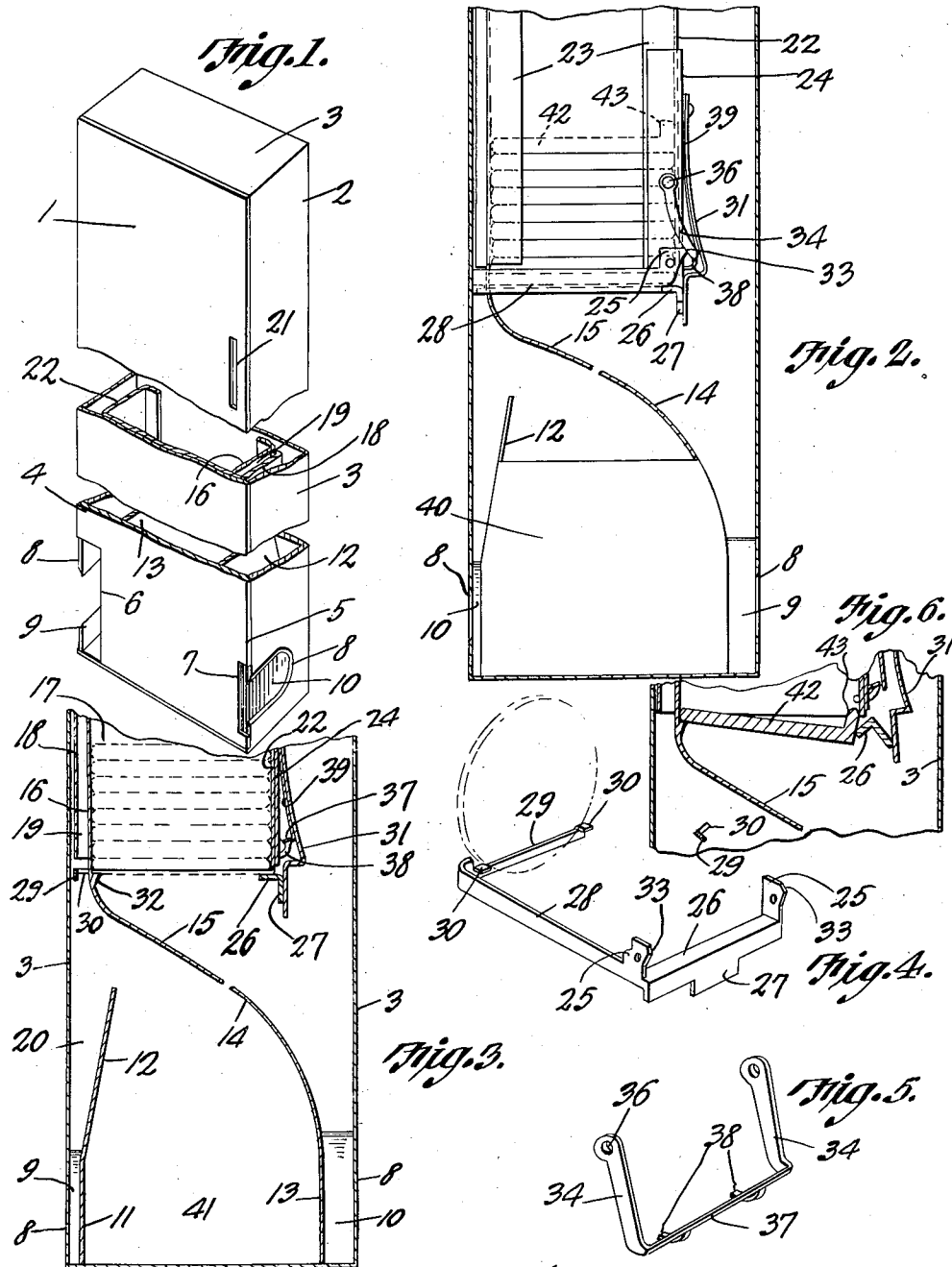


C. S. BACHMAN.
VENDING MACHINE.
APPLICATION FILED MAR. 24, 1915.

1,164,911.

Patented Dec. 21, 1915.



Witnesses

J. R. Dineen
R. L. Parker

C. S. Bachman Inventor

by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

CLAYTON S. BACHMAN, OF FULLERTON, PENNSYLVANIA.

VENDING-MACHINE.

1,164,911.

Specification of Letters Patent.

Patented Dec. 21, 1915.

Application filed March 24, 1915. Serial No. 16,711.

To all whom it may concern:

Be it known that I, CLAYTON S. BACHMAN, a citizen of the United States, residing at Fullerton, in the county of Lehigh and State of Pennsylvania, have invented a new and useful Vending-Machine, of which the following is a specification.

This invention relates to vending machines, it being an object of the invention to provide a simple and compact vending machine especially designed for use on the backs of theater seats, in street cars, and other places where such a machine can be used properly only if comparatively small.

Another object is to provide a coin controlled mechanism which will operate automatically to return an inserted coin should it not be of the proper denomination or should the magazine of the machine be empty.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a perspective view of the machine, a portion thereof being broken away. Fig. 2 is a vertical transverse section through the casing and showing the coin controlled mechanism in elevation. Fig. 3 is a view similar to Fig. 2 but showing the magazine and the coin controlled mechanism in section. Fig. 4 is a perspective view of the coin engaging lever, the position of a coin thereon being indicated by dotted lines. Fig. 5 is a perspective view of the latch used for holding the contents of the magazine during the discharge of the lowermost article therefrom. Fig. 6 is a vertical section through a portion of the structure and showing the relative positions of the parts after the last article has been removed.

Referring to the figures by characters of reference 1 designates a box-like casing the back of which is adapted to be closed by a removable cover 2 having side and end flanges 3 which fit snugly around the casing 1. This cover or closure may be fastened to

the casing 1 in any suitable manner, not shown.

Side flanges 4 and 5 extend laterally from the casing 1 and practically throughout the length thereof, the lower portion of the flange 4 being cut away to form an outlet opening 6 for the articles to be dispensed, while the lower portion of flange 5 is cut away to form an outlet opening 7 through which a returned coin may be removed. The side flanges 3 are formed, adjacent their lower ends, with slots 8 located directly opposite the openings or cut away portions 6 and 7 respectively and communicating with pockets 9 and 10 provided in the side portions of the casing 1 at the lower end thereof. The slots 8 are so proportioned as to permit the ready insertion of the end of a finger whereby an article seated in either pocket can be drawn forwardly through the opening 6 or 7. The inner wall of the pocket 9 is formed by a partition 11 which is secured to the inner surface of the front of casing 1 and extends upwardly a short distance parallel with the adjacent side flange 3, after which it merges into a laterally and inwardly inclined deflecting partition 12. The inner wall 13 of the pocket 10 extends upwardly a short distance parallel with the adjacent side flange 3 and is then curved inwardly and laterally, as shown at 14. This inwardly curved portion 14 extends close to the upwardly and laterally extending inclined partition or guide 15 provided at the lower end of one side wall 16 of the magazine 17 which occupies the upper portion of the casing 1. This wall 16 is spaced from and parallel with a flange 18 extending from the inner face of the front of casing 1 and parallel with the adjacent side flange 3 of the closure 2, the wall 16 and flange 18 cooperating to form a coin chute 19 which is directly above the space 20 provided between flange 3 and the inclined portion 12 of partition 11. Opening into the upper portion of the coin chute 19 is a coin receiving slot 21 so proportioned as to prevent the insertion of a coin larger than the one intended to be inserted. As the machine herein described is designed primarily to be operated upon the insertion of one cent, it will be apparent that the only other coin which might be inserted would be a dime.

Extending inwardly from the inner face of the front of casing 1 is a partition 22 forming another side wall of the magazine

17. The walls 16 and 22 of the magazine have their free longitudinal edges merged into inwardly extending retaining flanges 23.

Secured in any suitable manner to the lower portion of the wall 22 is a plate 24 to the lower end of which are connected upstanding ears 25 connected by an angular strip 26 having a depending tongue 27. The strip 26 is extended at right angles from one end of an arm 28, the other end of the arm being provided with a finger 29 extending at right angles therefrom. On this finger are formed studs 30 extending short distances toward the strip 26. Strip 26 is arranged under and parallel with the wall 22 of the magazine, while finger 29 is normally supported under the lower end of the partition 18, the studs 30 being extended toward the wall 16 and under the coin chute 19. The curved lower portion 15 of wall 16 is extended between the finger 29 and the strip 26, as will be seen, by referring to Fig. 3. A spring 31 is secured to the plate 24 and bears against tongue 27 so as to hold the arm 28 normally in a substantially horizontal position. A supporting rib 32 is formed along the inner side of the wall 16 and substantially in the same plane with the top of the strip 26 when said strip and its arm 28 are in their normal positions. This rib constitutes a rest on which one end of an article contained within the magazine is adapted to bear, the other end of the article bearing on the strip 26.

Each of the ears 25 has a straight face indicated at 33 designed to be engaged by the sides 34 of a latch, these sides being pivotally connected as at 36, to the plate 24 and being connected at their lower ends by a cross strip 37 from which extend fingers 38 which project through the wall 22 at a distance from the strip 26 substantially equal to the thickness of the articles to be dispensed. A supplemental spring 39 is connected to the plate 24 and bears against the strip 37, thus to hold the fingers 38 normally projected into active positions.

The two partitions 11 and 13 are connected by a cross partition 40 whereby a coin receiving receptacle 41 is provided under the curved portion 14 of partition 13. A weight 42 is adapted to rest on the stack of articles in the magazine and has an upstanding flange 43 at one end.

When the machine herein described is in use, the closure 2 is attached to a suitable supporting structure and the casing 1 after being unfastened from the closure is withdrawn forwardly, after which the articles to be dispensed, such for example, as cakes of chewing gum, are deposited in the magazine with the weight 42 thereon, the lower one of the articles bearing at its ends upon the strip 26 and the rib 32 respectively, while the fingers 38 project over the lowermost article

and under the next adjoining article. The casing 1 is then reinserted into the closure 2 and locked after which a coin can be inserted into the slot 21. If the coin is of the proper denomination it will gravitate through the chute 19 and strike the lugs 30, thus causing the arm 28 to swing downwardly against the action of the spring 31 which bears against the tongue 27. During this downward swinging of arm 28, the angular strip 26 will be tilted downwardly, thus lowering that end of the article supported thereby until said end finally slips past the strip 26 whereupon the released article will slip off of the rib 32 and slide along the partition 15 and the curved portion 14 into the pocket 10. The deposited coin when brought into contact with the lugs 30 will project a short distance below the finger 29, as shown in Fig. 4, with the result that said downwardly projecting portion of the coin will ride along the convex face of the partition 15 and thus prevent the coin from tilting outwardly over the finger 29 and into the space 20. Instead, the coin will travel with the finger 29 until it is brought to position above receptacle 41 when it will swing over the finger and drop into the receptacle 41. During the downward movement of the arm 28 the spring pressed strip 37 is pushed inwardly so that the lugs 38 are held positively below the next article in the magazine and one end of said article will thus be deposited on the rib 32. As soon as the arm 28 is released of the weight of the coin, the spring 31 will return it to its normal position, thus causing the ears 25 to push against the side members 34 of the latch and withdraw the fingers 38 from under the article thereon so that said article will be deposited on the strip 26. Thus the machine is reset automatically. Should a dime, which is smaller than a cent, be inserted into the coin chute 19, it would not operate the mechanism but would, instead, pass between the lugs 30 and fall into the space 20, thus being deposited in the pocket 9.

After the last article has been removed from the magazine in the manner pointed out, the weight 42 assumes a position upon the strip 26 and the ribs 32 and presses downwardly on said strip 26 so as to cause the finger 29 to swing downwardly to position above the receptacle 41 where it will not be in the way of a deposited coin. The weight is limited in its downward movement by the rib 43 coming against the adjacent wall of the magazine 17. With the parts thus positioned it will be apparent that any coin inserted in the usual manner will be directed into the pocket 9 from which it can be removed by the person who deposited it.

What is claimed is:—

1. A vending machine including a magazine, a yielding held member pivotally con-

5 nected to the lower portion of the magazine, a coin receptacle, deflecting means extending between the magazine and coin receptacle, cooperating means upon said pivoted member and the deflecting means for engaging the respective ends of an article to be supported in the lower portion of the magazine, means for directing a coin against the pivoted member to shift it out of its normal position and release the supported article, said pivoted member and the lower face of the deflector cooperating to guide the deposited coin laterally during the downward movement of the pivoted member, to the coin receptacle, and a weight in the magazine for preventing the return movement of the pivoted member after the ejection of the last article from the magazine.

2. In a vending machine, a magazine, a coin receptacle thereunder, a deflector extending from one side of the magazine to the opposite side of the coin receptacle, an arm pivotally connected to the magazine, an article supporting strip extending under the magazine from the pivot end of the arm, yielding means engaging said strip for holding it normally in active position, means on the deflector and cooperating with the strip for supporting an article in the lower portion of the magazine, when said strip is in its normal position, a coin engaging finger extending from the arm and movable below the deflector, said finger having spaced coin supporting lugs, the said finger and deflector cooperating to hold a deposited coin upon the finger until brought to a position above the coin receptacle.

3. In a vending machine, a magazine, an arm pivotally connected thereto, an article engaging member extending from the pivot end of the arm, yielding means for holding said arm normally in a predetermined position, a deflector extending from the magazine and past the arm, means on the deflector and cooperating with said member on the arm for engaging the end portions of an article within the magazine, to support the article, a coin chute, a coin engaging finger upon the arm and extending adjacent the discharge end of the coin chute, coin engaging projections upon the finger and extending across the discharge end of the chute, said finger and projections cooperating with the lower surface of the deflector to guide a coin laterally under the deflector and away from the coin chute, a coin receptacle under the deflector, and a weight in the magazine and constituting means for preventing the return movement of the arm and coin engaging finger when brought to their lowermost positions upon the release of the last article above the coin receptacle.

4. In a vending machine, a magazine, a coin receptacle thereunder, a deflector extending between the magazine and coin re-

ceptacle, a coin pocket at one side of the coin receptacle, a coin chute above the pocket, an arm pivotally connected to the magazine, yielding means for holding the arm normally in a predetermined position, cooperating means upon the arm and deflector for engaging the respective end portions of an article in the magazine, thereby to support the article, a weight to be supported by the articles, a finger upon the arm and movable below the deflector, spaced coin engaging projections upon the finger and normally projecting across the discharge end of the coin chute, said finger and arm being movable under the action of a coin deposited in the coin chute, to release one end of the supported article to permit said article to gravitate along the deflector, the finger and the lower surface of the deflector constituting means for guiding the deposited coin from a position above the coin pocket to a position above the coin receptacle, the weight constituting means for preventing the return movement of the arm and finger when the last article is delivered.

5. In a vending machine, a magazine, a coin receptacle, a coin receiving pocket at one side of the coin receptacle, a deflector extending between the magazine and coin receptacle, a coin chute above the pocket, an arm pivotally connected to the magazine, an article engaging member extending therefrom, means upon the deflector and cooperating with said member for engaging the respective end portions of an article to support it within the magazine, a spring for yieldingly holding the arm in active position, a finger extending from the arm and movable below the deflector, spaced coin engaging projections upon the finger and normally extended across the outlet of the coin chute, said arm being movable under the action of a deposited coin to release one end of the supported article to thereby deposit the article upon the deflector, said finger and the lower surface of the deflector cooperating to guide the deposited coin laterally from under the coin chute to a position above the coin receptacle, the arm controlling spring constituting means for producing a quick return of the arm and finger to their initial positions, and a weight adapted to rest upon the articles and constituting means for preventing the said return movement after the discharge of the last article.

6. In a vending machine, a coin receptacle, a coin pocket at one side thereof, an article receiving pocket at the other side thereof, a magazine, a coin chute above the coin pocket, a deflector extending between the magazine and coin receptacle for directing articles into the article receiving pocket, yieldingly held article supporting means below the magazine, a coin engaging member movable therewith and normally positioned

below the coin chute and above the coin pocket, said member being movable downwardly under the action of a deposited coin to release an article in the magazine and
5 said member cooperating with the lower surface of the deflector to guide a coin to the coin receptacle during the downward movement of the article supporting means, and a weight in the magazine constituting
10 means for preventing the return movement of the coin engaging member after the delivery of the last article.

7. In a vending machine, a magazine, a spring pressed latch pivotally connected
15 thereto, article engaging lugs extending from the latch and into the magazine, an arm pivotally connected to the magazine, an article engaging strip extending therefrom, a deflector below the magazine, means
20 on the deflector and cooperating with said strip for engaging the respective end por-

tions of the lowermost article in the magazine, thereby to hold said article in the magazine, means upon the arm for holding the latch normally out of active position, a
25 spring engaging the article supporting strip for holding the arm normally in active position, a coin engaging member movable with the arm, and means for directing a coin thereagainst to shift the arm out of its normal position, thereby releasing the lowermost article and the latch said latch when
30 released being movable into engagement with the next adjoining article in the magazine.

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

CLAYTON S. BACHMAN.

Witnesses:

WARREN K. MILLER,
HELEN R. OBERLY.