W. E. SWIFT.

DISPENSING CABINET FOR PAPER DRINKING CUPS.

APPLICATION FILED MAY 5, 1917.

1,333,045.

Patented Mar. 9, 1920.

2 SHEETS—SHEET 1.

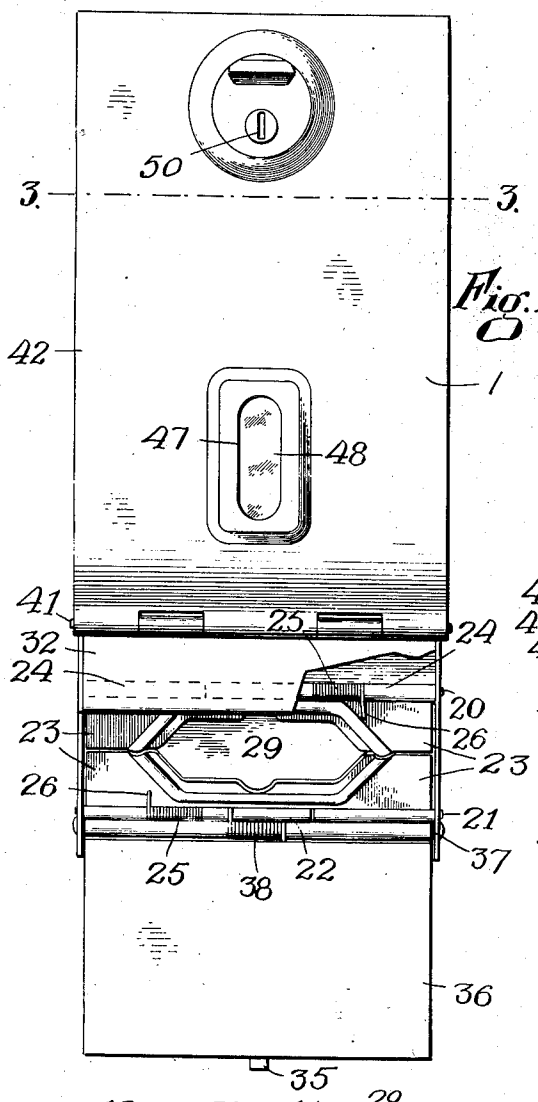


Fig. 1.

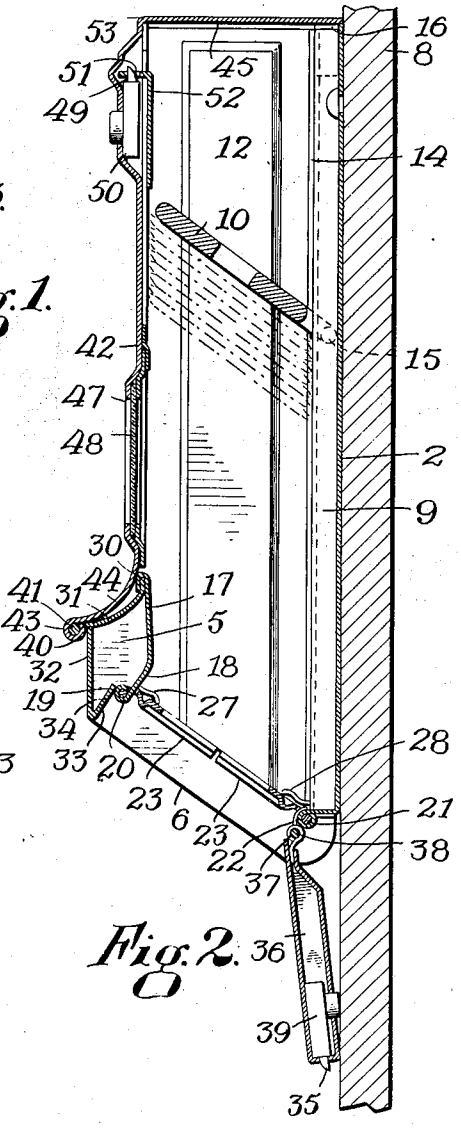


Fig. 2.

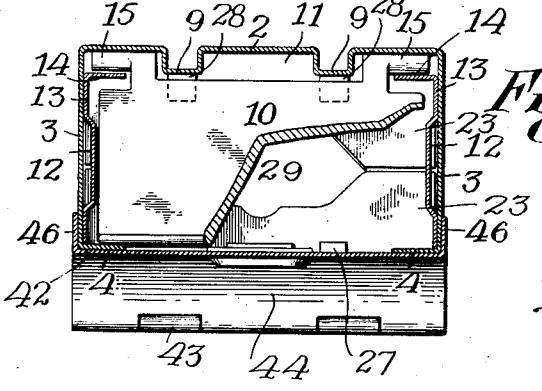


Fig. 3.

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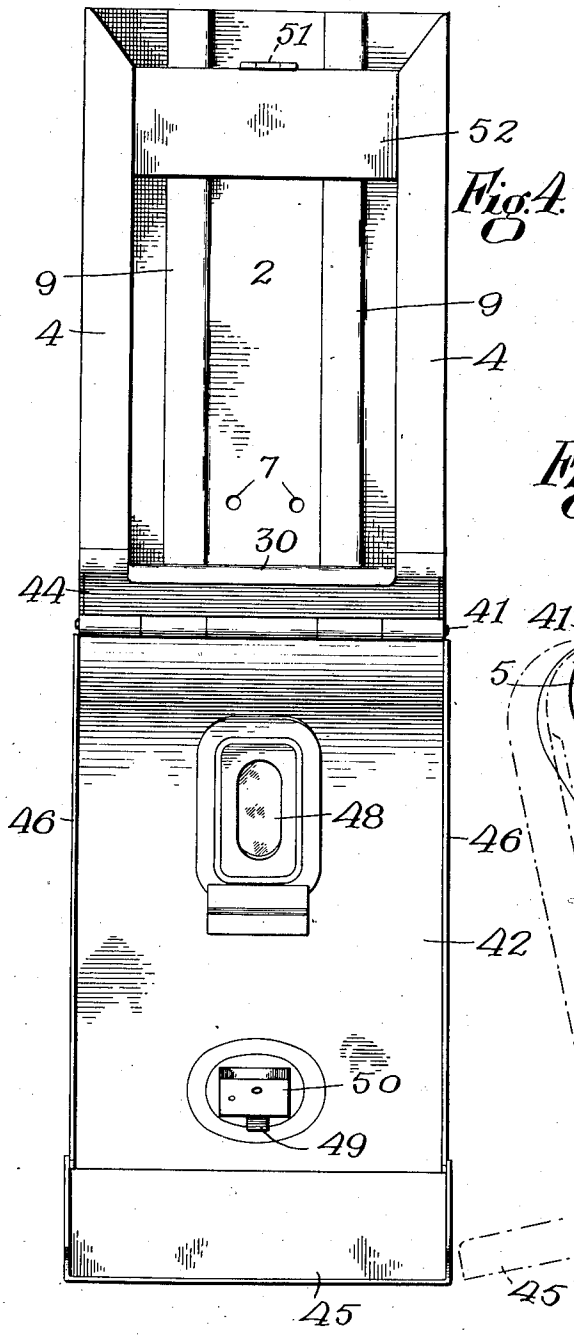


Fig. 4.

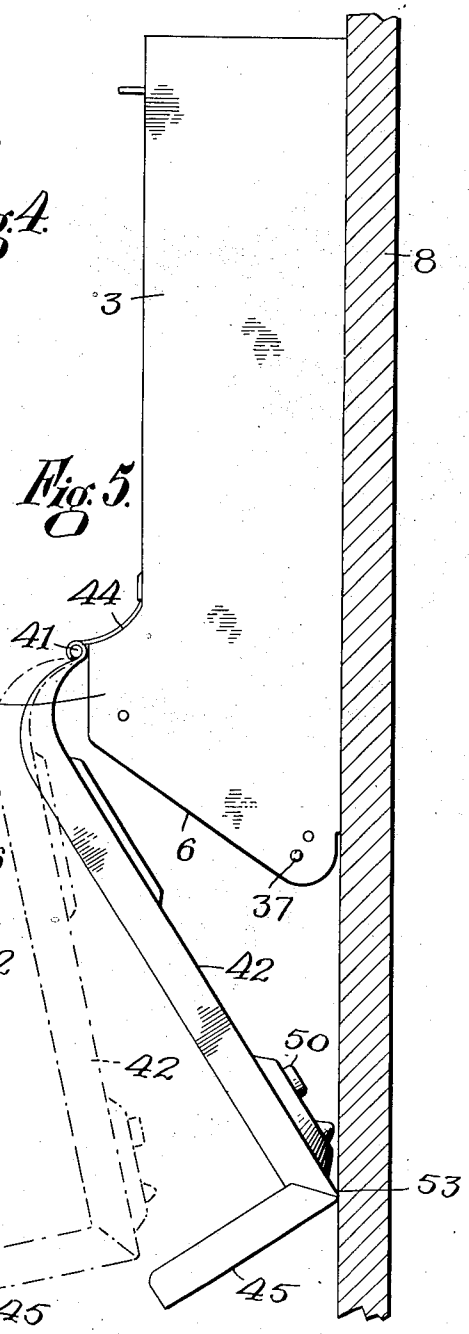


Fig. 5.

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UNITED STATES PATENT OFFICE.

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DISPENSING-CABINET FOR PAPER DRINKING-CUPS.

1,333,045. Specification of Letters Patent. Patented Mar. 9, 1920.

Application filed May 5, 1917. Serial No. 166,748.

To all whom it may concern:

Be it known that I, WILLARD E. SWIFT, a citizen of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Dispensing-Cabinets for Paper Drinking-Cups, of which the following, together with the accompanying drawings, is a specification.

The present invention relates to the construction of a dispensing cabinet for paper drinking cups, adapted to receive and hold a stack of such cups in such a manner as to permit the lowermost cup of the stack to be withdrawn therefrom, after which the cup immediately above becomes available for withdrawal in a similar manner.

The invention resides in an improved construction for such a cabinet, whereby cheapness, simplicity and ease of operation are obtained, the essential features of the invention being fully set forth hereinafter and pointed out in the annexed claims. In connection with the following detailed description reference is had to the accompanying drawings, in which—

Figure 1 is a front view of a cabinet involving my invention, parts being broken away to reveal the construction of other parts.

Fig. 2 is a vertical sectional view of the cabinet, showing a stack of paper drinking cups therein.

Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a front view of the cabinet when opened to permit the loading of a stack of cups therein.

Fig. 5 is a side view of the cabinet when in the position illustrated in Fig. 4.

Like reference characters refer to like parts in the different figures.

In accordance with my invention, I prefer to form the cabinet of sheet metal or the like, and to this end I provide an inclosing shell 1 made from a single sheet of material and bent or pressed to form a rear wall 2, side walls 3, 3 and inturned front flanges 4, 4, as shown in Fig. 4. The shell 1 incloses a substantially rectangular space for the greater portion of its length, which is open at both ends. At their lower ends, below the lower edges of flanges 4, 4, the side walls 3, 3 of the shell have forwardly disposed extensions 5, 5, Figs. 2 and 5 for a purpose hereinafter described, and said side walls 3, 3, including said extensions 5, 5, have their lower edges 6, 6 inclined downwardly to the rear, as shown in Fig. 5.

The rear wall 2 provides screw holes 7, 7 Fig. 4, for the attachment of the cabinet to a plane wall or surface 8. Said rear wall is formed with longitudinal interior projections or guides on its inner side, as shown at 9, 9, these guides being preferably constituted by grooving the outer face of said rear wall. These guides assist in controlling the descent of a weight 10, whose edge adjacent said rear wall 2 is recessed, as at 11, to straddle the guides 9, 9. The side edges of the weight 10 slide in substantial contact with inwardly projecting guiding portions 12, 12, formed on supplemental side walls 13, 13 which are attached to the side walls 3, 3 of the shell and have, at the rear, inturned flanges 14, 14 which are spaced from the rear wall 2 of the shell. The spaces thus formed between flanges 14, 14 and rear wall 2 constitute guideways for the alined projections 15, 15 of said weight 10, these spaces being closed at the top of the shell by lips 16, after the weight 10 is in position, to prevent either intentional or accidental withdrawal of the weight from the cabinet. It will be seen, however, as shown in Figs. 4 and 5, that this construction, while preventing the withdrawal of the weight 10, permits the latter when the cabinet is open, to be swung on its said projections into a position slightly past a vertical position, and be supported against the rear wall of the cabinet when said weight is at the limit of its upward movement, thereby facilitating the introduction of a stack of cups into the shell from the top, as hereinafter described.

The front flanges 4, 4 provide for the support of a transverse vertical plate 17, which defines, in conjunction with the guiding portions 12, the flanges 14 and the guides 9, a rectangular space within the shell adapted to receive the stack of rectangular cups, when said cups lie in the inclined position, shown in Fig. 2. That is to say, the cups of said stack, when in the receptacle or cabinet, have their edges at the rear end in contact with the flanges 14, and their edges at the front in contact with the flanges 4 and with the plate 17 which con-

stitutes an extension of said flanges 4. The side edges of the cups are in contact with the guiding portions 12, and thus the corners of the cups are maintained out of contact with any corners of the cabinet, thereby reducing the liability for the cups to stick or bind in their descent toward the lower end of the cabinet. The cups lie substantially parallel to the inclined lower edges 6 of the side walls 3, which lower edges define the discharge mouth of the cabinet at the bottom thereof. The plate 17 is bent outwardly at 18 near its lower end, to lie substantially normal to said lower edges 6, whereby the lowermost cups of the stack, three or four in number, are guided forwardly and outwardly in the act of being withdrawn from the cabinet. The plate 17 at its lower end has a portion or tongue thereof turned up as at 19 to provide a central bearing for a shaft or rod 20, which is attached at its ends to the extensions 5 of side walls 3. A similar shaft 21 is supported by a bead 22 formed from the metal of rear wall 2, between the guides 9 at their lower ends, and said shaft 21 is supported at its ends in the side walls 3.

The two shafts 20 and 21 afford support for a pair of hinged doors 23, 23 at the discharge mouth of the cabinet, these doors having integral beads 24 surrounding their respective shafts on opposite sides of the supporting beads 19 and 22. Springs 25, surrounding shafts 20 and 21 and attached at their adjacent ends to stationary beads 19 and 22, have their opposite ends 26, 26 bearing against the faces of the corresponding doors, whereby said doors are urged yieldingly inward against stops 27, 28 formed by projecting tongues on the plate 17 and on the rear wall 2, respectively. Said doors 23 have oppositely facing notches or recesses in their meeting edges to provide an opening 29 through which the fingers may be inserted to seize hold of the tongue or fin of the lowermost cup of the stack, and by which tongue or fin said cup is withdrawn, the doors yielding outwardly to permit its withdrawal, and thereafter springing inwardly under the action of springs 25, to again partially close the discharge opening and to support the remaining cups of the stack.

The plate 17 has its upper edge, between the flanges 4, 4, overturned, as at 30, to receive and support a concave plate 31, the latter closing the outside of the receptacle as a continuation of the flanges 4, and following the contour of the upper edges of extensions 5. The front edges of extensions 5 are joined by a substantially vertical plate 32, whose lower edge is inturned, as at 33, to close the space between said extensions 5, said inturned portion terminating adjacent the outward bend 18 of plate 17. Said portion 33 provides an aperture 34 to receive a spring lock or catch 35 carried by a swinging door 36, the latter being hinged on a shaft 37 which is carried by the side walls 3, 3 at the lower rear corners thereof, below the shaft 21. A spring 38 surrounds said shaft and normally acts to open said door 36 when the latch 35 is withdrawn from the opening 34, by means of a key, or the like, inserted in the lock 39 of said latch. When the cabinet is in use, the door 36 hangs downwardly, as shown in Fig. 2, to permit the withdrawal of cups past the doors 23, 23. In case it is desired to prevent the withdrawal of cups from the cabinet, the door 36 is swung upwardly, and the spring latch 35, entering the aperture 34, retains the door in closed position until said latch is again unlocked by the attendant.

At its upper edge, adjacent its intersection with the curved plate 31, the plate 32 provides a pair of beads 40, 40 for the support of a shaft 41. The latter has journaled thereon a swinging front 42 of sheet metal, having integral beads 43 on its lower edge to provide a hinged connection with said shaft. This front 42 is curved inwardly, as at 44, above its hinged edge, and thereafter rises substantially vertically to lie flat against the flanges 4 when in closed position, the upper end being turned rearward and horizontally, as at 45, to provide a closure for the top of the cabinet. The sides of the hinged front and top closure thus formed are flanged, as at 46, to embrace the side walls 3, 3 when the closure is in position. If desired, a suitable aperture may be formed in the front of said closure, as at 47, to contain a pane of glass 48, whereby it is possible to ascertain when the supply of cups within the cabinet needs replenishment without opening the cabinet. Preferably also this front closure carries near the top a spring latch 49 actuated by a lock 50, and adapted to be received within a latching aperture 51 provided by a transverse bar 52 which is carried between the flanges 4, 4.

When the latch 49 is withdrawn to permit the front closure 42 to be opened, by swinging the same backward on its pivot 41, said closure in its lowest position will make contact along its edge 53 with the wall or support 8, and there will be no contact of said closure with the cabinet, except where it is hinged at 41. This is due to the outward curvature or swell 44 at the lower end of said closure, whereby it is hinged in a position offset forwardly from the plane of the flanges 4, 4 of the cabinet. Because of this arrangement of parts, all danger of breaking or of tearing the closure loose from its hinges when the same is swung downwardly is avoided, since the closure makes contact with the wall or support 8 before it has a chance to strike the plate 32 or the door 36, as shown in Figs. 4 and 5.

The normal position of the closure 42 or the position which it assumes by gravity is shown by the broken lines 54, Fig. 5. The closure 42 will therefore be moved against gravity between the position shown by broken lines 54 and the full lines thereby causing gravity to impede its movement and lessen the force of the blow against the supporting wall 8.

I claim,

1. A drinking cup cabinet, comprising a sheet metal casing open at the top and bottom and having a rear wall provided with interior longitudinal ribs, side walls flanged in the plane of the front wall, and supplemental side walls supported by the side walls of the casing and forming side guides, and a slidable weight contained between said rear longitudinal ribs, said front flanges and said side guides, and a door covering the space between said front flanges.

2. A drinking cup cabinet, comprising a sheet metal casing, a slidable weight for pressing the cups downwardly, provided at its rear corners with trunnions, said casing having guideways for said trunnions, and supplemental side walls supported by the side walls of the casing and contacting with said slidable weight.

3. The combination in a drinking cup cabinet, comprising a sheet metal casing and having interior flanges on its opposite sides spaced from the rear wall forming a pair of vertical guideways, of a vertically slidable weight extending between said flanges, and a pair of projections on opposite sides of said weight extending toward the sides of the cabinet and into said guideways, said projections being alined to provide an axis upon which said weight may be rocked into a vertical position.

4. A drinking cup cabinet comprising a sheet metal casing open at the top and bottom and pressed into substantially rectangular shape in cross section, a slidable weight for pressing the cups downward provided at its rear corners with trunnions, guideways at the rear corners of said casing for said trunnions, longitudinal ribs spaced from said guideways to hold the cups away from said trunnions.

5. A drinking cup cabinet comprising a sheet metal casing, a weight for pressing the cups downwardly, having at its rear corners a pair of trunnions, gideways at the corners of the casing for said trunnions having their upper ends closed to prevent the withdrawal of said weight and to form a hinged connection between said weight and said casing.

6. A drinking cup cabinet comprising a sheet metal casing pressed into a substantially rectangular shape in cross section, a slidable weight for pressing upon the cups and having at its rear corners a pair of trunnions, vertical guideways to receive said trunnions, having their upper ends closed to permit a rocking movement of said trunnions against the closed ends of said guideways for the insertion of cups, with the weight supported in its raised position.

7. A drinking cup cabinet, comprising a sheet metal casing open at its front and having its side walls forwardly extended at the bottom of the casing, a transverse vertical plate between the forwardly extended side walls and in the plane of the front of the casing, a vertical plate closing the outside of said extended side walls, and a door hinged at the upper edge of said vertical plate having a lower concave section and an upper plain section covering the front of the casing.

Dated this 2nd day of May, 1917.

WILLARD E. SWIFT.

Witnesses:

NELLIE WHALEN,

PENELOPE COMBERBACH.