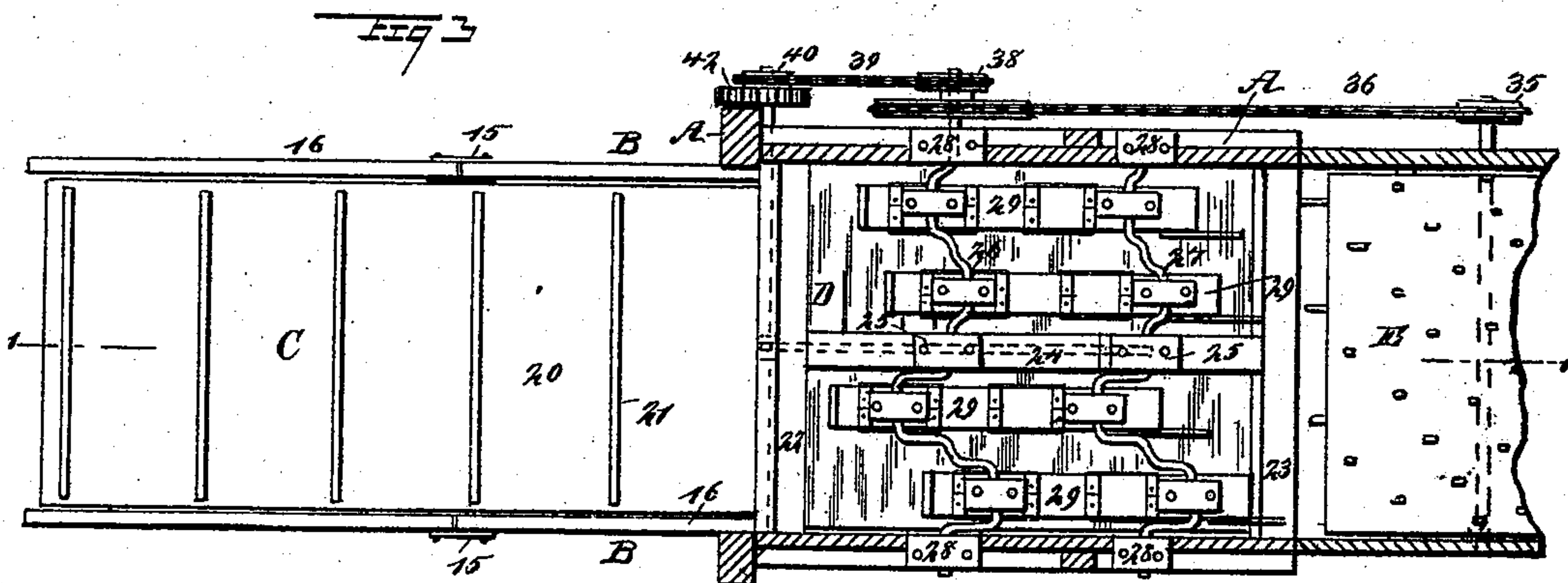
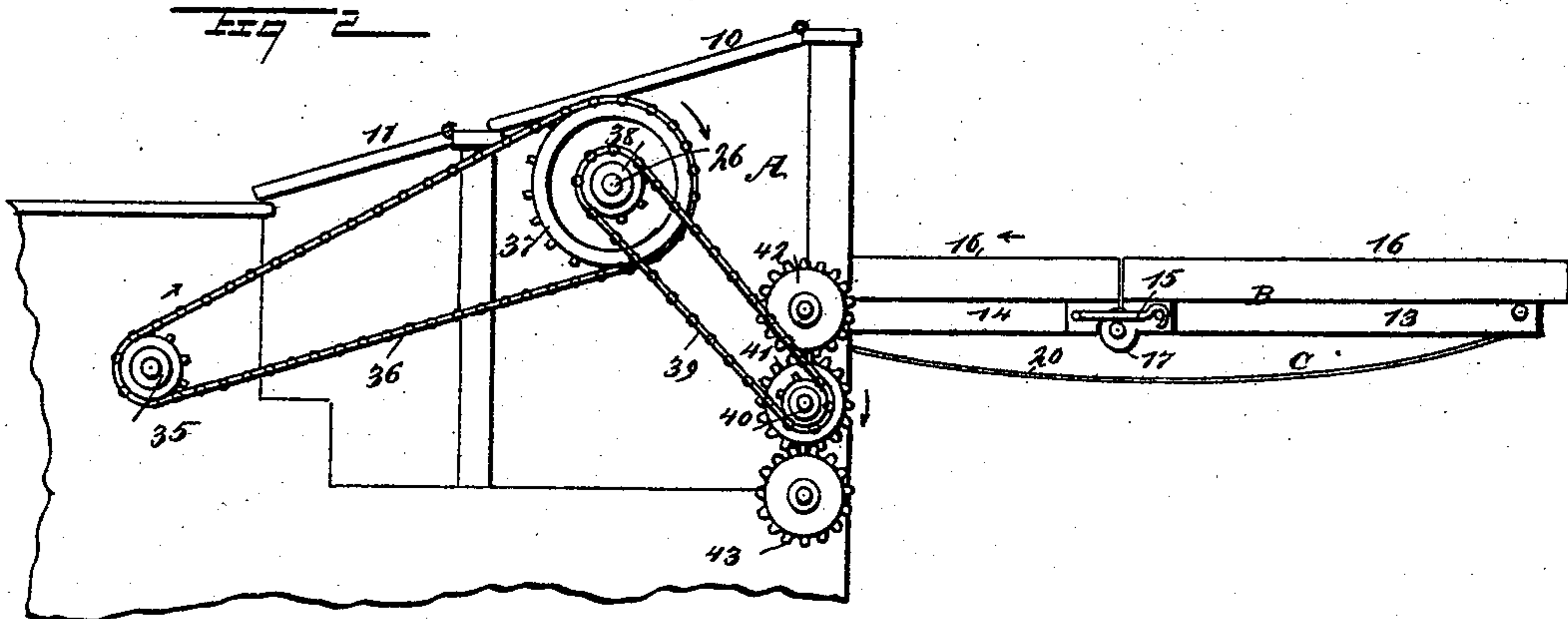
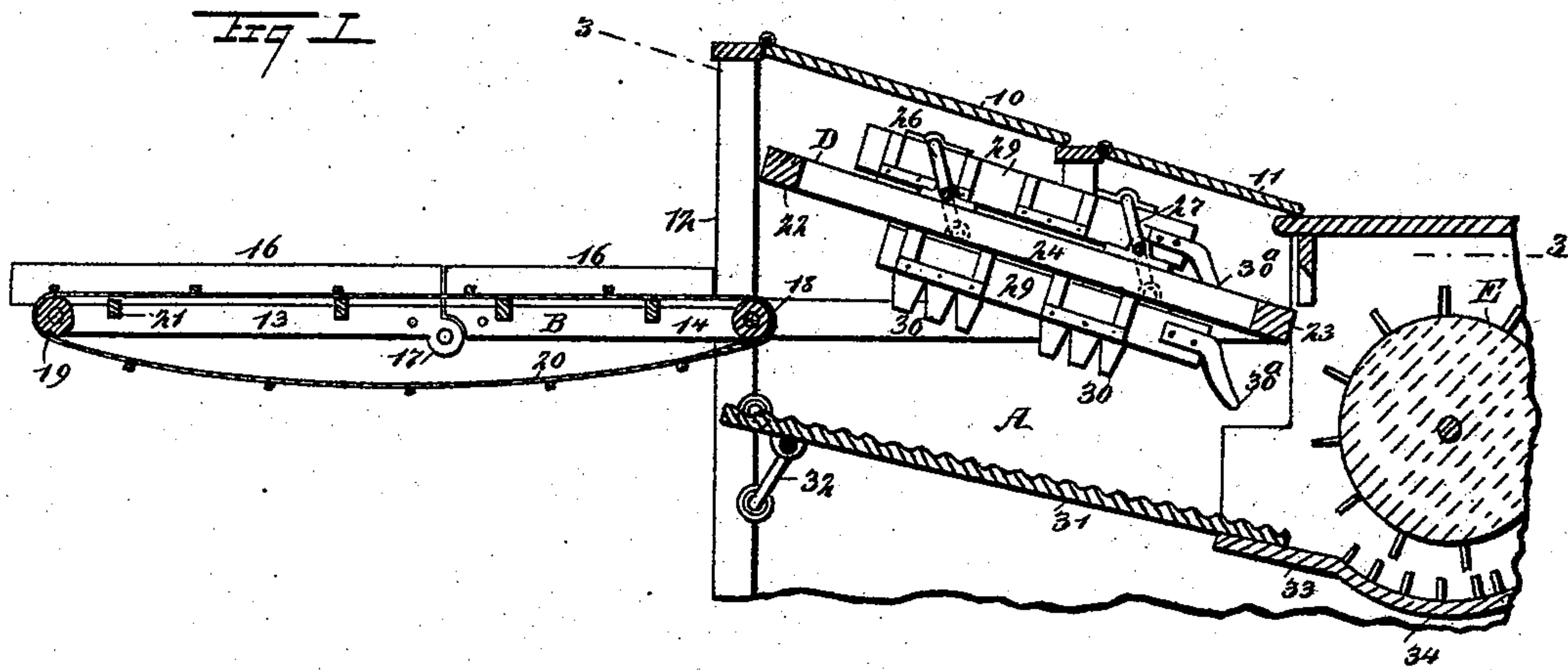


(No Model.)

M. G. SCHAUER & A. A. BARTLETT.
BAND CUTTER AND FEEDER FOR THRASHERS.

No. 528,396.

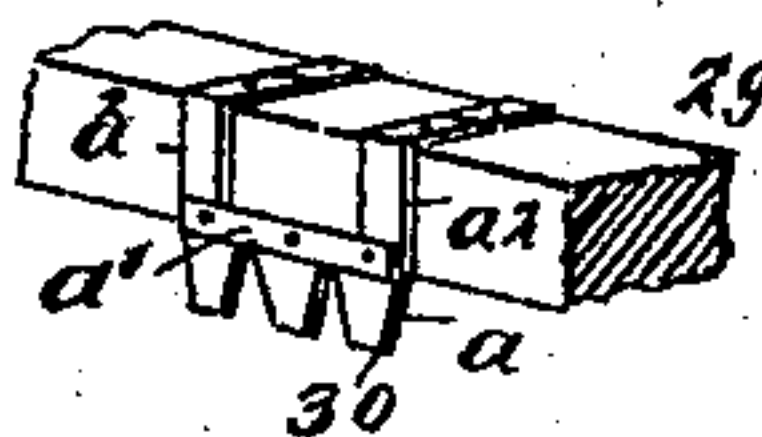
Patented Oct. 30, 1894.



WITNESSES:

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Fig 4



INVENTORS:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

MICHAEL G. SCHAUER AND ALDEN A. BARTLETT, OF PIPE STONE, MINNESOTA.

BAND-CUTTER AND FEEDER FOR THRASHERS.

SPECIFICATION forming part of Letters Patent No. 528,396, dated October 30, 1894.

Application filed March 25, 1893. Serial No. 467,619. (No model.)

To all whom it may concern:

Be it known that we, MICHAEL G. SCHAUER and ALDEN A. BARTLETT, of Pipe Stone, in the county of Pipe Stone and State of Minnesota, have invented a new and useful Improvement in Band-Cutters and Feeders for Thrashers, of which the following is a full, clear, and exact description.

Our invention relates to an improvement in band cutters and feeders for thrashing machines, and the object of the invention is to improve upon the construction of the band cutter and feeder for which Letters Patent were granted to W. G. Huntington, February 24, 1891, No. 446,973, and to this end, the invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a vertical longitudinal section through a portion of a thrasher and the improved band cutter and feeder applied to the machine, the section being taken on the line 1—1 of Fig. 3. Fig. 2 is a side elevation of the attachment. Fig. 3 is a partial plan view and partial horizontal section of the attachment, the section being taken on the line 3—3 of Fig. 1; and Fig. 4 is a detail perspective view of a portion of one of the feed arms and the sickle knife attached to it.

The dust box A, is preferably made open at the bottom and is closed at the top by two covers 10 and 11, hinged in such manner that they may be readily lifted to expose the interior of the dust box when desired, but when the covers are closed dust cannot pass out through the upper part of the box but is compelled to enter the thrasher and pass through or over the thrashing cylinder, thereby preventing the attendant located at the feed opening of the dust box from becoming choked, or otherwise troubled by the dust. The box at its top is preferably given a downward inclination; that is, an inclination downward in direction of the thrasher, and the box and the thrasher may be connected in any suitable or approved manner. A feed opening is located in front

of the dust box and is designated as 12, and at each side of this opening beams B, are secured, the said beams being preferably in two sections 13 and 14. These beams are adapted to form a frame for a carrier C, which carrier is adapted to convey the material to be thrashed into the dust box to be operated upon by the feed devices and knives.

The beams B of the carrier extend horizontally outward from the dust box, and the two sections are held end to end when the carrier is in service by means of a hook or clamp 15, as shown in Fig. 3, or an equivalent device.

Each beam B, is preferably provided with a side or guard board 16, the board being in as many sections as there are sections of the beams. The beams are connected by means of a hinge 17, preferably a rule hinge, so that when the two sections are in a horizontal position their opposing ends will abut, as shown in both Figs. 1 and 3; but when the attachment is not in operation and it is desired to remove the thrasher from one place to another, the outer section of the carrier may be dropped downward and carried practically beneath the dust box and therefore out of the way, enabling the team to be attached to the pole of the thrasher without inconvenience.

Between the beams B of the carrier C two drums 18 and 19, are placed, the drum 18 being at the inner end of the carrier and essentially within the feed opening of the dust box, while the drum 19, is located at or near the outer end of the carrier, and the two drums are adapted to carry and support an endless belt or apron 20, the said apron being ordinarily provided with a slatted outer face, and the upper stretch of the apron or belt is prevented from sagging downward by cross bars 21, engaging practically with the inner face of the belt or apron, as is likewise shown in Fig. 1, the said cross bars connecting the side beams of the carrier.

Within the dust box a slanting frame D, is located, the frame being essentially at the central portion of the box; and the said frame usually comprises an upper and a lower transverse beam, designated respectively as 22 and 23, and a longitudinal beam 24, which connects with the end beams near the center of the latter, as is best shown in Fig. 3. The center

beam 24 of the frame has secured upon it at suitable intervals apart two journal boxes 25, and each of these boxes is adapted to receive a crank shaft designated respectively as 26 and 27, the outer ends of the crank shafts being journaled in boxes 28, located in the side portions of the dust box. Each crank arm of each drive shaft is pivotally attached to a feed arm or bar 29, the arms or bars being arranged parallel to each other at suitable intervals apart and longitudinally of the dust box; and the arms or bars are so located with respect to the crank shafts that when one of them is in an upper or rearward position another will be in a forward and lower position, or vice versa, and others will be in positions intermediate of the upper and lower and forward and rear ones, the arrangement of the cranks being best shown in Figs. 1 and 3.

The finger arms or bars 29, are provided upon opposite sides with blades or knives 30, and these blades or knives are sickle-shaped, as shown best in Fig. 1, and are arranged in groups of two or more, and usually four groups are placed upon the feed bar, two near the front end and two near the center.

The knives, as shown in Fig. 4, comprise virtually plates α of an angular character, a body bar α' to which the knives are connected or integrally affixed, and straps α^2 , which emanate from the body bar and are adapted to be passed up the sides of the feed arms or bars and over the top thereof, both the body bar and straps being secured to the arms. This construction of knives provides for the removal of individual groups of blades for repair or replacement of broken sections or cutters.

Each feed arm 29, is provided at its rear end with a finger 30^a, known as a kicker, the fingers being adapted to assist the material that has been acted upon in its passage to the thrashing drum E of the thrasher.

In connection with the upper feed devices 29 an auxiliary and lower feed device is used, the latter being in the shape of a board 31, the board being located preferably parallel with the frame D and the top of the box. Thus the board is given a downward inclination from the receiving opening toward the cylinder E of the thrasher, as shown in Fig. 1. The upper face of the board is corrugated or otherwise roughened, and the board is adapted to have a longitudinally reciprocating movement, this movement being imparted to it by a crank shaft 32, which is directly connected with the forward end of the feed board, as shown in Fig. 1, the said crank shaft being journaled in the forward portion of the dust box, while the inner or free end of the feed board is made to slide upon the extension 33 from the sector 34 of the thrasher.

The driving of the various parts is accomplished in the following manner: A band wheel 35, is secured upon the outer end of the thrashing cylinder shaft, and is connected by a belt 36 with a large band wheel 37, located preferably upon the forward upper crank shaft 26, as shown in Fig. 2. This shaft is also provided with a small sprocket wheel 38, and the said sprocket wheel is connected by a chain belt 39, with a smaller wheel 40, located upon a shaft attached to the outer face of the dust box, which shaft has also loosely mounted upon it and connected with the small sprocket gear 40 a gear 41, and this gear 41, meshes with a like gear 42, fast upon one trunnion of the inner carrier drum 18, and the said gear 40 likewise meshes with a gear 43 of like size secured upon the crank shaft 32 carrying the feed board 31. Thus the various parts are compactly and simply geared together, and are operated in perfect unison.

The auxiliary or lower feed board 31, it will be observed, will force or carry the chopped or divided material to the thrasher cylinder even should the upper set of feed devices fail to act, but when the two feed devices act together a perfect and regular feed is secured although the knives are carried only by the upper feed devices.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

In a band cutter and feeder the combination with a feed bar and its two crank shafts, of two pairs of cutters mounted thereon each cutter comprising the plates α , body bar α' , the knives 30 on the bar α' and the angle straps α^2 projecting from the body bar and extending upwardly along the sides of the feed bar and over its upper face, substantially as set forth.

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ALDEN A. BARTLETT.

Witnesses:

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MAYME L. PEASE.