June 6, 1944. W. H. DOUGLASS 2,350,596

DROPPER BOTTLE

Filed April 24, 1943

Fig. 1

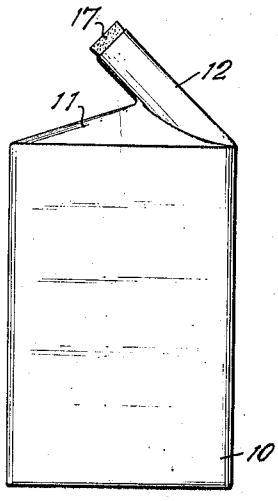


Fig. 3

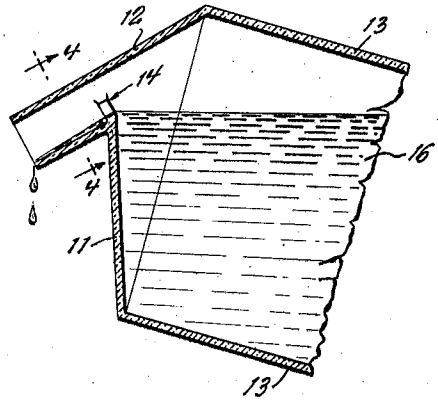


Fig. 2

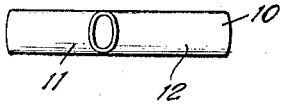


Fig. 4

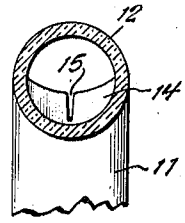


Fig 5

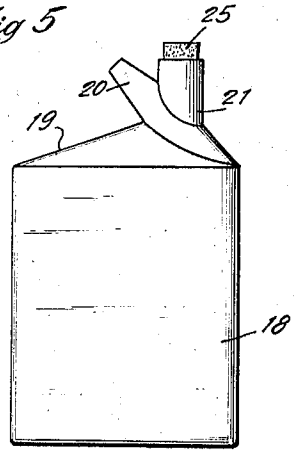
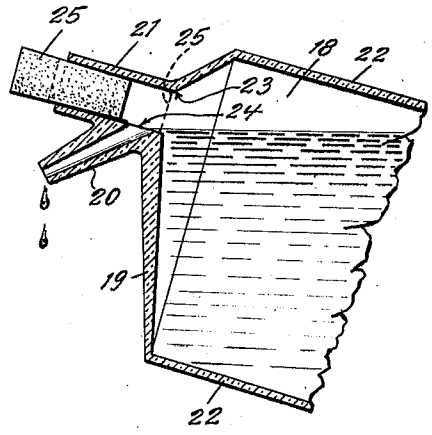


Fig. 6



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DROPPER BOTTLE

William H. Douglass, Prentice, Wis.

Application April 24, 1943, Serial No. 484,329

1 Claim. (Cl. 222—421)

This invention relates to dropper or dosage bottles or containers, and one object thereof is the provision of such a bottle possessing novel features of construction whereby the dispensing of a single drop of the liquid contents at a time is assured. With the usual type of medicine bottle or the like, it is extremely difficult to dispense a single drop at a time and it then requires the utmost care and steadiness of the hand of the person doing the dispensing. With the bottle of this invention, the effort and concentration on the part of the person using it are reduced to a minimum in obtaining such a drop by drop dispensing of the liquid contents.

The above and other objects will become apparent in the description below, wherein characters of reference refer to similarly numbered parts in the accompanying drawing which form a part hereof. It is to be noted that the drawing is intended to serve the purpose of illustration only, and that it is neither intended nor desired necessarily to limit the invention to any or all of the modifications or exact details of construction shown, excepting insofar as they may be embodied within the scope of the appended claim.

Referring briefly to the drawing, Figure 1 is a side elevational view of one form of the dropper bottle.

Figure 2 is a plan view of the same.

Figure 3 is an enlarged fragmentary longitudinal cross-sectional view through the bottle of Figures 1 and 2.

Figure 4 is a cross-sectional view taken on the line 4—4 of Figure 3.

Figure 5 is a side elevational view of a modified form of the bottle.

Figure 6 is a fragmentary enlarged longitudinal cross-sectional view through the bottle of Figure 5.

Referring in detail to the drawing, the numeral 10 indicates a bottle which is substantially flat in general appearance and which has a raised roof 11 from one end of which a tubular neck 12 extends angularly. As seen in Figure 2, the angle at which the neck 12 lies with respect to the side edges 13 of the bottle is about forty-five degrees. This angle may of course be varied, but it is believed that the angle specified should be very nearly the best for the purposes intended.

The bottle might be used when constructed as so far described, that is, with simply the angular neck 12 communicating with the body 10. As an improvement thereover, however, a dividing wall or partition 14 may be provided at the throat of the neck 12, that is, at the junction of the lower wall (Figure 3) of the neck 12 with the upper edge of the roof 11. A V slot 15 is cut vertically through the mid line of the wall 14, with the apex thereof lying spaced a short distance above the lower wall portion of the throat.

When the bottle 10 has liquid 16 therein and the same is about to be dispensed in drops, the bottle is held in the position shown in Figure 3 and tilted slowly. Owing to the narrow outlet through the slot 15 and to the phenomenon of surface tension of liquids, it is obviously possible to pass a drop of liquid at a time therethrough, without great difficulty. A cork 17 is provided as a removable stopper.

In the modified form of dropper bottle, the body 18 and its roof 19 are substantially similar to the same parts of the bottle above described. Herein, however, a spout-like neck 20 is provided at the same angle as that of the neck 12, and in addition thereto, a second control neck 21 which extends parallel with the side edges 22 and intersects the neck 21 in such manner that the throat or base of the neck 21 lies below the intersection of the two necks, as shown at 23. The entrance opening of the spout 20 into the neck 21 is shown at 24. A long cork 25 is insertable into the neck 21. When inserted all the way home, to the position shown in broken lines in Figure 6, this cork not only blocks the neck 21 but also closes the entrance 24 into the neck 20. To use this bottle, the cork 25 is withdrawn partway or entirely if desired, and the bottle is tilted slowly as before. If the cork is withdrawn only partway, however, to limit the amount of air which may enter through the neck 21 to a minute quantity, it is apparent that the formation and flow of drops may be easily controlled. For instance, one method of such control would be to push the cork in the instant a drop has passed out of the spout, thus preventing any further flow, and then loosening the cork again and repeating the same operation for each drop desired.

In either of the forms of construction set forth, the flow and control of the drops is very easily attained, so that the common trouble of having an excess of liquid pass out of the bottle is eliminated. Likewise, the flow of drops may be made at a very slow rate, and the time interval between successive drops also controlled at will, so that a rush of drops in excess of the desired dosage is avoided.

Obviously, other modifications in form and structure, as well as in the manner of use or application of the bottle, may be made without

departing from the spirit and scope of the invention.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is as follows:

A dropper bottle comprising a substantially flat body including two opposed relatively wide walls and two opposed relatively narrow walls, said bottle having a neck extending from said body from the upper edge of one of said narrow walls at an angle to and intersecting the center line through the body, the intersection of said neck and body adjacent said center line forming a throat, a partition extending across the lower half of said throat and having a V-shaped cut-out therethrough, the apex of said V-shaped cut-out being spaced from the lower wall portion of said throat.

WILLIAM H. DOUGLASS.