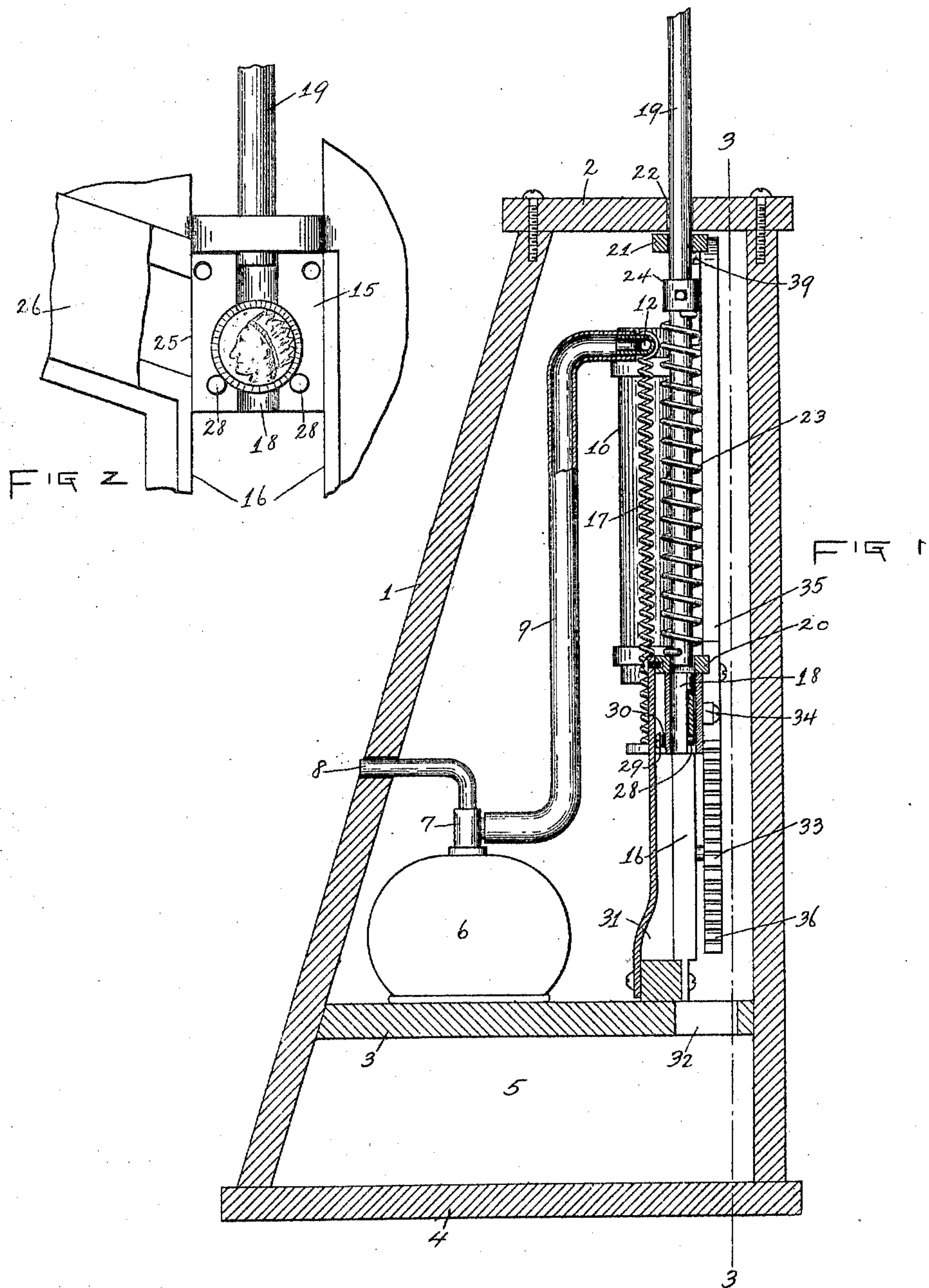


No. 817,231.

PATENTED APR. 10, 1906.

P. A. DUNN.
COIN CONTROLLED ATOMIZER.
APPLICATION FILED NOV. 21, 1904.

4 SHEETS—SHEET 1.



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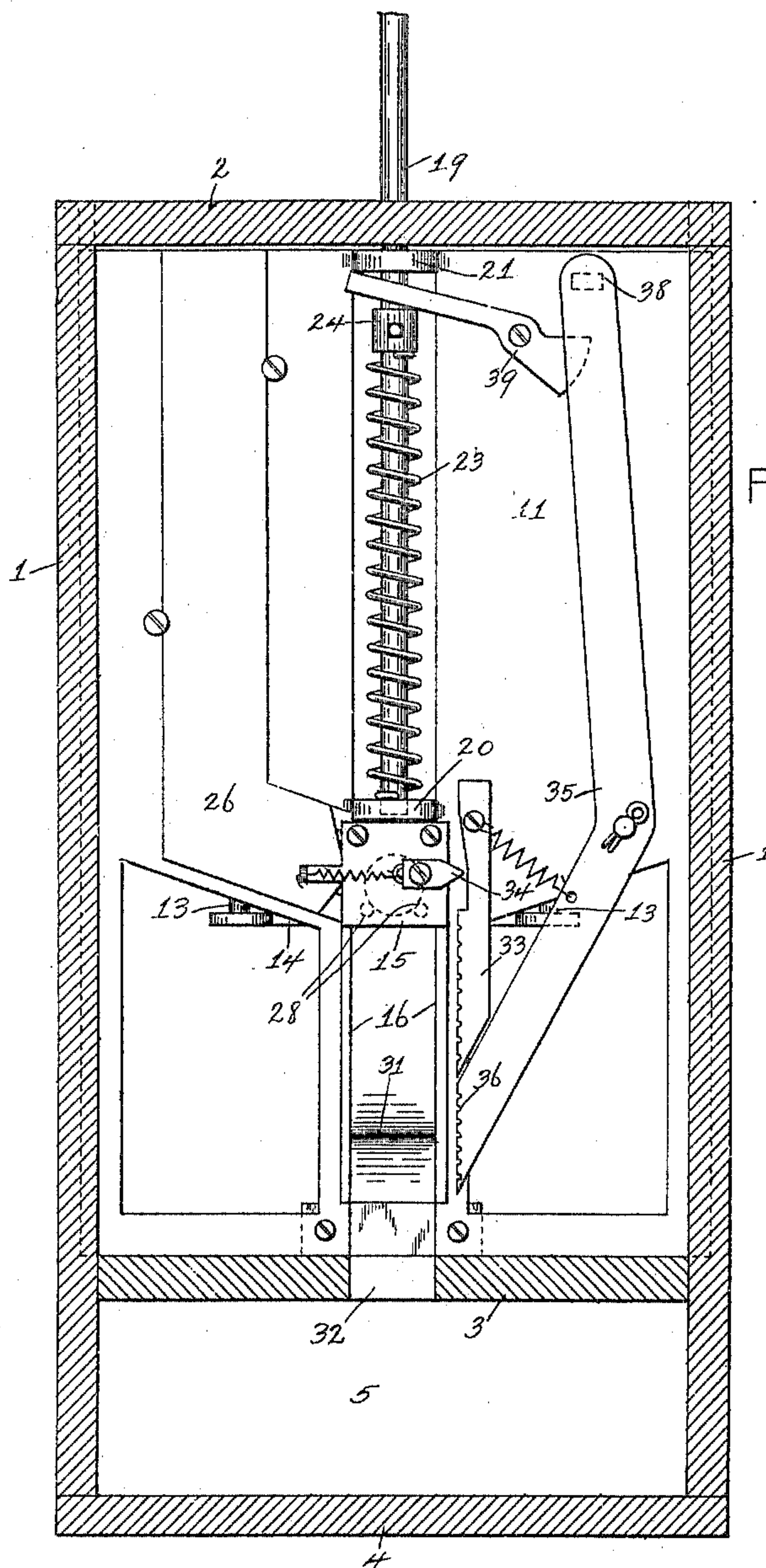
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4 SHEETS—SHEET 2.



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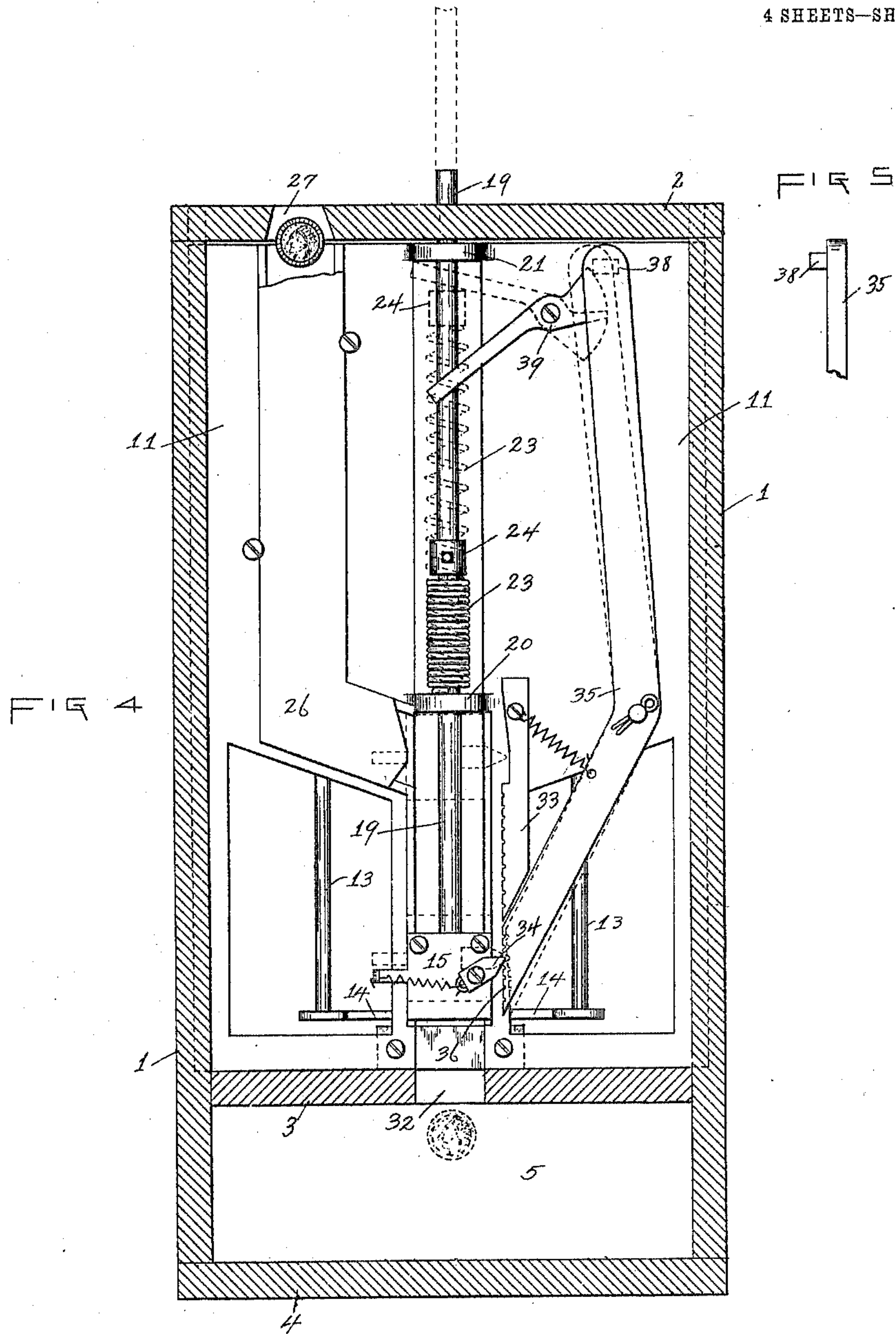
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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.

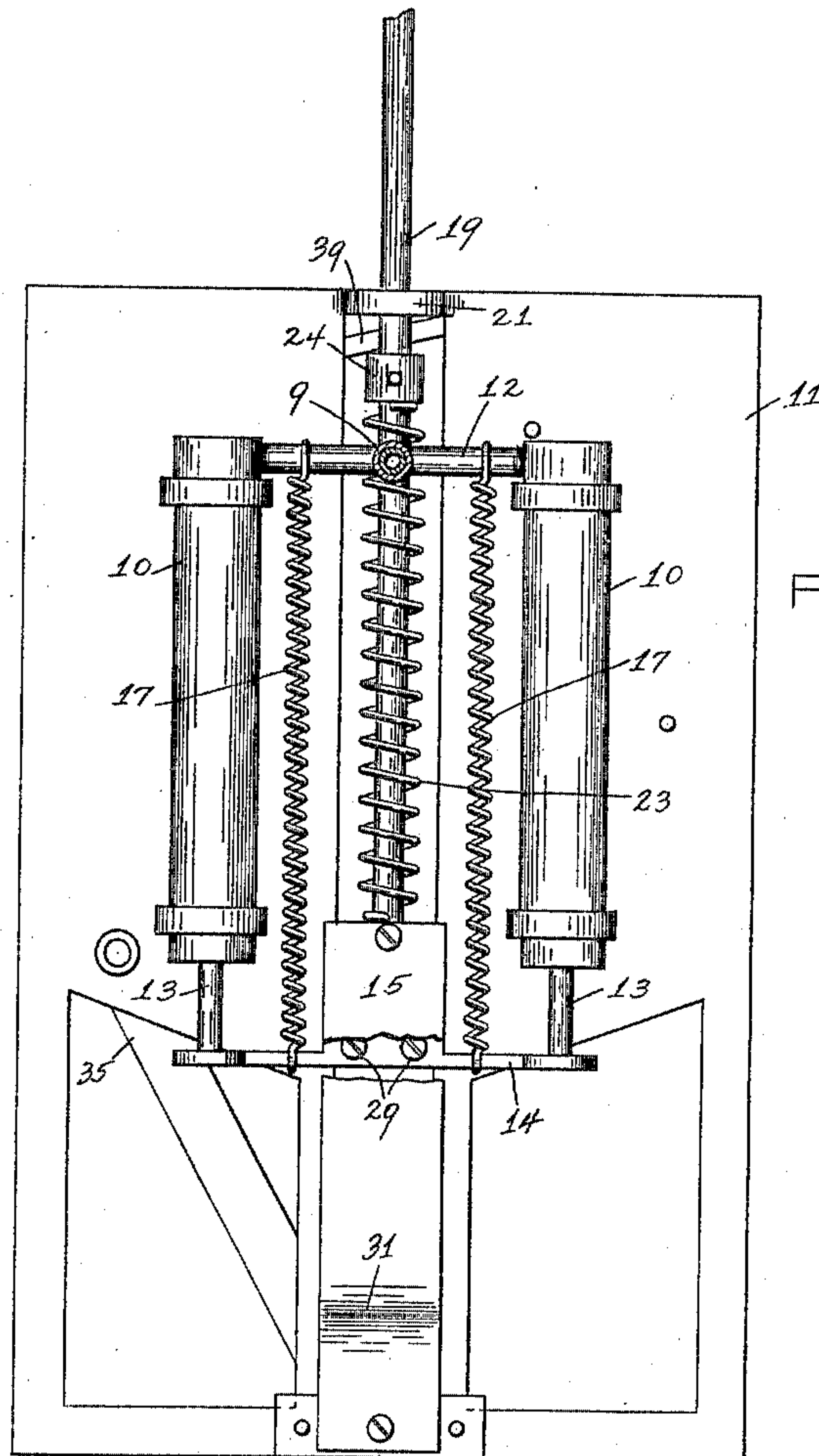


FIG 6

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UNITED STATES PATENT OFFICE.

PIERCE A. DUNN, OF GREEN ISLAND, NEW YORK.

COIN-CONTROLLED ATOMIZER.

No. 817,231.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed November 21, 1904. Serial No. 233,656.

To all whom it may concern:

Be it known that I, PIERCE A. DUNN, a citizen of the United States, residing at Green Island, county of Albany, and State of New York, have invented certain new and useful Improvements in Coin-Controlled Atomizers, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a central vertical section from front to rear of my improved check-controlled atomizer. Fig. 2 is a view of the traveling coin-holder in position at the upper end of its slideway and the neighboring end of the coin-chute, on an enlarged scale, the back plate of the coin-holder being removed. Fig. 3 is a vertical section taken on the broken line 3 3 in Fig. 1, showing the case-inclosed mechanism in rear elevation with the parts in normal position. Fig. 4 is a similar view with the plunger depressed. Fig. 5 is a view, in side elevation, of the upper end of the releasing-lever. Fig. 6 is a view, in front elevation, of the air-pumps, their operating mechanism, and the supporting-plate for the same.

The principal object of my invention is to facilitate the delivery in atomized form of liquids, such as perfume, in limited quantities at the will of persons desiring the same upon depositing in a suitable receptacle therefor a check or coin of stated denomination.

Other objects of the invention will appear in connection with the following description.

Referring to the drawings, wherein the invention is shown in its preferred form, 1 represents a case or inclosure, preferably having a removable top 2 and a false bottom 3, between which and the true bottom 4 is located a coin-chamber 5, adapted to receive the coins from time to time deposited in the machine.

The liquid to be delivered is contained in a bottle 6, which rests upon said false bottom 3 and is provided with an atomizer 7, the nozzle 8 of which projects through the front of the inclosure, air under pressure being supplied to said atomizer from time to time

through the pipe 9, leading from a pair of air-pumps 10, the cylinders of which are mounted in fixed position upon a vertically-arranged plate 11, which also supports the mechanism for operating said air-pumps and which is removable and insertible through the upper open end of the inclosure when the cover 2 is removed. The edges of said plate 11 fit and are adapted to slide vertically in vertical grooves formed in the side walls of the inclosure, and when inserted said plate is adapted to rest upon the false bottom 3 and be secured within the inclosure by the cover 2.

The atomizer may be of any known form adapted to be operated by an air-blast.

The cylinders of the air-pumps are connected together at their upper ends by a cross-pipe 12, with which is also connected the pipe 9, which leads to the atomizer.

The air-pumps are of the usual form of plunger air-pumps, similar to the ordinary bicycle-pump, and their piston-rods 13 are connected together at their lower ends by a cross-bar 14, upon which is fixed a coin-holder 15, which fits and is adapted to reciprocate vertically in a slideway 16, formed upon the plate 11.

A pair of coil-springs 17 connect the cross-bar 14 with the cross-pipe 12 and tend to yieldingly hold the cross-bar 14, with its connected coin-holder 15 and piston-rods 13, in raised position, which is their normal position. The coin-holder 15 is provided with an aperture 18, adapted to permit the passage therethrough of the vertically-arranged plunger 19, which is reciprocatory longitudinally in the bearings 20 and 21 on the plate 11 and is adapted to project upwardly through an aperture 22 in the cover of the inclosure, where it is accessible to the hand of a person desiring to operate the machine. This plunger is normally yieldingly retained in raised position by the force of the spring 23, inclosing the plunger, with its lower end engageable with the bearing 20 and with its upper end engageable with the shoulder or sleeve 24 on the plunger.

When the plunger is in elevated position, its lower end projects slightly within the upper end of the aperture in the coin-holder 15, or is just above said aperture, through which it is adapted to freely reciprocate, except when its path is blocked by the location of a coin within the holder.

One side of the coin-holder is open at 25

and adapted, when the coin-holder is in elevated position, to register with the lower end of a coin-chute 26 on the plate 11, the upper end of which chute registers with a coin-slot 5 27 in the cover of the inclosure.

The coin-holder is provided with a removable coin-supporting bottom formed by two pins 28, reciprocatory laterally through the front plate of the holder on opposite sides of the aperture 18, said pins having heads 29 located outside the holder, between which heads and the front wall of the holder are interposed coil-springs 30, which tend to withdraw said pins outwardly.

15 The front wall of the slideway 16 is located adjacent to the path of the coin-holder in position to be engaged by the heads 29 of said pins and to hold the pins in opposition to the force of their actuating-springs until the holder reaches the end of the path of the intended plunger-induced movement, whereat said slideway-wall is provided with a recess 31, adapted to receive said pins and permit them to be withdrawn by the force of their 25 actuating-springs, and thus to remove the support for the coin and permit the same to fall from the holder through the aperture 32 into the coin-chamber 5. When not withdrawn, said pins are adapted to support a coin in opposition to the thrust of the plunger 19; but they are so spaced apart that they will not support a coin of less than the size intended for use in the machine, but will permit such a coin to drop between said pins out 35 of the holder without operation of the machine. When a coin of the required size is supported by said pins, it is in position to be engaged by the plunger 19 and affords a medium through which said plunger and coin-holder are connected, whereby the coin-holder can be operated in opposition to the force of its actuating-springs 17.

Adjacent to the path of the coin-holder is a fixed toothed rack 33, adapted to be engaged by a dog 34, mounted on the holder, whereby when a partial movement has been imparted to the holder it cannot return to its elevated position until the downward movement has been completed.

50 A releasing-lever 35 is mounted on the plate 11 adjacent to the fixed rack 33 and is provided on its lower end with a toothed rack 36 adjacent to the lower end of the fixed rack in line therewith and adapted to form a practical continuation thereof at certain 55 times and adapted to be engaged by the dog 34. The upper end of the releasing-lever 35 is provided with an offset or lug 38, adapted to engage a detent-lever 39 in certain positions of the latter and be held thereby locked in position with its rack in line with the fixed rack 33 and adapted to prevent, through the dog 34, upward movement of the coin-holder.

When the detent is removed from the path of 65 said lug, the releasing-lever can yield to per-

mit the dog to reverse its position, thereby releasing the coin-holder to the action of its actuating-springs 17.

The upward movement of the coin-holder carries the dog above the upper end of the 70 fixed rack 33, permitting the dog to again reverse itself for the next operation of the machine.

The detent-lever normally automatically assumes a position in the path of the lug on 75 the releasing-lever and is adapted to be engaged and operated by an offset 24 on the plunger when the latter is moved upwardly.

By mounting all of the operating mechanism upon a single plate 11, as shown, which 80 is insertible and removable through a cover-closed opening in the case or inclosure, I make it practically unnecessary to undertake repairs to such mechanism at the place where the machine is in use, as it is comparatively 85 easy to remove the plate with the defective mechanisms thereupon and substitute another plate with perfect mechanisms in place thereof. The plate with defective mechanism can be taken to the shop or factory, where 90 repairs can be readily made.

The operation of the machine is as follows: A coin having been inserted through the cover-slot 27, passes downwardly through the chute 26 into the coin-holder, where it 95 rests upon the pins 28 in the path of the plunger, which can then be operated to depress the coin-holder and the cross-bar 14, carrying therewith the pistons of the air-pumps. When the pins 28 reach the recess 31, they 100 enter the same and are withdrawn from beneath the coin, which thereupon falls out of the holder into the coin-chamber 5. Then upon the plunger being released it will be forced upwardly by its spring 23, causing its 105 flange 24 to engage and operate the detent-lever 39 and withdraw the same from the path of the releasing-lever, which is thus left free to yield to the pressure of the dog 34, permitting said dog to reverse its position, and 110 thereby release the coin-holder to the action of its springs 17, which force the holder upwardly, causing the pistons of the air-pumps to drive a supply of compressed air through the atomizer. The detent-lever is released 115 from control of the plunger before the dog reaches the rack on the releasing-lever when the machine is operated.

I do not wish to be limited to the specific use of the machine above described, as the 120 form of the ejecting mechanism can be varied to meet different conditions.

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

1. In a machine of the class described, and 125 in combination, spring-actuated ejecting mechanism; a movable coin-holder connected with and adapted to operate said ejecting mechanism in opposition to its actuating-spring; a plunger adapted to be connected 130

with said coin-holder through the medium of a coin inserted therein; a stationary toothed rack adjacent to the path of the coin-holder; a lever having thereon a toothed rack adjacent to the path of the coin-holder at the end of said fixed rack; a dog on the coin-holder engageable with said racks successively; means for releasing the coin from the holder at the end of the holder movement; and means for locking said lever during the plunger-induced movement of the coin-holder and releasing the same upon release of the coin from the holder.

2. In a machine of the class described, and in combination, spring-actuated ejecting mechanism; a movable coin-holder connected with and adapted to operate said ejecting mechanism in opposition to its actuating-spring; a plunger adapted to be connected with said coin-holder through the medium of a coin inserted therein; a stationary toothed rack adjacent to the path of the coin-holder; a lever having thereon a toothed rack adjacent to the path of the coin-holder at the end of said fixed rack; a dog on the coin-holder engageable with said racks successively;

means for releasing the coin from the holder at the end of the holder movement; a detent automatically movable into the path of said lever; and an offset on said plunger engageable with said detent to remove the same from the path of said lever.

3. In a machine of the class described, and in combination, ejecting mechanism; a movable coin-holder connected with the ejecting mechanism and having a coin-supporting reciprocatory pin; a spring adapted to remove said pin from the path of a coin in the holder; a plunger adapted to be connected with said holder through the medium of a coin supported therein; and a slideway adjacent to the path of said holder adapted to engage and hold said pin in opposition to the force of said spring, and provided with a recess adapted to receive said pin at the end of the plunger-induced movement of the holder.

In testimony whereof I have hereunto set my hand this 19th day of November, 1904.

PIERCE A. DUNN.

Witnesses:

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