June 26, 1923.

M. B. BAIRD ET AL

1,460,123

VENDING MACHINE

Filed Jan. 5, 1920

3 Sheets-Sheet 1

Fig. I.

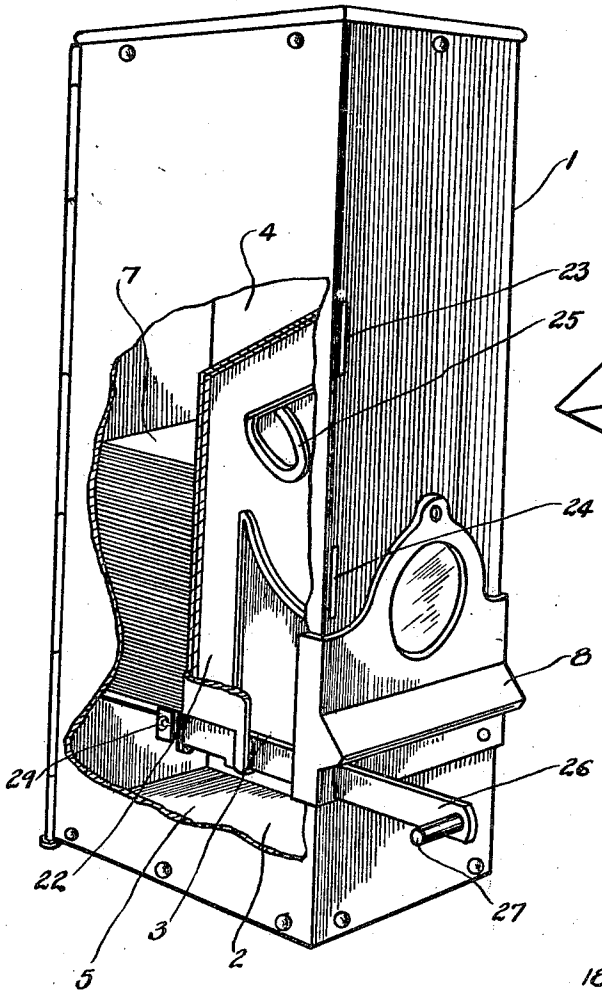


Fig. VI.

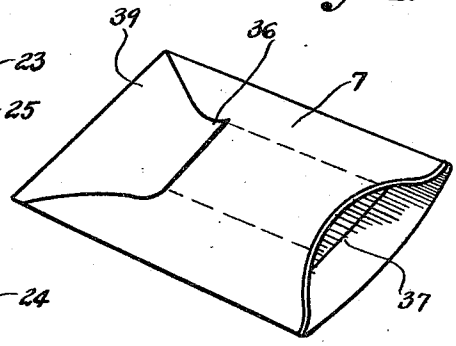


Fig. VII.

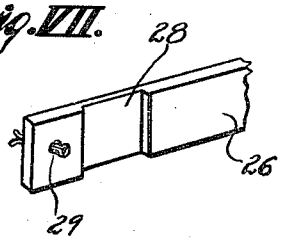
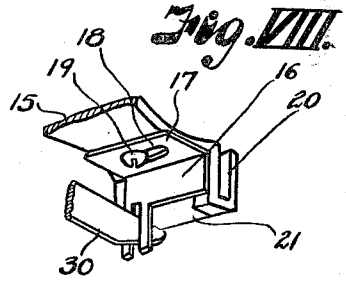


Fig. VIII.



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Fig. II.

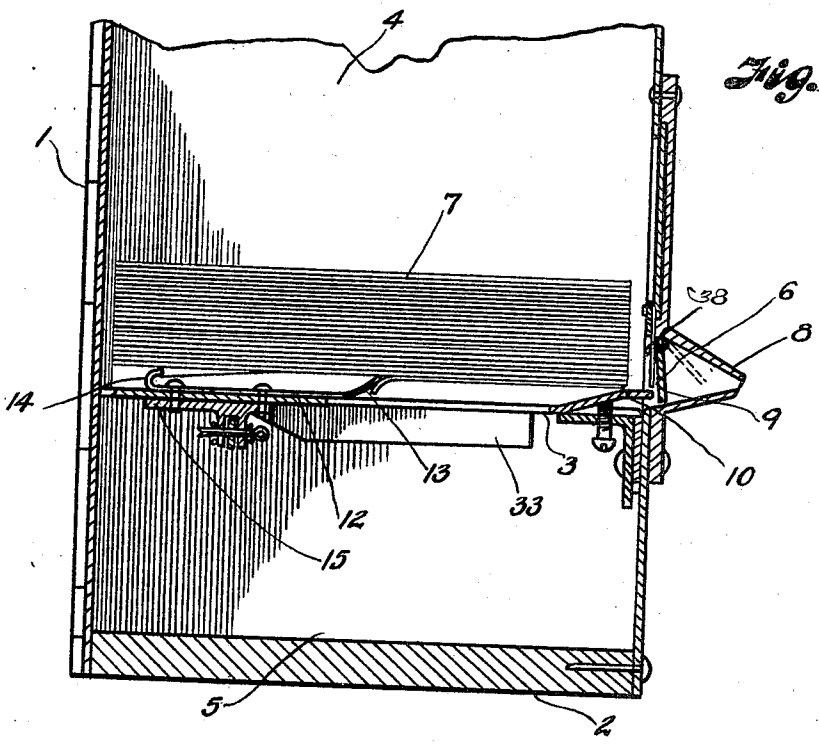
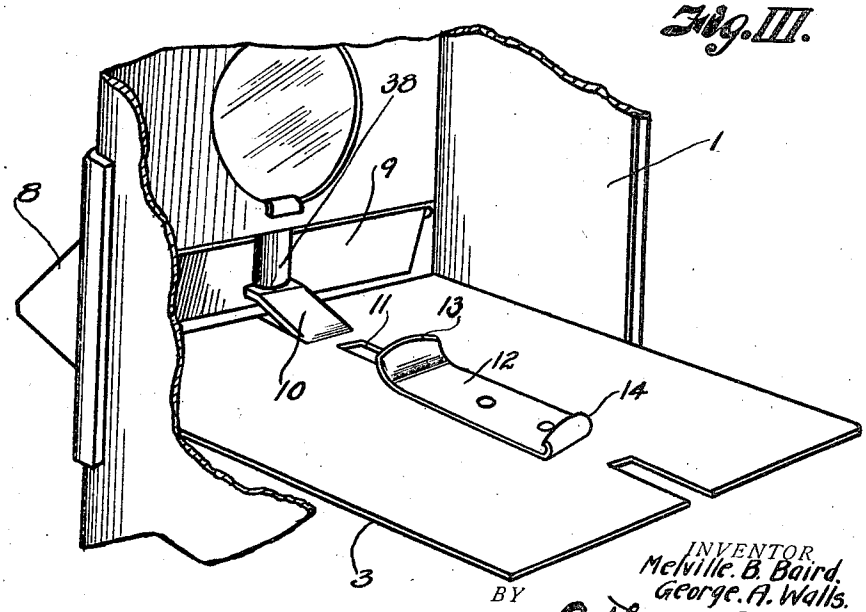


Fig. III.



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Fig. IV.

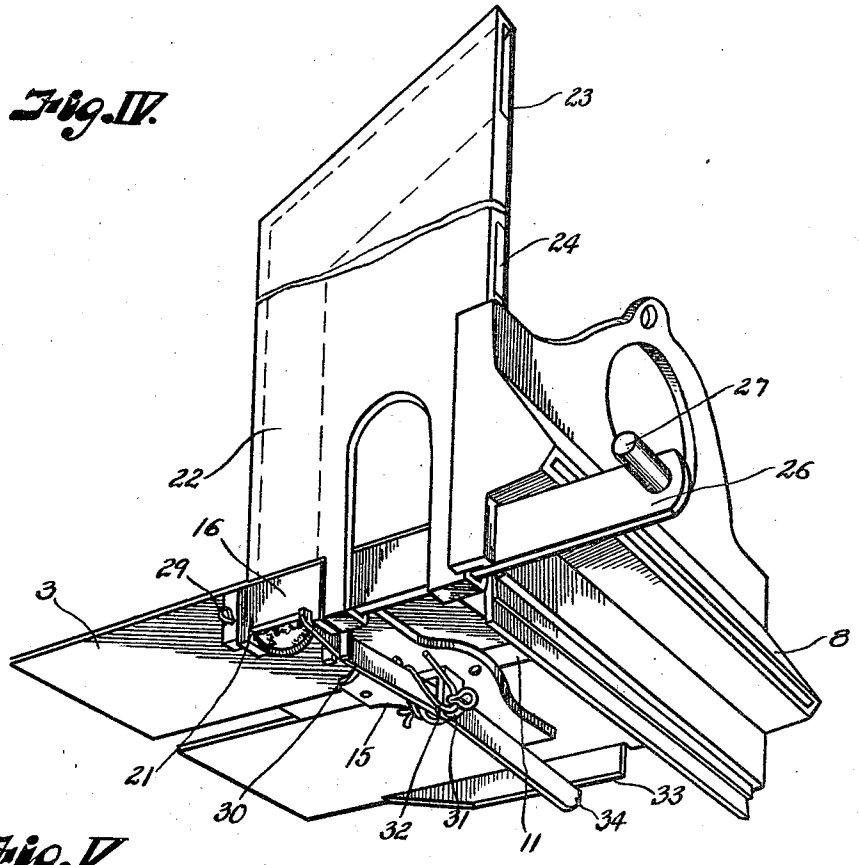
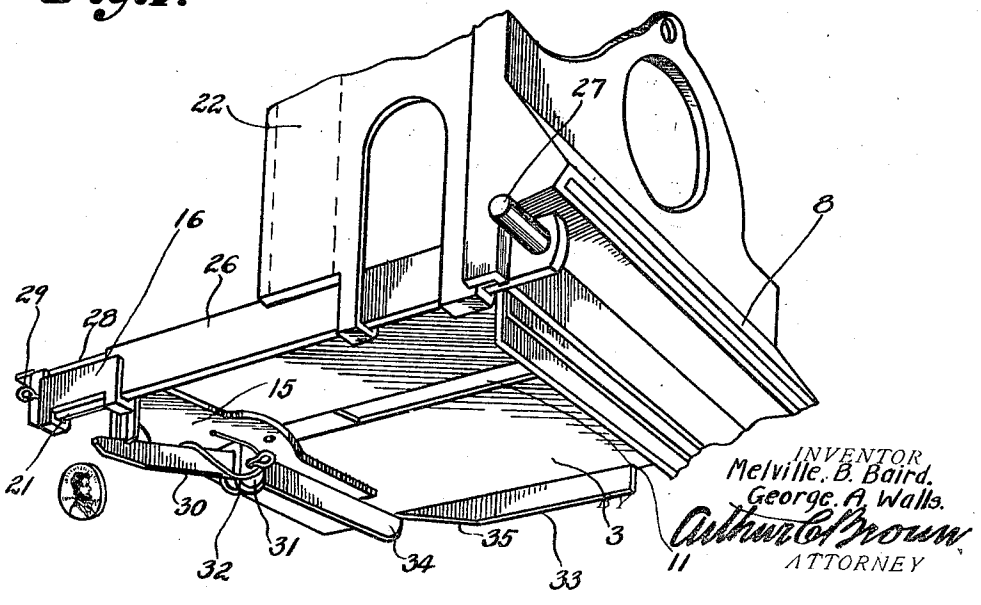


Fig. V.



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Patented June 26, 1923. 1,460,123

UNITED STATES PATENT OFFICE.

MELVILLE B. BAIRD AND GEORGE A. WALLS, OF KANSAS CITY, MISSOURI; ALBERT H. STEELE ADMINISTRATOR OF SAID MELVILLE B. BAIRD, DECEASED; SAID ADMINISTRATOR AND SAID WALLS, ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO J. C. W. BLAND, OF TULSA, OKLAHOMA.

VENDING MACHINE.

Application filed January 5, 1920. Serial No. 349,475.

To all whom it may concern:

Be it known that we, MELVILLE B. BAIRD and GEORGE A. WALLS, citizens of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Vending Machines; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to coin-controlled vending machines and particularly to a machine for vending paper cups capable for use at drinking fountains and the like.

The invention contemplates the provision of means whereby the paper cups may be contained within a receptacle and rendered inaccessible unless a coin, check or token of authorized denomination is introduced into certain novel ejecting mechanism, which constitutes one of the novel features of our invention, there being means provided whereby the insertion of an illegal coin, check or token through the discharge opening in the receptacle will cause the opening to be closed so that access to the cups cannot be had.

In the drawings,

Fig. I is a perspective view of a vending device constructed in accordance with our invention, parts being broken away to show the interior construction thereof.

Fig. II is a fragmentary, vertical, longitudinal, sectional view of a device embodying our invention.

Fig. III is a fragmentary, perspective view, showing a part of the floor and a portion of the ejector.

Fig. IV is a bottom perspective view of the ejector and the coin-receiver in ejecting position.

Fig. V is a similar view showing the ejector in cup-engaging position and the coin being released.

Fig. VI is a detail view of one of the cups.

Fig. VII is a fragmentary, perspective view of the jaw end of the ejector actuator, and

Fig. VIII is a detail view of the slotted guide on the ejector.

Referring now to the drawings by numerals of reference,

1 designates a closed receptacle illustrated as rectangular in form and provided above the bottom 2 with a floor 3 to provide an upper article-containing compartment 4 and a subjacent coin compartment 5, the front wall of the receptacle having a slot 6 through which the envelopes or cups 7 may be projected. A slotted hood 8 covers the slot 6 and carried thereby is an outwardly swinging gate or door 9, the inward swinging movement of which is adapted to be opposed by the stop 10, struck up from the floor 3, as shown in Fig. III, so that in the event that an illegal instrument is forced through the slotted hood 8 from the exterior of the receptacle, its passage will be arrested by the gate 9 although the ejection of the cups in an authorized manner will not be seriously opposed.

The floor 3 of the receptacle 1 is shown as provided with a slot 11 over which is adapted to slide an ejector bar 12 having an upwardly curved front end 13 and a hooked end 14 at its rear, the parts 13 and 14 being designed to engage parts of the cups 7, as will appear hereinafter.

Suspended from the bar 12 and slidable along the under face of the floor 3 is a plate 15 fastened to the bar between the edges of the slot 11 so the movements of the plate 15 and bar 12 will be synchronous. The plate 15, which constitutes part of the ejecting or delivery device, is provided at one side edge with a vertically extending guide member 16 having a flange 17 provided with a slot 18 through which a set screw passes into the plate 15 whereby the guide may be adjusted with relation to the plate. By reference to Figs. IV, V and VIII it will be observed that the guide is provided with a lateral groove 20, parallel with the slot 11 and that in the floor of the groove 20 is a through slot 21 adapted to align with the coin slot 22, the inlet of which is at the front of the receptacle, as shown at 23, there being a return slot 24 provided in which is

located a magnet 25 so that slugs and the like will be deflected in a well known manner to the return slot, as will be well understood.

Guided in the groove 20 is an ejector or delivery device actuator, illustrated as a bar 26, the front end of which projects through the front panel of the receptacle and is provided with a stop pin 27. The rear end of the bar 26 is cut away to provide a coin-engaging jaw 28 of a length substantially the length of the slot 21 and adapted to register therewith, but the rear end of the bar 26 extends beyond the rear end of the guide 16 and carries a stop shown as a cross pin 29 so that the stop may engage against the rear end of the guide when the bar 26 is pulled out and thereby cause the ejector to move to ejecting position. When, however, the bar 26 is pushed inwardly, its movement will be independent of the guide unless opposed by a coin, check or token introduced through the coin slot 22 adapted to be held in the guide by a coin support 30, carried by the plate 15.

The coin support or retainer for the coin receptacle is shown as consisting of a lever pivoted to the plate 15 at 31 and normally urged by a spring 32 to coin-releasing position but the spring will be opposed by a cam rail 33, along the edge of which the arm 34 may travel toward the end of the inward stroke of the bar 26 and the ejector. Therefore, it will be seen that when the check, coin or token is introduced into the machine, it will pass into the slot 22 and drop into the receiver, passing partly through the slot 21 where its movement will be arrested by the coin support 30. During this time the parts will be in substantially the position shown in Fig. IV. Upon a rearward movement of the bar 26 the jaw 28 will be caused to engage the coin because the coin will fill the gap between the edges of the jaw 28 and will impinge against the edges of the slot 21 so that the actuator 26 and the ejector will be locked together. Therefore, a continued rearward movement of the actuator bar 26 will impart a corresponding movement to the ejector until the movement has been sufficient to cause the lever arm 34 to ride off the edge 33, whereupon the spring 32 will urge the coin retainer 30 away from the slot 21, permitting the coin to drop into the coin receptacle 5. The ejector and its actuator thereupon become disconnected for movement in one direction but the return movement, that is, an outward movement of the bar 26 will cause the stop, shown as a cotter pin 29, to engage the rear edge of the guide 16 so that the ejector and its actuator must move together in an outward direction or toward the slot 6. The movement of the ejector toward the slot will cause the lip 13 to engage the outwardly curled tip 36 of the cup 7 and the upturned end 14 to engage the edge 37 of the cup 7 so that the cup will be moved up the spring stop 10, between it and the finger 38 and pass the outwardly opening gate 9 so that its end will protrude through the slotted hood 8, whereupon it may be removed.

It is to be understood that the cups will be introduced into the receptacle in stacks, the portions 36 extending downwardly and rearwardly so that the end 39 will be disposed toward the ejecting slot of the machine, enabling the cups to be easily engaged by the slide 12.

The ejection of the cup will be effective in bringing the plate 15 and its appurtenances to the front of the machine and it cannot again be retracted to cup-engaging position unless the guide is connected to the actuator 26 by another coin, check or token of appropriate denomination. Upon the presentation of a proper coin, the ejector and its actuator may again be locked together and the machine permitted to function.

If an unauthorized coin, check or token is inserted through the opening 23, the magnet 25 will deflect it to the return slot 24 so that it will be returned to the customer.

What we claim and desire to secure by Letters-Patent is:

In combination, an article container, a reciprocatory ejector, a coin receiver carried by the ejector, an ejector actuator having a part to abut against the coin receiver, depending lugs adjacent to the coin receiver and spaced apart to provide guides, a pivoted member having one end weighted and the other end movable between the lugs and normally lying in a position to obstruct the passage of a coin through the coin receiver, and means for tilting the pivoted member to release the coin.

In testimony whereof we affix our signatures.

MELVILLE B. BAIRD.
GEORGE A. WALLS.