

(No Model.)

2 Sheets—Sheet 1.

R. M. DUDLEY.
BAND CUTTER AND FEEDER.

No. 466,225.

Patented Dec. 29, 1891.

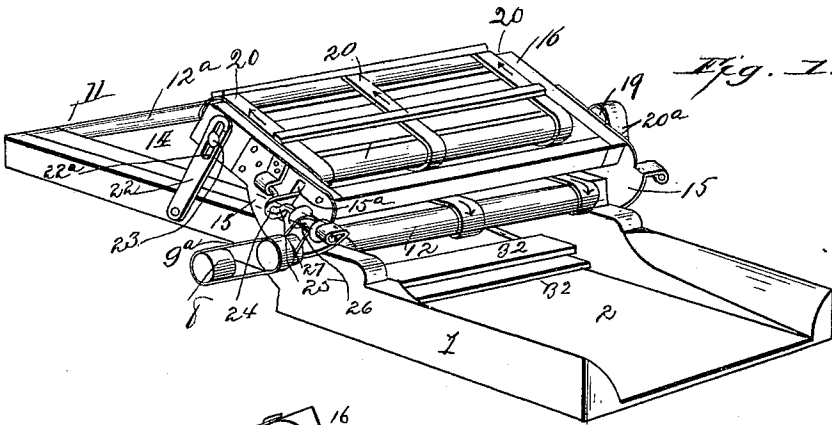


Fig. 1.

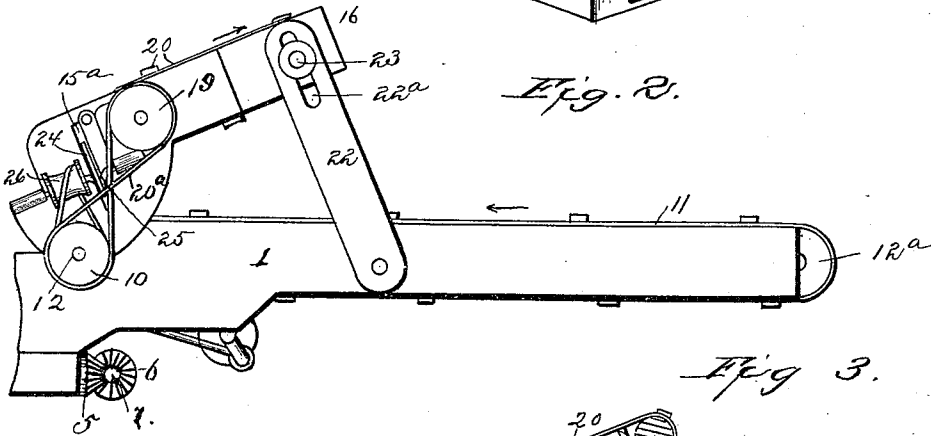


Fig. 2.

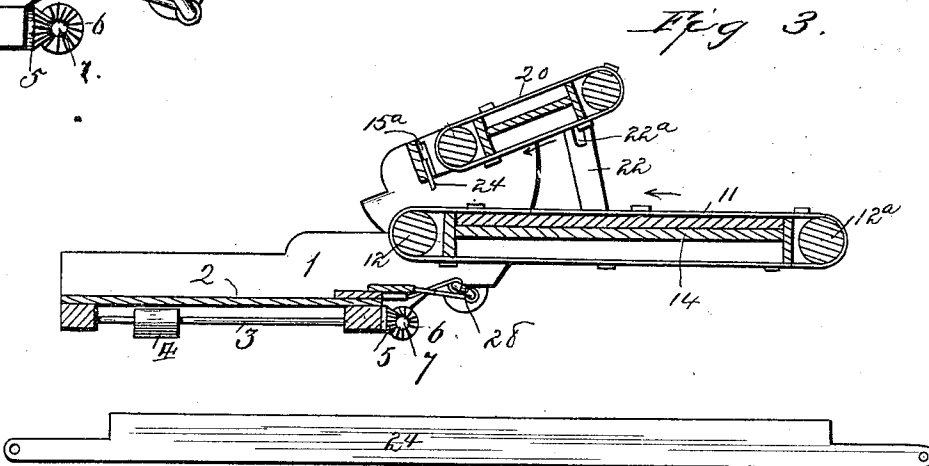


Fig. 3.



Fig. 4.

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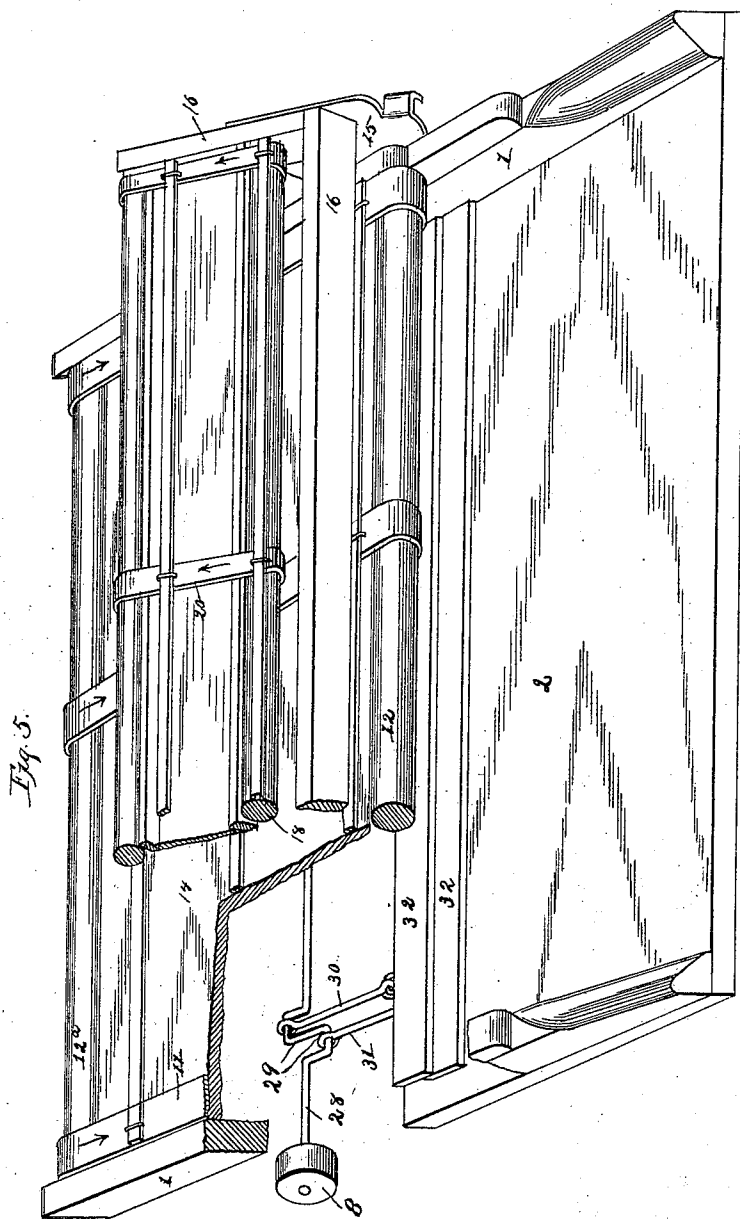
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WITNESSES

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UNITED STATES PATENT OFFICE.

ROBERT M. DUDLEY, OF METAMORA, MICHIGAN.

BAND-CUTTER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 466,225, dated December 29, 1891.

Application filed March 9, 1891. Serial No. 384,306. (No model.)

To all whom it may concern:

Be it known that I, ROBERT M. DUDLEY, a citizen of the United States, residing at Metamora, in the county of Lapeer and State of Michigan, 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.

My invention consists in a new and improved band-cutter and feeder, which is comparatively simple in its construction and very effective in its operation; and the invention will be hereinafter fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a perspective view of my new and improved band-cutter and feeder. Fig. 2 is an end view of the same. Fig. 3 is a central sectional view, and Fig. 4 illustrates in detail the band-cutter knife. Fig. 5 illustrates in detail, on an enlarged scale, the distributors 32 and their operating mechanism.

The same numerals of reference indicate corresponding parts in all the figures.

Referring to the several parts by their designating-numerals, 1 indicates the main frame of the device, and 2 indicates the lower table, on which the bundle of grain is discharged after its band has been cut. Beneath this table is mounted a drive-shaft 3, having a band-wheel 4, around which passes a drive-belt from any suitable source of power, usually from a drive-shaft of the thrashing-machine to which the device is attached. On the outer end of the shaft 3 is mounted a beveled cog-wheel 5, which meshes with a similar beveled wheel 6 on the inner end of the shaft 7, which is mounted in bearings at right angles to the shaft 3. On the outer end of the shaft 7 is mounted a pulley 8, and a belt 9^a passes around this pulley and a corresponding pulley on the end of a transverse crank-shaft 28. A second belt 9 passes from the pulley 8 around a pulley 10 on the front roller-shaft 12. A slatted conveyer belt or apron 11 passes around the forward and rear rollers 12 12^a, passing over the main table 14, upon which the bundles are first thrown.

Upon the ends of the roller-shaft 12 are

mounted, pivotally, the lower ends of the end plates 15, which are secured on the ends of the adjustable frame 16. Around this frame 55 travels the slatted feed-belt 20, one end of the forward roller-shaft 18 of which is extended and has a pulley 19 secured upon it. A belt 20^a passes around this pulley and a pulley 21 on the end of the roller-shaft 12. It will thus be 60 seen that when the drive-shaft 3 is revolved the feed-belts 13 and 20 will be revolved in the direction indicated by the arrows.

In operation the bundles of grain are thrown upon the table 14, when the revolving conveyer-belt 13 carries them forward beneath 65 the frame 16, where the feed-belt 20 comes in contact with them and the bundle is carried forward by the two revolving belts or conveyers. The rear end of the pivotally-mounted 70 frame 16 is supported by the arms 22, formed with the longitudinal slots 22^a near their upper ends, through which studs 23 on the rear end of the frame pass. It will thus be seen that the rear end of the frame is allowed a 75 certain amount of play or movement to accommodate itself to the thickness of the bundles passing between it and the table 14.

24 indicates the long cutting-blade, the ends of which pass through slots 15^a in the end 80 plates 15 and are pivotally mounted upon the small crank-shafts 25. The ends of these crank-shafts are mounted in bearings on the end plates 15, and they have the pulleys 26 secured upon them. A cord or small band 85 passes around these pulleys and fits in annular grooves 27 in the pulleys on the ends of the roller-shaft 12. It will be seen by this arrangement that as the roller-shaft 12 is revolved the long knife 24 will be swung down 90 to cut the band of each bundle as the latter passes beneath it, and will then be raised to permit the cut bundles to pass freely beneath it. The cut bundles fall upon the inner end of the table 2, where they are scattered and 95 pushed forward to the packers by the following device: The transverse shaft 28 is formed near each end with the double cranks 29, which are pivotally connected by small pitmen 30 31 with the rear edges of the distributors 32. These distributors consist of two 100 boards or pieces 32 32, arranged transversely to the body, which extend entirely across the end of the lower table 2, being arranged one

immediately above the other and being connected to the two cranks 29 29 by the pairs of pitmen 30 31, which are so arranged that as the lower distributor is slid forward by the revolving crank-shaft the upper one is slid back and as the lower board is drawn back the upper distributor is slid forward. The advantage of this construction and operation is that as the lower board or distributor is slid back after having pushed the loosened grain from the cut bundle forward on the table the upper distributor sliding forward over it prevents the grain which is falling from the cutting-knife from being drawn back by the receding distributor and pushes the said grain forward, while the lower board is moved back. By this construction the feed of the loosened grain forward over the table 2 is much more rapid and effective than is possible where a single feed-board is employed or where the feeder is composed of two sections arranged side by side.

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

1. In a band-cutter and feeder, the combination, with the revolving crank-shaft formed with the double cranks 29, of the transverse

upper and lower distributors 32 32, arranged transversely to the body, one above the other, and connected by the pitmen 30 31 to the double cranks of the shaft 28, so that they will be alternately reciprocated back and forward, traveling, respectively, above and below each other, substantially as and for the purpose herein set forth.

2. In a band-cutter and feeder, the combination of the table 14, the revolving conveyer-belt 13, the frame 16, the revolving feed-belt 20, mounted on the same, the long blade 24, the revolving crank-shafts 25, on which the ends of the blade are pivotally mounted, the revolving shaft 28, formed with the double cranks 29, the reciprocating upper and lower distributors 32, arranged transversely one above the other and operating as described, and the pitmen 30 31, connecting the same pivotally with the cranks of the shaft 28, substantially as set forth.

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

ROBERT M. DUDLEY.

Witnesses:

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