Nov. 25, 1941. L. L. LEWIS 2,263,882

BOTTLE

Filed May 10, 1941

Fig. 1.

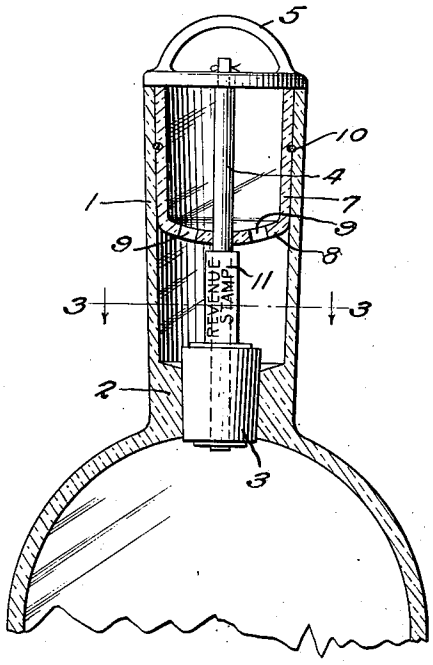


Fig. 2.

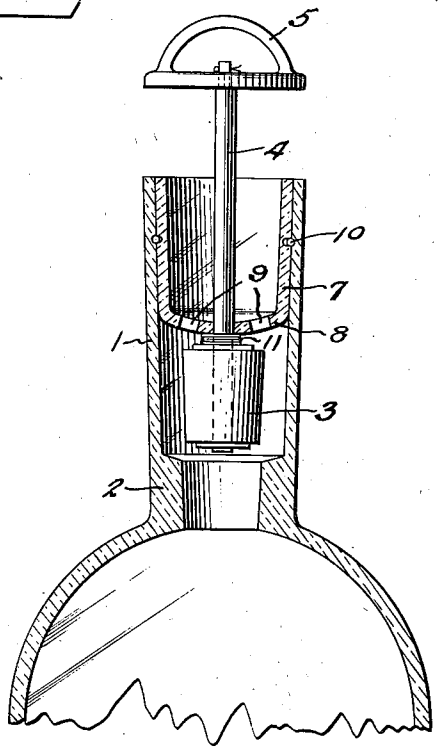


Fig. 4.

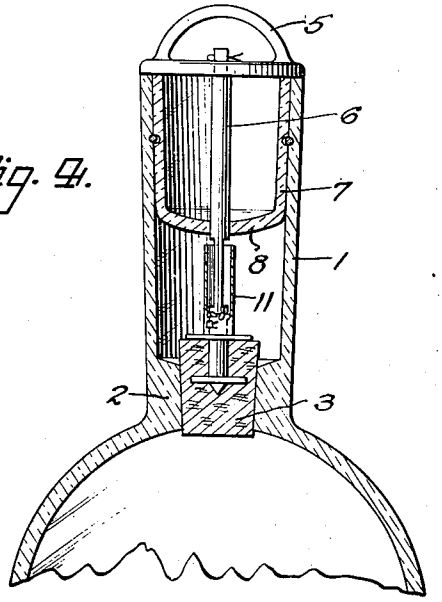
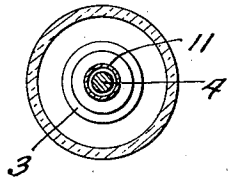


Fig. 3.



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Patented Nov. 25, 1941

2,263,882

UNITED STATES PATENT OFFICE

2,263,882

BOTTLE

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Application May 10, 1941, Serial No. 392,976

5 Claims. (Cl. 215—8)

This invention relates to improvements in means to safeguard bottle closures, and particularly means associated with such a closure to cancel or destroy a revenue stamp or the like when the bottle is opened.

It is desirable to enclose and to destroy at the first opening of the bottle such an indicia-bearing element, which for convenience will be illustrated by a revenue stamp in this description.

A purpose toward which this invention is directed is to seal a revenue stamp within a bottle neck so that it is protected positively against tampering and yet is certain to be destroyed the first time any contents of the bottle are removed.

An additional object is to provide such a bottle structure by means that are simple to manufacture and to assemble in large quantities and of inexpensive material.

An additional purpose is to provide such a bottle structure that permits removal of all the contents of the bottle. It may be stated that this invention is not necessarily associated with a non-refillable bottle, though its use may be desirable with non-refillable bottles.

Novel and useful features of this invention are presented in the appended drawing and particularly pointed out in the accompanying claims, taken with the following illustrative description.

In the drawing:

Figure 1 shows a vertical assembly view partly in cross-section of a preferred form of this invention with the bottle closed and a revenue stamp in place and intact;

Figure 2 shows the closure of Figure 1 but with the closure removed sufficiently for liquid to be poured from the bottle and with a revenue stamp destroyed;

Figure 3 shows a cross-section through the bottle neck of Figure 1 along the line 3—3; and

Figure 4 shows a modification of this invention.

In brief, the principles of this invention are developed in a closure that crushes a revenue stamp at the first opening of the bottle. Preferably, the crushing is accomplished between a stopper and a guard member by means of an integral or unitary lifting rod.

The invention will be understood more clearly by a specific description of the elements and of their preferred mode of assembly and of operation. However, it is to be understood that this invention is not limited to this specific embodiment, but may be practiced otherwise and will comprise such equivalents as may be comprehended within the scope of the claims of this application.

In the drawing is illustrated a bottle neck 1 of considerable length. Near the bottom of the neck are closure elements illustrated in this case by a thickened neck wall 2 and forming a stopper opening, and by a stopper 3. The stopper bears a rod 4 adapted to lift against an appreciable resistance and extending as an integral unit up to the top of the bottle and terminating in the handle 5. By this means the bottle may be closed with the stopper 3, but the stopper may be withdrawn or be reinserted by means of the handle and connecting rod.

Rod 4 may extend entirely through the stopper 3 and be held in place by washers above and below the cork. Or alternatively, as illustrated in Figure 4, the rod which will be designated as rod 6 may extend only partly into the cork and be molded in place with a suitable base-retaining member such as a washer. At the top of the bottle the rod may conveniently be secured to the handle 5 by providing an opening to the handle 5 into which the rod 4 or rod 6 will extend with a hole through the top of the rod for a cotter key.

In addition is provided a guide 7 for the rod suitable to permit assembly as a unit with the stopper and the lifting rod. This guide is perforated so that the rod may extend therethrough, but closely surrounds the rod. It is preferable to construct this guide in a form that will prevent tampering with the closure or with the revenue stamp 11 to be contained in the bottle neck. As shown in the drawing, such a guard comprises a cylindrical stopper, preferably hollow but provided with passageways for flow of liquid therethrough. The stopper in the form shown is closed across the bottom by a wall 8 through the center of which extends rod 4. Also perforating the guard wall 8 are suitable openings for flow of liquid. The guard wall is grooved to contain a split ring 10. The inner walls of the bottle neck are grooved in complementary arrangement so that when the closure unit is pushed into place the split ring in the grooves of the guard expand into the complementary neck crevice and will lock the guard in place.

A space is left between the top of the stopper 3 and the guard bottom 8. Within this space may be placed a revenue stamp or other indicia, of readily deformable material. Preferably this simply is in the form of a cylinder. Such a cylinder of deformable material will not pass through the guard opening for the rod 4, but is somewhat larger than that opening. Thus as the stopper is drawn upwardly the revenue stamp is crushed and thereafter remains mutilated.

However, the strength of paper or foil or the like is considerable and requires pronounced pull on the integral rod in the stopper.

The passageway 9 for flow of liquid through the guard wall 8 may be modified. Thus for example, separate openings are absent as shown in Figure 4 and in lieu thereof the rod 6 of Figure 4 is reduced in diameter below the bottom of the guard so that as the rod 6 is drawn upwardly through the guard a passageway appears along the rod itself for flow of liquid. Nevertheless, the cylinder of crushable material such as a revenue stamp is sufficiently large to be deformed against the rod when the stopper is drawn upwardly.

In manufacture, assembly of this invention may be rapid and suitable for large-scale production. Thus stopper 3 and accompanying rod 4 readily receive a cylindrical stamp. Then the guard may be slipped down around the rod and then handle 5 be attached to the top. This assembly may be treated as a unit. As a unit it may be inserted into a bottle neck. The split rings of the guard spring into locking position with the neck wall at substantially the same time that the stopper is forced into the position to close the bottle. No withdrawal of the stopper can occur without crushing the revenue stamp so that the stamp is destroyed the first time the bottle is opened. Yet when the stopper is removed from the opening, liquid readily may be poured in the bottle. It should be clear that this invention is not necessarily associated with a non-refillable bottle structure. Yet if the bottle is refilled the stamp remains mutilated. The stopper may be withdrawn and reinserted as many times as desired if the bottle is of non-refillable type, but the destruction of the revenue stamp is unavoidable from the first the bottle is opened.

It will be evident that other positionings and structures for retaining the revenue stamp is crushable position may be devised, but this invention provides means to prevent tampering with the stamp, to assure crushing of the stamp when first the bottle is opened, and to permit pouring liquid from the bottle as many times as one may desire and to permit the bottle to be emptied entirely.

According to the patent statutes, the principles and preferred operation of this invention have been described in what is now considered to represent its best embodiment, but it is understood that within the scope of the appended claims modifications will now occur to those skilled in the art and may be practiced otherwise than as specifically illustrated and described.

What I claim is:

1. In a bottle having an extended neck, closure means near the lower end of said neck, a guard within the neck above said closure means, means passing through said guard to open and close said closure means, and an indicia-bearing cylinder of readily deformable material surrounding the closure-operating means between the guard and the closure means.

2. In a bottle having an extended neck, a stopper adapted to be seated in an opening near the lower end of said neck, a guard within the neck above said stopper, a rod passing through said guard and connected to said stopper, and an indicia-bearing cylinder of readily deformable material surrounding the rod between the guard and the stopper.

3. Means for protecting indicia in a bottle comprising a stopper for a bottle neck, an elongated integral element extending therefrom and adapted to receive an encircling indicia-bearing element of readily deformable material, and a guard comprising a wall having a restricted opening through which the elongated element may slide, the guard being adapted to be slipped into a bottle neck, and then locked, so as to be assembled as a unit and so that on moving the closure element toward the guard the deformable material will be crushed between the closure and the guard.

4. Protective means for bottle closure comprising a stopper, an integral rod extending from the stopper to fit it for use in an extended bottle neck, a guard adapted to be fastened into the bottle neck and provided with an opening through which the stopper element may slide, means to withdraw the stopper of sufficient length to receive an indicia-bearing cylinder of readily deformable material in such position that when the stopper is withdrawn the deformable material is crushed.

5. In combination, a bottle having an extended neck, a thickened neck portion to form a stopper opening, a stopper, an elongate integral rod extending from the stopper to the top of the extended bottle neck, a guard adapted to be fastened into the bottle neck above the stopper and provided with an opening through which the stopper rod may slide, the rod being adapted to withdraw the stopper and extending between the stopper and the guard for sufficient space to receive an indicia-bearing cylinder of readily deformable material so that when the stopper is withdrawn the deformable material is crushed.

LESTER L. LEWIS.