

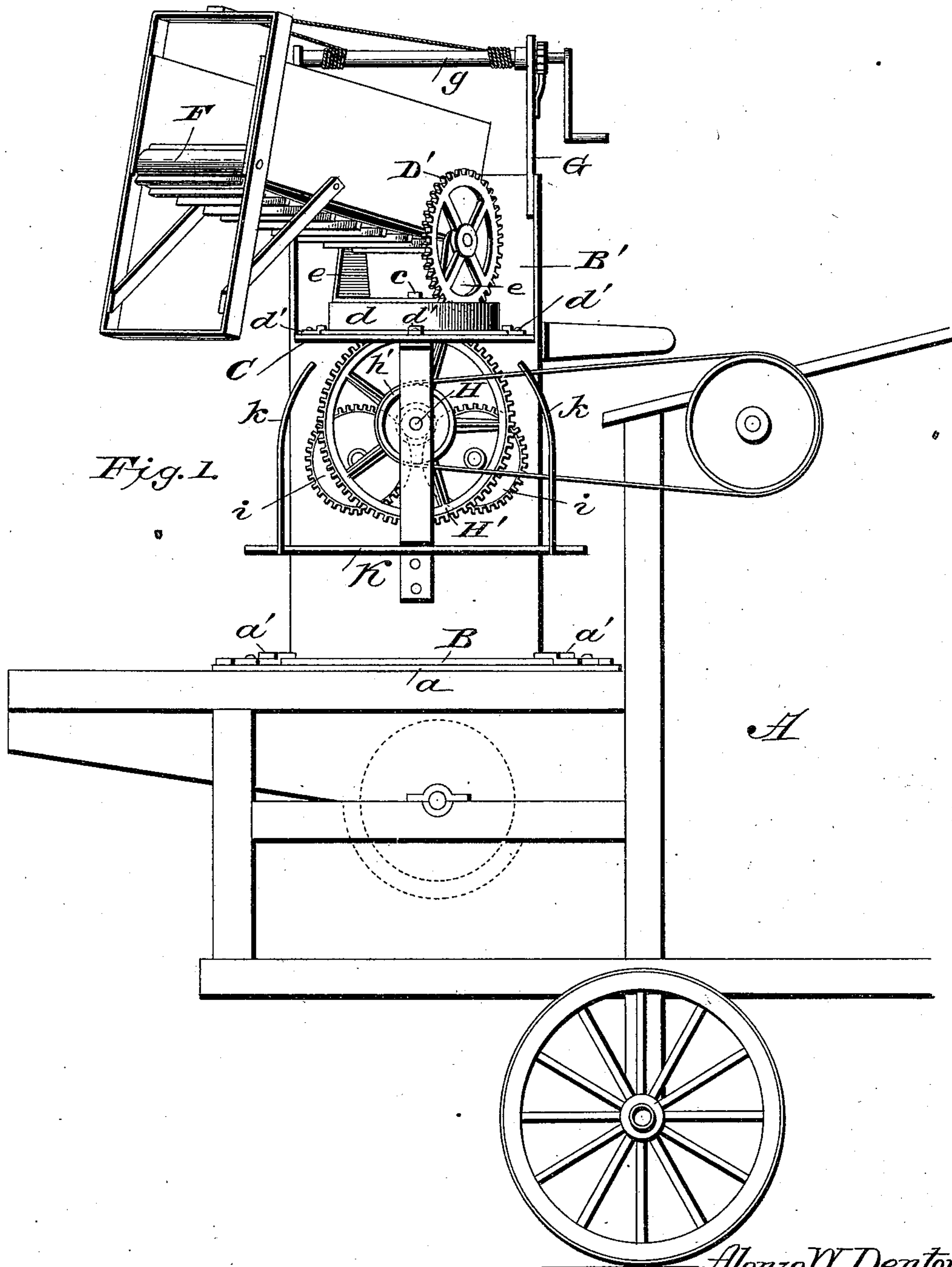
(No Model.)

2 Sheets—Sheet 1.

A. W. DENTON.
BAND CUTTER AND FEEDER.

No. 548,043.

Patented Oct. 15, 1895.



WITNESSES
L. F. Elliott.
W. Johnson

Alonzo W. Denton
INVENTOR

Attorney

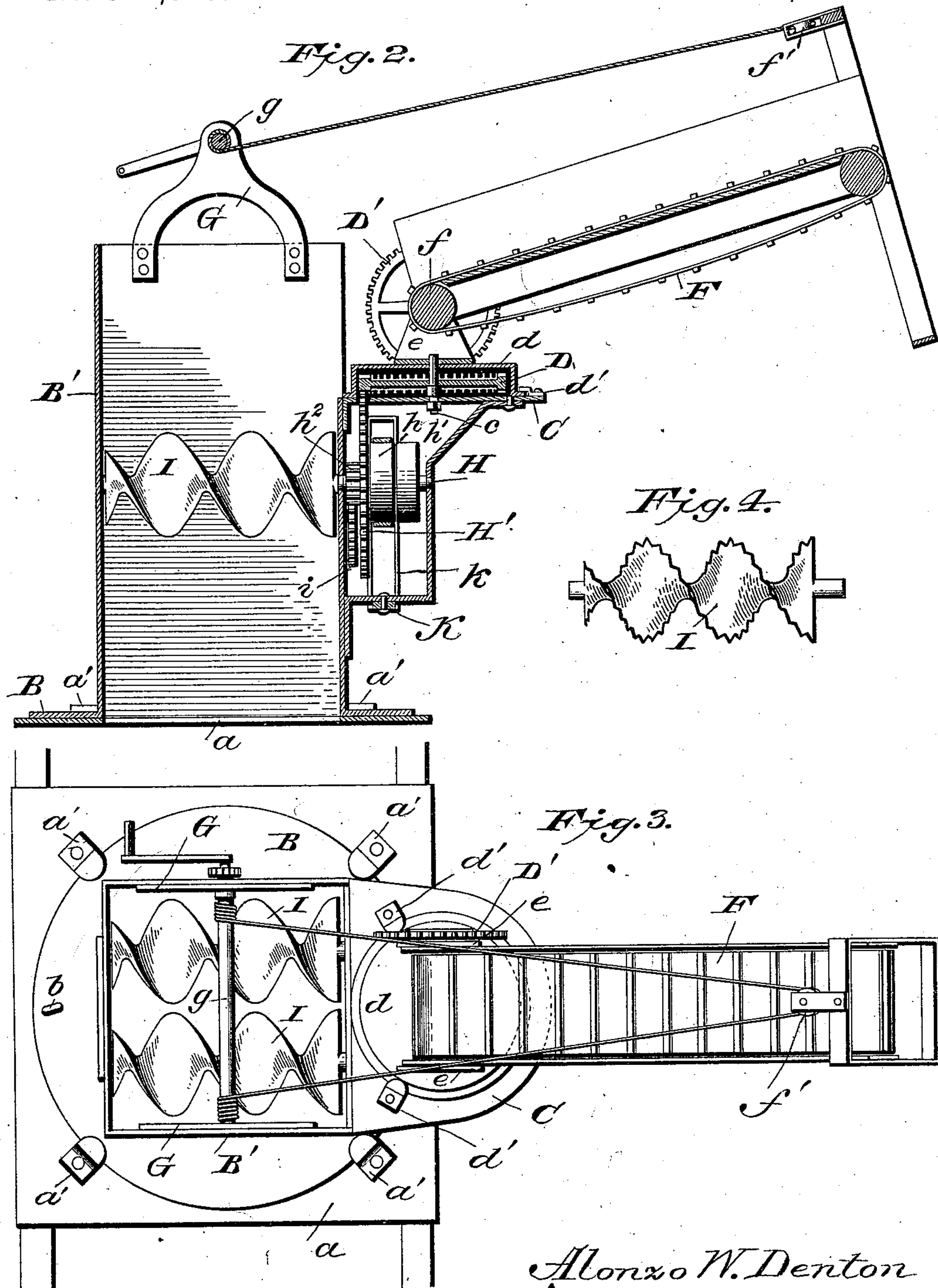
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[Signature]
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UNITED STATES PATENT OFFICE.

ALONZO W. DENTON, OF AUGUSTA, MONTANA.

BAND-CUTTER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 548,043, dated October 15, 1895.

Application filed June 15, 1895. Serial No. 552,900. (No model.)

To all whom it may concern:

Be it known that I, ALONZO W. DENTON, a citizen of the United States of America, residing at Augusta, in the county of Lewis and Clarke and State of Montana, have invented certain new and useful Improvements in Band-Cutters and Feeders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide means whereby the sheaves are readily fed to an improved band-cutter and separator before they are delivered to the thrashing-machine; and it consists in providing a feeder and band-cutter for thrashing-machines which comprises an adjustable structure attached to the thrashing-machine above the cylinder thereof, the frame being mounted so as to be movable and the feeding-belt connected to the movable frame so that it may be adjusted to various positions.

The invention further consists in providing a pair of spirally-grooved cutters which turn toward each other for cutting the bands and separating the straw before delivering the same to the thrashing-machine; and the invention further consists in the construction and combination of the parts, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a view showing the application of my improved band-cutter and feeder to a thrashing-machine. Fig. 2 is a sectional view; Fig. 3, a plan view; and Fig. 4 is a detail view of one of the band-cutters and separators, showing more fully the sickle-edges with which they are provided.

A designates a thrashing-machine or separator of ordinary construction, which may have the usual cylinder and concave, above which my improvements are applied. The thrashing-machine may also be provided with a pulley, over which the belt passes for actuating the feed and band-cutting mechanism.

Above the usual feed-opening of the thrashing-machine is attached a plate a , having a

central rectangular opening therein, and adjacent to this opening are lugs or angle-plates a' , which are adapted to engage a circular plate or turn-table B, which is also provided with a rectangular opening. The plate or turn-table B has a suitable aperture through which passes a pin b or other means for holding it against rotation of the plate a . Upon the plate B is mounted a frame B', which is preferably rectangular and open at its upper and lower ends, one side being cut away for a short distance, as shown in Fig. 2, and to this open side of the frame is attached a bracket C. At the upper end of this bracket, on a vertical pivot c , is mounted a double crown-wheel D, over which is placed a covering-plate d , said plate having an outwardly-projecting flange engaged by lugs or angle-plates d' , attached to the bracket C. This construction permits the covering-plate to turn upon the bracket, being further held in place by the pivot-bolt c . To the cover-plate d are attached uprights $e e$, between the upper ends of which is journaled a roller f , over which passes the endless feeding-belt F, one end of the roller f being extended to receive a gear-wheel D', which passes through a slot in the covering-plate d and engages or meshes with the upper crown-teeth of the wheel D.

The supporting-frame of the feeding-belt F is pivoted at one end upon the roller f . By this construction it will be seen that the feeding-belt may be shifted to any angle or position that may be suitable for feeding sheaves to the band-cutter and separator. The outer end of the frame which supports the feeding-belt is provided with a pulley f' , around which passes a cord or flexible connection extending from a roller g , supported in brackets G G, attached to the upper end of the rectangular frame B', the roller being provided with an operating-handle and with a ratchet-wheel engaged by a pawl, and by this connection the outer end of the feeding-belt can be raised and lowered to change the angle thereof. The bracket C also supports one end of a shaft H, the other end of which is journaled in the rectangular frame B', and upon this shaft is mounted a fixed pulley h and an idle-pulley h' , as well as a gear-wheel H' and pinion h^2 , the gear-wheel passing through the bracket C so as to mesh with the lower crown-

teeth of the wheel D, and the pinion being located between gear-wheels *i i* so as to mesh therewith. The gear-wheels *i i* are mounted on the outer ends of the band-cutters and feeders II, which are located within the rectangular frame B', and consist of spirals, the edges of which are serrated, as shown more clearly in Fig. 4. The cutters and feeders are geared to the driving-shaft H, so that they will turn toward each other, so that the sheaves when fed thereon will be straightened, the bands cut, and the straw separated, so as to fall or be delivered to the thrashing-machine in proper condition for thrashing.

To the lower end of the bracket C is pivoted a lever K, having upwardly-projecting arms *k k* at each end, and between the arms which are nearest the thrashing-machine the driving-belt passes, and by operating the lever K said belt can be shifted to either the idle or fixed pulley *h h'*.

In operation the frame B' can be adjusted or turned so as to locate the feeding-belt F on either side of the thrashing-machine, and the frame which carries the feeding-belt may also be turned to the most convenient point for feeding the sheaves thereon, and the elevation of the outer end of the same varied as the feeding progresses. When the driving-belt is shifted to the fixed pulley *h*, the shaft H will be turned and the gear-wheel H' thereon, meshing with the double crown-wheel D, will rotate the same and the motion imparted to the feeding-belt by means of the gear-wheel D'. At the same time the pinion *h²* on the shaft H turns the gear-wheels *i i*, so as to operate the band-cutters and feeders I I, and as the sheaves are fed from the belt F onto said cutters and separators the serrated edges will sever the bands as the sheaves pass between the same.

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

1. In a feeder and band cutter for thrashing machines, the combination, of an endless carrier belt F mounted in a frame, a frame or chute into which the sheaves are delivered from the carrier-belt, said frame or chute having spiral band cutters and separators which are geared to the driving mechanism so as to rotate toward each other, substantially as shown and for the purpose set forth.

2. In combination with a thrashing machine, a band cutter and feeder therefor mounted above the cylinder, the frame carry-

ing the band cutters being rotatable with respect to the thrashing machine, said frame carrying the driving mechanism for the band cutters, a frame carrying the feeding-belt and a turn-table upon which one end of the frame of the feeding-belt is mounted, substantially as shown and for the purpose set forth.

3. In a band cutter and feeder for thrashing machines, the combination, of a pair of spiral cutters having gear wheels which mesh with a pinion mounted on a driven shaft, as H, a double crown-wheel D driven from the shaft H by means of a gear wheel H', and a gear wheel D' mounted on a shaft or roller over which the feeding-belt passes, the wheel D' meshing with the double-crown-wheel D, the parts being organized substantially as shown and for the purpose set forth.

4. The combination with a thrashing machine, of a frame or chute B' mounted so as to turn thereon; a pair of spiral band cutters and separators I I mounted within the frame and journaled in the side pieces thereof, said band cutters and separators being provided with pinions *i*; and a bracket C attached to one side of the frame B' and supporting a shaft carrying a driving pulley, gear wheel and pinion, the latter meshing with the pinions *i*, substantially as shown and for the purpose set forth.

5. The combination with a thrashing machine, of a frame or chute B' mounted so as to turn thereon; a pair of spiral band cutters and separators I I mounted in the frame or chute and provided with pinions *i*; a bracket C attached to one side of the frame or chute and supporting a shaft H carrying a driving pulley, gear wheel and pinion, the latter meshing with the gear wheels *i*; together with a double gear wheel D mounted upon the upper end of the bracket and in mesh with the gear-wheel on the shaft H; a covering plate for the double gear wheel provided with uprights; and a frame supported at its inner end between the uprights, said frame having an endless belt F and a gear wheel D' which is in mesh with the upper teeth of the double gear wheel D; the parts being organized substantially as shown and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ALONZO W. DENTON.

Witnesses:

CLARA C. WOODS,
T. G. WOODS.