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CLOSURE FOR BOTTLES AND CONTAINERS
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Fig. 1

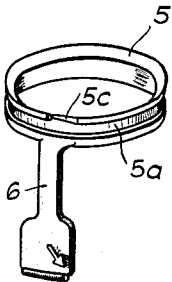


Fig. 3

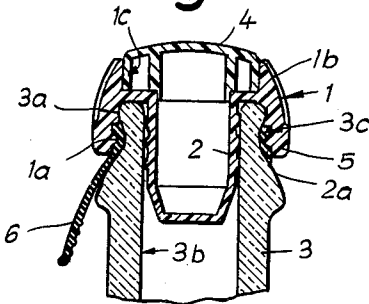


Fig. 2

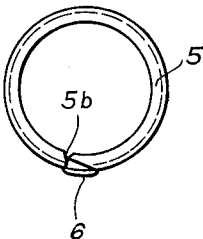
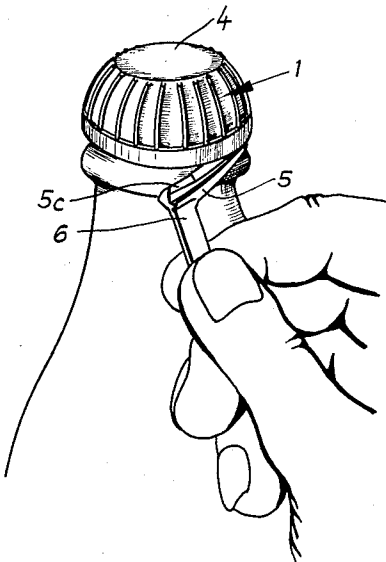


Fig. 4



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CLOSURE FOR BOTTLES AND CONTAINERS

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8 Claims. (Cl. 215-48)

The present invention relates to a closure of elastic material for bottles and containers. Although not limited to, the invention is particularly intended for effervescent drinks such as champagne, in which heretofore, the closures were secured to the bottle-neck by means of a wire, a sheet metal yoke, a sheet metal cap, or the like.

It is an object of the invention to provide an improved and simplified closure for bottles and containers.

It is another object of this invention to provide a closure as set forth in the preceding paragraph which can easily be removed without the necessity of employing outside tools.

These and other objects and advantages of the invention will appear more clearly from the following specification in connection with the accompanying drawings, in which:

FIGURE 1 is a perspective view of a connecting ring according to the present invention.

FIGURE 2 is a top view of the connecting ring of FIGURE 1.

FIGURE 3 is a section through a bottle closure mounted on a bottle-neck.

FIGURE 4 is a perspective view illustrating the opening phase of a closure according to the invention.

A closure according to the present invention, which will not require the employment of a wire, is characterized primarily in that at the lower edge portion on the inside of the closure cap there is arranged a connecting or locking ring adapted to rest below the bead of the bottle or container. This locking ring is in the form of a closed ring placed into the closure cap prior to closing the bottle or container so that said ring will be able to be clamped below the bead of the bottle.

According to a particularly favorable design of the arrangement according to the invention, the locking ring may have a groove on its outside which will be engaged by a collar on the inside of the cap.

The locking ring is provided with an extension or ear adapted to be grasped by a hand when it is intended to open the bottle or container. The inner diameter of this locking ring is slightly less than the outer collar around the bottle or container neck. In this way, it will be possible to tear the ring when the closure with the locking ring inserted therein is compressed upon the bottle-neck. In order to facilitate this tearing, a tear notch is arranged on the inside of the locking ring. In order further to facilitate the pulling out of the ring, above the extension or ear on the outside of said locking ring there is provided a notch by means of which the ring can be more easily withdrawn from the collar of the cap.

The bottle closure according to the present invention which may, of course, also be used for vessels other than bottles proper comprises a cap 1 which may advantageously consist of an elastic synthetic material, as for instance high pressure polyethylene. Cap 1 has a central or neck portion 2 which extends into the bottle neck 3. This neck portion has preferably a corrugated surface 2a for tightly engaging the inner wall 3b of the bottle neck. Cap 1 is provided with an outer skirt or flange portion 1b which extends around the bead 3a of the bottle neck and downwardly beyond the same and is provided with a ridge 1a for a purpose which will be explained further below. The upper end of cap 1 has a circular

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recess 1c for receiving a head member or cap 4. Cap 4 may be made of Polyacetylen and Polystyrol.

In order to obviate holding cap 1 on the bottle by means of a wire or sheet metal yokes or clamps, according to the present invention a safety ring 5 which may likewise consist of elastic material, as for instance low pressure polyethylene, is placed around the annular depression 3c below the bead 3a. As will be evident from FIGS. 1 to 3, safety ring 5 is provided with a groove 5a which is engaged by the ridge 1a of cap 1. In this way, ring 5 will be properly held in its position. Ring 5 has connected thereto an arm or tongue 6 for purposes of removing ring 5 from a closed bottle. The inner diameter of ring 5 is slightly less than the outer diameter of bead 3a of bottle neck 3. As soon as cap 1 with ring 5 inserted thereto and engaged by ridge 1a is pressed over bead 1a, ring 5 will tear or split open. To facilitate this tearing, ring 5 is provided with a tearing notch 5b on the inside thereof as shown in FIG. 2. It will thus be appreciated that cap 1 with its outer skirt 1b and ridge 1a firmly surrounds ring 5 which latter engages the annular depression 3c so that both members 1 and 5 are safely connected to the bottle neck while the latter is closed by cap 1. Thereupon, cap 4 is inserted which tightly fits into the annular space 1c and prevents an accidental inward bending of the upper end of flange 1b thereby aiding in properly holding cap 1 on the bottle neck.

If it is now desired to open the bottle or container, handle or tongue 6 is grasped as shown in FIG. 4 and a pull is exerted thereupon so that ring 5 will be pulled out from underneath skirt 1b. This is possible without difficulties since, as mentioned above, ring 5 split open when it was placed with cap 1 over the bottle neck. It will then be possible to press the lower end of skirt 1b inwardly and the upper end of skirt 1b outwardly so as to permit removal of cap 4. Cap 1 can then be easily removed from the bottle neck.

In order to facilitate the withdrawal of ring 5 when trying to remove the closure, the outside of ring 5 is provided with a notch 5c (FIGS. 1 and 4).

It is, of course, to be understood that the present invention is, by no means, limited to the particular construction shown in the drawing, but also comprises any modifications within the scope of the appended claims.

What I claim is:

1. In combination with a vessel having a neck with a bead and an annular depression below said bead: a split ring engaging the neck immediately below said bead and extending around said neck, and a closure cap of resilient material closing said vessel and having a top part extending across the top of the neck and also having a skirt part extending downwardly around said bead and said ring, the outer surface of said ring and the inner surface of the skirt part of said cap having interengaging means releasably interlocking the cap and ring.

2. An arrangement according to claim 1, in which the upper end of the cap is provided with a circular recess and which includes an additional cap inserted in and closely fitting said recess.

3. A closure for bottles, vessels and containers having a neck with a bead and an annular depression below said bead: a ring dimensioned to fit into said annular depression, and an elastic closure cap having a top part for extending over the top of the neck and also having a skirt adapted to be placed around said bead and extending over and around said ring, said ring and said skirt on their interengaging surfaces being provided with interengaging projection and recess means for releasably interlocking the cap and ring.

4. A closure for bottles, vessels and containers having a neck with a bead and an annular depression below said bead: a ring dimensioned to fit into said annular depres-

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sion, and an elastic closure cap having a top part to fit over the neck and having a skirt for placing around said bead and around said ring, said ring having an annular groove on the outside thereof, said skirt being provided at the lower inside portion thereof with an annular ridge for engagement with said groove, said ring being adapted for being split at a predetermined point and being thus disengageable from the skirt by pulling outwardly on one end of the ring adjacent said point.

5. A closure according to claim 3, in which said ring is provided with pulling tab adapted to be grasped by hand and located adjacent said predetermined point.

6. A closure for bottles, vessels and containers having a neck with a bead and an annular depression below said bead: a ring dimensioned to fit into said annular depression, and an elastic closure cap having a top part for extending over said neck and having a skirt adapted to be placed around said bead and extending over and around said ring, said ring and said skirt being provided with interengaging means releasably interlocking the cap and ring, said ring additionally being provided with an outwardly extending tongue connected to ring and adapted to be grasped by hand, said ring furthermore being provided with a tearing notch adjacent the connection of said ring with said tongue for splitting of the ring.

7. A closure according to claim 6, in which said inter-

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engaging means comprises a rib on the inside of the skirt and a groove on the outside of the ring wherein the outside of said ring above the connection of said tongue with said ring and above said grooves is provided with an additional notch.

8. A closure for bottles, vessels and containers having a neck with a bead and an annular depression below said bead; a ring dimensioned to fit into said annular depression, and a elastic closure cap having a top part to fit over the neck and having a skirt for placing around said bead and around said ring, said ring having an annular groove on the outside thereof, said skirt being provided at the lower inside portion thereof with an annular ridge for engagement with said groove, said ring having a zone of reduced cross section therein forming a tear line whereby the said ring will split when the closure is placed on a container neck and is pressured downwardly over the bead of the neck into sealing position on the container.

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