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POURING STOPPER FOR BOTTLES

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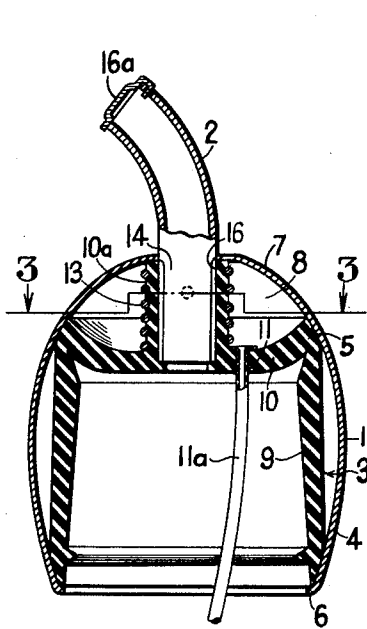


Fig. 1

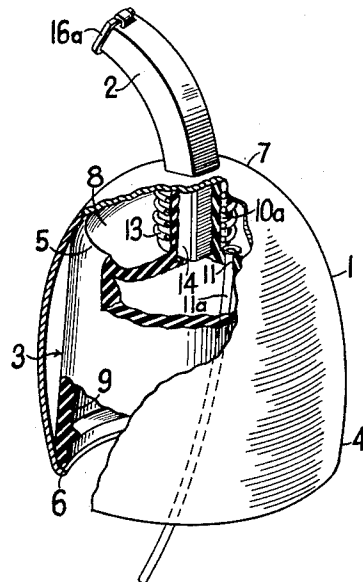


Fig. 2

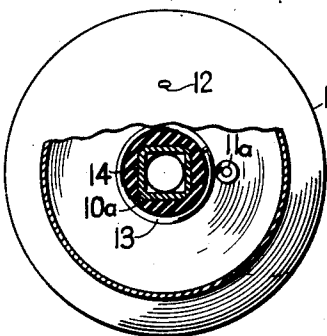


Fig. 3

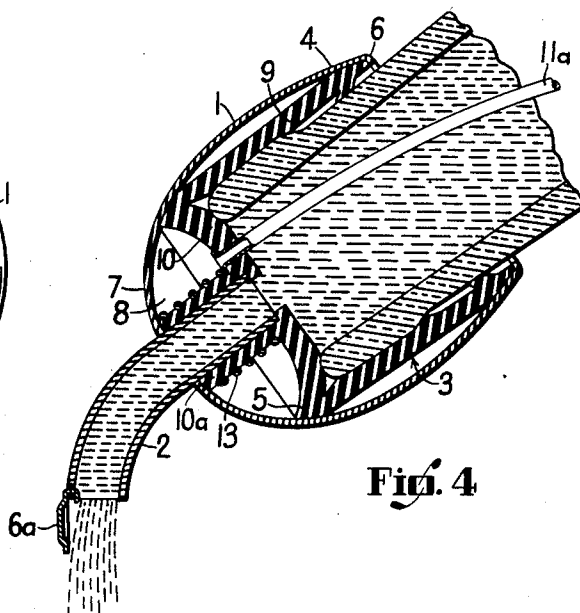


Fig. 4

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POURING STOPPER FOR BOTTLES

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3 Claims. (Cl. 215-79)

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My invention relates to a pouring stopper for bottles. It has to do, more particularly, with a stopper adapted to be applied to the neck of a liquid-containing bottle, the stopper being provided with a pouring spout to facilitate pouring of the liquid from the bottle.

One of the objects of my invention is to provide a bottle stopper and pouring spout which is of such a structure that the liquid can be poured from the bottle with ease and in a smoothly flowing uniform stream.

Another object of my invention is to provide a pouring stopper for a bottle which can be applied to the neck of the bottle with ease and be removed therefrom when necessary with little difficulty but which is ordinarily effectively maintained in position without danger of accidental displacement from the neck.

Another object of my invention is to provide a stopper of the type indicated which can be applied to necks of bottles varying somewhat in diameter or contour.

Another object of my invention is to provide a stopper of the type indicated composed of a minimum number of parts, the separate parts being so designed that they can be manufactured in large quantities at low cost, the parts being of such a nature that they may be assembled easily and retained in assembled condition.

Another object of my invention is to provide a stopper of the type indicated which is of a sanitary nature and can be cleansed with ease.

The preferred embodiment of my invention is illustrated in the accompanying drawing wherein similar characters of reference designate corresponding parts and wherein:

Figure 1 is a vertical sectional view taken through a pouring spout made according to my invention.

Figure 2 is a perspective view partly broken away.

Figure 3 is a horizontal section taken on line 3-3 of Figure 1.

Figure 4 is a vertical sectional view taken through the pouring spout and the neck of the bottle to which it is applied, showing liquid being poured from the bottle.

With reference to the drawing, I have illustrated my pouring spout as comprising a shell 1 formed of metal, a spout 2 also formed of metal, and a liner or bottle neck gripping collar 3 which is preferably made of rubber. The members 1 and 2 are preferably made of thin metal which will not corrode, such as stainless steel, aluminum, et cetera. However, it is also possible to make

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these members of plastic or other non-corrosive materials. The material of the member 3 is preferably compressible rubber although it may be any other suitable sanitary compressible or elastic material.

The shell 1 is of inverted dome-like form. The lower portion curves inwardly forming a depending annular skirt 4 which receives and closely surrounds the compressible rubber member 3. A shoulder 5 on the upper end of the member 3 limits the inward movement of the member 3 into the member 1 and an inturned lip 6 on the lower edge of the skirt 4 prevents the withdrawal of the member 3. The upper portion 7 of the member 1 is of reduced diameter due to the inward curving thereof and thus provides an air chamber 8 in the upper end of the member 1 above the top of the member 3.

It will be noted that the member 3 is of inverted frusto-conical form so that it snugly fits within the skirt 4. The side wall 9 of the member 3 is adapted to receive and grip the neck of the bottle as shown in Figure 4. The lip of the neck of the bottle will engage and seat on the lower surface of the top wall 10 of the member 3. This top wall 10 is provided with an opening 11 through which is drawn and securely held in position a small vent tube 11a. The purpose of the vent tube 11a is to provide an inlet for the air into the bottle, the air passing from the chamber 8. Air enters the chamber 8 through an inlet 12 provided in the metal wall portion 7 of the member 1.

The pouring spout 2 fits within an opening in the top of the wall 7 of the member 1 and is held in place by a helical retaining spring 13 which surrounds the upstanding portion 10a of the upper wall 10. This prevents movement of the pouring spout axially through the opening. The pouring spout has a lower end portion 14 which extends into the shell 1 and fits snugly in an upstanding socket portion 16 formed integrally on the top wall 10a of the member 3. The outer end of the pouring spout is provided with a hinged flap valve 16a which will open automatically when the stopper is tilted with the bottle.

The members 1, 2 and 3 can be made separately and then be assembled with ease. In assembling these members, the spout 2 is first mounted on the member 1, then the member 3 is inserted in the member 1, the lower part 14 of the spout being guided into the socket 16 of member 3 and held in place by the retaining spring 13.

In using this device, it is positioned on the neck of the bottle as shown in Figure 3. The material

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of the member 3 will be compressed sufficiently to compensate for any irregularities in the bottle neck and will frictionally engage the neck to prevent accidental displacement therefrom. Air will be permitted to enter to bottle and take the place of the displaced liquid, through the inlet 12 and the vent tube 11a. It will be noted that the opening 12 is disposed above the top of the upper wall 10 of the member 3 and is spaced laterally opposite opening 11 which is adjacent the socket 16.

It will be apparent from the above description that I have provided a pouring spout for bottles having a number of advantages. Some of these advantages have been mentioned and others will be apparent.

Having thus described my invention, what I claim is:

1. A pouring spout adapted to be applied to the neck of a bottle comprising an inverted cup-like shell, an inverted cup-like liner member disposed within the shell, a socket formed by the lower end of the liner member, a pouring spout carried by the shell, said spout having a portion extending within the shell and fitting within the socket portion formed by the liner member.

2. A pouring spout adapted to be applied to the neck of a bottle comprising an inverted cup-like shell, an inverted cup-like liner member disposed within the shell and forming a socket for receiving the bottle neck, said liner member being formed of compressible material and having a top

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portion, a skirt portion, and an upstanding socket portion formed on said top portion, the top of the liner member being spaced from the upper inner part of the shell to provide an air chamber therebetween, an air inlet in the shell leading into said chamber, an air inlet in the liner member leading from said chamber to the socket in the liner member, a pouring spout carried by the upper inner part of the shell and having a portion extending downwardly into the shell, said portion fitting into an upstanding socket portion carried by the top portion of said liner member and communicating with the interior thereof.

3. A pouring spout according to claim 2 wherein the inlet opening in the shell is spaced above the top of the liner member and is spaced laterally from said spout.

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