June 27, 1961 M. A. HARRIS 2,990,080

INVERTED BOTTLE SUPPORT

Filed Feb. 19, 1958

Fig. 1

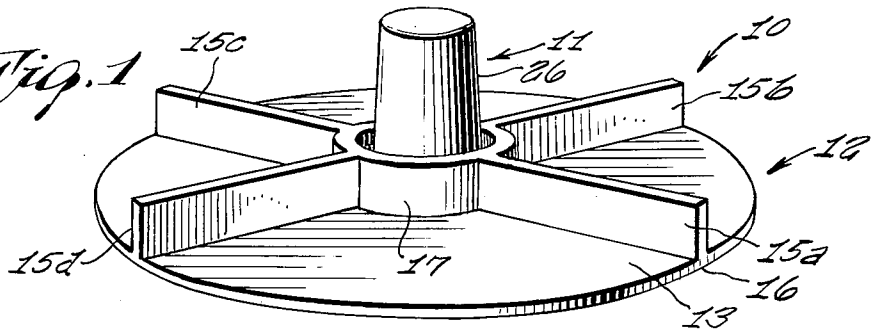


Fig. 2

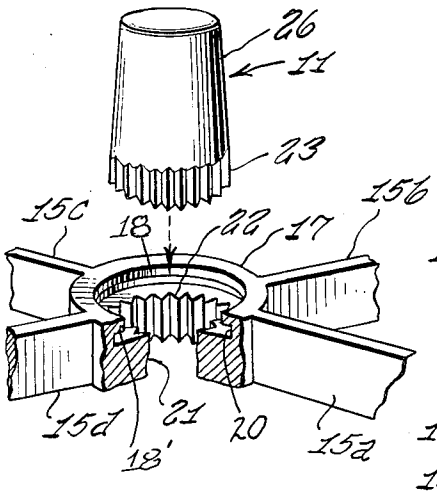


Fig. 3a

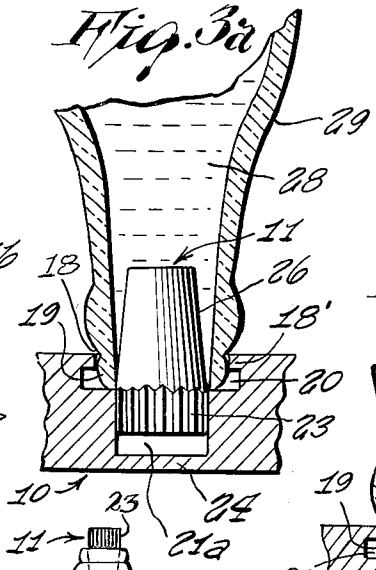


Fig. 3b

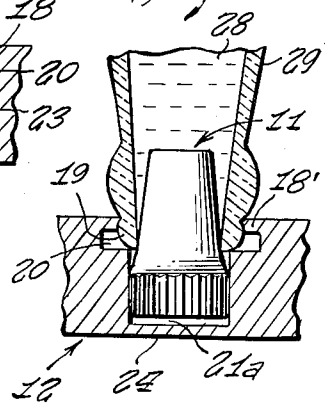
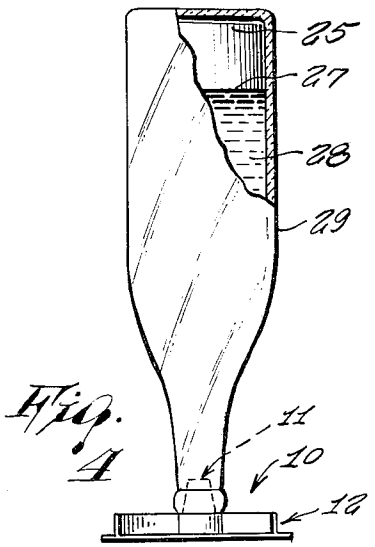


Fig. 4



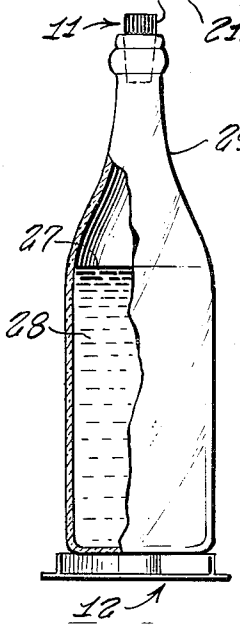


Fig. 5

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INVERTED BOTTLE SUPPORT

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This invention relates generally to caps or stoppers for bottles and other containers, but more specifically to stoppers and cooperable support bases.

It is well known how gaseous content or carbonation of beverages is lost after the bottle or container therefor is recapped after first use.

Thus far, it has been found difficult to make a complete air seal with the common crown cap after first removal. Carbonation or gaseous content escapes from the fluid into the surrounding air within the bottle, then develops pressure thereby forcing itself out of the container and beyond the fluid sealable cap. Eventually all the carbonation leaves the liquid and it becomes "flat."

It is therefore an object of the present invention to provide a special cap and operative mounting member therefor to replace the original crown cap after the container has once been opened and which will prevent the escape of the said carbonation or gaseous content as described.

A further object of this invention is to provide a container cap and operative mounting member or base therefor which permits upright support of the container containing fluid contents while in an inverted position for gaseous sealing of the container contents.

A further object of the invention resides in utilization of the base or support as a coaster and utilization of the cap for temporary and conventional closure of the container during periods of intermittent use.

A further object is to provide a sealing stopper applicable at the filling plant to bottles containing carbonated or effervescent liquids and capable of use for recapping to prevent evaporation of the charged gases with consequent flattening of taste.

Other objects include simplicity and efficiency of the device, ease of operation, durability and economy in production.

These objects and other ends of the invention will hereinafter appear in the progress of the disclosure and as pointed out in the appended claims.

Accompanying this specification is a drawing showing a preferred form of the device wherein:

FIGURE 1 is a perspective view of the device.

FIGURE 2 is a fragmentary perspective view partly in cross-section and showing the two component parts of the device in exploded or separated position.

FIGURE 3*a* is an enlarged fragmentary cross-sectional view showing the device supporting an inverted bottle in sealed position.

FIGURE 3*b* is a view similar to FIGURE 3*a* showing the device supporting a bottle having a narrower mouth.

FIGURE 4 is a side view partly in section of the device supporting an inverted bottle.

FIGURE 5 is a side view of the device in association with the bottle in upright position with the components separated and used in another manner.

Referring now to the drawing in detail, FIGURE 1 illustrates a combination bottle stopper and support base **10** composed of two separate components of a stopper **11** and a base **12**.

The base is comprised of a circular flat disc **13** having on the upper surface **14** thereof suitable spacers such as four beams **15***a*, **15***b*, **15***c* and **15***d* extending radially from the disc periphery **16** inwardly to a central cylindrical hub **17**. Hub **17** is provided with three communicating bores of different diameters, the uppermost one being indicated by numeral **18** to accommodate the penetration of bottle neck head **19**, an intermediate bore of larger diameter **20** to support on the base thereof the head **19** and to give the side wall or effective flange **18'** of bore **18** resiliency, and a bore **21** penetrating the bottom of hub **17** of smaller diameter than bore **18**. Bore or opening **21**, along the inner wall is toothed with vertical serrations **22** therearound, said serrations being mated to mesh with corresponding toothed vertical serrations **23** on a tapered stopper **11** thereby permitting engagement of the two component parts.

In an alternate form of this invention as shown in FIGURES 3*a* and 3*b*, the bore or opening **21***a* does not penetrate through the hub, and creates a cylindrical chamber **21***a*, having a bottom wall **24**.

It is to be noted that in either embodiment involving bore **21** or chamber **21***a* sufficient extra depth is provided to permit vertical adjustment of the stopper best shown in FIGURE 3*b* and to accommodate various sizes of bottle neck openings so that flange **18'** efficiently grips bottle neck head **19**.

In FIGURE 4, the inverted bottle **29** is shown supported as an assembled unit. The fluid-tight stopper **11** below and the air-tight and sealed air chamber **25** at the bottle base above prevent gas escape or decarbonation from the upper surface **27** of beverage **28**. This is the normal position of the assembly when bottle **29** is stored for future use.

In FIGURE 5, use of the assembly is shown when the bottle is ready for immediate service, as upon a dining table, bar, etc.

The stopper component **11** may be separated from the base and used as a conventional stopper. Here, the serrations **23** serve excellently as a knurled surface to permit an easy grip on the stopper or cork for twisting for removal from the bottle. The base member further serves as a coaster for the usual reasons.

The device comprising the stopper **11** and base **12** may be made of flexible plastic, rubber, or other desirable materials, and may be efficiently molded as single pieces.

I wish it understood that minor changes and variations in the material, integration, size, shape and location of parts may all be resorted to without departing from the spirit of the invention and the scope of the appended claims.

I claim:

1. A combination container cap and a mounting for both the cap and the container and operative when said container is in inverted position, comprising a stopper cap body, said body being operative as a cork for the container with a projecting upper portion, the upper portion along the peripheral side wall of said body having vertically extending grooves, and a mounting member operative for the container neck and the container cap when the container is in inverted position and comprising a supporting body having central concentric bores, the innermost bore having vertically extending grooves on the inner peripheral wall to engage the grooves of the upper portion of the said cap and the shoulder of the adjacent bore serving to support the lip of the container neck.

2. The structure of claim 1 wherein the lower portion of the said cap body tapers downwardly and inwardly.

3. The structure of claim 1 wherein said supporting

body has three concentric bores, the innermost bore having vertically extending grooves on the inner peripheral wall to engage the grooves of the upper portion of the said cap, an intermediate bore having a shoulder to support the lip of the container neck, and an outermost and reduced bore to form a peripheral resilient flange to engage the side wall of the container neck.

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