

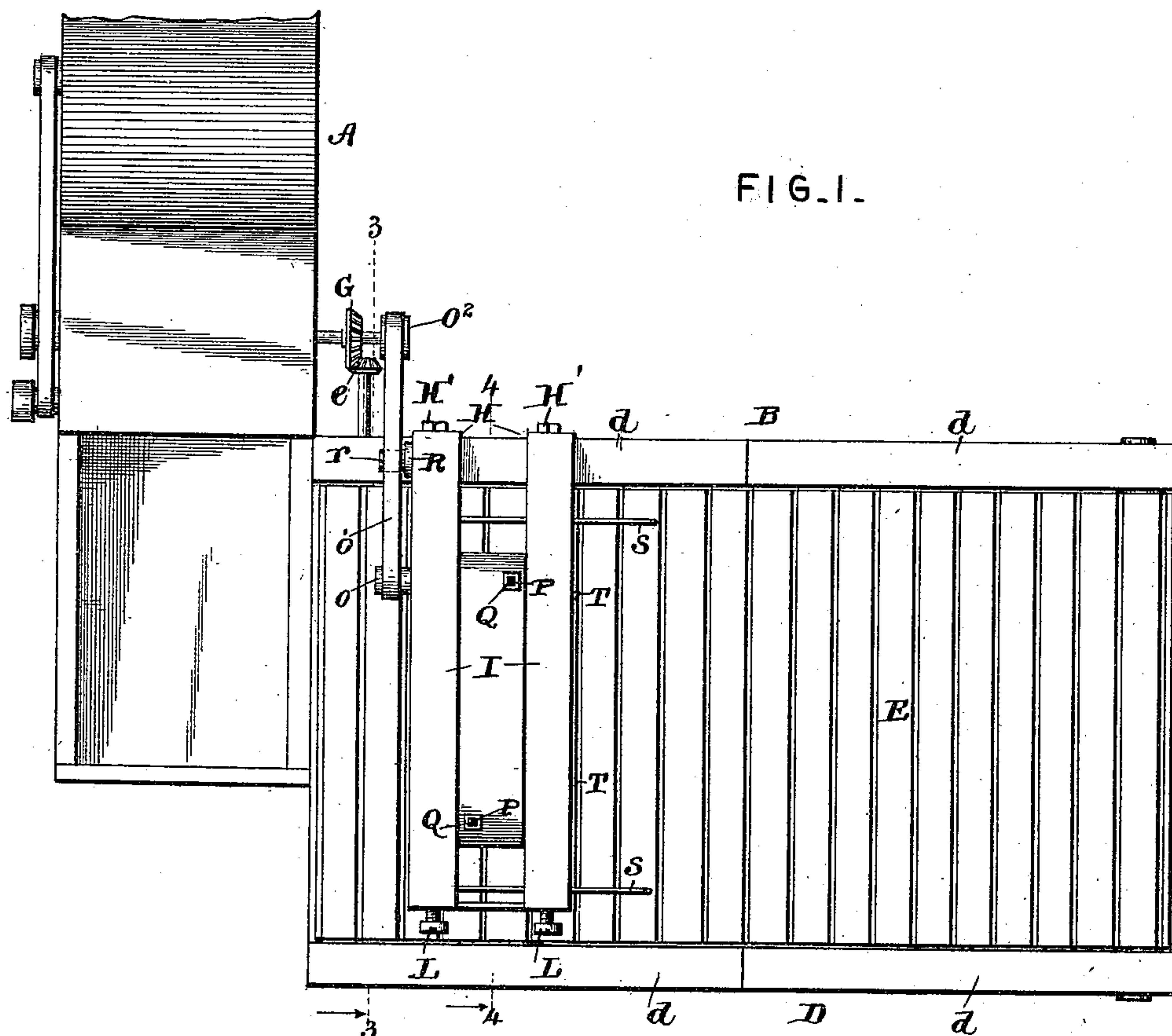
(No Model.)

2 Sheets—Sheet 1.

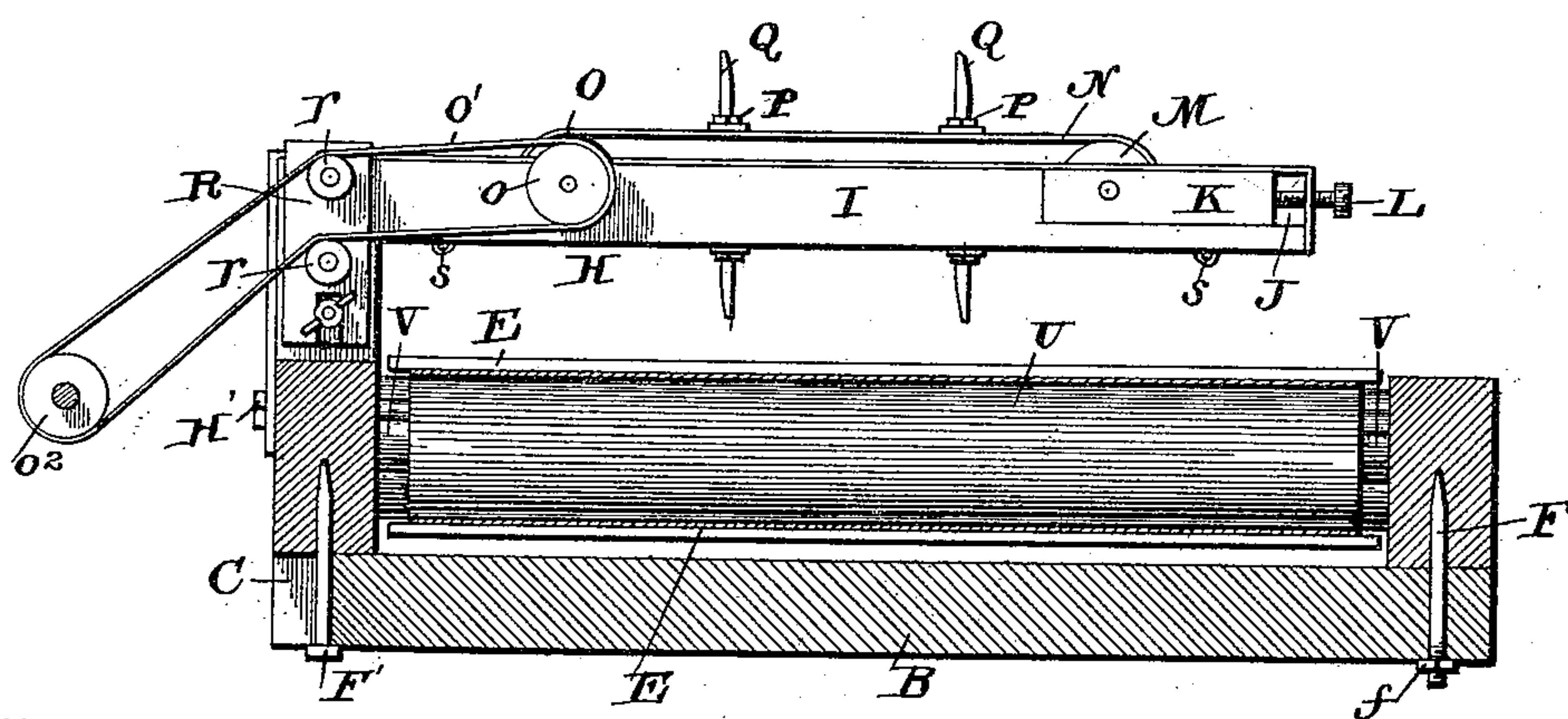
W. P. BURKE.
BAND CUTTER AND FEEDER.

No. 487,987.

Patented Dec. 13, 1892.



FIG_3_



Witnesses

Jas. K. McCathran
D. P. Walchaupter

Inventor

William P. Burke

By *his* Attorneys,

Chas. Snow & Co.

(No Model.)

2 Sheets—Sheet 2.

W. P. BURKE.
BAND CUTTER AND FEEDER.

No. 487,987.

Patented Dec. 13, 1892.

FIG. 2.

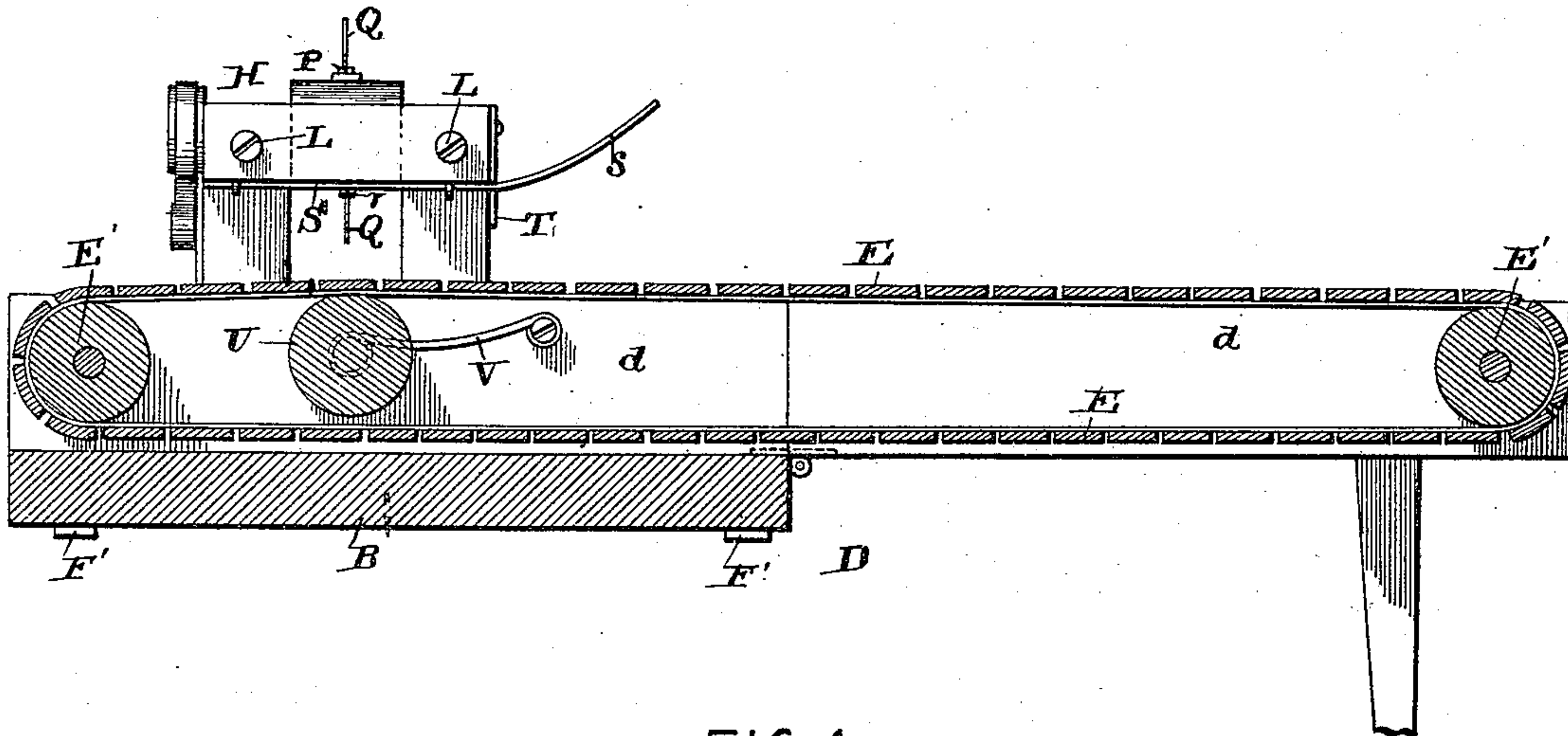


FIG. 4.

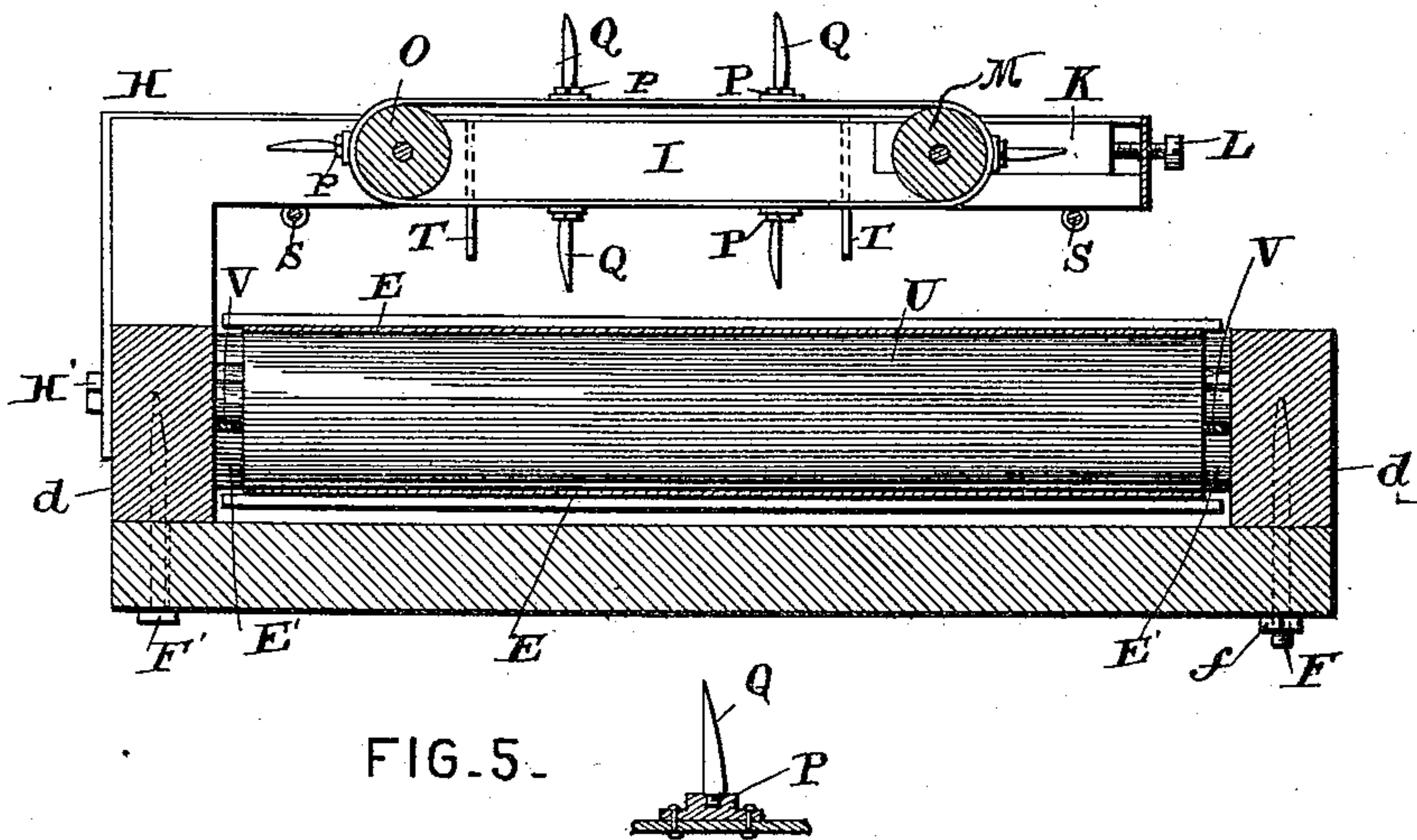


FIG. 5.

Witnesses

Inventor

Jas. H. McLaughlin
D. P. Wolhaupter

William P. Burke

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

WILLIAM PATRICK BURKE, OF EDINA, MISSOURI.

BAND-CUTTER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 487,987, dated December 13, 1892.

Application filed June 14, 1892. Serial No. 436,700. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PATRICK BURKE, a citizen of the United States, residing at Edina, in the county of Knox and State of Missouri, have invented a new and useful Band-Cutter and Feeder, of which the following is a specification.

This invention relates to band-cutters and feeders for thrashing-machines; and it has for its object to provide certain improvements in machines of this character which greatly facilitate the handling of the grain by the feeder, while at the same time providing for the cutting of the bands and evenly distributing the grain to the cylinder end of a thrasher. To this end the invention contemplates general improvements over similar machines.

With these and many other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a top plan view of a band-cutter and feeder attached to the cylinder end of a thrashing-machine as contemplated by this invention. Fig. 2 is a vertical longitudinal sectional view through the attachment. Fig. 3 is a vertical transverse sectional view on the line 3 3 of Fig. 1. Fig. 4 is a similar view on the line 4 4 of Fig. 1. Fig. 5 is a detail sectional view of one of the cutting-knives and its connection with the knife-belt.

Referring to the accompanying drawings, A represents the cylinder end of a thrashing-machine of ordinary construction, and to one or both sides of which is secured the fixed table B, having upon one edge thereof the slotted openings or notches C. Removably secured to the top of said table B is the feeder-frame D, comprising the separate hinged members *d*, through which passes the endless slatted feeder-apron E, which is designed to convey or carry the grain to the cylinder end of the thrasher, where it is fed to the cylinder by the feeder stationed to receive the grain from the machine-feeder. As stated, the feeder-frame D is removably secured to the table B, and one of the hinged members

thereof is provided upon one of the sides thereof with the depending securing-bolts F, adapted to pass through the table and be engaged upon one side thereof by the screw-nuts *f*, providing a removable attachment to said table, while the opposite side of the same member is provided with the depending headed bolts F', which are adapted to be slipped into the notches or slotted openings in one edge of the table, so that in removing the feeder-frame from the table or placing the same in position thereon it is only necessary to manipulate the nuts *f*, as will be readily apparent. It will, of course, be seen that the outer movable member of the feeder may be raised up and held out of the way while the thrasher is being moved. The endless apron E, passing through the feeder-frame, passes over the end apron-rollers E', located at the end of each member, respectively, and one of which rollers is provided upon one end thereof with the pinion *e*, engaging the gear-wheel G, carried upon one end of the cylinder-shaft of the thrashing-machine, and thus provides means for moving the apron in the direction of the cylinder end of the thrasher. Removably secured to the fixed frame member and upon one side of the same is the knife-frame H. The said knife-frame H is removably secured to one of the sides of said fixed frame member by the bolts H', so as to provide means for removing the frame when loose grain is being carried by the feeder to the thrasher, and said frame comprises the opposite parallel members or arms I, which extend from one side of the feeder-frame above and parallel with the apron passing therethrough to a point near the opposite side of the frame in order to hold the cutting devices carried thereby transversely over the center of the apron. The outer ends of the knife-frame arms I are provided with the slots J, which receive the adjustable bearing-blocks K, adjusted in said slots by means of the set-screw L, working through the outer ends of the arms and engaging said bearing-blocks, which blocks carry the adjustable belt-roller M. The said adjustable belt-roller M receives one end of the endless knife-belt N, the other end of which passes over the fixed belt-roller O,

journaled within the knife-frame near the
 opposite end of the knife-frame. The said
 belt-roller O carries upon one end thereof the
 pulley o , receiving the drive-belt o' , which is
 5 connected with the pulley o^2 , also mounted on
 the cylinder-shaft of the thrasher, so as to
 communicate motion to the knife-belt in or-
 der that the same will move simultaneously
 with the feeder-apron and transversely across
 10 the same near one end thereof. Fixedly se-
 cured to the knife-belt N are the knife-nuts
 P, which are arranged out of line with each
 other from one edge of the belt to the other
 at regular intervals and are adapted to re-
 15 ceive the threaded shank of the band-cutting
 knives Q, which are thus removably secured
 to the belt. The knives Q are slightly curved
 and have their points project toward the
 thrasher in a line with the travel of the apron
 20 E, so that as the apron E carries the bundle
 toward the thrasher the bundle is drawn
 across or at least under the knives which cut
 the bands thereof and, owing to their dispo-
 sition, allow all the straw to pass away with-
 25 out backing up or clogging thereon.

In order that the knife-belt may be insured
 an even and regular movement, I employ a
 belt-tightener R, adjustably secured to one
 side and the inner end of the knife-frame and
 30 carrying the tightener-pulleys r , which are
 adapted to receive both portions of the drive-
 belt o' , so that the tension of the frame may
 be regulated to suit the requirements of the
 machine, while the knife-belt itself is tight-
 35 ened or loosened, as desired, by means of the
 adjustable bearing-blocks previously re-
 ferred to.

Secured to the underside of the knife-frame
 H are the guard-rods S, having upturned or
 40 curved ends s , projecting beyond one side of
 the knife-frame toward the outer end of the
 feeder, so as to compel the sheaves to pass un-
 der the knife-frame in contact with the knives,
 while the horizontal under portions of said
 45 guard-rods extending across and under the
 knife-frame at each end of the knife-belt
 serve to hold the straw in position out of in-
 terference with the knife-belt while passing
 thereunder. Depending from the same side
 50 of the knife-frame beyond which the guard-
 rods project are the depending spring-metal
 guide-fingers T, which extend below the said
 knife-frame, so as to prevent the sheaves from
 coming under the knife-frame crosswise, and
 55 also provide means for holding the bundles
 or sheaves until the same are straightened to
 pass properly under the knives in the event
 of the end of one bundle being ahead of the
 other end of the same bundle, so that the bun-
 60 dle is therefore compelled to pass under the
 knife-frame parallel therewith, the said guide-
 fingers being of spring metal and thus allow-
 ing the bundles to be forced past the same.

A spring-supported apron-elevating roller
 65 U is arranged under the portion of the apron
 E over the table B and directly under the
 knife-belt working thereover. The said roller

U is journaled in the spring bearing-arms V,
 secured to the inner opposite sides of the fixed
 frame member, and are adapted to hold the 70
 said roller up in contact with the top portion
 of the endless feed-apron, so as to hold the
 same in such a position that any-sized bun-
 dle or sheaf, from the largest to the smallest,
 will be held in close proximity to the knife- 75
 belt, so that the bands of all bundles or sheaves
 will be effectually cut.

Having thus described my invention, what
 I claim, and desire to secure by Letters Pat-
 ent, is—

1. In a feeder for thrashing-machines, the
 combination, with a thrasher, of a fixed table
 secured to one side and end of the thrasher
 and provided with slots or notches at one edge
 of the same, a feeder-frame comprising sepa- 85
 rate hinged members, one of which is pro-
 vided with securing-bolts depending from one
 side of the same, adapted to pass through the
 table, and the other with depending headed
 bolts adapted to be slipped into and out of 90
 said slots in the other side, screw-nuts engag-
 ing said securing-bolts, and an endless apron
 passing through said frame, substantially as
 set forth.

2. In a band-cutter and feeder, the combi- 95
 nation, with the thrasher, of a fixed table se-
 cured to one side and end of the thrasher, a
 sectional feeder-frame comprising separate
 hinged members, one of which is removably
 bolted to said fixed table, the endless apron 100
 passing through said sectional feeder-frame,
 a knife-frame removably secured to one side
 of the bolted frame member and extending
 transversely over and parallel with the apron
 therein, an endless knife-carrying belt mount- 105
 ed within the knife-frame and having a se-
 ries of knives out of line with each other and
 adapted to travel above the portion of the
 apron in the bolted frame member, and means
 for normally elevating the portion of the 110
 apron directly under said knives, substan-
 tially as set forth.

3. In a band-cutter and feeder, the sectional
 feeder-frame, the endless apron passing
 through said frame, a knife-frame removably 115
 secured to one side of said feeder-frame and
 comprising opposite parallel arms extending
 transversely over said apron and provided
 with slots near their outer ends, adjustable
 bearing-blocks mounted in said slots, an ad- 120
 justable belt-roller mounted in said blocks, a
 fixed belt-roller mounted in said arms near
 the other end thereof, and an endless knife-
 carrying belt mounted over said belt-rollers
 and having a series of spaced knives out of 125
 line with each other, substantially as set forth.

4. In a band-cutter and feeder, the combi-
 nation, with the frame and the endless apron
 passing therethrough, of the knife-frame se-
 cured to one side of said feeder-frame and 130
 extending transversely above and parallel
 with the apron, an endless knife-carrying
 belt moving in said knife-frame, opposite
 parallel guard-rods having horizontal por-

tions secured to the under side of and across said knife-frame at each end of the knife-carrying belt, and outer upturned ends projecting beyond one side of the knife-frame, and
5 depending spring-metal guide-fingers secured to one side of the knife-frame and projecting downwardly therefrom between the projecting ends of said guard-rods, substantially as set forth.

10 5. In a band-cutter and feeder, the combination, with the frame and the endless apron passing therethrough, of an endless knife-belt arranged to move parallel with and transversely above said apron, an apron-elevating
15 roller mounted within said frame, and spring bearing-arms carrying the journal ends of said rollers and adapted to hold the same in contact with the top portion of the apron to

press the latter in close proximity to said knife-belt, substantially as set forth. 20

6. In a band-cutter and feeder, the combination, with the frame and the endless apron passing therethrough, of an endless knife-belt arranged to move transversely above said apron, a series of knife-nuts fixedly secured
25 to said apron at regular intervals and out of line with each other, and knives having threaded shanks removably engaging said nuts, substantially as set forth.

In testimony that I claim the foregoing as
30 my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM PATRICK BURKE.

Witnesses:

THOMAS DWYER,
ED. T. BURKE.