

No. 684,162.

Patented Oct. 8, 1901.

J. Q. ADAMS.
CONVEYER.

(Application filed May 17, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

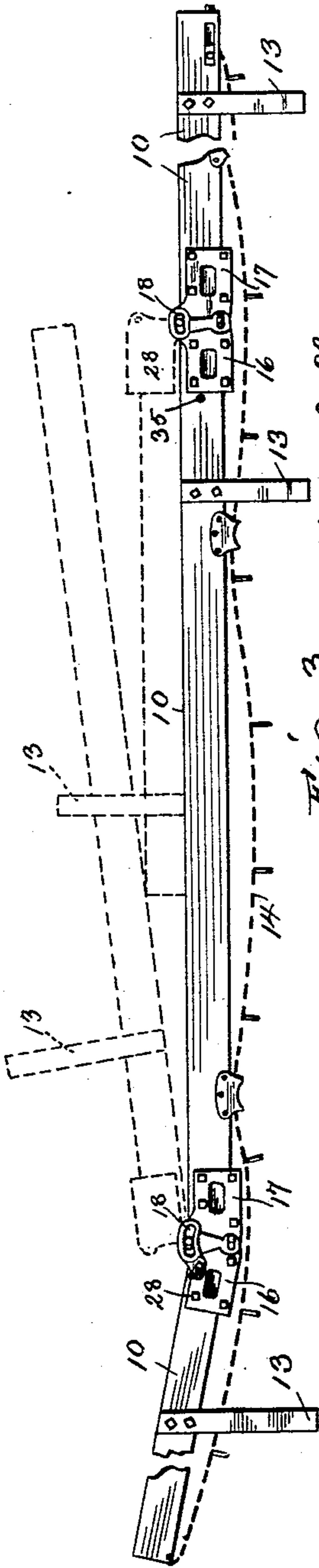


Fig. 3.

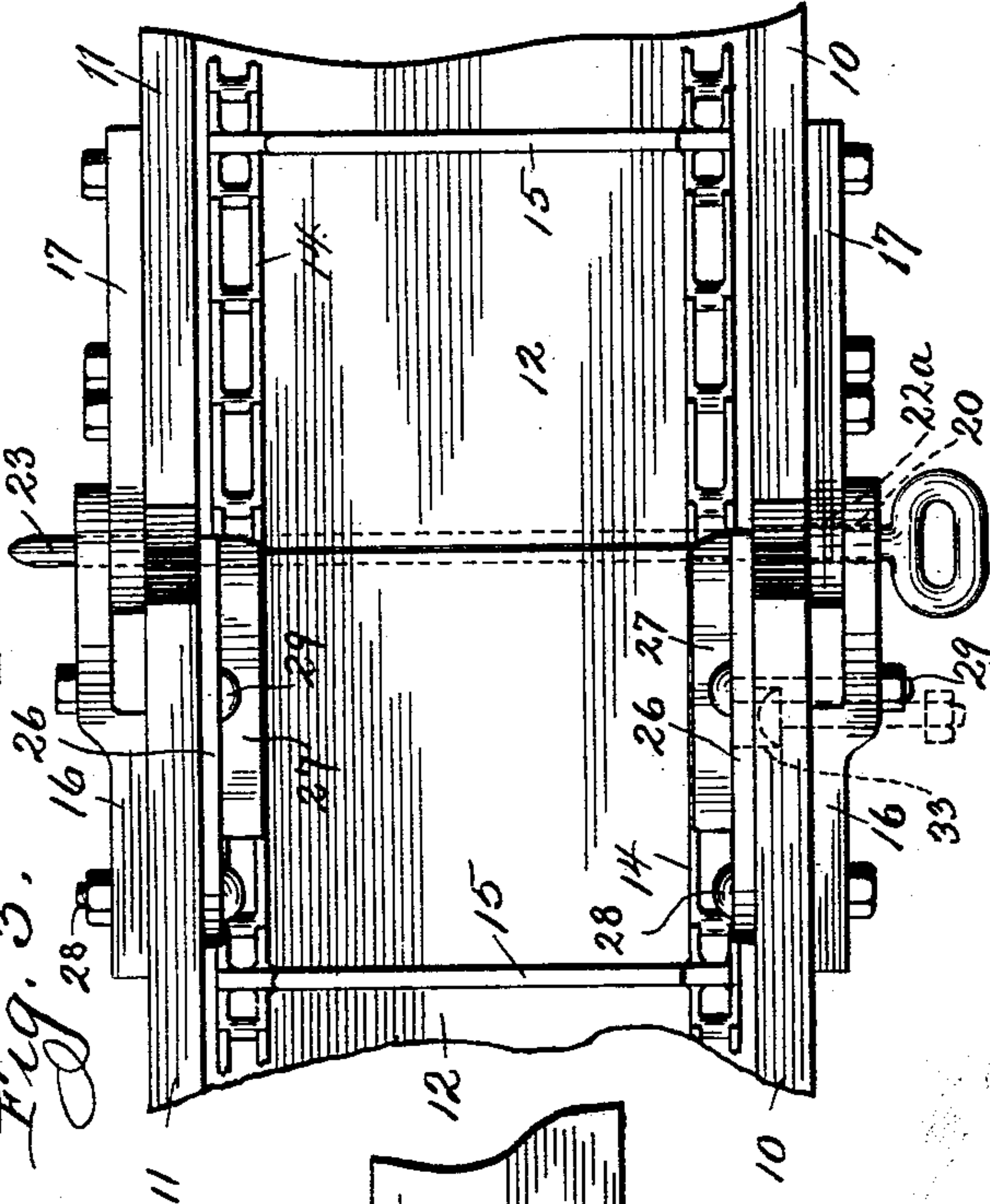
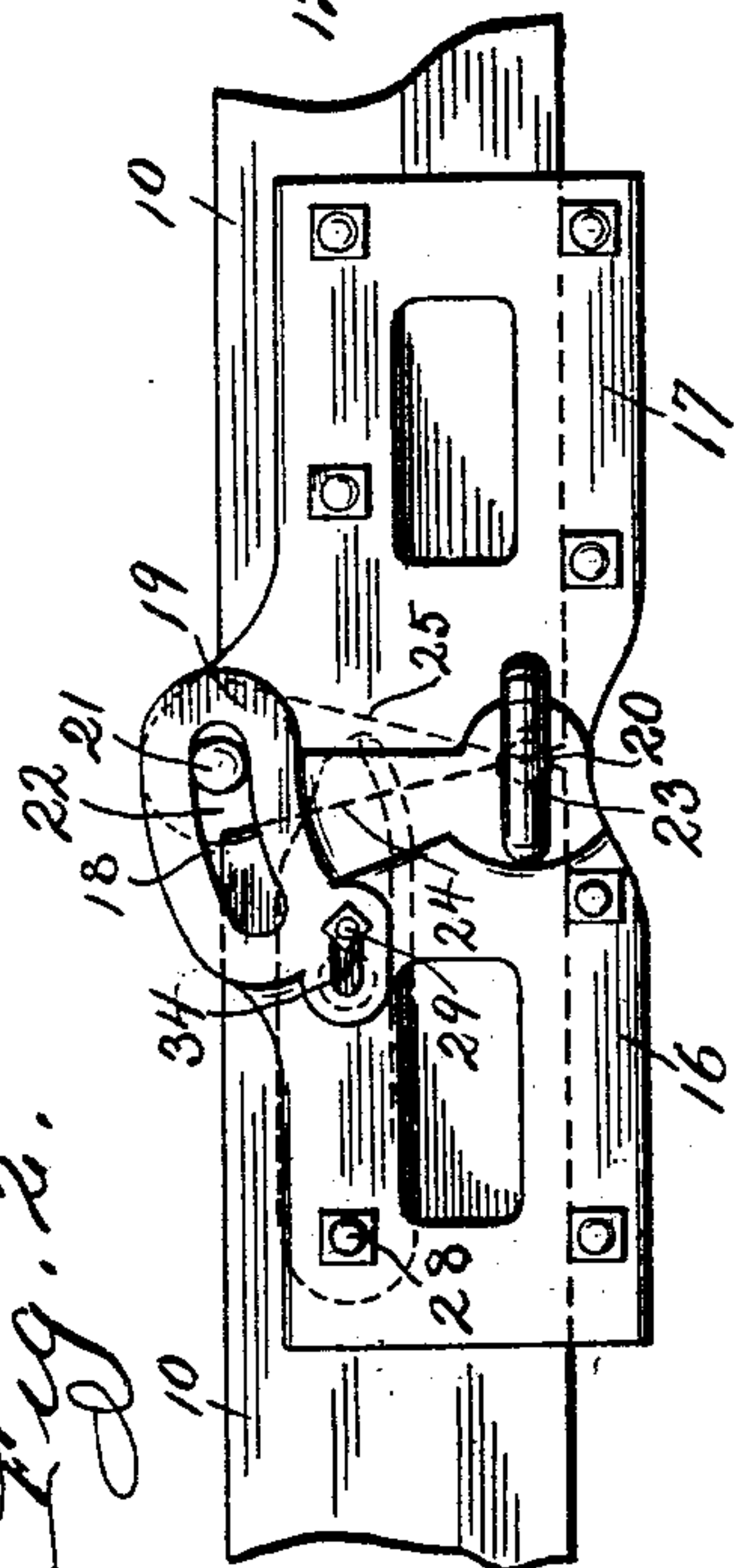


Fig. 2.



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Fig. 4.

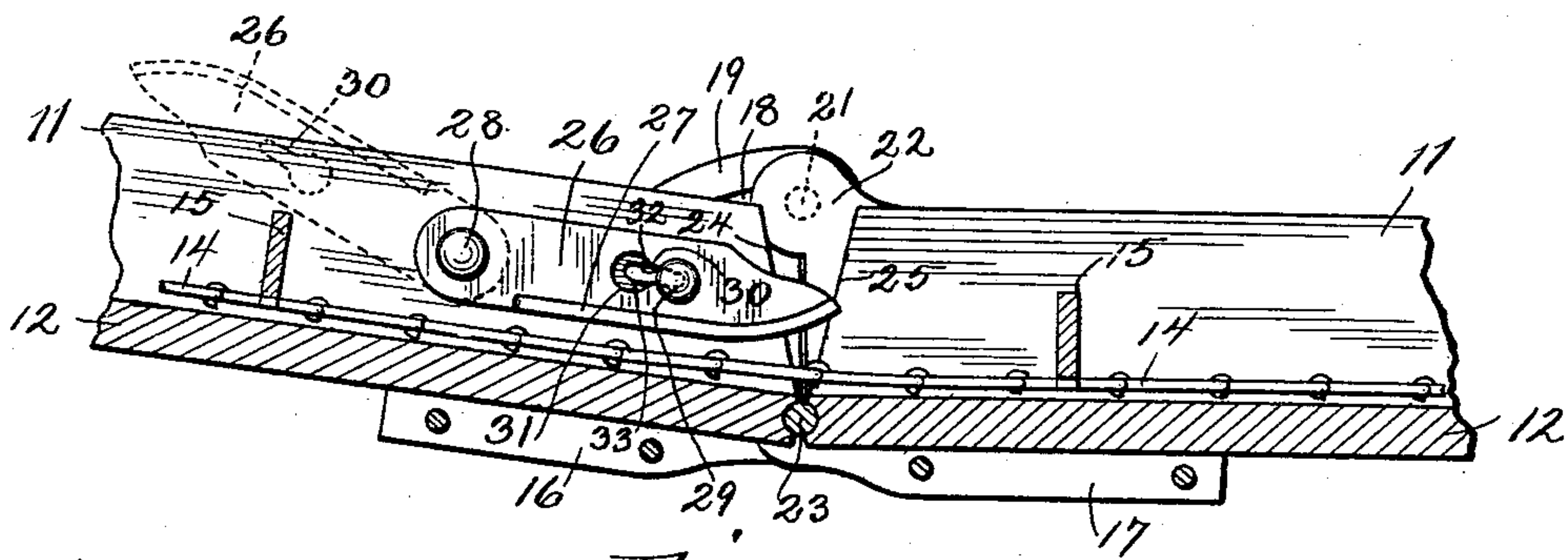
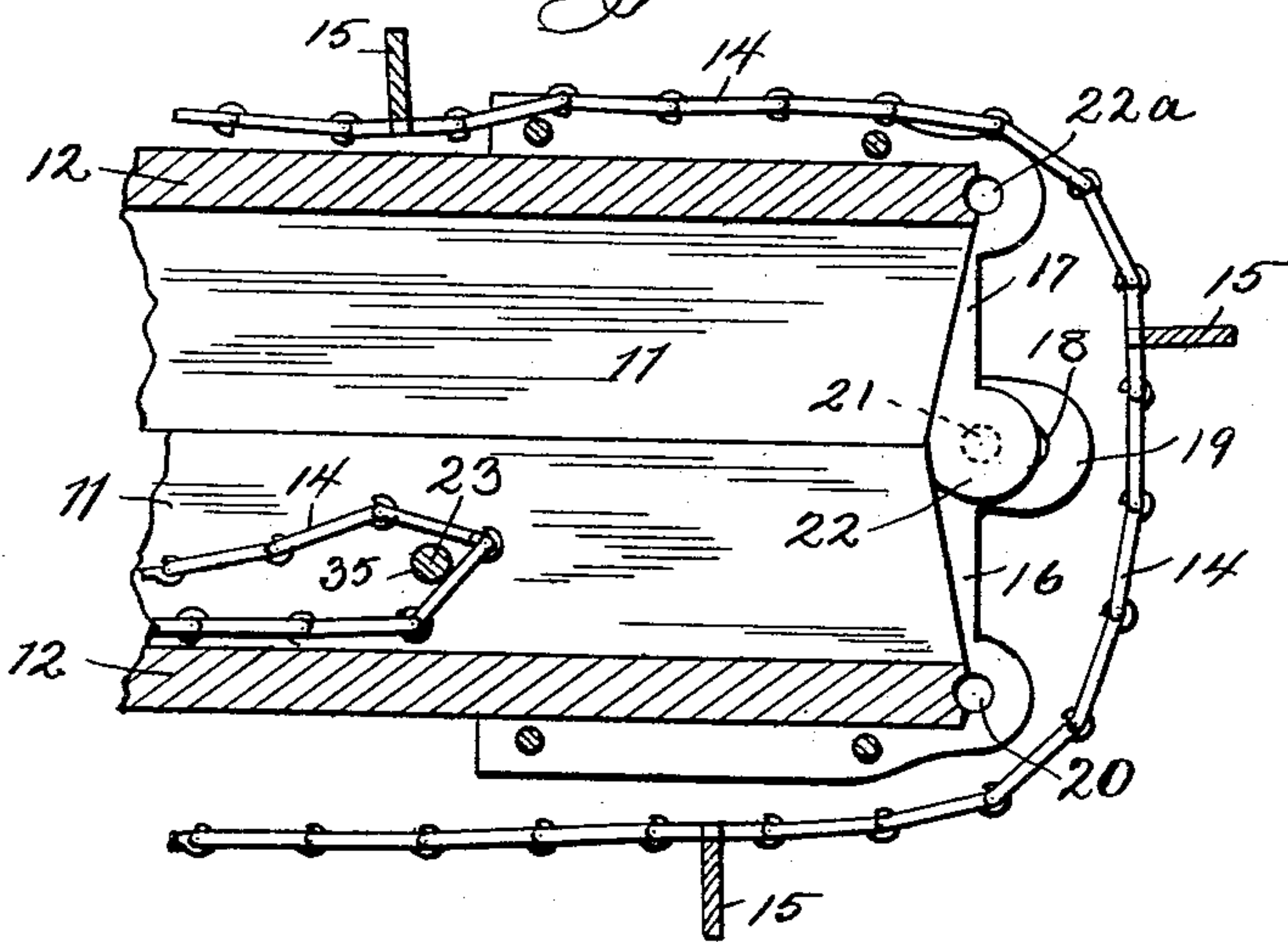


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN Q. ADAMS, OF MARSEILLES, ILLINOIS.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 684,162, dated October 8, 1901.

Application filed May 17, 1901. Serial No. 60,648. (No model.)

To all whom it may concern:

Be it known that I, JOHN QUINCY ADAMS, a citizen of the United States, residing at Marseilles, in the county of Lasalle and State of Illinois, have invented certain new and useful Improvements in Conveyers, of which the following is a specification.

My invention relates to improvements in conveyers of the general type shown in my Patent No. 659,838, dated October 16, 1900, and is designed to produce a device of that class in which the drag-feed can be folded up for transportation, so as to obviate the necessity of unjointing the various sections, while at the same time it produces a conveyer in which the different sections can adjust themselves automatically to the inequalities in the surface of the ground.

Referring to the accompanying sheets of drawings, in which the same reference characters are used to designate identical parts in all the views, Figure 1 is a side elevation of the conveyer with the parts extended ready for use and in its position when folded for transportation. (Shown in dotted lines.) Fig. 2 is an enlarged side elevation of the joint connecting the inclined portion with the first horizontal portion. Fig. 3 is a plan view of the same joint. Fig. 4 is a side elevation of the same joint with the parts in central section; and Fig. 5 is a central section of one of the horizontal joints, showing the parts folded.

All of the sections are made of a trough-like form consisting of the side pieces 10 and 11, connected by the bottom part 12, and each one is supported by a pair of legs 13. A pair of chains 14, which are of the Ewart type of detachable links, extend along the inner edges of the trough and are connected at suitable intervals by the carrier bars or slats 15, the chains and slats being of the customary construction employed in this class of devices. These chains are carried by sprocket-wheels (not shown) journaled at the extreme ends of the carriers and are arranged to be driven by power from the machines to which they are attached in the customary manner. The joint between the inclined portion and the adjacent horizontal portion is made up of the complementary castings 16 and 17, which are bolted to the sides 10 and 11 of their respective sections in the custom-

ary manner. The casting 16 is provided at its upper end with the segmental slot 18, which is formed in the segmental portion 19 of the casting which stands outside of the main portion to accommodate the cooperating part of the casting 17. This slot 18 is concentric with the aperture 20 in the casting and receives the pin 21, projecting into it from the ear 22, forming the upper and adjacent portion of the casting 17. The casting 17 is provided with the aperture 22^a, which when the parts are in operative position is in line with the aperture 20, so that the pivot-rod 23 can be passed from one side of the carrier through the apertures 20 and 22^a, thence between the channeled ends of the side pieces 10, the bottom pieces 12, and the side pieces 11, through the apertures 22^a and 20 of the castings 17 and 16 on the opposite side of the carrier, so that the two sections are pivotally connected, so that one can be turned relative to the other for the distance permitted by the length of the segmental slots 18. This distance is as much as may be necessary to accommodate the inclination that it may be desired to give to the end section and the variations in the surface upon which the conveyer is placed. The ends of the adjacent side pieces 10 and 11 are cut away, as indicated by the dotted lines at 24 and 25, to accommodate the relative movements of the sections. To hold the chains 14 down at the angle between the inclined section and the horizontal section, I secure the castings 26, which are of the shape best shown in Fig. 4, on the inner edges of the pieces 10 and 11 in the position shown, so that the horizontal flanges 27 thereon will project over the links of the chains and hold them down, so that the carrier-slats 15 will be substantially in contact with the bottom 12 throughout the length of the apparatus.

When it is desired to fold up the parts for transportation, the pivot-rods 23 are withdrawn and the outer sections are turned upon the lugs 21 as a pivot into the dotted-line position of Fig. 1. To permit of this movement at the joint between the inclined portion and the horizontal portion without increasing the length of the chain on the under portion, I secure the castings 26 to the side pieces 10 and 11 in the following manner: At their upper ends they are pivoted to the side pieces by the bolts 28 and are normally rigidly secured

at their other ends by means of the bolts 29, which, however, instead of passing through ordinary bolt-holes pass through an elongated slot 30 in the casting 16, terminating in a circular recess 31, which is larger than the head of the bolt. The side pieces 10 and 11 have similar slots 32 therein, and opposite the hole 30 is sunk a correspondingly-shaped recess 33, which is deep enough to receive the head of the bolt 29, and the castings 16 have the elongated recess 34 therein, so that when it is desired to swing the inclined portion over the adjacent portion the bolts 29 can be slid to the left and then drawn into the dotted-line position shown at the lower edge of Fig. 3, where the head of the bolt 29 being beneath the castings 26 there is nothing to prevent said castings turning about the bolts 28 as pivots into the position shown in dotted lines in Fig. 4. When turned in this position, it will be apparent that enough slack is given to the chains 14 to permit the sections being thus turned, and at the same time the chains are held in place by passing over the ends of the flanges 27.

The joints between the horizontal sections are similar to those between the inclined section and its adjacent section, except that the slot 18 is not so long and the castings 26 and the movable bolt 29 are unnecessary. To prevent the chain 14 from becoming displaced in transportation when the parts are folded, as shown in Fig. 1, when the rod 23 is withdrawn, as shown in Fig. 5, it is passed through the oppositely-disposed recesses 35 in the sides 10 and 11, where it is not only held from possibly being lost, but it serves to prevent the portions of the chains 14 on the inside from becoming displaced.

While I have shown my invention as embodied in the form which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of modifications, and that I do not desire to be limited in the interpretation of the following claims, except as may be necessitated by the state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a device of the class described, the combination with a trough-section having the casting secured on one end thereof provided with the segmental slot therein and the aperture concentric with said slot, of another section having a complementary casting secured thereon having the lug taking into the slot of the other casting and the aperture opposite the aperture of the first-mentioned casting, and the pivot-rod passing through said aperture; substantially as described.

2. In a device of the class described, the combination with the casting 16 having the segmental slot 18 therein at its upper edge and the aperture 20 concentric with said slot near its lower edge, of the casting 17 having the aperture 22^a therein opposite the aperture 20 and having the lug 21 projecting into

the slot 18, and the pivot-rod 23 passing through said apertures; substantially as described.

3. In a device of the class described, the combination with the trough-sections, of connections for joining said sections so as to permit a limited degree of angular movement between said sections, and the removable pivot-rod to permit said sections being folded upon each other without being disconnected; substantially as described.

4. In a device of the class described, the combination with the trough-sections, of the main connections for pivotally joining said sections in the plane of the bottoms of the troughs and including a removable pivot-rod, and the auxiliary connections acting as a pivot about which to fold said troughs when the pivot-rod is withdrawn; substantially as described.

5. In a device of the class described, the combination with the trough-sections, of connections for joining said sections so as to permit a limited degree of angular movement between them, said connections including detachable pivot members to permit said sections being folded upon each other without being disconnected, the chains, castings secured to one of the sections adjacent the joint, and connections for securing said castings from movement when desired; substantially as described.

6. In a device of the class described, the combination of the sections detachably pivoted together, with the chains, the castings secured to one of the sections adjacent the joint, and connections for securing said castings from movement when desired, consisting of the slot and the aperture in the castings, the slot and depression in the troughs, the slot in the joint-castings, and the bolt, all cooperating substantially as described.

7. In a device of the class described, the combination of the casting 16 having the elongated slot 34 therein, with the side piece 10 having the elongated slot 32 coinciding with the slot 34 and the depression 33, and the casting 26 having the slot 30 coinciding with the slots 32 and 34 and the aperture 31 coinciding with the recess 33, and the bolt 29, all cooperating substantially as and for the purpose described.

8. In a device of the class described, the combination with the trough-sections, of connections for joining said sections so as to permit a limited degree of angular movement between them, and a pivot member removable to permit such sections being folded upon each other without being disconnected; substantially as described.

In witness whereof I hereunto set my hand in the presence of two witnesses.

JOHN Q. ADAMS.

Witnesses:

JOHN H. McELROY,
R. S. CLEMAGE.