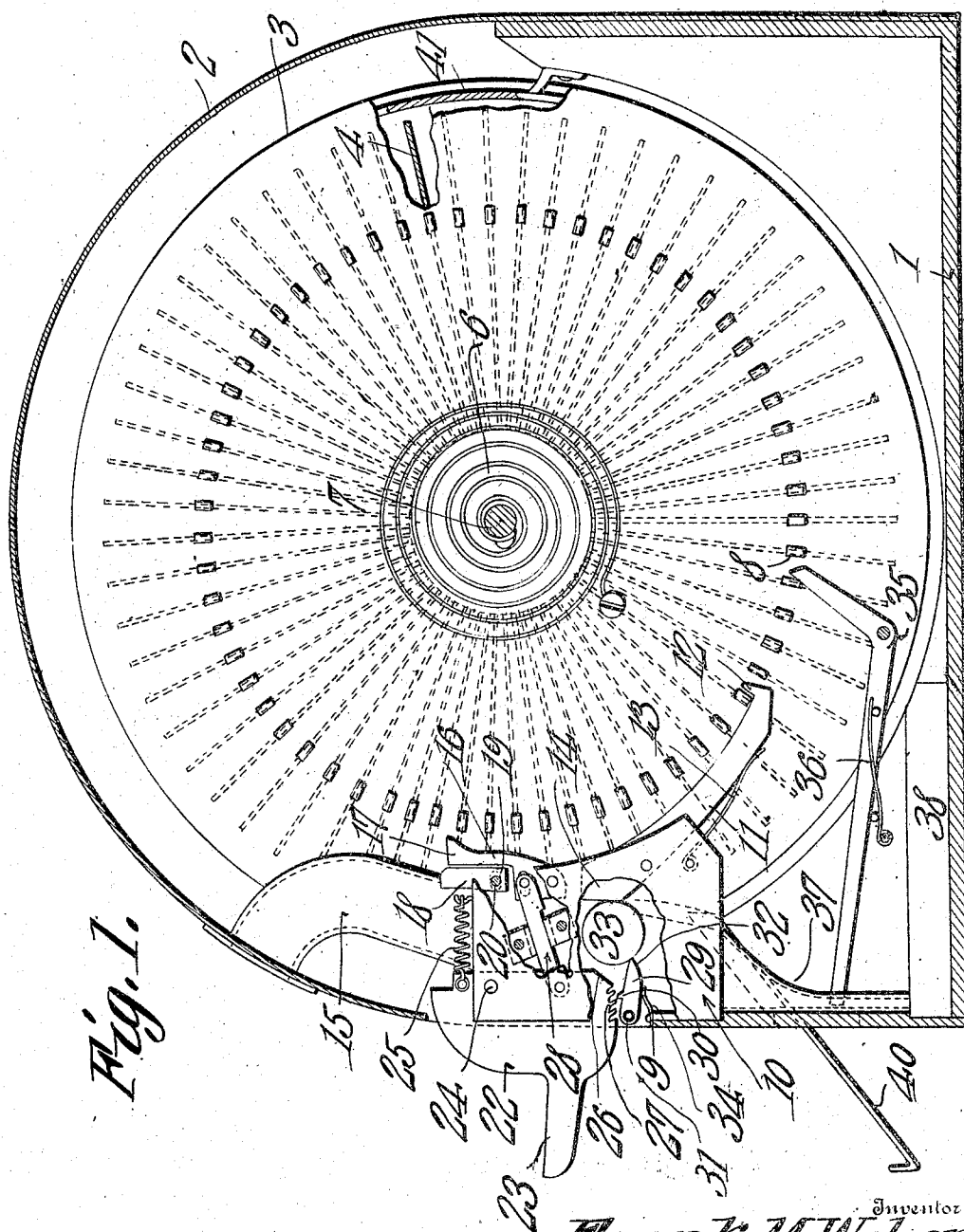


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 VENDING MACHINE.
 APPLICATION FILED JULY 22, 1909.

942,117.

Patented Dec. 7, 1909.
 2 SHEETS—SHEET 1.



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 2 SHEETS—SHEET 2

Fig. 2.

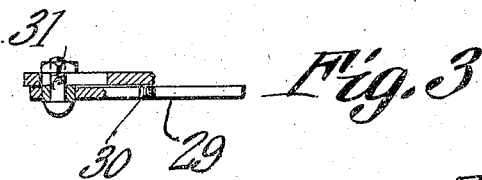
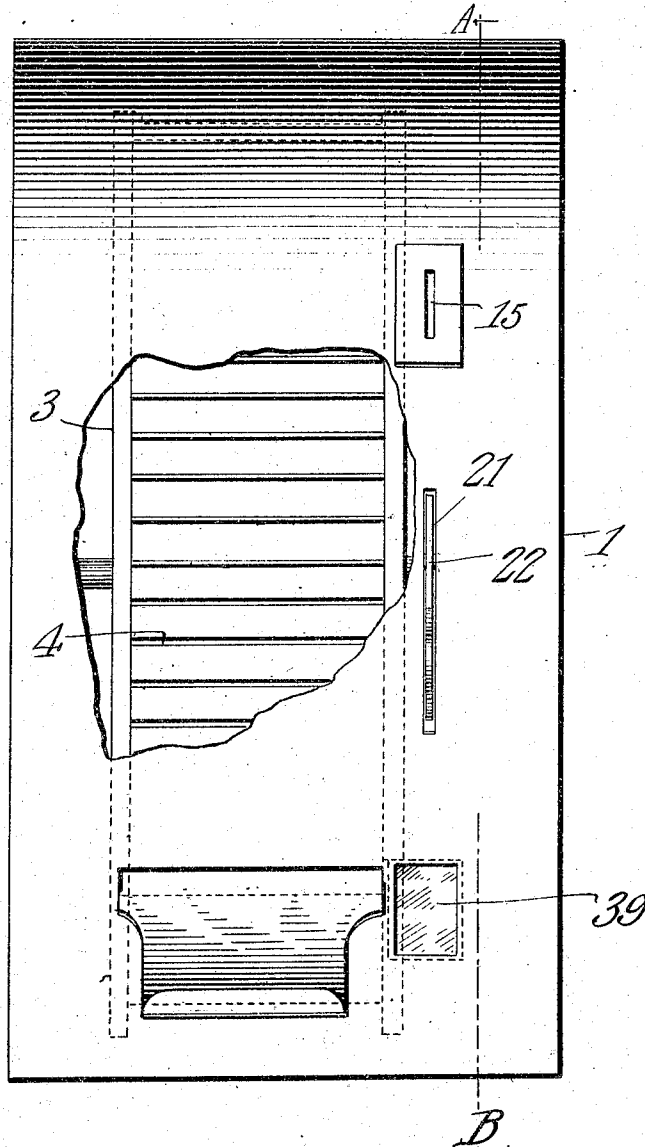


Fig. 3

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UNITED STATES PATENT OFFICE.

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VENDING-MACHINE.

942,117.

Specification of Letters Patent.

Patent

c. 7, 1909.

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To all whom it may concern:

Be it known that I, FRANK M. WEBER, a citizen of the United States, residing at Carsonville, in the county of Sanilac and State of Michigan, have invented a new and useful Vending-Machine, of which the following is a specification.

This invention has reference to improvements in vending machines and is directed more particularly to the vending of postal cards and other such articles although of course some features of the invention may be used in connection with other types of vending machines.

In accordance with the present invention there is provided a rotatable holder for postal cards under the constant impulse of a suitable spring and this holder is prevented from rotating by means of a suitable coin-controlled lock mechanism which, on the introduction of a proper coin, and through the intermediary of the coin, is controllable by an operator to cause the movement of the reservoir of postal cards to a position where a card is released and permitted to gravitate into the reach of the operator.

The invention will be best understood from a consideration of the following detail description taken in connection with the accompanying drawings forming a part of this specification, in which drawings—

Figure 1 is a vertical section on the line A—B of Fig. 2 with some parts broken away to reveal more remote structures. Fig. 2 is a front elevation of the machine with parts broken away to reveal more remote structures. Fig. 3 is a detail section through a coin-controlled detent.

Referring to the drawings, there is shown a basic member 1 provided with a cover 2 which may be semi-cylindrical in shape and made of sheet metal or other material. Within the casing there is mounted a drum 3 provided with a circular series of radial partitions 4 so spaced as to accommodate one or more postal cards between them. At the center of the drum there is formed a spring casing inclosing a suitable spring 6 mounted on an axial arbor 7 which latter may be made rotatable and accessible from the exterior of the machine, or the spring may be wound by reversing the direction of rotation of the drum 3. On one head of the drum there is formed a circular series of spaced

teeth 8 by means of which the rotation of the drum may be prevented or arrested at any point and which are utilized for co-action with suitable pawls or levers for the release of the drum to the action of its spring through movements for predetermined distances. At one side of the drum there is secured to the casing a coin-controlled mechanism designated generally by the reference numeral 9. This coin-controlled mechanism is provided with a side plate 10 to which is pivoted a lever 11 having at its longer end a tooth 12 normally in the path of the teeth 8. This lever is urged into engagement with the teeth 8 by means of a suitable spring 13. The other end of the lever, that is, the end remote from the tooth 8, is designated at 14 and extends a short distance beyond the pivot point of the lever on the side remote from the said tooth 12. This end 14 of the lever 11 is in the path of coins of proper size introduced into a coin chute 15 carried by the casing 1.

Pivoted to the plate 10 above the lever 11 is a dog 16 having a tooth 17 at its free end adapted to be moved between the teeth 8 in the path of said teeth. The movement of the dog 16 away from the teeth 8 is arrested by a stop 18 of any suitable construction. The stop 18 may be made adjustable by means of a suitable slot 19 therein and an adjusting screw 20. The reason for this adjustment will appear farther on.

Pivoted to the plate 10 so as to project through a slot 21 in the front of the casing is a trigger-shaped manipulating lever 22 having a fingerpiece 23 exterior to the casing and within easy reach of an operator. This trigger 22 has a portion extending above the pivot point designated at 24 and a spring 25 tends to maintain the trigger in its normal position. The other end of the trigger, that is, the end on the side of the pivot 24 remote from that engaged by the spring 25 has formed thereon an inclined shoulder 26 adapted to engage an inserted coin and the lower edge of the manipulating lever or trigger 22 has formed therein a series of notches 27. The trigger 22 on one side of the pivot is connected by a link 28 to the dog 16.

Pivoted to the casing or to the plate 10 as the case may be, below the trigger 22, is a block 29 provided on one side with a tooth 30 adapted to the notches 27. This block 29

is adjustable in the direction of its length with relation to its support by means of a screw or bolt 31 and the end of the block remote from its support is formed into a coin-engaging finger 32 so related to the end 14 of the lever 11 that a coin of proper size, such as designated at 33 in Fig. 1, on being introduced into the coin chute 15 will gravitate until arrested by engagement at one edge with the lever end 14 and at the other edge with the finger 32. A spring 34 tends to elevate the block 29 until its tooth 30 is seated in some one of the notches 27 in the lower edge of the manipulating trigger 22, but this spring is of such strength that the weight of a coin is sufficient to move the block against the resistance of the spring until the tooth 30 is out of engagement with its particular notch 27.

Back rotation of the drum 3 is prevented by a lever 35 having one end in the path of the teeth 8 and there maintained by a suitable spring 36 while the other end may extend into a coin guide 37 designed to direct a coin after passing through the coin-controlled mechanism into a suitable receptacle 38. The lever 35 will hold a deposited coin temporarily in front of a window 39 in the front of the casing.

Let it be assumed that a customer desires to purchase a postal card, or more than one postal card, in accordance with the design of the machine, then a coin is introduced into the coin slot 15 and gravitates until it is stopped by engagement with the extension 14 of the lever 11 and with the finger end 32 of the block 29, it being assumed that the coin is of the proper size. If the coin be too small, it will pass freely between these

two points and reach the receptacle 38. Assuming that the coin 33 is of proper size and has been arrested as described then the weight of the coin will move the block 29 until the tooth 30 is out of engagement with the corresponding notch 27. Now the operator may depress the fingerhold 23 and with it the trigger 22 about its pivot 24 which movement will cause the shoulder 26 to be brought into engagement with the coin thus moving the end 14 of the lever 11 rearwardly, and causing the tooth 12 of the lever 11 to move out of engagement with a tooth 8 on the side of the drum 3. The spring 6 is now free to act and the drum 3 is rotated on the impulse of the spring 6 but the movement of the trigger 22 has caused a corresponding movement of the dog 16 and the tooth 17 of the said dog 16 is now in the path of one of the teeth 8 and so the drum

can only rotate until a corresponding tooth 8 has engaged the tooth 17 of the dog 16 when further movement of the drum is prevented. This movement, however, has caused the actuation of the lever 35 about its pivot, and the end of this lever which

extends into the coin guide 37 has lifted the coin exposed at the window 39 to such an extent that the coin will slip off the end of the lever and find its way into the receptacle 38. The lever 35 as soon as it escapes from the tooth 8 with which it was engaged on the rotative movement of the drum will move back into its normal position before the active coin has escaped from between the lever end 14 and block 29 so that when this coin does escape, which it does by the action of the inclined shoulder 26 thereon the lever 25 is in position to arrest the coin in front of the window 39. As soon as the coin has escaped from the block 29 the latter moves to its normal position under the action of the spring 34 and the tooth 30 will engage in the corresponding one of the notches 27 and pass from notch to notch as the pinion 22 assumes its normal position under the action of the spring 25 after being released from pressure of the finger of the operator and serves to lock this trigger against further movement in the active direction until another coin is inserted.

By making the block 29 adjustable lengthwise the active end 32 may be brought nearer to or farther from the end 14 of the lever 11 and so the machine may be readily adapted to coins of different diameters. Since the movement of the trigger 22 is about a fixed pivot 24, the extent of movement of this trigger varies with coins of different diameters and therefore in order to bring the dog 16 with its tooth into engagement with the teeth 8 both the stop 18 and the link 28 may be made adjustable. The arrangement is such that when a compartment between two partitions 4 is brought into proper position the card or cards therein contained will gravitate onto a guide plate 40 and so find their way to the exterior of the machine.

A band 41 made fast to the casing and closely embracing the drum 3 in the paths of the outer edges of the cards will prevent the cards from escaping except in line with the discharge guide 40 where the drum may be discontinued.

Since it is desirable at times to adapt the machine to the sale of one or two postal cards or to a comparatively large number of postal cards, it is only necessary to adjust the block 29 toward or from the lever end 14 to and correspondingly adjust the link 28 and dog 16 to cause the machine to respond properly to coins of different diameters. For instance, the machine may be adjusted to cause the discharge of one postal card at a time on the introduction of a one cent piece, or the machine may be adjusted to respond to a five cent piece, in which case a number of postal cards, say five or six, may be placed in each pocket formed between the partitions 4 so that on the opera-

tion of the machine a corresponding number of postal cards will be discharged at one time. By this means the same mechanism is adapted for delivering different quantities as may be desired without the necessity of any change whatsoever in the structure but only in the adjustment of parts.

What is claimed is:

1. In a vending machine, a vending mechanism having a constant tendency to move actively, and a coin controlled lock therefor comprising a detent lever having one end in the path of an inserted coin, a co-acting member accessible from the exterior of the machine, and a stop member for the coin having means for locking the member accessible from the exterior of the machine in inoperative position.

2. In a vending machine, a coin-controlled lock comprising an operating member for the vending side of the machine, a stop member for the coin co-acting with the said operating member to arrest the movement of an inserted coin of proper size, and an operating member accessible from the exterior of the machine, said stop member and last-named operating member co-acting to cause the locking of the last-named operating member in inactive position in the absence of a coin of proper size in the machine.

3. In a vending machine, a vending mechanism, and a coin controlled lock therefor comprising a lever having one end in the path of an inserted coin, a member accessible from the exterior of the machine, and a stop member for the coin having means for locking the member accessible from the exterior of the machine in inoperative position and having a constant tendency to the locking position, said stop member moving to the release position under the weight of an inserted coin.

4. In a vending machine, a vending mechanism having a constant tendency to move actively, and a coin-controlled lock therefor comprising a detent lever having one end in the path of an inserted coin, a co-acting member accessible from the exterior of the machine and provided with a series of notches, and a stop member for the coin having a projection adapted to the notches in the member accessible from the exterior of the

machine and operating to lock said member in the inoperative position in the absence of an inserted coin.

5. In a vending machine, a vending mechanism having a constant tendency to move actively, and a coin-controlled lock therefor comprising a detent lever having one end in the path of an inserted coin, a co-acting member accessible from the exterior of the machine and provided with a series of notches, and a stop member for the coin having a projection adapted to the notches in the member accessible from the exterior of the machine and operating to lock said member in the inoperative position in the absence of an inserted coin, said stop member yielding to the weight of an inserted coin to release the member accessible from the exterior of the machine.

6. In a vending machine, a vending mechanism, and a coin-controlled lock therefor comprising two co-acting members adapted to be connected actively through the intermediary of an inserted coin of proper size, and an adjustable stop for the coin co-acting with one of the members to arrest the coin and provided with means for locking the other member in inactive position in the absence of a coin and yielding to the weight of the coin to unlock said member.

7. In a vending machine, a coin-controlled lock comprising a member accessible from the exterior of the machine and having a normal tendency to move to inactive position, a detent lever in operative relation to the said first-named member through the intermediary of an inserted coin, a locking dog connected to the first-named member, a coin stop movable to lock the first-named member in inactive position in the absence of a coin and yieldable to the weight of a coin to release the said first named member, and a vending mechanism having a constant tendency to move actively and controlled by the said coin lock.

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

FRANK M. WEBER.

Witnesses:

A. R. NILES,

ALEX. B. SIMONSON.