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CAPPED VESSEL WITH ADAPTER

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FIG. 1

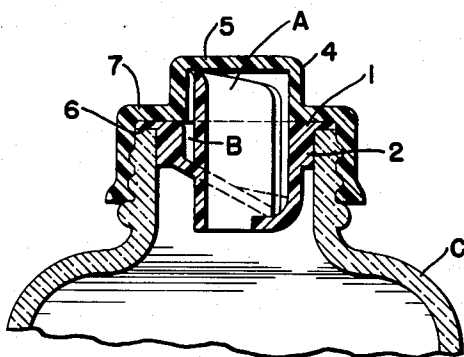
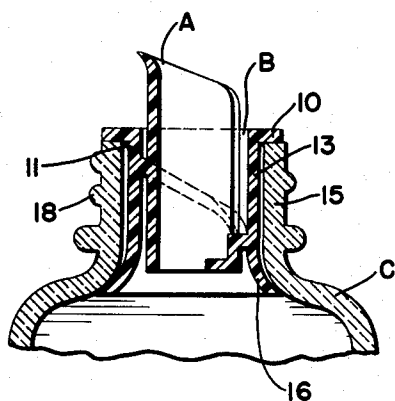


FIG. 2

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2,690,281

CAPPED VESSEL WITH ADAPTER

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Application May 27, 1952, Serial No. 290,227,
which is a division of application Serial No.
130,432, December 1, 1949, now Patent No.
2,601,039, dated June 17, 1952. Divided and
this application April 2, 1954, Serial No. 420,611

3 Claims. (Cl. 222-542)

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This invention relates to a pouring adapter or attachment of resilient plastic, for a glass bottle, metal can or other vessels for liquids. The adapter is held in the neck of the vessel by friction or otherwise. It is provided with a flange which fits over the end of the neck of the vessel and serves as a sealing gasket. A cap fits over the adapter and is fastened to the outside of the vessel by being threaded on the neck or by other means. For instance, it may be snapped in place. The cap is provided with a surface which presses the flange of the adapter against the end of the neck of the vessel (either the outside rim or the inside rim or intermediate the two or elsewhere) so that it serves as a sealing gasket, one surface of the flange being brought into liquid-tight contact with the cap and the other surface of the flange being brought into liquid-tight contact with the end of the neck of the vessel. The cap may or may not include a liner. As a rule, additional gasketing means between the flange and the end of the vessel is superfluous. Thus the vessel is sealed so that there is no leakage of liquid either above or below the flange.

The invention will be more particularly described with reference to a run-back type of adapter, but any other pouring adapter may be employed which is designed so that all liquid which enters the opening in the adapter and is not poured from the adapter is returned to the vessel when the vessel is brought to the upright position. For instance, the adapter may be so designed that liquid poured through it is discharged by pouring it over the flange. In this case the vessel will generally be sealed with the conventional non-dome-type closure cap. The function of the run-back type of adapter is explained in detail in my Patent No. 2,601,039; the present application being a division of my application Serial No. 290,227 which is a division of that patent. The adapter is held to the neck of the vessel, even though the cap be removed and the vessel be inverted. There is an opening through the adapter through which the liquid contents of the vessel may be poured.

Figure 1 is a section through a capped bottle using one type of pouring adapter, and

Figure 2 is a section through a different type of pouring adapter in a bottle.

The pouring adapter of both figures of the drawing includes a pouring spout A surrounded by a channel B which slopes from the portion under the pouring spout to the rear of the adapter. The adapter is fitted in the neck of a glass bottle C. The rear of the spout is open as shown

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in the drawings and liquid which collects in the channel is returned to the bottle through this opening. Any liquid dripping or draining from the spout A collects in the channel and thus is returned to the bottle. It is for this reason that such adapters are called run-back adapters.

In Fig. 1, the adapter 1 is frictionally fitted into the neck of bottle C by the annular flange 2. This flange is an integral part of the adapter. Any flange formed integrally with the outside of the adapter, which flange engages with the inside surface of the bottle's neck may be employed. A closure cap 4 having an offset portion 5 is used to close the bottle. The cap is screwed to the neck of the bottle and when it is removed the adapter will be retained in the bottle by the flange 2 or its equivalent.

The flange 6 is formed integrally with the adapter, being an extension of the outer wall of the channel B. It projects over the end of the neck of the bottle. The horizontally projecting portion 7 of the cap presses the flange tightly to the bottle when the cap is screwed tight on to the bottle.

The adapter of Fig. 2 is provided with a flange 10 extending outwardly from the upper edge of wall 11 which bounds the channel B. A flexible skirt 13 extends downwardly from the bottom edge of wall 11 and its bottom portion flares outwardly. The skirt is fitted into the neck 15 of the bottle by collapsing the sides of the flexible skirt and pressing the outwardly flaring bottom 16 through the neck of the bottle. When the spout is in the bottle, flange 10 rests on the rim of the neck and the flaring bottom embraces the base of the neck inside the bottle so that the spout is held tightly in place. A dome-shaped cap as shown in Fig. 1 may be threaded onto the threads 18 with the flange 10 serving as a sealing gasket.

The bottom of the flexible skirt 13 may be tapered inwardly to form a lead section to facilitate introduction of the adapter into the vessel.

The adapter may be molded from any resilient plastic, e. g. polyethylene. Such a spout works equally well with milk, water, wine, whiskey, oils, and sirups, etc.

What I claim is:

1. In combination with a vessel having a neck and an opening at the end thereof, liquid in the vessel, a cap which encloses the opening and is fastened externally to the vessel, and under the cap a pouring adapter of resilient plastic having an opening therethrough which adapter is en-

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gaged with the neck, the adapter having a flange integral therewith which extends radially outwardly between the cap and the end of the neck and is squeezed therebetween so that the flange is in sealing contact with both the cap and the end of the neck so that no liquid escapes from the capped vessel when it is upset, the surface of the adapter from the cap to the opening through the adapter draining to said opening, whereby when the cap is fastened to the vessel and the vessel is upset liquid which flows from the vessel through the opening in the adapter is returned to the vessel when the vessel is brought to the upright position.

2. In combination with a vessel having a neck and an opening at the end thereof, liquid in the vessel, threads on the outside of the neck, a rigid cap which encloses the opening and is threaded on said threads on the outside of the neck, and under the cap a pouring adapter of resilient plastic having an opening therethrough which adapter is frictionally engaged in the neck, the adapter having a flange integral therewith which extends radially outwardly between the cap and the end of the neck and is squeezed therebetween so that the flange is in sealing contact with both the cap and the end of the neck, so that no liquid escapes from the capped vessel when it is upset, the surface of the adapter from the cap to the opening through the adapter draining to said opening, whereby when the cap is fastened to the vessel and the vessel is upset liquid which flows from the vessel through the opening in the adapter is returned to the vessel when the vessel is brought to the upright position.

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3. In combination with a vessel having a neck and an opening at the end thereof, liquid in the vessel, a cap which encloses the opening and is fastened externally to the vessel, and under the cap a pouring adapter of polyethylene having an opening therethrough which adapter is engaged in the neck, the adapter having a flange integral therewith which extends radially outwardly between the cap and the end of the neck and is squeezed therebetween so that the flange is in sealing contact with both the cap and the end of the neck, so that no liquid escapes from the capped vessel when it is upset, the surface of the adapter from the cap to the opening through the adapter draining to said opening, whereby when the cap is fastened to the vessel and the vessel is upset liquid which flows from the vessel through the opening in the adapter is returned to the vessel when the vessel is brought to the upright position.

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