

Aug. 28, 1956

R. L. DIETHER

2,760,683

Pouring Spout

Filed May 16, 1955

FIG 1

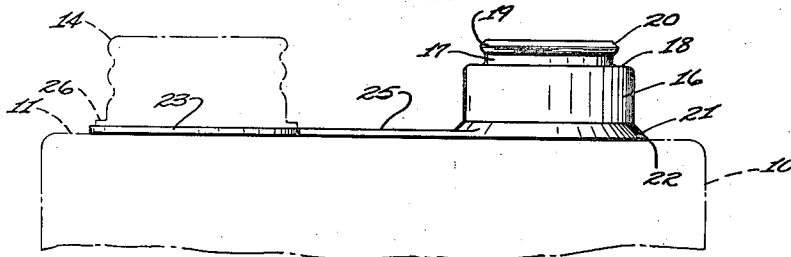


FIG 2

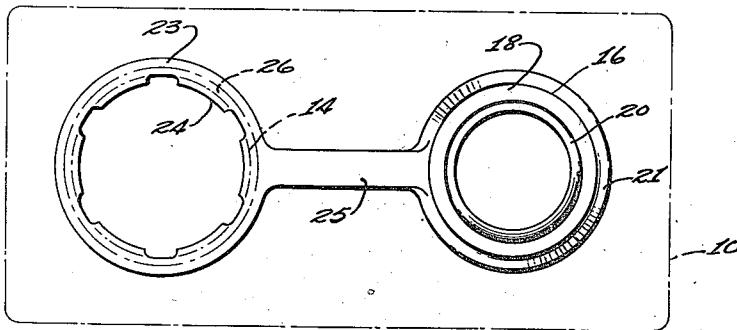


FIG 4

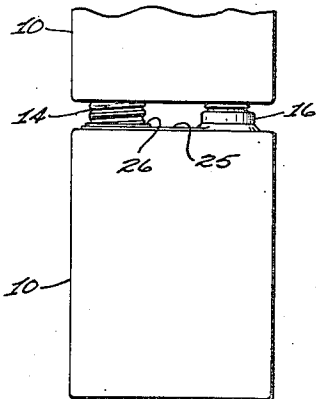
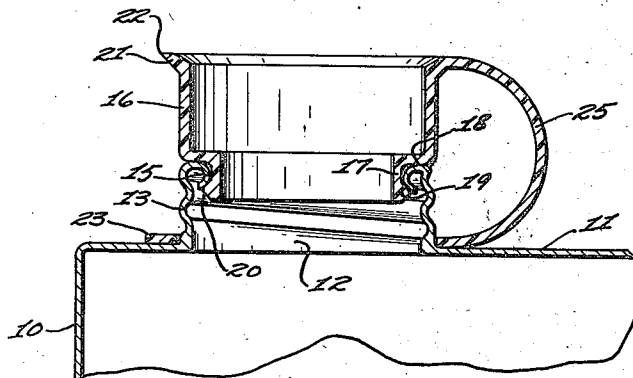


FIG 3



INVENTOR

RICHARD L. DIETHER

BY

Rule & Hoge
ATTORNEYS

1

2,760,683

POURING SPOUT

Richard L. Diether, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Application May 16, 1955, Serial No. 508,466

9 Claims. (Cl. 222—143)

The present invention relates to improvements in pouring spouts and more particularly is a separable spout formed of polyethylene or similar plastic material and readily attachable to a container neck.

An object of my invention is the provision of a spout of the above character which is readily attachable to the neck of a so-called "F" style tin can in such fashion that it will facilitate stacking of these containers on the store shelves and is at all times conveniently located for attachment to the can neck or nozzle for dispensing purposes.

These so-called "F" style tin cans include a flat upper surface and near one margin of the latter an upstanding filling and dispensing neck which as a rule is screw-threaded to facilitate attachment of a cap or closure thereto. In stacking such containers it is customary procedure to arrange first a horizontal bottom row with the neck portions projecting upwardly while the next row of containers will be inverted with the result that two neck portions are positioned more or less side by side to lend stability to the display. This, of course, means that the labels, etc., on the second row of containers are inverted, such being objectionable for reasons which are apparent.

Another objection to the present containers is that the neck portion is comparatively short in the interest of economy and owing to the method of manufacture of the container itself the upper flat surface is defined by an upstanding wall all of which contribute to the collection of portions of the liquid which are dispensed but which may flow down the exterior surface of the neck, or actually drop directly from the neck onto said flat upper surface incident to reinversion of the container following a dispensing operation. Very obviously an accumulation of any such liquids (polishes, paint removers, turpentine, oil, etc.) is very objectionable.

Among the objects of my invention is the provision of a pouring spout which remains at all times with the container and may with ease be attached to the outer end of the neck thereby forming an extended pouring device which minimizes or even entirely overcomes the objectionable dripping of the liquid onto the upper end of a container.

A further object of my invention is the provision of a novel pouring spout of the above character which can be effectively sealed to the neck of the container and prevent any leakage of the liquid at the juncture between the pouring spout and neck.

A further object of my invention is the provision of a pouring spout of the above character which is positively held in contact with the upper surface of the container and is of such axial dimension that together with the capped neck of containers so equipped, can be stacked in normal upright positions thereby providing both stability and pleasing appearance as regards the display aspects.

Other objects will be in part apparent and in part pointed out hereinafter.

2

In the drawings:

Fig. 1 is a side elevational view of the pouring spout and attaching means positioned upon a container, a fragment of which is shown in dot-and-dash lines;

Fig. 2 is a top plan view;

Fig. 3 is a fragmentary detailed sectional view showing the pouring spout secured to the outer end of the container neck; and

Fig. 4 is a side elevational view showing the manner in which the pouring spout effectively contributes to stability in the stacking of containers equipped with such a spout.

In the illustrated embodiment of my invention it is shown as a captive device attached to a so-called "F" style tin can comprising a generally rectangular body 10 formed with a relatively flat upper end 11 in which a filling and dispensing opening 12 is formed preferably near one margin thereof. An annular neck 13 formed coaxially with and rising from the wall of the opening 12 is screw-threaded to accommodate a closure cap 14. This neck is also provided with an internal hollow locking bead 15 at its upper end. It is obvious that the general shape of the container is unimportant and whether it is formed of tin, glass or some plastic material likewise is of no particular concern.

The fitment itself comprises a pouring spout in the form of a relatively short cylinder 16 having one end reduced in diameter to form a neck extension designed for insertion into the screw-threaded neck 13 of the container when the pouring spout is in operative position. This reduction in the diameter results in the formation of an annular shoulder 18 which may rest upon the outer end of the container neck 13, these surfaces being held in sealing contact with each other by means of a radial projection 19 or rib which interlocks with the hollow bead 15 and includes an inwardly downwardly tapered guiding surface 20 facilitating insertion of the neck 17 of the pouring spout into the container neck. Incident to completion of the assembling operation, this projection has sealing contact with an inner surface of the hollow bead 15 and as stated above, draws the shoulder 18 downwardly into sealing contact with said hollow bead.

The outer end of the cylinder 16 is provided with a pouring ledge or cut-off 21 which projects radially outward from the cylinder 16 and terminates in a relatively sharp, substantially continuous, edge 22. Because of this specific structure a stream of liquid being dispensed from the container may be cut off quite cleanly and without any drippage whatsoever incident to uprighting the container at the conclusion of a dispensing operation.

In order that the pouring spout may at all times remain with the container, it is secured to the container neck 13 by means of a retainer ring 23, the inner wall of which is formed with an annular series of fingers 24, the latter projecting radially inward for snug frictional contact with the base of the container neck 13. Because of the provision of these fingers 24, it is also apparent that within certain limitations the retainer ring can accommodate itself to container necks of different diameters. A flexible connector 25 is formed as an integral part of the pouring spout and retainer ring, and preferably is a flat strip which lies upon the aforementioned flat upper surface of the container 10. The retainer ring just referred to is intended to be securely gripped between the flange 26 at the lower end of the closure 14 and the upper end 11 of the container. Thus, the fitment is positively and securely held against serious displacement until it has reached the ultimate consumer.

As best shown in Fig. 4, the pouring spout, being positioned in proximity to each edge of the container remote from the neck and being of the same axial di-

3

mension as the capped container neck, serves very effectively in providing stability in display stacking of the containers.

Although I have specified polyethylene of such material as being preferred, it is to be understood that other materials such as elastomeric vinyl may be required in the interest of compatibility with the produce packaged.

Modifications may be resorted to within the spirit and scope of the appended claims.

I claim:

1. In combination, a container having a relatively flat upper surface formed with a filling and discharge opening near one margin, a neck coaxial with and rising from the wall defining said opening, a separate pouring device formed of flexible plastic material and comprising a cylindrical spout of substantially the same axial dimension as said neck, said spout normally being positioned with one end resting upon said upper surface at a point spaced from the neck whereby together the spout and neck form a spacer and support for and contacting the bottom of, another container, a retainer ring encircling and frictionally gripping the neck and a flexible connector element formed integral with the spout and ring.

2. The combination defined in claim 1, the flexible connector elements being a flat strip lying against said flat upper surface of the container and having one end formed integral with that end of the spout which rests upon said upper surface.

3. The combination defined in claim 1 in which an annular bead is formed internally of the upper end of the neck and an external projection is formed at one end of the spout for locking and sealing engagement with said bead.

4. The combination defined in claim 1, together with means separably connecting the neck and spout including an internal bead substantially at the upper end of the neck, a diametrically reduced portion at the other end of said spout providing an annular shoulder seatable

4

upon the upper end of the neck and a radial projection formed externally of the reduced portion for holding engagement with said bead, both said shoulder and radial projection having sealing contact with the neck.

5. An article of the character described formed of a plastic material and comprising a cylinder-like pouring spout, a diametrically reduced extension at one end of the cylinder providing an annular shoulder adapted to be seated upon and to have sealing engagement with a container neck, a radial projection externally of the diametrically reduced extension adapted for holding engagement with an internal portion of a container neck, a pouring lip substantially encircling and projecting radially outward from the other end of said spout, a retainer ring adapted for releasable attachment to a container neck and a flexible connector element formed integral with the spout and ring and connected to the latter at the pouring lip end thereof.

6. The combination defined in claim 5, the inner wall of the retaining ring being formed with an annular series of fingers projecting radially inward to grip the container neck.

7. The combination defined in claim 5, said pouring lip comprising a ledge projecting radially outward and terminating in a relatively sharp edge.

8. The combination defined in claim 5, said radial projection being an annular ring providing a continuous sealing surface.

9. The combination defined in claim 1 and a closure telescoped over the neck and holding the retaining ring in contact with said flat upper surface.

References Cited in the file of this patent

UNITED STATES PATENTS

1,215,130	Elliott	Feb. 6, 1917
1,633,197	Snyder	June 21, 1927
2,168,822	Fink	Aug. 8, 1939
2,580,811	Martinsen	Jan. 1, 1952
2,601,039	Livingstone	June 17, 1952