

N<sup>o</sup> 4987



A.D. 1910

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COMPLETE SPECIFICATION.

**Improvements in and relating to the Delivery Mechanism and Coin-action for Automatic Delivery Machines.**

I, MAX SIELAFF, of 23, Spener Strasse, Berlin, in the German Empire, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 This invention relates to coin-freed automatic delivery machines and more particularly to improvements in the delivery mechanism and coin-action. An object of this invention is to provide means whereby the return movement of the delivery mechanism to normal position is controlled by the article during and until its delivery. A further object, in a machine of the kind referred to  
10 having a coin-action in which the coin is utilised as a connecting member between the device operated by the purchaser and the delivery mechanism to establish a subsequent direct connection between said device and said mechanism, is to provide means whereby said direct connection is broken at the commencement of the return movement of said device.

15 In the accompanying drawings the present invention has been illustrated as applied to the construction of automatic machines adapted to deliver post-cards and other similarly thin articles described in my concurrent Application No. 19,533, filed August 25, 1909.

20 Figure 1 being a front view of the machine, the outer casing having been removed with the exception of the delivery mouth-piece.

Figure 2 a side-view looking in the direction of the arrow *x* in Figure 1;

Figure 3 a side view looking in the direction of the arrow *y*;

25 Figure 4 a sectional plan-view, the section being taken on the line 4—4 of Figure 1, and

Figure 5 a section on the line *a—b* of Figure 4.

Referring to the drawings I will first generally describe the operation of the machine, as disclosed in my aforesaid concurrent application.

30 Post-cards showing various views or pictures are arranged in a number of holding cases 10 loosely pivoted to a drum 11, each case containing a number of post cards showing the same view or picture. (See Figure 3.) The drum 11 may be rotated stepwise by pushing a rod 12. The rotation of the drum takes place in the direction of the arrow 13 in Figure 3. As the drum rotates, the holding cases 10 are in turn brought into the position of the case 10<sup>a</sup> in Figure 3 resting upon a stop 63 when the intending purchaser may examine  
35 the cards contained in the case through an opening in the outer casing. For the sake of simplicity this outer casing is not shown in the drawings. When the intending purchaser sees through the opening in the casing a card which he wishes to purchase, he inserts a coin 70 through a coin slot in the outer casing and this coin is guided to a coin pocket 14 and thereby renders the  
40 delivery mechanism operative. When the coin is properly inserted in the coin slot, the intending purchaser pulls a draw-bar 15 and thereby causes an extractor 16 (Figure 1) to be moved to the left, so that the post-card is ejected through a mouth-piece 17.

I will now proceed to describe my improved coin-action. The reciprocating

[Price 8d.]



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slide 77 which supports the carrier 79 and the pivoted supporting arm 80 for the extractor 16 is shown mounted upon rods 78 and is provided with a pin 76. One arm 75 of a double armed lever pivoted at 74 is provided with a slot adapted to thread over the pin 76 while the other arm 73 is bent into the path of movement of the coin after it has fallen into the coin pocket 14, formed in a slide 64 supported on guides 65. The channel through which the coin falls into the pocket 14 is not shown.

The draw-bar 15 passes through an eye 67 arranged on the slide 64 and is provided with a collar 68 by which movement is imparted to the slide 64. Preferably a spring 69 is inserted as shown, between the collar 68 and the eye 67.

When the draw-bar 15 is pulled out against the influence of a spring 100, the slide 64 will also be moved in the same direction bringing the face of the coin into contact with the end of the lever arm 73 thus causing a movement of the sliding piece 77 towards the magazine in the direction of the arrow 81.

In order that the coin may have time to fall into the collecting box through an opening 108 in the base of the casing, the movement of the coin is utilised to cause the first part only of the movement of the lever 73, 75. This initial movement is sufficient to bring the arm 73 behind the path of action of a pawl 103 pivoted at 104 to the slide 64. Normally the pawl is held clear by the arm 73 by a pin 105 on the pawl resting upon a fixed guide 106 which is so formed that when the limit of the said initial movement has been reached, as indicated at 107, the pin 105 clears the guide 106 allowing the pawl 103 to fall and engage with the arm 73. In order to break the connection between the pawl 103 and the arm 73 at the commencement of the return movement of the draw-bar 15 and the slide 64 a piece 109 conveniently pivoted to the guide 106 and provided with inclined surface at its free end is so arranged and located within the path of movement of the pawl 103 that as the bar 15 is drawn out, the piece 109 is raised but upon the return movement of the slide 64 the pin 105 engages with the inclined surface of the piece 109 whereby the pawl 103 is rapidly raised and held clear of the arm 73 until the pin 105 again rests upon the guide 106.

In order to ensure that the lever arm 73 may not be partially moved by the coin which might render fraudulent use of the machine possible I provide means for ensuring that the stroke of the draw-bar 15 when once commenced must be fully completed. To this end a rack 71 is arranged below the path of movement of the coin extending to the edge of the slot 108 and the teeth are so formed on the rack that the coin when once moved and the tension of the rod 15 is relaxed, falls between the teeth which prevent any backward movement of the coin and thereby any backward movement of the slide 64. It will be observed that, owing to the fact that the lever 75, 73 is not spring-controlled, when the tension on the rod 15 is relaxed, pressure upon the coin will be released and the coin will thus be free to fall.

To prevent coins falling out of the coin channel while the slide 64 is being moved the mouth of the channel is closed by a tail piece 110 on the slide 64.

In order to provide means whereby the return movement of the delivery mechanism to normal position is controlled by the article itself during its delivery and until it has been removed beyond the casing of the apparatus the delivery slot 97 is formed in a sliding plate or shutter 96 which is moved by the reciprocating slide 77, through a lever 94 pivoted at 95 to a bracket in the casing, the free end of said lever passing through a slot in the shutter. A pivoted pawl 98 is provided with a tail piece 101 upon which the bottom of the shutter 96 normally rests, thus normally raising the pawl above the path of a rack 99 connected to the slide 77. The lever 94 is provided with an inclined surface 93, 93<sup>a</sup>. The slide 77 is provided with a pivoted arm 90 which is weighted so that it normally rests in the position shown in Figure 1, against a stop 92 on the slide 77. The inclined surface 93, 93<sup>a</sup> is so formed that upon the aforesaid initial movement of the slide 64 and slide 77 in the

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direction of the arrow 81 the shutter 96 is raised sufficiently to permit the pawl 98 to drop into engagement with the rack 99 and upon completion of the movement to raise the shutter sufficiently to permit the article to pass through the delivery slot 97. The length of the inclined surface 93, 93<sup>a</sup> is such that the arm 90 stands clear of said surface upon the completion of the stroke of the arm 79, the delivery mouth piece 17 being arranged sufficiently close to the magazine to permit of the shutter 96 being held by the rigidity of the article after mechanical extraction and as it rests partly within the casing and partly within the mouth-piece 17. Upon withdrawal of the article by hand the shutter 96 is released thus tripping the pawl 98 releasing the rack 99 and permitting the spring 100 to return the draw-bar 15 to normal position and thereby slide 64, which, by means of a snug 102 on the under side of said slide engaging with the arm 73, returns the sliding piece 77, 79 and extractor 16 to their initial position.

Thus when once the actuation of the machine has been commenced the action must be fully completed before any backward movement of the operating parts can take place.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a coin-freed automatic delivery machine, means whereby the return of the slide to normal position is controlled by the article during and until its delivery.

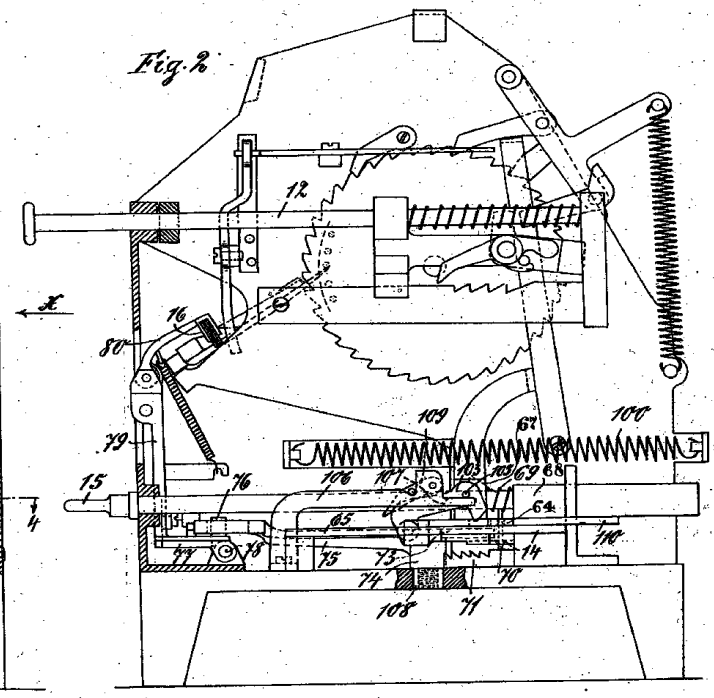
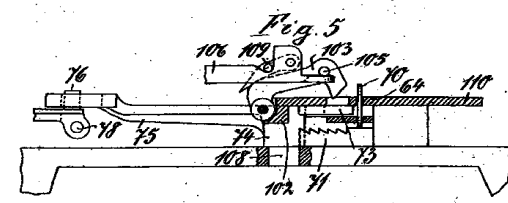
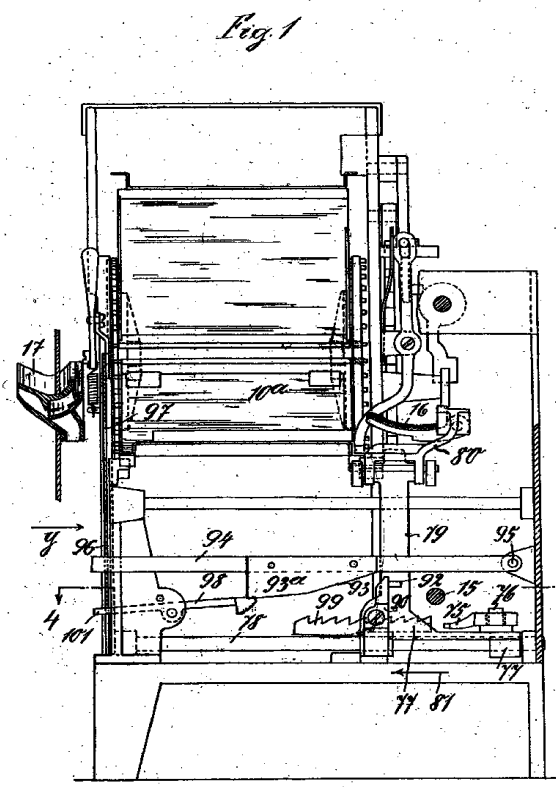
2. In a coin-freed automatic delivery machine, as claimed in Claim 1 and having a coin-action whereby the first portion only of the movement of the delivery mechanism is obtained through the medium of the coin while the remaining portion of said movement is obtained directly from a device actuated from outside the casing, means for breaking the connection between said mechanism and said device at the commencement of the return movement of said device, substantially as described.

3. In a coin-freed automatic delivery-machine according to Claim 1, a coin-action, delivery mechanism and locking devices, constructed and operating substantially as described with reference to the accompanying drawings.

Dated this 20th day of February, 1910.

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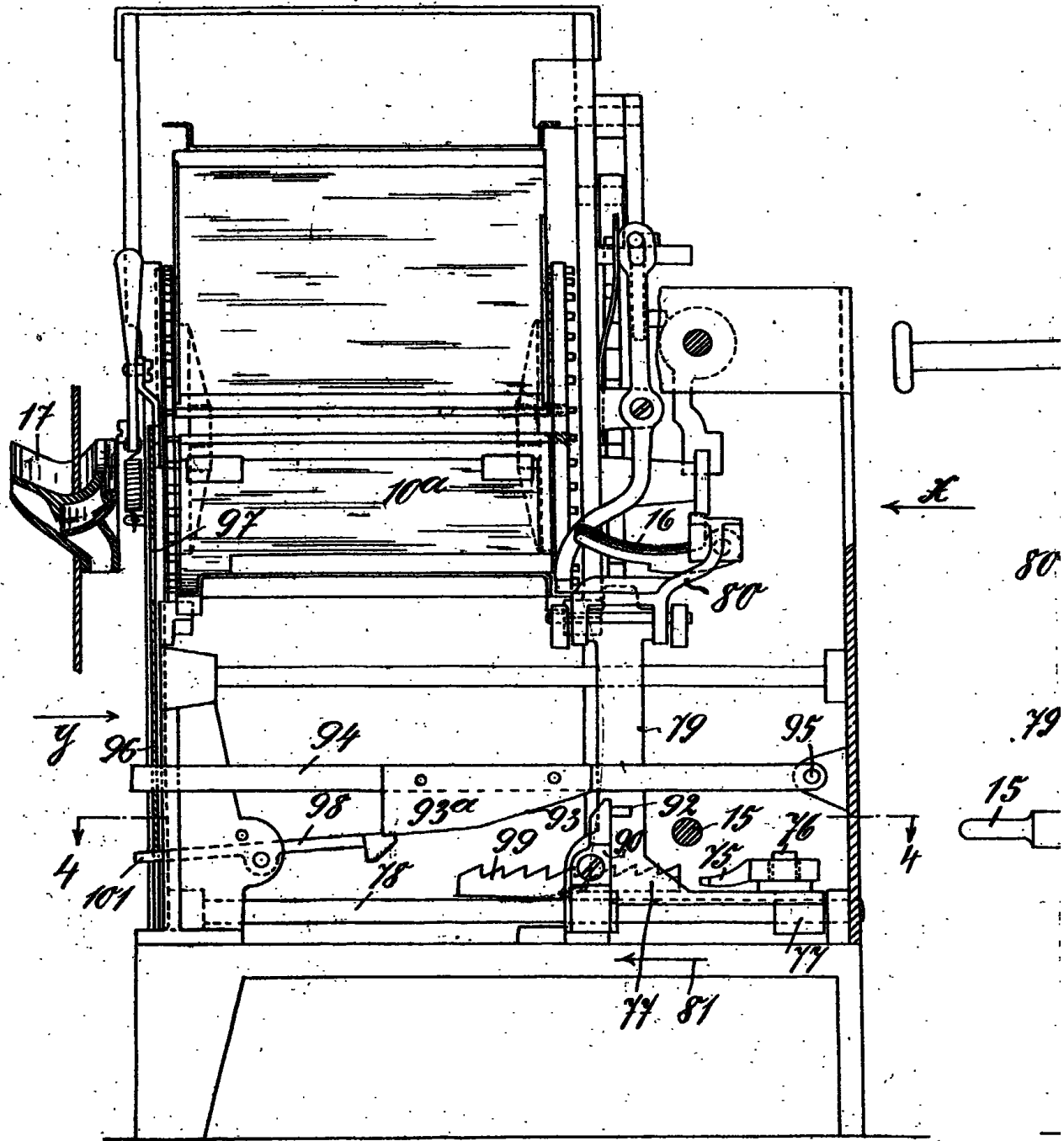
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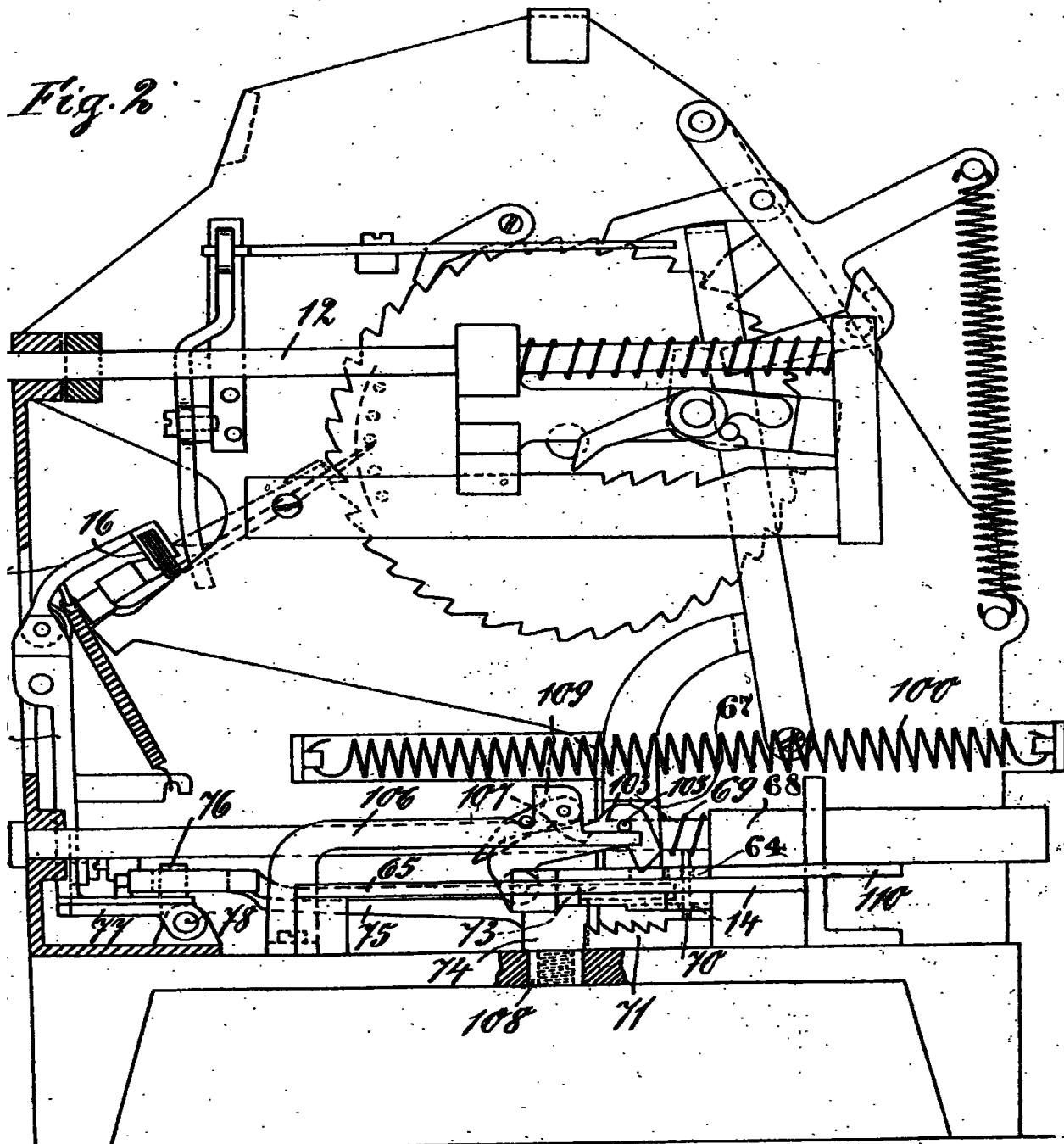
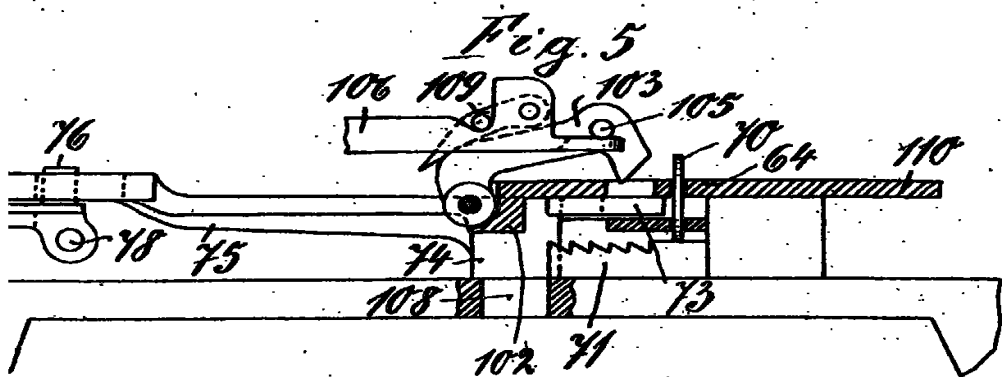


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Fig. 1

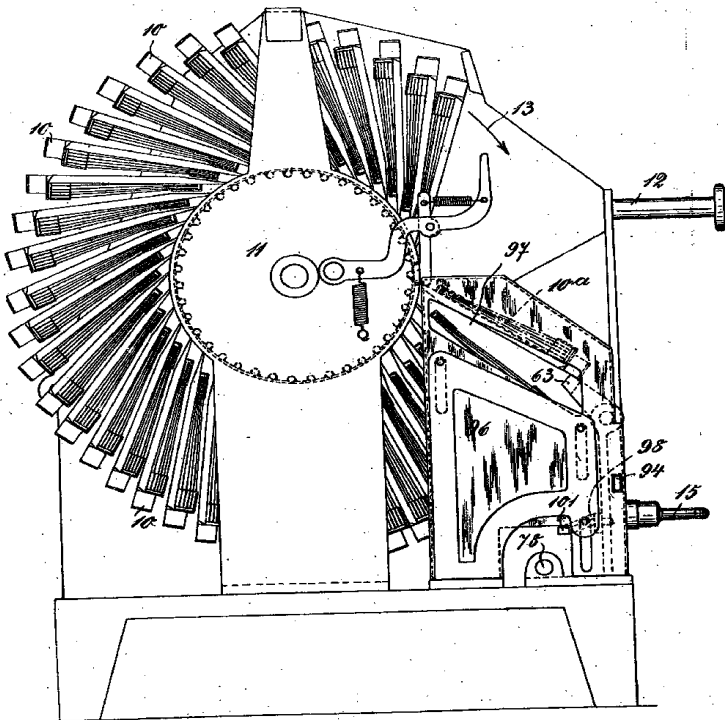
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Fig. 3.



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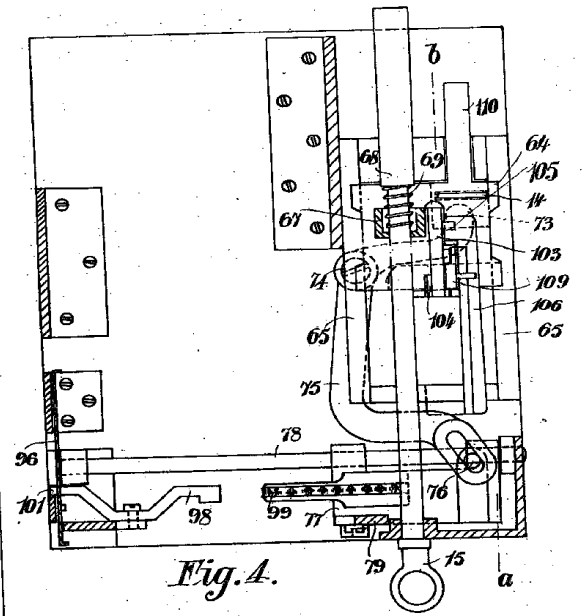
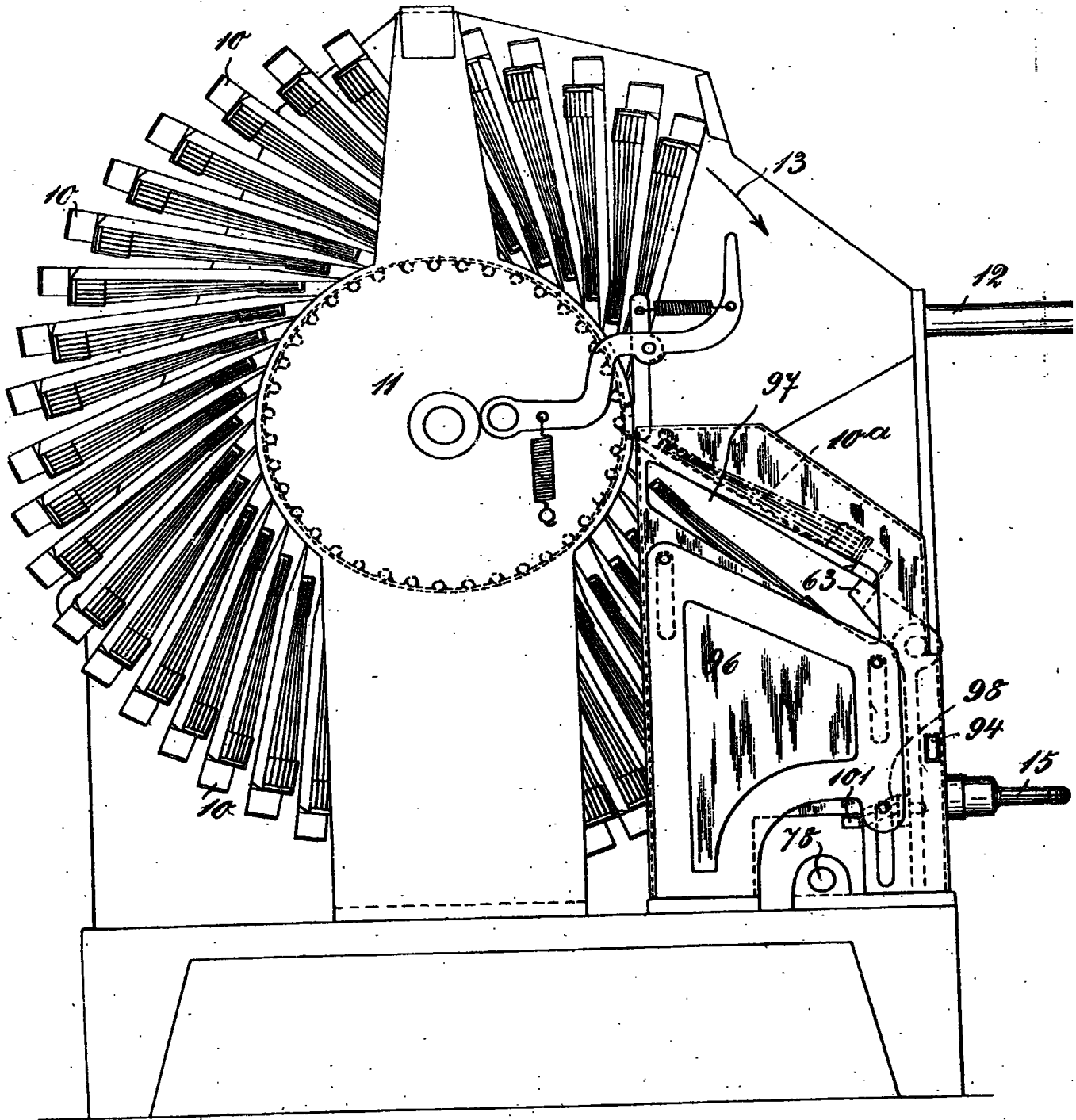


Fig. 4.

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Fig. 3.



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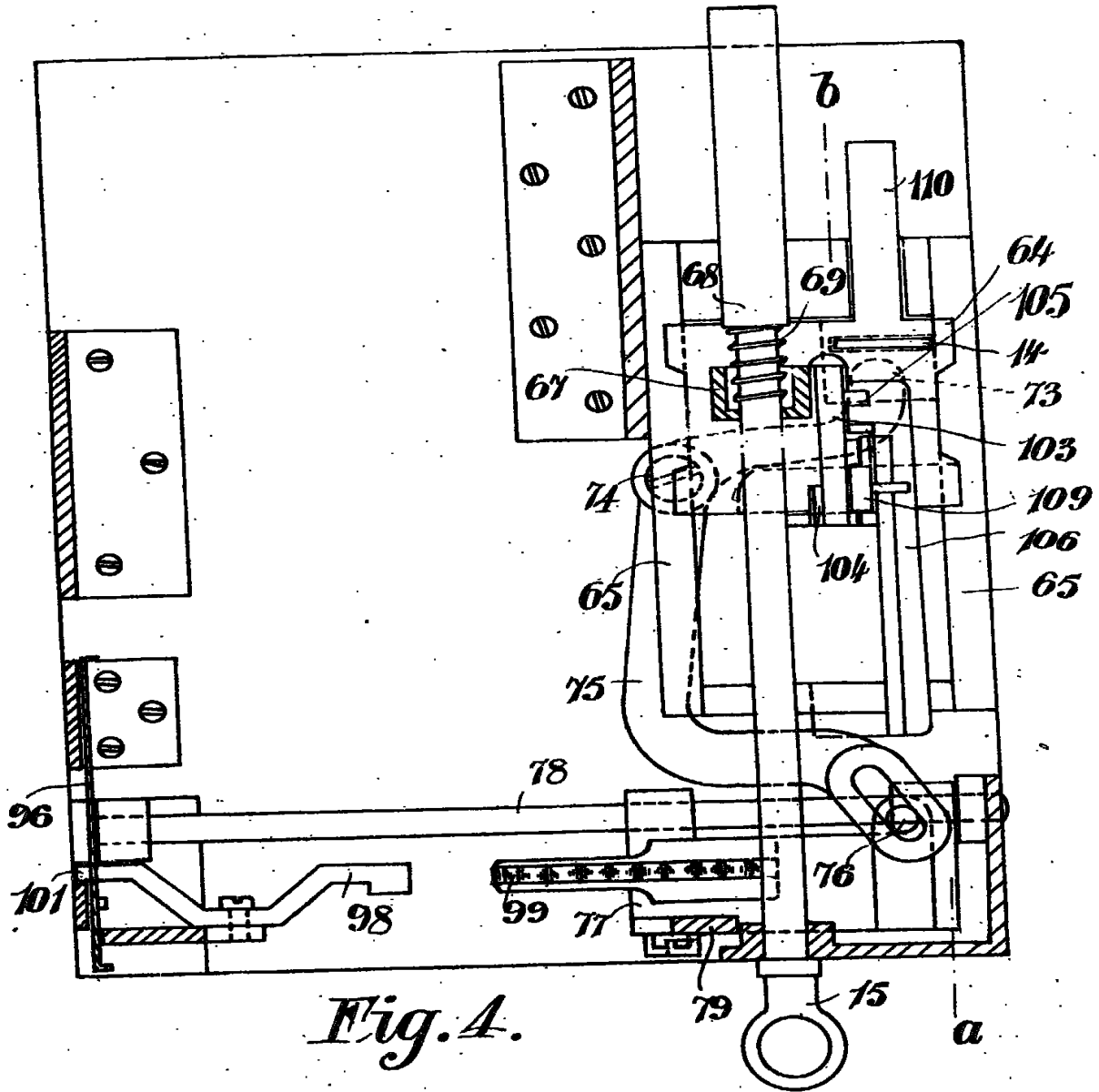


Fig. 4.

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