

G. L. SLATER.
VENDING MACHINE.

No. 491,323.

Patented Feb. 7, 1893.

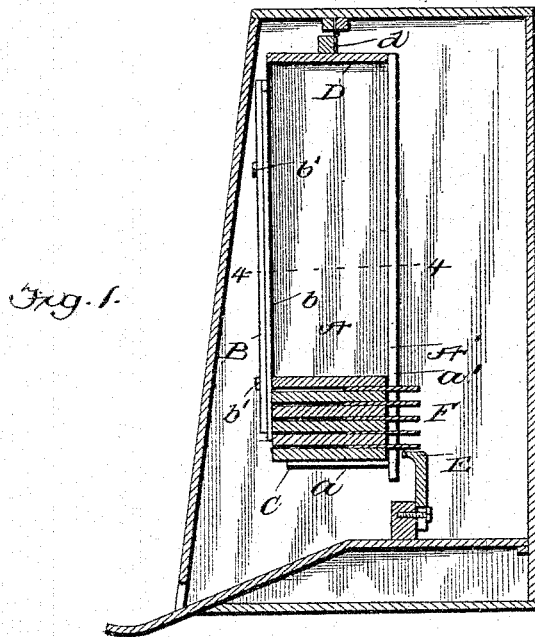
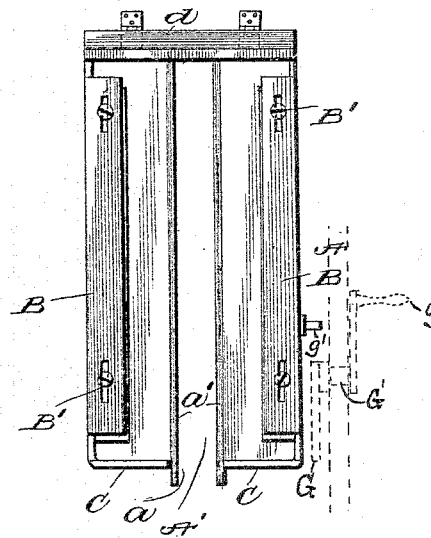
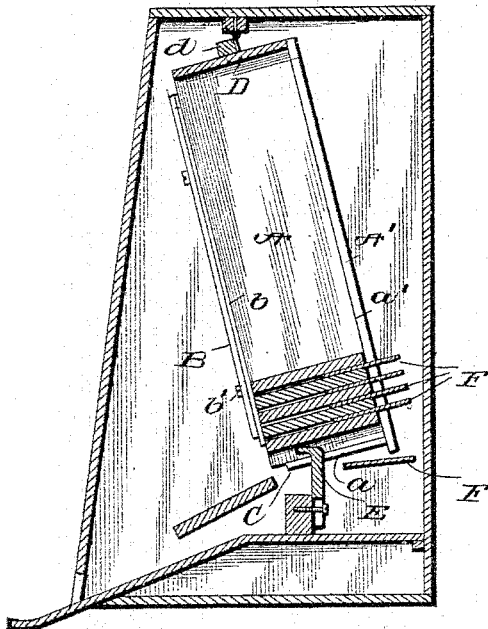


Fig. 2.

Fig. 3.



Witnesses

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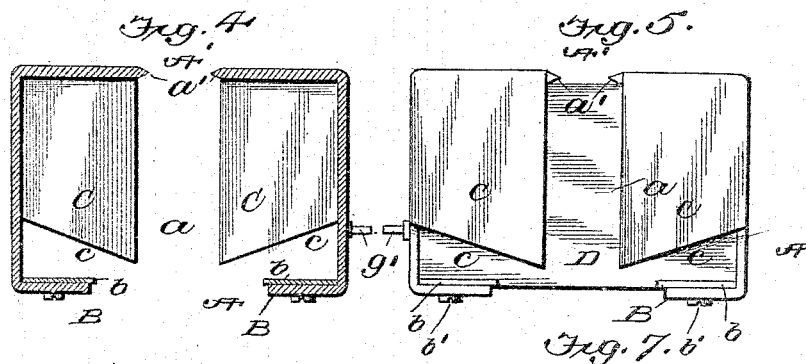


Fig. 6

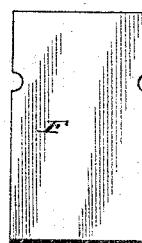
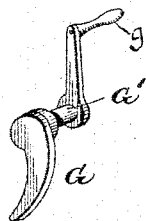


Fig. 9.

Fig. 8.

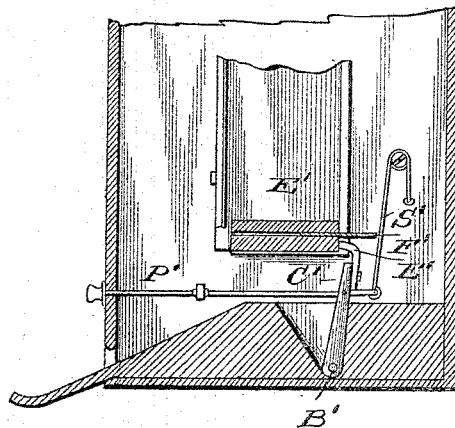
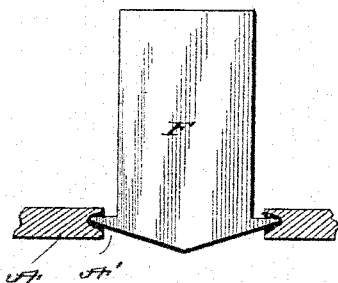
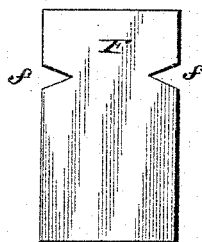


Fig. 10.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE L. SLATER, OF SOUTH BEND, INDIANA.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 491,323, dated February 7, 1893.

Application filed November 12, 1892. Serial No. 451,765. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. SLATER, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Vending-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention is an improvement in coin-controlled vending apparatus of the class wherein the articles are successively ejected from a receptacle. It is especially designed as an improvement upon the machine shown in Letters Patent of the United States, No. 485,140, granted October 25, 1892; and its objects are to improve the construction of the receptacle; and to insure the successive delivery of the articles singly and without interference with each other.

To these ends the invention consists in the novel construction and combination of parts hereinafter described and claimed.

Referring to the drawings by letters;—Figure 1 is a central, vertical, longitudinal section through the machine. Fig. 2 is a detail view illustrating the position of parts when a package is discharged. Fig. 3 is a front view of the receptacle. Fig. 4 is a transverse sectional view through the same on line 4—4 Fig. 1. Fig. 5 is a bottom view thereof. Fig. 6 is a detail view of the devices for swinging the receptacle inward. Figs. 7 and 8 are details showing modified forms of separator strips. Fig. 9 illustrates a modified form of the machine. Fig. 10 is a detail view of a separating strip.

In the drawings the receptacle A is a hollow parallelopiped, closed at top and sides but having a vertical central slot down its back and in its bottom, as at A' a, and open in front except narrow side flanges or portions B, B, which are formed by bending in the front edges of the sides. These flanges B are shorter than the sides, terminating above bottom C, and below top D.

d, is a bar extending transversely and centrally across top D, and suspended by hinges to a bar or support fixed to the top of the casing as indicated in the drawings so that the

receptacle can be swung rearwardly, but will normally hang in a vertical position.

b, b, are strips adjustably secured to the inner faces of flanges B, B, by means of screws b' b' playing through slots B' in the flanges. The strips may be adjusted vertically so that only a single article can pass between their lower ends and bottom of the box.

The coin-controlled locking devices for the receptacle are constructed and operated like those described in the patent aforementioned and need not be described herein, forming no part of this invention, and indeed any other desired form of controlling devices may be employed.

The front corners of bottom C are cut away as indicated at c, c, on each side, so that the front edge of the bottom is V-shaped, the slot however cutting the bottom and the V edge thereof directly in two. The object of this is to prevent articles catching in the receptacle as they are ejected therefrom, and this form of bottom is especially desirable when the articles are thin and flexible, as envelopes or postal cards.

The ejector finger E is adjustably secured in the casing below and just in rear of the receptacle, for instance as described in the aforementioned patent. When the receptacle is swung backward, the upper end of this finger engages the lowermost article in the receptacle, through slots A' a, and holds it while the receptacle swings back until the article drops off the front edge of the bottom C. In order to prevent finger E catching more than one article, I employ separating plates F, F, these may be of sheet metal, are slightly wider than slot A', of any suitable length (about half as long as the articles for instance) and are notched on opposite sides as at f to engage the edges of the back pieces a' a' at each side of the slot A', so that the plates will be prevented from slipping out, except at bottom thereof. These plates are inserted intermediate the several packages in the receptacle, alternating therewith and project in rear of the holder as shown, so that the rear end of the lowermost plate rests upon the top of finger E, and will lift the superimposed articles off the bottom one, so that the finger E will engage that alone, and as the receptacle is pressed back when the plate has

passed behind the finger, it, having no support will drop down onto the bottom of the case in rear of the finger; the next lowest article in the receptacle will then be partly resting upon the upper end of the finger, when the lowest article is ejected the receptacle returns to its normal position, the entire contents will settle down so that the then lowest article will rest upon the bottom of the receptacle, and the outer end of the lowest separating plate will rest on top of the ejector E. By this means only one article at a time can be engaged by ejector E.

As the flanges B do not extend entirely to the top of the receptacle, the articles can be inserted laterally therein, and it be completely filled.

The receptacle can be swung backward by means of the cam piece G which is fixed on the inner end of a stub shaft G' journaled in the side of the casing and rotated by a suitable handle as g, on its outer end. When the shaft is rotated, cam G engages a pin g' fixed to the side of the receptacle and swings the latter backward until the package is ejected. The cam may be rotated past the pin, and by its weight will normally keep the handle in operating position.

It is obvious that various modifications of the separating plate might be used; for example a plate with a "T"-shaped end, that is to say it has ears projecting from two of its corners as illustrated in Fig. 8. These ears project into grooves in the edges of the rear strips of the receptacle and rest upon the ejector finger. It is also evident that if the receptacle were to be made stationary, and the motion be given to the finger, the articles would be delivered and the strips would fall, and the operation of the machine be identically the same so far as the separating plates are concerned as it is now, so that I claim the use of separating plates in combination with the receptacle herein described whether the receptacle moves in order to deliver the article, or whether the receptacle is stationary and the ejector moves so as to deliver the article.

Fig. 9 shows a section of the case with the receptacle stationary. The ejector finger E is adjustable on C' which is pivoted at B' and is moved by pull P' and automatically returned by spring S' to its first position. The receptacle E' is stationary, and at each forward movement of the ejector a package is delivered from the receptacle, the separating plates F' serving the purpose above described.

As it is easy to multiply variations in the form of the plates I do not limit myself to the precise shape thereof, or of their co-operating mechanism shown in the drawings.

Having described my invention what I claim as new, and desire to secure by Letters Patent thereon is;—

1. The combination with the receptacle having flanges at its front side, with the retain-

ing strips adjustably secured to said flanges, substantially as described.

2. A receptacle for the purpose described having a bottom, the front corners of which are diagonally cut away, substantially as described.

3. A receptacle having a bottom cut away so as to prevent a V-shaped front edge and longitudinally slotted, substantially as described.

4. The combination with the receptacle having a vertical slot, with a series of separating plates adapted to partially project through said slot, substantially as specified.

5. The combination with a receptacle and an ejector, of a series of plates alternating with the articles in the receptacle and adapted to successively rest upon the ejector and to fall from the receptacle when the underneath article is discharged therefrom, substantially as and for the purpose set forth.

6. The herein described receptacle having front side flanges B, B, and a bottom C having its front corners diagonally cut away, substantially as specified.

7. The combination with a vertically slotted receptacle and ejector, of the notched separating plates adapted to partially project through the slot in the receptacle, substantially as described.

8. The combination of the swinging vertically slotted receptacle the stationary ejector finger, and the separating plates adapted to partially project through the slot in the receptacle, substantially as and for the purpose set forth.

9. The combination of the swinging receptacle having a stud on its side, with a stationary ejector and the rotatable cam G adapted to alternately engage and disengage said stud when rotated and its actuating devices, substantially as described.

10. The receptacle A, having flanges B, B, on its sides and slotted in rear and at bottom, with the adjustable pieces b, b, attached to flanges B, and the ejector finger, all constructed and arranged to operate substantially as described.

11. The receptacle A having flanges B, B, on its sides and slotted in rear and at bottom, with the adjustable pieces b, b, attached to flanges B, and the ejector finger, and the separating plates K, K, substantially as set forth.

12. A receptacle having a bottom cut away so as to present a V-shaped front edge, and slotted substantially as described, in combination with the ejector finger operating through the slot in the bottom, substantially as described.

13. A receptacle having a bottom cut away so as to present a V-shaped front edge, and slotted substantially as described, in combination with the ejector finger operating through the slot in the bottom, and the separating plates, substantially as and for the purpose set forth.

14. In a vending apparatus the combination
of a vertically slotted receptacle having a dis-
charge opening at the bottom an ejector and
a series of vendible articles or packages: with
5 a series of separating plates intermediate and
alternating with the articles, substantially as
specified.

15. The combination with a receptacle hav-
ing a vertical slot in its back and a longitudi-
10 nal slot in its bottom, and a series of vendi-
ble articles or packages therein; of a series

of separating plates and an ejector operating
through the slot in the bottom, substantially
as and for the purpose set forth.

In testimony that I claim the foregoing as 15
my own I affix my signature in presence of two
witnesses.

GEORGE L. SLATER.

Witnesses:

JAMES DUSHANE,
GEO. P. ROSE.