March 4, 1969 A. MICROULIS 3,430,826

BOTTLE TOP WITH RESILIENT ATTACHING SLEEVE

Filed Oct. 25, 1967

FIG. 1.

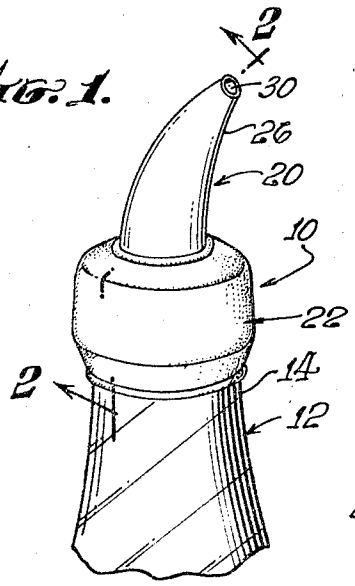


FIG. 4.

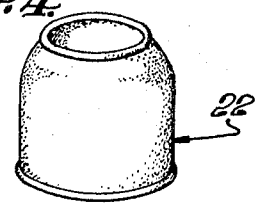


FIG. 5.

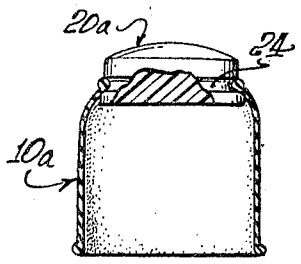


FIG. 6.

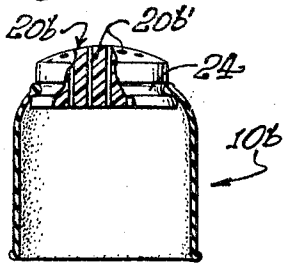


FIG. 2.

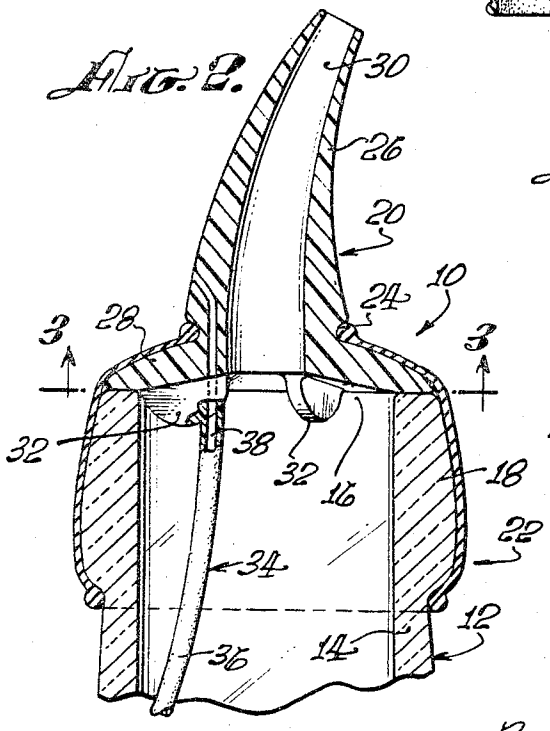
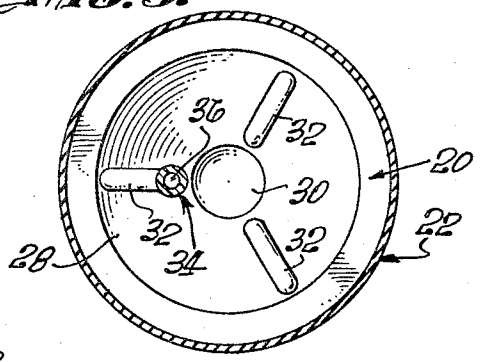


FIG. 3.



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BOTTLE TOP WITH RESILIENT ATTACHING SLEEVE

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U.S. Cl. 222—570 7 Claims
Int. Cl. B65d 5/72, 25/40, 35/38

ABSTRACT OF THE DISCLOSURE

An attachment for a bottle having a neck with an open mouth surrounded by an external lip on the neck, the attachment having a cap member which may be a pouring spout, closure, or shaker, and a resilient skirt on the member adapted to be snapped or rolled over the bottle neck to be secure and seal the cap member to the neck.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates generally to bottles and more particularly to an attachment adapted for application over the neck of a bottle to provide a fluid sealing or dispensing action.

Prior art

Bottle attachments of the general class to which this invention pertains are well known in the art. These attachments are applied to the neck of a bottle and are constructed and arranged to provide a fluid sealing and/or a fluid dispensing action. Bottle attachments of this type, for example, are disclosed in prior art Patents Nos. 1,447,117, 2,160,602, 2,546,194, 2,642,207, and 2,828,-054. While these existing bottle attachments are satisfactory to a degree, they are characterized by certain inherent deficiencies which this invention seeks to avoid. Among the foremost of these deficiencies are complex construction, high cost, difficulty of application and removal, and undesirability from the sanitary standpoint.

SUMMARY OF THE INVENTION

The present invention provides a bottle attachment having a cap member proper adaped to be positioned across the mouth of a bottle in seating contact with the neck of the bottle lip, and a skirt secured to and extending from the cap member. This skirt is resilient and is constructed and arranged in such a way that the skirt may be snapped or rolled over the botle neck. When the attachment is properly applied to a bottle, the skirt serves the dual function of both mechanically attaching and sealing the cap member to the bottle neck.

According to the present invention, the cap member may be designed to serve any one of several different functions. In one disclosed embodiment of the invention, for example, the cap member is a pouring spout. In a second disclosed embodiment, the cap member is a closure. In a third disclosed embodiment, the cap member is a perforated shaker cap.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a perspective view of a pouring attachment according to the invention illustrating the attachment applied to the neck of a bottle;

FIGURE 2 is an enlarged section taken on line 2—2 in FIGURE 1;

FIGURE 3 is a section taken on line 3—3 in FIGURE 2;

FIGURE 4 is a perspective view of the attachment skirt per se;

FIGURE 5 is a vertical section through a closure attachment according to the invention; and

FIGURE 6 is a vertical section through a shaker attachment according to the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In general terms, the invention provides an attachment, represented in FIGURES 1 through 3 by the pouring attachment **10**, for a bottle **12** having a neck **14** with an open mouth **16** surrounded by an external lip **18** on the neck. The attachment **10** includes a cap member **20** and a skirt **22**. The cap member **20** has normally upper and lower ends and is formed intermediate these ends with an external circumferential groove **24**. The skirt **22** has upper and lower beaded ends and is fabricated of a suitable resilient material such as neoprene or other suitable plastic material. The upper beaded end of the skirt **22** surrounds the lower end of the cap member **20** and engages in the groove **24** in the member in such a way that the skirt is both mechanically secured and sealed to the cap member. The lower end of the skirt **22** extends beyond the lower end of the cap member.

According to the preferred practice of the invention, the attachment skirt **22** is constructed of a resilient material, such as neoprene, and is sized to permit application of the attachment **10** to the bottle **12** by forcing the skirt downwardly over the bottle lip **18** to the position of FIGURE 2, wherein the lower beaded end of the skirt snaps under the lip, as shown. According to an alternative practice of the invention, however, the skirt may be provided with a relatively thin wall, such that the skirt may be initially rolled upwardly toward the cap member **20** into the form of an annulus. In this instance, the attachment **10** is applied to the bottle **12** by placing the attachment over the bottle and then unrolling the attachment skirt **22** downwardly over the bottle neck **14** and lip **18** to the position of FIGURE 2.

As noted earlier, the bottle attachment of the invention may be designed to serve any one of several different functions. In FIGURES 1 through 3, for example, the cap member **20** of the illustrated bottle attachment **10** is a pouring spout. This spout has an upper curved neck **26** and a lower bottle seating flange **28**. The skirt receiving groove **24** of the attachment is located at the juncture of the neck and flange. Extending centrally through the pouring spout neck **26**, and opening through the underside of the spout flange **28**, is a passage **30**. Integrally formed on and depending from the underside of the flange **28** are a number of centering lugs **32**. These lugs are circumferentially spaced about the axis of the spout and are radially dimensioned to engage the inner edge of the bottle neck **14**, about the mouth **16**, in such a way as to center the pouring spout **20** relative to the bottle neck.

The outer diameter of the spout flange **28** approximates the upper external diameter of the bottle neck **14**. Accordingly, when the pouring spot **20** is applied to the bottle **12**, the undersurface of the flange seats against the upper end of the bottle neck **14**, about the mouth **16**. The outer end of the flange is then substantially flush with the outer surface of the bottle lip **18**. The attachment skirt **22** extends outwardly over and then axially beyond the spout flange **28**.

The illustrated pouring spout **20** is equipped with a vent **34** to assure smooth pouring of liquid from the bottle **12**. This vent comprises a vent tube **36** which is secured to the underside of the pouring spout **20** and extends downwardly toward the bottom of the bottle. In this instance, the upper end of the vent tube **36** is joined to one of the pouring spout centering lugs **32**. Extending

through the vent tube is a vent passage **38**. One end of this passage opens through the lower end of the vent tube **36**. The opposite end of the passage extends upwardly through the body of the pouring spout **20** and opens through a side of the spout, as shown, to communicate with atmosphere. When the bottle **12** is inverted to pour liquid from the bottle through the spout passage **30**, air flow occurs into the upper end of the bottle above the liquid through the vent tube **36**, thus to prevent the formation of a vacuum within the bottle.

FIGURES 5 and 6 illustrate two modified versions of the present bottle attachment. The modified bottle attachment **10***a* illustrated in FIGURE 5 is a closure attachment. In this instance, the cap member **20***a* of the attachment is a closure plug which is designed to seal the mouth **16** of the bottle **12** against leakage when the attachment is applied to the bottle neck **14**. The bottle attachment **10***b* illustrated in FIGURE 6 is a shaker attachment. The cap member **20***b* of this attachment is similar to the closure plug **20***a* illustrated in FIGURE 5 except that the plug **20***b* is formed with a multiplicity of shaker passages **20***b'*. It will be understood, of course, that the closure attachment of FIGURE 5 and shaker attachment of FIGURE 6 are applied to a bottle in the same manner as described earlier in connection with the pouring attachment **10** of FIGURES 1 through 3.

While the invention has been disclosed in connection with certain physical embodiments thereof, it will be recognized by those versed in the art that various modifications of the invention are possible within the spirit and scope of the following claims.

What is claimed as new in support of Letters Patent is:

1. An attachment for a bottle having a neck with an open mouth surrounded by an external lip on the neck, said attachment comprising:

a cap member to be positioned across said mouth in seating contact with the bottle neck about said mouth,

said cap member having normally upper and lower ends and an external circumferential groove between said ends,

a resilient generally sleeve-like skirt for attaching said cap member to said bottle, and

said skirt having a beaded upper end surrounding the lower end of said cap member and engaging in said groove to secure and seal said skirt to said cap member and a beaded normally lower end extending beyond the lower end of said cap member for application over said bottle neck and lip.

2. A bottle attachment according to claim **1** wherein:

the wall thickness and diameter of said skirt are sized to permit said skirt to be snapped over said bottle neck to a position wherein the lower beaded end of said skirt engages under said bottle lip.

3. A bottle attachment according to claim **1** wherein:

said skirt has a relatively thin wall, such that said lower skirt end may be initially rolled up into the form of an annulus and then unrolled over said bottle neck.

4. A bottle attachment according to claim **1** wherein:

said cap member is a closure for sealing said bottle mouth.

5. A bottle attachment according to claim **1** wherein:

said cap member is a perforated shaker cap.

6. A bottle attachment according to claim **1** wherein:

said cap member is a pouring spout having a dispensing passage opening through the ends of said spout, and a vent tube secured to the lower end of said spout for extension through said bottle to the lower end thereof.

7. A bottle attachment according to claim **6** wherein:

said spout has a lower flange below said groove for seating against said bottle neck about said mouth, and

centering lugs depending from the underside of said flange for engaging the inner edge of said neck about said mouth to center said spout relative to said mouth.

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U.S. Cl. X.R.

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