

No. 791,208.

PATENTED MAY 30, 1905.

G. W. PETER.
VENDING MACHINE.

APPLICATION FILED MAY 20, 1904.

2 SHEETS—SHEET 1.

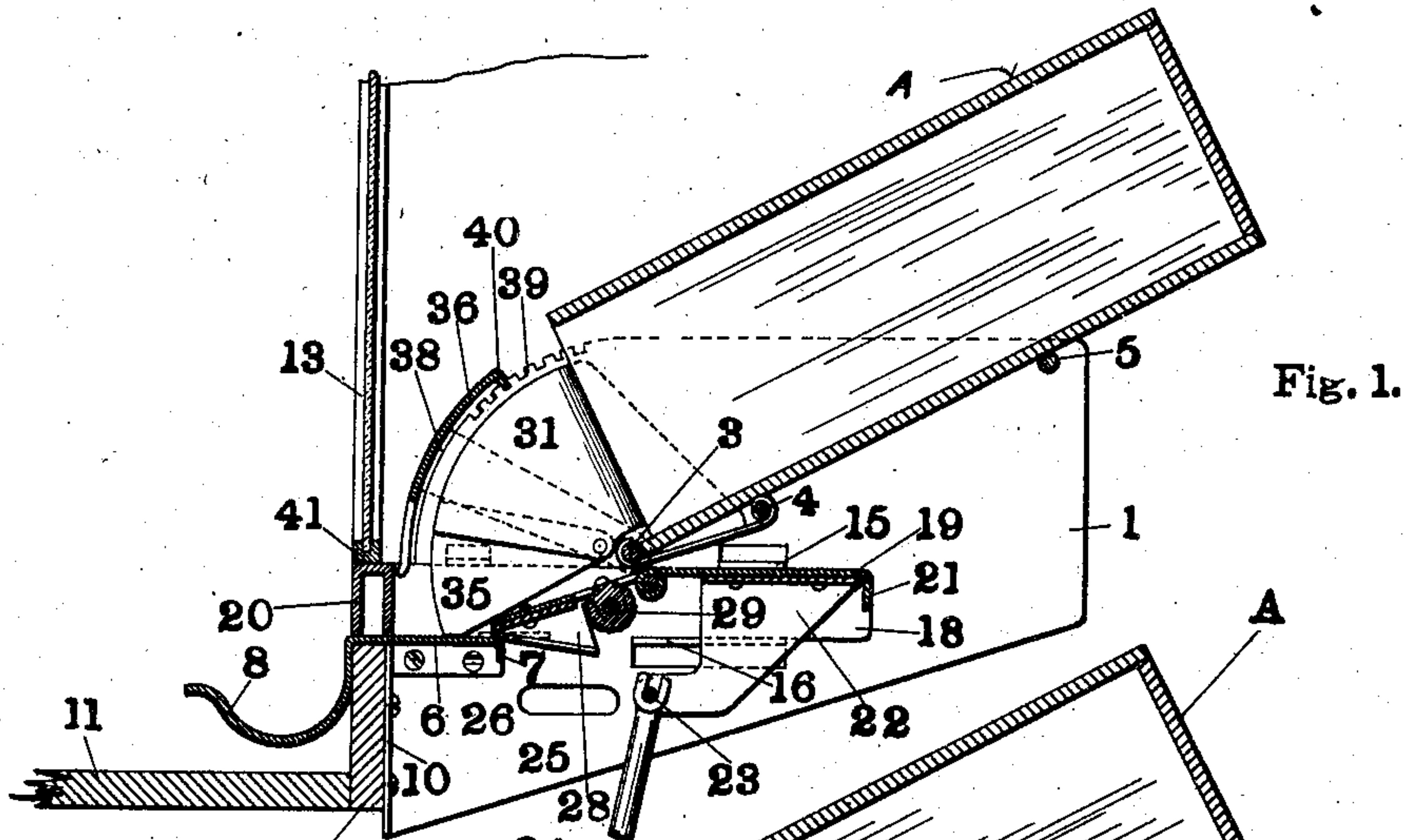


Fig. 1.

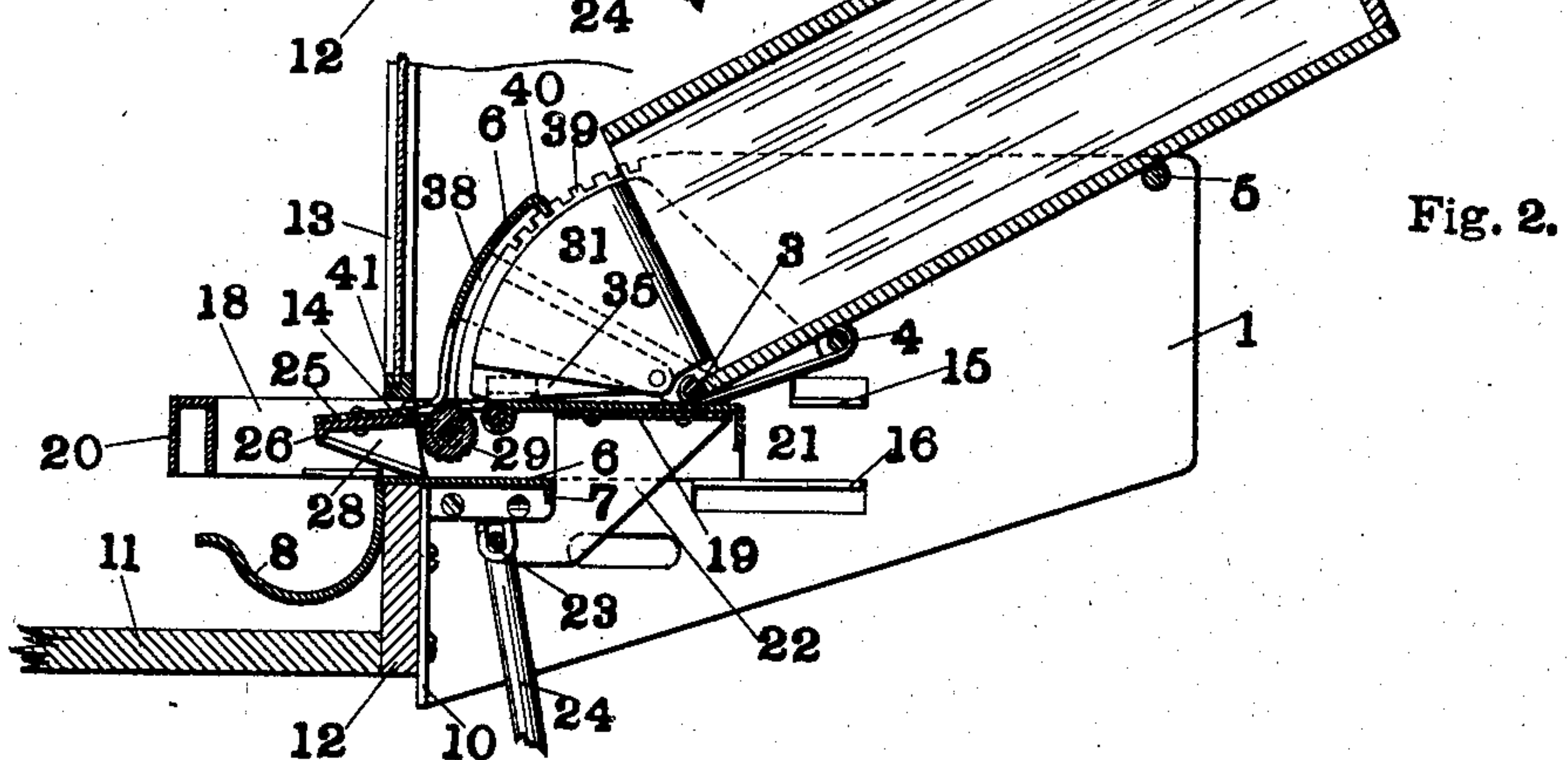


Fig. 2.

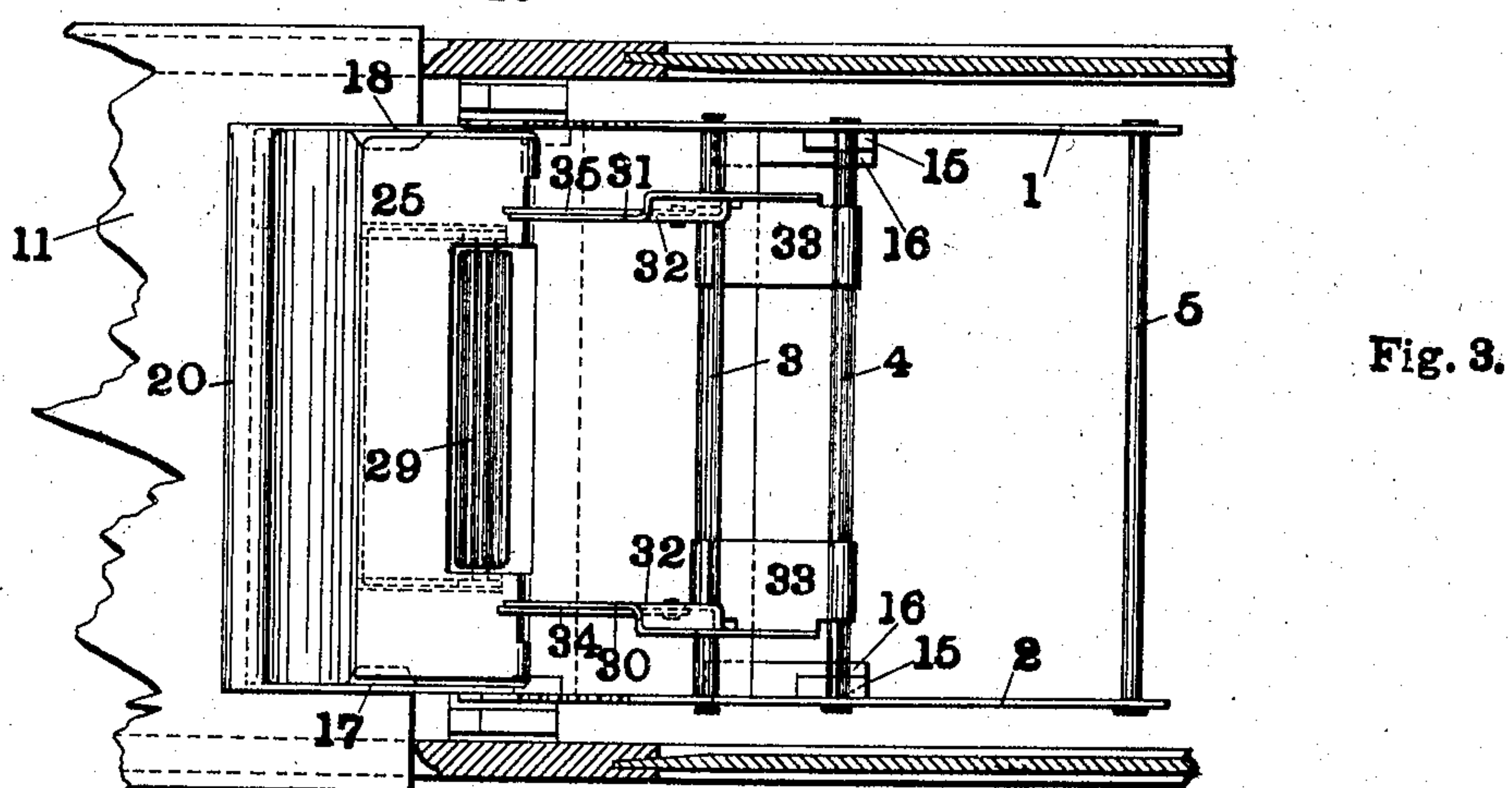


Fig. 3.

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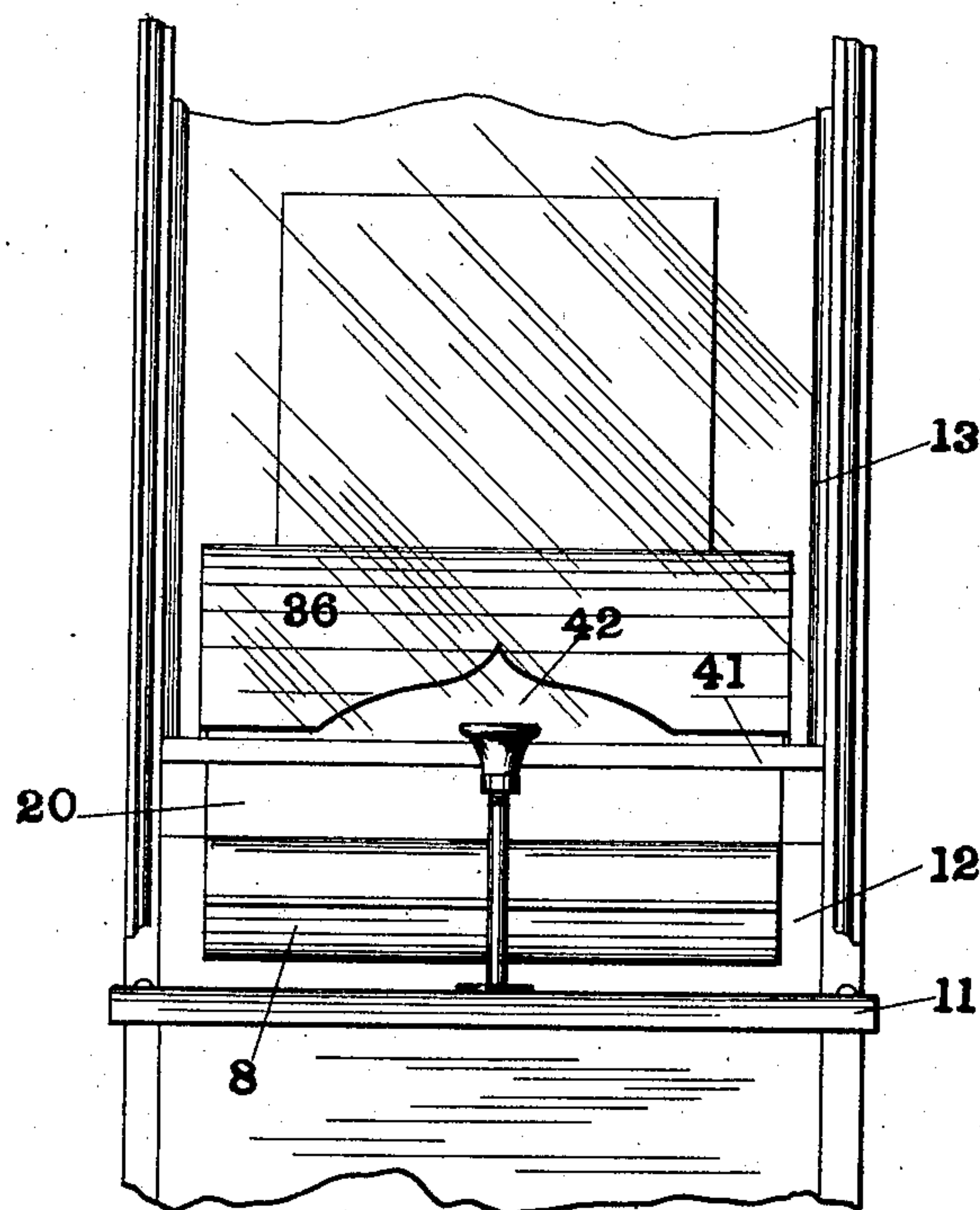


Fig. 4.

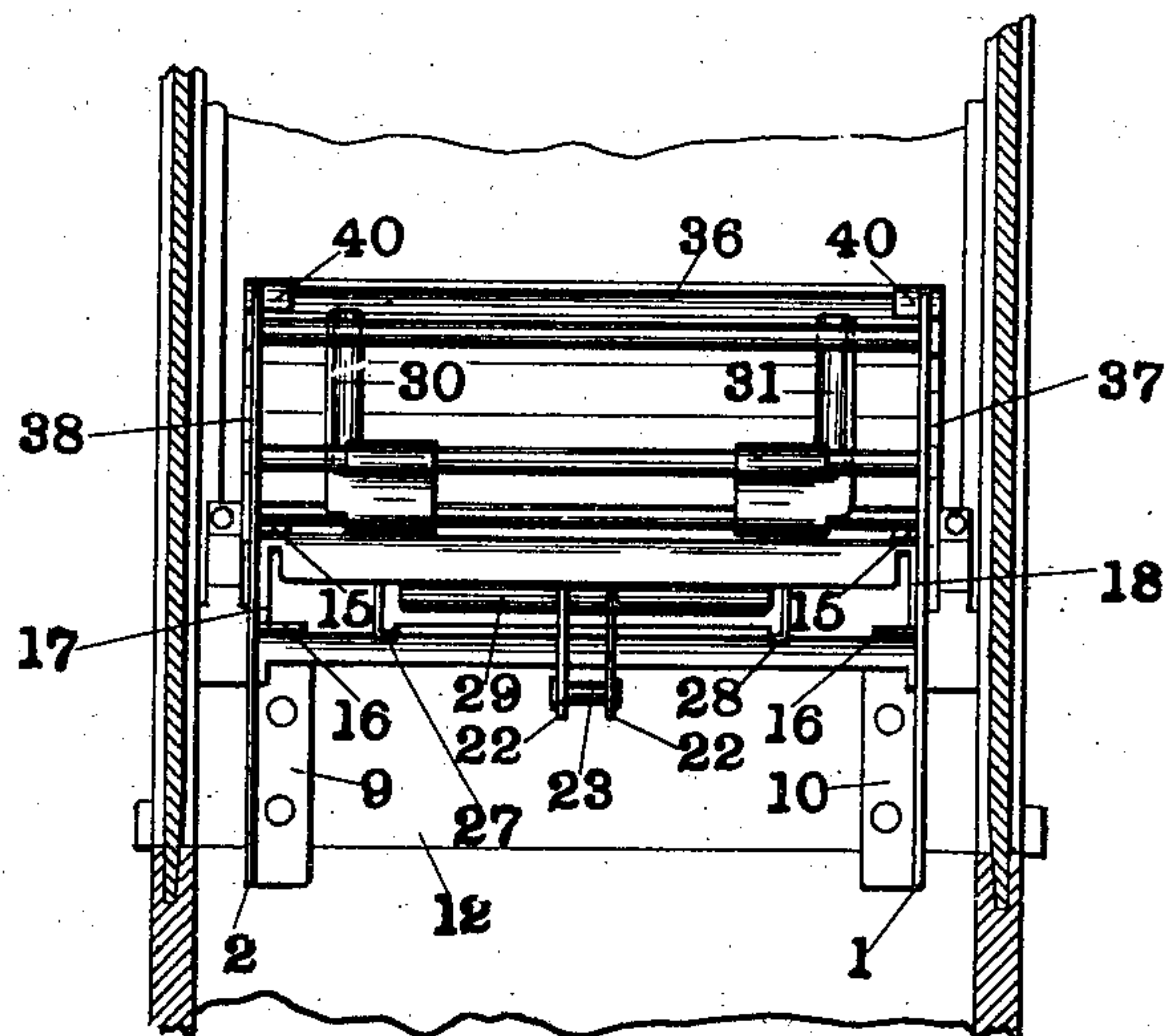


Fig. 5.

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UNITED STATES PATENT OFFICE.

GEORGE W. PETER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE PETER MANUFACTURING COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 791,208, dated May 30, 1905.

Application filed May 20, 1904. Serial No. 208,809.

To all whom it may concern:

Be it known that I, GEORGE W. PETER, a citizen of the United States, and a resident of the city of St. Louis, State of Missouri, have
5 invented a new and useful Improvement in Vending-Machines, of which the following is a specification.

My invention relates to vending-machines, and especially to delivery mechanisms for such
10 machines.

My invention has for its principal objects to provide a delivery mechanism adjustable to suit articles of different lengths; to provide a delivery mechanism adjustable to suit articles
15 of different thickness; to provide a delivery mechanism adjustable to suit articles of different lengths and thicknesses; to provide a delivery mechanism arranged to prevent injury to the sides or ends of brittle articles, such as cigars; to provide a delivery mechanism having means to close the exit-slot at all times except when the article to be delivered lies therein, and other objects hereinafter more fully appearing.

25 My invention consists in the parts and in the arrangements and combinations of parts hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, and wherein like
30 symbols refer to like parts wherever they occur, Figure 1 is a longitudinal sectional view through the delivery mechanism. Fig. 2 is a longitudinal sectional view showing the reciprocatory slide in its foremost position. Fig. 3 is a plan view showing the casing partly
35 in section and the cover-plate removed. Fig. 4 is a front view of a portion of the casing with the delivery mechanism mounted therein, the cover-plate thereof being adjusted to its highest position; and Fig. 5 is a rear view of the delivery mechanism, showing the casing partly in section.

The delivery mechanism is provided with a frame consisting of similar side plates 1 2,
45 connected by rods 3 4 5 of equal length, and a plate 6. The plate 6 is provided with a small flange 7 at its rear edge, making a rounded and smooth angle therewith. At

its forward edge it is turned downwardly and then shaped to form a receptacle 8 to receive
50 the articles delivered. At the lower forward corners of the side plates 1 2 are perforated flanges 9 10, which are parallel with the vertical portions of the plate 6.

The case for the mechanism is preferably
55 L-shaped. The top 11 of the horizontal portion and the lower portion 12 of the front of the vertical portion are rigidly connected and are together removable from the remainder of the case. The fixed portion 13 of the front
60 of the case ends far enough above the top of the removable portion 12 to provide an exit-slot 14 wide enough to permit the passage of the largest article to be delivered. The vertical portion of the plate 6 and the flanges 9 10
65 are so spaced that they will snugly fit over the removable portion 12 of the front. Screws passing through the flanges 9 10 firmly secure the frame to the removable portion 12. Thus the delivery mechanism may be bodily
70 removed with the removable top 11 and removable portion of the front 12.

Guides 15 16 are struck inwardly from each of the side plates 1 2 of the frame and together form a slideway for the delivery-slide.
75 The delivery-slide consists of vertical plates 17 18, fitting between the guides 15 16 and connected at the rear by a plate 19. At the front they are connected by an exit-slot-closing bar 20, which is preferably a sheet-metal
80 channel. The plate 19 is integral with the vertical plates 17 18, and its rear edge is turned down to form a flange 21, the angle being smooth and rounded. The vertical dimensions of the slot-closing bar are such that it
85 will fit easily in the exit-slot and close the same against the entrance of wires and the like. Hangers 22 depend from the plate 19 and support a pin 23, which may be engaged by the actuating mechanism, a fragment of
90 the actuating-lever 24 of which is shown. The actuating mechanism may be of any desired type, and hence it is unnecessary to illustrate it.

An oscillating plate 25 is pivotally connected
95 to the front edge of the plate 19. The front

edge is provided with an integral flange 26. Wedge-shaped projections 27 28 are secured to the bottom of the plate, the apex of each wedge being directed forwardly. These
 5 wedges slide upon the plate 6 of the frame and raise the front edge of the oscillating plate 25 as the delivery-slide moves forward. The front edge of the oscillating plate is far enough in the rear of the slot-closing bar to
 10 permit one of the articles to be delivered to lie between them. As the delivery-slide moves forward the front edge of the oscillating plate 25 pushes the article to be delivered forward. At the same time its front edge is gradually
 15 rising and by the time the article is out of the exit-slot has closed the slot to such an extent that the extraction of a second article is impossible. The upward movement of the front edge of the oscillating plate causes the article
 20 to roll, and hence a brittle article, such as a cigar, is less likely to be injured than when it is made to slide. A roller 29 is mounted on the rear edge of the oscillating plate, so as to extend slightly above the surface thereof.
 25 As the slide moves forward the roller 29 rolls under the articles above, and hence they are relieved from the wear of sliding contact.

Adjustable guides 30 31 are mounted on the rods 3 4 of the frame. These guides are each
 30 made of an integral piece of sheet metal. Each has a vertical portion of substantially sectorial shape, which is laterally offset to form a shoulder 32, that is substantially perpendicular to the plane of the rods 3 4 5. An
 35 extension 33 of each guide is turned parallel with the plane of the rods 3 4 and has its edges rebent to embrace the rods. By this means the guides are slidably mounted on the rods 3 4. Adjustable sectorial wings 34 35 are
 40 pivoted upon the vertical portion of the guides 30 31 and are concentric therewith. These rest upon the plate 6 when the delivery-slide is in normal position and ride upon the oscillating plate 25 when the delivery-slide is forward of its normal position. These wings thus
 45 serve as adjustable extensions of the guides and keep articles from getting under the fixed portions of the guides, where they might be injured.

50 A curved cover-plate 36 is pivotally mounted on the side plates 1 2 by integral arms 37 38, pivoted on the ends of the rod 3. The front upper corners of the side plates 1 2 are curved to conform to the cover-plate, which
 55 is an arc having its center at the pivot-point of the arms 37 38. The curved edges of the side plates are provided with teeth 39. Immediately above each side plate the cover-plate has a projection 40 to engage said teeth. By
 60 this construction the cover-plate is made adjustable. The article to be delivered must pass between the lower edge of the cover-plate and the plate 6. The cover-plate may be so adjusted that the space between the lower edge

thereof and the plate 6 is just sufficient to permit any given article to pass between them. Thus the machine may be adjusted to deliver articles of various sizes.

The fixed portion of the front of the case consists principally of a plate of glass resting at the bottom upon a narrow bar 41. The cover-plate 36 is provided with a sight-opening 42 adjacent its lower edge. The shape of this opening is unimportant. It is provided to permit prospective customers to see whether
 75 the machine is charged with articles to be sold or is empty.

The delivery of cigars will be taken as an example for the description of the operation of the mechanism. One end of the cigar-box
 80 A, parallel with the length of the cigars, is broken out, and the box is set upon the rods 4 5. The guides 30 31 are adjusted so that their inner faces are flush with the sides of the box. The bottom of the box will project slightly in
 85 front of the sides. In order to permit the sides of the box to rest against the shoulder 32 of the guides, the lower portion of the latter is cut away to permit the projecting portion of the box-bottom to extend thereunder. The cigars
 90 may roll down and fill the space beneath the cover-plate. One cigar will occupy the space between the slot-closing bar 20 and the front edge of the oscillating plate 25. When the delivery-slide is moved forward, the last-mentioned cigar will be moved forward by the oscillating plate, which at the same time slides under the remaining cigars. When the delivery-slide has moved forward sufficiently, the cigar drops into the receptacle 8. When
 100 the slide has returned to normal or initial position, a second cigar will fall into the space between the oscillating plate 25 and the slot-closing bar 20 and may be delivered in the same manner as the first.

Obviously my device is capable of modification within the scope of my invention, and therefore I do not wish to be limited to the specific construction shown and described. Although a delivery mechanism having a
 110 frame which may be bodily removable from the case has been herein disclosed, it is obvious that the case may be made to serve as the frame.

What I claim as my invention, and desire to
 115 secure by Letters Patent, is—

1. In a vending-machine, delivery mechanism comprising a frame provided with an opening and an article-ejecting member to eject articles through said opening and provided with a fixed member to close said opening and a movable member to close said opening.

2. In a vending-machine, a delivery mechanism comprising a frame having a chamber
 125 containing articles to be delivered and provided with an opening, an article-ejecting member to eject articles through said opening

and provided with a fixed member in position to close said opening and a pivotally-mounted member in position to shut off communication with said chamber through said opening, said fixed member and pivoted member being separated to form an article-receiving recess.

3. In a vending-machine, delivery mechanism comprising a frame provided with an article-receiving chamber and provided with an opening and an article-ejecting member to eject articles through said opening and provided with a fixed member in position to close said opening when said ejecting member is in its rearmost position and a movable member in position to shut off communication through said opening with said chamber when said ejecting member is in its foremost position, said fixed and movable members being separated to provide an article-receiving recess therebetween.

4. In a vending-machine, a delivery mechanism comprising a frame provided with an opening, a relatively movable article-ejecting member to eject articles through said opening, and a plate pivoted at its rear edge on said member and provided with a wedge-shaped projection on its lower face in position to engage a part of said frame in the forward movement of said article-ejecting member, the front edge of said plate being at a distance from the front end of said member to form an article-receiving recess.

5. In a vending-machine, a delivery mechanism comprising a frame, a chamber in said frame to contain articles to be delivered, a relatively movable article-ejecting member forming a movable bottom for said chamber and having a pivoted member, and a roller mounted on said ejecting member near the pivot of said pivoted member in position to be engaged by articles in said chamber.

6. In a vending-machine, delivery mechanism comprising a frame, a relatively movable article-ejecting member having an article-re-

ceiving recess, and guides above said member provided with movable sections in position to enter said recess when said member is in its normal position.

7. In a vending-machine, delivery mechanism comprising a frame, a relatively movable article-ejecting member having an article-receiving recess, and adjustable guides above said member provided with movable sections in position to enter said recess when said member is in its normal position. 50

8. In a vending-machine, a delivery mechanism comprising a frame provided with an adjustable opening, guides adjustably mounted on said frame, an article-ejecting member 60 movably mounted below said guides and comprising a fixed plate and a pivoted plate, an adjustable cover-plate on said frame, said discharge-opening being bounded by said frame and one edge of said cover-plate, said guides, 65 ejecting member and cover forming a chamber to receive articles to be delivered and means to oscillate said pivoted plate in the ejecting movement of said ejecting member.

9. In a vending-machine, delivery mechanism comprising a chamber to contain the articles to be delivered, an article-ejecting member forming a movable bottom for said chamber and provided with an article-receiving recess large enough to receive but one of the 75 articles, a plate pivoted on said ejecting member normally inclined and arranged to slide under and raise the articles in said chamber during the ejecting movement of said member, and a roller in said plate in position to 80 engage articles resting on said plate.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 14th day of May, 1904, at St. Louis, Missouri.

GEO. W. PETER.

Witnesses:

FRED. F. REISNER,
J. B. MEGOWN.