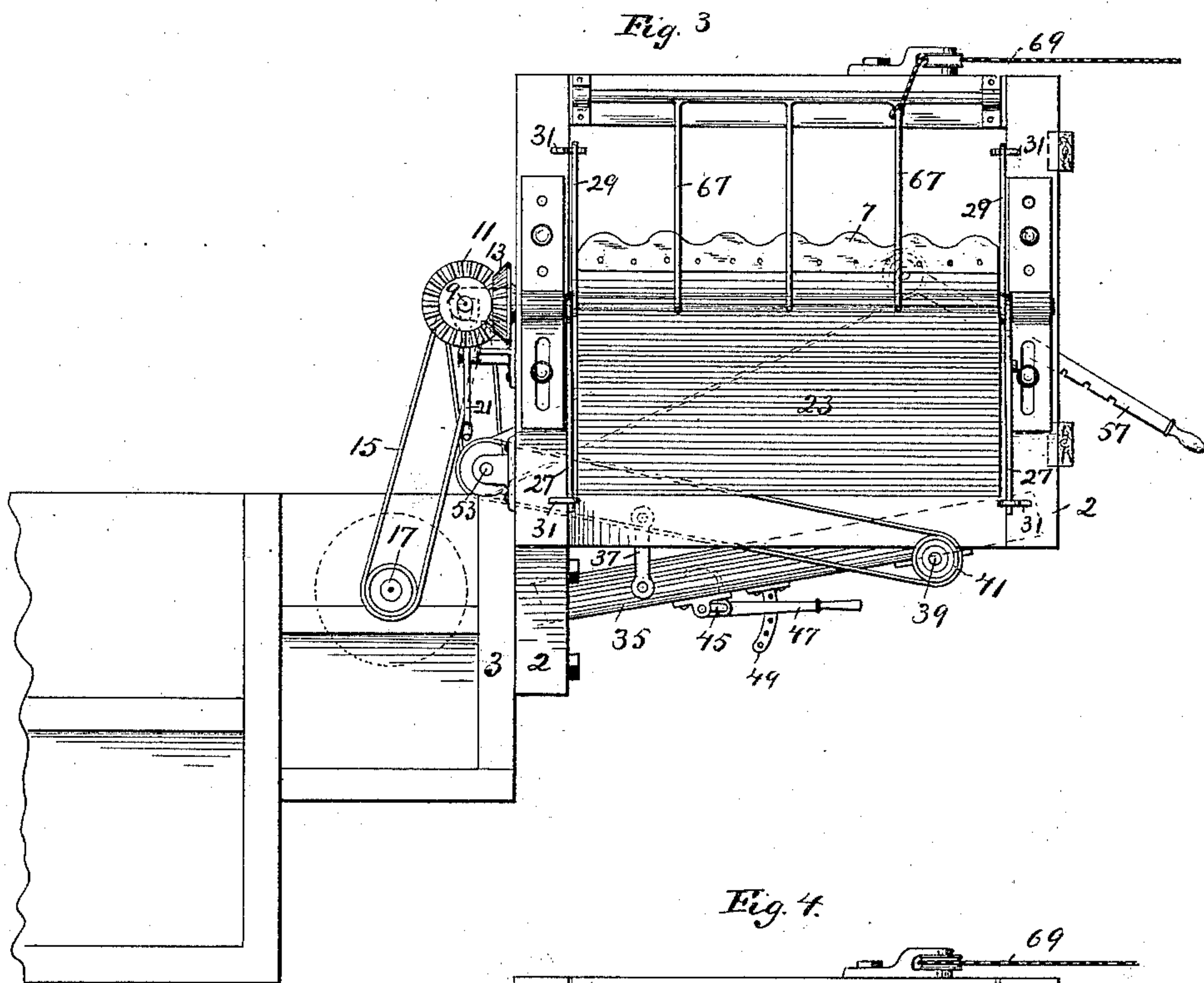
2 Sheets—Sheet 2.

W. H. ALSTON.

BAND CUTTER AND FEEDER FOR THRASHING MACHINES.

No. 409,897.

Patented Aug. 27, 1889.



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UNITED STATES PATENT OFFICE.

WILLIAM H. ALSTON, OF BUFFALO, DAKOTA TERRITORY.

BAND-CUTTER AND FEEDER FOR THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 409,897, dated August 27, 1889.

Application filed January 17, 1889. Serial No. 296,674. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ALSTON, of Buffalo, in the county of Cass and Territory of Dakota, have invented certain new and useful Improvements in Band-Cutters and Feeders for Thrashing-Machines, of which the following is a specification.

The object of this invention is to provide an improved device for cutting the bands upon bundles of grain and feeding the grain to thrashing-machines; and the invention consists, generally, in the construction and combination hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is an end elevation of my improved device. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a side elevation. Fig. 4 is a longitudinal vertical section.

In the drawings, 2 represents a suitable frame upon which the operating parts of the device are supported. This frame is suitably secured to the frame 3 of the thrashing-machine.

Arranged at each side of the frame 2, and supported in suitable bearings thereon, is a longitudinal shaft 5, to which are secured a series of knives 7. Each of the shafts 5 is provided with a beater-frame, which is secured to the shafts and is of a substantially X shape in cross-section. To this beater-frame the knives 7 are bolted, as shown in Fig. 2. A combined cutter and beater cylinder is thus formed. The shafts 5 are rotated from a counter-shaft 9, which is provided with bevel-gears 11, which mesh with similar gears 13 upon the shafts 5. The shaft 9 is preferably driven by means of a belt 15, extending from a pulley on the shaft 17 of a thrashing-cylinder. The shaft 9 may be provided with a suitable clutch 19, which is adapted to be operated by a lever 21.

Arranged at each side of the machine, beneath the shafts 5, is an inclined table 23, the inner end of which rests upon the sill of the frame 2, while the outer end is hinged upon a rod 25. The rod 25 is supported by the brace-rods 27 and 29, which are provided with hooks at their inner end and engage suitable

staples 31 in the frame of the machine. By this means the tables are removably supported upon the sides of the frame, and can be removed at any time by simply disengaging the hooks upon the brace-rod from the staples 31.

Arranged within the frame 2 is an inclined table 35, the lower end of which is close to the mouth of the thrashing-machine, in such position that the grain which passes over the table 35 passes under the cylinder of the thrashing-machine. The lower end of this table is supported upon links 37, and the upper end upon a crank-shaft 39. The shaft 39 is provided with a pulley 41, and is adapted to be driven by suitable means. As the shaft 39 is rotated the upper end of the table is given a vibratory movement, and thereby the grain which rests upon the table is fed toward the thrashing-machine.

For the purpose of retarding the grain upon the table 35 if it should be found to be feeding too fast into the thrashing-machine, I provide a series of fingers 43, which are secured upon a crank-shaft 45, that is arranged in bearings beneath the table 35.

The shaft 45 is provided with a lever 47, by means of which the shaft may be rotated and the fingers projected above the table or be drawn down so as to be close to the surface thereof. By this means the speed with which the grain will feed to the cylinder may be regulated.

A quadrant-shaped locking-plate 49 is preferably arranged in connection with the lever 47, by means of which the fingers may be secured in any desired position.

Arranged above the table 35 is a swinging frame 51, preferably pivoted at its lower end upon a shaft 53 and carrying at its upper end a shaft 55. Secured to the shaft 55 is a notched lever 57, which is adapted to engage a lug 59 upon the frame 2. Any one of the notches upon the lever 57 may be engaged with the lug 59, and thereby the frame 51 may be brought nearer to or farther from the table 35. A canvas belt 61, provided, preferably, with slats 63, extends around the frame 51 over the shafts 53 and 55. The shaft 53 is preferably driven by a belt 65 from the shaft

9. I also prefer to arrange upon the frame 2, at each side of the machine, the pivoted racks 67. These racks are adapted to turn down over the tables 23, as shown in Fig. 1, and thereby to prevent feeding of bundles to the machine. I prefer to connect a cord 69 to both of the racks 67. This cord may be extended to any suitable point, and it will preferably be arranged so that the engineer can operate it at pleasure to raise or lower the rack 67. He can thus lower the rack 67 when he is about to stop the engine, and thus prevent clogging up the machine.

The operation of the machine will be readily understood. The bundles are placed upon the inclined tables 23 and pass under the rotating knives 7. The knives cut the bands and at the same time the knives and the frame upon which they are mounted enter the bundle and spread it apart. The grain passes down onto the swinging feed-table 35 and from this to the thrashing-machine. The knives 7 may be straight edge or curved, as shown in Fig. 3, or of other desired shape. By this means the bands of the bundles are cut and the grain will be regularly and evenly fed into the thrashing-machine.

I claim as my invention—

1. The combination, in a machine of the class described, with the main frame 2, and the revolving shafts provided with the series of knives 7, of the inclined tables 23; arranged at each side of the main frame and having their lower ends resting upon said frame 2, the rods 25, extending transversely and supporting the upper ends of said tables, the inclined brace-rods 27, extending to the frame below said tables, pivoted to said rods 25 and provided with hooks engaging staples upon said frame 2, and the inclined brace-rods 29, extending to the frame above said table, and also provided with hooks engaging staples upon the frame, for the purpose set forth.

2. The combination, with the inclined tables 23 and knives 7, of the rack 67, pivoted above said tables and arranged to cover said tables, and the cords 69, secured to said racks, for the purpose specified.

In testimony whereof I have hereunto set my hand this 31st day of December, 1888.

WILLIAM H. ALSTON.

In presence of—

A. C. PAUL,

A. M. GASKILL.