

J. W. TATUM.
 AUTOMATIC VENDING MACHINE.
 APPLICATION FILED MAR. 21, 1910.

1,066,451.

Patented July 1, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

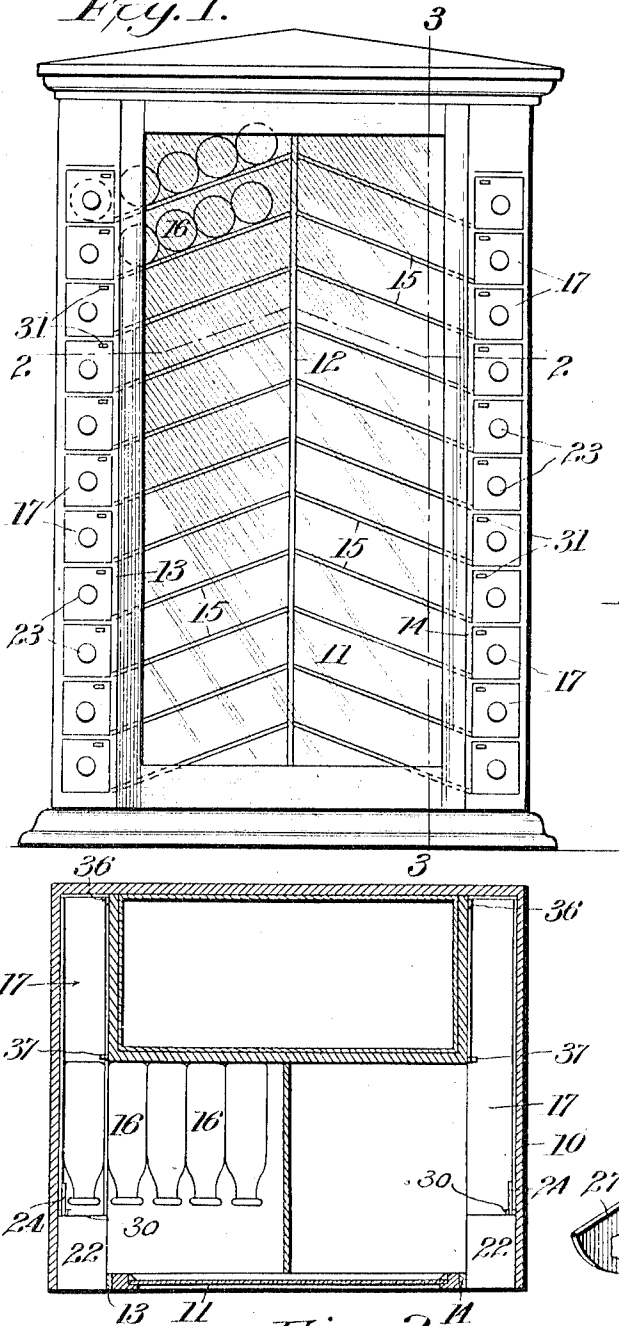


Fig. 7.

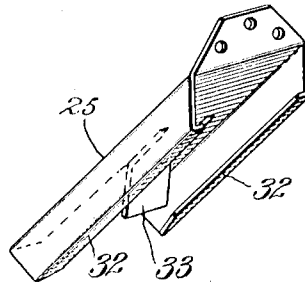


Fig. 8.

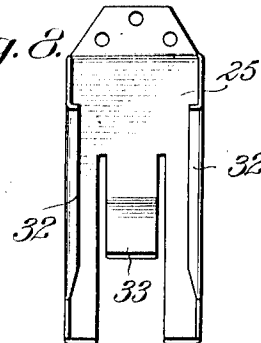


Fig. 6.

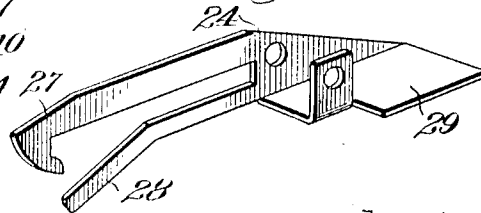


Fig. 2.

Witnesses
 C. H. Walker
 J. H. Boy

Inventor
 James W. Tatum.
 By Messrs. Cushman & Co.
 Attorney

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2 SHEETS-SHEET 2.

Fig. 3.

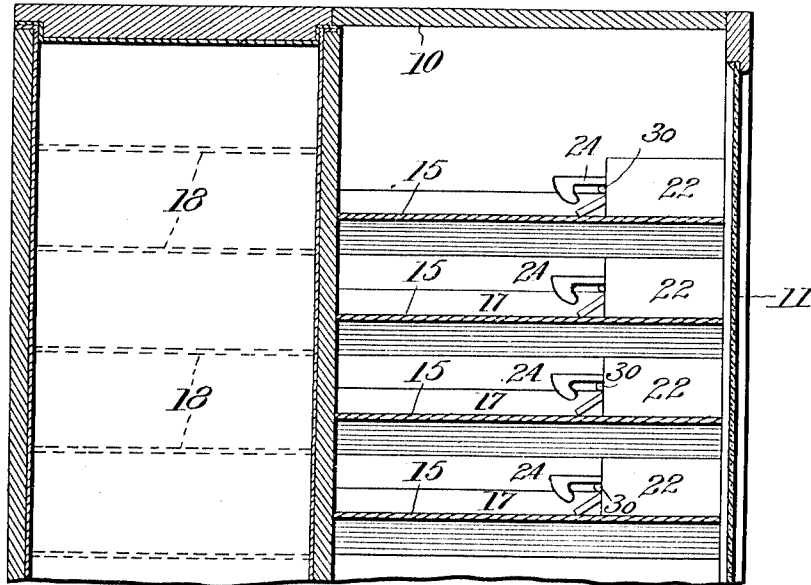


Fig. 4.

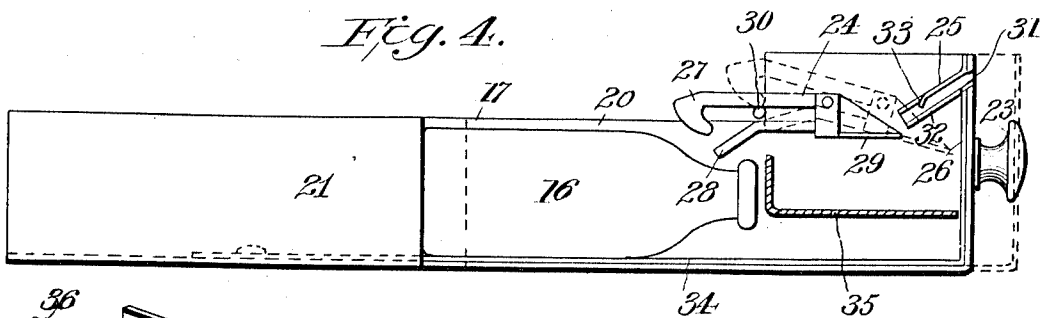
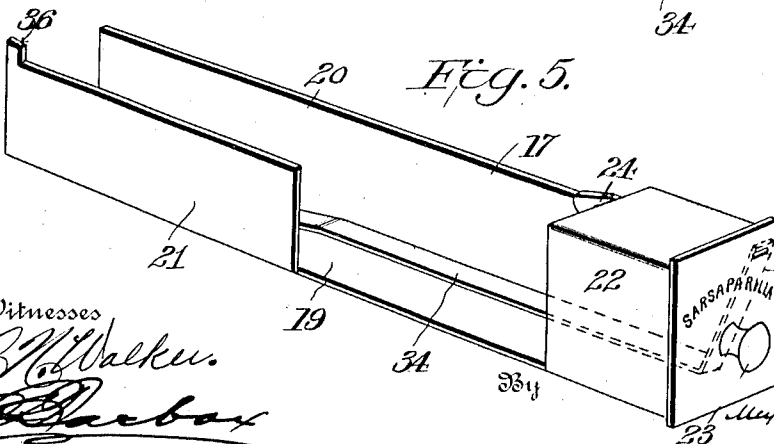


Fig. 5.



Witnesses
C. H. Walker.
Charles

Inventor
James W. Tatum

Meyers, Cushman & Ren
Attorney

UNITED STATES PATENT OFFICE.

JAMES W. TATUM, OF ANGIER, NORTH CAROLINA.

AUTOMATIC VENDING-MACHINE.

1,066,451.

Specification of Letters Patent.

Patented July 1, 1913:

Application filed March 21, 1910. Serial No. 550,781.

To all whom it may concern:

Be it known that I, JAMES W. TATUM, a citizen of the United States, residing at Angier, in the county of Hornet and State of North Carolina, have invented new and useful Improvements in Automatic Vending-Machines, of which the following is a specification.

My invention relates to vending apparatus of that type in which articles are delivered from storage by a slide which is released by the insertion of a coin, and has particular relation to that type of machine for vending bottled beverages. While of the type and relation specified, however, my invention possesses a number of features which may be used with equal and perhaps greater advantage with other types of apparatus.

The vending of bottled beverages at the present time is done by hand for the most part. Beverages which it is desired to preserve ice-cold are kept in ice-boxes or refrigerators, and in most cases no provision whatever is made for their storage in any definite order. Each time that a bottle is to be sold the ice-box or refrigerator has to be opened wide allowing an inrush of air and consequent increase of the temperature within the refrigerator, and a corresponding increase in the use of ice. As a general rule the bottles are not arranged in any definite order and the selection of the particular bottle desired requires some time and when salesmen are rushed this time counts a great deal. The time is further extended in instances where the bottled beverages are kept buried in ice, and must be uncovered one by one until the particular bottle desired is found. Salesmen under these circumstances necessarily work inefficiently. Moreover it is necessary that the buyer ask for the goods he desires, and this subjects his wants to more or less publicity, which he may desire to avoid.

It is the object of my invention to produce an automatic vending apparatus by the use of which the objections of the present practised method may be avoided.

The apparatus of my invention is entirely under the control of the customer and is arranged to enable him to select and purchase any desired quantity of the particular va-

riety of goods he desires, quickly and reliably.

In the accomplishment of my invention I make use of a plurality of storage shelves or receptacles, each adapted to contain a particular variety of goods, and provide in connection with these storage receptacles an article delivery movable from an article receiving position in connection with a receptacle to an article delivery position. This movement is coin controlled. In further refinement of my invention and to the increase of its reliability I have provided means which prevents the reception of an article by the delivery member unless it is locked in a certain article receiving position in such a manner that access cannot be had without the insertion of a coin; means which prohibits the insertion of a coin unless an article has been received by the delivery member and is in a position to be delivered; and an improved means for preventing the operation of the machine by coins of a denomination other than that of the price of the article being vended. In connection with this mechanism I provide an ice-box which keeps the bottled beverages cool and at the same time does not interfere in any measure with its operation, the entire apparatus being organized into a compact, neat and attractive case.

My vending device comprises a compact form of a refrigerator in which there is arranged at opposite sides a vertical series of coin-controlled drawers or receptacles, in such a way that one drawer is adapted to be used without in any way disturbing the other. Each drawer or receptacle contains in itself the entire locking mechanism and moves with it when the consumer has forced it from its casing. In analogous devices, by reason of the provision of many cooperating elements in a casing proper, wherein an article was delivered to the outside of the casing in a single appropriate receptacle, it was impossible to so arrange the locking mechanism with all of its combined elements to the position within the article delivery or within that portion of the device which delivers the article to the consumer. Hence in a device where compactness is of great importance it is indispensable to provide a plurality of independent drawers or recep-

tacles each of which may readily be removed from its casing for the end specified.

I will not describe the various parts embraced in my compact coin-controlled refrigerator.

In the accompanying drawings I delineate one embodiment of my invention.

Figure 1 is a front elevation, Fig. 2 is a section on line 2—2 of Fig. 1, Fig. 3 is a section on line 3—3 of Fig. 1, Fig. 4 is a sectional elevation of the article delivery, showing two operative positions thereof, Fig. 5 is a perspective view of the same, Fig. 6 is a detail of latch, and Fig. 7 is a perspective view of the coin chute. Fig. 8 is a bottom plan view of the same.

Referring to the drawings 10 designates the casing in which the apparatus of my invention is mounted. This casing is provided with a glass front 11, a central partition 12 and uprights 13 and 14 on the right and left of the casing respectively, and spaced away from the sides of the casing a short distance. The central partition extends only part way between the front of the casing and the back. Receptacles in the form of inclined shelves 15 are supported between the central member and the respective side members, the shelves sloping gently from the central partition 12 to the respective uprights 13 and 14. These shelves are adapted to hold bottles or other articles, 16 as shown. The space between the rear ends of the shelves and the back of the casing is fitted up to serve as an ice-box.

At the end of each shelf and in the space between the uprights and the sides of the case article delivery members 17 are positioned. These members are in the form of slides or drawers, as clearly shown in Figs. 2, 4 and 5, and are supported on ways 18 on the sides of the casing, and the uprights 13 and 14 respectively. Each slide comprises a bottom or body portion 19, side portions 20 and 21, and a housed in portion 22. The body portion is of a length substantially equal to the depth of the case 10 and somewhat over twice the length of the articles to be vended. The side portion 20 is of the same length as the body portion 19 and of a height somewhat less than the housed in portion 22, being cut away immediately adjacent the housing 22. The opposite side portion 21 extends from the end of the delivery opposite the housing 22 to a point substantially opposite the middle of the side wall 20. The housed in portion 22 is the front of the slide. On the front of this portion is provided a knob 23 by which the slide can be drawn out of the casing and within the housing is provided a coin controlled locking mechanism by which the movements of the slide are governed when the same is mounted in the casing. This mechanism comprises a locking lever or

latch 24, a coin chute 25 adapted to direct coin to the latch, and a shutter 26 adapted to close the coin chute under certain conditions. The locking lever or latch 24 comprises three parts, a locking part or hook 27, a guiding part or a restraining arm 28, and a coin receiving part or shelf 29. The parts 27 and 28 are on one end of the locking lever and the part 29 is upon the other. The locking lever 24 is pivoted in such a manner that the parts 27 and 28 thereof are heavier than the shelf 29, but when a coin is placed upon said shelf it overbalances the parts 27 and 28 and tilts the lever. The locking lever or latch is located close to the side 20 of the slide, and normally rests in the full line position of Fig. 4 with the locking part or hook 27 resting upon a fixed pin or stop 30 projecting from the inside of a side wall of the casing 10 (see Fig. 2). The chute 25 is secured to the front of the housing 22 opposite a coin slot 31. The chute is rectangular in form, and is provided with an open bottom, inwardly projecting bottom ledges 32 on the sides of the chute permit coins of the proper denomination and diameter sliding through the chute. All coins of a diameter smaller than that of the proper denomination will fall out of the chute before reaching its end when inserted through the coin slot. To guard against forcible projection of small coins through the coin slot and onto the shelf 29 I provide a depending lip 33 on the upper side of the chute. All small coins thrust into the coin slot will thus strike this lip and will be thrown downwardly before they strike the shelf 29. The shutter 26 comprises a long body spring 34 secured to the middle of the bottom 19 of the delivery slide and extending forwardly within the housing 22 and upwardly into a position adjacent the coin slot 31. Normally this shutter is inclined upwardly as shown in dotted lines in Fig. 5, to close the mouth of the slot. The front face of the coin chute is cut away to accommodate it, and in such a manner that the coin chute forms a backing for the shutter and prevents it being thrust far from the slot by attempted insertion of coins or other instruments. The housing 22 is provided with a false bottom 35 covering the lower forward end of this spring shutter.

The operation of the apparatus of my invention is as follows: Assuming the article delivery slide is in the full line position shown in Figs. 2 and 4, and it is desired by a person to purchase a bottle of a particular kind of beverage, the purchaser first looks through the glass front of the case and notes the shelf on which are placed the bottles of the variety he desires. He then inserts a coin in the slot of the corresponding slide or drawer, after which he may pull the drawer out and take the bottle contained in

the drawer therefrom. Upon insertion, the coin is directed by the chute upon the shelf 29 of the latch 24, and the shelf 29 is thus weighted to turn upon its pivot, but is held from so turning by the guide or restraining arm 28. When the slide is pulled by the knob 23, the downwardly inclined end of the restraining arm 28 of the lever 24 permits the shelf to fall and raise the hooked end 27 above the stop or pin 30 thus allowing the drawer to be freely drawn out. The coin is deposited within the housing 22 from which it may be removed through a door or other suitable opening. The drawer or slide is prevented from being drawn out a greater distance than is necessary by a stop 36 on the drawer engaging a pin 37 on the casing. As the slide is pulled out the side member 21 of the slide passes between the bottle or other article upon the slide and the next bottle on the shelf, thus preventing the next bottle from rolling down upon the slide. Moreover upon the return of the slide, it is necessary to shove it full home as shown in Figs. 2 and 4 before the next bottle will be delivered to the slide. The reason for this is readily seen upon inspection of Figs. 2 and 4. The hook 27 of the locking member 24 is so positioned with respect to the pin or stop 30 that when the slide is full in the end of the hook is projected some distance in front of the pin. The side member 21 of the slide is made of such length that it is only when the slide is in its extreme inner position shown in Figs. 2 and 4 that a bottle on a shelf can roll past it and into the slide. This feature effectually prevents parties from obtaining several articles from the insertion of a single coin, it being impossible for a party to place an article in the delivery slide until the slide has been locked. All the while an article is not in the slide the shutter 26 is in a raised position closing the coin slot 31. As soon, however, as an article is received by the slide that article by its weight depresses the shutter 26 and permits the insertion of a coin. The spring metal shutter at other times will forcibly eject coins pushed against it.

It will thus be evident that I have attained all the objects of my invention, and that I have produced a very efficient and reliable and neat compact and attractive apparatus for automatic vending of ice-cooled beverages. The ice-box at the rear of the storage shelves is at all times kept supplied with ice, the temperature of the beverages may be kept at any point desired. It should also be evident that a number of features of my invention may be used in other types of apparatus and while I have described one embodiment of my invention, my invention may be given any one of a number of forms without departing from its generic spirit, and I therefore desire to cover in the an-

nexed claims all embodiments to which my invention may be subjected without departing from its generic spirit.

What I claim is:

1. In a vending machine, an article delivery slide, a gravity actuated locking lever pivotally mounted on said slide and having a hook normally in position to engage a fixed part and prevent full withdrawal of said slide, a shelf at the opposite end of said lever to receive a coin and tilt said lever so as to prevent engagement of said hook with said fixed part, and means on said lever to prevent tilting thereof and dropping of the coin until said hook has passed said fixed part.

2. In a vending machine, an article delivery slide, a gravity actuated locking lever pivotally mounted on said slide and having a hook at one end, a shelf at its opposite end to receive a coin and tilt said lever, a fixed stop in position to be engaged by said hook and lock said slide in the absence of a coin, and restraining means on said lever to engage said stop and prevent tilting of said lever and dropping the coin until said hook has passed said stop.

3. In a vending machine, an article delivery slide; a gravity actuated locking lever pivotally mounted on said slide and having a hook at one end; a shelf at its opposite end to receive and support a coin; a restraining arm on said lever parallel with said hooked end for a portion of its length, the outer end of said arm being inclined relative to the open end of said hook and separated therefrom; and a fixed hook-engaging stop between the hook portion of said lever and said restraining arm in position to be engaged by said hook to prevent full withdrawal of the slide when the shelf is empty and to prevent tilting of said lever until the hook passes said stop.

4. In a vending machine, an article delivery slide, a locking lever pivoted on said slide and having a coin shelf at one end and a locking hook and restraining arm at the other end, and a fixed stop between said hook and restraining arm to engage said hook in the absence of a coin on said shelf, and to engage said restraining arm and prevent tilting of the lever by a coin until after a predetermined movement of said slide.

5. In a vending machine, an article delivery slide, a locking lever pivoted on said slide and having a coin shelf at one end, a locking hook at the other end, a restraining arm spaced from and extending beyond the bill of said hook, and a fixed stop lying between said hook and restraining arm to engage the hook on said lever in the absence of a coin on said shelf, and to engage the restraining arm when a coin is deposited on said shelf.

6. In a vending machine, an article delivery

ery slide, a locking lever pivoted on said slide and having a coin shelf at one end, a locking hook at the other end, a restraining arm spaced from said hook and having its forward end inclined away from and extended beyond said hook, and a fixed stop to engage said hook on said lever in the absence of a coin on said shelf and to engage said restraining arm when a coin is deposited on said shelf.

7. In a vending machine, an article delivery slide, a locking lever pivoted on said slide and having a forked end to provide a stop-engaging hooked arm and a stop-engaging restraining arm to prevent tilting of

said lever, a coin shelf integral with said lever and at right angles to the plane thereof, an integral pivot ear struck up from the body of said coin shelf, and a fixed stop between said hook and said restraining arm to engage alternately said hook or said restraining arm.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES W. TATUM.

Witnesses:

THOMAS DURANT,
J. P. TARBOX.