H. J. KEATING.

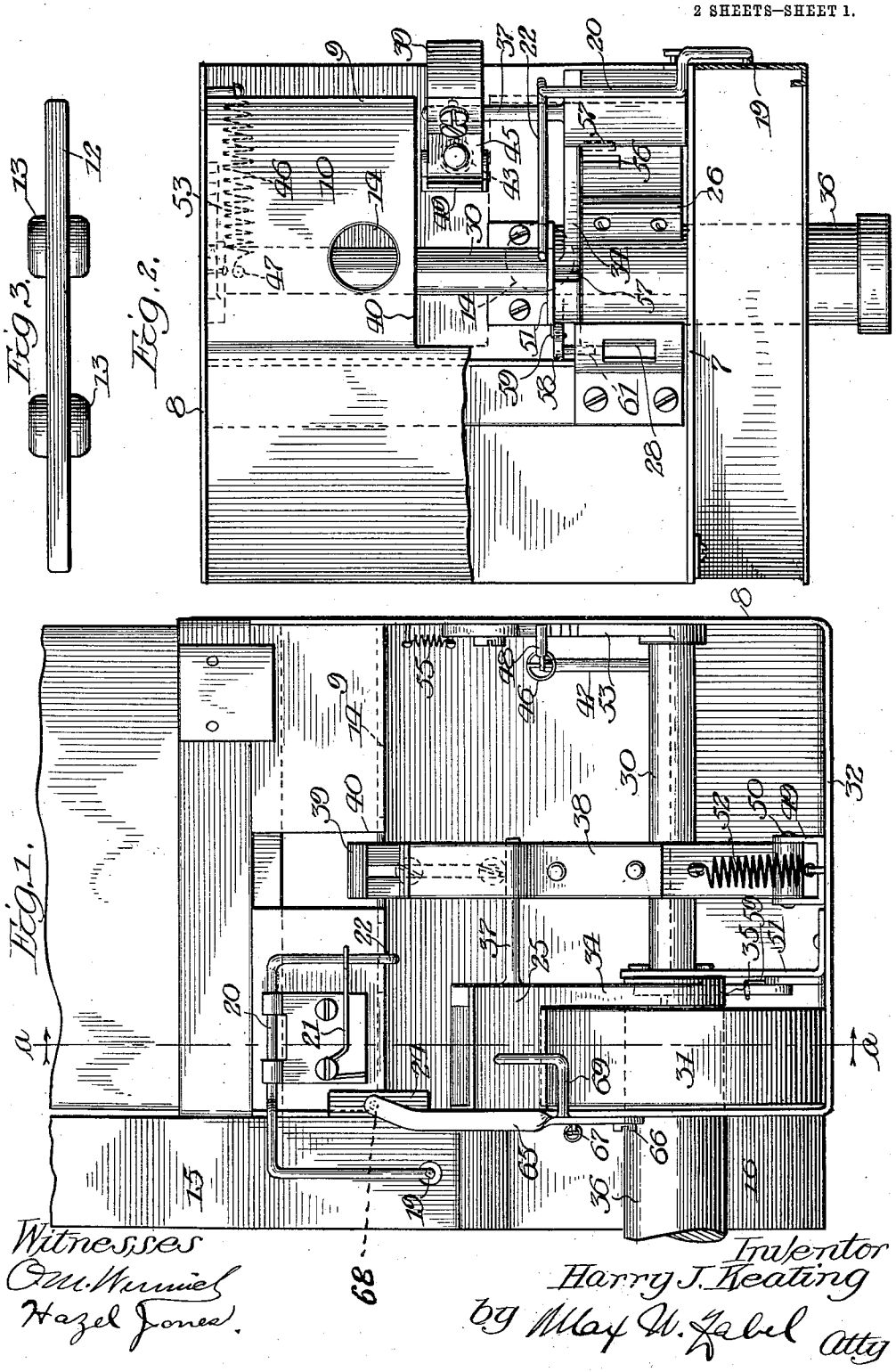
VENDING MACHINE.

APPLICATION FILED SEPT. 26, 1911.

1,083,365.

Patented Jan. 6, 1914.

2 SHEETS—SHEET 1.



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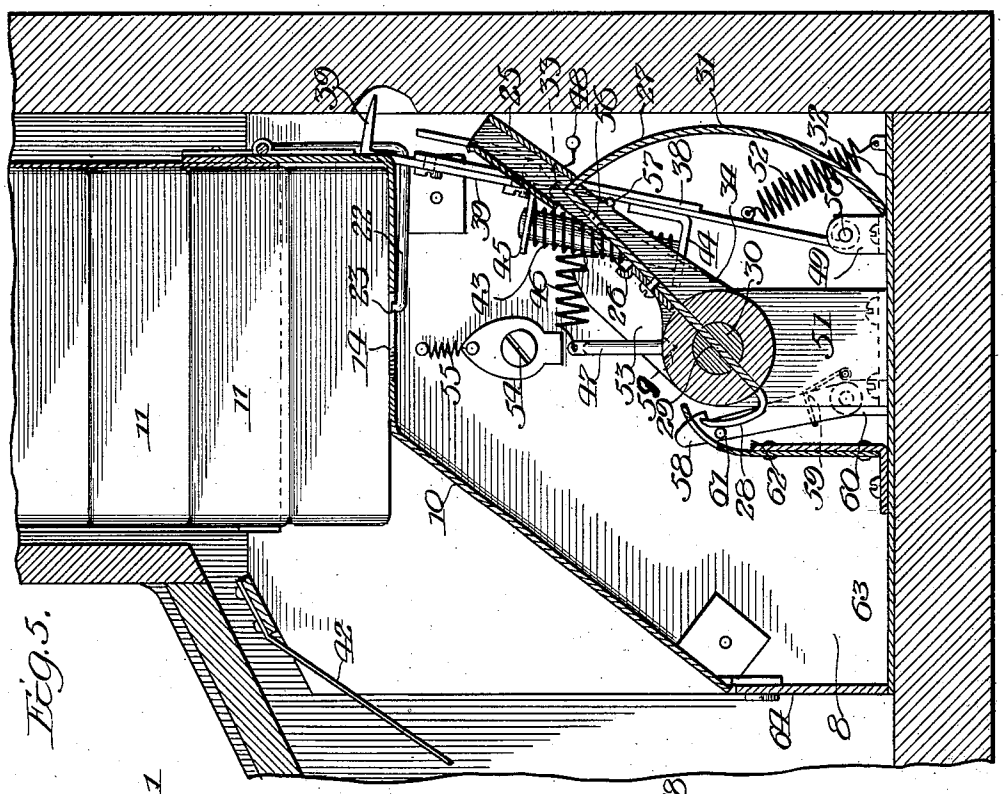


Fig. 5.

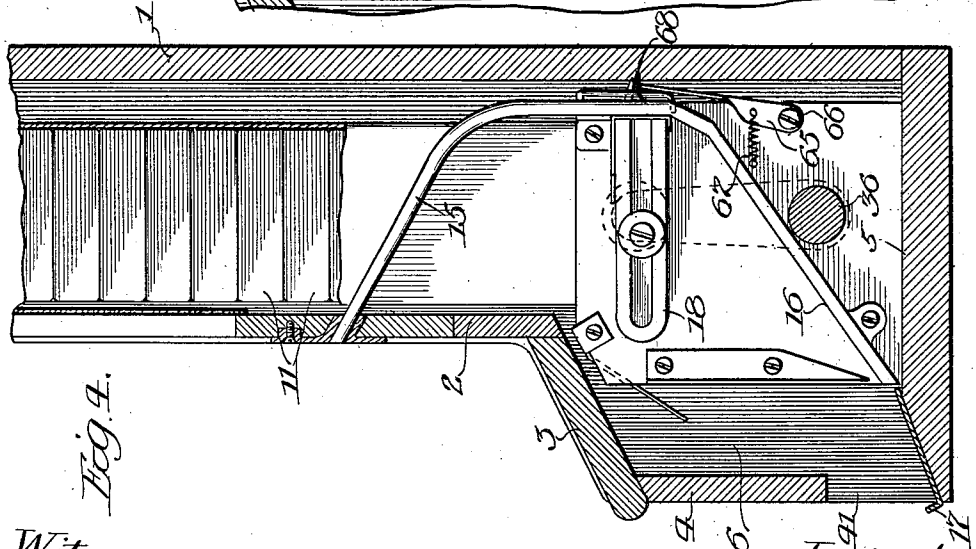


Fig. 4.

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UNITED STATES PATENT OFFICE.

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VENDING-MACHINE.

1,083,365. Specification of Letters Patent. Patented Jan. 6, 1914.

Application filed September 26, 1911. Serial No. 651,354.

To all whom it may concern:

Be it known that I, HARRY J. KEATING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Vending-Machines, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to check controlled apparatus and has for its object the provision of a machine in which cartons or packages of such a nature may be suitably vended.

In one of the applications of my invention, it is especially designed for the sale of cartons containing a small piece of soap and a towel. The machines are of particular use in vending these articles especially in such communities where by statutes individual towels and soap must be used in public places. I therefore provide cartons of a suitable size containing a small individual towel and a small cake of soap and my improved machine is designed to vend packages of this approximate size and is provided with suitable check controlled apparatus covering the vending of these cartons or packages.

I will describe my improved machine for vending these cartons in connection with the accompanying drawings illustrating the same, in which:

Figure 1 is a front view with the casing removed of the mechanism employed in my improved machine; Fig. 2 is a top view thereof, a portion of the top wall being broken away more clearly to reveal features of construction; Fig. 3 is a detail view of the weight employed which also performs certain functions; Fig. 4 is an end view of the apparatus with the outer casing shown in section, and Fig. 5 is a sectional view on line *a*—*a* of Fig. 1.

Referring more particularly to Fig. 4, I show a casing having the walls 1, 2, 3, 4, 5 and 6, one of the sides having been removed to reveal the interior of the mechanism within this casing. Within the casing is a box-like structure containing the operating mechanism which has side walls 7 and 8 and a rear wall 9, and a top wall 10 bent as shown more clearly in Fig. 5. On the flat upper surface of the plate 10 suitable cartons 11, 11 are to rest and surmounting these is the weight 12 shown more clearly in Fig. 3. This weight 12 has four projections 13, 13, two on either side which are adapted to project through holes 14, 14 provided in the plate 10 for purposes of control to be presently explained. A coin chute 15 extends from the front side 2 of the casing and is continuous through a discharge section 16 which opens in front of a discharge shelf 17 where a returned coin may be directed when the machine for instance is without further cartons. The magnet 18 is placed in proximity to the chute 15 to prevent the use of magnetic material for operating the machine. A pin 19 projects into the chute 15 and closes the discharge portion thereof 16 when this pin projects into said chute 15. The pin is carried by a lever 20, which lever is actuated by a spring 21 normally to hold this pin 19 within the chute 15. Arm 22 of this lever 20 is provided with a pin 23 that projects into the opening 14 shown in dotted lines in Fig. 2. Now when the cartons have all been used up, the weight 12 rests on the plate 10 and has the projections 13 which project through the openings 14 to thereby depress the pin 23 to thereby remove the pin 19 from the coin chute, thus permitting the deposited coin to pass entirely through the chutes 15 and 16 and lodge at the discharge plate 17 to be there reclaimed. When the pin 19 is in the chute however, the coin may pass from the coin chute 15 through the opening provided by a straightened out portion 24 of said chute and then pass through a rectangular tube 25 and lodge against an angle plate 26 of a coin carrier 27. This coin carrier 27 is made of a straight ribbon-like piece of metal, having a cam portion 28, a straight portion 29 lodged in a shaft 30, and an arc member 31, which member 31 normally rests against the bottom plate 32 of the controlling mechanism when in its zero position.

The position of the coin is indicated in dotted lines at 33, and it will be seen that this coin will operate the tube 25 as it projects into said rectangular tube 25. This rectangular tube 25 is carried by an arm 34, which arm is loosely mounted on a shaft 30, said arm having a hub 35. A handle 36 is adapted to be mounted around the shaft 30 and has slots wherein the portion 29 of the coin carrier 27 may enter, thereby to cause the rotation of the handle to be communicated to the shaft 30 and the coin carrier.

Now after the coin has been deposited, the handle is turned so as to rotate the shaft 30 in a contra-clockwise direction (Fig. 5) and the coin 33 by engaging the front wall of the rectangular chute 25 carries this rectangular chute with it. This rectangular chute is provided with an extending pin 37, which pin engages an oscillating arm 38 so that when the handle 36 is rotated in a contra-clockwise direction the coin being in position in the carrier, the rectangular chute and the oscillating arm are likewise carried along. A finger 39 is provided on top of the arm 38 and projects through a slot 40 of the top plate 10 and the back plate, and is thus in position to engage the lowermost carton. If the handle is thus rotated to its limiting contra-clockwise position, the finger 39 is moved forward enough to eject the lowermost carton 11 from its position on top of the shelf 10 out into the forward space of the machine where it will be removed through an opening 41 by the purchaser. A spring 42 serves to direct the carton downwardly in its movement so that it may not become stuck in the machine. The finger 39 is pressed upwardly by a spring 43, which spring 43 rests against an angle plate 44 mounted on the arm 38. The remaining cartons thus when falling down will press the finger downwardly so that it may return to the position occupied in Fig. 5 where, after it has become released from the carton, the finger is again pressed upwardly by means of the spring 43, the spring 43 pressing against the angle plate 45. A spring 46 acting on a pin 47 driven into the shaft 30 and which spring is fastened at its opposite extremity to a pin 48 provided in the outside plate 8 normally turns the shaft in such a position that the circular portion 31 of the coin carrier 27 rests against the bottom plate 32 as shown in Fig. 5. Ears 49 in combination with a pin 50 provide a rotatable mounting for the arm 38. The guide plate 51 supports the shaft 30. A spring 52 normally holds the arm 38 in the position shown in Fig. 5. The shaft 30 carries a segment of a ratchet wheel 53 which coöperates with a double acting pawl 54 in such a manner that the shaft when once started in one direction of rotation must complete its movement to its limiting position before it can be returned, thus to prevent error in the operation of the mechanism. A spring 55 normally holds the pawl in the position shown in Fig. 5. The section 29 of the coin carrier has a slot 56 through which a pin 57 carried by the arm 34 may project.

When the coin is originally deposited, the parts occupy the position shown in Fig. 5. After the carton has been ejected and the handle released, the spring 46 rotates the shaft 30 to its starting position and during a portion of this return movement the coin is still upon the coin carrier. The hub 35 has a slot 59 shown in dotted lines in Fig. 5, which slot coöperates with an arm 58 in its furthermost operated position, being engaged by said pawl 58 which a spring 59 normally tends to rotate in a clockwise direction, and which pawl is pivotally mounted on an angle plate 60. Consequently although the coin carrier 27 and the shaft 30 return to normal position after ejection of the package, the arm 34 is held in its operated position until the extension 28 of the coin carrier which is cam shaped engages a pin 61 on the pawl 58, to thereby release this pawl and thereby to permit the arm 34 and arm 38 to be returned to their initial position by the action of the spring 52. Before the pawl 58 is released from the slot 59 of the hub 35, the pin 57 of the arm 34 has passed through the slot 56 and thrown the coin forward so that it may be guided by the arm 62 to the coin carrying receptacle 63 from whence it may be removed by unlocking the front plate 64 thereof at stated intervals by a duly authorized collector. In order to prevent loss of the coin while the machine is being operated I provide an arm 65 which is pivotally mounted at 66 which a spring 67 tends to rotate in a contra-clockwise direction. This arm turns a pin 68 that projects through the bent portion 24 of the coin chute and stops a second coin which might be deposited while the package is being ejected. As soon as the package has been ejected and the parts returned to normal an arm 69 fixedly mounted to the arm 65 is engaged by the rectangular chute 25 and the arm 65 thereby moves in a clockwise direction until the pin 68 is removed from the path of the coin which may thereupon fall upon the coin carrier in readiness for a second actuation.

While I have herein shown and particularly described one form which my invention may take, I do not wish to limit myself to such specific description and drawing, but

Having thus described one form of carrying out my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a machine of the character described the combination with a carton magazine, an arm for ejecting a carton independently pivotally mounted, a shaft, a handle for operating said shaft, a coin carrier carried by said shaft, an intermediate arm loosely mounted on said shaft and adapted to be engaged by and operated by a coin carried on said coin carrier, said intermediate arm having means to engage said carton ejecting arm, a pawl to hold said intermediate arm after operation, and means controlled conjointly with said coin carrier to control said pawl to release said intermediate arm.

2. In a machine of the character described

the combination with a carton magazine, an arm for ejecting a carton independently pivotally mounted, a shaft, a handle for operating said shaft, a coin carrier carried by said shaft, means carried by said coin carrier to prevent the proper lodgment of a coin therein after the shaft has been moved from its initial position, an intermediate arm loosely mounted on said shaft and adapted to be engaged by and operated by a coin carried on said coin carrier, said intermediate arm having means to engage said carton ejecting arm, a pawl to hold said intermediate arm after operation, and means controlled conjointly with said coin carrier to control said pawl to release said intermediate arm.

3. In a machine of the character described the combination with a carton magazine, an arm for ejecting a carton independently pivotally mounted, a shaft, a handle for operating said shaft, a coin carrier carried by said shaft, an intermediate arm loosely mounted on said shaft and adapted to be engaged by and operated by a coin carried on said coin carrier, said intermediate arm having means to engage said carton ejecting arm, a pawl to hold said intermediate arm after operation, and means controlled conjointly with said coin carrier to control said pawl to release said intermediate arm, said last aforesaid means including a pin carried by said pawl, and a cam.

In witness whereof, I hereunto subscribe my name this 9th day of September, A. D., 1911.

HARRY J. KEATING.

Witnesses:
MAX W. ZABEL,
HAZEL JONES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."