

T. O. L. SMITH.
BOTTLE.
APPLICATION FILED MAR. 14, 1918.

1,275,315.

Patented Aug. 13, 1918.

Fig. 1.

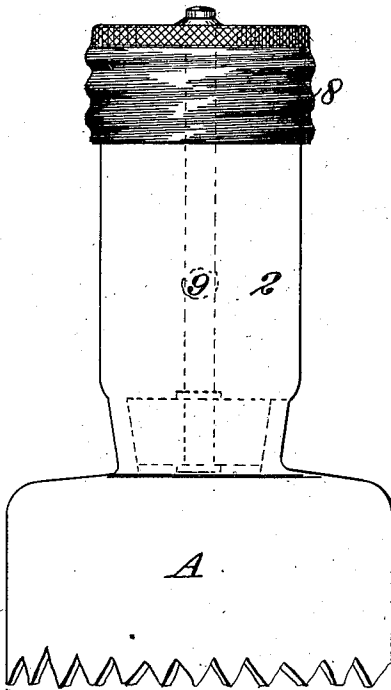


Fig. 2.

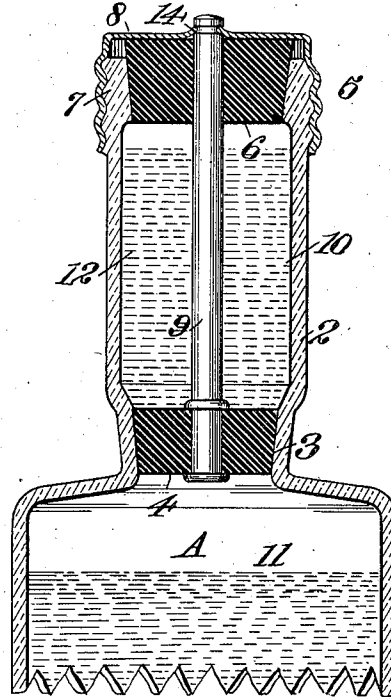
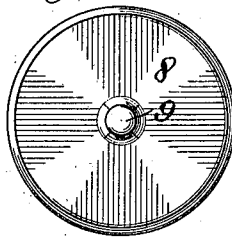


Fig. 3.



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BOTTLE.

1,275,315.

Specification of Letters Patent.

Patented Aug. 13, 1918.

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To all whom it may concern:

Be it known that I, THOMAS O. L. SMITH, a citizen of the United States, residing at the city and county of San Francisco and State of California, have invented new and useful Improvements in Bottles, of which the following is a specification.

This invention relates to a bottle.

One of the objects of the present invention is to form the neck of a bottle in such a manner that by the use of two corks or stoppers, one in the lower and one in the upper part of the neck, the bottle will serve as a receptacle for two liquids which may be kept separately until ready for use. Another object of the invention is to provide means for positively removing the lower stopper to insure a mixing of the liquids before the upper stopper can be removed. Further objects will hereinafter appear.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the bottle.

Fig. 2 is a central vertical section of the bottle.

Fig. 3 is a plan view of the metallic screw cap employed.

Referring to the drawings in detail, A indicates the main body portion of a bottle and 2 the neck. Formed in the lower end of the neck is a seat 3 for the reception of a stopper 4, preferably constructed of rubber, and formed in the upper portion of the neck is a seat 5 for the reception of an upper stopper 6. Formed on the exterior upper end of the neck is a screw thread 7 and adapted to form an exterior covering for the upper stopper is a screw cap 8.

Suitably secured to the lower stopper is a rod 9 which is preferably constructed of glass. This rod extends upwardly through a chamber 10 formed in the neck between the stoppers and through the stopper 6. It also passes through the screw cap 8 which is perforated for this purpose. The perforation of the lower stopper permits the formation of the chamber 10 which is provided for the reception of a liquid which should not be mixed with the main contents of the bottle until it is ready for use. This is particularly true when certain chemicals in concentrated form are employed as it has been

found in actual practice that mixing or diluting of the concentrates with other liquids and materials causes comparatively rapid deterioration of same. It is therefore ideal to maintain the concentrated material in full strength condition until it is ready for use.

This is accomplished in the present instance by first filling the bottle with a liquid indicated at 11. The lower stopper 3 supporting the glass rod 9 is then inserted and the concentrate 12 may then be poured in to fill the chamber 10. The upper stopper 6 is next passed over the upper end of the rod until it engages its seat, and, as said stopper is preferably constructed of rubber, it can readily be seen that a seal will be formed not only between the seat 5 and the stopper but also between the rod and the stopper. The perforated screw cap is next applied and when screwed into position it passes over the upper end of the rod which is provided with an annular groove 14. The metal surrounding the rod is then forced into the annular groove 14 by any suitable form of tool to prevent removal of the screw cap without lifting the rod 10 and the stoppers secured thereto. This is of considerable importance as it might otherwise be possible to remove the cap and the upper stopper without mixing the concentrate 12 with the liquid 11.

In the present instance it is only necessary to unscrew the cap 8. This movement will, of course, cause the cap to travel in an upward direction on the threads 7 and will thus impart a vertical movement to the rod 9. The lower stopper 4 is thus lifted from its seat before the screw cap and the upper stopper are entirely removed, thus permitting the concentrated liquid 12 to pass by the stopper and mix with the liquid 11; the positive mixing operation being procured entirely by the provision of the screw cap as it is impossible to remove this or the upper stopper without raising the lower stopper from its seat.

While the chamber 10 as here shown is formed in the neck proper, it is obvious that it might be formed in the main body portion. I therefore do not wish to limit myself to the specific arrangement shown and I also wish it understood that the materials and finish of the several parts employed may be such as experience and judgment of the manufacturer may dictate.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

5 1. A bottle having spaced seats to provide a chamber for liquid to be kept separate from the main contents of the bottle, a stopper in each seat, means connecting the stoppers, and operating means secured to said connecting means and rendering the upper stopper inaccessible for removal until the 10 lower stopper has been lifted from its seat.

15 2. A bottle having a neck with seats formed in the upper and lower ends to form an upper chamber for the reception of a liquid which should be kept separate from the main contents of the bottle until ready for use, a stopper for each seat, a cap inclosing the upper stopper, and means preventing removal of the cap without lifting 20 the lower stopper from its seat.

25 3. A bottle having a neck with seats formed in the upper and lower ends to form an upper chamber for the reception of a liquid which should be kept separate from the main contents of the bottle until ready for use, a stopper for each seat, a cap inclosing the upper stopper, a rod secured to the lower stopper passing through the upper stopper, said rod being secured to the cap 30 so that it, together with the lower stopper, will be lifted in a vertical direction when the screw cap is removed.

35 4. A bottle having a neck formed with spaced seats to provide a chamber between the seats, a stopper for each seat, a rod secured to the lower stopper extending through the upper stopper, a closure for the bottle

arranged exterior of the upper stopper and means to fixedly connect the rod to said closure whereby to cause removal of the 40 lower stopper from its seat before the upper stopper may be removed.

5 5. A bottle having a neck formed with spaced seats to provide a chamber between the seats, a stopper for each seat, a rod secured to the lower stopper extending 45 through the upper stopper, a cap forming a closure and covering for the upper stopper through which the rod also extends, and a connection between the cap and the rod 50 which permits the cap to be turned and the rod and stopper carried thereby to be lifted in a vertical direction when the cap is removed.

6 6. A bottle having a part formed with spaced seats to provide a chamber between the seats, a stopper for each seat, a rod fixedly connected to the lower stopper and having its upper end extending through and beyond the upper stopper, said upper end of 60 the rod being formed with an annular groove, and a cap engaged over the upper stopper and having a hole to receive said upper end of the rod, the wall forming said hole in the cap being bent to engage in the 65 groove of the rod so that when the cap is raised the rod will be raised therewith.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

THOMAS O. L. SMITH.

Witnesses:

R. C. CLARK,
MARTIN ARONSOHN.