

No. 781,634.

PATENTED FEB. 7, 1905.

P. F. COX.

CHECK OR COIN CONTROLLED VENDING MACHINE.

APPLICATION FILED FEB. 19, 1904.

2 SHEETS—SHEET 1.

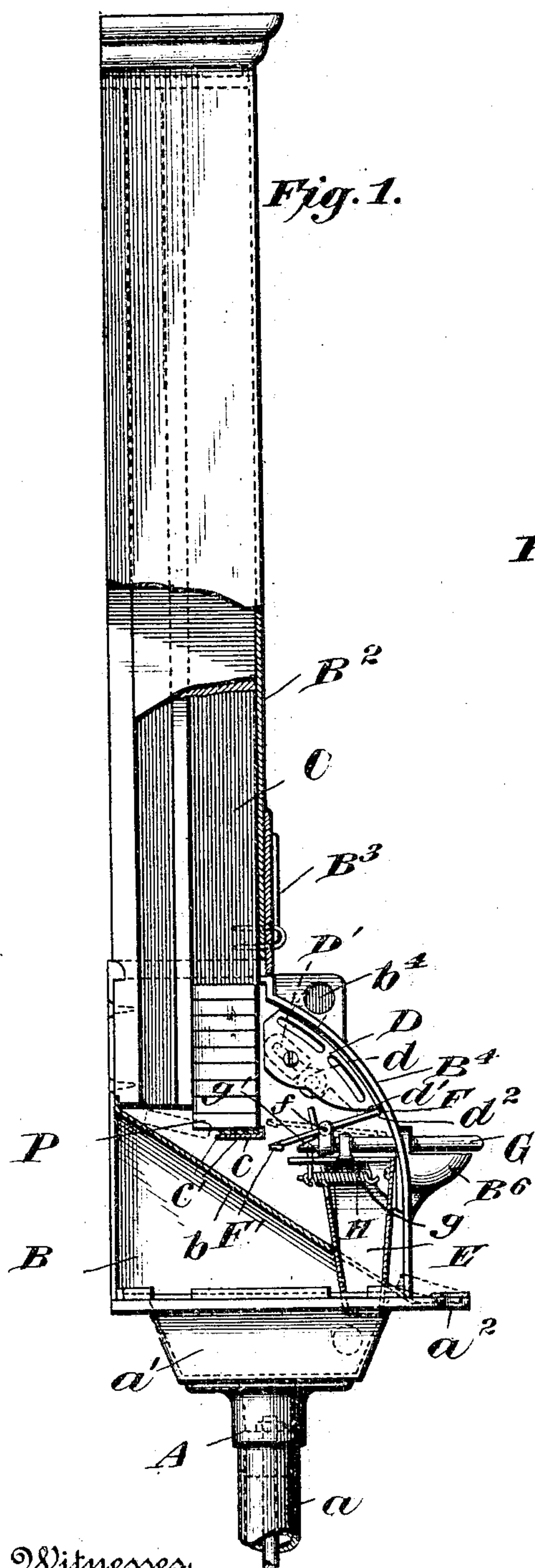
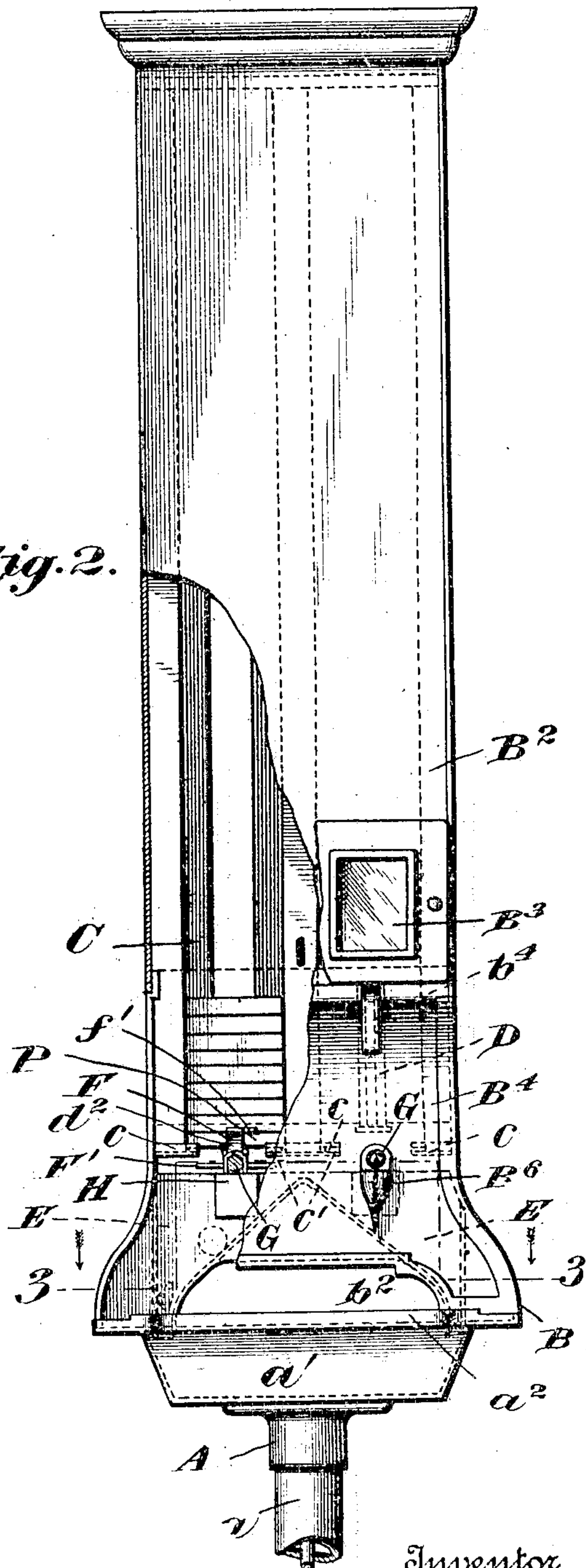


Fig. 2.



Witnesses.

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2 SHEETS—SHEET 2.

Fig. 3.

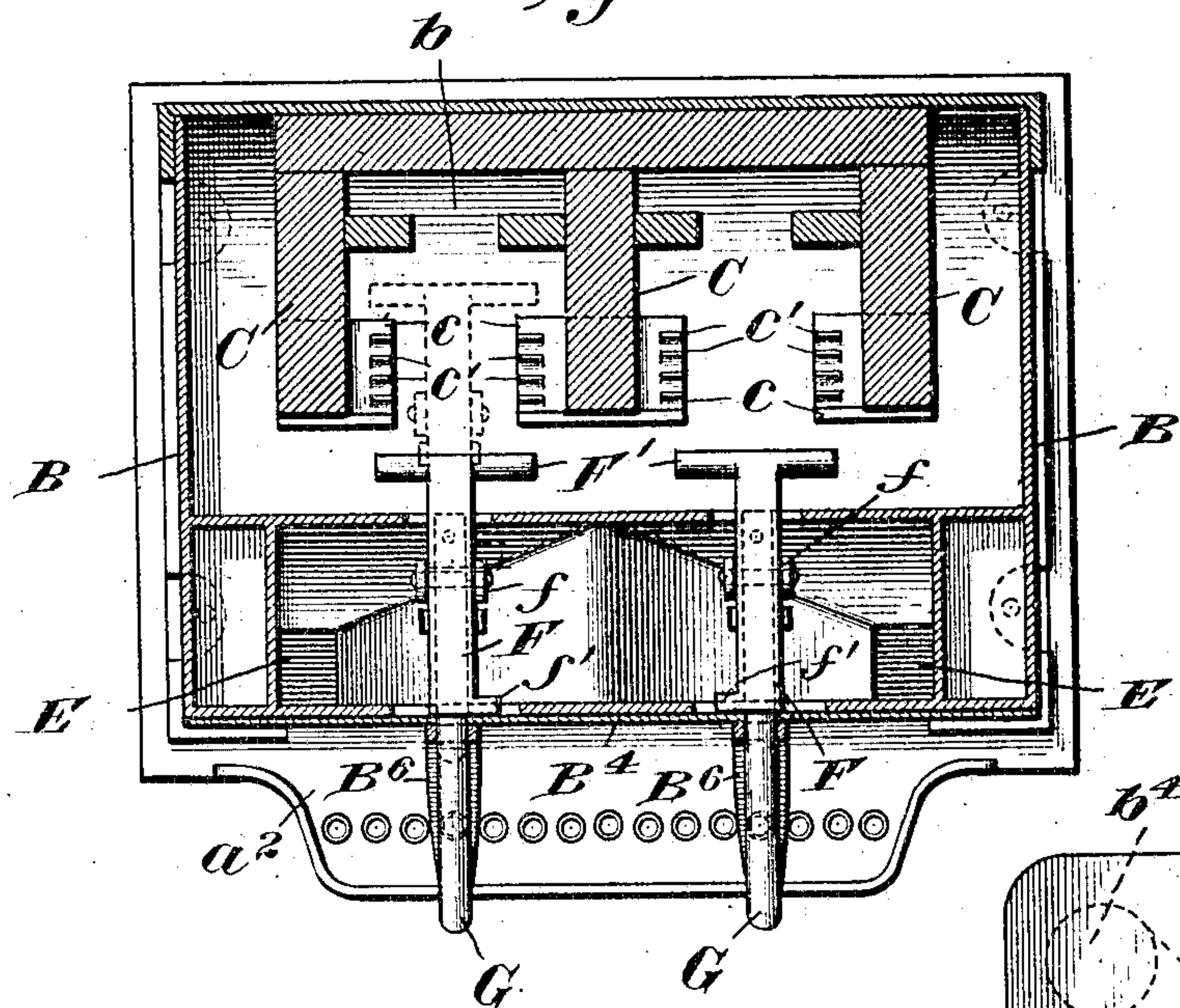


Fig. 4.

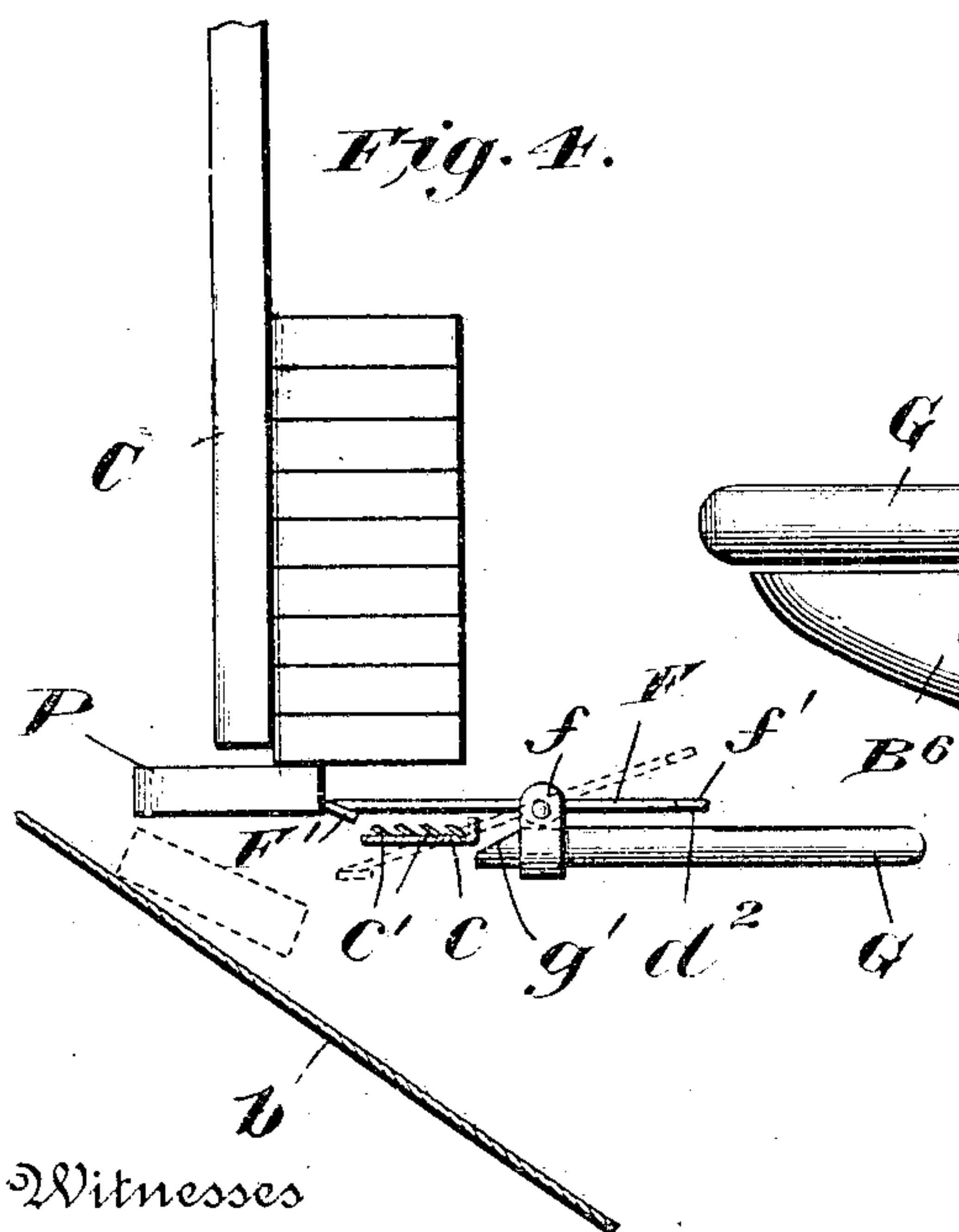
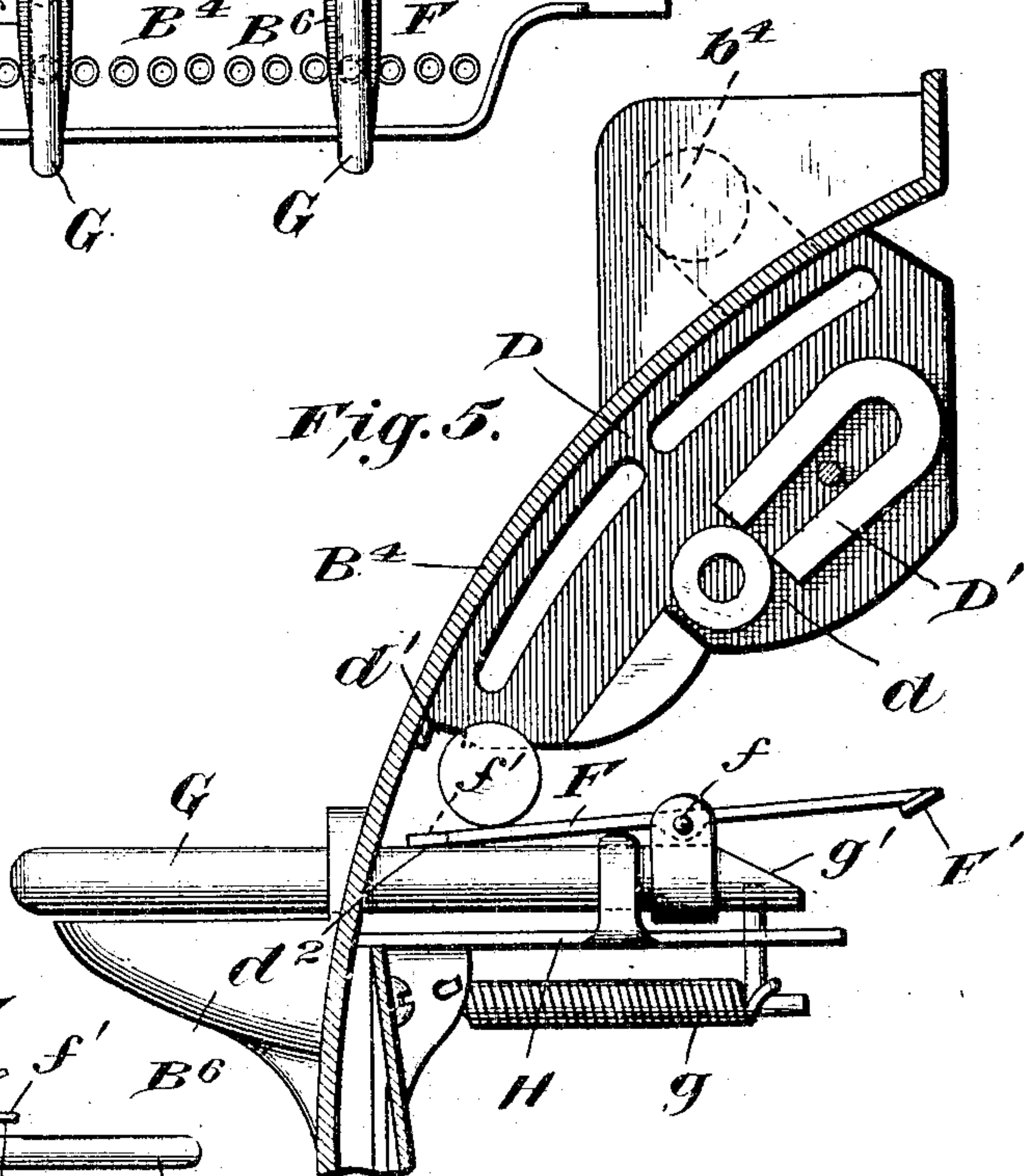


Fig. 5.



Witnesses

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CHECK OR COIN CONTROLLED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 781,634, dated February 7, 1905.

Application filed February 19, 1904. Serial No. 194,410.

To all whom it may concern:

Be it known that I, PAUL FLEMMING COX, of Battlecreek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Check or Coin Controlled Vending-Machines; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improved automatic check or coin controlled machine especially designed for vending small commodities in packages.

The object of the present invention is to produce a machine of very simple construction which will contain a large number of packages that can be successively ejected by means of a reciprocating pusher or slide, which is manually forced in one direction to eject a package and is then returned automatically by a spring. The ejector is automatically locked upon its return to normal position by its own gravital action. The weight of the coin or check will cause the unlocking of the ejector and raise it into position for operation and hold it there until it is moved sufficiently to insure its engagement with devices which prevent its retraction until the full ejecting stroke has been made, after making which the ejector drops by gravity so as to return freely, unencumbered or unhindered by the weight of packages in the machine. Means are also provided to prevent cheating the machine by counterfeit coins or checks.

I will now describe the invention in detail with reference to the accompanying drawings and refer to the claims for summaries of the various features and combinations of parts for which I desire protection.

In the drawings, Figure 1 is a side elevation of the complete machine with outer side piece removed to show the interior parts and parts of the stand and commodity-holder being broken away. Fig. 2 is a part front view and part sectionalelevation of Fig. 1. Fig. 3 is a transverse section on line 3 3, Fig. 2. Fig. 4 is an enlarged detail view showing the ejecting-

lever in the act of discharging a package. Fig. 5 is a detail sectional view of the ejecting mechanism and coin-guides.

A represents a stand of any suitable construction, upon which the machine is supported. As shown, it consists of a tubular post *a*, on which is mounted a hollow coin or check receiver *a'*, which latter forms the bottom of the machine proper and is provided with laterally-extending flanges, to which the sides of the casing B of the machine are attached. The front flange has a forwardly-projecting portion *a''*, upon which the ejected packages are delivered by gravity, said packages sliding down an inclined plane *b* within the lower part of the casing, formed of a plate of wood or metal and extending upwardly and rearwardly to and below the commodity-holders C C, two being shown in the machine illustrated in the drawings. These holders may be conveniently formed of channeled wooden bars or troughs secured in vertical position within the casing and terminating a short distance above the plate *b*.

To the lower ends of the sides of the channels C are attached metal plates *c*, which project inwardly sufficiently to engage and uphold the lowermost package and all superimposed packages in the channel, said plates *c* being preferably serrated or toothed, as at *c'*, the serrations pointing rearwardly.

The back of each channel C is cut away at its lower end sufficiently to allow the lowermost package in the channel to be pushed rearwardly off the plates *c* without disturbing the superimposed packages. The open fronts of the channels are closed by the front wall B² of the casing, which is preferably an ornamented metal plate secured in any suitable manner to the casing so that it can be conveniently removed when it is desired to fill the channels. This front B² may be provided with sight-openings B³, so that the condition of the contents of the channels can be inspected or the need of refilling can be seen without the necessity of removing said front. The plate B² does not extend entirely to the bottom of the channels C, but rests upon the

top of the swelled front B^1 of the casing, which covers the plate b and the operative parts of the ejecting mechanism. Said front has an opening b^2 coincident with the flange a^2 , and it is provided with coin or check openings b^4 , one for and adjacent to each commodity-channel C . A distinct set of ejecting devices is provided for each channel C , and as such devices are all constructed alike I will describe only one in detail, but letter similar parts of the several ejecting mechanisms in like manner in the drawings.

Beneath the coin-inlet slot b^4 is a vertically-disposed coin-guide D , which is attached to the under side of front B^1 and directs the coin downwardly onto the rear end of the ejecting-lever F . In this coin-guide is arranged a magnet D' adjacent to a slot or gap d in the guide, over which gap the coin will pass by gravity in its descent; but if a washer or other magnetizable piece of metal be dropped into the slot the magnet will attract it and deflect it into gap d , so that it will fall therethrough and not touch the lever F . Consequently the ejector will not be released. The washer falling through slot d may drop onto plate b and pass out of the machine, or it may be directed into the coin-holder, so as to be retained in the machine.

The ejecting-lever F is pivoted at f on the inner end of a slide G , which is guided in a bracket H (attached to the inner side of front B^1 below the coin-guide D , as shown) and in a slot in the front B^1 , through which the slide projects, so as to be manipulated by hand. The front B^1 has an abutment B^6 below the projecting end of the slide to protect the latter from lateral shocks and prevent its being depressed.

The slide G and lever F are normally retracted (in the position shown in Fig. 1) by means of a helical spring g , attached to the bracket H and to a pin or lug on the inner end of the slide, as shown. The inner end of ejector-lever F is T-headed, as shown at F' , said head being almost as wide as the adjacent channel C , so that when the lever is in proper position its ends will rest upon the plates c and eject the lowermost package. This head also serves as a means to prevent retraction of the lever when properly set by a coin until it has made a complete ejecting stroke, as the head ends will engage the serrations c' (see Figs. 3 and 4) if it is attempted to withdraw it. This head F' furthermore serves as a weight to overbalance the lever and depress its inner end and normally uphold its outer end, the inner end of slide G being beveled, as at g' , to serve as a stop to limit the gravital descent of head F' . The normal position of lever F , as shown in Fig. 1, is, with its head F' , depressed below the plane of the plates c , so that if the slide was pushed inward a package would not be ejected.

On the front or outer end of lever F is a lateral lug f' , which is adapted to engage a notch d' in the lower end of coin-guide D when the ejector is fully retracted, and thus lock the ejector and slide in retracted position, Fig. 1, until the proper coin is dropped into the coin-guide. The weight of the coin on the outer end of lever F causes the lever to assume the position shown in dotted lines, Fig. 1, raising its head F' into position to engage the lowermost package and to pass above the plates c , as indicated in full lines, Fig. 4. The coin will rest upon the lever and uphold it in ejecting position by its weight until the slide and lever are moved inward sufficiently to enter the head F' of the lever above the plates c . The coin is arrested at the bottom d^2 of the coin-guide by the lever, and as the lever passes on from beneath the coin the latter drops out and down onto the coin guide or chute E , by which it is directed downwardly into the coin-receptacle a' . It will be noted that the ejector-lever is tilted into ejecting position by the weight of the coin, which does not have any cam action, such as is common in this class of machines. This simplifies the machine and lessens the power required to operate the slide and lever, and it lessens liability to derangement of parts, as there is no pressure or squeeze between the coin or check and any moving or fixed parts.

Operation: The parts being in position shown in full lines, Fig. 1, the ejector is out of operative position, even if it could be moved inward, and it is, moreover, locked by engagement of lug f' with notch d' . When the proper coin or check is dropped into the slot b^4 , it passes through guide D onto the front end of the lever, releasing it and depressing it by its weight and raising head F' into the position shown in dotted lines, Fig. 1. The slide and lever can then be moved inward, so as to engage the lowermost package P and eject it from the holder. The head F' passes above plates c in the ejecting operation (see Fig. 3) and will engage the serrations c' and prevent the ejector being retracted until it has been moved fully inward, so as to force the lowermost package out of the holder. The coin meanwhile has dropped off into the coin-receiver. As soon as the head F' clears plates c it drops below them, tilting the lever, and spring g immediately returns the parts to the position shown in Fig. 1, and lug f' engages notch d' and locks the ejector until it is again released by a coin or check. The ejector is thus released and set in ejecting position simply by the weight of the coin. When once the ejecting operation is begun, it cannot cease until completed. When completed, the ejector is by gravity thrown into inoperative position and can be retracted without being impeded by the weight of packages in the holder, and it is also locked by gravity.

The machine can contain any desired num-

ber of the above-described holders and ejecting devices, all being duplicates in construction and operation.

5 Having thus described my invention, what I therefore claim as new, and desire to secure by Letters Patent thereon, is—

1. In a coin or check controlled vending apparatus, the combination of a commodity-holder, a reciprocating slide, an oscillating ejecting-lever pivoted to oscillate freely on the inner end of said slide and normally assuming by gravity an inoperative position; with means for directing a coin or check onto the outer end of said lever whereby its inner end is overbalanced and raised into and held in operative position; means engaged by the lever when in operation preventing its retraction until it has completed its ejecting stroke, a spring connected to the slide for retracting the slide and lever, and means engaged by the outer end of the lever for locking it in its retracted inoperative position, substantially as described.

2. In combination, a horizontally-reciprocating slide, a gravital oscillating lever pivoted to oscillate freely on and reciprocating with said slide and having a weighted inner end, provided with a laterally-projecting lug or catch on its outer end; with a coin-guide above the slide, having a notch adapted to be engaged by said catch on the ejecting-lever when the latter is in inoperative and retracted position.

3. The combination of a commodity-holder, toothed plates at and on opposite sides of the bottom of the holder, a horizontal reciprocating slide in front of said holder, a retracting-spring connected to said slide, a gravital eject-

ing-lever pivoted to oscillate freely on the inner end of said slide, and having a T-shaped inner end adapted to pass above said plates in ejecting a package and engage the said opposite toothed plates, and also adapted to drop by gravity below said plates after the ejection, said lever also having a catch on its outer end; with a coin-guide above the slide having a notch adapted to be engaged by the said catch on the ejector when the latter is in inoperative and retracted position, substantially as described.

4. In a coin-controlled vending apparatus, the combination of a commodity-holder, serrated plates at the bottom of the holder, a reciprocating slide in front of said holder, having a beveled inner end, a spring for retracting said slide, a gravital ejecting-lever pivoted on the inner end of said slide and normally resting upon the beveled end thereof, the inner end of said slide being T-headed and adapted to pass above said serrated plates in ejecting a package and then drop by gravity below said plates, and a laterally-projecting catch on the outer end of said lever; with a coin-inlet, a coin-guide below the inlet and above the slide, having a notch in its lower end adapted to be engaged by the catch on the ejector, a coin-receiver, and means for directing the coins dropping from the lever into said receiver, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

PAUL FLEMMING COX.

In presence of—

R. F. HOFFMARTER,
CHAS. C. GREEN.