Jan. 5, 1926. 1,568,764

E. P. NIZAMIS

COIN CONTROLLED VENDING MACHINE

Filed Jan. 20, 1925

Fig. 1.

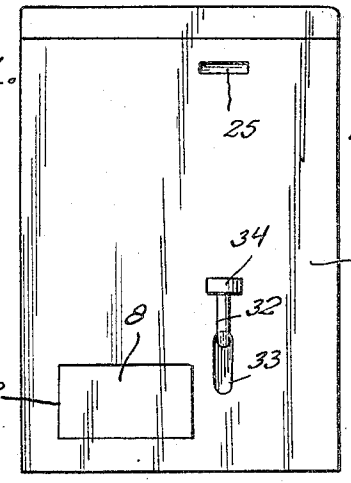


Fig. 2.

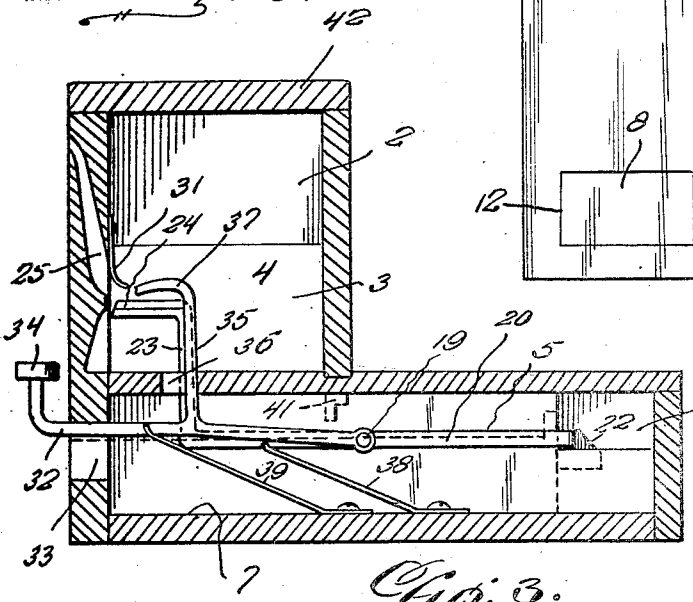
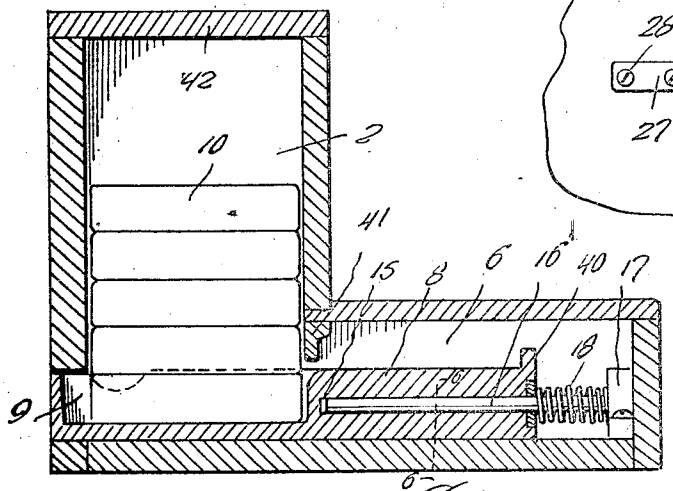


Fig. 4.

Fig. 3.



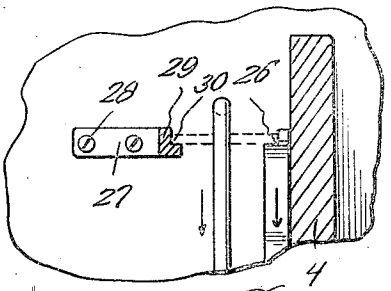


Fig. 6.

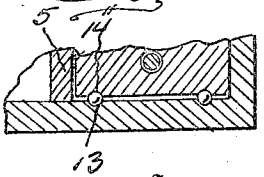
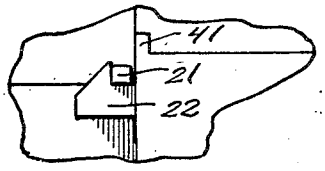


Fig. 5.



Inventor
E. P. Nizamis,
By Clarence A. O'Brien
Attorney

Patented Jan. 5, 1926. 1,568,764

UNITED STATES PATENT OFFICE.

EFTHIMIOS P. NIZAMIS, OF KALAMAZOO, MICHIGAN.

COIN-CONTROLLED VENDING MACHINE.

Application filed January 20, 1925. Serial No. 3,606.

To all whom it may concern:

Be it known that I, EFTHIMIOS P. NIZAMIS, a citizen of Greece, residing at Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Coin-Controlled Vending Machines, of which the following is a specification.

This invention relates to improvements in vending machines, and has for its principal object to provide a simple and efficient means whereby an article may be obtained by depositing and inserting the proper coin in the coin chute provided therefor, for facilitating the releasing of the locking means which normally prevents an article from being dispensed from the machine.

One of the important objects of the present invention is to provide a coin controlled vending machine of the above mentioned character, wherein a cabinet is provided for containing a number of the articles to be dispensed, each of the articles being discharged from the cabinet, one at the time.

A further object is to provide a coin controlled vending machine of the above mentioned character, wherein the article receiving receptacle is automatically refilled or replenished upon the return of the empty receptacle to its normal position within the cabinet.

A further object is to provide a coin controlled vending machine of the above mentioned character, which will, at all times be positive and efficient in its operation, the same being further simple in construction, inexpensive, strong and durable, and further well adapted for the purposes for which it is designated.

Other objects and advantages of the invention will become apparent during the course of the following detailed description.

In the accompanying drawing, forming a part of this specification, and in which like numerals designate like parts throughout the several views:

Figure 1 is a front elevation of the cabinet.

Figure 2 is a vertical sectional view through the same.

Figure 3 is a vertical sectional view through the slidable receptacle and the supply compartment of the cabinet.

Figure 4 is a fragmentary detail of the coin receiving means, and the member for tripping the coin, and

Figure 5 is a detail of the locking means associated with the slidable receptacle.

Figure 6 is a fragmentary sectional view, taken approximately on the line 6—6 of Figure 3.

In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates generally the cabinet, the forward portion thereof being divided into the supply compartment 2 and the coin receiving compartment 3, the partition 4 forming such compartment. The rear portion of the cabinet is of less height than the forward portion, as clearly illustrated in Figures 2 and 3, and the partition 4 is provided with a rearward extension 5, whereby the rear portion of the cabinet is divided into the compartments 6 and 7 respectively. The purpose of this construction will hereinafter be more fully described.

Adapted for slidable movement within the cabinet on one side of the partition is the block 8. The forward portion thereof is cut out, as illustrated at 9, in its top, to provide a receptacle for receiving one of the packages or articles 10 which are to be dispensed from the cabinet, a number of such packages or articles being initially placed in the supply compartment 2. The front wall 11 of the cabinet is provided with an opening 12, through which the forward portion of the block 8 is adapted to slide, in order that a person may remove the package from the receptacle, after the proper coin has been interposed within the cabinet, in a manner also hereinafter to be more fully described.

A pair of longitudinally extending grooves 13 are formed in the bottom of the compartment 6, and cooperating therewith are the ball bearings 14 associated with the bottom of the block 8, in the manner as clearly illustrated in Figure 6. This construction permits the free sliding movement of the block within the compartment 6. The rear portion of the block is provided with a longitudinally extending bore 15, and operable therein is the forward end of the guide rod 16. The rear end of the rod is secured on the member 17, the latter being secured in the rear portion of the

compartment 6, as clearly illustrated in Figure 3. An expansible coil spring 18 encircles the rod 16, and is disposed between the rear face of the block 8 and the rod supporting member 17.

A pivot pin 19 extends laterally from the partition 5 into the compartment 7 at a point intermediate the ends of the compartment. A lever 20 is pivotally supported intermediate its ends on the pin 19, adjacent the partition 5. The rear end thereof terminates in the lateral extension 21, for the purpose of providing a latch for cooperation with a suitable keeper 22, associated with the rear end of the block 8. As is clearly illustrated in Figure 2, the rear upper portion of the partition 5 is cut away, so that the latch 21 will extend into the compartment 6, for cooperative engagement with the keeper 22. The latch and keeper normally hold the block 8 in a retracted position within the compartment 6, simultaneously placing the coil spring 18 under tension, the same being compressed. The forward end of the lever 20 is disposed upwardly through the bottom of the coin receiving compartment 3, as illustrated at 23, and then is disposed forwardly, as illustrated at 24. The forward portion of the part 24 terminates adjacent the rear face of the front wall 11 of the cabinet, and the lower end of the coin chute 25. The upper end of the coin chute 25 terminates at a point adjacent the upper edge of the front wall of the cabinet, in the manner as clearly illustrated in the drawing. A ledge 26 is formed on the forwardly extending portion 24 as clearly illustrated in Figure 4, and the purpose thereof will be presently described.

Cooperating with the forwardly extending portion 24 of the lever 20 is the angular member 27, the same being secured on the rear face of the front wall 11, by any suitable fastening means shown at 28, at a point adjacent the lower end of the coin chute 25, and in proper spaced relation with respect to the portion 24. The portion 29 of the angular member 27 which extends rearwardly from the front wall of the cabinet, is also formed with a ledge 30, for cooperation with the ledge 26. A guard 31 is secured on the rear face of the front wall 11 of a cabinet, directly above the lower end of a coin chute for causing a coin to be deposited on the coacting ledges 26 and 30, after the same has been dropped into the coin chute.

An additional lever 32 is pivotally supported at its rear end on the pivot pin 19, adjacent the lever 20. The additional lever 32 extends forwardly in the compartment 7, and the forward end thereof is disposed through a considerable slot 33, provided therefor in the lower portion of the front wall of the cabinet, and disposed upwardly. A finger piece 34 is associated with the upper end of the upwardly disposed portion, the forward end of the additional lever 32, for facilitating the actuation thereof. An arm 35 extends upwardly from the intermediate portion of the additional lever 32 through a suitable opening 36 provided therefor in the bottom of the coin receiving compartment 3, at a point adjacent the upwardly extending portion 23 of the lever 20. The upper end of the arm 35 terminates in the forwardly disposed finger 37, the same being arranged at a point above the coin receiving means. A pair of flat spring elements 38 and 39 respectively, are secured at their lower ends to the bottom of the compartment 7, the upper free ends of the spring elements engaging the levers 20 and 32 respectively, for the purpose of normally holding the same in an inoperative position.

The operation of my improved coin vending machine may be briefly stated as follows:

When the proper coin is inserted in the chute 25, the same will fall by gravity onto the co-acting ledges 26 and 30, in a manner as shown in the dotted lines in Figure 4. The operator then depresses a finger piece 34 on the lever 32, whereupon the finger 37 will engage the coin which rests on the ledges. A further downward movement of the lever 32 and the arm 35 carried thereby will cause the coin to move the forward end of the lever 20 downwardly, causing the latter to swing on its pivot 19, and release the latch 21, from the keeper 22. The coil spring 18, being under compression will force the block 8 forwardly in the compartment 6, whereupon one of the packages contained within the receptacle or cavity 9 in the forward end of the block will be disposed outwardly of the front wall of the cabinet, so that the person who has deposited the coin within the chute may remove the article from the receptacle. The forward sliding movement of the block 8 is limited by providing the upstanding shoulder 40 on the rear end of the block, the same being adapted for engagement with the abutment 41, which extends downwardly from the top of the compartment 6 at a point adjacent the compartment 2. After the package or article has been removed, from the receptacle in the forward end of the sliding block, the latter is returned to its normal position, within the compartment 6, whereupon the keeper 22 will automatically be brought into locked engagement with the latch 21, compressing the coil spring 18 and positioning the receptacle 9, with respect to the compartment 2, so that the lowermost package or article therein will be automatically deposited in the empty receptacle.

The cabinet is then in condition for operation again, by inserting another coin in the chute 25. As the article containing or supply compartment becomes empty, the same may be refilled by removing the top 42. The coins will be tripped from the supporting ledges 26 and 30 and will fall into the coin receiving compartment 3, from which they may be removed by a proper person. The tripping of the coin from the supporting ledges is effected by the keeper 22 when the ejector is returned within the cabinet due to the beveled or inclined edge of the keeper engaging and raising the latch 21 formed on the rear end of the lever 20 which will cause the end 24 of the lever to be lowered and consequently drop the coin into the coin receiving compartment.

A coin controlled vending machine of the above mentioned character, may be used for dispensing various articles of merchandise in stores or the like, thus dispensing with the services of clerks, in the sale of such merchandise, further saving considerable time and labor, as well as expense.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to, without departing from the spirit of the invention or the scope of the appended claims.

Having thus described my invention, what is claimed is:

1. A coin controlled mechanism for vending machines comprising a cabinet, an ejector adapted for slidable movement therein, a lever pivotally supported intermediate its ends in said cabinet, a latch associated with the rear end thereof, a keeper on the rear end of the ejector cooperating with the latch for normally holding the ejector in a locked position within the cabinet, the forward end of said lever being disposed upwardly and then forwardly, the forward end of the forwardly disposed portion terminating at a point adjacent the front wall of the cabinet and below the lower end of a coin chute formed in the front wall, a ledge formed on the forwardly extending portion of the lever, a coacting ledge supported on the rear face of the front wall of the cabinet whereby a coin will be disposed on said coacting ledges after the same has descended by gravity through the coin chute, means adapted for engagement with the coin whereby said lever is adapted to swing on its pivot to disengage the latch from the keeper, an additional means for sliding the ejector outwardly when said latch is released.

2. A coin controlled mechanism for vending machines comprising a cabinet, an ejector adapted for slidable movement therein, a lever pivotally supported intermediate its ends in the cabinet, a latch associated with the rear end thereof, a keeper on the rear end of the ejector cooperating with the latch for normally holding the ejector in a locked position within the cabinet, an additional lever pivotally supported at its rear end in the cabinet, said levers adapted to be interlocked by the insertion of a coin in a cabinet whereby the first mentioned lever is adapted to swing on its pivot to disengage the latch from the keeper when the last mentioned lever is actuated, and means for sliding the ejector outwardly when the latch is released.

3. A coin controlled mechanism for vending machines comprising a cabinet, an ejector adapted for slidable movement therein, a lever pivotally supported intermediate its ends in said cabinet, a latch associated with the rear end thereof, a keeper on the rear end of the ejector cooperating with the latch for normally holding the ejector in a locked position, a pair of coacting ledges associated with the forward end of the lever and the cabinet respectively for receiving a coin after the same has descended by gravity through a coin chute formed in the cabinet, an additional lever having means adapted for engagement with the coin when the latter rests on said coacting ledges for actuating the aforementioned lever to swing the rear end thereof upwardly whereby the latch is disengaged from said keeper, and means for sliding the ejector outwardly when the latch is released.

4. A coin controlled mechanism for vending machines comprising a cabinet, an ejector adapted for slidable movement therein, a lever pivotally supported intermediate its ends in said cabinet, a latch associated with the rear end thereof, a keeper on the rear end of the ejector cooperating with the latch for normally holding the ejector in a locked position within the cabinet, the forward end of said lever being disposed upwardly and then forwardly, the forward end of the forwardly disposed portion terminating at a point adjacent the front wall of the cabinet and below the lower end of a coin chute formed in the front wall, a ledge formed on the forwardly extending portion of the lever, a coacting ledge supported on the rear face of the front wall of the cabinet whereby a coin will be disposed on said coacting ledges after the same has descended by gravity through the coin chute, means adapted for engagement with the coin whereby said lever is adapted to swing on its pivot to disengage the latch from the keeper, an additional means for sliding the ejector outwardly when said latch is released, said keeper cooperating with said latch for effecting the tripping of the coin from the coacting ledges when the ejector is returned to its normal position.

5. A coin controlled mechanism for vending machines comprising a cabinet, an ejector adapted for slidable movement therein, a lever pivotally supported intermediate its ends in said cabinet, a latch associated with the rear end thereof, a keeper on the rear end of the ejector cooperating with the latch for normally holding the ejector in a locked position, the forward end of said lever being disposed upwardly and then forwardly, the forward end of the forwardly disposed portion terminating at a point adjacent the front wall of the cabinet and below the lower end of a coin chute formed in the front wall, a ledge formed on the forwardly extending portion of the lever, a coacting ledge supported on the rear face of the front wall of the cabinet, whereby a coin will be disposed on said coacting ledges after the same have descended by gravity through the coin chute, means for engaging the coin when on said coacting ledges to effect the swinging movement of said lever whereby to disengage the latch from the keeper, said last mentioned means comprising an additional lever pivotally supported at its rear end in the cabinet, the forward end extending outwardly of the front wall of the cabinet, an arm extending upwardly from the intermediate portion of the last mentioned lever, the upper end thereof terminating in a finger which is disposed forwardly and adapted to engage the coin resting on the aforementioned ledges, and means for sliding the ejector outwardly when the latch is released.

6. A coin controlled mechanism for vending machines comprising a cabinet, an ejector adapted for slidable movement therein, a lever pivotally supported intermediate its ends in said cabinet, a latch associated with the rear end thereof, a keeper on the rear end of the ejector cooperating with the latch for normally holding the ejector in a locked position, the forward end of said lever being disposed upwardly and then forwardly, the forward end of the forwardly disposed portion terminating at a point adjacent the front wall of the cabinet and below the lower end of a coin chute formed in the front wall, a ledge formed on the forwardly extending portion of the lever, a coacting ledge supported on the rear face of the front wall of the cabinet whereby a coin will be disposed on said coacting ledges after the same have descended by gravity through the coin chute, means for engaging the coin when on said coacting ledges to effect the swinging movement of said lever whereby to disengage the latch from the keeper, said last mentioned means comprising an additional lever pivotally supported at its rear end in the cabinet, the forward end extending outwardly of the front wall of the cabinet, an arm extending upwardly from the intermediate portion of the last mentioned lever, the upper end thereof terminating in a finger which is disposed forwardly and adapted to engage the coin resting on the aforementioned ledges, means for sliding the ejector outwardly when the latch is released, and means for limiting the outward sliding movement of said ejector.

In testimony whereof I affix my signature.

EFTHIMIOS P. NIZAMIS.