

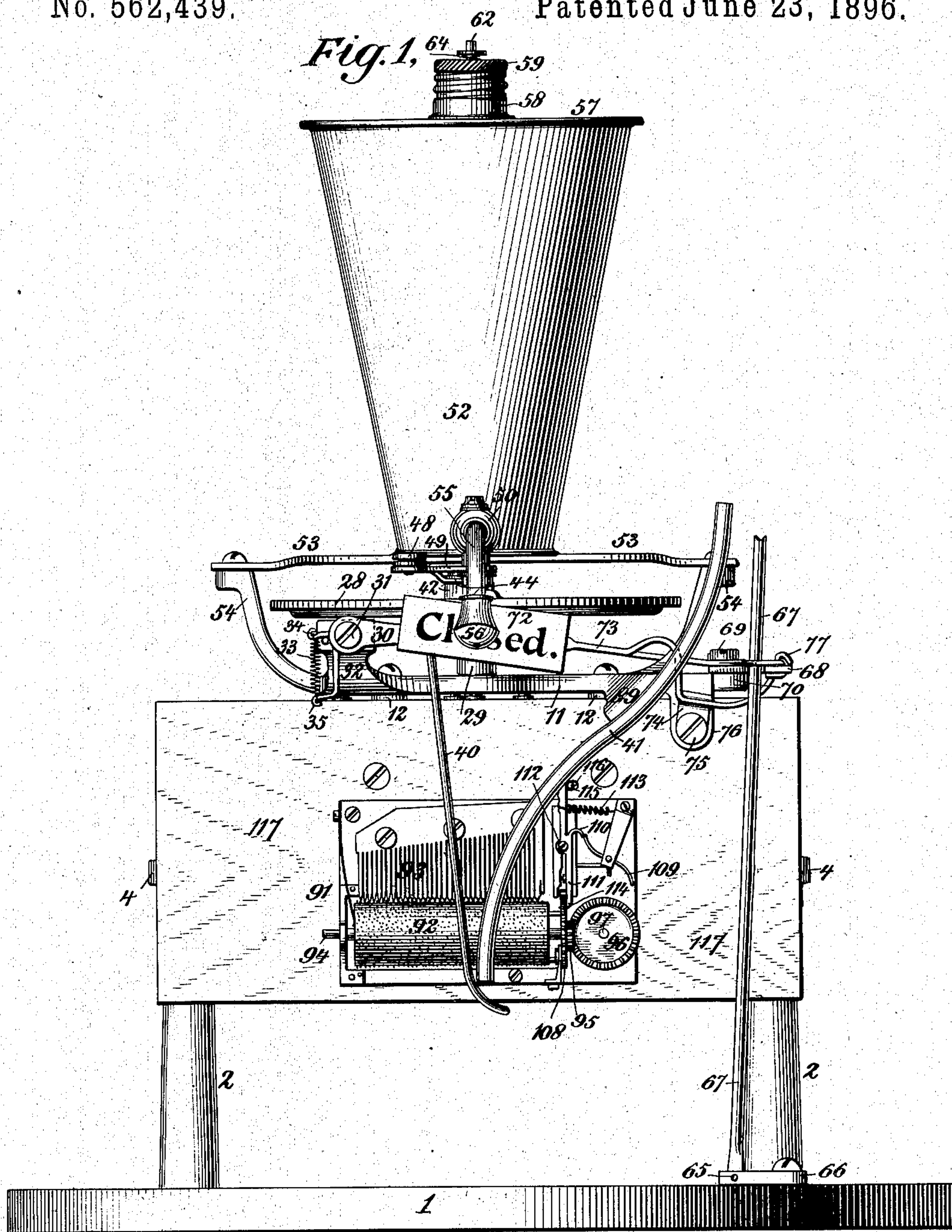
(No Model.)

4 Sheets—Sheet 1.

L. P. VALIQUET.
VENDING MACHINE.

No. 562,439.

Patented June 23, 1896.



WITNESSES:

R. H. Hayward
K. V. Donovan.

INVENTOR

Louis P. Valiquet
BY
Jacob F. Fabel
ATTORNEY

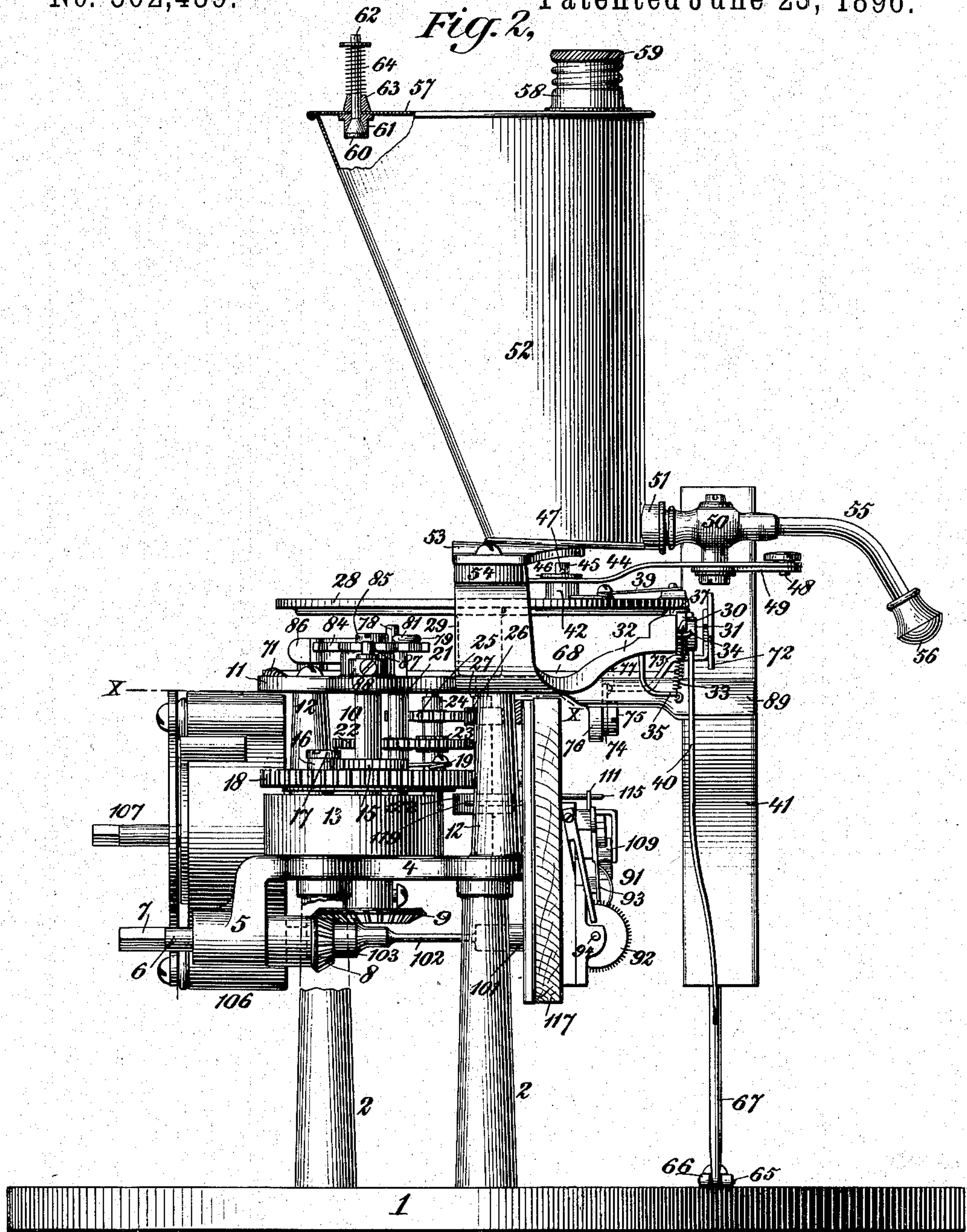
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4 Sheets—Sheet 2.

L. P. VALIQUET.
VENDING MACHINE.

No. 562,439.

Patented June 23, 1896.



WITNESSES:

D. H. Kayworth
H. V. Donovan

INVENTOR

Louis P. Valiquet

BY

Jacob Felbel
ATTORNEY

(No Model.)

4 Sheets—Sheet 3

L. P. VALIQUET.
VENDING MACHINE.

No. 562,439.

Patented June 23, 1896.

Fig. 3.

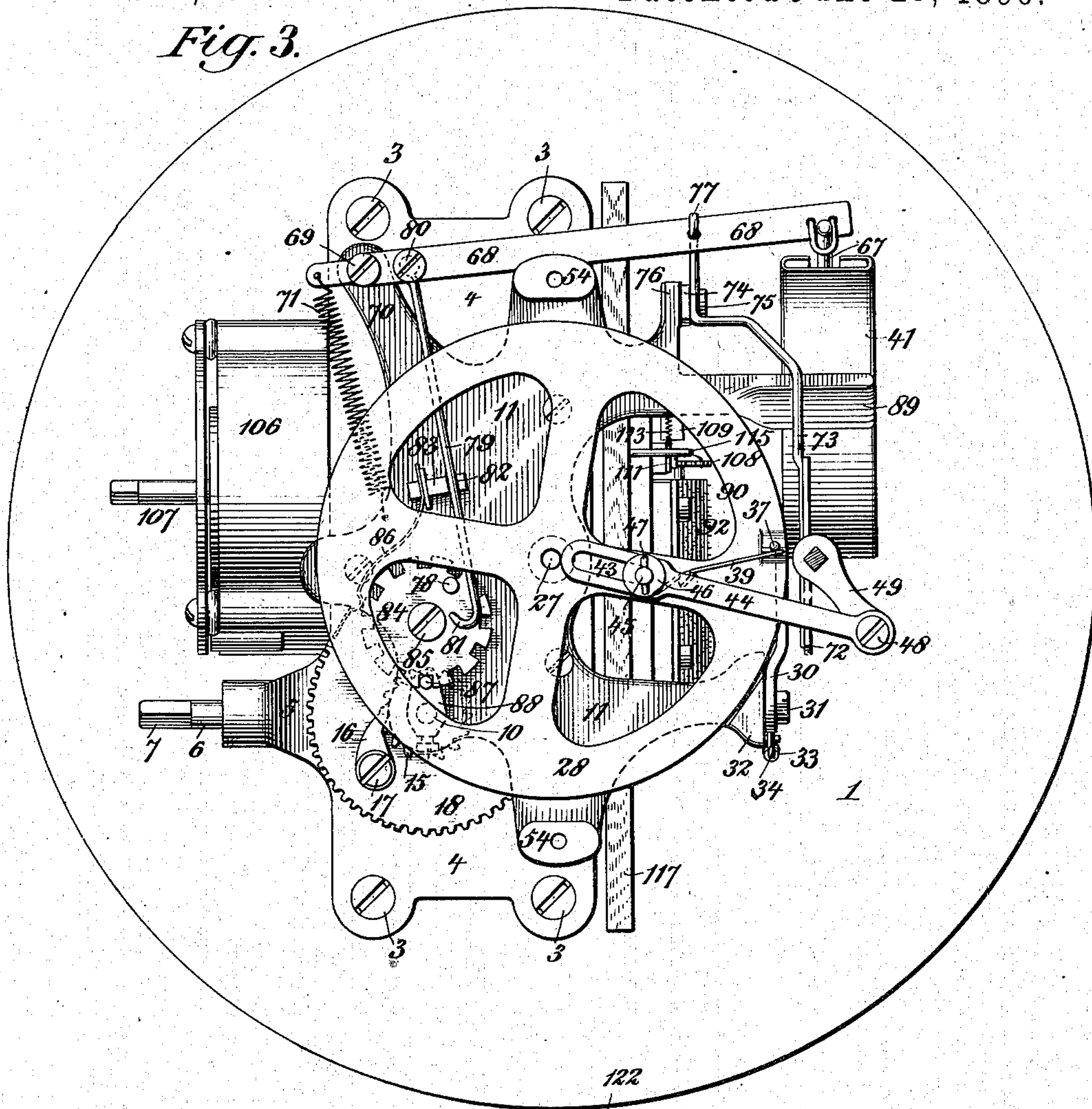
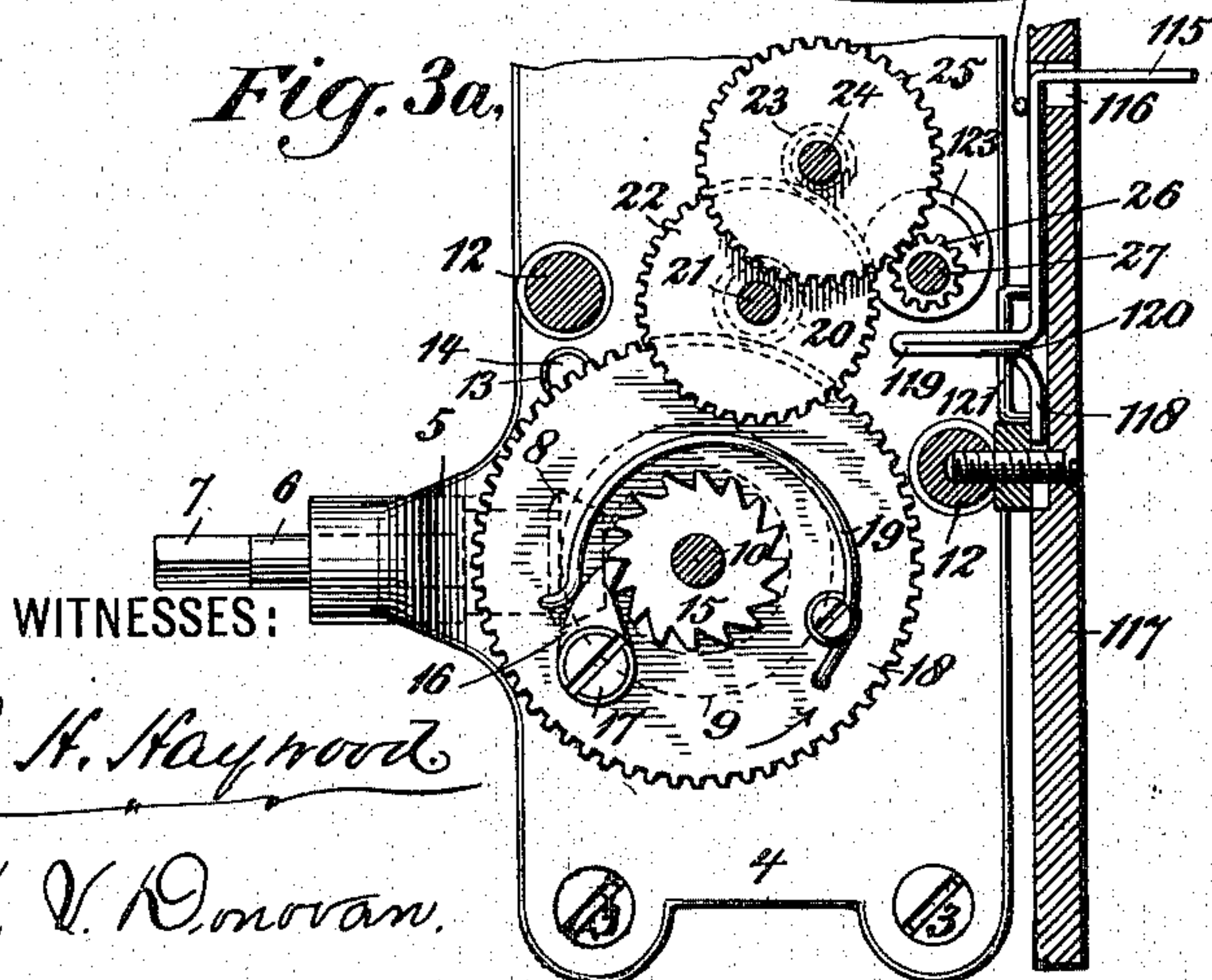


Fig. 3a.



WITNESSES:

O. H. Haywood

K. V. Donovan

INVENTOR

Louis P. Valiquet

BY

James F. Felbel
ATTORNEY

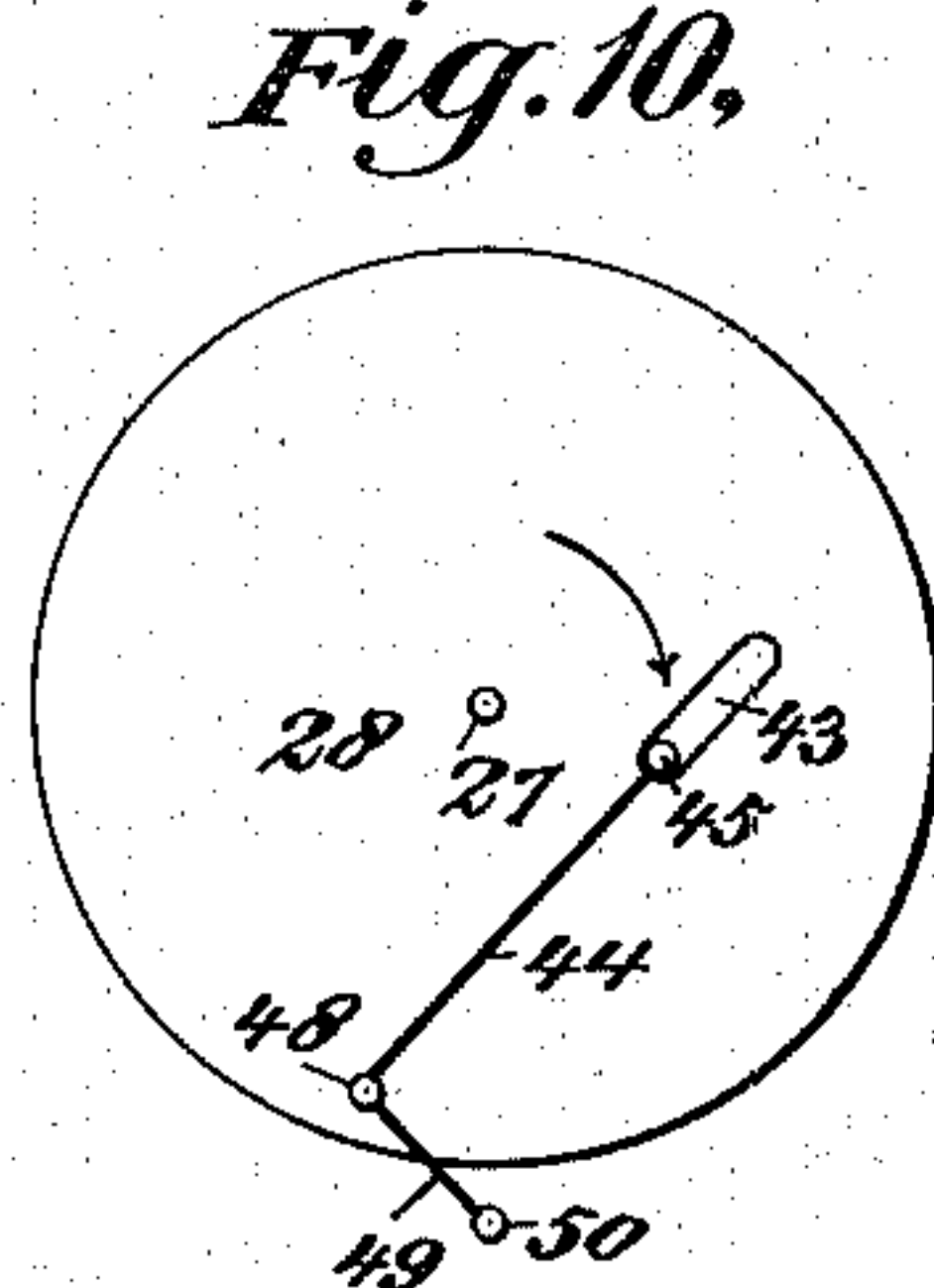
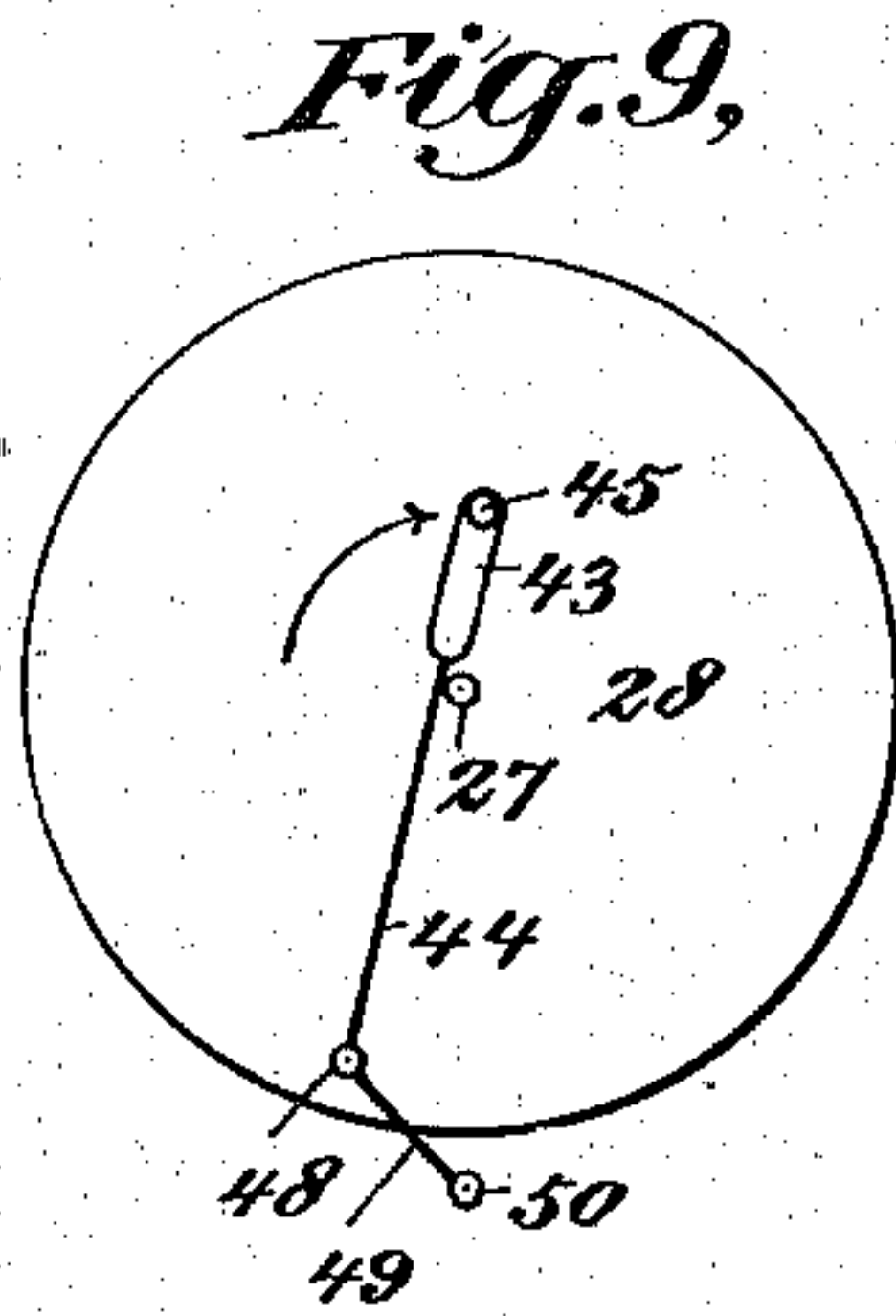
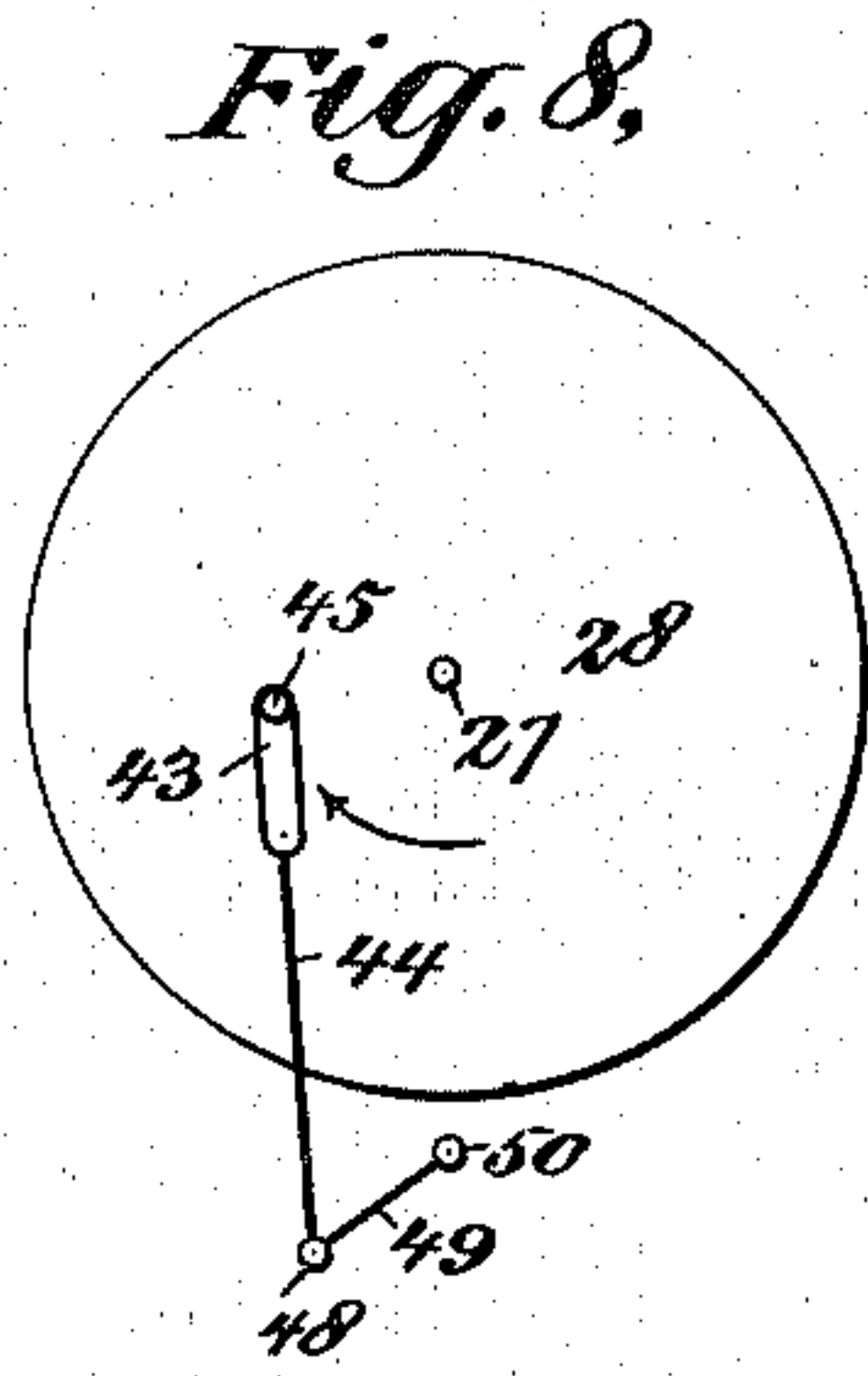
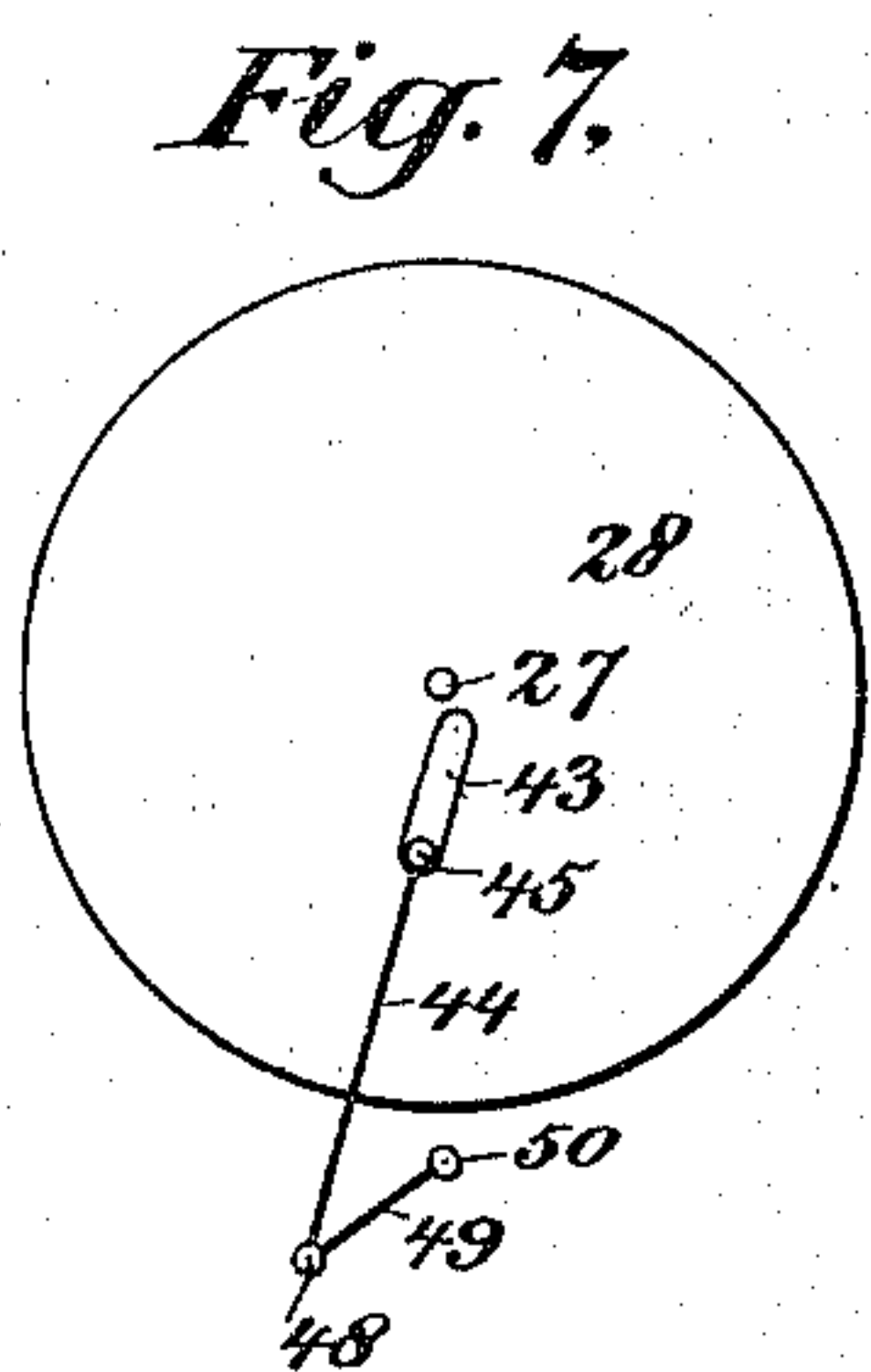
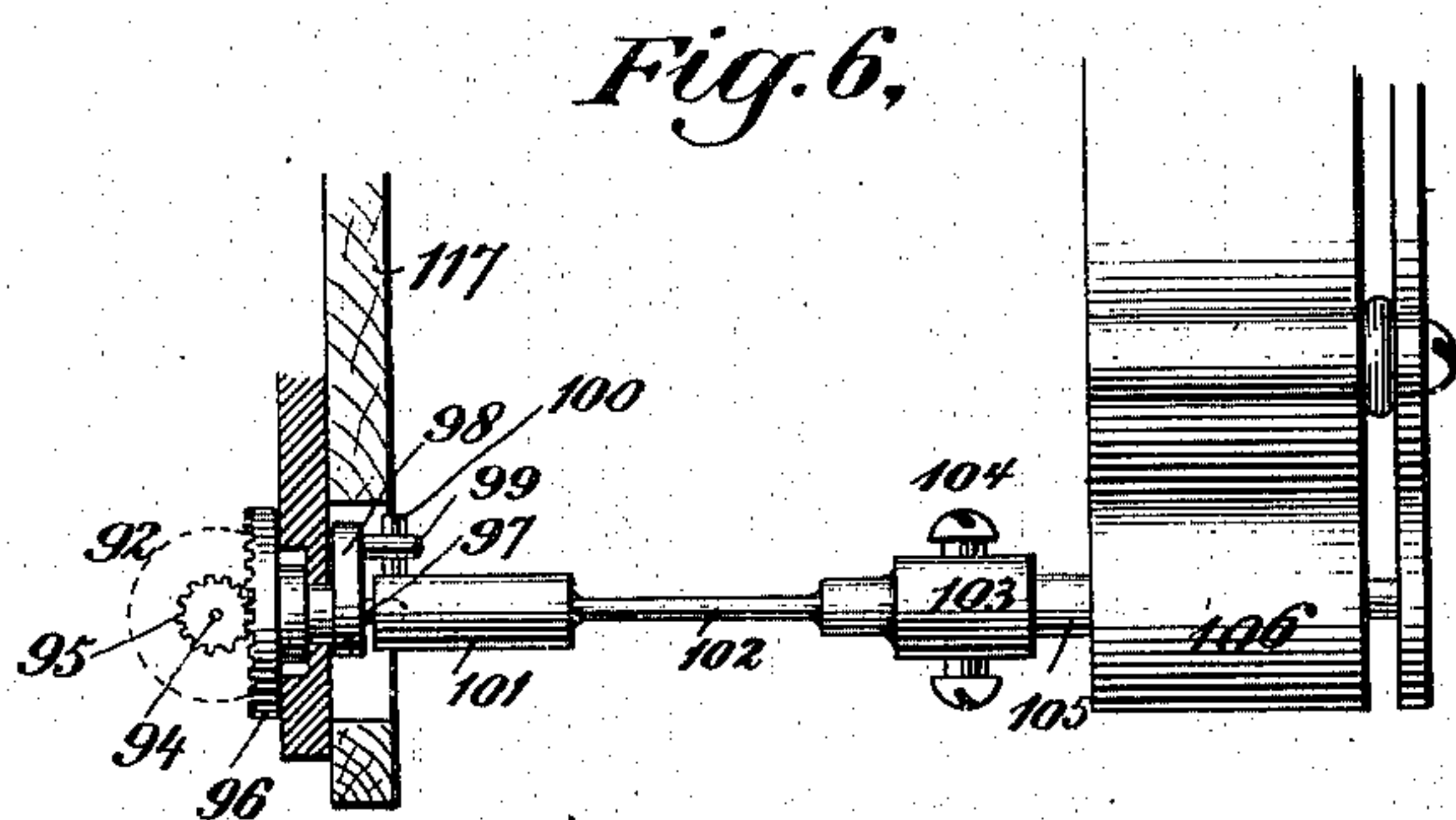
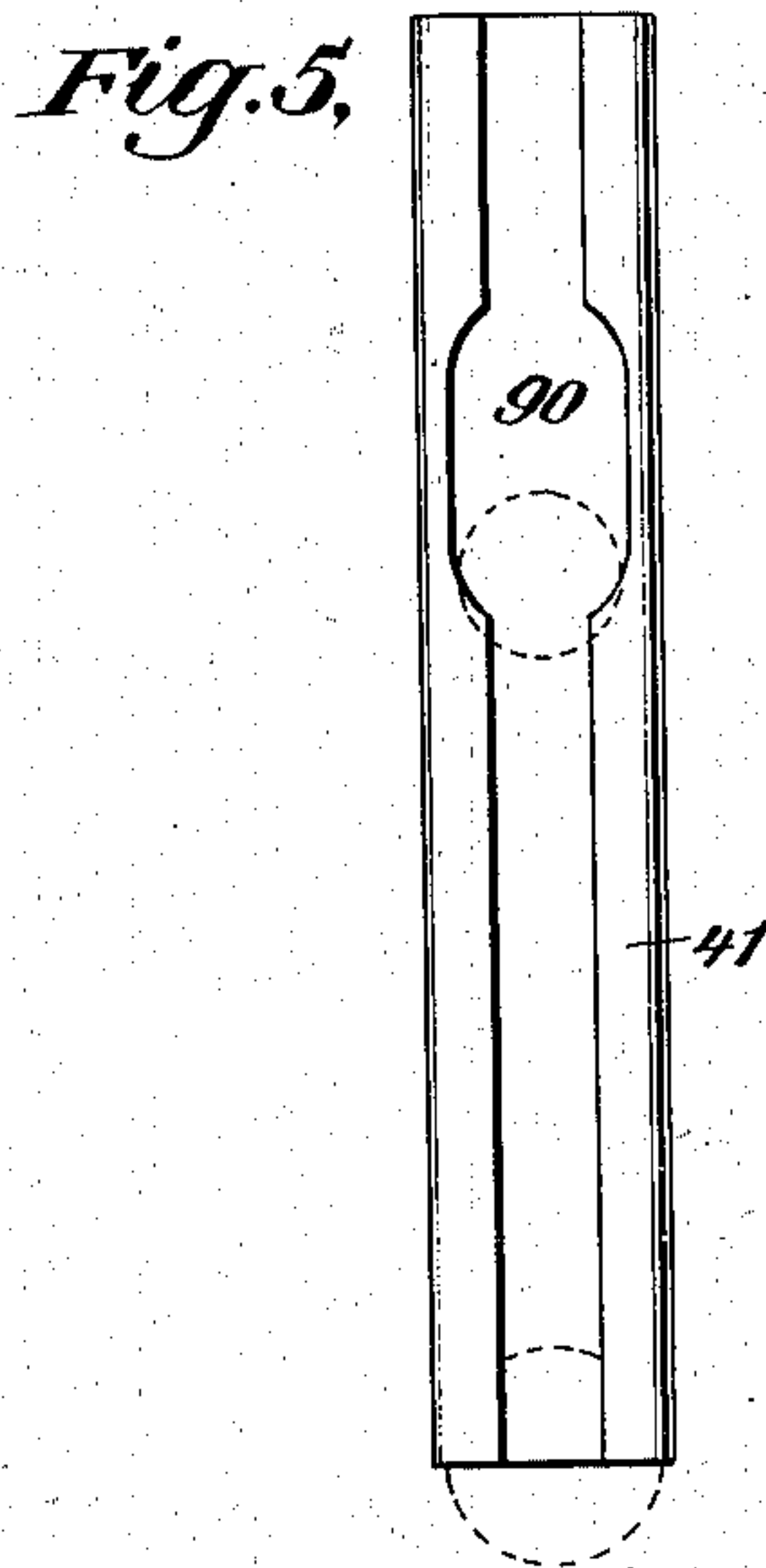
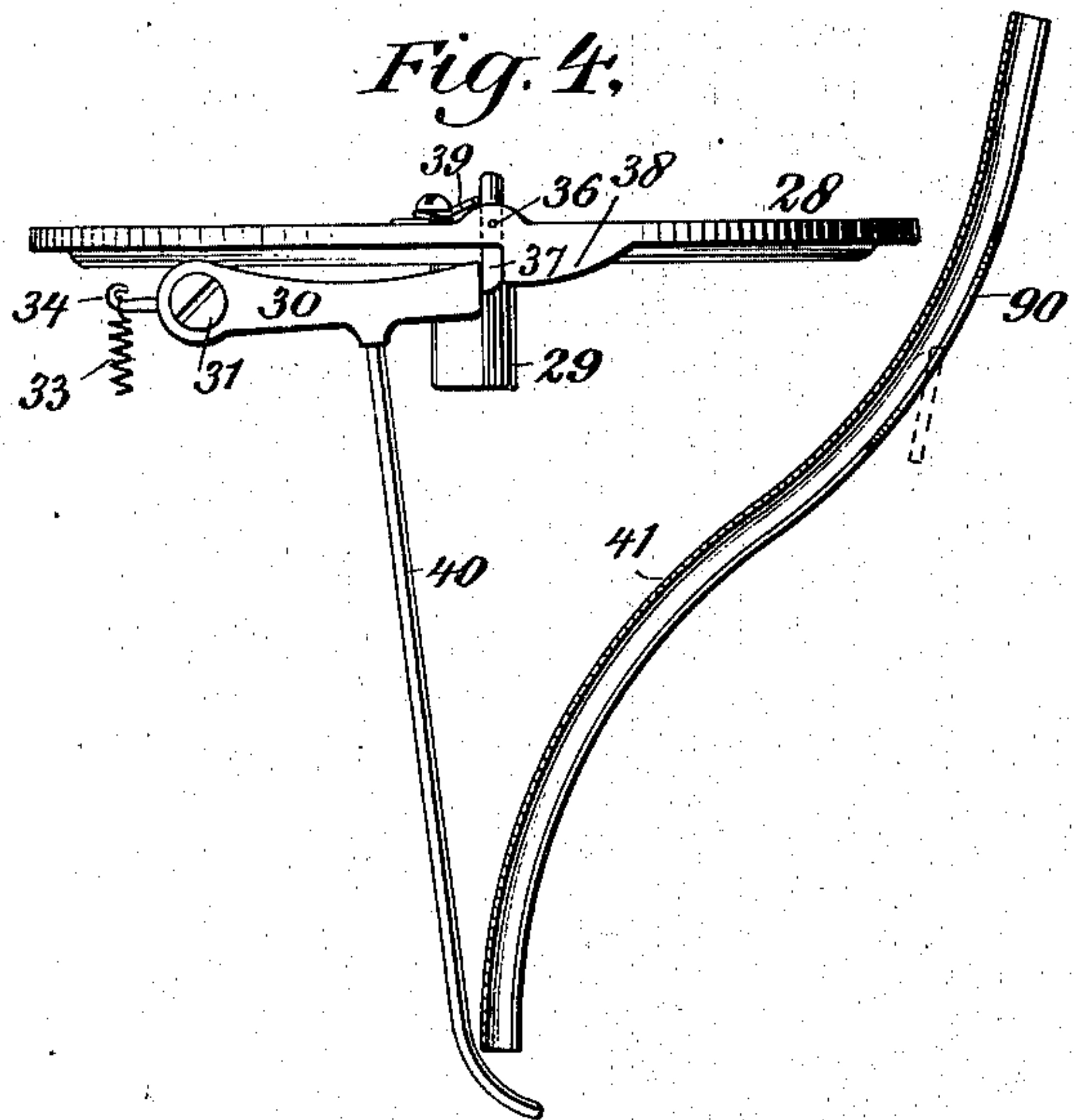
(No Model.)

4 Sheets—Sheet 4.

L. P. VALIQUET.
VENDING MACHINE.

No. 562,439.

Patented June 23, 1896.



WITNESSES:

R. H. Hayworth
K. V. Donovan

INVENTOR

Louis P. Valiquet
BY
Jacob Felbel
ATTORNEY

UNITED STATES PATENT OFFICE.

LOUIS P. VALIQUET, OF NEW YORK, N. Y., ASSIGNOR TO THE PERFUME
EJECTOR COMPANY, OF SAME PLACE.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 562,439, dated June 23, 1896.

Application filed May 3, 1895. Serial No. 548,025. (No model.)

To all whom it may concern:

Be it known that I, LOUIS P. VALIQUET, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

This invention relates more particularly to an apparatus or a machine for automatically vending perfumery or other liquids upon the deposit of a suitable or proper coin, but certain portions thereof may be employed in machines for automatically vending articles of manufacture in the solid state.

In carrying out my improvements as here exhibited a tank is provided for holding perfumery. At the bottom of the tank is arranged a spout which is controlled by a plug or cock, which is opened and closed by a power-driven mechanism when a coin is deposited into a chute and the driving mechanism is tripped or set into action by the descent of the coin. In connection with the mechanism for thus supplying the perfumery is employed a mechanism for driving a music-box, which latter mechanism is independently power-driven but is controlled by the first-named mechanism, and the arrangement is such that about simultaneously with the tripping or starting of the mechanism which governs the opening and closing of the plug the mechanism for driving the music box or barrel is also released, so that during the ejection of a predetermined quantity of the perfumery an air may be produced by the musical contrivance. A spring similar to that used in clocks and suitable wheelwork with other connecting devices are employed to open and close the plug, and a similar spring, independently arranged, and suitable wheelwork are employed to rotate the music-barrel, intermediate devices being used to restrain normally the action of the power for rotating the barrel, said devices being controlled by the wheelwork arranged to open and close the plug.

The tank or vessel for holding the perfumery may be of any suitable size or capacity and may be filled from the top and provided thereat with an air-valve. For the purpose

of preventing the deposit of coins after the vessel has been emptied or the machine has become inoperative, a mechanism is provided for automatically closing the mouth or passage-way of the chute, and in connection therewith a sign or tablet is used bearing the word "Closed," which is projected to view so as to also visually notify the intending purchaser that the vessel is empty or that the machine is inoperative.

Various other features of construction and modes of operation possessed by the machine will be hereinafter referred to in connection with the detailed description to be presently given.

My invention consists in certain features of construction and combinations of devices, all as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a front elevation of the machine with the casing or box removed. Fig. 2 is a left-hand side elevation of the same with a part broken away here and there to more fully show some detail of construction. Fig. 3 is a top plan view with the tank or fluid-holding vessel and its support removed. Fig. 3^a is a horizontal section at about the plane X X of Fig. 2 to show more particularly the devices employed for releasing the mechanism for driving the music-barrel. Fig. 4 is a detailed view, in front elevation, of the rotating wheel or disk and the means for normally holding the same, together with a vertical section of the coin-chute. Fig. 5 is a back elevation of the coin-chute. Fig. 6 is a plan view of the mechanism for driving the music-barrel. Fig. 7 is a diagrammatic plan view illustrating the means for turning the plug or cock of the spout, with the parts in their normal positions. Figs. 8, 9, and 10 are similar views illustrating the same means at different stages of their movements.

In the several views the same part will be found designated by the same numeral of reference.

Upon a bed-plate 1 are mounted four posts or pillars 2 to support the various mechanisms of which the machine is comprised. Fastened on the tops of these posts by screws

3 is a base-plate 4, having a downwardly-extending arm 5, through which passes a shaft 6, which is formed at its outer end with a squared portion 7 to receive a winding-key 5 and which is provided at its inner end with a beveled gear 8. This gear meshes with another but larger beveled gear 9 at the lower end of a vertical shaft 10, which passes through the base-plate 4 and has a bearing at its upper end in a top plate or casting 11, which is screwed upon three posts 12, rising from the base-plate. Attached at one end to the shaft 10 is a clock-spring 13, the other end of which is attached to a pin 14, projecting upwardly from the base-plate.

On the shaft 10 is affixed a ratchet-wheel 15, with which engages a pawl 16, pivoted at 17 upon a spur-gear 18, mounted loosely upon the shaft 10. A spring 19 is provided to keep the pawl in engagement with the ratchet-wheel.

The spur-gear 18 meshes with a pinion 20 on a spindle 21, rising from the base-plate, which spindle above said pinion is provided also with a spur-gear 22, which engages with a pinion 23 upon a spindle 24, also rising from the base-plate, and provided above the pinion 23 with a spur-gear 25, which meshes with a pinion 26 on a spindle 27, likewise rising from the base-plate.

To the upper end of the spindle 27, which passes through the top plate 11, is secured a wheel, disk, or rotating member 28, the means of attachment consisting of a depending hub 29, which slips upon the end of the spindle and is secured by a set-screw. This disk or device 28 is adapted to be rotated by the spring-power through the pawl-and-ratchet mechanism and wheelwork described, but is held normally against such rotation by means of a stop-lever 30, pivoted at 31 to an arm 32 on the top plate and held normally in position to perform its stopping function by a spring 33, one end of which is attached to a hook 34 on said stop-lever and the other end to a hook 35, projecting downwardly and outwardly from the arm 32. Upon the periphery of the wheel or disk is pivoted at 36 a fly 37, adapted to strike against the free end of the stop 30, and provided at its back with a stop or abutment 38. A spring 39 bears against the upper end of the fly 37 and tends to vibrate the same when the stop-lever is depressed and for a purpose which will presently appear. The stop-lever is provided with a depending arm or wire 40, which is curved at its lowermost end to hang beneath the opening or slot in the chute 41, which is preferably curved, as shown more particularly at Fig. 4. Upon one of the arms or spokes of the wheel or disk is arranged a boss 42, which supports the slotted end 43 of a link or lever 44. A stud 45 rising from said boss passes through the slot 43 and serves to guide the link 44, which is held from rising by a washer 46 and a cross-pin 47.

The outer end of the rod or link 44 is piv-

oted at 48 to the outer end of a crank 49, which is secured upon a squared or angular portion of a suitable plug or cock 50, adapted to turn in a casing or shell 51. The valvular contrivance, comprising the plug and seat or casing, is secured to the lower end of a tank 52, which is supported by lateral wings 53 upon arms 54, cast integral with the top plate 11. To the front end of the valvular contrivance is preferably attached a spout or nozzle 55, provided at its free end with a rose or spray 56. The tank has a cover or top 57, which is provided with a threaded nipple 58, to enable the tank to be filled, and a threaded cap 59 to close the same. The cover or top is also provided with an air-valve 60, preferably of conical form, and adapted to a like seat 61 on the under side of the top or cover 57. The stem 62 of the valve passes through a perforation in the cover and through a bearing 63, mounted thereon, and at its upper portion is provided with a light coiled spring 64, which tends to keep the valve against its seat.

Before describing the mechanism relating to the music-box and the means for preventing the entrance of coins after the tank is empty or the machine has become inoperative, I shall explain more fully the mode of operation of the means, above set forth, relating more particularly to the ejection of the perfumery.

When the proper coin is dropped into the slot, it passes down and striking against the lower curved end of the wire arm 40, causes said arm to move and pull down the lever-stop 30 a distance such that its inner free end will pass below the plane of the lower end of the fly 37, which, under the action of its spring 39, will then immediately fly or vibrate toward the left and over the top edge of said lever, and thereby prevent the said lever from returning so quickly under the action of its spring 33 that the wheel or disk will be caught or stopped again before it can make its intended revolution, a result which might happen but for the presence of the fly when the spring-power of the mechanism is weak or considerably run down. It will be seen that since the fly springs at once on top of the stop-lever 30, when the latter is pulled down, the wheel or disk is positively released and will make one turn or rotate until the fly comes around again and meets the end of the stop-lever, which has meanwhile returned to its normal position, and upon such meeting the fly will be vibrated back and its individual spring again put under tension, so that on the depression of the stop-lever the next time the fly may repeat the action described. The stop or abutment 38 is preferably tapering or curved, so as to allow the stop-lever to return gradually as the former passes over it. During one revolution of the wheel the plug or cock is opened and closed and, of course, during the time it is open a predetermined quantity of the perfumery is discharged. The arrangement of the crank which turns

the plug and the construction and arrangement of the arm which actuates the crank insure a positive opening and closing of the plug.

5 By referring to Fig. 7, which corresponds with Fig. 3, and at which the parts are shown in their normal or closed positions, it will be observed that the stud 45 is at the forward end of the slot 43 in the link 44, and by referring to Fig. 8 it will be observed that the
10 said stud is at the rearward or opposite end of said slot, while in both views it will be seen that the crank 49 occupies the same position. These two views are to illustrate that
15 during almost the first quarter of the revolution of the wheel the crank and the plug remain at rest or are unaffected. The object of this mode of operation is to enable the wheel to acquire momentum and bring the
20 arm 44 into a position where it may exercise more power upon the crank 49 and thereby positively turn the plug. It has been found in practice that if it be attempted to open or turn the plug at the same time that the wheel be-
25 gins to turn the action of the mechanism will be uncertain. If the power-spring be considerably run down, the resistance of the plug to turning will be sufficient to prevent the wheel from rotating. Hence it will be
30 seen that by permitting the wheel to have a partial revolution before the power is applied to the crank the momentum of the wheel will be more than ample to positively move the crank and turn the plug, without the slight-
35 est liability of arresting the wheel or appreciably diminishing its motion, and this is true when the power of the driving-spring is very weak.

40 By referring to Fig. 9 it will be seen that the crank is vibrated and the plug turned during the movement of the stud from the position shown at Fig. 8, and during this movement the plug is opened gradually to its full extent. In the travel of the stud
45 from the position shown at Fig. 9 to that shown at Fig. 10 the link 44 simply turns about the pivot 48 while the stud travels back to the front end of the slot again, and by reference to Figs. 9 and 10 it will be seen
50 that no movement of the crank takes place during this movement of the stud and the link. During the remainder of the movement of the wheel the link is carried forward and projected until it and the stud arrive at
55 the position shown at Fig. 7, and during this movement the crank is vibrated back to its first position and simultaneously the plug is closed. From Figs. 9 and 10 it will likewise
60 be seen that after the plug has been opened the wheel is relieved of the resistance of the crank and the plug for a time again, and hence may reacquire momentum to insure the closing of the plug. It will also be seen
65 that the actions of the wheel in opening and closing the plug are effected with a suddenness which may be likened to a blow or jerk on the crank-arm, which the friction or re-

sistance of the plug is unable to overcome, and therefore the opening and closing of the latter are effected in the most positive manner. 70

I shall now describe the means for closing the slot when the tank has been emptied of its contents or has been reduced to such a level that no more fluid will escape at the nozzle. 75

Pivoted at 65 in an arm or bracket 66 on the bed-plate is a rod 67, which projects upwardly and through a loop on a horizontal lever 68, which is pivoted at 69 on an ear 70, extending laterally from the top plate 11. To the rear
80 shorter end of said lever 68 is connected one end of a coiled spring 71, the other end of which is attached to the top plate, the said spring and the said lever serving to hold the said upright rod 67 normally in a vertical po-
85 sition and with its upper end away from the slot in the chute, as shown at Fig. 1. At a certain time in the operation of the machine, and by means to be presently described, the upper end of the rod is automatically moved
90 over into the slot of the chute, the said chute being preferably an incomplete flat tube, or cut away at its rear side, as shown at Fig. 5. When the said rod is thus moved over into the slot, its upper end, which is preferably
95 grooved or V-shaped, acts as a stop to the descent of a coin. The upper extremity of said rod is so near the top of the chute that any coin which may have been introduced at the mouth of the chute may be easily removed
100 by the fingers when it is discovered that it will not descend. Thus the machine is prevented from receiving money when the expected equivalent therefor may not be ob-
105 tained in return. An additional means is employed to notify the intending user of the machine that the tank is empty or inoperative, which means consists of a sign or tablet, inscribed with the word "Closed," which nor-
110 mally, or when the machine is in operative condition, remains hidden from view above a slot or opening in the casing of the mechanism, which casing, for the sake of clear-
115 ness, has been omitted in the drawings. The said sign or tablet 72 is mounted upon the free end of a bent arm 73, which is soldered or otherwise secured to a small plate 74, pivoted
120 at 75 upon a lug 76, cast with the top plate. The said arm 73 passes by the said pivoted plate and is loosely connected at 77 to the horizontal lever 68, in a manner such that
125 when the said lever moves toward the chute and carries the rod into the slot it vibrates the bent arm 73 and the plate 74, which have a lever action, and causes the sign or tablet to descend in register with the slot in the casing, which may be covered with glass if de-
sired.

The horizontal lever 68 is vibrated against the tension of its spring 71 by means of a pin
130 78 and a connecting-rod 79, which is pivoted at 80 to the horizontal lever 68 at one end, and which at its opposite end is provided with a hook 81, adapted to be engaged by said pin

78. The rod 79 is preferably guided in a slot 82 in an upright lug 83.

The pin 78 is mounted upon a toothed wheel 84, having a stud or arbor 85 supported in a bearing in the top plate. A leaf-spring 86 operates to hold said wheel frictionally and prevent it from turning backward accidentally. The said toothed wheel 84 is turned by a pin 87 on an arm 88, fastened at the upper end of the shaft or spindle 10 and above the top plate. The said toothed wheel has, preferably, twelve notches or spaces between teeth. When the mainspring is run down, the pin 78 stands in the hook 81, and as the spring is wound up the pin travels around toward the left, away from the hook, until it arrives at the back of the hook. The wheel 84, bearing the pin 78, is turned one notch or tooth during the winding of the mainspring for each complete revolution of the mainspring-shaft, the pin 87 making one revolution for each such notch or tooth. Hence to fully wind the spring the main shaft and the pin 87 are required to make twelve revolutions toward the right. When the machine is operated, the pin 87 turns in the opposite direction or toward the left, and with each complete revolution turns the toothed wheel 84 one step and gradually causes the pin 78 thereon to travel back in the direction of the mouth of the hook. When the said pin enters the mouth of the hook and bears against the same, the mainspring has nearly exhausted its power, and at this time the next movement or two of the wheel 84 will cause the pin to move the hooked rod 79 in the direction of its length, the lever 68 to be vibrated, and the coin stop-rod 67 to be moved over into the chute, (and the tablet to be dropped,) thereby locking the machine against further usage. When the mainspring is rewound, the pin 78 is gradually caused to leave the hook and the spring 71 acts to return the rod and the tablet to their normal positions. In one revolution of the pin 87 the plug may be opened and closed one hundred times, and, since it takes twelve revolutions of the pin to turn the wheel 84 one revolution and bring the locking-pin 78 into contact with the hook, it will thus be seen that the machine may be actuated twelve hundred times before the coin-slot is locked or closed. Of course the parts may be otherwise proportioned, so as to obtain a greater or less number of revolutions of the parts.

The coin-chute is supported by an arm 89, cast with the top plate and projecting forwardly. At near the upper end of the chute the metal is cut away on the rear side, as seen at 90, to provide an opening large enough for the escape therethrough of any coin not as large in diameter as that intended for the machine. For instance, if the machine be made for operation with a five-cent piece, and a cent be dropped into the slot, instead of passing therethrough to the lower end and actuating the trip-arm it will escape or fall

out of the slot at the enlarged opening 90, as indicated by the dotted lines at Fig. 4. A five-cent piece would not thus escape but would fall to the bottom of the slot and actuate the trip-arm of the stop-lever.

I shall now describe the mechanism for controlling and actuating the music-box 91, which may be of the usual or any suitable construction, but I prefer to drive the barrel 92, having the pins which actuate the reeds or fingers 93, by a clock-spring and intermediate devices such as will now be described. At one end of the barrel-shaft 94 is attached a pinion 95, which is engaged by a crown-gear 96, sleeved upon a stud or arbor 97 and rigidly connected with a crank-arm 98, having a crank-pin 99, which is turned by a pin 100 at the enlarged forward end 101 of a shaft 102, the opposite or rear end of which is connected by a collar 103 and screws 104 to a shaft 105, projecting forwardly from a box or casing 106, which contains the clock-spring and wheelwork for rotating said shaft. The winding-shaft 107 of the spring protrudes through the back part of the casing or box and is made angular to receive a key or crank for windingsaid spring. From this construction it will be seen that the power of the clock-spring may be transmitted through the shafts 105 and 102 and that the rotation of the pin 100 will effect the rotation of the crank-arm 98, the crown-gear 96, the pinion 95, and the barrel 92, and thus enable a tune to be played. In order, however, to prevent the music-box from operating constantly, the instrument is provided as usual with a gear-wheel 108 on the barrel-shaft and with a train of gears therefrom to a regulator 109, adapted to a hook-shaped stop 110 on a spring-actuated lever 111, pivoted at 112 and provided at its lower end with a toe adapted to a perforation in the gear-wheel 108. This mechanism being of the usual construction I have not attempted to describe it fully and in detail and it will suffice to add that when the toe is in the perforation and one arm of the fly or regulator rests against the hook-shaped stop the barrel is locked against the driving-power.

I shall now describe the means whereby the barrel-locking lever 111 is controlled and actuated by the mechanism for ejecting the perfumery.

The spring 113 of the lever 111 acts to hold the toe or catch 114 at the lower end of the lever normally in the perforation in the wheel 108 to lock the barrel against rotation. The lever is vibrated and the toe or catch removed from the perforation by an arm or pin 115, projecting forwardly through an opening 116 in a supporting-plate 117, which arm or pin is formed integral with a rod 118, arranged to slide in a groove in said plate. The said rod is preferably formed of wire and is bent to form a rearwardly-projecting horizontal arm 119, and a downwardly-projecting arm 120, which moves in a wire loop 121, attached to the supporting-plate, and which serves to

prevent the rod 118 from rocking, while at the same time it acts to guide, together with a pin 122, the rod 118 in its back-and-forth movements. This rod is moved in one direction by a cam 123, fixed upon the spindle 27, the said cam acting upon the said arm 119 of the rod, and during its revolution in the direction of the arrow at Fig. 3^a it operates to move the rod toward the left and causes the finger 115 to pull along with it the upper end of the locking-lever 111, whereby the toe or catch is withdrawn from the perforation in the locking-wheel, and the spring-power is left free to drive the barrel and its connected mechanism. The rod 118 is returned to its normal position with the locking-lever by means of the spring 113, as the rise or highest part of the cam retreats or recedes from the arm 119.

The cam being mounted upon the spindle 27, which is geared to the spring-power which operates the plug-actuating wheel, it will be seen that, whenever said power is permitted to act, the rod 118, which controls the independent power which actuates the music-barrel, is operated upon to trip or release the mechanism driven by said independent power. Hence, whenever the coin is dropped into the slot and the perfumery-ejecting mechanism is set into action, the music-box is simultaneously thrown into operation, but this operation continues some moments after the opening and closing of the plug.

Various changes in detail construction and arrangement may be made without departing from the gist of my several improvements, and it will be understood that some of said improvements may be used without others. For instance, the tablet may be used without the coin-stop, or vice versa, and the trip-arm may be used without the fly, but I prefer to provide the machine with all of these devices and in substantially the manner shown and described.

Some of my improvements may be used in machines for vending other articles or ingredients than perfumery, and hence I do not wish to be limited in my claims, unless specifically stated, to the employment of a fluid-reservoir, as it will be apparent that the mechanism may be used in connection with a suitable hopper or receptacle for vending solid as well as fluid articles of manufacture. While I prefer to employ a full wheel or disk for actuating the crank through the link, as thereby greater momentum and a better balancing of the parts may be obtained, portions of the wheel or disk may, however, be removed, so that the rotating member will consist merely of an arm. In regard to the tripping mechanism actuated by the coin the essence of the improvement (whereby the rotative member or wheel is positively released and prevented from relocking) consists in the employment of two stop portions, one of which has an independent movement toward the other when the trip takes place, so as to

pass by the end or face of the other immediately the two are separated, and thereby prevent the relocking or restopping of the parts before the intended action of the mechanism takes place.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a vending-machine, the combination of a valve-controlled fluid-reservoir, a crank connected to the valve, a link, and a power-driven normally restrained rotative member having a lost-motion connection to said link whereby said rotative member may make a partial revolution without opening said valve; substantially as set forth.

2. In a vending-machine the combination with a valve-controlled fluid-reservoir, a crank, a link, a power-driven wheel having a stud adapted to play in a slot in said link, and a stop-lever adapted to normally restrain said wheel and provided with a trip-arm adapted to be actuated by a descending coin; substantially as set forth.

3. In a vending-machine, the combination of a power-driven rotative member, a horizontally-arranged coin-actuated stop-lever therefor, provided with a depending arm, a coin-chute, a vertically-arranged spring-pressed stop on said rotative member bearing normally against the free end of said stop-lever and an abutment on said rotative member to hold said spring-pressed stop against backward movement when it encounters the end of said stop-lever; substantially as set forth.

4. In a vending-machine, the combination with a valve-controlled fluid-reservoir, a crank, a link, a power-driven rotative member connected thereto, a spring-actuated fly on said member, and a coin-actuated stop-lever adapted to said fly; substantially as set forth.

5. In a vending-machine, the combination of a coin-chute having an opening, an upright pivoted coin stop-rod, a horizontally-arranged lever connected to said upright stop-rod, a vertically-arranged lever having at one end an "Empty" sign or tablet and having a connection to the aforesaid horizontally-arranged lever, whereby said lever may simultaneously actuate the said stop-rod and the said tablet, and means for moving said lever when the machine is empty or inoperative, substantially as set forth.

6. In a vending-machine, the combination of a coin-chute or passage-way, a stop, a lever, adapted to move said stop into said chute or passage-way, a driving mechanism, a step-by-step rotating pin, and a hooked rod connected at one end to said lever and adapted to be actuated at its hooked end by said pin; substantially as set forth.

7. In a vending-machine, the combination of a coin-chute or passage-way, a pivoted stop therefor, a spring-actuated lever, a connecting-rod attached thereto at one end and provided at its opposite end with a hook, a

toothed wheel provided with an actuating-pin, a crank-pin for turning said toothed wheel, and a spring driving power; substantially as set forth.

5 8. In a vending-machine, the combination of a sign or tablet to indicate visually when the machine is empty or inoperative, a lever upon which said sign or tablet is fixed, a spring driving mechanism, and intermediate
10 devices connecting said tablet-lever to said spring driving mechanism for vibrating the tablet into view when the spring driving mechanism has made a predetermined number of revolutions; substantially as set forth.

15 9. In a vending-machine, the combination of a sign or tablet mounted upon a lever, a second spring-actuated lever connected with the latter, a connecting-rod having a hook at one end, a pin adapted to move said rod and
20 mounted upon a step-by-step wheel, a crank-pin turning said wheel, and a spring driving power; substantially as set forth.

10. In a vending-machine, the combination of a coin-chute or passage-way, a coin-stop
25 adapted thereto, a spring-actuated lever connected thereto, a tablet-bearing lever connected to said spring-actuated lever, a spring driving power, and intermediate devices substantially as described for moving said spring-
30 actuated lever when the machine is empty or has become inoperative; substantially as set forth.

11. In a vending-machine, the combination of the driving-spring, the driving-spring
35 shaft, the crank-arm secured thereto, the crank-pin, the notched wheel adapted to be turned by said crank-pin, the wrist-pin on said notched wheel, the hooked connecting-rod, the spring-actuated lever, the movable
40 tablet connected thereto, the movable coin-stop also connected thereto, and the coin-chute or passage-way; substantially as set forth.

12. In a vending-machine, the combination
45 of a valve-controlled fluid-reservoir, a crank, a slotted link, a wheel or disk, a driving-spring and intermediate wheelwork for rotating said wheel or disk, a movable stop for said wheel or disk, a coin-chute and a tripping-arm at
50 the lower end of said chute and connected to said movable stop; substantially as set forth.

13. In a vending-machine, the combination of a music-box, a driving-spring, means for
55 normally retaining the action of the music-box, an independent power-driven coin-controlled vending mechanism, and means for connecting said latter mechanism with the music-box mechanism and so arranged that when the vending mechanism is set into ac-
60 tion by the deposit of a coin, it automatically trips or releases the music-box mechanism for action; substantially as set forth.

14. In a vending-machine, the combination of a spring-driven music-box having a lock-

ing-lever, a power-driven coin-controlled
65 vending mechanism, a device for releasing said locking-lever, and means connected to the vending mechanism for actuating said releasing device; substantially as set forth.

15. In a vending-machine, the combination
70 of a spring-driven music-box having a locking-lever, an arm for releasing the same, a cam for actuating said arm, and a coin-controlled vending mechanism to which the cam is connected or of which it forms a part; sub-
75 stantially as set forth.

16. In a vending-machine, the combination of a valve-controlled fluid-reservoir, a crank, a link, a rotative member, a spring and wheel-
80 work for turning said member upon the release thereof by the descent of a coin, a cam on one of the spindles of the wheelwork, a movable rod actuated by said cam, and provided with an arm, and a spring-driven mu-
85 sic-box having a locking-lever adapted to be released by said cam-actuated arm; substantially as set forth.

17. In a vending-machine, the combination of the music-barrel, having a gear-wheel, a companion gear-wheel on a separate axis for
90 turning the same, the crank 98 on the axis of the companion gear-wheel, and a power-driven shaft connected to said crank for rotating the same; substantially as set forth.

18. In a vending-machine, the combination
95 of the music-barrel, the pinion thereon, the gear-wheel for turning the same, the crank 98 on the axis of said gear-wheel, the crank-pin 99 on crank 98, the crank-pin 100, and the spring-driven shaft 102 carrying said
100 crank-pin 100; substantially as set forth.

19. In a vending-machine, the combination of a spring-driven vending mechanism, means for restraining the action thereof until the de-
105 posit of a coin, an independent spring-driven music-box mechanism, means for controlling the latter, means actuated by the vending-mechanism spring when released for action for simultaneously actuating the means for
110 controlling the music-box spring; substantially as set forth.

20. In a vending-machine, the combination of a valve-controlled fluid-reservoir, a spring-
115 driven mechanism for opening and closing the valve, a coin-controlled mechanism for releasing said valve-operating mechanism, a spring-driven music-box, and a means for releasing the music-box-driving mechanism connected to and controlled by the valve-op-
120 erating mechanism; substantially as set forth.

Signed at New York city, in the county of New York and State of New York, this 30th day of April, A. D. 1895.

LOUIS P. VALIQUET.

Witnesses:

JACOB FELBEL,

K. V. DONOVAN.