Oct. 21, 1969 J. L. MAY ET AL 3,473,705

SPOUT FOR TEAR STRIP OPENED CONTAINERS

Filed July 10, 1968

Fig. 1

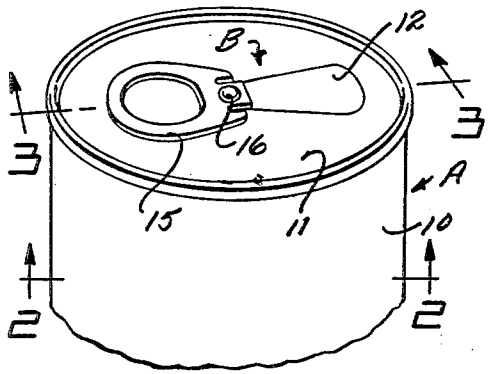


Fig. 2

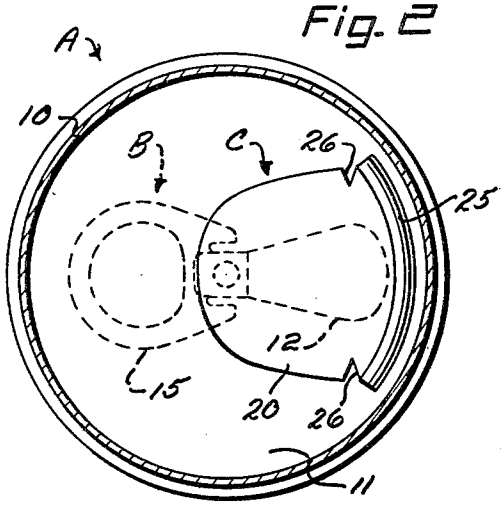


Fig. 4

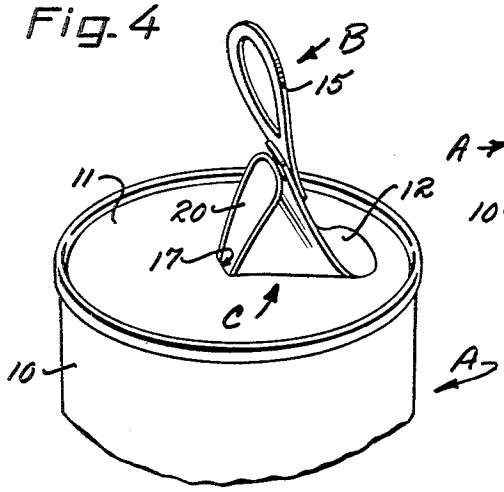


Fig. 3

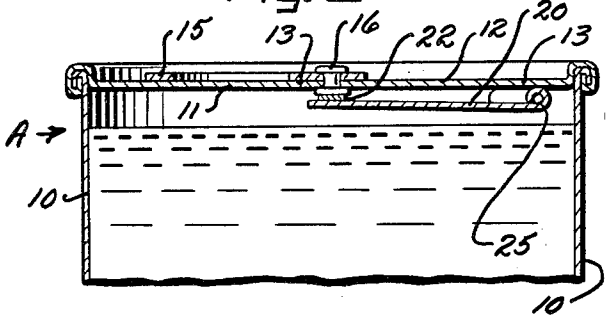


Fig. 5

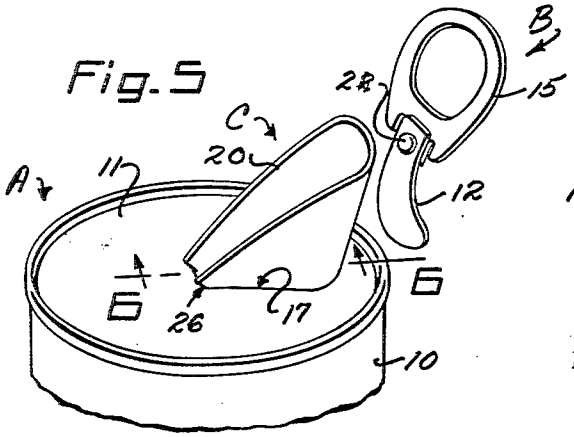
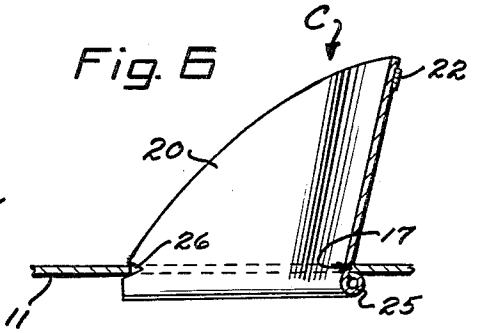


Fig. 6



INVENTORS

James L. May
James A. Stephens, Sr.
James A. Stephens, Jr.

BY Rommel, Allwine & Rommel
ATTORNEYS

United States Patent Office 3,473,705 Patented Oct. 21, 1969

3,473,705

SPOUT FOR TEAR STRIP OPENED CONTAINERS

James L. May, Rte. 9, Box 621 33502, and James A. Stephens, Sr., and James A. Stephens, Jr., 3313 N. Monroe St. 32301, all of Tallahassee, Fla.

Filed July 10, 1968, Ser. No. 743,716
Int. Cl. B65d 41/32
U.S. Cl. 222—541 6 Claims

ABSTRACT OF THE DISCLOSURE

For containers of the type in which an opening is formed by removal therefrom of a pull tab type tear strip, a spout for the same which is deformed from a substantially flat condition to a spout-like shape and positioned for pouring from the container contemporaneously with removal of the tear strip from the container.

This invention relates to improvements in the provision of spouts for the openings of containers having a pull tab type tear strip closure.

In the use of containers in which an opening is provided by a pull tab type tear strip, the opening provided is usually flush with the top of the container, so that any material poured therefrom is likely to pick up any dirt or unsanitary materials which have colllected on the top or become entrenched in the score lines normally provided for the tear strip. Also, the removal of the tear strip frequently leaves rough or sharp edges exposed about the opening provided in the container when the tear strip is removed. These edges are likely to cause incidental skin lesions to the soft tissues of the mouth when a person drinks directly from the container. The primary object of the present invention is the provision of a spout for this type of containers.

A further object is the provision of a spout for containers of the type described and which is disposed within the container itself, becoming exposed to the exterior of the can and opening to a spout-like shape contemporaneously with removal of the tear strip from the container.

A further object is the provision of a spout for containers of the type described and in which the spout comprises a substantially flat body portion designed to be positioned adjacent the underside of the container top, in substantial parallelism therewith, and which is deformed into a spout contemporaneously with removal of the tear strip from the container.

Other objects and advantages of the invention will become apparent during the course of the following detailed description, taken in connection with the accompanying drawing forming a portion of this specification, and in which drawing:

FIG. 1 is a perspective view of a container having a pull tab type tear strip for opening thereof.

FIG. 2 is an enlarged sectional view taken substantially on the line 2—2 of FIG. 1 and showing the body portion of our improved spout positioned along the underside of the container top.

FIG. 3 is an enlarged sectional view taken substantially on the line 3—3 of FIG. 1.

FIG. 4 is a perspective view showing the tear strip partially removed from the container.

FIG. 5 is a sectional view showing the tear strip entirely removed from the container and the spout positioned for use.

FIG. 6 is an enlarged sectional view taken substantially on the line 6—6 of FIG. 5.

In the drawing, wherein for the purpose of illustration is shown a preferred embodiment of the invention, and wherein similar reference characters designate corresponding parts throughout the several views, the letter A may generally designate a container having a pull tab type tear strip B provided at one end thereof for opening of the container; and C our improved spout means.

Container A may be of any desired shape, one in the nature of a soft drink container being shown in the drawing. Container A may be provided with generally cylindrical sides **10** having a top **11** which includes a pull tab type near strip B.

Tear strip B usually comprises a removable tear-out section **12** formed from top **11** by the provision of score lines **13**. It also usually includes a pull member **15** which may be attached to tear-out section **12** such as by a rivet **16**. When tear strip B is removed from container A, a somewhat key-hole shaped opening **17** will be provided in top **11** for removal of the contents of container A.

Tear strips of this type are well known in the art, and the present invention is contemplated for use with all variety and shape of such tear strips, the invention not being limited to either the particular tear strip shown or the particular shape of opening shown as being provided in the container on removal of such tear strip.

Spout means C preferably comprises a body portion **20** having connector means **22** adjacent one end thereof for attaching the same to tear strip B and a bead **25** adjacent the other end thereof. Notches **26** may be provided in body portion **20** adjacent each end of bead **25**.

As shown in FIG. 3, body portion **20** is preferably in a normally substantially flat condition, the same being flexible for deformation into a spout-like shape by abutment with the edges of opening **17** as it is drawn therethrough on removal of tear strip B, as shown in FIGS. 4 and 5. The shape and dimension of body portion **20** will thus be dictated by the shape of opening **17**. Body portion **20** shown in the drawing is shaped and dimensioned for deformation into a spout when pulled through a key-hole shaped opening, and it is obvious that the invention is not limited to a body portion **20** having the configuration shown.

Connector means **22** may comprise any suitable means such as solder, rivet, crimp, etc., for attachment of body portion **20** to tear strip B. Connector means **22** must be of sufficient strength so that tear strip B functions as a delivery vehicle in pulling body portion **20** through opening **17** to form a spout, but is frangible for break-away of tear strip B therefrom when tear strip B has opened completely, as shown in FIG. 5.

As body portion **20** is drawn through opening **17** by tear strip B, the central portion of bead **25** abuts against the underside of top **11**, providing a pivot axis for the shaping of body portion **20** into a spout. As the limit of extension of body portion **20** through opening **17** is reached, bead **25** substantially fully abuts top **11** and notches **26** engage the edge of opening **17**, providing a stop for limiting further movement of body portion **20**, so that tear strip B may break-away therefrom without pulling the spout from the container. Notches **26** and engagement of body portion **20** with the edges of opening **17** prevent the thus formed spout from dropping into the container and retain the same in juxtaposition to serve as a spout for the container.

It is, of course, obvious that some positive interconnection of spout means C to container A may be provided, if desired, such as a pivot attachment disposed centrally of bead **25**, or that some form of retaining means other than bead **25** and notches **26** may be provided for retaining one end of spout means C in juxtaposition to serve as a spout for container A.

Spout means C may be of a flexible metal, plastic, or any suitable synthetic polymer. In the form shown, spout means C is actually a part of pull tab type tear strip B, tear strip B being used as a delivery vehicle so that spout means C becomes positioned ready for use as tear strip B breaks away from the container.

Body portion **20** being flexible and without positive connection to container A, it is obvious that the same may be compressed for complete removal from opening **17**, in the event it is desired to pour from the container without use of a spout.

Spout means C may, after positioned for use as shown in FIG. 5, be again pushed part way down in the event it is desired to provide a partial closure for opening **17**. It is obvious that only slight modification of spout means C would be necessary to provide a completely resealable closure for container A, as is well known in the art.

Various changes may be made to the form of the invention herein shown and described without departing from the spirit of the invention.

We claim:

1. In a container having a relatively elongate pull tab type tear strip for providing a relatively elongate opening in an end of the container on removal of said tear strip, said tear strip having a pull member attached adjacent one end thereof for removal of said tear strip from the container, the combination therewith of spout means for providing a spout leading from the opening provided by removal of said tear strip from the container, said spout means comprising a substantially flat flexible body portion, and connector means adjacent one end of said body portion for connecting said body portion to the interior side of said tear strip adjacent the attachment thereto of said pull member on the other side of said tear strip, said connector means being juxtaposed to support said body portion within said container in substantial parallelism with the end of said container having the same when said container is unopened, being juxtaposed to raise the end of said body portion to which the same is attached through the opening provided as said tear strip is removed, and being sufficiently frangible to permit separation of said tear strip from said spout means on full opening of the container by removal of said tear strip, said body portion being of a dimension and shape to be deformed from its normal substantially flat condition

to a spout-like shape by engagement with the sides of the opening formed on removal of said tear strip as one end of the same is raised through the opening provided as said tear strip is removed and having retaining means at the opposite end thereof from the end thereof connected to said connector means for retaining one end thereof within the container.

2. The combination as specified in claim **1** wherein said retaining means includes a bead along one end of said body portion.

3. The combination as specified in claim **2** wherein said bead is juxtaposed for abutment against the interior of the container on raising of one end of said body portion through the opening provided as said tear strip is removed, such abutment providing a pivot axis for said body portion in raising of one end thereof through the opening provided as said tear strip is removed.

4. The combination as specified in claim **2** wherein said body portion is provided with spaced apart notches on opposite sides thereof and adjacent said bead, said notches being juxtaposed to receive therewithin the container edge adjacent one end of the opening provided as said tear strip is removed.

5. A container having a pull tab type tear strip for providing an opening in the container on removal of said tear strip, and spout means positioned interiorly of the container, said spout means being attached to said tear strip for lifting of said spout means to define a spout for the container contemporaneously with removal of said tear strip from the container.

6. A container as specified in claim **5** including connector means for attachment of said tear strip to said spout means, said connector means being sufficiently frangible to permit separation of said tear strip from said spout means on full opening of the container by removal of said tear strip.

References Cited

UNITED STATES PATENTS

3,216,609 11/1965 Bogert ---------- 222—541 X

STANLEY H. TOLLBERG, Primary Examiner

U.S. Cl. X.R.

222—566