

April 23, 1935.

M. SHAPIRO

1,999,113

BOTTLE STOPPER

Filed Aug. 3, 1934

Fig. 1.

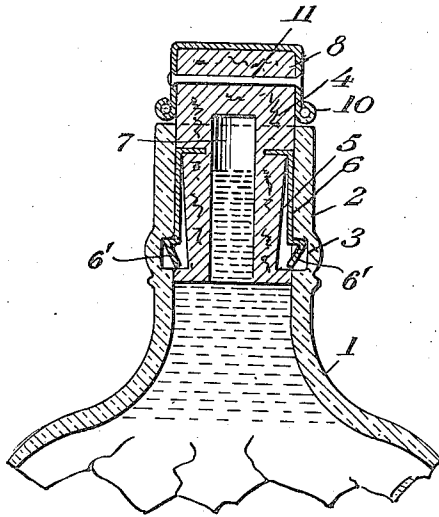


Fig. 3.

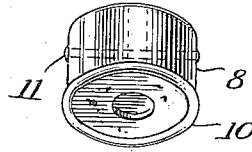


Fig. 2.

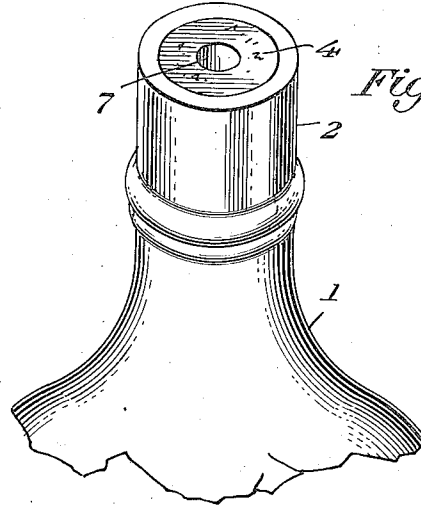


Fig. 5.

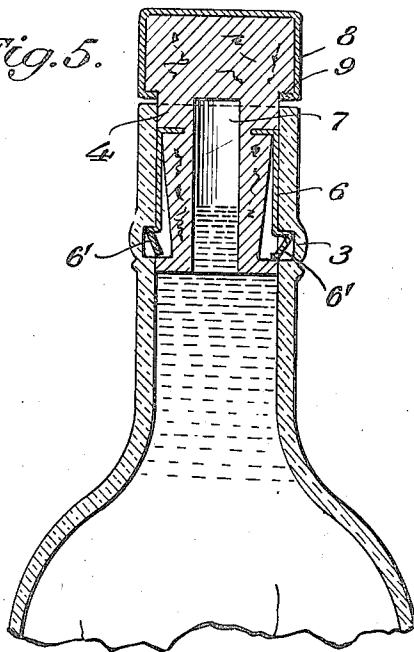
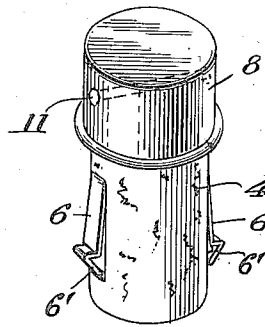


Fig. 4.



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UNITED STATES PATENT OFFICE

1,999,113

BOTTLE STOPPER

Morris Shapiro, Cleveland, Ohio

Application August 3, 1934, Serial No. 738,336

1 Claim. (Cl. 215—47)

This invention relates to bottle stoppers and has for the primary object the provision of a device of this character which will efficiently seal a bottle and may not be opened without detection requiring the destruction of the stopper or cork before the contents of the bottle may be obtained and further provide a device which will be simple and durable and may be manufactured and sold at a low cost.

With these and other objects in view this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawing, in which Figure 1 is a fragmentary vertical sectional view illustrating a bottle constructed in accordance with my invention.

Figure 2 is a fragmentary perspective view illustrating the device after being opened.

Figure 3 is a fragmentary perspective view showing a portion of the stopper or cork after being severed from the portion locked in the neck of the bottle.

Figure 4 is a perspective view illustrating the stopper or cork.

Figure 5 is a fragmentary vertical sectional view illustrating a modified form of my invention.

Referring in detail to the drawing, the numeral 1 indicates a fragmentary portion of a bottle having a neck 2 provided with an internal groove 3. A stopper or cork 4 is of a diameter to be inserted in the neck 2 and snugly fit the latter with a portion of the cork extending externally of the neck. Grooves 5 are formed on diametrically opposite sides of the stopper and run longitudinally thereof but open onto the periphery of the stopper. Disposed in these grooves and in confronting relation to the internal groove 3 in the bottle neck are the spring latching members 6, of which each is in the form of a flat spring having its upper end bent and embedded in the cork to anchor it thereto. The remote ends of the latching members are formed with latching pawls 6' of generally triangular form, of which the upper sides are at right angles to the latching members and the under sides at acute angles thereto. The under sides of the latching pawls constitute the extremities of the latching members and their free terminals are adjacent the bottoms of the grooves 5, so that as the latching members swing outwardly, as they do in the latching operation, the under sides

of the pawls may drag along the bottoms of the grooves, against which they will impinge, however, to preclude moving the latching members backwardly or into the bottoms of the grooves 5.

In initially inserting the cork into the bottle neck, the latching members can be set back into the bottoms of the grooves and held there until the initial insertion of the cork and will be held in such position until the cork is fully inserted, when the latching pawls will be opposite the groove or recess 3, when the inherent spring tendency of the latching members will shift the pawls into the groove or recess from which they will be prevented from receding by the under or inclined portions of the pawl impinging, at their extremities, in the bottoms of the grooves 5. Thus, after the stopper is fully inserted in the bottle neck, the collapsing of the latching ends is precluded, in any attempt to extract the stopper from the bottle neck. A chamber 7 is formed in the cork or stopper and opens outwardly of the latter at the inner end. The chamber 7 extends slightly beyond the end of the neck when the cork or stopper is inserted in the neck and secured to and covering the exposed end of the cork or stopper is a metallic cover 8 which in one form has an inwardly extending flange 9 to bite into the cork or stopper to prevent the cover from being removed. In the other form of my invention the cover is provided with an external bead 10 and also is secured to the cork or stopper by a rivet 11. The cover 8 is spaced slightly from the neck of the bottle when the cork or stopper is applied to the neck so that the cork or stopper may be readily severed by employing a knife or like instrument, detaching the cover and the portion of the cork or stopper lying in said cover from the remaining portion of the cork or stopper confined in the neck. The cork or stopper when severed, as shown in Figures 2 and 3 of the drawing, opens the chamber 7 so that the contents of the bottle may be readily dispensed. Any suitable type of plug may be employed for closing the chamber 7 after the stopper or cork has been severed to prevent evaporation of the contents of the bottle.

A device of the character described can be manufactured and sold at a low cost and is easily applied to the neck of the bottle after the filling of the bottle and will effectively seal the bottle and prevent opening of the latter without detection requiring the severance of the cork or stopper before the bottle can be opened.

Having described the invention, I claim:

In combination, a bottle having a neck on 55

which an interior peripheral recess is formed a
substantial distance below the upper end of the
neck, and a stopper entering the neck from the
open end thereof, the stopper being formed on
5 diametrically opposite sides with longitudinally
arranged grooves and having latching members
disposed in said grooves, the latching members
each being in the form of a flat spring having
its upper end bent and embedded in the stopper
10 to anchor it thereto and its opposite end formed
with a latching pawl of generally triangular form
of which the upper side is at right angles to the
latching member and the upper side at an acute
angle thereto, the under side of the pawl consti-
tuting the extremity of the latching member and
having its free terminal disposed adjacent the 5
bottom of its groove to drag over said bottom on
outward movement of the latching member but
impinge on the bottom on inward movement, the
pawls entering the recess in the bottle neck on
insertion of the stopper in the latter. 10

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