

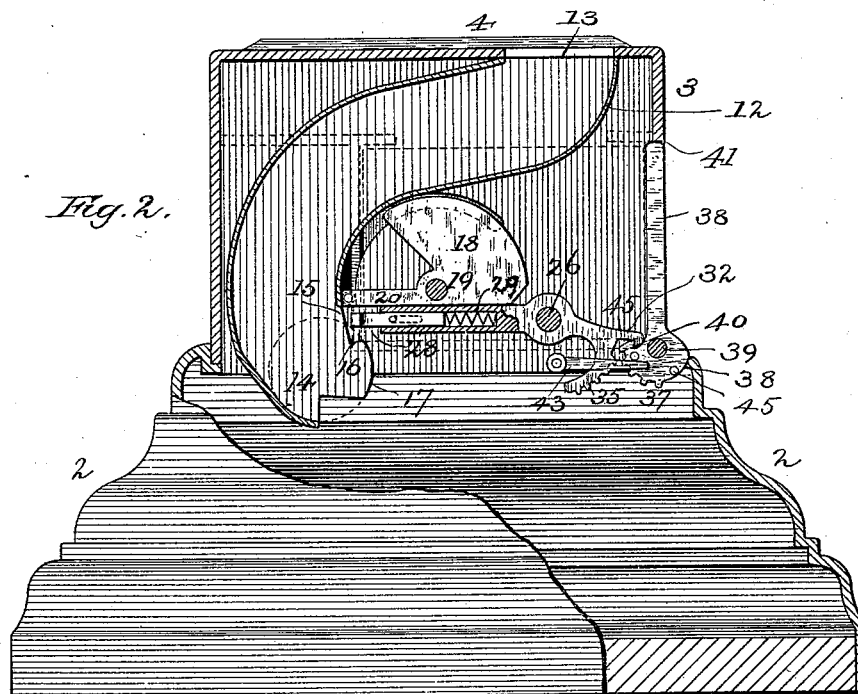
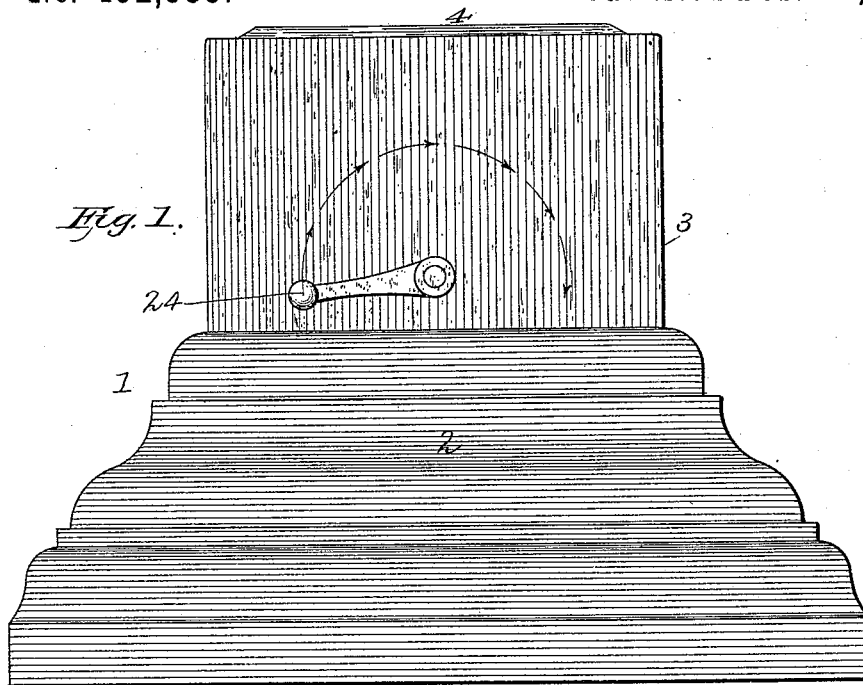
(No Model.)

3 Sheets—Sheet 1.

M. SLOUGH.  
COIN CONTROLLED APPARATUS.

No. 492,535.

Patented Feb. 28, 1893.



Witnesses:  
*James H. Jones*  
*W. D. Coombs*

Inventor:  
*Marion Slough*  
*James H. Jones & Co.*  
Attorneys.

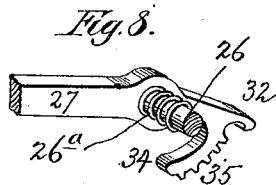
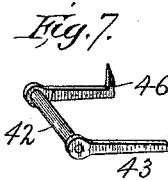
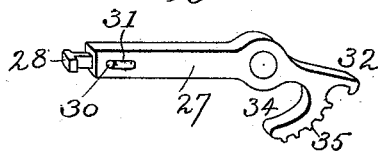
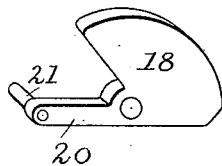
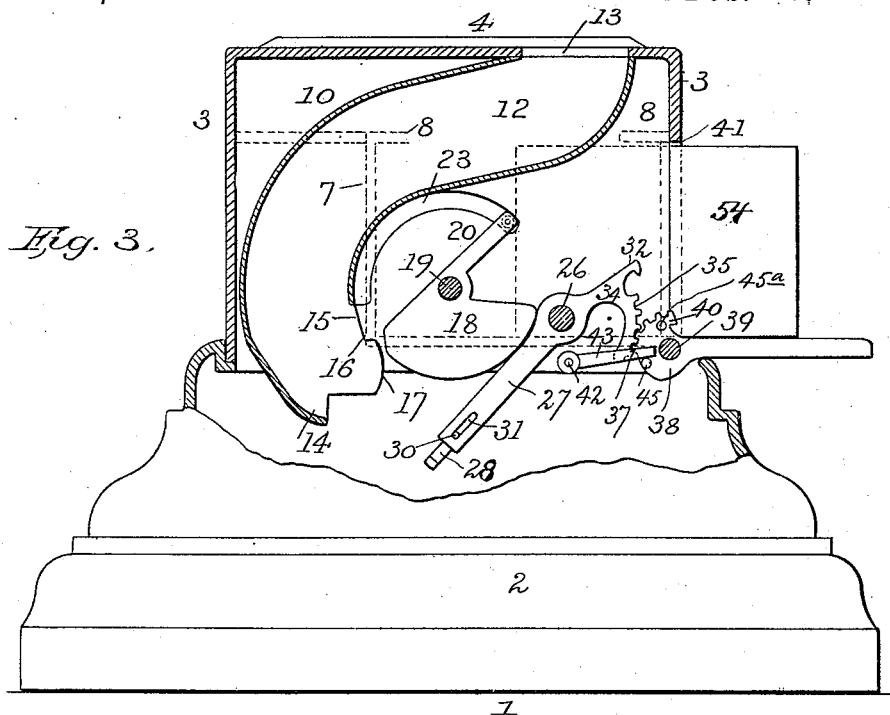
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Witnesses:  
James Jones  
J. S. Leoombs

Inventor:  
Martin Elough  
by Samuel Rogers  
Attorneys.

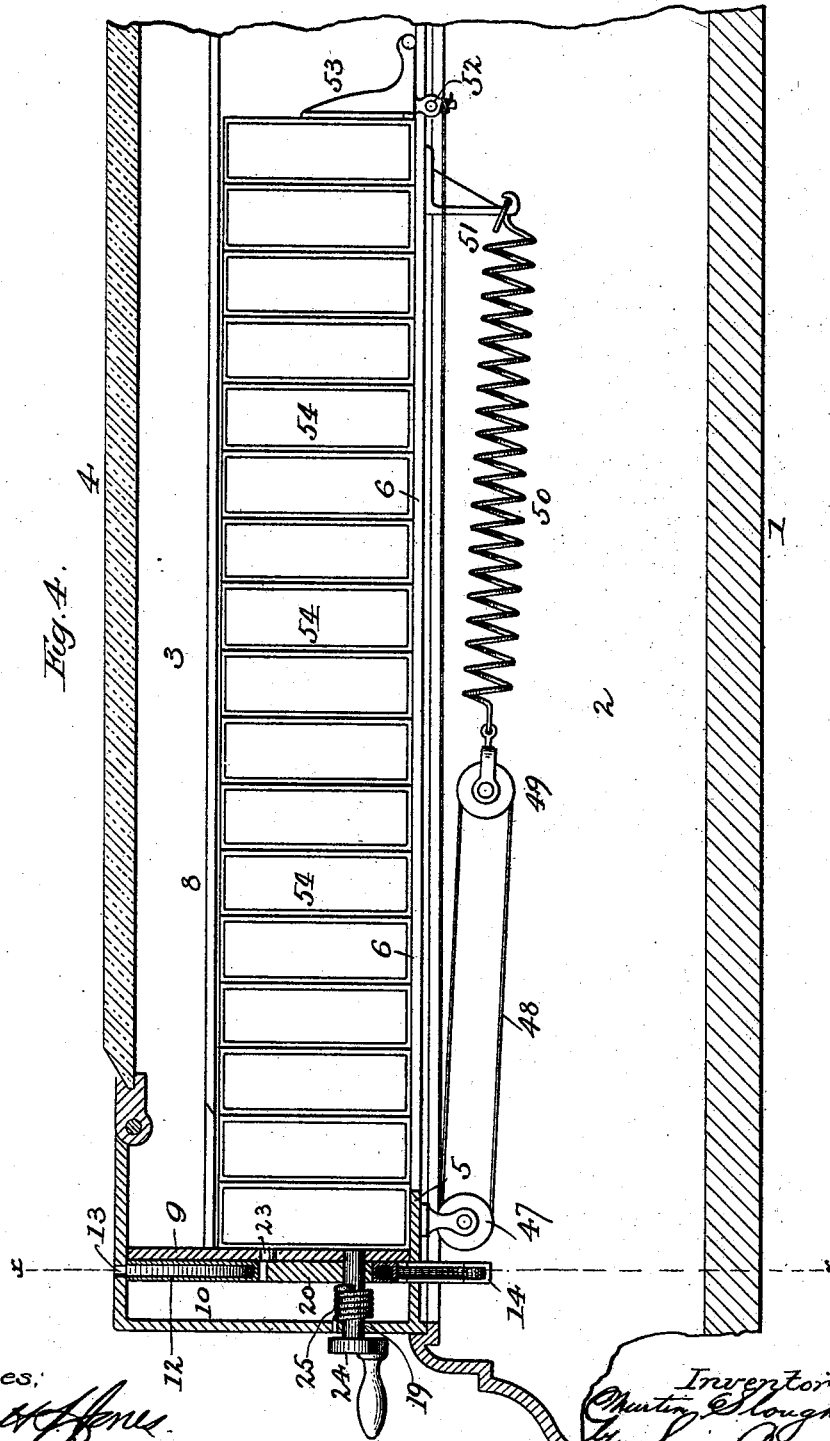
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3 Sheets—Sheet 3.

M. SLOUGH.  
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Patented Feb. 28, 1893.



Witnesses:  
*James H. Jones*  
*W. H. Croomb*

Inventor:  
*Charles M. Slough*  
*James H. Jones & Co.*  
Attorneys:

# UNITED STATES PATENT OFFICE.

MARTIN SLOUGH, OF NEW YORK, N. Y.

## COIN-CONTROLLED APPARATUS.

SPECIFICATION forming part of Letters Patent No. 492,535, dated February 28, 1893.

Application filed November 12, 1892. Serial No. 451,770. (No model.)

### *To all whom it may concern:*

Be it known that I, MARTIN SLOUGH, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Coin-Controlled Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in coin controlled vending apparatus in which an article is automatically delivered, upon a coin of proper denomination being dropped into a slot, and a crank manipulated.

The object of the invention is to provide an apparatus of the above character, which shall possess superior advantages with respect to simplicity and economy in construction and efficiency in operation.

The invention consists in the novel construction and combination of parts hereinafter described and claimed.

In the accompanying drawings: Figure 1 is an end view of a vending machine, constructed in accordance with my invention. Fig. 2 is a sectional view on the line  $x-x$ , Fig. 4. Fig. 3 is a similar view showing the parts in a different position. Fig. 4 is a central longitudinal sectional view. Fig. 5 is a detail perspective view of the segment cam. Fig. 6 is a similar view of the spring-actuated detent and arms for operating the door. Fig. 7 is a similar view of the holding or retaining dog. Fig. 8 is a detail perspective view of a portion of the detent arm, showing the spring for returning it to normal position.

In the said drawings, the reference numeral 1 designates a casing of any suitable material and comprises an ornamental base 2, and a superimposed rectangular receptacle 3, which may be integral with or separate from each other, and then secured together as may be desired. This receptacle is provided with a suitable cover 4, which should be hinged or otherwise so secured thereto as to be readily opened or removed to allow access to be had to the interior of the receptacle. It should

also be provided with a lock and key for preventing tampering with or fraudulent removal of the contents of the receptacle. The receptacle is provided with a bottom 5, having a slot 6, and with a longitudinal partition 7, and two inwardly extending horizontal plates 8, shown in dotted lines in Figs. 2 and 3, forming a guide-way for the articles to be vended.

Near one end the receptacle is provided with a vertical partition 9, forming a chamber or compartment 10, in which is located a downwardly extending curved chute or conveyor 12, the upper end of which communicates with a slot 13 in the top of the receptacle 3, of a size corresponding with the coin which is employed to render the machine operative. The lower end of the chute is open and its inner side is curved inwardly, forming a shoulder 14 slotted and cut-away or recessed at 15, forming a shoulder 16, and a cam surface 17.

The numeral 18 designates a segmental cam fixed to a shaft 19, journaled in the partition 10, and the end of the receptacle 3 and is provided with an arm 20, having an inwardly extending stud 21, which projects through a curved or segmental slot in the partition 10. One end of the shaft 19 projects through the end of the receptacle and is provided with a crank 24. The shaft 19 is also provided with a coiled spring 25, one end of which is secured to the end of receptacle 3, which serves to return it to normal position after having been actuated.

The numeral 26 designates a short shaft journaled in the partition 10 and end of the receptacle 3, and carries a lever 27, having a recess in one end in which is located a detent 28, and a coiled spring 29. This shaft 26 is provided with a coiled spring 26<sup>a</sup>. The detent is provided with a pin 30 projecting through a slot 31 in the end of said lever, by which its movement is limited. The opposite end of said lever is formed with a hook 32, and with a curved arm 34, provided with a series of cogs or teeth 35, which engage with a corresponding series of cogs 36 on the hub 37 of a door 38. This hub is secured to a pivot 39 journaled in partition 10, and the end of receptacle 3, and is also provided with a shoulder 40, with which the hook 32 engages. This door is adapted to open and close an opening

41 in the side of the receptacle at the end thereof.

The numeral 42 designates a short shaft carrying at one end an arm 43, which is adapted to engage with studs 45, 45<sup>a</sup> on the hub 37, and passes through the partition 10, beyond the opening 41, and is provided with a pointed dog 46.

Secured to the bottom 5 of the receptacle at one end is a block 47, over which passes a number of times a cord or rope 48, which also passes over a block 49 secured to one end of a coiled spring 50, the other end of which is secured to a bracket 51, secured to the bottom of the receptacle 3. One end of said cord or rope is secured to a lug 52, on a carriage 53, said lug passing through the slot 6 in the bottom of the receptacle. The other end of the cord or rope is secured to the shell of the block 49.

The operation is as follows: The articles to be vended are preferably inserted in rectangular boxes 54, of pasteboard or other cheap material, which are placed in the receptacle 3 in a vertical position, the carriage 53 keeping the box at the opposite end pressed against the partition 10, the parts being in the position shown in Fig. 2, the door 38 being closed and locked in place by means of the hook 32. If now it is attempted to operate the crank 24, to open said door and cause one of the boxes to be delivered without the insertion in the slot of a proper coin, the detent 28, will strike the shoulder 16 of the conveyer, thus preventing movement of the operating parts. When, however, a coin of the proper denomination is introduced into the chute or conveyer through the slot, it will roll down said conveyer till it reaches the lower end thereof, when it will engage with and be held by the detent 28 and the shoulder 14, a portion of the periphery of the coin projecting through the recessed or cut-away portion 15 of the open end of the conveyer, as shown by the dotted line Fig. 2. The shaft 28 can now be rotated, the periphery of the coin acting as a cam to throw the detent past the shoulder 16, and the cam 18 striking the lever 27 and depressing the end carrying the detent and throwing the hook 32 out of engagement with the shoulder on the hub 38, and by means of the cogs 35, and 37 throwing the door down into a horizontal position as seen in Fig. 3, and uncovering the opening 41 which is of a size just sufficient to admit of the passage of one of the boxes 54. At this movement, the stud 45 will strike the end of arm 43, elevating the same and rotating the shaft 42, causing the dog 46 to be thrown upward so that its point will engage with the box adjoining the one appearing at the opening 41. While these movements are taking place, the arm 20 will be actuated and its stud or pin 21 will strike the rear of the end box 54, and push it outwardly about half-way through the opening 41, onto the door 38. The crank is now

released, when the cam 18 and arm 20 will be returned to normal position by means of the spring 25, but the door and lever 27 will be prevented from returning by the partly ejected box. The box is now grasped by the fingers and withdrawn entirely from the receptacle, when the door will be closed by spring 26<sup>a</sup>, the dog 46 preventing any feeding or movement of the remaining boxes, while the door is closing, until the stud 45<sup>a</sup> strikes the arm 43 and disengages the dog. The boxes will now be fed forward by the carriage 53 and connections. It will be noted that the lever 27 is operated and the door fully opened before the stud pin 21 or arm 20 strikes the box to push it outwardly through the opening 41. Upon the return movement of the lever 27, the detent will strike the curved portion 17 of the conveyer causing the detent to be pushed inward, so as to clear the same, when it will be again forced outward to engage with another coin.

Having thus described my invention, what I claim is—

1. In a coin-controlled vending apparatus the combination with a casing, of a coin-chute or conveyer having a recess or cut away portion at its lower end, a curved bearing adapted to permit of the return of the detent and a spring actuated detent to catch and hold a coin, and prevent the operation of the apparatus, substantially as described.

2. In a coin-controlled vending apparatus, the combination with the casing, of an open ended conveyer or chute, a curved cam portion at its lower end having a recess forming a shoulder and a curved shoulder or bearing the latter adapted to permit of the return of the detent and a spring actuated detent, substantially as described.

3. In a coin-controlled vending apparatus, the combination with a casing having an opening therein for the passage of an article, and the conveyer chute cut away at its lower end forming a shoulder, of the oscillating cam, the lever carrying a spring actuated detent, and a cogged arm, and the swinging door having a cogged hub, engaging therewith, substantially as described.

4. In a coin-controlled vending apparatus the combination with a casing having an opening therein for the passage of an article, and a chute or conveyer having shoulders at its lower end, of the oscillating cam, a pivoted lever having a spring actuated detent, a hook and a cogged arm, and the swinging door adapted to open and close said opening, having a cogged hub, and a shoulder with which said hook engages, substantially as described.

5. In a coin-controlled vending apparatus, the combination with the casing having an opening therein for the exit of an article, a feeding carriage and a chute or conveyer having shoulders at its lower end, of the oscillating cam, the pivoted lever having a spring actuated detent and a cogged arm, the swing-

ing door having a cogged hub, the pins or studs carried by said hub, the shaft having an arm with which said studs engage and a pivoted dog adapted to engage with one of the articles in the casing, substantially as described.

6. In a coin-controlled vending apparatus, the combination with the receptacle, having an opening therein for the exit of an article, a feeding carriage and a chute or conveyer having shoulders at its lower end of the oscillating cam, the pivoted lever provided with a spring actuated detent, a hook and a cogged arm, the swinging door having a cogged hub provided with studs or pins, and the shaft having an arm and a pointed dog, substantially as described.

7. In a coin-controlled vending apparatus, the combination with the receptacle or receiver having an opening for the exit of an article, and a chute or conveyer having shoulders at its lower end, the oscillating cam having an arm provided with an inwardly extending stud or pin, the pivoted lever having a spring actuated detent and the swinging door, substantially as described.

8. In a coin-controlled vending apparatus, the combination with a receptacle or receiver having an opening for the exit of an article, a feeding carriage and a conveyer chute having shoulders at its lower end, of the oscillating cam having an arm provided with an inwardly extending stud or pin, the pivoted lever provided with a spring actuated detent, and with a hook and a cogged arm, and the swinging door having a cogged hub formed with a shoulder with which said hook engages substantially as described.

9. In a coin-controlled vending apparatus the combination with the receptacle or receiver having an opening for the exit of an article, a feeding carriage and a chute or conveyer having shoulders at its lower end, of the oscillating cam having an arm provided with an inwardly extending pin or stud, the pivoted lever provided with a spring actuated detent, a hook and a cogged arm, the swinging door having a cogged hub formed with a shoulder and provided with pins or studs, the shaft having an arm adapted to engage with said pins or studs and a pointed dog, substantially as described.

10. In a coin-controlled vending apparatus the combination with the base, the receptacle having a slotted bottom, an opening near one end for the exit of an article, a vertical partition provided with a curved or segmental slot, removable top or cover, a feeding carriage having a lug projecting through the slot in said bottom and means substantially as described connected with said lug for feeding the goods, of the chute or conveyer having shoulders at its lower end, the oscillating cam provided with a crank, and a pin or stud projecting through the slot in the partition, the pivoted lever, the spring-actuated lever and

the swinging door constructed and operated substantially as specified.

11. A conveyer-chute for a coin-controlled vending apparatus having a curved shoulder or bearing 14 at its lower end, the curved portion 17, the cut-away portion 15, and the shoulder 16, substantially as and for the purpose specified.

12. In a coin-controlled vending apparatus, an automatically operated door when open adapted to serve as a receptacle for the articles vended and automatic means for opening and closing said door.

13. In a coin-controlled vending apparatus, a door when opened adapted to serve as a receptacle for the article vended, mechanical means for opening and closing said door, and means for expelling said article.

14. In a coin-controlled vending apparatus, the combination with a door, of means for automatically forcing the article vended upon the door, when the latter has been opened.

15. In a coin-controlled vending apparatus, the combination with a mechanically operated door, of means for forcing the article vended upon the door after the latter has been opened.

16. In a coin controlled vending apparatus, the combination of a magazine horizontally arranged extending from front to rear, means for carrying the articles to be vended to the front, an opening lateral to the magazine through which the articles are vended, a door to close such opening, and mechanical means for opening and closing such door.

17. In a coin controlled vending apparatus, the combination of a magazine horizontally arranged extending from front to rear, means for carrying the articles to be vended to the front, an opening lateral to the magazine, a door to close such opening, a coin chute, and coin controlled mechanism for locking and releasing such door.

18. In a coin controlled vending apparatus, the combination of a horizontally arranged magazine extending from front to rear, an opening perpendicular to the plane of such magazine, a door to close such opening, a coin chute, and coin controlled mechanism for locking and releasing such door.

19. In a coin controlled vending apparatus, the combination of a magazine to contain the articles to be vended extending from front to rear having a lateral opening therein, a slot in said magazine near said opening, and a mechanism operating through the slot to project the articles to be vended from said magazine.

20. In a coin controlled vending apparatus, the combination of a magazine having an opening therein for the exit of the articles vended, a slot in said magazine near said opening, a casing having an opening therein, and a mechanism operating through the slot to project the articles vended through the opening in said casing.

21. In a coin controlled vending apparatus,

the combination of a magazine extending from front to rear, an opening lateral to said magazine, manually operated mechanism situated in front of said magazine to project the articles to be vended through said opening, a door to close said opening, a coin chute, and coin controlled mechanism for locking and releasing said door.

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

MARTIN SLOUGH.

Witnesses:

ARTHUR B. SEIBOLD,  
BENNETT S. JONES.