

APPLICATION FILED NOV. 9, 1910.

4 SHEETS--SHEET 1.



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 VENDING MACHINE.  
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988,297.

Patented Apr. 4, 1911

4 SHEETS—SHEET 2.

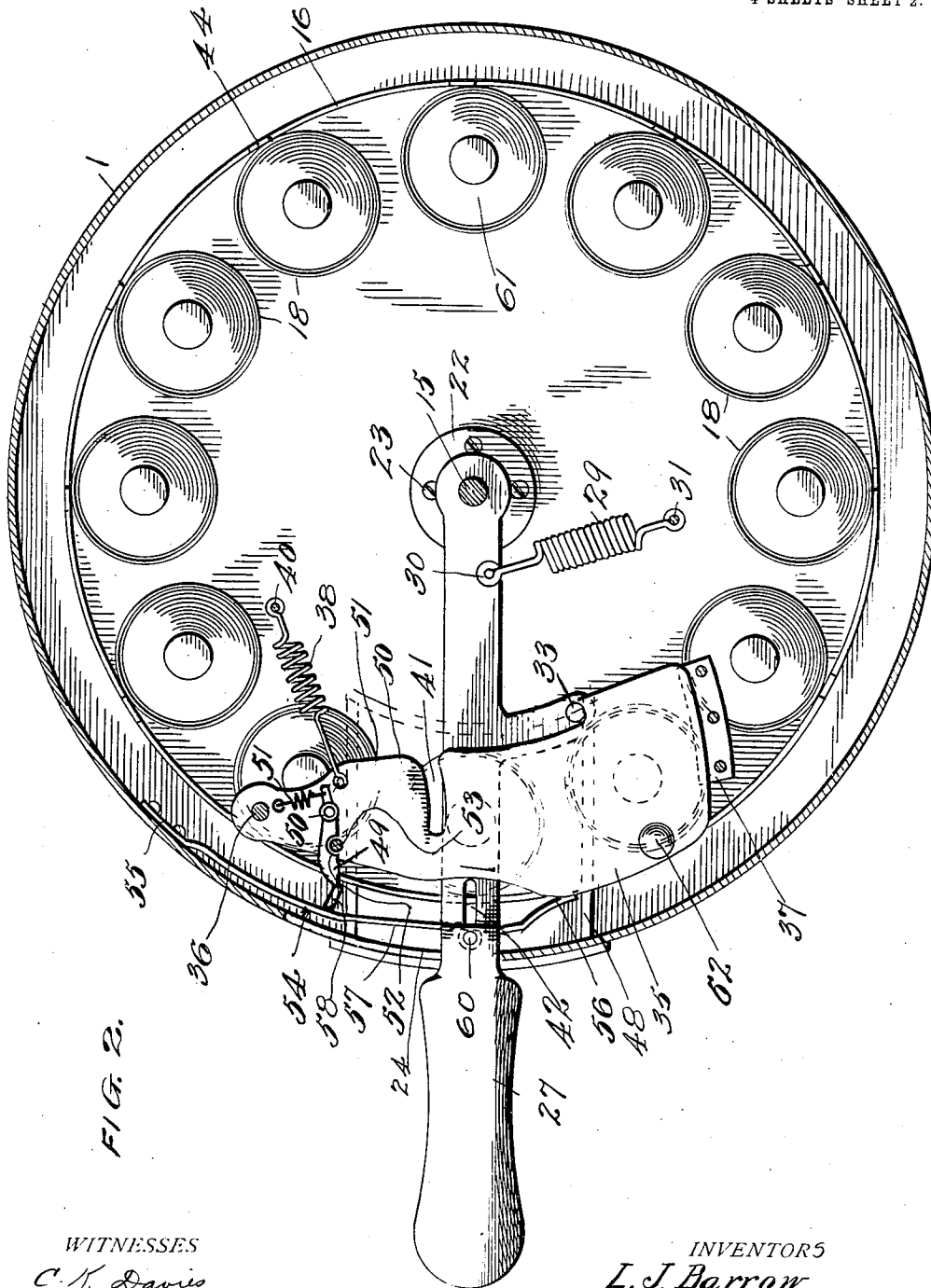


FIG. 2.

WITNESSES  
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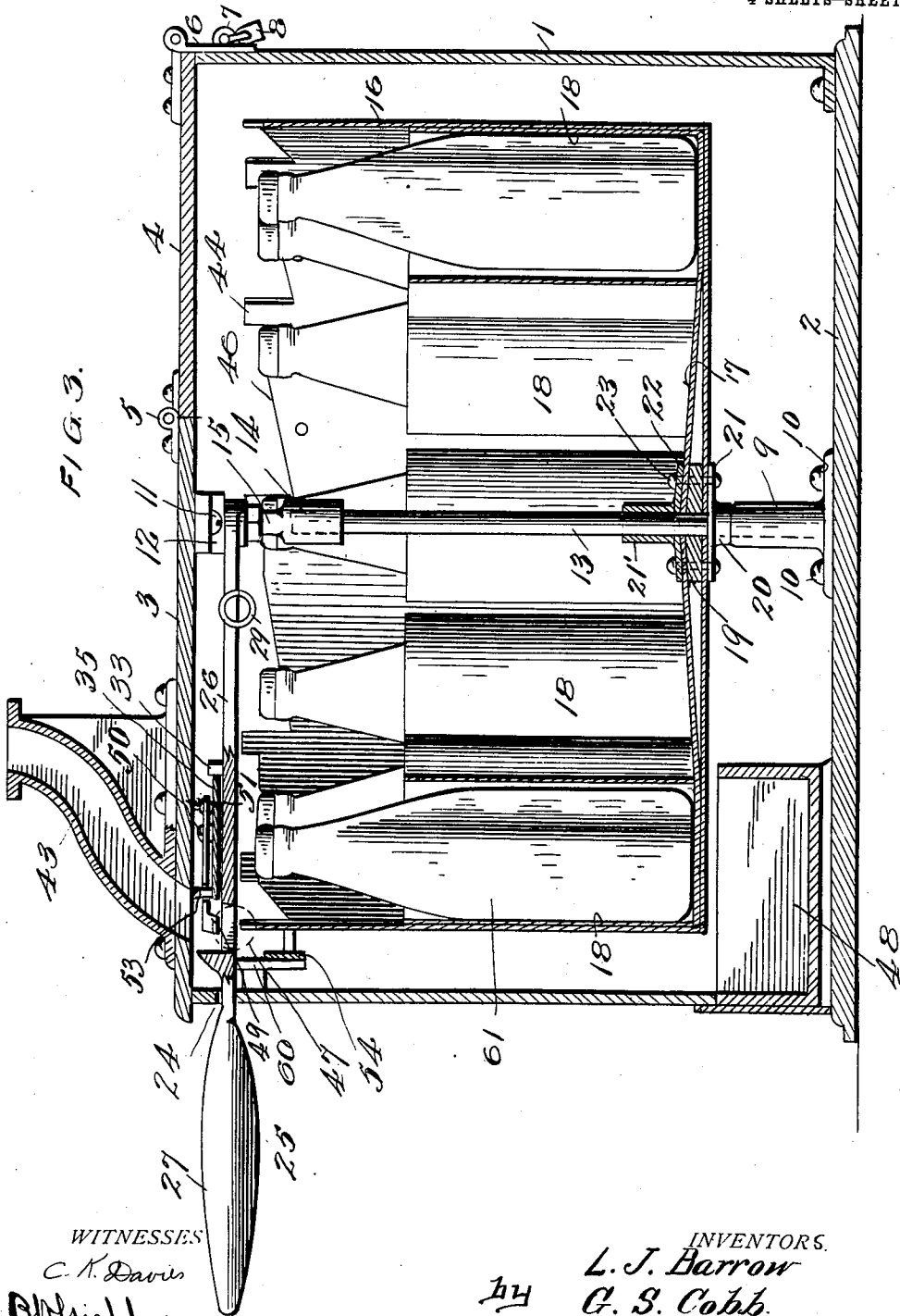
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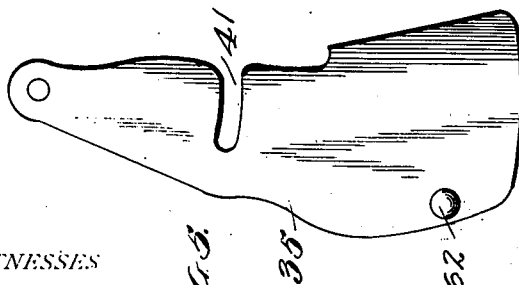
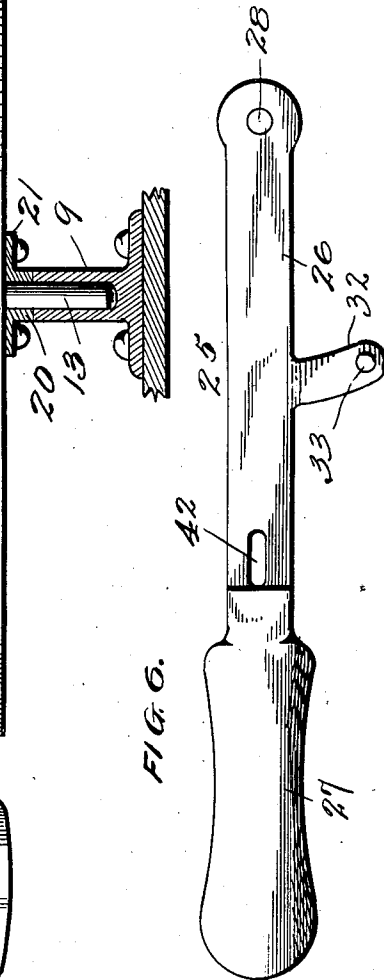
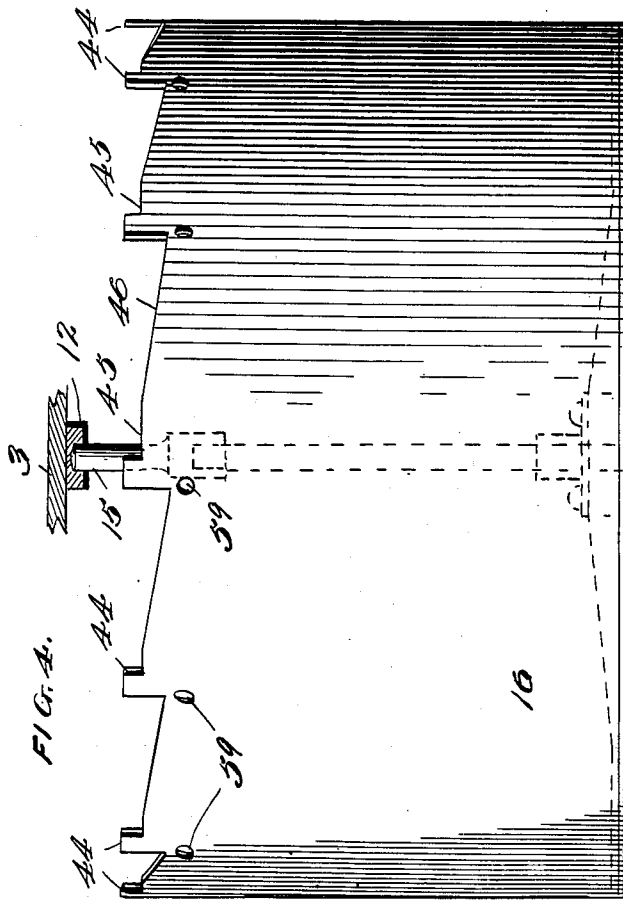
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4 SHEETS—SHEET 4.



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FIG. 3.

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# UNITED STATES PATENT OFFICE.

LEWIS J. BARROW AND GEORGE S. COBB, OF WEST POINT, GEORGIA.

## VENDING-MACHINE.

988,297.

Specification of Letters Patent.

Patented Apr. 4, 1911.

Application filed November 9, 1910. Serial No. 591,463.

*To all whom it may concern:*

Be it known that we, LEWIS J. BARROW and GEORGE S. COBB, citizens of the United States, residing at West Point, in the county of Troup and State of Georgia, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

This invention relates broadly to vending machines, and more particularly to a vending machine employed to deliver relatively large articles, such as a bottle of coca cola or the like.

In carrying out the invention, a rotatable receptacle or magazine is provided for holding the articles to be vended. A door is provided, which when properly moved will allow access to the receptacle or magazine, whereby the article may be removed therefrom by the operator. Novel means are provided for effecting the rotation of the receptacle or magazine, and for controlling the movement of the door. Means are provided to lock the receptacle or magazine against rotation when the door has been moved to permit the operator to remove the desired article.

An important object of this invention is to provide a machine of the above character which is relatively simple in construction, cheap to manufacture, and easy and positive in its operation.

Other objects and advantages of this invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same, Figure 1 is a plan view of the vending machine, Fig. 2 is a similar view, the top or lid of the outer casing being removed to show the interior of the machine, Fig. 3 is a central vertical sectional view through the machine, Fig. 4 is a side view of a rotatable receptacle or magazine, Fig. 5 is a plan view of a movable door which controls the access to within the movable receptacle or magazine, and Fig. 6 is a similar view of an operating lever.

In the drawings wherein is illustrated a preferred embodiment of the invention, the numeral 1 designates a preferably cylindrical outer casing, which is suitably mounted upon a base 2. The upper end of this casing is closed by means of a lid or top formed

preferably in two sections 3 and 4. The section 3 is rigidly connected with the outer casing 1 by any suitable means, and the section 4 is connected with the section 3 by means of hinges 5. The lid-section 4 carries a hasp 6, adapted to engage with a staple 7 suitably connected with the outer casing 1. A suitable lock 8 may be provided to prevent the separation of the hasp 6 and staple 7.

Rigidly mounted upon the upper face of the base 2 and at its center, is an upstanding bearing 9, secured to the same by means of screws 10 or the like. The lid-section 3 has rigidly secured thereto by means of screws 11 or the like, a depending bearing 12, which is in vertical alinement with the bearing 9. A vertically disposed shaft 13 is provided, the lower end of which is rotatably mounted within the bearing 9, as shown. The upper end of this shaft is disposed within a sleeve 14, carrying a reduced cylindrical extension 15, which is rotatably mounted within the bearing 12. The shaft 13 may preferably be formed cylindrical, as shown.

Disposed within the outer casing 1 and arranged concentric therewith is a preferably cylindrical receptacle or magazine 16, for holding the articles to be vended. This receptacle or magazine is much smaller in diameter and length than the casing 1, as shown. Within the receptacle or magazine 16 is arranged a preferably circular plate 17, which is disposed adjacent the bottom of the receptacle 16. This plate 17 has suitably formed thereon a plurality of equidistantly spaced tubes 18, serving as means to hold the separate articles to be vended. It is to be understood that the tubes 18 are rigidly connected with the plate 17 in any suitable manner, or the same may be cast integral therewith. The tubes 18 are disposed adjacent the periphery of the receptacle or magazine 16, as shown. Disposed between the plate 17 and the bottom of the receptacle or magazine 16 is a spacing ring 19, having an opening formed therethrough for receiving the shaft 13. The shaft 13 passes through the plate 17 and the bottom of the receptacle or magazine 16, as clearly illustrated in Fig. 3. Below and adjacent the bottom of the receptacle or magazine is disposed a collar 20 having an annular flange 21 formed upon the upper end of the same. Disposed upon the shaft 13 above and ad-

5 adjacent the plate 17, is a collar 21' having an annular flange 22 formed upon its lower end. The collars 20 and 21' are keyed upon the shaft 13 or otherwise connected there-  
 10 with so that they can not rotate upon said shaft 13. The flanges 21 and 22 are rigidly connected by means of a plurality of bolts 23, or the like. By the description of the above referred to parts, it is obvious that the  
 15 receptacle or magazine 16 is rigidly connected with the shaft 13 and that the plate 17 together with tubes 18 are rigidly connected with said shaft 13 and receptacle 16.

The casing 1 is provided near its upper  
 15 end with a horizontally disposed slot 24, within which is disposed to operate, a lever 25. This lever comprises a flat body portion 26 and a gripping portion 27. The operating lever 25 extends within the outer  
 20 casing 1 and is arranged above and spaced from the receptacle or magazine 16. The inner end of the flat body portion 26 of this operating lever, is apertured as shown at 28, to receive the extension 15 of the sleeve 14,  
 25 whereby a pivotal connection is effected between the operating lever and the extension 15. The operating lever 25 has a retractile coil spring 29 connected therewith near its inner end, as shown at 30, and the opposite  
 30 end of this spring has suitable connection with the lid-section 3, as shown at 31 in Fig. 1. The flat body portion 26 of the operating lever is provided midway its ends with an ear or extension 32, upon which is  
 35 rigidly mounted an upstanding pin 33. The lid-section 3 is provided near the operating lever 25 with a preferably circular opening 34 formed therethrough, whereby access may be had to the interior of the receptacle or  
 40 magazine 16 for removing a desired article. The opening 34 is controlled or normally closed by a swinging door 35, one end of which is pivotally connected with the lid-section 3, as shown at 36. A track 37 is  
 45 rigidly connected with the lower surface of the lid-section 3, and engages the swinging door 35 to prevent the same from being forced downwardly. The door 35 is capable of oscillating only in a substantially  
 50 horizontal plane, and the movement of this door inwardly is effected by a retractile coil spring 38, having suitable connection with the door 35, as shown, and having connection with the lid-section 3, as shown at 40.  
 55 As clearly shown in Fig. 2, the upstanding pin 33 engages the door 35, and when the lever 25 is in its starting position, it is obvious that the pin 33 will prevent the inward movement of the door 35 to uncover  
 60 the opening 34. The door 35 is provided intermediate its ends with a slightly curved transverse slot 41 adapted to receive the upstanding pin 33, when the operating lever is moved to bring said pin into registration  
 65 with this slot. The flat body portion 26 of

the operating lever is provided adjacent its outer end with an elongated opening 42 formed therethrough for receiving a suitable coin. Rigidly mounted upon the upper surface of the lid-section 3, is a coin chute 43, disposed to conduct a coin within the opening 42, as clearly illustrated in Fig. 3. The upper end of the receptacle or magazine 16, as shown in Fig. 4, is provided with equi-distantly spaced upstanding extensions 44, and between each pair of such extensions, the material of the receptacle 16, is cut horizontally, as shown at 45, and then inclined as shown at 46. The horizontal edge 45 is disposed adjacent the extension 44 in the direction of which the receptacle 16 is to be rotated. When a coin 47 is disposed within the opening 42, such coin is held in a substantially vertical position and rests upon the horizontal edge 45. Upon the oscillation of the operating lever, this coin engages the extension 44 and serves to detachably connect the receptacle or magazine 16 and said operating lever, whereby the former is partially rotated upon the oscillation of the latter. When the operating lever is moved in a reverse direction, the coin is carried with it and follows the inclined edge 46 and finally drops out of the opening 42, falling between the receptacle 16 and the outer casing 1 to be collected within a drawer 48. This drawer (see Fig. 3) is suitably mounted within the outer casing 1 and disposed below the receptacle or magazine 16.

Pivotally mounted upon the upper surface of the door 35 and near the transverse slot 41, is a latch 49, as shown at 50. The inner end of this latch has suitable connection with a retractile coil spring 51, which is suitably connected with the door 35. The latch 49 is provided with a cut out portion 52, for receiving a stationary depending pin 53, having rigid connection with the lid-section 3. The spring 51 normally holds the latch 49 in engagement with the stationary pin 53, whereby the door 35 cannot be moved inwardly by spring 38, until the disengagement of the latch and stationary pin is effected. If the latch 49 and its associated members were not provided, the door 35 would be opened upon the movement of the operating lever, without the insertion of a coin.

Disposed below and adjacent the operating lever, between the outer casing 1 and the receptacle or magazine 16, is a leaf spring 54, having one end thereof rigidly connected with the outer casing 1, as shown at 55. This leaf spring has its free end portion bent inwardly, as shown at 56, and another portion of the leaf spring which is adjacent the bent end portion 56, is also slightly bent inwardly as shown at 57, but not near as much as the bent portion 56. The leaf spring 54 has rigidly connected therewith, 130

an inwardly extending pin 58, which is adapted to successively fit within openings 59, formed through the receptacle or magazine 16 and disposed below and adjacent the extensions 44, as clearly shown in Fig. 4. The operating lever 25 carries a depending pin 60 which is disposed for engagement with the bent portion 57 of the leaf spring 54. The door 35 carries a knob 62 whereby the door may be returned to its normal starting position. This knob fits within an opening 63 when the door is in its innermost position.

In the operation of the machine, assuming that the operating lever is at its starting position, the operator deposits a coin within the coin-chute 43, whereby this coin is conducted to within the opening 42. When the operating lever is oscillated in the direction of the arrow, the coin engages the extension 44, whereby a partial rotation of the receptacle or magazine 16 is effected, so that one of the tubes 18 is brought in proper registration with the opening 34. Upon proper movement of the operating lever, the pin 33 is brought into registration with the slot 41, and the coin engages the latch 49, whereby said latch is disengaged from the stationary pin 53 and the door 35 will then be automatically swung inwardly to uncover the opening 34. Upon the above referred to movement of the operating lever, the pin 60 will engage the bent portion 57 of the leaf spring and initially urge the free end of the leaf spring into engagement with the receptacle or magazine 16, to prevent the same from rotating too freely and by inertia travel too far, so that the next tube 18 will not be in proper registration with the opening 34. By the free end of the leaf spring initially engaging the receptacle or magazine 16, the same may be more readily stopped, without subjecting the machine to undue strains or shocks. As the operating lever is further advanced in the direction of the arrow, the pin 58 is moved toward the receptacle or magazine 16, and when the opening 59 is brought into registration with this pin, said pin will fit within the opening and securely lock the receptacle or magazine 16 against rotation. The operator may now remove the article, such as a bottle of coca cola 61 or the like. If the operator desires to secure another article 61, he takes hold of the knob 62, and by moving the same in the direction of the arrow, returns the door 35 to its normal starting position. The spring 29 will then return the operating lever to its normal starting position, whereby the coin is made to travel along the inclined edge 46 and will drop into the drawer 48, as above described. The spring 51 also returns the latch 49 to its normal starting position, for engagement with the stationary pin 53. When the second coin is insert-

ed within the coin-chute, the operation is repeated as above described.

In the use of the machine, the receptacle 16 may be partly filled with ice and the cold water from the same, for keeping the bottles 70 of coca cola or the like cold.

We wish it understood that the form of our invention herewith shown and described is to be taken as a preferred example of the same, and that certain changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus fully described our invention, we claim:

1. In a machine of the character described, a movable receptacle, an operating lever disposed near the same, means to connect said operating lever and receptacle, a movable door to control the removal of articles from said receptacle, and means to lock said door against movement until said lever has traveled a certain distance.

2. In a machine of the character described, a movable receptacle for holding articles to be vended, a movable door for controlling the removal of the articles from said receptacle, means to normally lock said door against movement, and common means to move said receptacle and actuate the first named means for releasing said door.

3. In a machine of the character described, a movable receptacle for holding articles to be vended, a movable door for controlling the removal of the articles from said receptacle, means to normally lock said door against movement, common means to move said receptacle and to actuate the first named means for releasing said door, and means to move said door after the same is released.

4. In a machine of the character described, a rotatable receptacle for holding articles to be vended, a pivoted door to control the removal of such articles, a latch to normally hold the door against movement, an operating lever disposed near the receptacle, and means moved by said lever to operate said receptacle and latch.

5. In a machine of the character described, a rotatable receptacle for holding articles to be vended, an operating lever near one side of which said rotatable receptacle is disposed, a movable door for controlling the removal of the articles and disposed upon the opposite side of said operating lever, means connected with said movable door to lock the same against movement, means to connect said operating lever and receptacle, said last named means being adapted to engage said receptacle and the first named means.

6. In a machine of the character described, a movable receptacle for holding articles to be vended, a movable door to control the re-

removal of such articles, a movable operating lever disposed near said receptacle and means whereby the movement of the door is prevented when the operating lever is in a certain position and permitted when said operating lever is in another position.

7. In a machine of the character described, a rotatable receptacle for holding articles to be vended, a pivoted door to control the removal of such articles, a pivoted operating lever disposed near said receptacle, said door being provided with a transverse slot, means connected with said operating lever to operate within said slot, and means to connect said receptacle and operating lever.

8. In a machine of the character described, a rotatable receptacle for holding articles to be vended, a pivoted door to control the removal of articles from said receptacle, an operating lever disposed near said receptacle, means tending to effect a movement of said door, a pin connected with said operating lever to engage the door to prevent its movement, and said door being provided with an opening for receiving said pin whereby said door may be moved.

9. In a machine of the character described, a rotatable receptacle to hold articles to be vended, a pivoted door to control the removal of such articles, an operating lever pivotally mounted near said receptacle, means tending to move said door, a pin connected with said lever to engage said door to prevent the movement thereof, said door being provided with a transverse opening for receiving said pin, whereby said door

may be moved, and means to connect said receptacle and lever.

10. In a machine of the character described, a rotatable receptacle for holding articles to be vended, an operating lever to effect the movement of such receptacle, a spring disposed near said receptacle, means connected with said spring to engage said receptacle to prevent the rotation thereof, and means connected with said operating lever to move said spring.

11. In a machine of the character described, a receptacle for holding articles to be vended, a pivoted door to control the removal of such articles from said receptacle, a latch to hold the door against movement, an operating lever, and means moved by said operating lever to operate said latch.

12. In a machine of the character described, a receptacle for holding articles to be vended, a movable door for controlling the removal of the articles from said receptacle, said door being provided with a slot formed therein, a movable operating lever, and means connected with said lever to have slidable engagement with said door for preventing the movement thereof and to be moved into registration with said slot to permit said door to be moved.

In testimony whereof we affix our signatures in presence of two witnesses.

LEWIS J. BARROW.  
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Witnesses:

PHIL LANIER,  
E. J. COLLINS.