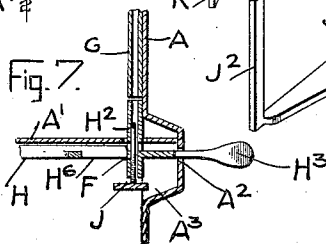
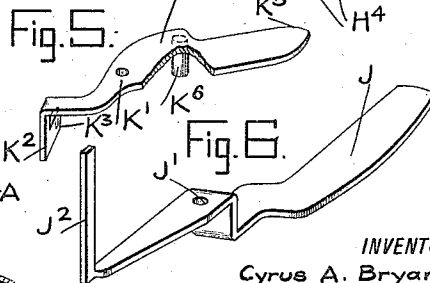
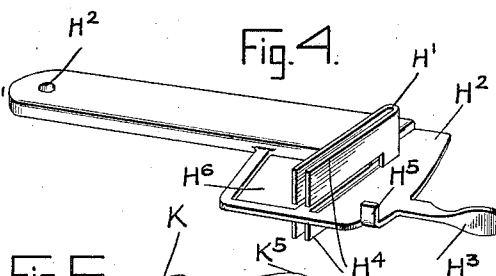
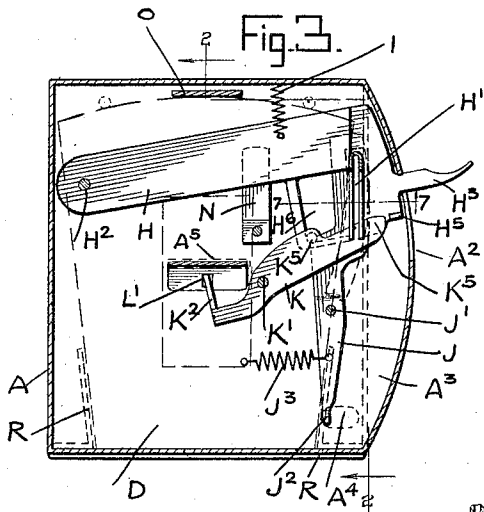
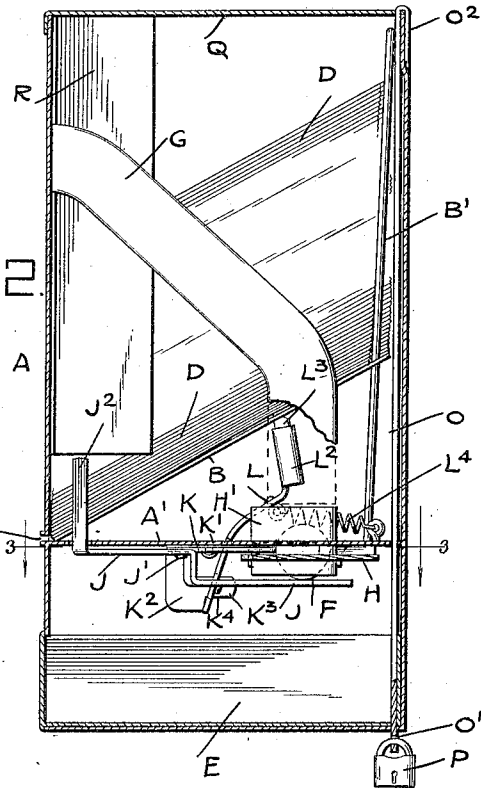


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UNITED STATES PATENT OFFICE.

CYRUS A. BRYANT AND CHARLES H. ROUNDS, OF PASSAIC, NEW JERSEY.

VENDING-MACHINE.

1,057,327.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed April 15, 1912. Serial No. 690,890.

To all whom it may concern:

Be it known that we, CYRUS A. BRYANT and CHARLES H. ROUNDS, both citizens of the United States, and residents of Passaic, in the county of Passaic and State of New Jersey, have invented a new and Improved Vending-Machine, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved vending machine more especially designed for vending keystone-shaped flat drinking cups in public places and the like and arranged to insure the delivery of a drinking cup after the proper coin is once introduced and a controlling handle is manipulated, and to prevent the delivery of a drinking cup unless the coin is first introduced into the machine.

For the purpose mentioned use is made of a casing having a delivery opening and adapted to contain a pile of keystone-shaped drinking cups, the lowermost of which is in register with the said delivery opening, a pushing device adapted to engage the under side of the undermost drinking cup and push the same partly through the said delivery opening, an actuating mechanism for the said pushing device and controlled by the introduced coin, and a supporting and releasing device for supporting the coin while in operative position on the said actuating mechanism, the said supporting and releasing device having a member extended into the path of one of the inclined sides of the lowermost drinking cup so that the said supporting and releasing device is actuated on the operator withdrawing the lowermost cup from the casing with a view to release the coin.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of the vending machine, parts of the casing and its cover being shown in section; Fig. 2 is a transverse section of the same on the line 2—2 of Fig. 3; Fig. 3 is a sectional plan view of the same on the line 3—3 of Fig. 2; Fig. 4 is a perspective view of the actuating lever; Fig. 5 is a perspective view, partly broken out, of the coin lever connected with the pushing device; Fig. 6 is a perspective view of the coin-supporting and releasing lever; and Fig. 7 is a sectional front view

of the vending machine on the line 7—7 of Fig. 3.

Within a suitably constructed casing A is arranged a support B inclined upwardly and rearwardly and resting at its forward end on a false bottom A' arranged in the lower portion of the casing A, and the lower end of the support B is adjacent to a delivery opening C arranged in the front of the casing A so that the lowermost cup of a pile of cups D held within the casing A and resting on the support B is in register with the said delivery opening C. The support B near its rear end is held on rods B' resting at their lower ends on the false bottom A' and extending upwardly to the upper end of the casing A to permit of withdrawing the support B from the casing whenever it is desired to place the cups D in position within the casing and on the support B. The detail construction of the support B is more fully set forth in the application for Letters Patent of the United States for a drinking cup holder, filed by Cyrus A. Bryant on October 17, 1911, Serial No. 655,199, so that further description of the same is not deemed necessary. Each of the drinking cups D is in the form of a flat keystone-shaped cup, as indicated in dotted lines in Fig. 3, the open and widest end of the cup being rearward while the small bottom end is at the front of the casing and the inclined sides of the cup extend adjacent the sides of the casing A.

In the lower portion of the casing A is arranged a coin drawer E for receiving a coin F introduced into the machine through an opening G' arranged in the front of the casing A and leading to a downwardly-extending chute G arranged within the casing at one side of the pile of cups D. The lower end of the chute G registers with a vertical coin guide H' arranged on an actuating lever H fulcrumed at H² on the under side of the false bottom A'. The free end of the lever H is provided with a handle H³ extending through a slot A² formed in an extended portion A³ of one side of the casing A so that the handle H³ can be taken hold of by the operator to impart a swinging motion to the lever H. Normally the lever H is held in lowermost position by a spring I connecting the lever H with the back of the casing, as plainly indicated in Fig. 3. The coin F passing from the chute G into the vertical guideway H' rests with its lower end on a

supporting and releasing lever J pivoted at J' on the under side of the false bottom A'. The forward end of the lever J is provided with an upwardly-extending arm J² passing
 5 through a slot A⁴ formed in the false bottom A' to reach to one side of the lowermost cup D near the forward end thereof, as will be readily understood by reference to Fig. 3. A spring J³ connects the lever J with the
 10 under side of the false bottom A' to normally hold the lever J in the position shown in Figs. 2 and 3.

The coin F while supported in vertical position on the lever J and held in vertical
 15 position by the guideway H' engages with its forward edge a coin lever K fulcrumed at K' to the under side of the false bottom A', as shown in Figs. 2 and 3. The lever K is provided at its inner end with a rear-
 20 wardly-extending lug K² terminating in a tongue K³ passing through an opening L' in the lower end of a pusher L for engagement with the under side of the lowermost cup D so as to push the same forwardly with a
 25 view to project the small end of the cup through the delivery opening C with a view to permit the operator to take hold of the projected end of the cup to draw the same finally out of the casing, as hereinafter more
 30 fully explained. The lug K² abuts against the front face of the lower end of the pusher L and the tongue K³ is provided with a transverse pin K⁴ engaging the back of the lower end of the pusher L thus forming a
 35 pivotal connection between the lever K and the pusher L. The pusher L is in the form of a lever having its lower narrow portion extending through an opening A⁵ in the false bottom A', the upper portion being
 40 widened to rest on the top of the false bottom A' and thus form a fulcrum for the lever. The upper end of the lever L is provided with a socket L² carrying a block L³ of soft rubber or a similar material and provided with a sharp edge so that the block
 45 firmly takes hold of the under side of the lowermost cup D for pushing the same forward and downward, as previously explained. The pusher L is returned to rear-
 50 most position by the action of a spring L⁴ connecting the pusher with the false bottom A'.

The outer end of the coin lever K overlies the lever H and extends in a slot H⁴ formed
 55 in the upper portion of the guideway H', as plainly indicated in Figs. 3 and 4. The outer end of the coin lever K is provided with a cam face K⁵ adapted to be engaged by a lug H⁵ extending upwardly on the
 60 lever H so that when a coin is in position in the guideway H' (see Fig. 2) and the lever H is swung forward in the direction of the arrow a' then the coin is carried forward with the said lever H and imparts a start-
 65 ing, swinging motion to the coin lever K

whereby the cam face K⁵ is finally engaged with the lug H⁵, and the latter imparts a final swinging motion to the coin lever K to move the latter away from the front edge
 70 of the coin F. The forward swinging motion given to the lever K by the lever H causes the pusher L to swing forwardly at its upper end to push the lowermost drinking cup a short distance through the open-
 75 ing C to permit the operator to take hold of the beveled side of the cup and pull the same outward, whereby the projected end of the cup acts on the arm J² to thus impart a swinging motion to the lever J which
 80 now swings from under the coin F to allow the latter to drop down into the drawer E. When the operator releases the handle H³ of the lever H the several parts return to their normal position by the action of the
 85 springs I, J³ and L⁴. It is understood that the lever J is not actuated until the cup is pulled out by the operator and consequently the coin F remains in operative position in the guideway H' and the lever J until a
 90 cup is withdrawn, and if the pusher K should fail to push the lowermost cup outward then the coin remains in position and the lever H can be worked forward and backward with the coin in operative posi-
 95 tion until a cup is projected through the opening C and pulled out by the operator. Thus the user of the machine is sure to obtain the value for the introduced coin. The lever K is provided with a depending pin K⁶ extending into an opening H⁶ formed in
 100 the lever H so as to limit the rearward swinging movement of the levers H and K one relative to the other. The under side of the false bottom A' is provided with a
 105 guideway N for guiding the lever H in its forward and backward swinging movement (see Fig. 3).

The drawer E is locked in closed position to the casing A by the use of a vertically-disposed locking bar O extending
 110 through the bottoms of the drawer and of the casing and on the lower outer end of the bar O is formed an eye O' engaged by a padlock P or other similar locking device. The locking bar O extends upward in
 115 the casing close to the back thereof and the upper end is in the form of a hook O² hooking onto the rear end of the cover Q, normally closing the casing A, the sides of the cover Q being interlocked with the sides of the
 120 casing A at the upper end thereof to prevent the cover Q from being removed by unauthorized persons. When it is desired to refill the casing A with cups D the lock P is removed from the bar O and the latter
 125 is drawn upward out of engagement with the cover Q to allow of sliding the same forwardly to open the upper end of the casing A. In a like manner the locking bar O is removed when it is desired to withdraw
 130

the drawer E from the casing A for removal of the accumulated coin.

In using the device, the operator inserts a coin at the opening G' so that the coin rolls down the chute G and drops into the guideway H' of the lever H now in rear-most position. The coin is supported at its bottom on the lever J and its front edge abuts against the coin lever K and when the operator now swings the lever H forward in the direction of the arrow α' the coin and lug H⁵ actuate the lever and the latter imparts a swinging motion to the pusher L to push the lowermost drinking cup forwardly a short distance so that the forward portion of the cup projects sufficiently far in front of the casing to permit the operator to take hold of it and pull the cup out of the casing. In doing so the lever J is actuated so as to swing out from under the coin F, which now drops down into the drawer E. When the operator releases the handle H³ of the lever H the several parts return to their normal position, as previously explained.

The casing A is provided at the inner face of the front with rearwardly-extending guiding flanges R (see Figs. 2 and 3) to guide the cups D in their downward movement. The lower ends of the flanges R terminate above the upper end of the arm J² so that the latter is free to move sidewise on withdrawing a cup, as previously explained.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. A coin controlled mechanism, comprising in combination, an article feeding member, an actuating mechanism for said member, embodying a coin guide, and a member movable beneath said coin guide and normally forming a support for the coin, said member having an angular portion adapted to extend into the path of movement of the article being vended.

2. A coin controlled mechanism, comprising in combination, an article feeding member, an actuating mechanism for said member embodying a manually movable lever having a coin guide, and a lever which is operatively connected to the said feeding member and adapted to be coupled with the manually movable lever by a coin held in the said coin guide, and a member movable beneath the said coin guide and normally forming a support for the coin, said member having an angular portion adapted to extend into the path of movement of the article being vended.

3. A coin controlled mechanism, comprising an intermediately pivoted feeding lever having an article engaging end, an actuating mechanism having connection with the opposite end of said lever and embodying

a coin guide, and a supporting member movable beneath said coin guide and normally forming a support for the coin, said member having an angular portion adapted to extend into the path of movement of the article being vended.

4. A coin controlled mechanism, comprising an upright intermediately pivoted lever having an article engaging and feeding upper end, an actuating mechanism having connection with the lower end of said lever and embodying a coin guide and relatively movable members adapted to be coupled together by a coin supported in said coin guide, and a member movable beneath the said coin guide and normally forming a support to hold the coin therein, said member having a portion adapted to extend into the path of movement of the article being vended.

5. A coin controlled mechanism, comprising in combination, an article feeding member, an actuating mechanism for said member embodying a coin guide, and an intermediately pivoted member having one end normally extending beneath the coin guide and forming a support for the coin therein, said member having an angular extension at its opposite end adapted to extend into the path of movement of the article being vended.

6. A coin controlled mechanism, comprising in combination, an intermediately pivoted feeding lever having an article engaging end, an actuating mechanism for said member embodying a manually movable lever having a coin guide, and a lever which is operatively connected to the opposite end of the said intermediately pivoted feeding lever, and adapted to be coupled with the manually movable lever by a coin held in the said coin guide, and a member movable beneath the said coin guide and normally forming a support for the coin, said member having an angular portion adapted to extend into the path of movement of the article being vended.

7. A coin controlled mechanism, comprising in combination, an article feeding member, an actuating mechanism for said member embodying a manually movable lever having a coin guide, and a lever which is operatively connected to the said feeding member and adapted to be coupled with the manually movable lever by a coin held in the said coin guide, and an intermediately pivoted lever having one end normally extending beneath the coin guide whereby to form a support for the coin therein, said member having an angular extension at its opposite end which is adapted to extend into the path of movement of the article being vended.

8. A coin controlled mechanism, comprising in combination, an intermediately piv-

oted feeding lever having an article engaging end, an actuating mechanism embodying a manually movable lever having a coin guide, and a lever which is operatively connected to the opposite end of said intermediately pivoted feeding lever and adapted to be coupled with the manually movable lever by a coin held in the said coin guide, and an intermediately pivoted member having one end normally extending beneath the coin guide whereby to form a support for the coin therein, said member having an angular extension at its opposite end which is adapted to extend into the path of movement of the article being vended.

9. A coin controlled mechanism, comprising in combination, an article feeding member, an actuating mechanism for said member, embodying a manually movable lever having a coin guide and a lug, and a lever which is operatively connected to the said feeding member and is adapted to be coupled with the manual lever by a coin held in said coin guide, said last named lever also having a cam portion engageable with the said lug during the movement of the lever, whereby to move the second lever and free the coin, and a member movable beneath the coin guide and normally forming a support for the coin, said member having an angular

portion adapted to extend into the path of movement of the article being vended.

10. A coin controlled mechanism, comprising in combination, an article feeding member, an actuating mechanism for said member embodying a manually movable lever having a coin guide and a projecting lug, and a lever which is operatively connected to the said feeding member and is adapted to be coupled with the manually movable lever by a coin held in the said coin guide, said last-named lever being also provided with a cam portion engageable with the said lug during the movement of the manually movable lever, whereby to free the coin, and an intermediately pivoted member having one end normally extending beneath the coin guide and forming a support for the coin therein, said member having an angular extension at its opposite end adapted to project into the path of movement of the article being vended.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CYRUS A. BRYANT. [L. S.]

CHARLES H. ROUNDS. [L. S.]

Witnesses:

IRA J. BOGERT,

ALFRED MORRIS.