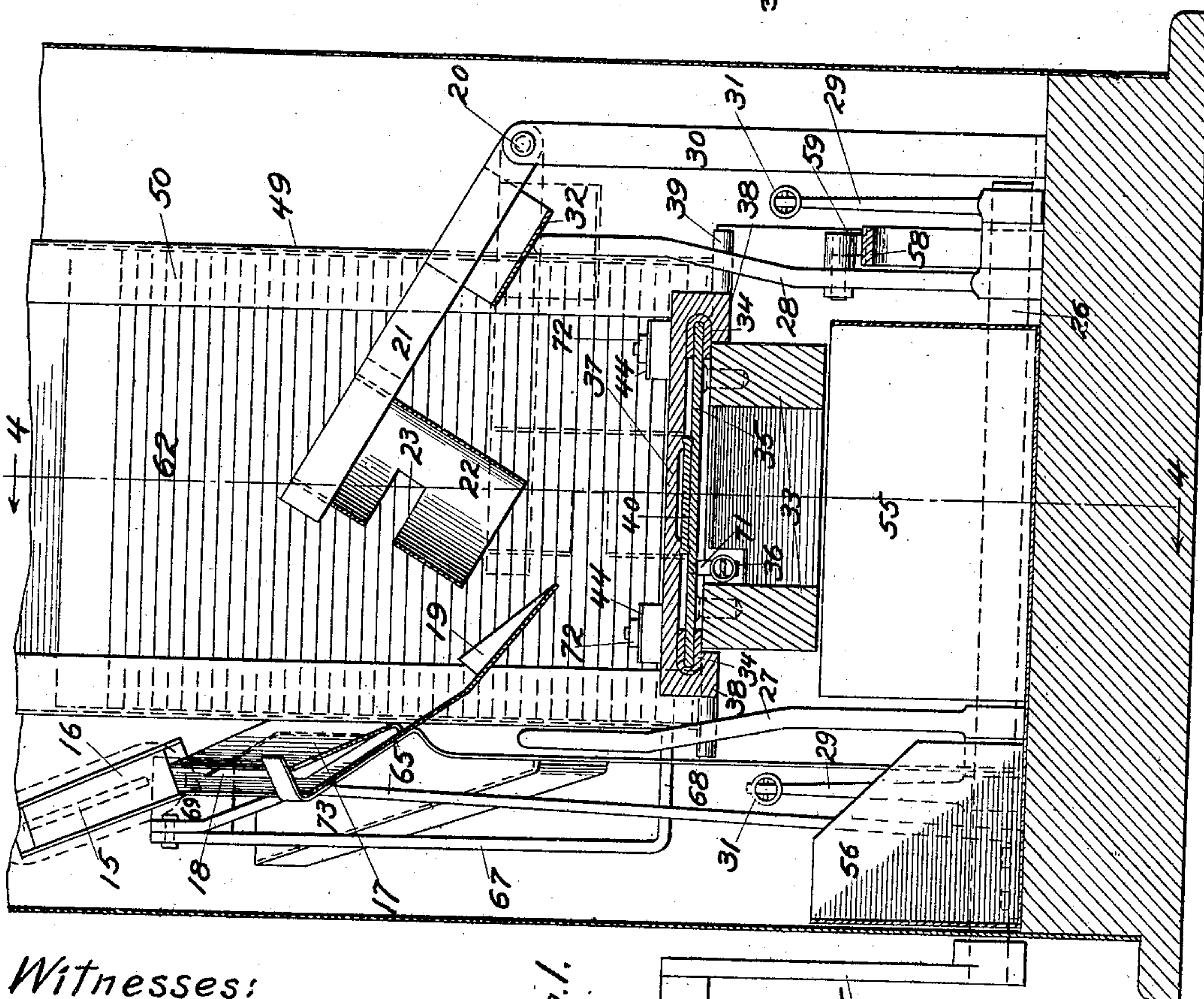
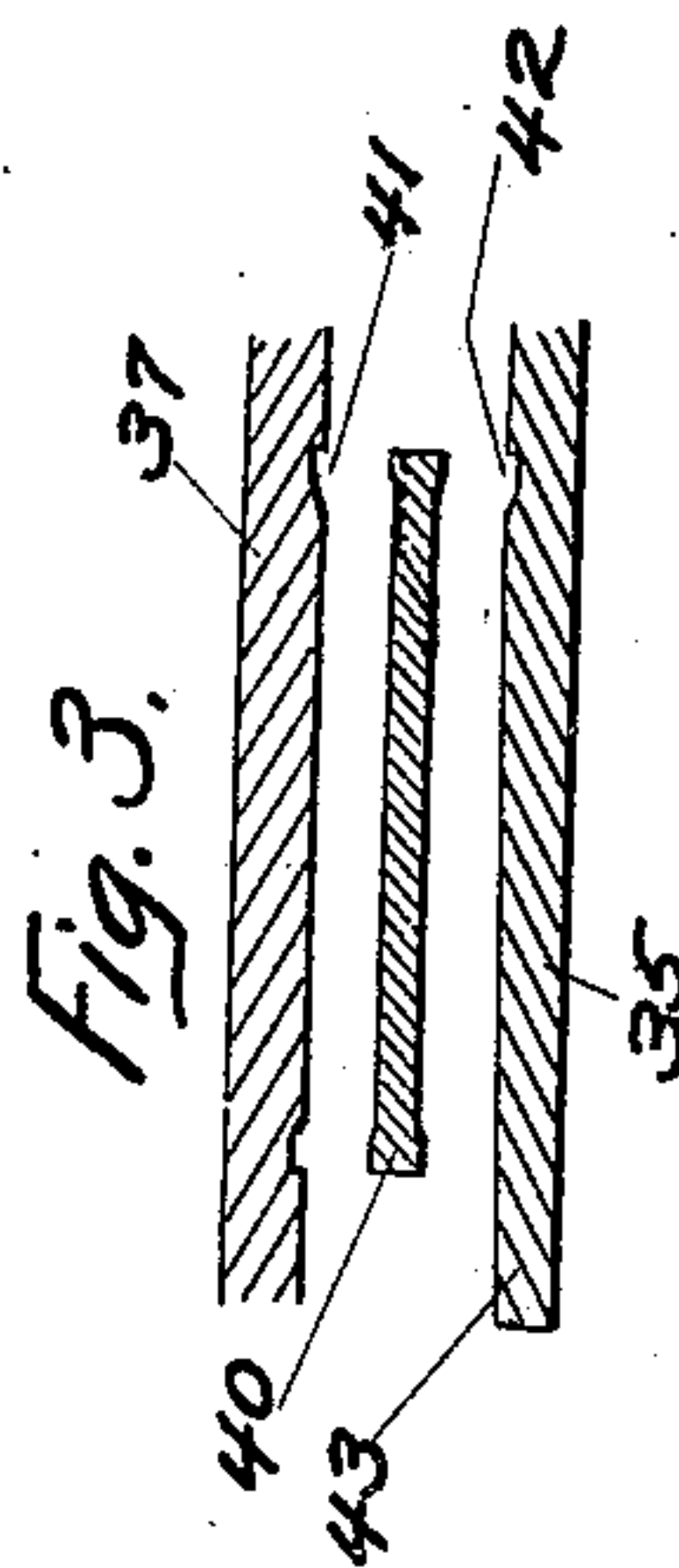
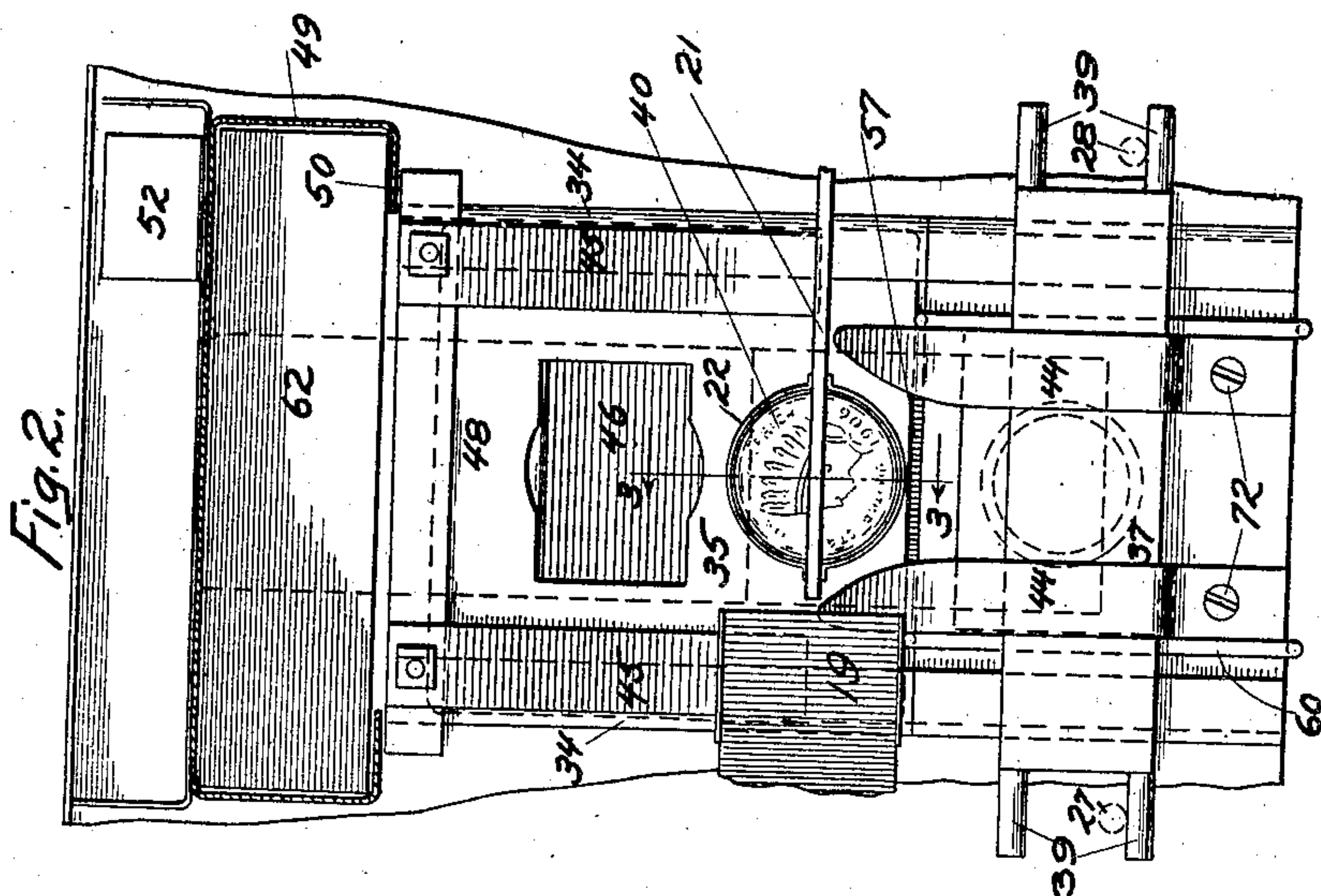


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COIN CONTROLLED VENDING MACHINE.
APPLICATION FILED JUNE 6, 1908.

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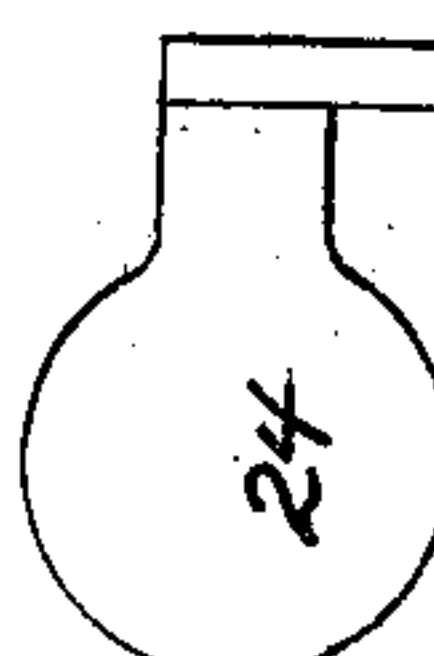
2 SHEETS—SHEET 1.



Witnesses:

Anniad. Savie
Lillian A. Kibby

Fig. 1.



Inventor:
Louis J. Dissar
By

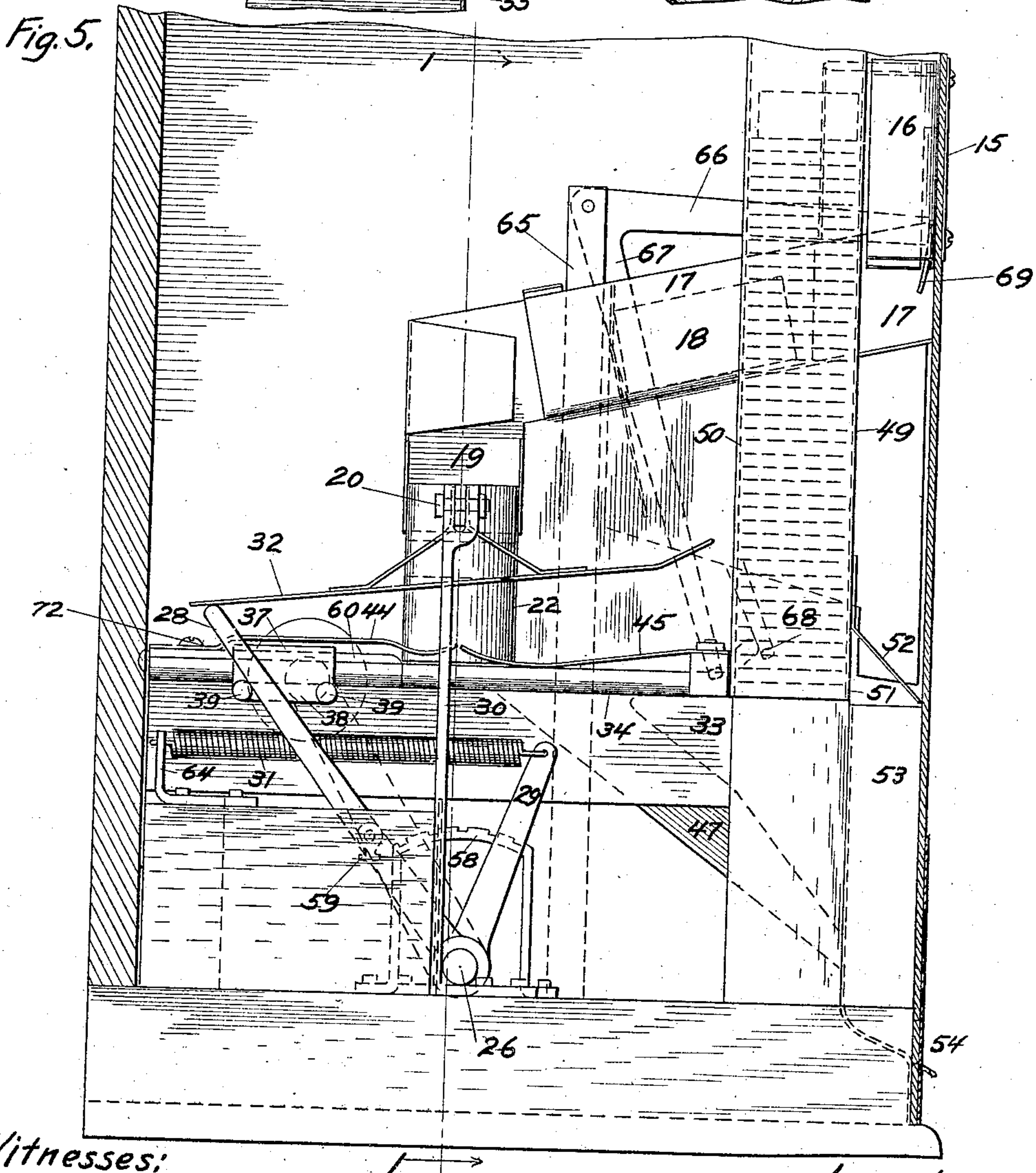
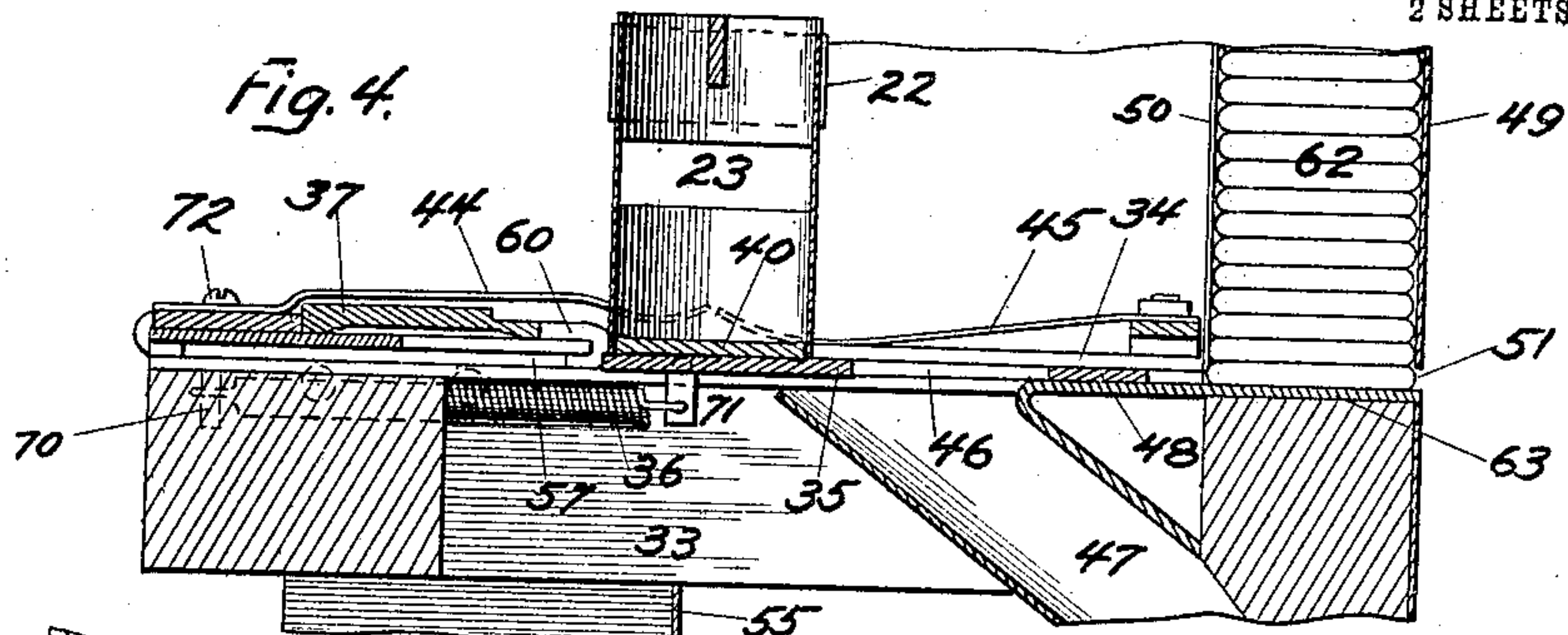
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2 SHEETS—SHEET 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

LOUIS J. DISSER, OF CHICAGO, ILLINOIS.

COIN-CONTROLLED VENDING-MACHINE.

No. 917,266.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed June 6, 1908. Serial No. 437,135.

To all whom it may concern:

Be it known that I, LOUIS J. DISSER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Coin-Controlled Vending-Machines, of which the following is a specification.

The object of my invention is to provide a new and improved vending machine for dispensing packages of gum or other articles, such machine being adapted to be controlled in its action by the insertion of a coin in the proper place.

Another object of my invention is to provide a coin controlled vending machine which shall operate only when a coin having a thickened flange, such as are commonly in use, is introduced.

Another object is to provide a displaceable guide for the coin that shall position it exactly with respect to the elements with which it is intended to cooperate.

Still another object is to provide means for closing the coin slot when the machine is being operated and is therefore not adapted to receive a coin.

All these and various other objects of my invention will be made apparent in the following specification and claims, taken in connection with the accompanying drawings, in which—

Figure 1 is a transverse vertical section looking forward as indicated by the arrows on the line 1, 1 in Fig. 5. Fig. 2 is a top plan view. Fig. 3 is a section on an enlarged scale on the line 3, 3 of Fig. 2, looking in the direction of the arrow, and showing the coin and the coin engaging members spaced slightly apart. Fig. 4 is a vertical median section, taken on the line 4, 4 in Fig. 1. Fig. 5 is a side elevation, the casing being removed.

The slot in which the coin is introduced is indicated by the reference numeral 15. Back of this is a hood 16 which opens downwardly into an inclined trough 17 having a hole 18 on one side thereof which is adapted to drop out coins smaller than those by which the machine is adapted to be actuated. A chute 73 below the hole 18 catches any such undersized coin and guides it to the front of the casing, delivering it at that point. From the end of the trough 18 a transverse chute 19 leads to a point over the center of the machine, as will readily be understood on com-

paring the different sheets of drawings. A standard 30 rises from one side of the machine and has a horizontally extending arm 21 pivoted to its upper end 20. This arm carries a vertical sleeve 22 at its extremity which has a side opening 23. This opening 23 normally stands in position to receive the coin from the end of the chute 19, this normal position being indicated by dotted lines in Fig. 1 and by full lines in Figs. 2, 4 and 5. A transverse shaft 26 is mounted to rotate in the bottom of the casing and at one end it projects through the side wall of the casing carrying a crank 25 and an operating handle 24. From this shaft 26 two similar parallel arms 27 and 28 project upwardly. There are also two similar shorter arms 29 to which coil springs 31 are attached, the opposite ends of said springs being attached to the fixed brackets 64.

It will be observed on looking at Fig. 5 that the tendency of the springs 31 is to rotate the shaft 26 in a counter-clockwise position, that is, to throw the arms 27, 28 and 29 rearwardly. Rotation in a clockwise direction may be effected by pulling the handle 24 forward. The pivoted arm 21, previously referred to, carries a cam surface 32, the relative position of which may be readily understood from Figs. 1 and 5. The upper extremity of the arm 28 that projects from the shaft 26 contacts with this cam surface 32. It will readily be seen that as the handle 24 is drawn forward the arm 28 will raise the cam surface 32 and raise the coin positioning tube 22, but that as the arm 28 reaches the forward limit of its movement the parts will drop back again.

The parallel sills 33 extend from the front to the rear of the machine and support the parallel fixed guides 34, seen in cross section in Fig. 1 and in side elevation in Fig. 5. The slide 35 is mounted to reciprocate forwardly or rearwardly within the guides 34. A stud 71 depends from the slide 35 and a coil spring 36 connects this stud to the fixed stud 70, the tendency being to pull the slide 35 rearwardly. The guides 34 also support another sliding member 37 which has inwardly curved ledges 38 to engage them. Projecting horizontally and outwardly from these ledges on either side are the studs 39 in pairs. The arms 27 and 28 extend between these studs 39 and thus an oscillation of the arms reciprocates the slide 37.

The reference numeral 40 indicates the coin in position. The under surface of the slide 37 has a circular groove 41 adapted to fit over the thickened flange of the coin. The upper surface of the slide 35 has a similar groove 42, but the upper rear surface of the slide 35 is beveled off gently, as indicated by the reference numeral 43, for a purpose which will be stated later.

Leaf-springs 44 are fixed to the sills 33 at the rear of the machine by means of the screws 72 and these press down on the slide 37 at a certain stage of its movement, as will be understood from an inspection of Fig. 4. Other leaf-springs 45 project rearwardly and their purpose is to continue the downward pressure on the slide after it passes beyond the extremities of the springs 44. The slide 35 has a hole 46 in front of the coin seat 42 and below this hole is a chute 47 which leads to the outside of the machine at the front. The magazine for the gum 62 is represented by the reference numeral 49 and comprises a vertical containing shell with inward turned lips 50 on the rear side. At its front just above the bottom 63 there is a slot 51 through which a single package of gum can be pushed under the hood 52 into the chute 53. All the chutes leading to the front of the machine, namely, 73, 47 and 53, lead to an opening 54. The front edge of the slide 35 is indicated by the reference numeral 48 and it will be seen from Figs. 2 and 4 that this is adapted to push a package of gum 62 through the opening 51. The transverse partition 55—56 extends across below the coin seat 42, as will be seen in Fig. 4. Back of the slide 35 is an open space 57.

A notched quadrant 58 stands over the actuating shaft 26 and the radial arm 28 carries a reversible dog 59 adapted to engage the notches in the quadrant. Extending for a limited distance at the rear of the machine the runners 60 are attached above the guides 34, their purpose being to elevate the slide 37 at this part of its travel.

Below the coin chute 17 is a vertical standard 65 to the top of which is pivoted the bent arm lever 66—67. The lower end of the arm 67 is bent across, as indicated by the reference numeral 68, and this part is adapted to be engaged by the upper extremity of the oscillating arm 28 when it reaches the forward limit of its throw. The extremity of the other arm 66 carries a diaphragm 69 which is adapted to be moved up in front of the coin slot 15.

Figs. 2, 4 and 5 show the parts in the positions which they would normally occupy. A normal coin being introduced into the coin slot 15, it will pass along the members 16, 17 and 19 and be delivered into the positioning tube 22 through the slot 23. At this time the said tube will have the position shown by the dotted lines in Fig. 1. Thus,

the coin will fit exactly in place, and if it has the proper thickened flange, the edges thereof will lie in the circular channel 42 in the slide 35. At this time the upper slide 37 will lie at the rear as seen clearly in Fig. 4. The handle 24 now being pulled forward, the arms 27 and 28, by their movement, will carry the slide 37 forward and also raise the positioning tube 22 by means of the cam 32. During the first part of its travel, the slide 37 will ride upon the tracks 60, thus being elevated somewhat above the coin 40, but presently the slide 37 will pass over the forward ends of the tracks 60 and under the influence of the leaf-springs 44 it will be pressed down upon the coin. Thereupon, the circular channel 41 in the under surface of the slide 37 will engage the thickened flange of the coin, and thus the coin will act as a locking member to lock the two slides 35 and 37 together. In this state of affairs the continued forward movement of the slide 37 will carry the slide 35 along with it. Thus, the forward end 48 of the slide 35 will push against a package of gum and push it out through the hole 51 into the chute 53 on its way to the delivery outlet 54. On releasing the handle 24 the springs 31 will restore the parts to their normal position, the slide 37 carrying the slide 35 back with it until the latter reaches its limiting rearward position, which is as indicated in Fig. 4. This restoration of the slide 35 will be assisted by the spring 36. When the point just described has been reached the coin will be pulled off from the slide 37, this action being facilitated by the gentle incline 43, shown in Fig. 3. Thus, the coin will be scraped back of the slide 35 and will drop through the opening 57 into the space to the rear of the partition 55—56. At the same time that the handle 24 comes to its normal rearward position the coin positioning tube 22 will come down to its normal position resting on the coin seat of the slide 35.

It will be observed that the pawl 59 in conjunction with the notched quadrant 58 prevents incomplete operation of the machine. That is, as the handle 24 is brought forward the pawl 59 prevents its return, but when the forward stroke is ended the pawl has an opportunity to reverse, and then the handle may return.

When the handle is in its forward position the arm 28 will operate to push the diaphragm 69 over the coin slot 15 and thus prevent the introduction of a coin at this time. This is apparent from Fig. 5.

This completes the description of the normal operation of the machine. It remains to consider how it would work with spurious coins or slugs. Large coins are excluded by the size of the coin slot 15. Undersized coins are dropped through the side opening 18 in the trough 17 and thence are delivered at 54

at the front of the machine. Coins which do not have a thickened flange like ordinary American one cent pieces will not serve to act as locking members between the slides 5 37—35, but they will be pushed off from the lower coin seat 42 by the advancing slide 37, the lower slide 35 remaining *in situ*, and will be dropped through the hole 46 into the chute 47 and then delivered back to the front 10 of the machine at the point 54.

It will be observed that I have invented a coin controlled vending machine which is adapted to be actuated only by genuine coins or by very close imitations thereof.

15 The mechanism is comparatively simple and is fool-proof to the public.

I claim:—

1. In a coin controlled device, two slides, each having a recess on a lateral face thereof, 20 the two recesses being adapted to receive a coin between them and thus lock the slides together side by side, power-driven means to actuate one slide, and connections from the other slide to actuate the mechanism to 25 be controlled.

2. In a coin controlled device, two slides having parallel surfaces spaced slightly apart, and having opposed circular channels in said surfaces adapted to receive the thickened 30 edge of a coin and thus lock the slides together, power-driven means to actuate one slide, and connections from the other slide to actuate the mechanism to be controlled.

3. In a coin controlled device, two slides, 35 guides to confine the slides in a movement parallel to each other, said slides having circular channels on their opposed faces adapted to receive the thickened edge of a coin between them and thus lock the slides together, 40 springs to press the slides toward one another and thus tightly engage the coin, power-driven means to actuate one slide, and connections from the other slide to actuate the mechanism to be controlled.

45 4. In a coin controlled device, two slides, each having a circular channel the two said channels being opposed to one another and adapted to receive the thickened edge of a coin between them and thus lock the slides 50 together, the edges of one channel being beveled so as to permit the coin to slide off therefrom in one direction, power-driven means to actuate one slide, and connections from the other slide to actuate the mechanism to be controlled. 55

5. In a coin controlled device, two slides, each having a recess, power-driven means to move one slide past the other so as to bring the recesses opposite each other at an intermediate stage, the stationary slide being 60 beveled toward the initial position of the driven slide, means to place a coin on the recess in the stationary slide where it may be engaged by the recess in the driven slide and 65 thus the movement of the driven slide may

displace the stationary slide, and connections from the stationary slide to actuate the mechanism to be controlled.

6. In a coin controlled device, a flat horizontal driven slide having a coin-receiving 70 recess on its upper surface and having a hole through the slide in front of said recess, a chute leading from beneath the hole to the outside of the machine, a driving slide above the driven slide adapted to reciprocate parallel therewith said driving slide having a 75 recess on the under surface adapted to engage a coin resting in the recess in the driven slide, power-driven means to actuate the driving slide, and connections from the 80 driven slide to actuate the mechanism to be controlled.

7. In a coin controlled device, a lower horizontal driven slide, an upper driving slide parallel therewith, said slides having coin- 85 engaging recesses on their proximate faces the lower slide having an opening there-through in front of its coin recess, a chute leading from beneath said opening to the outside, the lower slide having another open- 90 ing behind the coin recess, a receptacle beneath said last named opening, power-driven means to actuate the upper slide, and connections from the lower slide to actuate the mechanism to be controlled. 95

8. In a coin controlled device, a horizontal lower slide, a guideway therefor, an upper slide parallel to the lower slide, a guideway 100 therefor, said slides having coin-engaging recesses on the proximate faces thereof, the guideway for the upper slide having a slight jog therein so as to bring the slides closer together when the said coin recesses are opposed, power-driven means to actuate the 105 upper slide, and connections from the lower slide to actuate the mechanism to be controlled.

9. In a coin controlled device, an upper and lower slide, the lower slide having a coin recess on its upper face, a coin guide pivotally 110 mounted in proximity to said recess, the upper slide having an opposed coin recess on its under surface, power-driven mechanism to actuate the upper slide, connections therefrom to displace the said coin guide 115 simultaneously with the movement of the upper slide, and connections from the lower slide to actuate the mechanism to be controlled.

10. In a coin controlled device, a seat 120 adapted to receive a coin, a coin guide leading to said seat, a displaceable member adapted to move near said seat and engage a coin thereon, and means to displace the coin guide simultaneously with the move- 125 ment of the said member.

11. In a coin controlled device, a coin seat, a pivotally mounted guide leading to said coin seat, a slide adapted to move above said coin seat and engage a coin thereon, a cam 130

fixed to said coin guide, and an oscillating arm adapted to reciprocate said slide and also to engage said cam, whereby the coin guide will be displaced simultaneously with the movement of said slide.

12. In a coin controlled device, power-driven means, controlled means adapted to be engaged by the power driven means through the medium of a coin, a casing having a slot in which to introduce the coin, a slide adapted to close said slot, said slide normally occupying a position at one side of the slot, and a mechanical connection to move the slide across the slot when the power-driven means is actuated.

13. In a coin controlled device, a vertical magazine for parcels, having a side opening therefrom near the bottom, a slide adapted to push the bottom parcel through said opening, said slide having a coin recess on the upper surface thereof, another slide above the first named slide, said last named slide

having a coin-engaging recess on its under surface, and means to actuate the upper slide.

14. In a coin controlled device, an operating handle, a parcel ejecting slide, another slide parallel thereto and adapted to be actuated by said handle, each said slide having a recess on a lateral face thereof, the recesses being adapted to engage a coin and thus lock the slides together, a reversible pawl adapted to be moved by said handle, and a fixed notched quadrant adapted to co-act with said pawls, the ends of said quadrant being modified to reverse the pawl at the ends of the stroke of the handle.

In testimony whereof, I, have subscribed my name.

LOUIS J. DISSER.

Witnesses:

ANNA L. SAVOIE,
LILLIAN A. KIBBY.