

No. 890,632.

I. FLUEGELMAN.

PATENTED JUNE 16, 1908.

TICKET EJECTING AND REGISTERING DEVICE.

APPLICATION FILED AUG. 16, 1907.

3 SHEETS—SHEET 1.

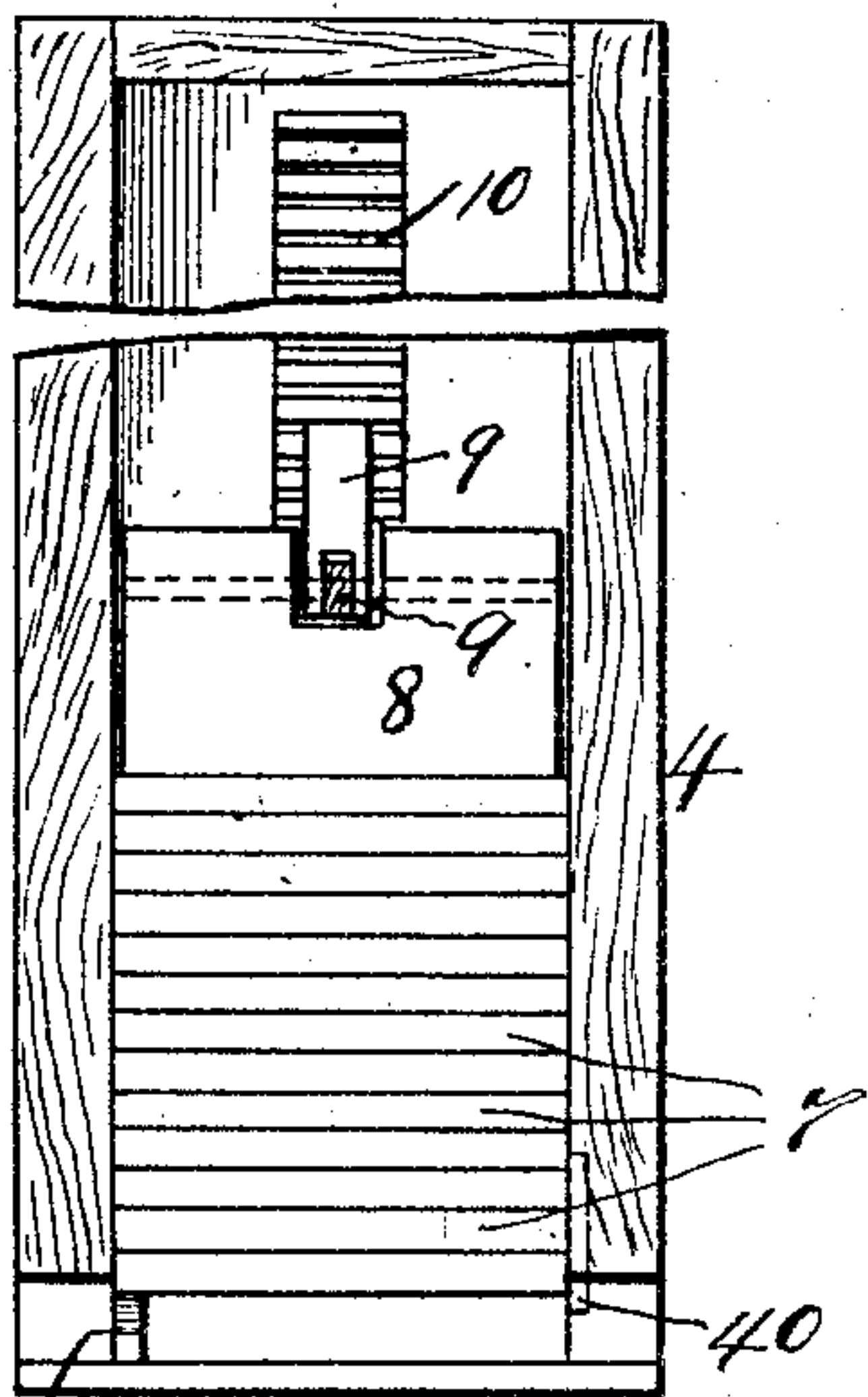
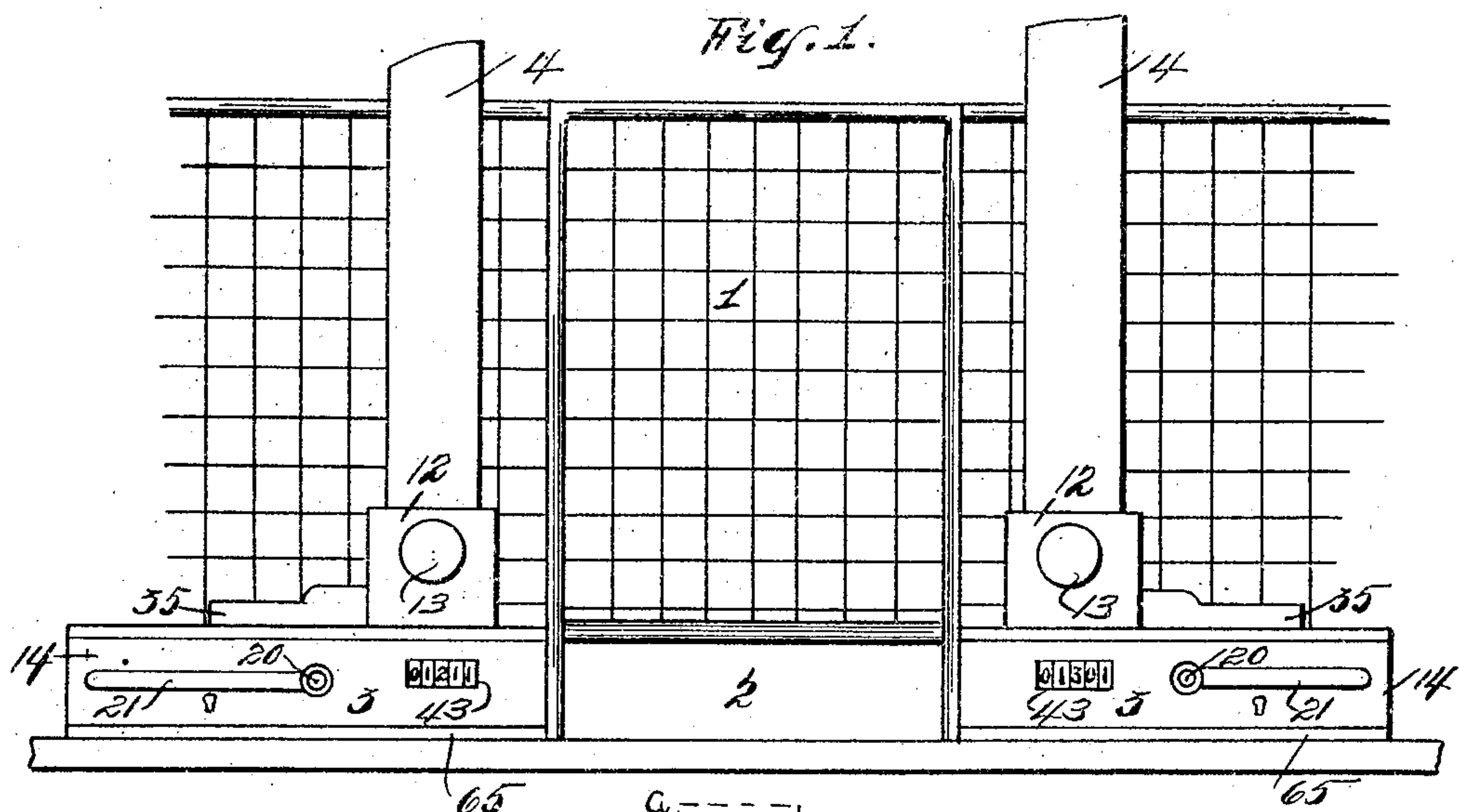


Fig. 3.

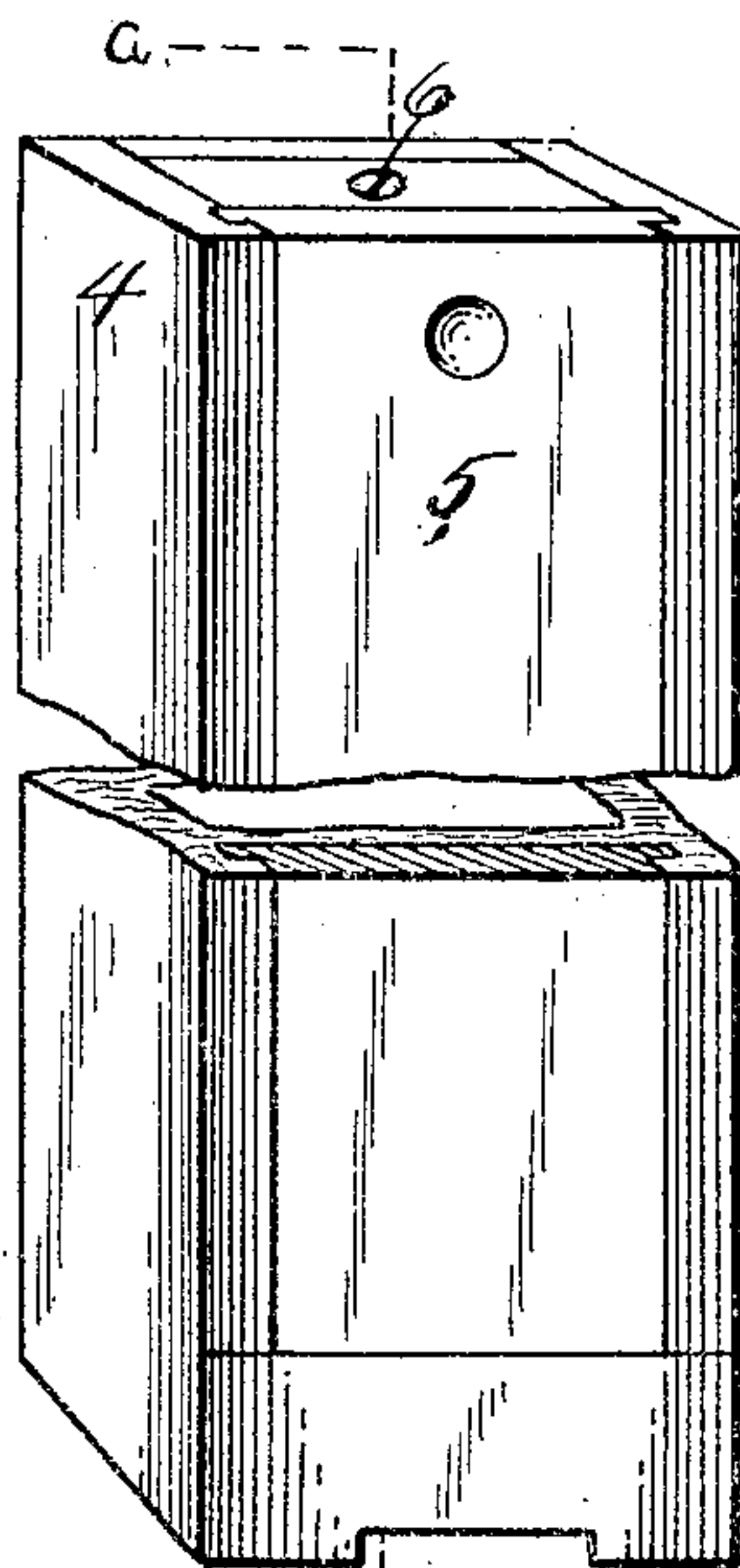


Fig. 2.

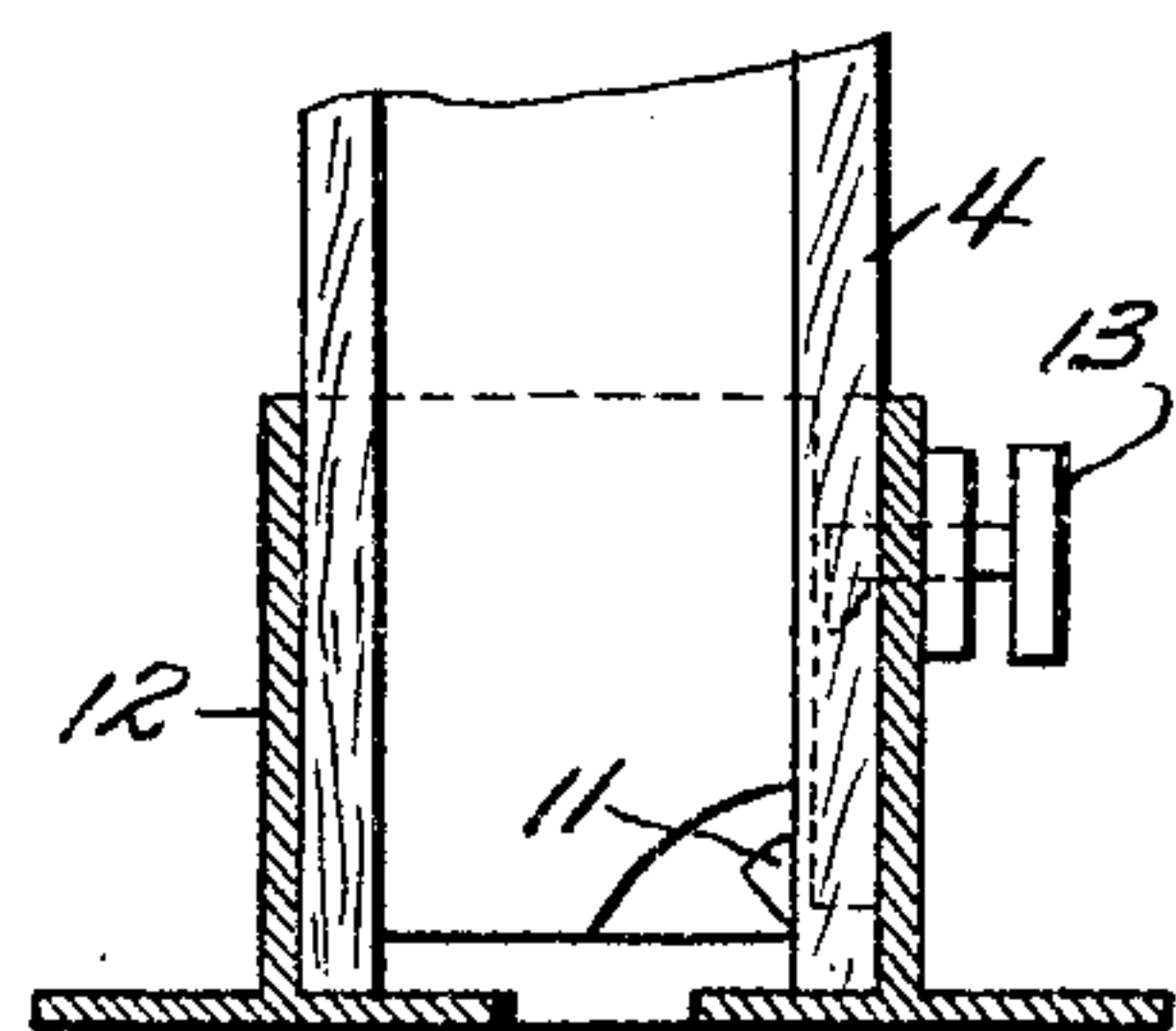


Fig. 4.

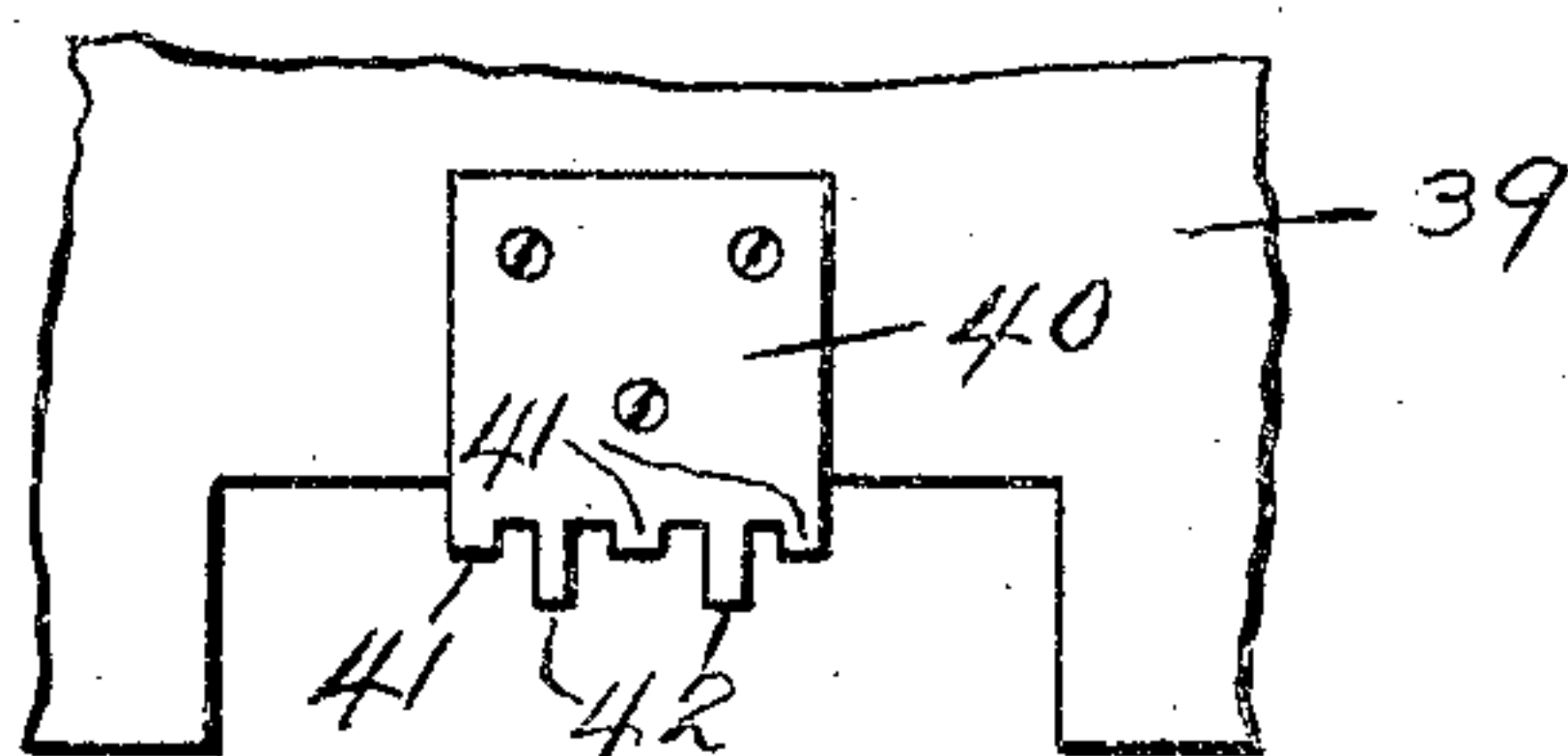


Fig. 5.

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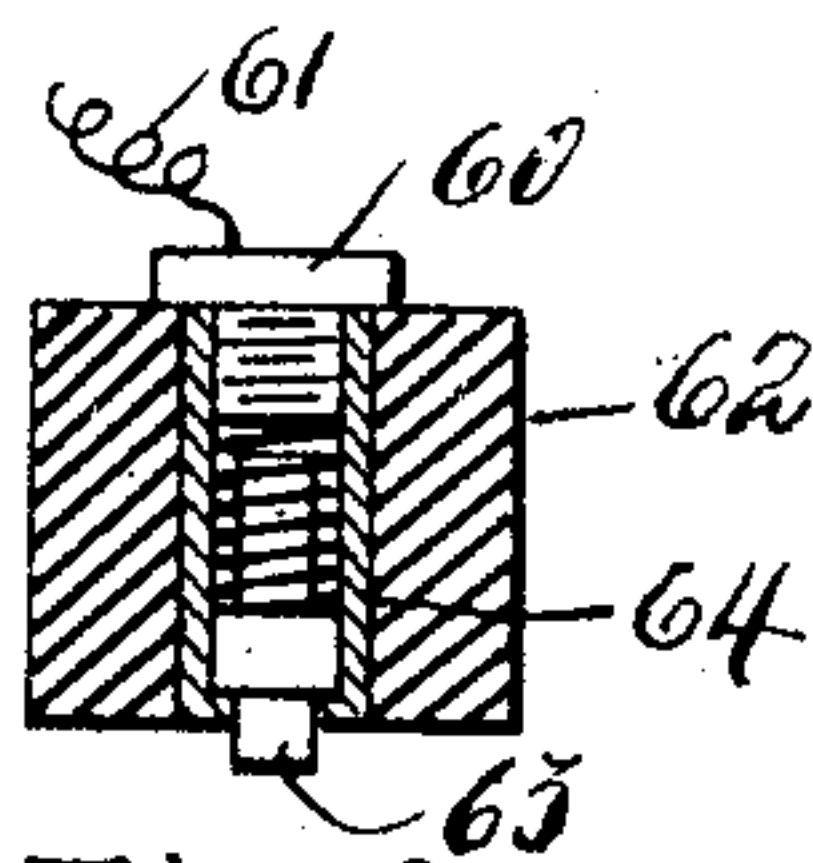
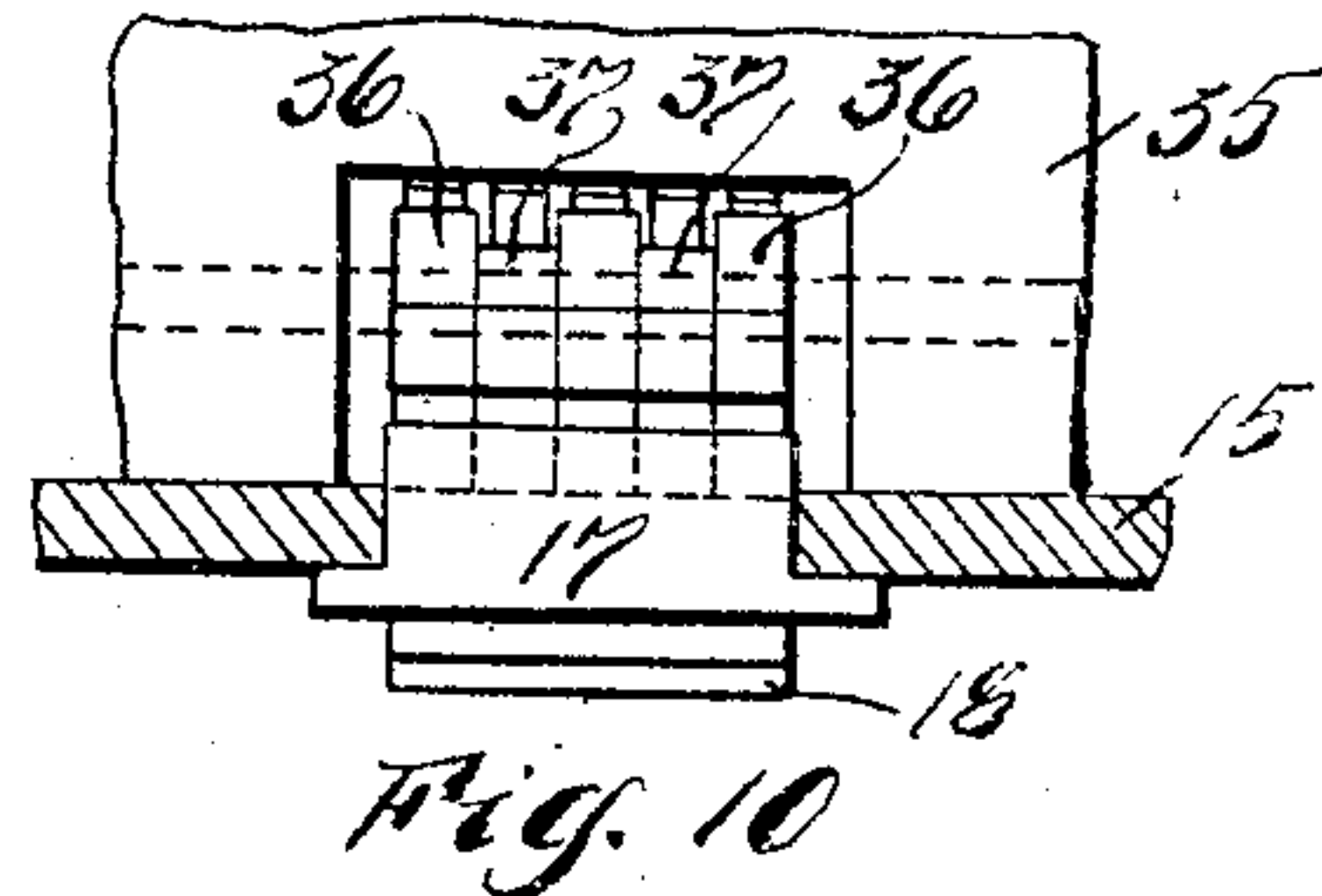
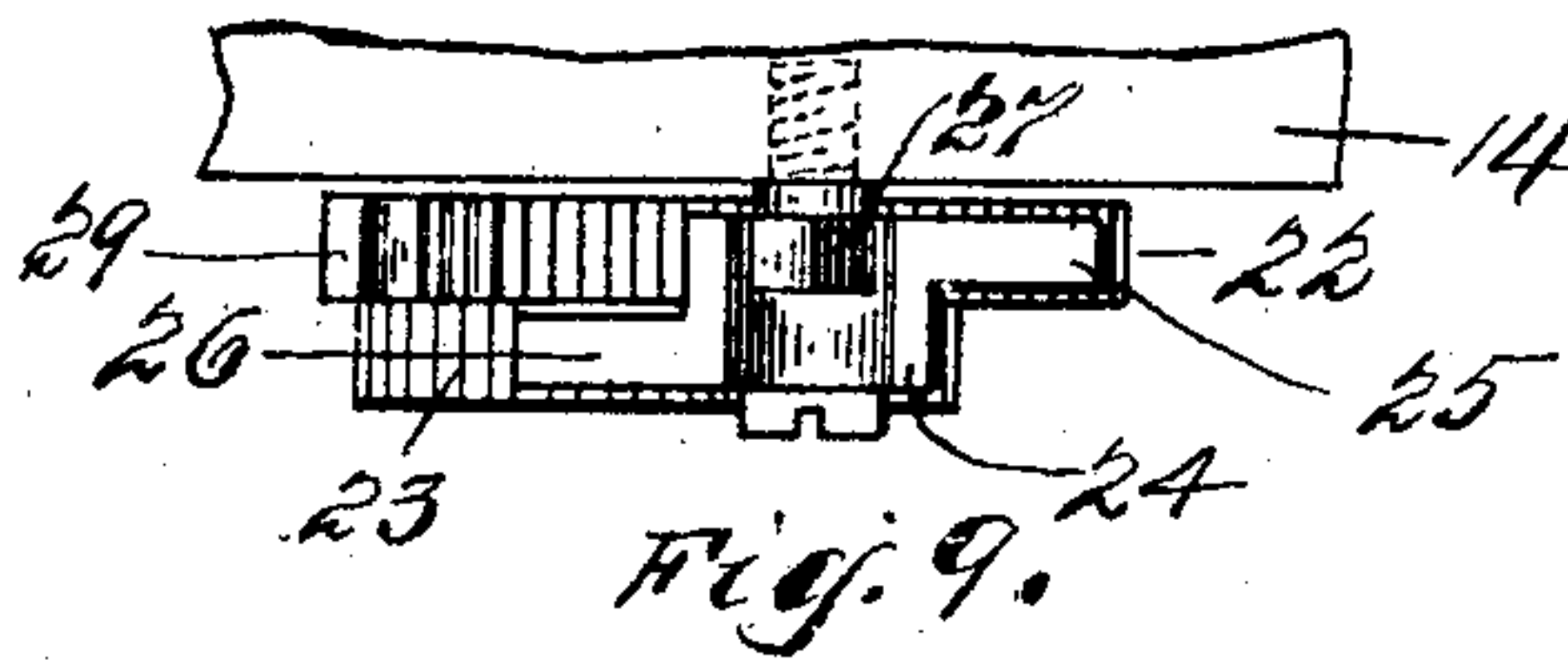
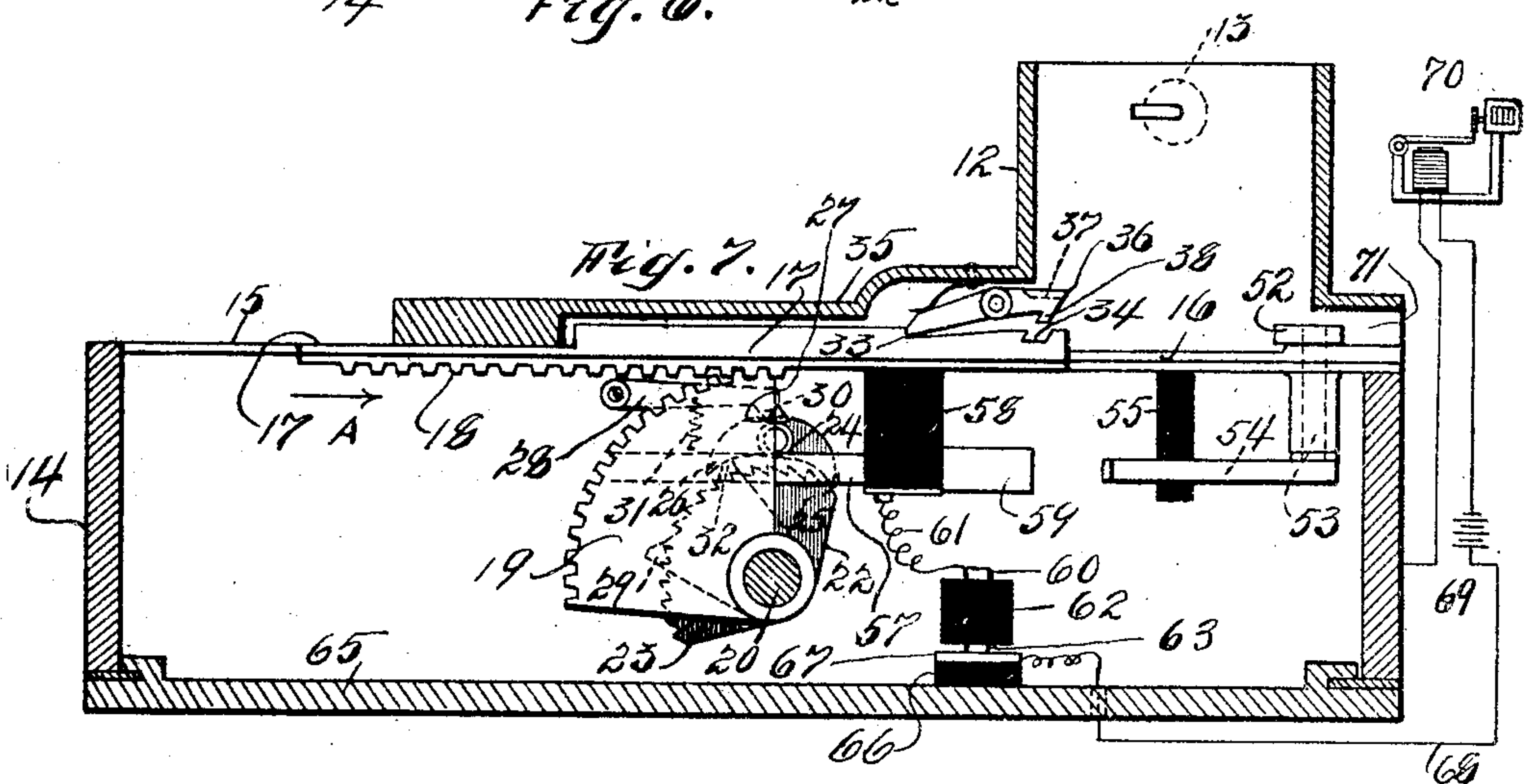
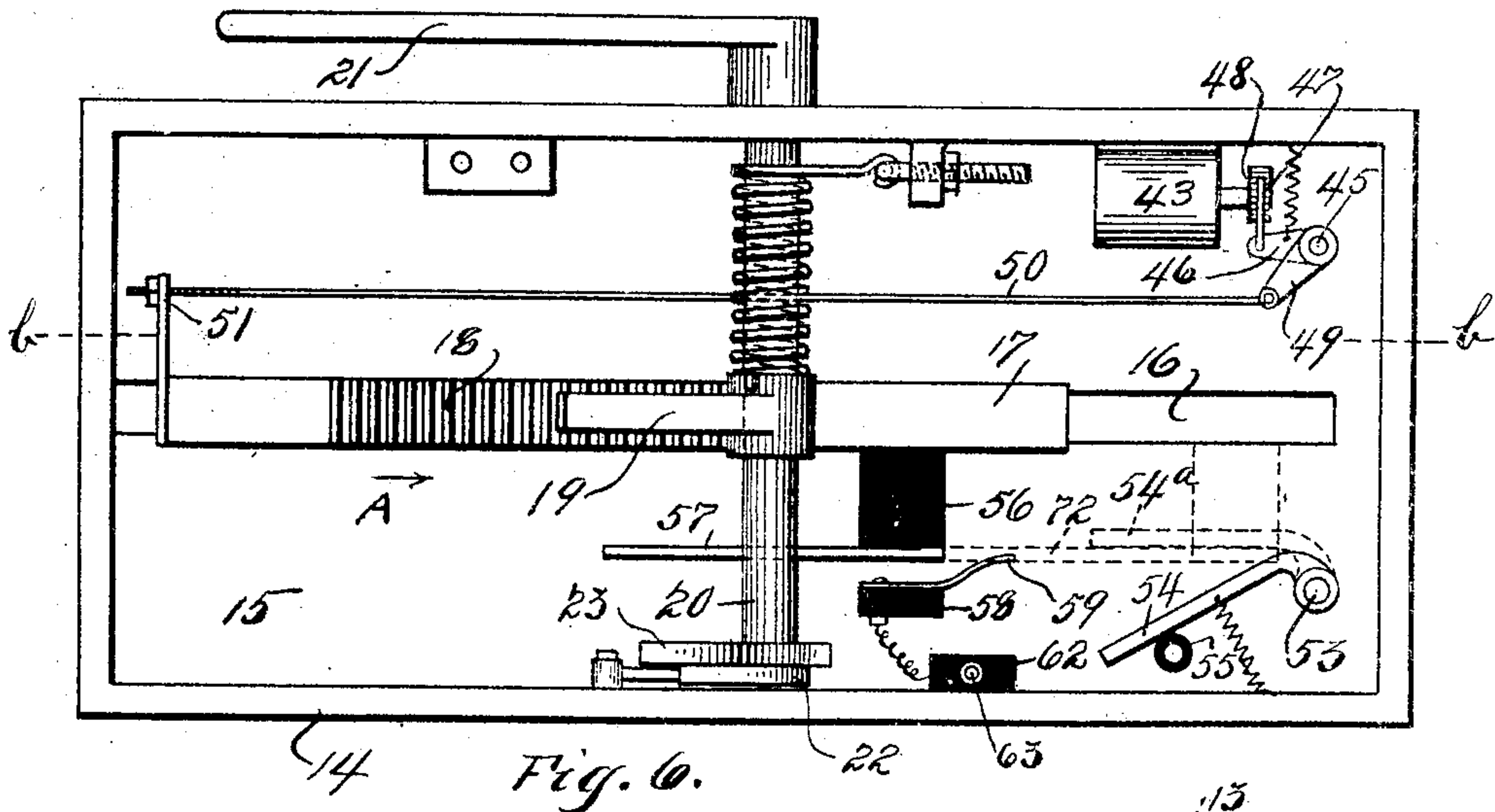
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3 SHEETS-SHEET 2.



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3 SHEETS—SHEET 3.

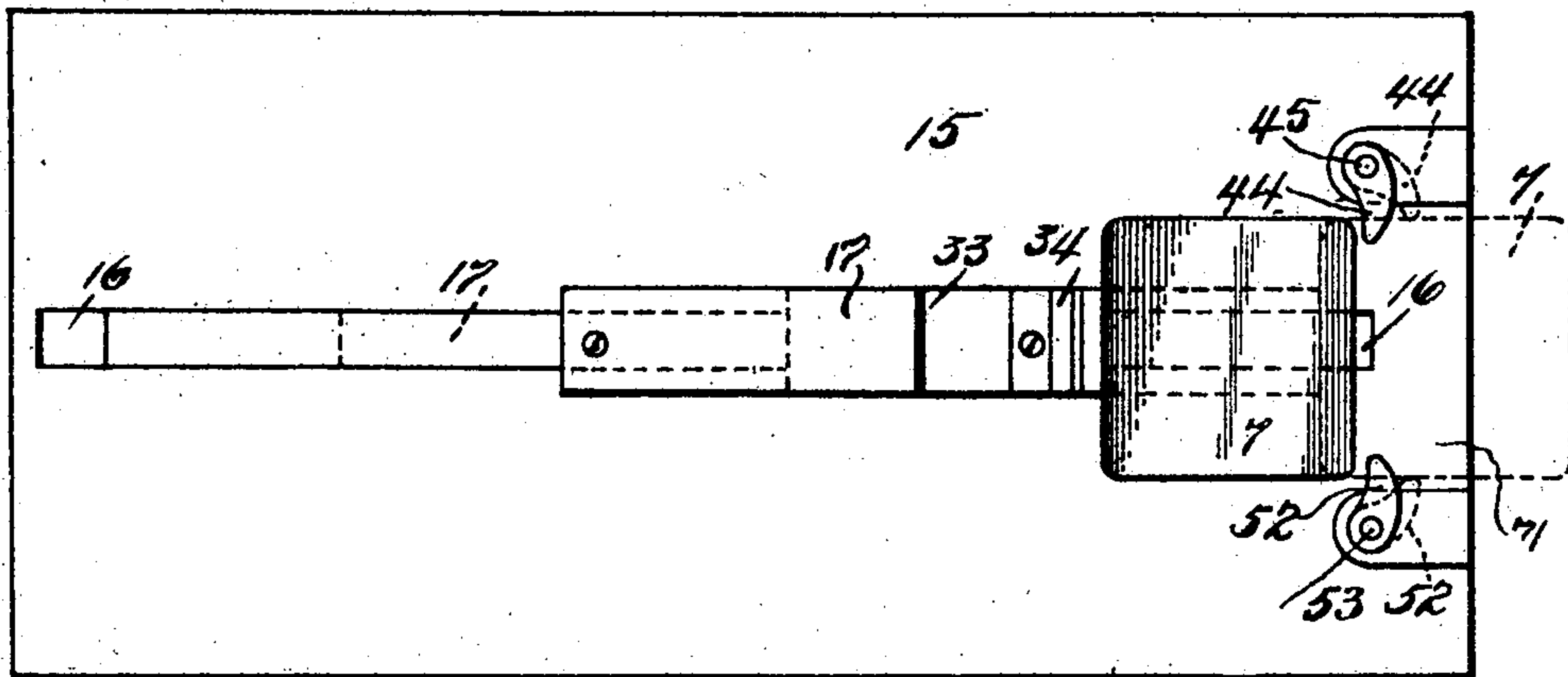


Fig. 8.

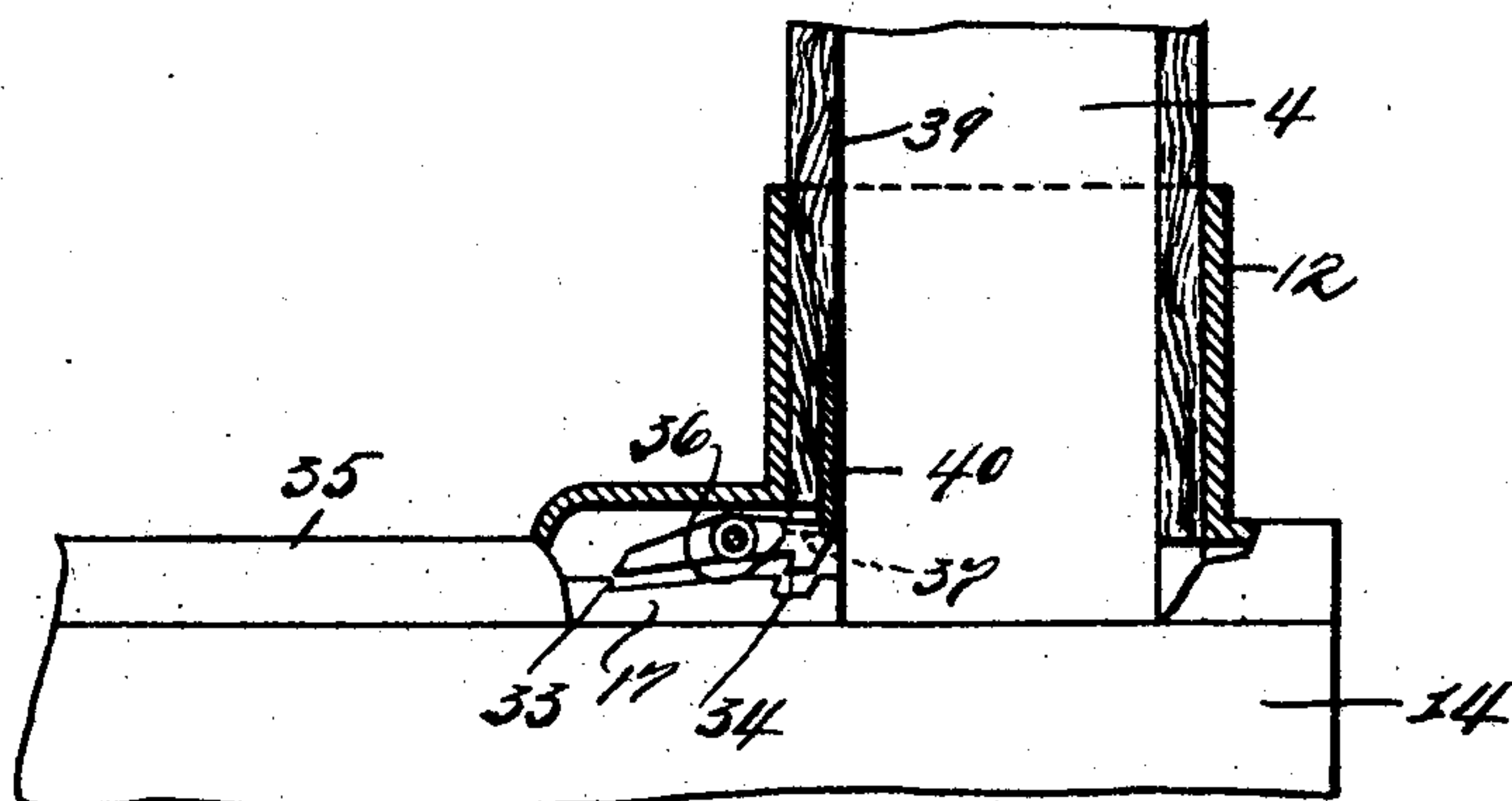


Fig. 11.

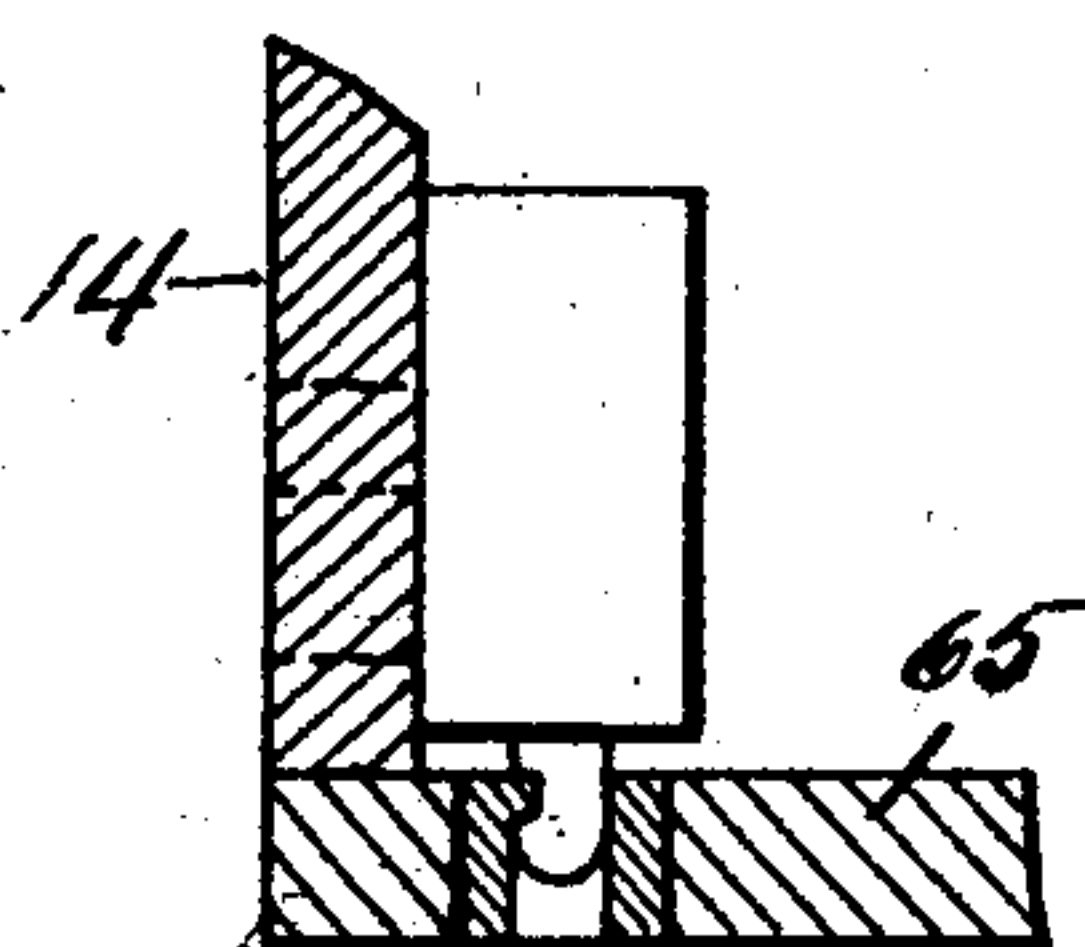


Fig. 12.

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# UNITED STATES PATENT OFFICE.

ISIDOR FLUEGELMAN, OF NEW YORK, N. Y.

## TICKET EJECTING AND REGISTERING DEVICE.

No. 890,632.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed August 16, 1907. Serial No. 388,819.

*To all whom it may concern:*

Be it known that I, ISIDOR FLUEGELMAN, a citizen of the United States, residing at New York city, Manhattan borough, county and State of New York, have invented certain new and useful Improvements in Ticket Ejecting and Registering Devices, of which the following is a clear, full, and exact description.

10 This invention relates to ticket or check ejecting devices, particularly adapted for checkogram machines for theater and other purposes, the object of the invention being to provide a ticket or check ejecting device, 15 in combination with a registering means, that cannot operate for the purpose of ejecting checks without the cooperation of a check, the said check to be automatically placed in position relative to the ejecting 20 device.

Another object of the invention is to provide a register operating means adapted to be actuated by a check when said check is ejected by the ejecting device, the object of 25 this latter provision being to prevent the registering device from being operated unless a check has been ejected, thereby preventing a false registration. Without the above mentioned provision of a register actuating device, operated by a check, the 30 ejecting device could be operated and perform all the functions necessary to eject a check without actually producing an equivalent, in the form of a check; that is to say, if 35 the registering device was directly connected to the ejecting device, the register could be operated without the presence or delivery of a check. It is to prevent this false registration that I provide a register operating 40 device normally independent for operation from the ejecting device.

A further object of my invention is to provide a device, adapted for operation by a check, whereby the registering device will 45 operate should a check be surreptitiously taken from the device.

For the purpose of economy of space I prefer to mount above the ejecting device a magazine adapted to hold checks and to automatically drop the checks, one by one, in 50 front of the ejecting device. Other means can be used to deliver the checks to the ejecting device, if desired.

A still further object of my invention is to 55 provide a locking device which is adapted to lock the check ejecting device when it is nec-

essary to remove the check delivering device or magazine from the ejecting device.

By means of the above mentioned arrangement of parts I am able to produce a combined ejecting and registering device which 60 requires for its complete operation the presence of a check.

In practice I place an ejecting device, provided with a check magazine, on each side of 65 the window of the box-office, and when a patron desires a check, the clerk operates the lever of the ejecting device, whereby a check is delivered and the sale thereof registered.

To the foregoing and other ends which will 70 hereinafter appear, my invention comprises the novel features of improvement and combination and arrangement of parts which I will now proceed to describe and finally claim, reference being had to the accompanying 75 drawings, forming part hereof, wherein—

Figure 1 illustrates, diagrammatically, a rear view of a box-office window, with an ejecting machine at each side thereof; Fig. 2 is a detail perspective view of the check- 80 magazine; Fig. 3 is a vertical section of the magazine, the section being taken on a line *a—*a** in Fig. 2, and shows checks therein contained; Fig. 4 is a detail vertical sectional view of a portion of the magazine and the 85 socket of the ejecting device which is adapted to receive and hold the magazine; the lock therefor being also indicated; Fig. 5 is an enlarged detail view of a portion of the wall of the magazine which carries the master-key 90 for operating the tumblers adapted to lock the slide of the ejecting device, the said master-key being also shown; Fig. 6 is a bottom plan view of the ejecting device; Fig. 7 is a longitudinal sectional view of the ejecting 95 device, (the section being taken on a line *b—*b** in Fig. 6) when in position for operation; Fig. 8 is a top plan view of the ejecting device, and shows a check in position for ejection; Fig. 9 is an enlarged detail plan 100 view of the ratchet and pawls adapted to operate to prevent a reverse movement of the ejecting slide when said slide is moved in either direction; Fig. 10 is an enlarged detail front view of the tumblers which lock the 105 ejecting slide against movement when the magazine is separated from the ejecting device; Fig. 11 is a side elevation, partly in section, of a portion of the ejecting device, and shows the lower end of the magazine 110 supported thereby, the master-key being also shown as having actuated the tumblers to



release the ejecting slide; Fig. 12 is an enlarged sectional detail view of a portion of the ejector-casing and bed-plate therefor, and shows the lock for securing the casing and bed-plate together; and Fig. 13 is a sectional detail view of the movable contact adapted to complete the circuit for the electrically controlled registering device.

Like numerals of reference are intended to indicate corresponding parts in the several views.

Referring to the drawings, the numeral 1 indicates the screen or grating which is usually placed in the front of a theater box-office or the like, the opening 2 being for the purpose of passing money and tickets there-through. At each side of the opening 2, I place a check-ejecting device 3 in order that two operators can work at the same time. The ejecting devices 3 are adapted to removably retain magazines 4 in which the checks which are to be ejected are kept. The magazine 4 is provided with a slidable front 5, which is secured by means of a lock 6 (Fig. 2). The checks are put into the magazine when the front 5 is raised. Fig. 3 shows the checks 7 within the magazine, a weight 8 being placed on top of the pile of checks to force them downwardly. Said weight 8 carries pawls 9 which are adapted to work in connection with racks 10, one only being raised, whereby the bolt 11 could be raised and allow the checks 8 to fall from the magazine and whereby the said checks could be used without being registered. The ejecting device is provided with a socket 12 in which the magazine 4 fits (see Fig. 4). A key 13, normally held in one wall of the socket 12 against removal, serves to lock the magazine in place and also to raise the bolt 11, whereby the checks 7 are free to fall. By this means the checks 8 are secured against removal until the magazine is in position.

A detailed description of the ejecting mechanism will now be given: Referring to Figs. 6 and 7, the numeral 14 indicates the body portion of the ejector-casing, and 15 the top of said casing 14. In the top 15 I provide a guideway 16 in which a reciprocating slide 17 is adapted to work. The said slide carries a rack 18, with which a segmental gear 19 is adapted to mesh and operate the said rack. The segmental gear 19 is secured to and operated by a rotatable shaft 20, which in turn is rotated by a handle 21 convenient to the hand of the operator.

To the shaft 20 I secure two ratchets 22 and 23, the teeth of which are oppositely disposed, and adjacent to said ratchets I pivotally mount a double pawl 24, the end 25 of which engages the inside ratchet 22 and the end 26 of which engages the ratchet 23. The pawl 24 carries an angular tooth 27 (see Fig. 9) which coöperates with a spring opposed

latch 28. The operation of said ratchets 22, 23, pawl 24 and latch 28 will now be described. As the slide 18 is moved forwardly in the direction of the arrow A (Figs. 6 and 7) by the segmental gear 19, the said ratchets will also rotate in the same direction. As the ratchet 22 is cut, as shown in Fig. 7, the end or nose 25 of the pawl 24 will, in consequence of its being in contact with the said ratchet 22 jump the teeth, and will continue to jump the teeth as long as the forward movement is kept up. Should the movement of the slide tend to reverse, before the forward movement has been completed, the end 25 of the pawl 24 would catch in one of the teeth and prevent the reversal of said slide. At the end of the said forward movement of the slide 17, a cam 29, carried by the ratchet 22, will impinge upon the end 25 of the ratchet 24 and knock it upwardly and away from the ratchet 22; whereby the tooth 27 will force the latch 28 upwardly, and pass under the nose 30 thereof, whereby the spring 31 will pull the latch 28 downwardly so that the nose 30 thereof will be on the opposite side, of the tooth 27, previously occupied by the said nose 30. This action will cause the nose 26 of the pawl 23 to rest upon the ratchet 23. When the slide 17 comes backwardly, the nose 26 of the pawl 24 will jump the teeth of the ratchet 23. Should the backward movement be checked, or tend to go forward, the said nose 25 will engage one of the teeth of the said ratchet 23. By the above described device I am able to prevent the slide from being returned to its starting point until a movement in either direction has been completed. The ratchet 23 is also provided with a cam 32 which will knock the nose 26 upwardly when the backward stroke of the slide has been completed, whereby the pawl is thrown, in the manner described, against the ratchet 22. The slide is then in condition to be again moved forward.

As shown in Fig. 7 the magazine is absent and when in this condition I prefer to lock the slide 17 of the ejecting device against movement, which I do in the following manner: As can be seen in Figs. 7 and 8 the slide 17 is provided with transverse grooves 33 and 34, and the cover 35, which carries the socket 12, has pivotally attached thereto a plurality of tumblers 36 and 37 (see Fig. 10), the top of the outer ends of the tumblers 37 being below the plane of the top of the outer ends of the adjacent tumblers 36, while the inner ends of all the said tumblers are in alignment and adapted to engage the groove 33 when the slide 17 is in its rearward position. The outer end of each of said tumblers is provided with a catch 38 which is adapted to engage the groove 34 should any of the tumblers be shoved downwardly from above by a wire or the like. The same result would



take place if two or more tumblers were pushed downwardly. In other words the tumblers 36 and 37 are so designed as to require a master-key for the simultaneous operation of the tumblers in order to release them for the purpose of moving the slide 17.

On the rear wall 39 of the magazine 4 (see Fig. 5) I place a master-key 40, the lower end of which is cut to form tongues 41 and 42 which are adapted to strike the outer ends of the tumblers 36 and 37 respectively when the magazine 4 is inserted into the socket 12 of the ejecting device. The object of the above described device is to prevent the unlocking of the slide 17 by any means other than a master-key, and as the master-key is carried by the magazine it is obvious that the slide 17 cannot be unlocked until the magazine has been inserted into the socket 12. When the master key 40 strikes the tumblers and moves them downwardly, the movement of said tumblers will just be enough to free the inner ends thereof from the groove 33 but not enough to cause the catches 38 to engage the grooves 34.

I will now describe the recording features of the ejecting device: As it is essential to the complete operation of my improved ejecting device to register the number of checks delivered, the said register being visible to the operator, I mount upon one wall of the casing 14 a counting device 43, such for instance as a Veeder cyclometer, which is mechanically operated by the passage of a check in the following manner: Referring now to Figs. 6 and 8, the numeral 44 indicates a finger carried by a rotatable spindle 45. Under the top plate 15 of the casing 14, I mount an arm 46 upon the spindle 45 and connect the said arm, by means of a pawl 47, to the ratchet 48 of the cyclometer 43. The said spindle 45 also carries an arm 49, which by means of a rod 50, is connected to the back end of the slide 17 as at 51. The object of connecting the arm 49 with the back end of the slide 17 is to provide a means independent of the operating lever 21, whereby the slide 17 will be caused to move forward and operate the registers should a check be surreptitiously removed by means of a wire or the like. It is obvious that in that event the fingers 49 and 54 will be caused to rotate should a check be pulled outwardly. The movement of the finger 49 will, by means of the rod 50, cause the slide 17 to move forward, whereby an electrical circuit will be completed for the electrical register, and the register 43 will also be operated by the movement of the said finger 49. As shown by the said Fig. 8, the finger 44 is in its normal position.

Before describing the operation of registering on the cyclometer, I will describe a cooperating electrically operated registering device which is preferably situated in the

office of the manager of the theater. For the purpose of operating the electrical registering device I place a second finger 52 (Fig. 8) on the opposite side of the top 15 as shown, and mount the said finger 52 on a rotatable spindle 53. At the lower end of the spindle 53 I mount a circuit closing arm 54, which is normally held against an insulated stop 55. Both of said fingers 44 and 52 are spring opposed, as shown in Fig. 6. The casing 14 is connected to one side of a source of electrical energy, as shown; consequently, the arm 54 is grounded.

The slide 17 carries a block of insulating material 56 upon which I mount a metallic track 57 adapted to contact the arm 54, and upon the under side of the top 15 of the casing 14 I mount another block of insulating material 58, which carries metal brushes 59, said brushes being electrically connected to a contact 60 by a wire 61, (see Fig. 7) the contact 60 being carried by a block of insulating material 62, and is in turn in circuit with a spring opposed movable contact 63 by means of the bushing 64, (see Fig. 13). On the bottom plate 65 of the casing 14 I mount a block of insulating material 66, upon which a contact 67 is placed, said contact 67 being connected to the side 68 of the source of electrical energy 69. The magnetically controlled registering device 70 is included in the electrical circuit.

I will now describe the operation of ejecting a check and also the manner of registering the ejection thereof: When the magazine 4 is placed in the socket 12 and the tumblers 36 and 37 operated to release the slide 17 (as shown in Fig. 11), the checks 7 will be free to drop one by one in front of said slide 17 and back of the fingers 44 and 52 (as shown in Fig. 8) due to the raising of the bolt 11, as has been described. I will now suppose a check is desired. As a check 7 has dropped, in manner above described, in front of the slide 17 (as shown in Fig. 7) and is in condition to be ejected, I push the handle 21 toward the front end of the device, or in the direction of the arrow A in Fig. 7. As the slide 17 comes forward, the check 7 will be pushed outwardly toward the opening 71 (see Fig. 7), the said opening being indicated by the numerals 71, in Fig. 8, for the sake of clearness. As the check 7 travels forwardly it will strike the fingers 44 and 52, and a continued forward movement of the check will finally cause said fingers to assume the position shown by dotted lines in Fig. 8. When the said fingers have assumed the said dotted line position, the ratchet 48, controlled by the finger 44, will have been pushed to engage another tooth of the ratchet on the cyclometer 43, and the circuit closing arm 54 will have been pushed to the dotted line position 54<sup>a</sup> (see Fig. 6). The length of the arm 54 is proportioned so that it will have



assumed said dotted line position before the track 57 comes ahead sufficiently to get behind the arm 54 (see dotted lines 72, Fig. 6). When the arm 54 and track 57 are in contact; as shown by the dotted lines, the said track will also be in contact with the contact 59, and hence an electrical circuit is established for the register 70, which will register the delivery of one check. A detailed description of said electrical circuit has hereinbefore been given. When the slide 17 has been pushed to its extreme forward position, the check 7 will drop out and the arm 44 will be pulled back to its normal position by its spring. This will actuate the cyclometer 48 and the ejection of the check 7 will be registered. Two registrations of the ejection of a check are, by the above described means, registered. When the slide has been brought to its extreme rear, or normal, position, a new check 7 will drop into position. This above described action can take place until all the checks have been ejected from the magazine.

It will be seen, in Fig. 7, that the case 14 and bottom plate 65 are separably connected, by a lock. In order to form an automatic contact, which will be adapted to place the source of energy 69 in circuit with the contact 59, I provide the plate 67 and spring contact 63. The said plate contact 67 and the spring contact 63 will come together when the case 14 and bottom plate 65 are fitted together. If the wire 68 and contact 59 were directly connected, the case 14 and the bottom plate 65 could not be separated to any great degree.

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

1. In combination with a movable ejector, a magazine detachable therefrom, a locking device adapted to lock said ejector against movement, and a controlling device, having tongues of different lengths carried by said magazine and adapted to actuate said locking device, when said magazine is in position.

2. In combination with a magazine adapted to retain checks, a reciprocating ejector, a rotatable shaft adjacent thereto, means carried by said shaft adapted to operate said ejector, a plurality of oppositely disposed ratchets carried by said shaft, pawls adapted to engage said ratchets one at a time, means adapted to automatically throw said pawls to engage their adjacent ratchets, when said ejector has been moved a predetermined distance in either direction, and a locking device adapted to lock said ejector, said locking device comprising a plurality of tumblers.

3. In combination with a magazine adapted to retain checks, a reciprocating ejector, a rotatable shaft adjacent thereto, means carried by said shaft adapted to operate said

ejector, a plurality of oppositely disposed ratchets carried by said shaft, pawls adapted to engage said ratchets one at a time, means adapted to automatically throw said pawls to engage their adjacent ratchets, when said ejector has been moved a predetermined distance in either direction, said means consisting of cams carried by said ratchets, and a locking device adapted to lock said ejector, said locking device comprising a plurality of tumblers.

4. In combination with a magazine adapted to retain checks, an ejector comprising a reciprocating slide provided with a rack, a rotatable shaft, a segmental gear carried by said shaft adapted to mesh with said rack, a plurality of oppositely disposed ratchets carried by said shaft, pawls adapted to engage said ratchets one at a time, means adapted to automatically throw said pawls to engage their adjacent ratchets when said ejector has been moved a predetermined distance in either direction, and a locking device adapted to lock said ejector, said locking device comprising a plurality of tumblers.

5. In combination with a magazine adapted to retain checks, an ejector comprising a reciprocating slide provided with a rack, a rotatable shaft, a segmental gear carried by said shaft adapted to mesh with said rack, a plurality of locking tumblers adapted to lock said slide against movement when said magazine and said ejector are separated, and a master-key carried by said magazine adapted to actuate said tumblers, to free said slide, when said magazine is in position.

6. In combination with a magazine adapted to retain checks, a movable ejector, a lever for manually operating said ejector to deliver checks, a registering device, and means independent of said lever, and actuated by said checks, adapted to move said ejector and operate said registering device, should said checks be surreptitiously removed.

7. In combination with a magazine adapted to retain checks, a plurality of movable fingers adjacent to the delivery point of said magazine, an ejector separated from said fingers a distance approximately equal to the length of said checks, a mechanical register operated by one of said fingers, an electrical register controlled by the other of said fingers, and means adapted to actuate said ejector at will, whereby the said fingers are caused to move by the forward movement of said checks.

8. The combination of an ejecting device, a mechanical registering device, an electrical registering device, a plurality of fingers normally disconnected for operation from said ejecting device, a check automatically positioned between said ejecting device and said fingers, one of said fingers being adapted to actuate said mechanical registering device,



and the other of said fingers being adapted to complete the circuit for said electrical registering device.

9. The combination of a magazine, an ejecting device removable therefrom, means adapted to automatically lock said ejecting device against movement when said magazine is removed, said means comprising a plurality of tumblers adapted for simultaneous movement.

10. The combination of a magazine, an ejecting device removable therefrom, means adapted to automatically lock said ejecting device against movement when said magazine is removed, said ejecting device being provided with a plurality of notches, locking means adapted to engage one of said notches when the magazine is removed, said means being also adapted to engage the other of said notches should said locking means be forced out of engagement with the notch first named, and means carried by the magazine adapted to actuate said locking means, to free said ejecting device, when said magazine is placed in position.

11. The combination of a magazine, an ejecting device removable therefrom and provided with a registering device, and means adapted to prevent the operation of said registering device when said magazine and said ejecting device are separated, said means comprising a connecting element between said ejecting device and said registering device.

12. In combination with a magazine adapted to retain checks, an ejector for said checks, and a locking device for said ejector,

said locking device comprising a plurality of cooperating locking elements adapted for simultaneous operation.

13. In combination with a magazine adapted to retain checks, an ejector for said checks, a locking device for said ejector, said locking device comprising a plurality of cooperating locking elements adapted for simultaneous operation, and means adapted to actuate said locking elements.

14. In combination with a magazine adapted to retain checks, an ejector for said checks, a locking device for said ejector, said locking device comprising a plurality of cooperating locking elements, adapted for simultaneous operation, and means carried by the magazine adapted to actuate said locking elements.

15. In combination with a device adapted to eject checks, a locking device adapted, at each end thereof, to lock said ejecting device against movement, and means adapted to cause said locking device to disengage said ejecting device.

16. In combination with a device adapted to eject checks, a plurality of pivotally mounted tumblers adapted to engage and lock said ejecting device, and means adapted to keep said tumblers out of engagement with said ejecting device.

Signed at New York city this 12th day of August 1907.

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