

(No Model.)

3 Sheets—Sheet 1.

H. M. WILSON.

COIN OPERATED PERFUMING APPARATUS.

No. 446,639.

Patented Feb. 17, 1891.

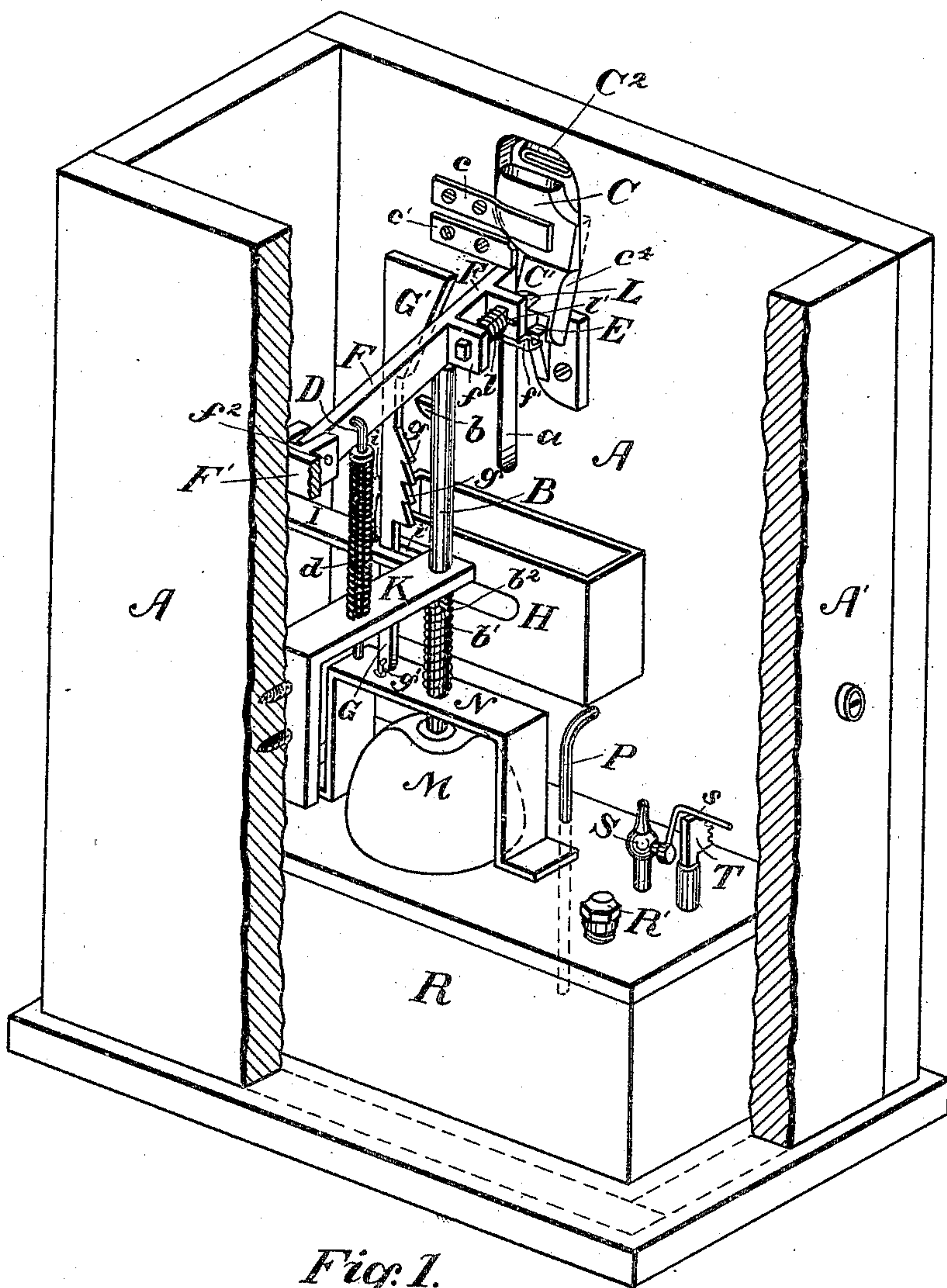


Fig. 1.

Witnesses

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W. H. Thompson.

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by M. B. Adams
his atty.

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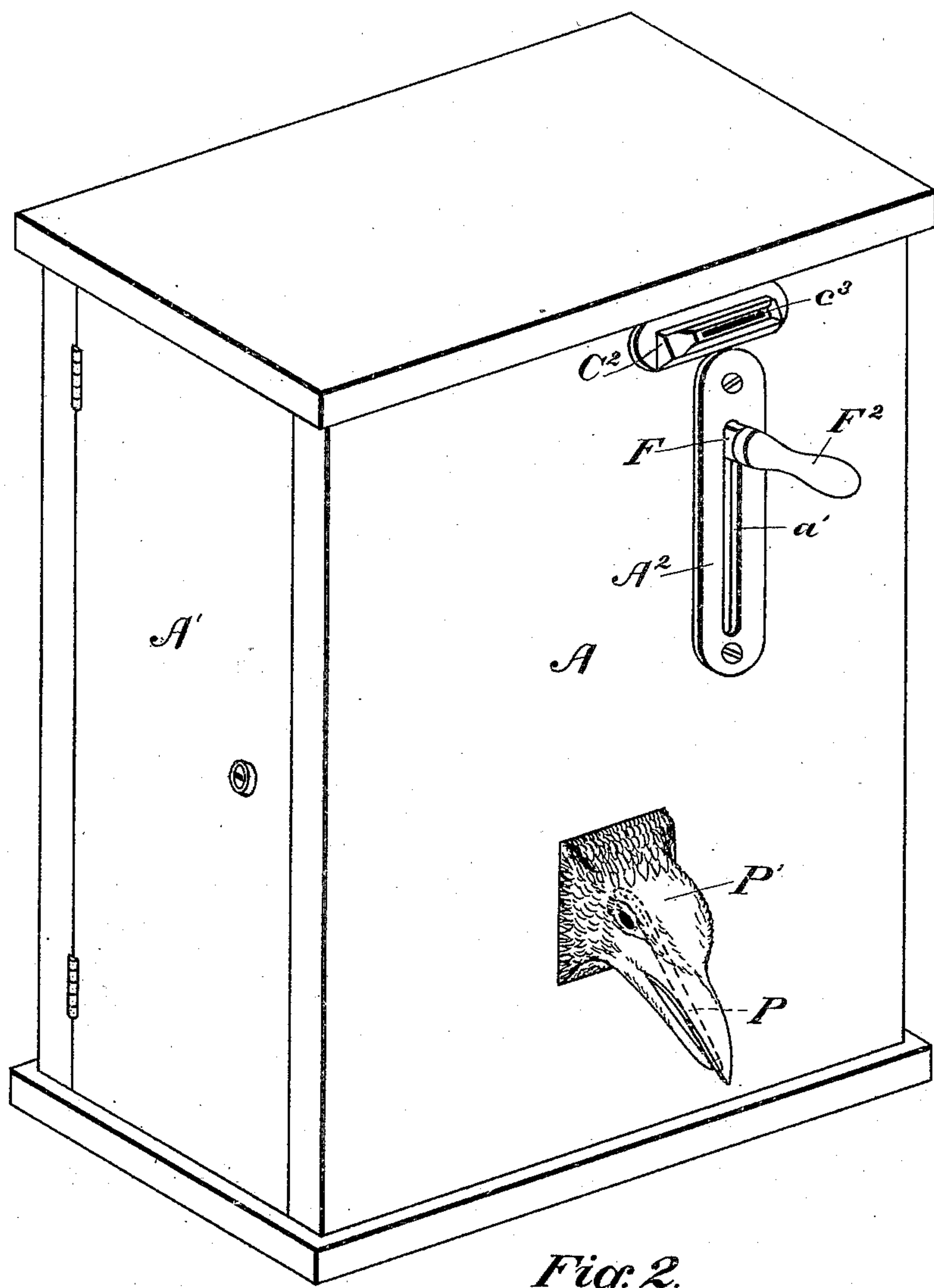


Fig. 2.

Witnesses

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(No Model.)

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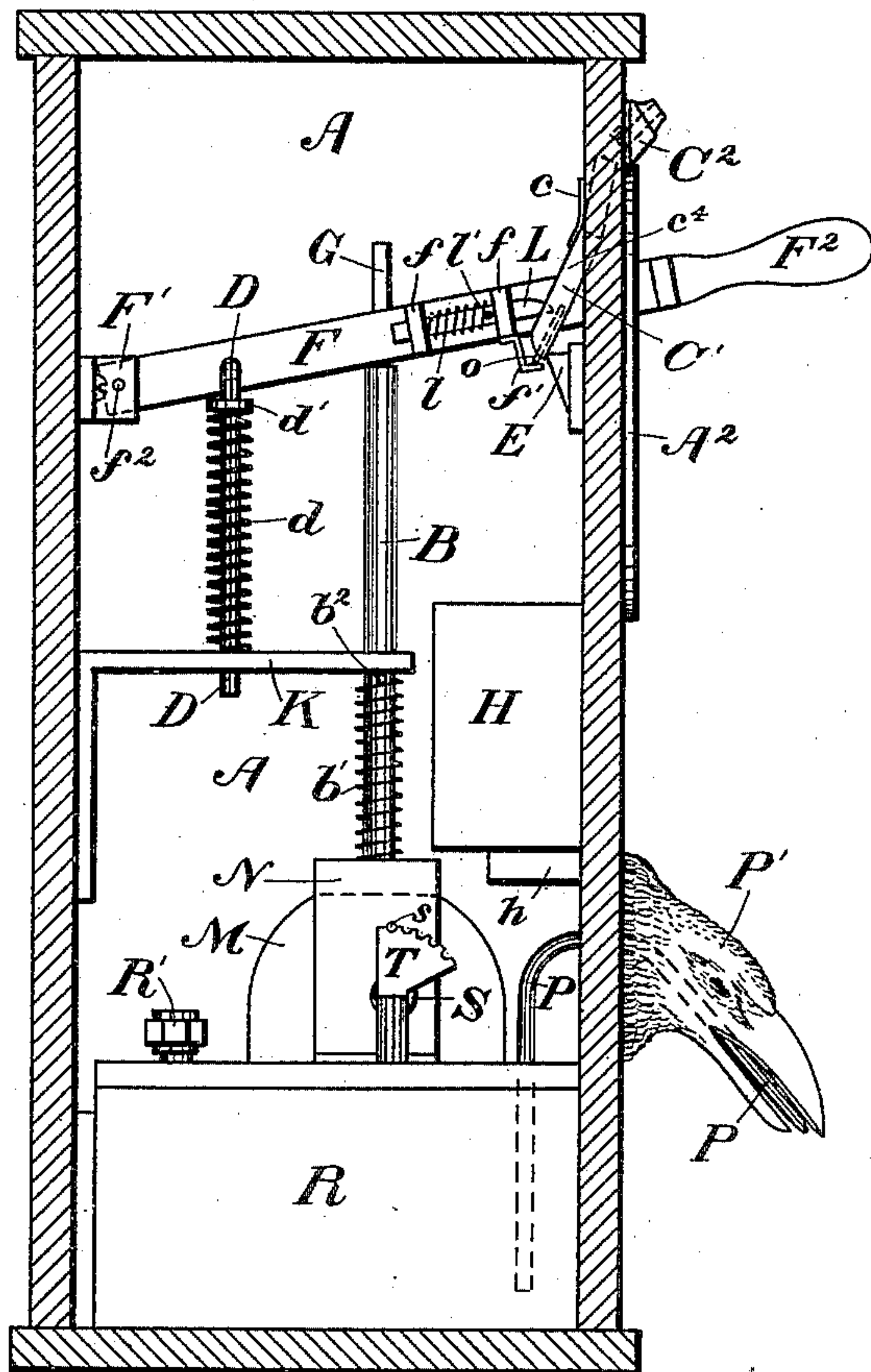


Fig. 3.

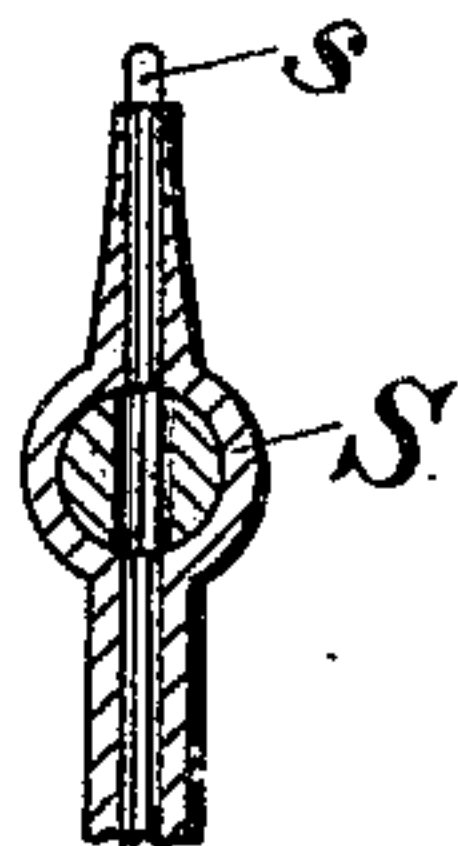


Fig. 4.

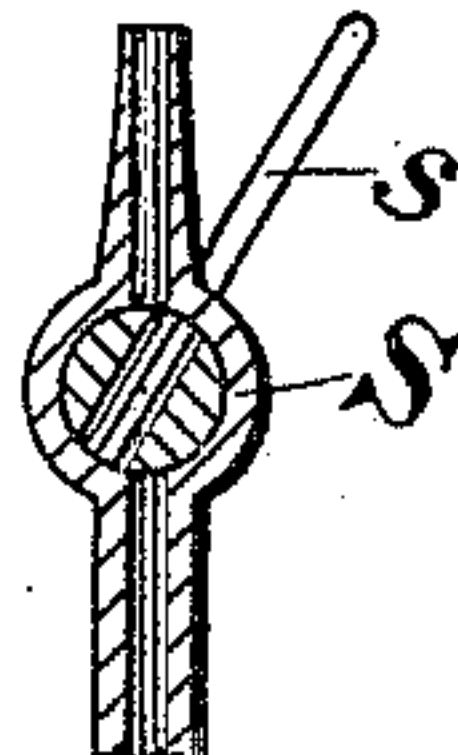


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

HORACE M. WILSON, OF CAMBRIDGE, ASSIGNOR OF ONE-HALF TO W. B. H. DOWSE, OF NEWTON, MASSACHUSETTS.

COIN-OPERATED PERFUMING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 446,639, dated February 17, 1891.

Application filed April 7, 1890. Serial No. 346,863. (No model.)

To all whom it may concern:

Be it known that I, HORACE M. WILSON, a citizen of the United States, residing at Cambridge, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Coin-Operated Perfuming Apparatus, of which the following is a full specification.

My invention consists of an approved apparatus having mechanism such that when a coin of proper denomination is dropped into a slot a lever may be operated by means of a handle on the outside of the machine and a determined quantity of cologne or other liquid delivered in a stream or spray, the amount of liquid thus delivered in return for the coin being readily regulated by a simple valve arrangement.

In the accompanying drawings, Figure 1 is a perspective view of a form of apparatus embodying my invention, the inclosing case being represented as having its side and end broken away and the cover removed in order to show the operation of its interior parts. Fig. 2 is a perspective front and end view of the apparatus. Fig. 3 is a sectional elevation near the door end of the casing, and Figs. 4 and 5 are sectional views of the regulating-valve in different positions.

A is the casing inclosing the working parts, one end of which A' is hinged, as shown, to open as a door and give access to the interior.

The cologne or other liquid is contained in an air-tight receptacle R, the top of which is preferably provided with a screw-cap R', whereby the liquid may be introduced therein.

M is a flexible bulb secured in an air-tight manner to the top of the liquid-receptacle R to communicate with the interior thereof, being held thereon in any desired way, as by cementing the edges of the bulb around a raised rim or flange on the top of the said receptacle. To the top of the bulb M is secured the bottom of a rod B, guided to move vertically by passing through holes in the bracket K and piece N.

F is a lever pivoted at its inner end, at f^2 , to a piece F', secured to the back of the casing, the said lever resting against and bearing upon the top of the rod B. At its outer end

the lever F terminates in the handle F^2 outside the casing, by means of which the said lever is operated, being guided to move up and down by the vertical slit a' , made in the plate A^2 , secured to the front of the casing, a being a corresponding slit made in the material of the front. The lever F is kept normally at its highest position by means of a spring d , which, as here shown, surrounds the rod D, secured at the top to the lever F and passing through a hole in the bracket K. This spring d is seated at its top against the piece d' , fixed on the rod D, and at its bottom against the said bracket K, so that whenever by the handle F^2 the lever is depressed it will immediately be pushed upward again to its highest point, even if the handle is released at its lowest position.

c' is a stop against which the lever rests when at its highest point. The said lever is ordinarily kept locked at or near its extreme upward position by means of the latch L, which slides back and forth in two lugs f on the said lever. The spring l , seated between the rearmost lug f and the pin l' on the latch L, tends to keep the said latch at its forward position, (shown in Figs. 1 and 3,) in which position the latch engages with the stationary locking projection E, fixed to the casing, when it is attempted to press down the handle F^2 , rendering it impossible to do so. When the lever F is up, the rod B is also kept at its uppermost position—i. e., with the bulb M distended—by means of the spring b' , seated between the top of the piece N and the pin b^2 in the said rod.

G' is a cam surmounting an arm G, which is pivoted at its lower end at g' to the piece N. This cam G' is continually pressed inward toward the lever F by means of a spring i , Fig. 1, mounted in the support I, and the arm G is guided laterally by means of the slot i' in the bracket I. The arm G is provided with a series of teeth g , having inclined tops, as shown, being arranged like a series of ratchet-teeth pointing downward.

b is a projection on the rod B, engaging with the teeth g when the lever is pressed down, the arrangement and construction being such that when a coin is inserted, as here-

inafter described, and the lever is pressed down the cam G' will move forward sufficient to allow the projection b to engage with one of the teeth g . When the lever is pressed down 5 and the bulb M depressed, a certain quantity of the liquid is forced out through the tube P , which passes tightly through the top of the liquid-receptacle R , reaching nearly to the bottom thereof, passes out through the front 10 of the casing, and terminates at its outer end, preferably in an ornamental figure P' , the said outer end being of such a shape as to deliver the liquid either in a spray or single stream, as desired.

15 C^2 is the outer coin-channel, fixed to the front of the casing, near the top thereof, and having the slot c^3 of sufficient size to contain easily within it the coin of proper denomination to render the machine operative. From 20 the outer channel C^2 the coin drops into the inner curved channel C , thence slides down the trough C' onto the bracket f' , fixed to a lug f on the lever F , finally resting in an inclined position against the bracket f' , and the 25 bottom of the trough C' being retained laterally between the flange c^4 on the trough C' on one side and the lever F on the other. The coin is shown in this position in Fig. 3, being lettered o . When the coin is in this position, 30 the handle F^2 and lever F may be pressed down, for the coin covers the locking projection E in an inclined position and acts as a cam, causing the latch L , as its forward end moves over the coin, to slide back sufficiently 35 to clear the said locking projection E , the bottom of the trough being cut away over the projection E , as shown in Fig. 1. When the latch has cleared the locking projection, the coin drops back upon said latch and thence 40 into a suitable coin-receptacle H , which, as here shown, consists of a removable box held on a shelf h by spring-pressure or otherwise. The lever when once unlocked is then pressed down completely, which pushes down the rod 45 B and depresses the bulb M . The lever being disengaged from the cam G' , the arm G is pressed forward, allowing the projection b on the rod B to engage with one of the teeth g , thus holding down the rod while the liquid 50 is discharged through the pipe or tube P .

55 S is a bulb on a tube arising from the top of the liquid-receptacle and communicating with the interior, the said bulb containing a rotary regulating-valve, as shown in Figs. 4 and 5. This valve controls the amount of liquid delivered each time the machine is operated by regulating the force of the air compressed in the receptacle R upon the depressing of the bulb M . Each time the said bulb 60 is pressed down the liquid flows out through the tube P as long as there is force enough to drive it. If the valve is open, as shown in Fig. 4, obviously when the bulb M is depressed air escapes quite freely through the said 65 valve. The force is soon spent within the liquid-receptacle, and but little liquid is de-

livered from the tube P . On the other hand, when the valve in the bulb S is closed, as shown in Fig. 5, more time is taken to use up 70 the force within the receptacle, which is almost all utilized in driving out the liquid, a large quantity of which is delivered from the tube on pressing down the lever. By turning the valve in various intermediate positions between these two extremes the quan- 75 tity of liquid to be delivered in return for the coin can be varied and fixed as desired. I have shown the valve-stem connected with the arm s , which traverses the notched plate T as a convenient method of holding the 80 valve in various positions. When the lever F and rod B have been pushed down in the manner described and the handle F^2 released, the lever will at once return to its uppermost position by the spring d , the front of the 85 latch L sliding over the beveled front surface of the projection E as a cam, thus pushing back the latch, which, under the influence of the spring l , returns to its normal position above the said projection, thus locking the 90 lever so that it cannot be again pushed down till another coin is inserted. While the lever F is thus at once returned to its uppermost position, the rod B is held down for a longer time by means of the projection b 95 being locked under one of the ratchet-teeth g . The rod is held in this position until the lever F as it rises engages with the inclined front surface of the cam G' , when the said cam being pushed back by the lever the tooth 100 g is released from the projection b , allowing the rod B to rise by means of the spring b' .

The series of teeth g act as a safety device, preventing all possibility of the handle F^2 , when once rendered operative by a coin, 105 from being pumped up and down indefinitely below the position required for locking the same, thus enabling a large amount of liquid to be fraudulently obtained. The teeth g are so arranged that even when the lever F 110 has been pressed down a little the projection b on the rod B will catch in one of them and the rod cannot return until the lever is raised far enough to lock itself. The ratchet-teeth g are furthermore arranged so closely to- 115 gether that the pumping operation cannot be carried on between them, so that the machine can never be worked fraudulently and cannot by any possibility be made to deliver more than the determined amount of liquid 120 in exchange for the coin.

I claim—

1. In a liquid-delivering apparatus, a liquid-receptacle provided with a discharge-tube and a flexible bulb, in combination with a 125 sliding rod operating said bulb, and a lever provided with a coin-operated locking-latch, constructed and arranged substantially as described.

2. In a coin-operated apparatus, a handle- 130 lever provided with a sliding spring locking-latch, in combination with a coin-guiding

trough, a coin-holding bracket connected with said lever, and a stationary locking projection engaging with the latch, arranged whereby when a coin is introduced the lever may
5 be unlocked, substantially as described.

3. In a coin-operated apparatus, a lever provided with a handle F^2 and having a coin-operated spring locking-latch L sliding in
10 lugs f on said lever, substantially as described.

4. In a liquid-delivering apparatus, a lever F , in combination with a bulb-operating sliding rod provided with a projection b , a pivoted arm G , surmounted by a cam engaging
15 with said lever, the said arm being provided with teeth g , engaging with said projection, and springs counteracting said lever-rod and arm, arranged and operating substantially as
and for the purposes described.

20 5. In a liquid-delivering apparatus, the combination, with a liquid-receptacle provided with a flexible bulb and having a rotary regulating-valve, of a sliding rod operating said bulb, and a lever operating said rod, con-

structed and arranged substantially as and
25 for the purposes described.

6. In a coin-operated apparatus, a lever provided with a sliding coin-operated spring locking-latch, substantially as described.

7. In a coin-operated apparatus, the combination, with a lever having a sliding coin-operated locking-latch, of a stationary locking projection E , engaging with said latch,
30 substantially as and for the purposes described.

8. In a liquid-delivering apparatus, the combination, with a rotary regulating-valve provided with the arm s , of a notched plate T , traversed by said arm, arranged and operating
35 substantially as and for the purposes described.

In witness whereof I have hereunto set my hand.

HORACE M. WILSON.

Witnesses:

W. B. H. DOWSE,
ALBERT E. LEACH.