

No. 621,182.

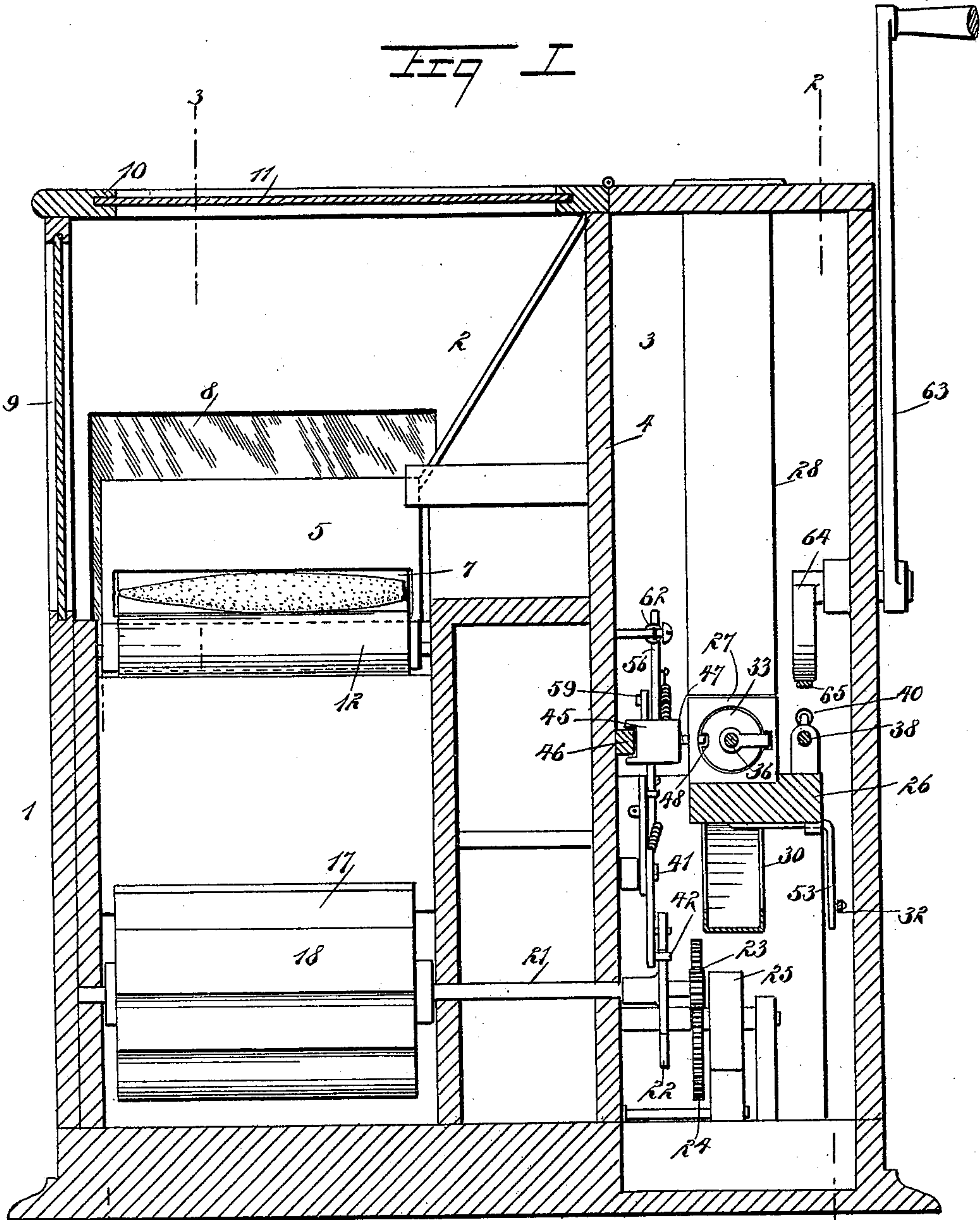
Patented Mar. 14, 1899.

W. TRIBBLE.  
COIN CONTROLLED VENDING MACHINE.

(Application filed Mar. 23, 1898.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

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*W. Tribble*

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ATTORNEYS.

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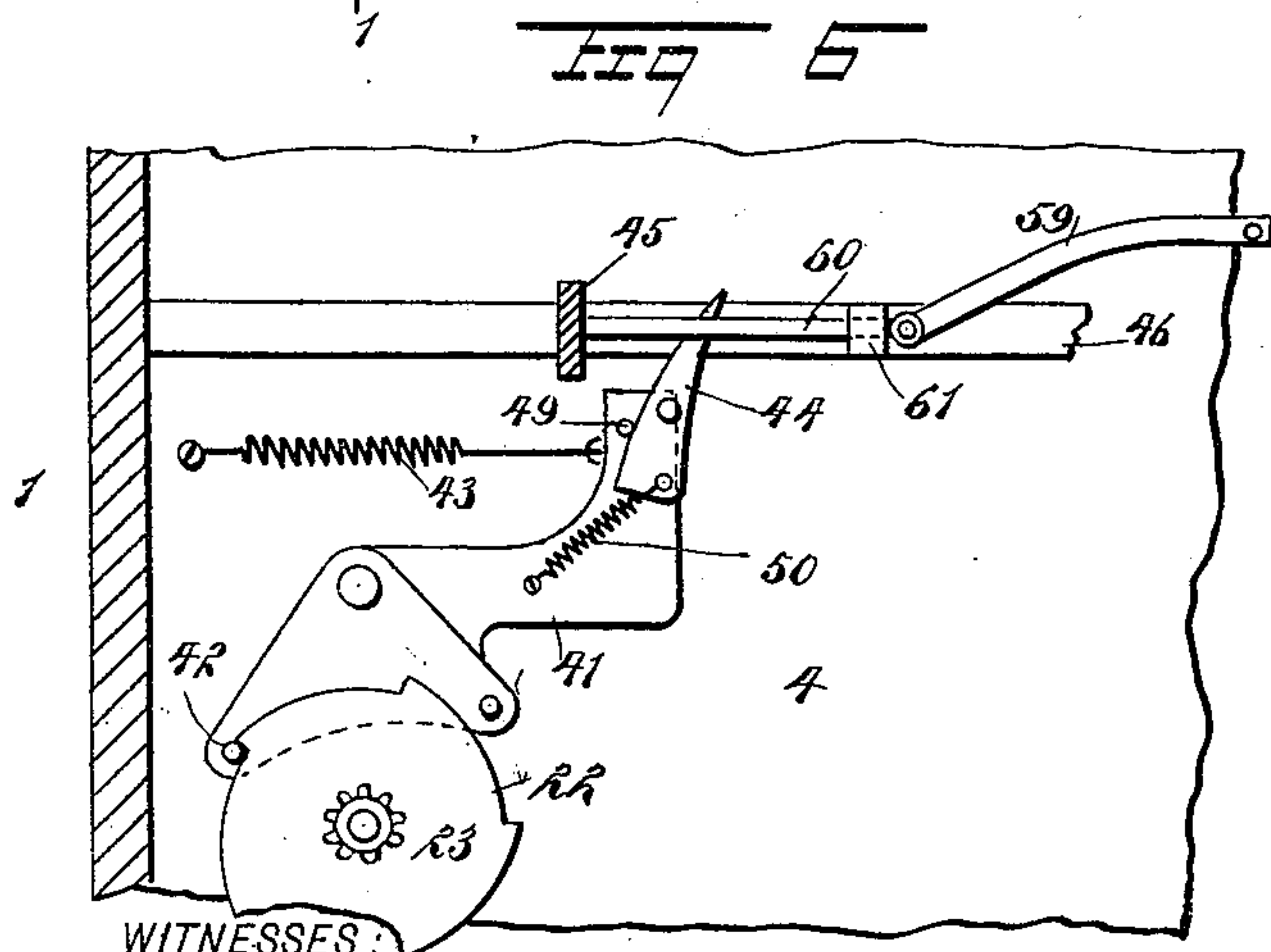
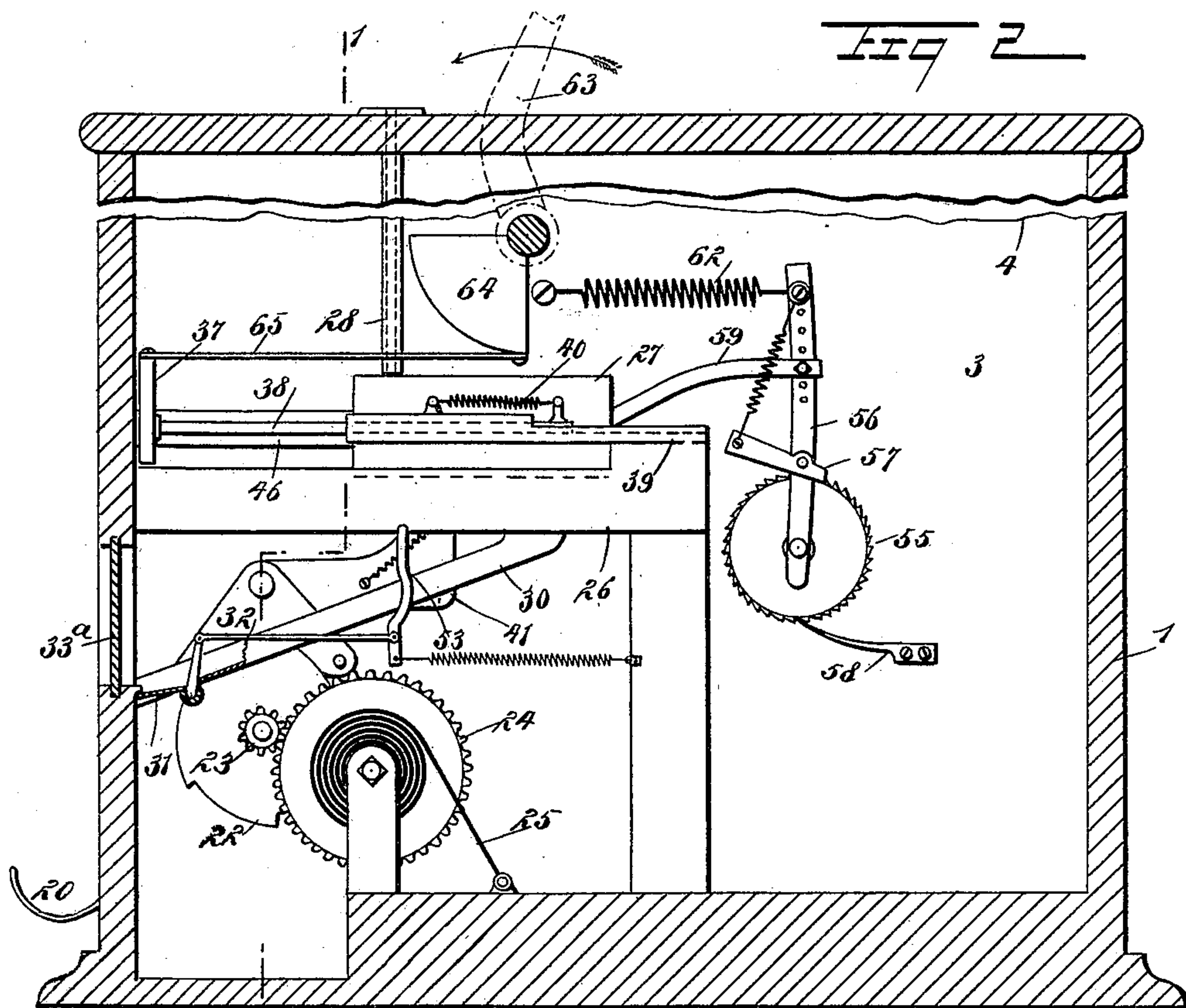
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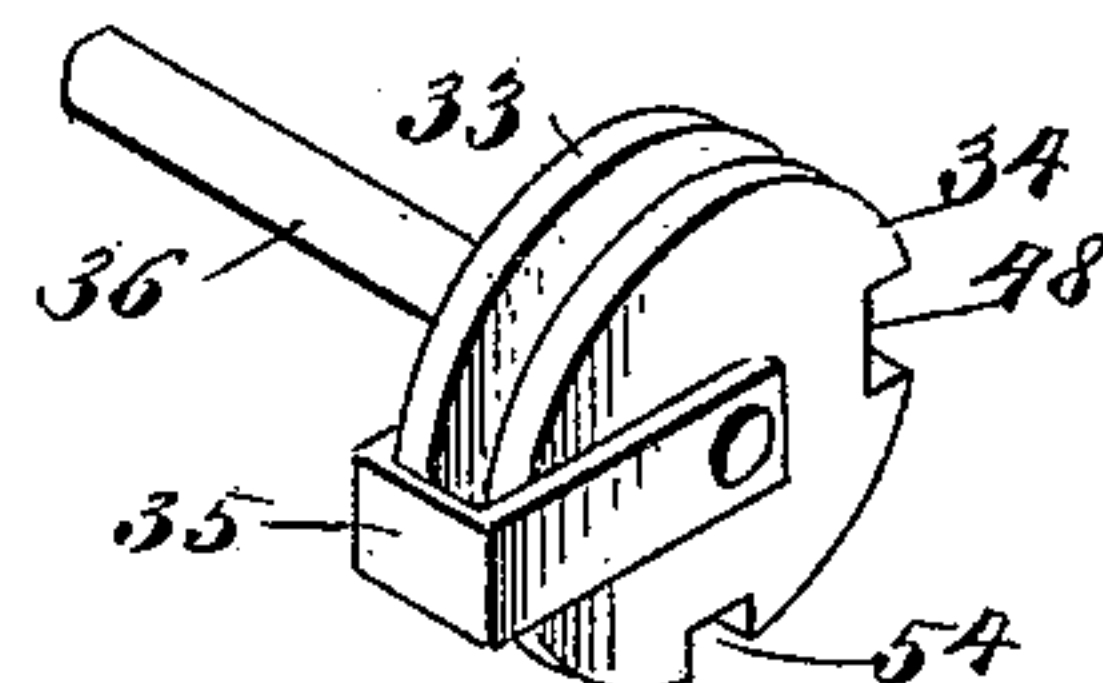
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Fig 7



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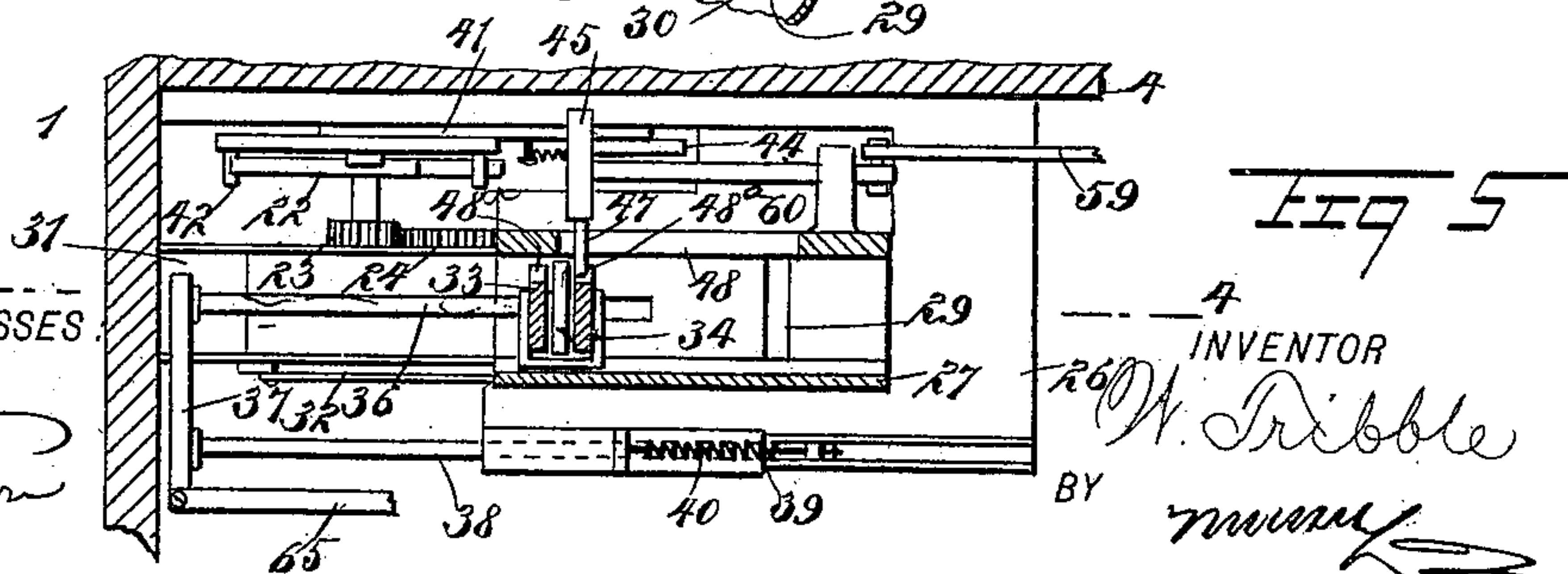
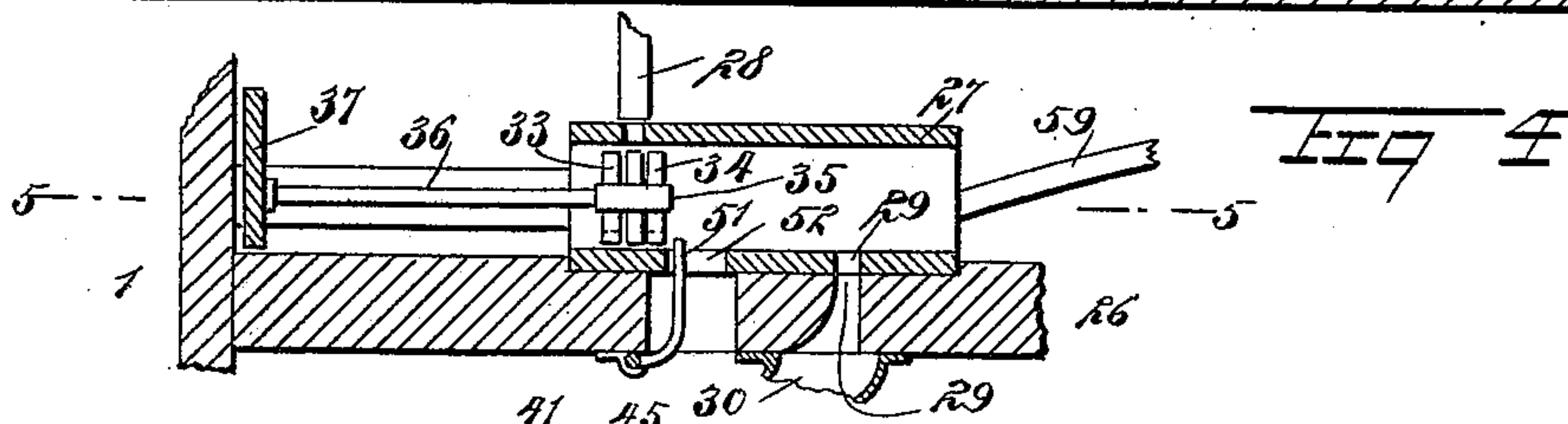
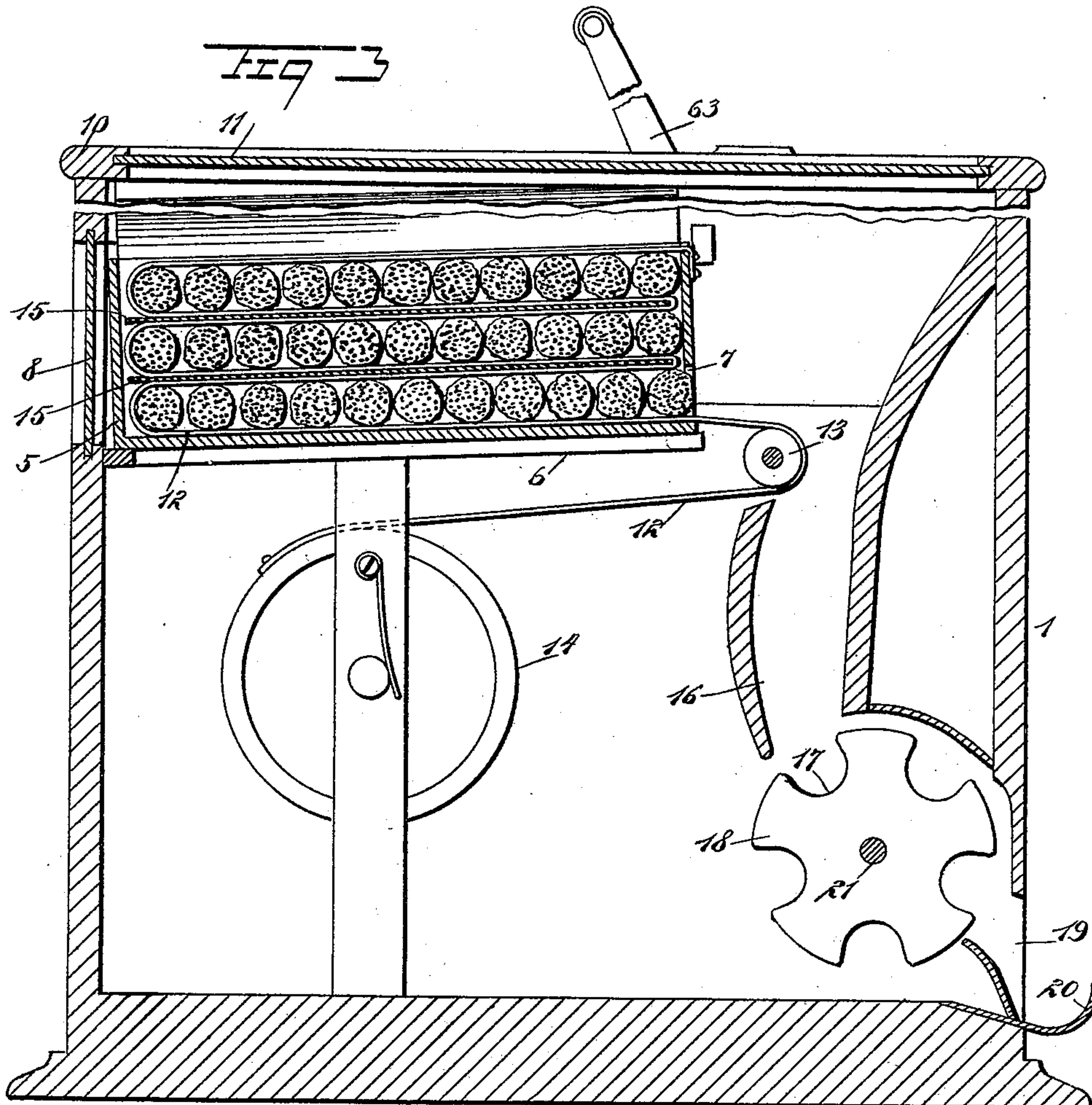
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H. Walker  
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# UNITED STATES PATENT OFFICE.

WILLIAM TRIBBLE, OF ALTON, ILLINOIS, ASSIGNOR OF ONE-HALF TO  
SAMUEL H. WYSS, OF SAME PLACE.

## COIN-CONTROLLED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 621,182, dated March 14, 1899.

Application filed March 23, 1898. Serial No. 674,891. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM TRIBBLE, of Alton, in the county of Madison and State of Illinois, have invented a new and Improved  
5 Coin-Controlled Vending-Machine, of which the following is a full, clear, and exact description.

This invention relates particularly to machines for vending cigars; and the object is  
10 to provide a machine of this character of simple construction and by means of which, after the insertion of a coin, the cigars may be withdrawn directly from the original box, as is required by the revenue laws.

15 I will describe a coin-controlled vending-machine embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying  
20 drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a vertical section, on the line 1 1 of Fig. 2, of a coin-controlled vending-machine embodying my invention. Fig. 2 is a  
25 section on the line 2 2 of Fig. 1. Fig. 3 is a section on the line 3 3 of Fig. 1. Fig. 4 is a section on the line 4 4 of Fig. 5, showing a coin-carrying mechanism employed. Fig. 5  
30 is a section on the line 5 5 of Fig. 4. Fig. 6 is a detail view showing a motor-releasing mechanism employed, and Fig. 7 is a perspective view of a coin-carrier employed.

The machine has a casing 1, divided into  
35 compartments 2 3 by means of a vertical partition 4. The compartment 2 is designed to receive a box 5 of cigars, which will rest on suitable ledges 6. These ledges are inclined slightly downward and rearward, as  
40 clearly shown in Fig. 3, so that the cigars will not accidentally roll out of an opening 7 in the end of the box. The rear wall of the casing has an opening in which glass 8 is arranged and has a glass 9 at one side of the  
45 casing, and this compartment 2 also has a door 10 at its top, provided with a glass 11. Through the glass the box of cigars may be inspected to show the labels, the marks, and the revenue-stamp thereon.

50 Before the box of cigars is placed in the

casing a portion of the end will be broken away to leave an opening 7. When the cigars are originally packed, a ribbon 12 is extended back and forth between the layers of cigars, and one end, which extends over the top of  
55 the upper layer, is fastened to the box, while the other end is designed to pass along the bottom of the box, through the opening 7, around the roller 13, and thence to a connection with a take-up roller 14, journaled in the  
60 compartment 2. If desired, cardboard or similar material 15 may be placed between strips of ribbon between layers of cigars, as plainly indicated in Fig. 3. These strips of  
65 cardboard or the like will serve to hold an upper layer of cigars in proper alinement while cigars of a lower layer are discharged from the box.

As a cigar is drawn out of the opening 7  
70 by a rotary movement of the roller 14 it is discharged into a chute 16 and falls into a pocket 17 longitudinally formed in a discharge-roller 18. These pockets 17 will be substantially the size of a cigar, and from  
75 the pockets the cigars are designed to be discharged through an opening 19 in the front of the casing and into a tray 20, from which they may be removed.

The shaft 21 of the discharge-roller 18 extends through the partition 4, and in the com-  
80 partment 3 a ratchet-wheel 22 is mounted on the said shaft. The number of teeth of this ratchet-wheel will equal the number of pockets in the discharge-roller. Of course there may  
85 be any desired number of such pockets, although I have shown but five in the drawings. Also connected to the shaft 21 is a pinion 23, meshing with a gear-wheel 24, operated by a suitable motor. As here shown,  
90 this motor consists of a spring 25, having one end connected to the shaft of the gear-wheel 24 and the other end connected to the casing. Above the motor is a platform 26, and supported on this platform is a coin-tube 27. A  
95 coin-chute 28 leads through the top of the compartment 3 and is designed to discharge a coin through a slot in the top of the tube 27, and an opening 29 through the bottom of the tube 27 and through the platform 26 communicates with the coin-chute 30, which extends  
100



toward the front of the casing at a downward incline. At the lower end of this coin-chute 30 is a swinging plate 31, designed to hold a coin so that it may be inspected through a glass 33<sup>a</sup>, and the coin will be thus held until another coin is placed in the machine and the machine again operated.

Movable longitudinally in the tube 27 is a coin-carrier, here shown as consisting of two disks 33 34, spaced apart, so as to receive a coin between them. These disks are connected by a yoke 35, and from one of the disks a rod 36 extends outward and connects with a cross-head 37. From this cross-head 37 a guide-rod 38 extends into a guide-tube 39, which is provided with a longitudinal slot at the upper side, through which a lug from the rod 38 extends, and a spring 40 has one end connected to this lug and the other end connected to the guide-tube or to any other fixed support. This spring 40 is designed to return the coin-carrier to its normal position or to bring the spaces between the disks underneath the chute 28.

A motor-holding lever 41 is pivoted to the partition 4, and extended from the downwardly-projected portion of this lever 41 is a pin 42, designed to engage with the teeth of the ratchet-wheel 22 to hold the motor from operation until the parts shall have been operated, as hereinafter described. The lever or the pin is held in yielding engagement with the ratchet-wheel by means of a spring 43, here shown as secured at one end to the upwardly-extended portion of the lever 41 and at the other end to the partition 4. Mounted to swing on the upwardly-extended portion of the lever 41 is a dog 44, the upper end of which is extended into the line of movement of a push-plate 45, guided at one end on a rail 46, secured to the partition 4, and having at the other end a finger 47, which extends through a slot 48 in one side of the tube 27.

It will be noted that the disks 33 and 34 are provided at one side with notches 48<sup>a</sup>, which are in line with the inwardly-extended end of the finger 47, so that should the coin-carrier be pushed inward without a coin the machine will not be operated to deliver a cigar. However, when a coin is between the disks 33 and 34 it will engage with the finger 47 and move the plate 45 against the dog 44 and tilt the lever 41 to disengage the pin 42 from the ratchet-wheel 22. As said plate moves inward and engages against the curved edge of the dog 44 it will tilt the lever 41, because the dog engages at its curved edge and below its pivotal point with a pin 49, extended from the lever 41. The dog is held yieldingly against the pin by means of the spring 50. As the plate 45 in its movement will pass over the end of the dog 44, it is obvious that upon its return it will engage with the dog 44 and tilt it against the resistance of the spring 50, thus allowing the plate to return to its normal position.

To prevent the return of the coin-carrier

to its normal position with a coin therein, I provide a trip, here shown as a wire 51, pivoted to the platform 26 and extended upward through an opening 52 in the platform and the bottom of the tube 27. This trip has a downwardly-extended portion 53, having a link connection 32 with a crank-arm on the shaft of the plate 31. The disks 33 and 34 are each provided on the lower side with a notch 54, so that the carrier may pass the wire 51 when not carrying a coin. When a coin, however, is between the disks and the carrier is moved inward to discharge the coin into the chute 30, the edge of the coin will engage with the trip and tilt it; but should an attempt be made to return the carrier before the coin shall have been discharged therefrom the said coin will engage with the rear side of the trip, and as this trip will bear against the end wall of the opening 52 it is obvious that the coin-carrier cannot be returned to its original position while a coin is therein. As the coin-carrier moves forward the trip will be rocked by the coin, and the movement thereof will tilt the plate 31, so that the coin thereon will be dropped.

A step-by-step rotary motion is imparted to the ribbon-take-up roller 14 by a movement of the push-plate 45, and the means therefor I will now describe.

To the shaft of the roller 14, which extends through the partition 4 and into the compartment 3, is affixed a ratchet-wheel 55, and mounted to swing on this shaft is an upwardly-extended lever 56, to which is pivoted a spring-pressed dog 57, designed to engage with the teeth of the ratchet-wheel to rotate it forward by a step-by-step motion, it being held from backward motion by means of a dog 58. From the lever 56 a link 59 extends to a connection with a rod 60, extended from the plate 45 through a guide 61. The lever 56 may be provided with a series of holes, through either one of which the bolt securing the link 59 to the lever may be inserted, so as to adjust the degree of movement of the ratchet-wheel 55, and consequently the degree of movement of the roller 14, depending upon the number of cigars designed to be discharged from the box at one operation of the machine. After a movement of the ratchet-wheel and the roller 14 a spring 62, attached at one end to a fixed support and at the other end to the upper end of the lever 56, will return the lever to its normal position for a subsequent operation. The spring 62, it will be noted, also serves to return the plate 45 to its normal position.

Motion is imparted to the coin-carrier to convey a coin to the chute 30. As here shown, this means consists of a lever or crank 63, the crank of which extends through the casing, and on the inner end of this shaft is a segment-plate 64, to which is attached one end of a strap 65, the other end of said strap being connected to the cross-head 37, as plainly indicated in Fig. 2.



In operation after placing a coin in the chute 28 it will fall between the disks 33 and 34. Then by turning the crank 63 the carrier will be moved along, and as the coin catches the finger 47 the plate 45 will be moved and operate the ribbon-take-up roller 14, as before described. As the ribbon is taken up on said roller a cigar will be drawn through the opening 7 and discharged through the chute 16 into a pocket 17. Then as the motor is released by the tilting of the lever 41 in the manner before described it will rotate the roller 18, so that a cigar will fall through the opening 19 into the tray 20. Of course when the coin reaches the opening 29 it will fall into the chute 30, and then the parts will be returned to their normal position.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A vending-machine, comprising a casing, a discharge-roller mounted in the casing, a ribbon for delivering articles to the discharge-roller, a motor for operating the discharge-roller, means operated by the movement of a deposited coin to release said motor, and means controlled by the moving coin for actuating the ribbon, substantially as specified.

2. A cigar-vending machine, comprising a casing, a discharge-roller mounted to rotate therein and having longitudinal pockets, a ribbon-take-up roller for drawing a ribbon from a box of cigars to discharge the said cigars from the box, a motor for rotating the discharge-roller, means operated by the movement of a deposited coin to release said motor, and means operated by said coin for operating the ribbon-take-up roller, substantially as specified.

3. A cigar-vending machine, comprising a casing, means for supporting a box of cigars therein, a discharge-roller mounted to rotate in the casing and adapted to receive cigars from the box, a ribbon-take-up roller for drawing a ribbon from the box to discharge cigars therefrom, a spring-actuated motor having gear connection with the discharge-roller, a ratchet-wheel connected with the shaft of said discharge-roller, a swinging lever adapted for engagement with said ratchet-wheel, to hold the motor, a plate movable by the movement of a deposited coin and adapted to rock the lever to disengage it from the ratchet-wheel, and means operated by said plate to impart motion to the ribbon-take-up roller, substantially as specified.

4. A vending-machine, comprising a casing, a discharge-roller therein, a feeding mechanism for the discharge-roller a motor for operating the discharge-roller, a holding-lever for said motor, a coin-tube, a coin-carrier movable in said tube, and a plate adapted to be engaged by a coin in the coin-carrier and to trip the lever to release the motor and also to actuate the feeding mechanism, substantially as specified.

5. A coin-controlled vending-machine, comprising a casing, a discharge-roller in said casing, a ratchet-wheel on the shaft of said roller, a spring-motor having gear connection with the shaft, an angle-lever having a pin to engage with the ratchet-wheel, a curved swinging dog on the upwardly-extended portion of said lever, a coin-tube having a longitudinal slot in its side, a movable plate having a finger extended through said slot, the said plate being adapted to engage with the pivoted dog of the lever, to trip said lever out of engagement with the ratchet-wheel, a coin-carrier movable in the tube and consisting of two disks spaced apart, the said disks being notched at one side so as to pass the finger which extends into the tube, and means for moving said coin-carrier in the tube, substantially as specified.

6. A coin-controlled vending-machine, comprising a casing, a discharge-roller mounted in the casing, a ribbon-take-up roller mounted in the casing, a motor for operating the discharge-roller, means actuated by the movement of a coin to release said motor, a ratchet-wheel on the shaft of the ribbon-take-up roller, a lever mounted on said shaft, a dog pivoted to the lever and engaging with the ratchet-wheel, and means for operating said lever and dog by a movement of the coin, substantially as specified.

7. A coin-controlled vending-machine, comprising a casing, a coin-tube, an inlet coin-chute communicating with the coin-tube, an outlet coin-chute communicating with said tube, a swinging plate at the outlet end of said discharge-chute, a coin-carrier movable in the coin-tube, a swinging detent extended into the tube in the line of movement of a coin carried by the carrier, and a connection between the detent and swinging plate, substantially as specified.

WILLIAM TRIBBLE.

Witnesses:

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WILLIAM B. ROSE.