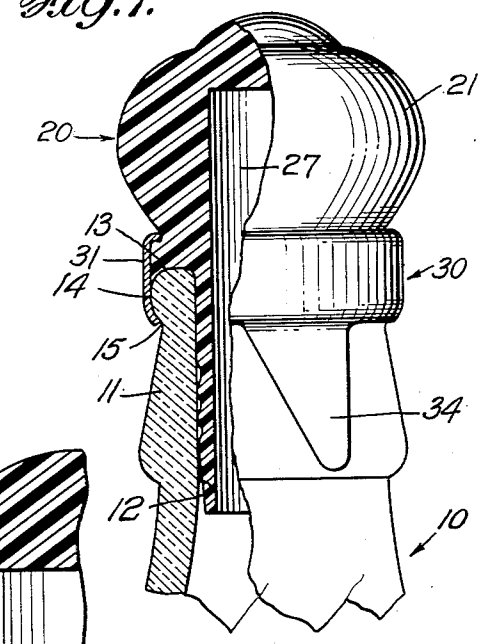
June 14, 1960 C. A. SCHULTZ 2,940,627

CHAMPAGNE BOTTLE CLOSURE

Filed Feb. 25, 1958

Fig. 1.



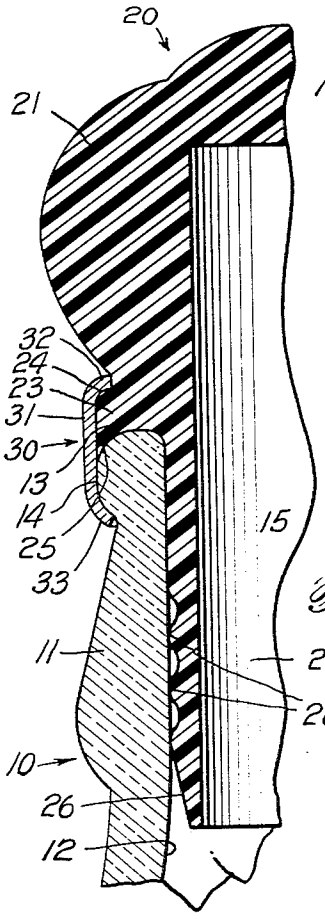


Fig. 3.

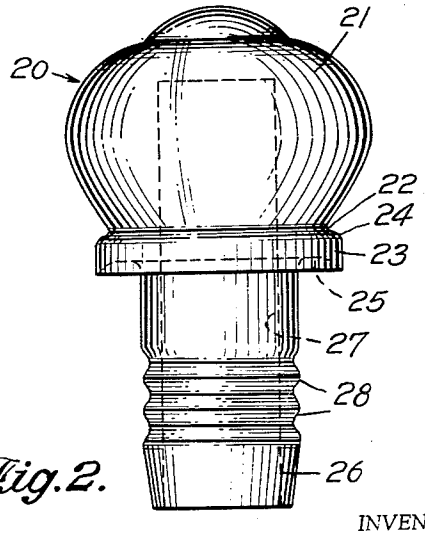


Fig. 2.

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CHAMPAGNE BOTTLE CLOSURE

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1 Claim. (Cl. 215—47)

The present invention relates to a champagne bottle closure and more particularly to a champagne bottle closure having a double sealing action and a readily attached and readily removed securing band.

In the marketing of champagne, it has been found that the presently used closures for the champagne bottle do not always effect a seal which is tight enough to hold the contents of the bottle that are under pressure. As a result, when the bottle is opened, there is a noticeable absence of the familiar and expected "pop" sound, together with the absence of the anticipated forceful ejection of the stopper from the bottle. This failure to effectively seal the champagne in the bottle in all cases has two adverse effects: first, there is a danger that the contents of the bottle will be either spoiled or unappetizing; and second, there will be disappointment by the purchaser of the bottle because of the lack of both the "popping" sound and the above-mentioned forceful ejection of the stopper from the bottle.

It has been found that although the contents of the bottle were quite satisfactory from the point of view of enjoyment of the beverage, nevertheless, the absence of the "pop" sound and the failure of the stopper to eject have led purchasers to believe that the champagne was inferior, and they have thus avoided purchasing the same brand of champagne again.

In the present day closing of bottles of champagne, there is in almost universal use a system involving a stopper made of a piece of cork that is held in the neck of the bottle by wire that is wrapped around the bottle neck and this forms a relatively expensive closure.

It is an object of the present invention to provide a bottle closure which will insure the sealing of both the gas and liquid contents in a bottle.

It is another object of the present invention to provide a bottle closure characterized by an extremely effective double sealing of the stopper to the bottle.

A further object of the present invention is the provision of a closure for a bottle wherein a stopper is securely held in the neck of a bottle by a securing band.

Still another object of the present invention is the provision of a bottle closure wherein a securing band is provided which is relatively easily removed, thus permitting the removal of the band and the opening of the bottle by one having no previous experience with that type of bottle closure.

Other objects and the nature and advantages of the instant invention will be apparent from the following description taken in conjunction with the accompanying drawings wherein:

Fig. 1 is an elevational view, with parts broken away, of a bottle and closure in accordance with the present invention;

Fig. 2 is an elevational view of a stopper in accordance with the present invention; and

Fig. 3 is a cross-sectional view similar to Fig. 1, but showing the parts in greater detail.

Referring now to the drawings, there is shown in Fig. 1 the upper part of a bottle **10** having a generally elongated neck **11** with a smooth inner bore **12**. At the end of the neck **11** there is a downwardly and outwardly extending annular lip **13**. A bead **14** is on the exterior of the neck **11** and has its upper portions at substantially the same level as the lip **13**. There is a recessed portion **15** immediately below the bead **14**.

A stopper **20**, shown in Fig. 2, made of polyethylene, has a crown **21** adapted to be readily grasped and a recess **22** therebelow. Below the recess **22** is an outwardly extending flange **23** having an upper surface **24** and a lower surface **25** which is of a shape corresponding to the lip **13** of the bottle **10**. Beneath the under surface **25** of the flange **23**, the stopper **20** has a neck **26** which preferably has a bore **27** therein and sealing grooves **28** on the exterior thereof.

In Fig. 3, there may be seen in greater detail the polyethylene stopper **20** in the bore **12** of the neck **11**. As may be readily seen, there is a seal established between the neck **26** of stopper **20** and the bore **12** of the neck **11**. There is a second seal established between the substantial surface contact of the underside **25** of the flange **23** of stopper **20** with the lip **13**. The stopper **20** is forced into the bottle neck **11** when the bottle has been filled and thus the forcing is with great effort in order to securely place the stopper into the bottle. In order to hold the stopper **20** in the bottle **10**, and taking into cognizance the great pressure within the bottle **10**, either at the time the stopper **20** is placed in the neck thereof or at some later time, there is provided a securing band **30** which is preferably made of aluminum. Band **30** is characterized by a body portion **31**, an upper inwardly turned flange **32** which enters into the recess **22** of the stopper **20**, and a lower inwardly turned flange **33** which enters into the recess **15** of the neck **11**. It will be noted that the flange **23** of the stopper **20** is substantially the same diameter as the bead **14**, whereby there is presented a substantially cylindrical joint surface between the bottle and the stopper, and it is upon this surface that the body portion **31** of the securing band **30** rests. As seen in Fig. 1, the band **30** has a downwardly extending tab **34** which may be readily grasped when it is desired to remove the stopper **20** from the bottle **10**.

It may be readily seen that when it is desired to close a bottle **10** which has been filled, the stopper **20** is forcefully pushed into the bore **12** of the neck **10**, and that there results the aforementioned double sealing action. Thereafter, the band **30** is applied and the flanges **32** and **33** thereof formed by crimping over the marginal portions of a normally flat band.

When it is desired to use the contents of the bottle **10**, it is only necessary to grasp the tab **34** and to pull it upwardly, thus tearing the band **30** completely across. It is thereafter a simple matter to remove the band **30** by spreading it from its encircling configuration, and then by pushing or pulling the crown **21** of the stopper **20**, the stopper **20** may be removed from the bottle **10**.

It may be readily seen from consideration of the above that there is provided a bottle closure which will effectively seal a bottle in which the contents are under pressure by providing a double seal for the bottle, and also that there is provided a simple, economical and secure band to hold the stopper in the bottle, this band being readily removable.

It will be obvious to those skilled in the art that various changes may be made without departing from the spirit of the invention and therefore the invention is not limited to what is shown in the drawings and described in the specification but only as indicated in the appended claim.

What is claimed is:

A closure for a bottle comprising a bottle, an annular

lip at the end of said bottle, and an annular bead on the exterior of said bottle immediately below said lip, a resilient stopper having in order a bulbous crown, an outwardly extending flange, and a hollow neck, said stopper neck being in said bottle and in tight sealing engagement therewith, the underside of said flange having a preformed annular groove substantially arcuate in cross section conforming to and pressing on said lip and having substantial surface sealing contact therewith over the entire area thereof, said flange being of substantially the same diameter as said bead, said bead and flange presenting a substantially continuous cylindrical surface extending from the top of said flange downwardly to the bottom of said bead, a peripheral recess in said stopper above the upper surface of said outstanding flange and beneath said bulbous crown, and a metallic securing band encircling

said stopper and bottle, said band having an upper inwardly turned flange engaged in said recess on the upper surface of the flange of the stopper, a lower inwardly turned flange engaging the recess of said neck, a body portion between said inwardly turned flanges, and a downwardly extending tab, whereby said band is continuously supported by said flange and bead throughout the height thereof.

References Cited in the file of this patent

UNITED STATES PATENTS

1,946,981	Lower	Feb. 13, 1934

FOREIGN PATENTS

390,471	Great Britain	Apr. 6, 1933
1,147,313	France	June 3, 1957