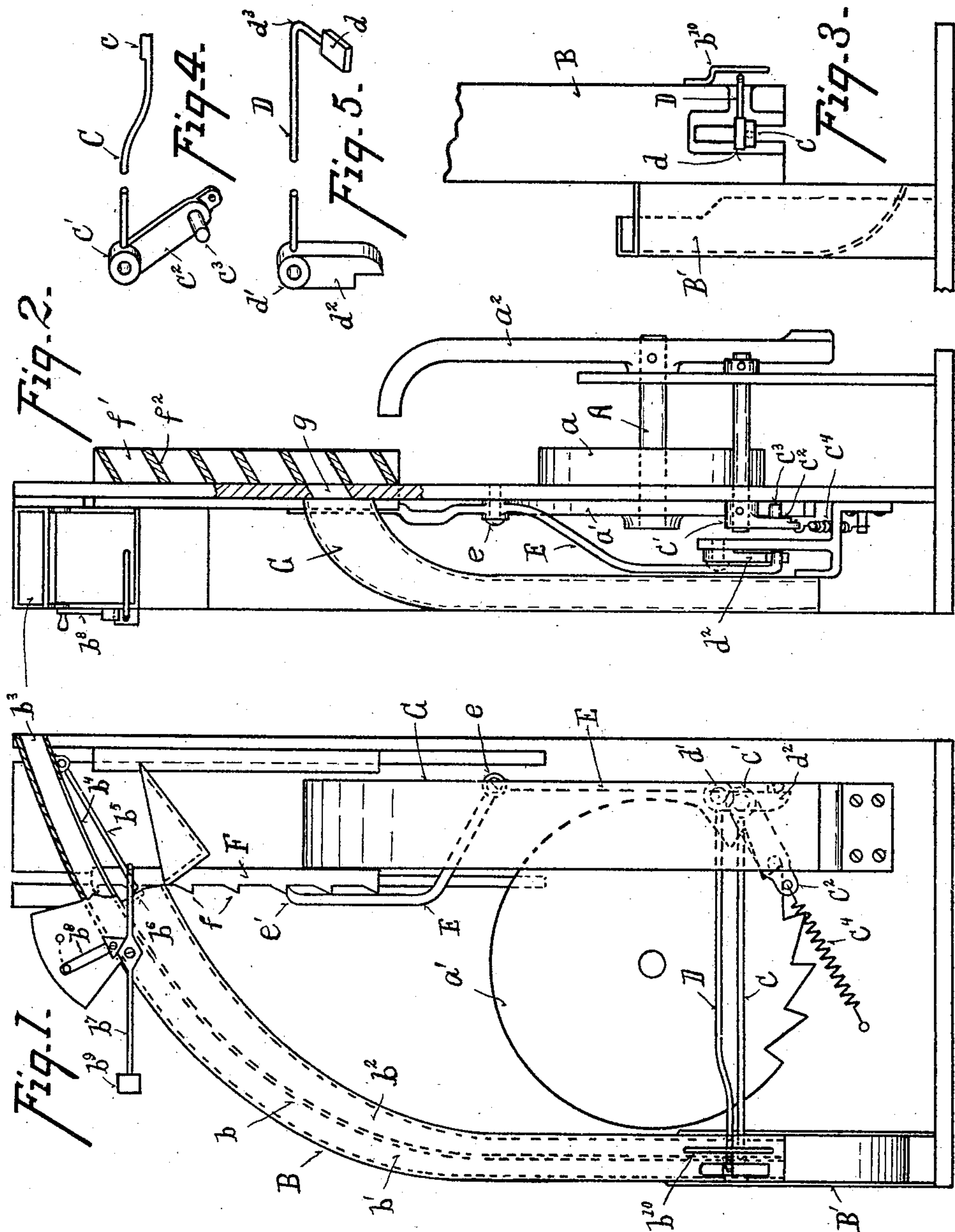


No. 822,869.

PATENTED JUNE 5, 1906.

J. A. RULE.  
COIN OPERATED VENDING MACHINE.

APPLICATION FILED DEC. 31, 1904.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN A. RULE, OF CINCINNATI, OHIO.

## COIN-OPERATED VENDING-MACHINE.

No. 822,869.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed December 31 1904. Serial No. 239,087.

*To all whom it may concern:*

Be it known that I, JOHN A. RULE, a citizen of the United States of America, and a resident of Cincinnati, county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Coin-Operated Vending-Machines, of which the following is a specification.

The object of my invention is a vending-machine in which a coin of larger denomination actuates both the delivery mechanism and the change-receptacle and a small coin actuates only the delivery mechanism.

In the accompanying drawings I have illustrated the coin-actuated part of a vending-machine.

Figure 1 is a side elevation of the same. Fig. 2 is a front elevation of the same, the coin-receptacle being shown in section. Fig. 3 is a detail rear elevation of the ends of the coin and the change chutes. Figs. 4 and 5 are detail perspective views of the levers which regulate the delivery mechanism and the change-receptacle.

Referring to the parts, the delivery mechanism is represented only to such an extent as is necessary to understand my invention. The delivery mechanism as here illustrated consists of a shaft A, which carries a coiled spring  $a$  and a ratchet-wheel  $a'$  and a swinging arm  $a^2$ , which is adapted to open the doors of a paper-receptacle when it is rotated as described in my application which was filed on August 14, 1903, Serial No. 169,440, for a coin-operated vending-machine.

In the present construction coin-chute B is divided by a partition  $b$  into passages  $b'$   $b^2$ . The passage  $b'$  at the upper end of the chute is extended into a coin-slot  $b^3$ , the partition  $b$  being cut away adjacent to the opening  $b'$ , leaving ledges  $b^4$  at a distance apart such as to support a coin of a larger diameter, such as a nickel, and to allow a smaller coin, such as a cent, to pass between the ledges. Pivoted below the ledges  $b^4$  is a leaf  $b^5$ , whose lower end stands normally adjacent to a flange  $b^6$ . The leaf  $b^5$  at its loose end rests upon the end of a lever  $b^7$ , which may be regulated by an arm  $b^8$  so that the weight  $b^9$  upon the end of the lever will be overbalanced by the weight of the number of small coins desired when resting on the leaf  $b^5$ , so as to carry it below the flange  $b^6$  and direct the small coin into the chute  $b^2$ .

At its lower end the passage  $b^2$  is intercepted by a block  $c$  upon an arm C of a bell-crank

lever which is fulcrumed at  $c'$  and carries upon its other arm  $c^2$  a pawl  $c^3$ , the pawl being held normally in contact with the teeth of the ratchet  $a'$  by a spring  $c^4$ . When a coin or coins in falling through passage  $b^2$  strikes the block  $c$ , they carry the pawl  $c^3$  out of contact with the tooth of the ratchet  $a'$  and allow the ratchet-wheel  $a'$  to move through one step, thereby moving arm  $a^2$  through one step, which releases the article to be vended.

The passage  $b'$  is intercepted at its lower end by a block  $d$  upon the end of an arm D of a second bell-crank lever which is fulcrumed at  $d'$  and has its other arm  $d^2$  brought in contact with lever E, which is fulcrumed at  $e$  and has at its upper end a hook  $e'$  for engaging the successive lugs  $f$  of a sliding change-receptacle F. The arm D is bent at  $d^3$ , passes upon the outside of the passage  $b^2$ , and enters passage  $b'$  from the side and is guided by a bracket  $b^{10}$ , secured upon the outside of the coin-chute. The block  $d$  stands above the end of the block  $c'$ , so as to contact the same when it is carried downward.

The change-receptacle consists of vertical sides  $f'$ , joined by inclined partitions  $f^2$ , forming compartments for the reception of change, the compartments being brought successively to register with the slot  $g$ , leading into the change-chute G, when the operation of the lever E permits the tooth  $e'$  to be carried from one of the teeth  $f$  to the next tooth upon the change-receptacle.

The operation of the device is as follows: If a two-cent paper is to be vended, the compartments  $f'$  each receive three cents and the change-receptacle is set in its uppermost position with the lowermost of the compartments  $f'$  standing just one step above the slot  $g$ . The lever  $b^7$  is regulated by means of the arm  $b^8$ , so that the leaf  $b^5$  will be carried below the partition  $b^6$  by the weight of two cents. If two cents be placed in the slot  $b^3$ , they will then be carried into the passage  $b^2$ , will strike the block  $c$  without affecting the arm D, causing it to stand upon the outside of the passage  $b^2$ , and will release the pawl  $c^3$  from the ratchet, thereby turning the delivery mechanism through one step. If a nickel be placed in the slot  $b^3$ , it is carried by ledges  $b^4$  into the passage  $b'$ . It strikes the block  $d$ , lowers both the arm D and the arm C, which carries the pawl  $c^3$  out of contact with the ratchet  $a'$ , allowing it to move through one step, and causes the arm  $d^2$  to throw the lever E and carry the tooth  $e'$  out of contact with



the tooth  $f$  it has been engaging and allows the change-receptacle to drop down one step, causing the compartment  $f'$  to register with the slot  $g^3$ , through which the pennies in the  
 5 compartment pass into the change-chute  $G$  because of the inclined bottom of the compartments.

What I claim is—

1. In a coin-operated vending-machine the  
 10 combination of a delivery mechanism, a locking mechanism for the delivery mechanism, a movable change-receptacle, means for locking the change-receptacle, a passage for large coins, a second passage for small coins, a re-  
 15 leasing mechanism for the delivery mechanism adapted to be actuated by a coin in either passage and a releasing mechanism for the change-receptacle to be actuated by a coin in the first passage.

20 2. In a coin-operated vending-machine the combination of a coin-chute having a passage for large and a passage for small coins, means of directing large coins into the first passage and small coins into the second passage, a  
 25 delivery mechanism, a lever for locking said mechanism one of whose ends extends into

the second passage, a movable change-receptacle, and a second lever for actuating the change-receptacle and the first lever and whose end extends into the first passage. 30

3. In a coin-operated vending-machine the combination of a main shaft, a means of exerting a rotating pressure upon the shaft, a ratchet-wheel upon the shaft, a sliding change-receptacle, a lever for engaging the  
 35 change-receptacle, a coin-chute having a passage for large and a second passage for small coins, a bell-crank lever one of whose arms engages the ratchet-wheel and the other arm of which extends into the second passage, a  
 40 second lever one end of which engages the lever which holds the change-receptacle and the other arm of which extends around the second passage and into the first passage above the bell-crank lever so that a small  
 45 coin actuates the delivery mechanism and a large coin actuates both the delivery mechanism and the change-receptacle.

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