(No Model.)

2 Sheets—Sheet 1.

W. H. ALSTON.

BAND CUTTER AND FEEDER.

No. 429,876. Patented June 10, 1890.

Fig. 1

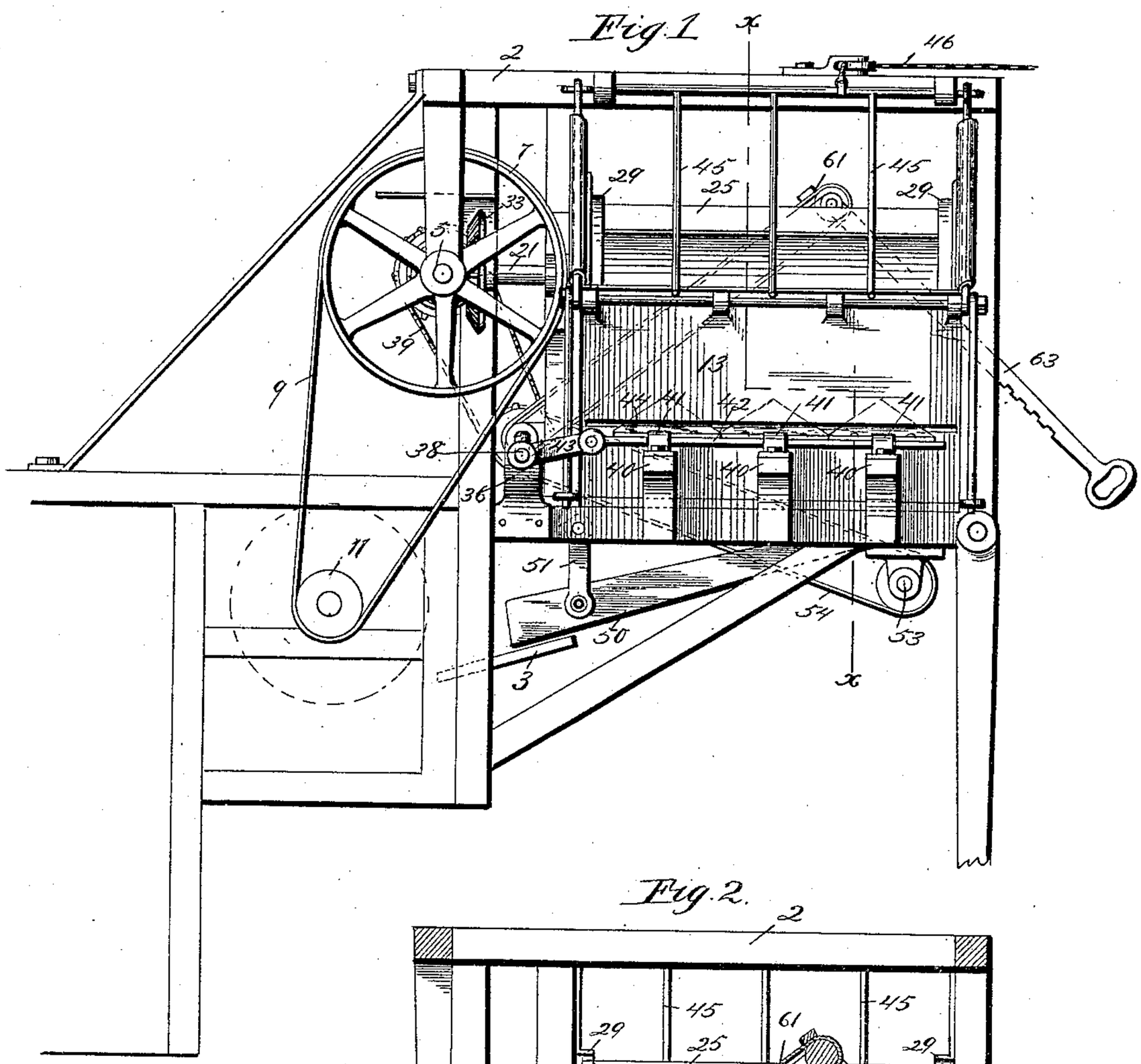
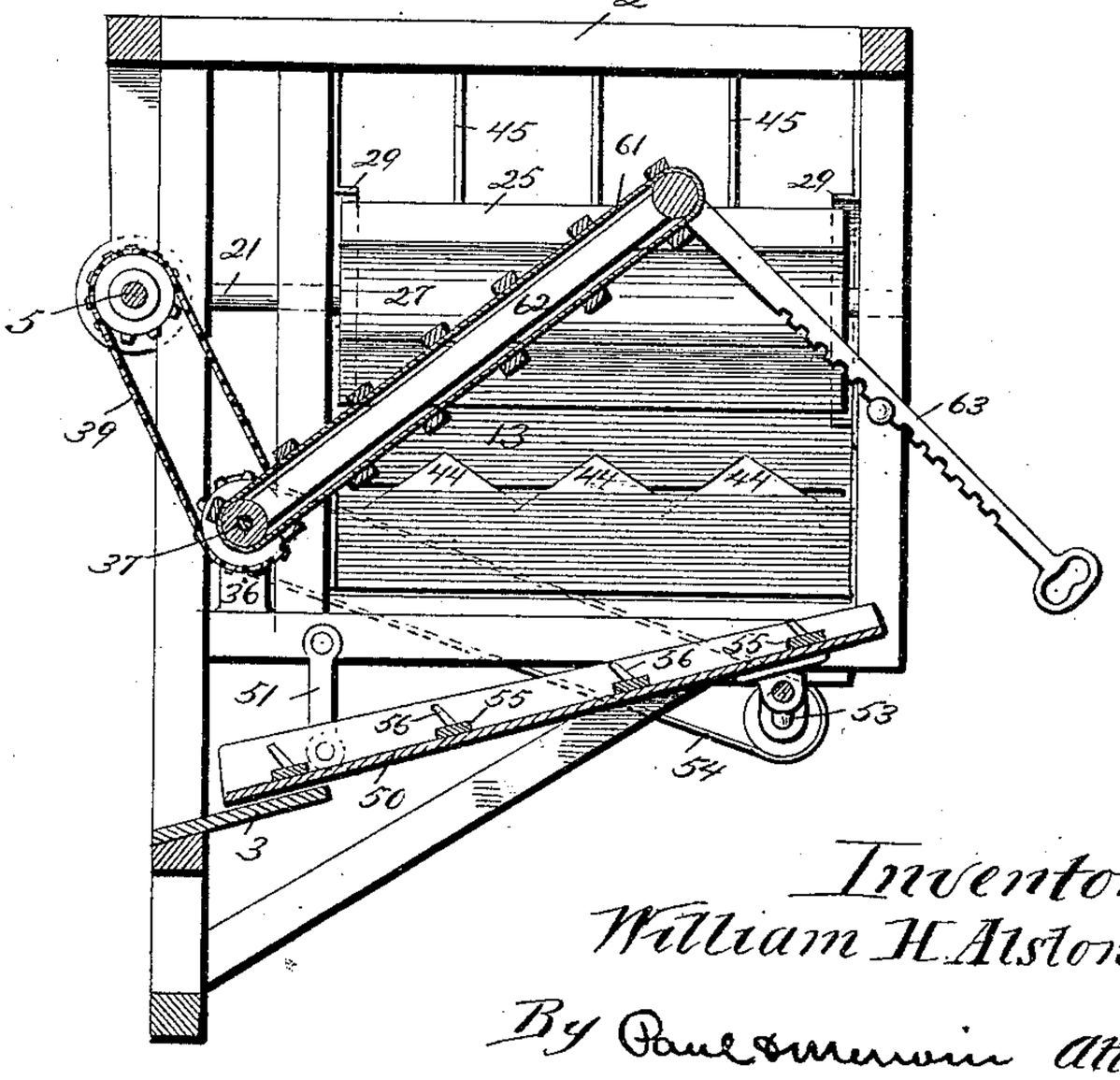


Fig. 2.



Witnesses'
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A. M. Gaskill

Inventor.
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By Paul & Sumerwin Att'ys

(No Model.) 2 Sheets—Sheet 2.

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BAND CUTTER AND FEEDER.

No. 429,876. Patented June 10, 1890.

Fig. 3.

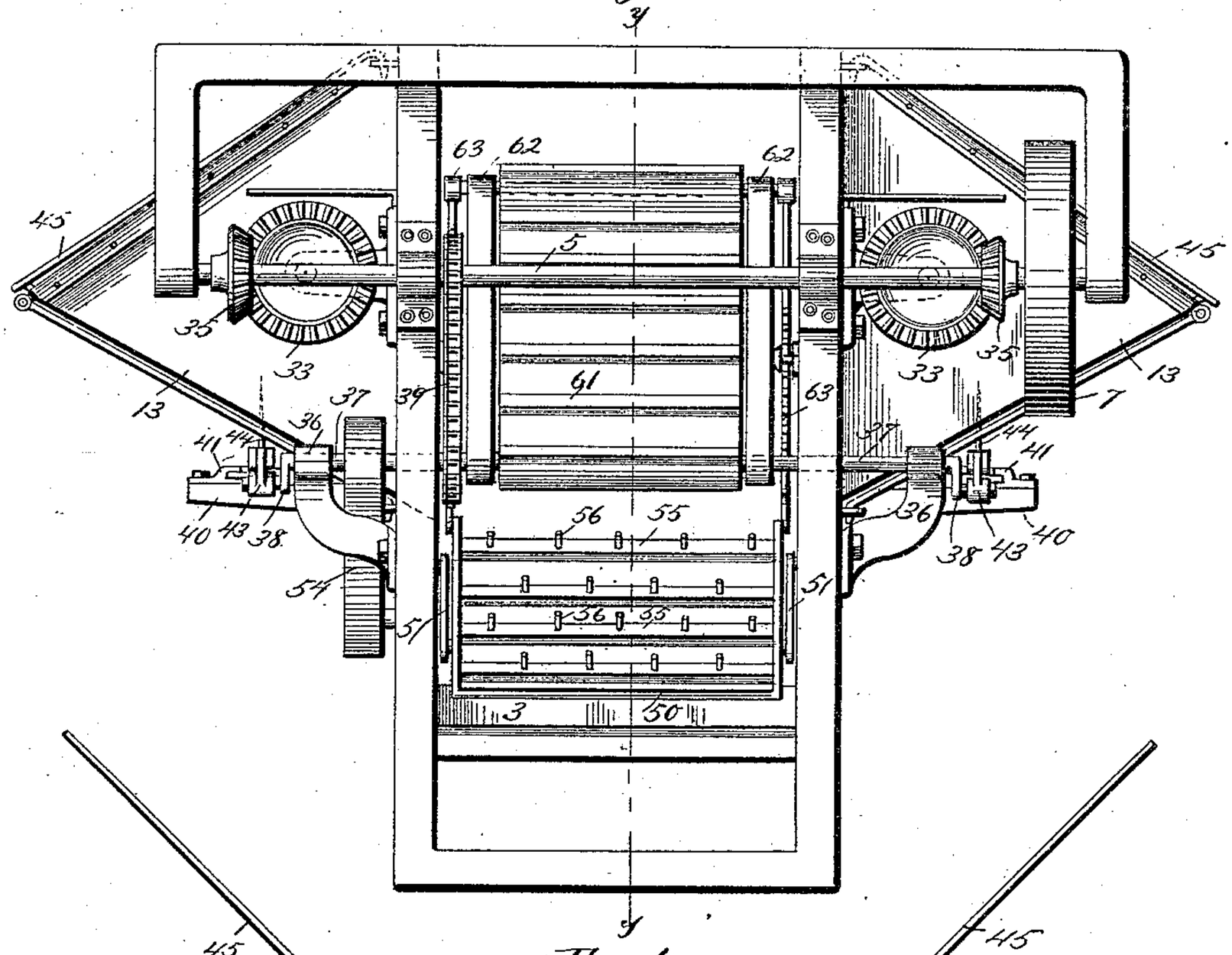
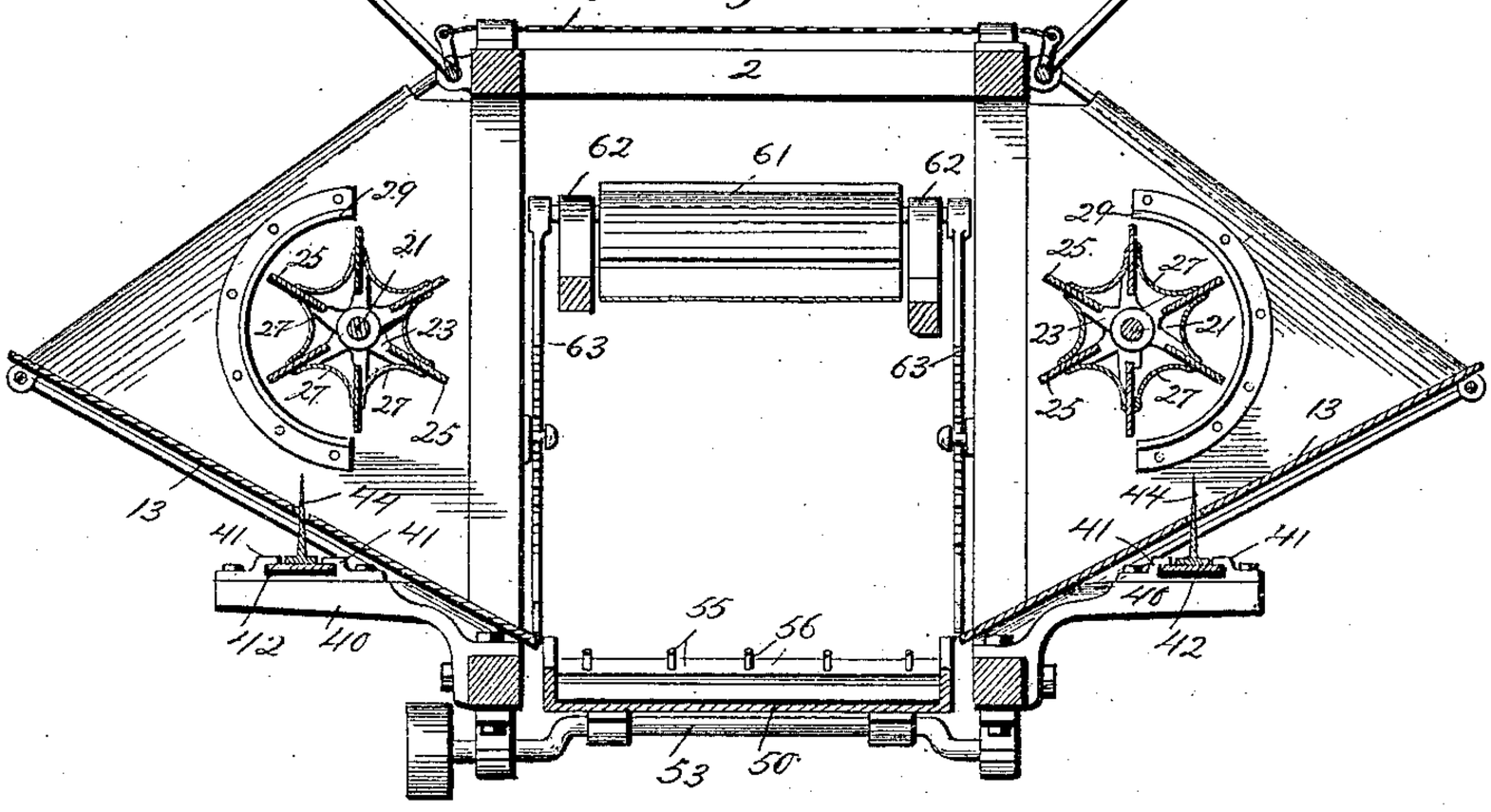


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM H. ALSTON, OF ADRIAN, ILLINOIS.

BAND-CUTTER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 429,876, dated June 10, 1890.

Application filed October 29, 1889. Serial No. 328,581. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ALSTON, of Adrian, in the county of Hancock and State of Illinois, have invented certain Improvements in Band-Cutters and Feeders, of which the following is a specification.

The object of this invention is to provide an improved machine for feeding bundles of grain to thrashing-machines and cutting the bands of the bundles.

The invention consists, generally, in the construction and combination hereinafter described, and particularly pointed out in the claim.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is an elevation looking at the end of the machine which comes next to the thrashing-machine cylinder. Fig. 4 is a transverse vertical section on line *x x* of Fig. 1.

In the drawings, 2 represents the frame of the machine, which is secured to the frame of the thrashing-machine at a point above the feed-table 3, which is arranged in front of the cylinder, the position of which is indicated by dotted lines in Fig. 1. Mounted upon the frame 2 is a driving-shaft 5, which is preferably provided with a suitable belt-pulley 7. A belt 9 extends around said pulley 7 and around a pulley 11 upon the shaft of the cylinder, thereby driving the shaft 5 at the desired speed. Arranged upon each side of the frame 2 is an inclined table 13, which is substantially the same as the inclined table described in my former patent, No. 409,897, dated August 27, 1889, upon which this is an improvement. Arranged upon each side of the machine is a beater, that is located above the inclined table and is adapted to move the grain over said table and hold it upon the knives, as hereinafter described. These beaters each consists of a shaft 21, having secured thereon a frame 23 and a series of plates 25, between which are a series of curved plates 27. The curved guard-plates 29 are arranged at the ends of the beater to prevent the straw from getting into the space between the ends of the beaters and the supporting-frame. The shafts 21 are provided with suitable bevel-pinions 33, which are engaged by bevel-pinions 35 upon the driving-shaft 5. One of these beaters is arranged over each of the tables, and they are driven in opposite directions, so that as the bundles of grain move down over the surface of the inclined table they are engaged by the plates of the beaters, between which the bundles extend as far as the curved plates permit them. The bundles are thereby moved over the table at the desired rate of speed, and as they project into the spaces between the plates 25 they are kept in the proper position for the knives to cut the bands, as hereinafter described. Mounted in suitable bearings 36 upon the frame of the machine is a shaft 37, that is driven by a chain 39 from the shaft 5. The shaft 37 is provided, preferably, at each end with a crank 38. Brackets 40 are secured upon the opposite sides of the machine beneath the inclined tables. Arranged upon the brackets 40 are guides 41, which hold a bar 42 in place. A connecting-rod 43 is connected to the bar 42 and to the crank 38 upon the shaft 37. By this means the bar 42 is reciprocated in the guides 41. Secured to the bar 42 are a series of triangular-shaped knives 44, which project through a slot in the table 13. As the bar 42 is reciprocated the knives are also reciprocated beneath the beater, and the bundles of grain, which are moved over the knives and are held against them by the beaters, have their bands cut as they move downward on the table. The tables are also preferably provided with the guard-rods 45, to which are connected suitable cords 46, substantially as described in my former patent. Arranged between the inclined feed-tables is an inclined table or carrier 50, having its lower end mounted upon suitable links 51 and its upper end mounted upon a crank-shaft 53. The shaft 53 is driven by a suitable belt 54 from the shaft 37. The upper inclined surface of the table 50 is provided with a series of transverse bars 55, in each of which is a series of projecting teeth 56. These teeth project upwardly from the surface of the table, and are inclined toward its lower end, as shown in Fig. 2. This table is given a swinging motion, the upper end being alternately raised and depressed and moved upward and then toward the thrashing-machine, and the in-

clined projecting teeth 56, engaging the material on the table, push it downward toward the lower end of the table. Then as the table is swung the other way the teeth pull out of the grain and take a new hold. By this means the grain falling upon the table is moved rapidly into the thrashing-machine.

Located above the table 50 is an endless carrier 61, mounted upon a frame 62, the upper end of which is adjustably supported by the notched bar 63, substantially as described in my former patent.

With this construction the bundles of grain are placed upon the inclined tables and, sliding down over them, are engaged by the beaters and are moved over and held against the knives while the bands are cut. The further rotation of the beaters spreads the bundles, and the grain, passing off from the inclined tables, falls upon the swinging table 50, by which it is moved toward the cylinder of the thrashing-machine.

I claim as my invention—

The combination, with the inclined table 13, of the brackets 40, arranged beneath said table, a reciprocating bar arranged upon said brackets and provided with knives 44, projecting through an opening in said table, the rotating beater arranged above said table and over said knives and consisting of the shaft 21, provided with the frame 23, the projecting plates 25, and the curved plates 27, arranged between said plates 25, substantially as described.

In testimony whereof I have hereunto set my hand this 17th day of October, 1889.

WILLIAM H. ALSTON.

In presence of—

A. M. GASKILL,

A. C. PAUL.