

United States Patent

[11] 3,616,961

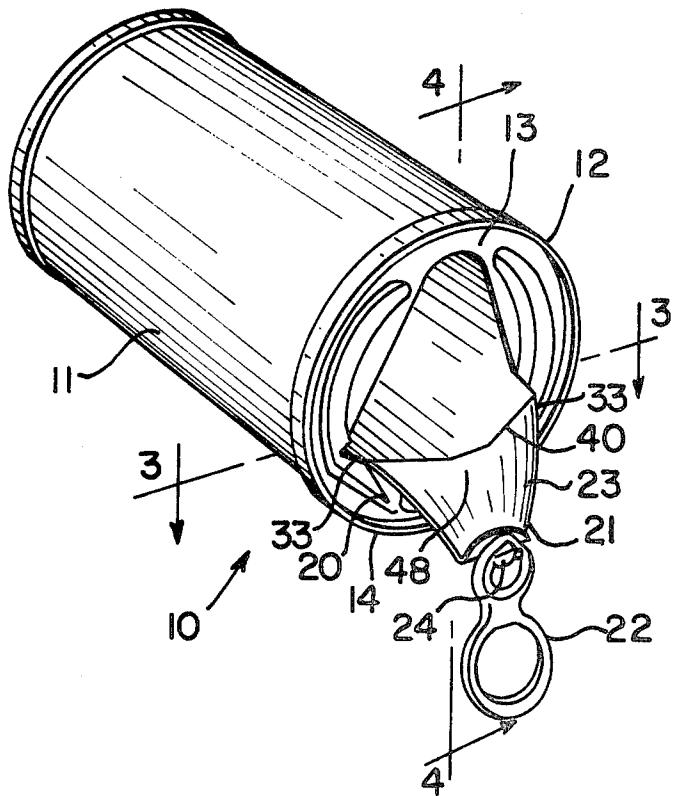
[72] Inventor **Salvador C. Mallorca**
Chicago, Ill.
[21] Appl. No. **33,243**
[22] Filed **Apr. 30, 1970**
[45] Patented **Nov. 2, 1971**
[73] Assignee **Continental Can Company, Inc.**
New York, N.Y.

[56] **References Cited**
UNITED STATES PATENTS
3,473,705 10/1969 May et al. 222/541
3,454,190 7/1969 Miki 220/54
Primary Examiner—George T. Hall
Attorneys—Fred P. Kostka, Joseph E. Kerwin and William A. Dittmann

[54] **EASY-OPENING CONTAINER WITH POUR SPOUT**
5 Claims, 4 Drawing Figs.

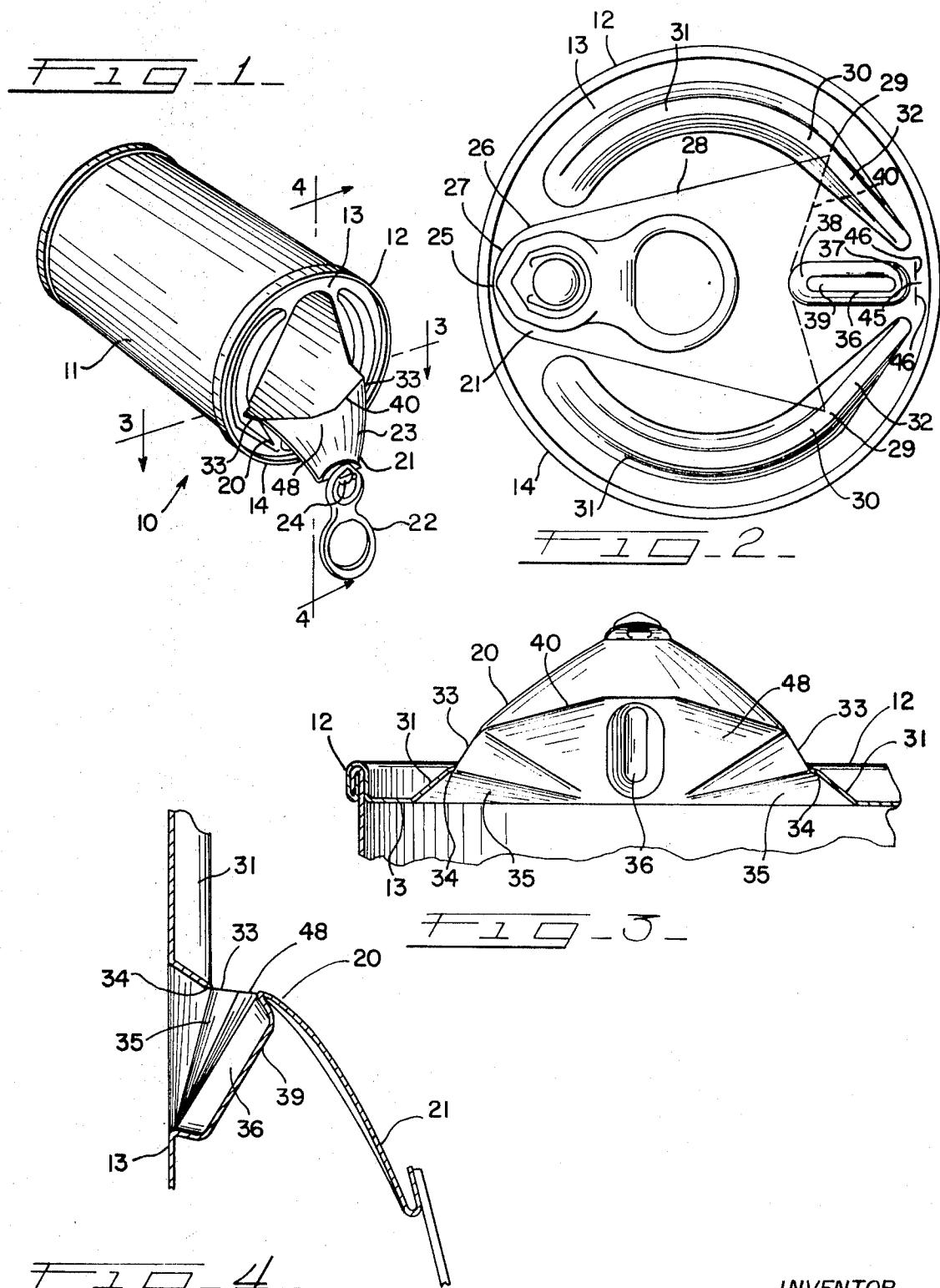
[52] U.S. Cl. **220/54, 222/541, 220/27, 222/529**
[51] Int. Cl. **B65d 17/24**
[50] Field of Search. **220/54, 27, 48, 85; 215/46; 222/541, 529, 530, 566; 229/7**

ABSTRACT: An easy-opening container including a panel having a tear strip defined by a score line terminating in spaced ends. Outwardly bulging projections are formed in the panel adjacent the terminal ends of the score line. The tear strip is foldable about the projections at the terminal ends of the score line to provide a pour spout of generally concave cross section along a major portion of the length of the tear strip.



PATENTED NOV 2 1971

3,616,961



INVENTOR
SALVADOR C. MALLORCA
BY *Fred P. Hostka*
ATT' Y.

EASY-OPENING CONTAINER WITH POUR SPOUT**BACKGROUND OF THE INVENTION**

The present invention relates to easy-opening containers and more particularly to an easy-opening container constructed so that the tear strip serves as an integral pour spout.

Easy-opening containers generally have a tear strip that is completely separable from the end panel on which it is formed to provide a pour opening in the panel. This pour opening generally lies flush in the plane of the end panel so that there is a tendency for the contents to flow on the panel surface during opening. This is undesirable because the contents may pick up dirt, grit and other contaminates which may be collected on the end panel. Moreover, the pour characteristics through the flush opening may be such that the contents spill out indiscriminately making it difficult to control the emptying of the container into other receptacles.

SUMMARY OF THE INVENTION

In accordance with the present invention, there is provided an easy-opening container having a pour spout which overcomes the difficulties encountered heretofore.

This is accomplished by forming a nondetachable tear strip in the end panel. The tear strip is defined by a score line which terminates in spaced ends that are located adjacent to upwardly extending projections formed in the panel of the end closure. After separation of the tear strip along the score line, the tear strip is folded about the projections at the terminal ends. The panel projections provided pivot axis about which the tear strip is bent to form the latter into a substantially concave spout extending upwardly over the rim of the container.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of an easy-opening container having an end closure embodying the structure of the present invention, and showing the tear strip bent to provide a pour spout;

FIG. 2 is a top plan view of a container and closure showing the closure prior to opening of the container;

FIG. 3 is a cross-sectional view taken generally along the lines 3-3 of FIG. 1; and

FIG. 4 is a cross-sectional view taken generally along the lines 4-4 of FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, there is shown a container 12 incorporating an easy-opening end having the structure of the present invention. The container 10 includes a cylindrical body 11 having an end closure attached to the lower end by means of a double seam. Fixed to the upper end also by means of a double seam is an end closure 12 embodying the tear strip and pour structure of the present invention.

As shown, the end closure 12 includes a countersunk end panel 13 having upwardly projecting and angularly spaced beads 30. The beads each project upwardly from the plane of the panel 13 and include a generally semicircular portion 31 and a downwardly tapering end portion 32 of the beads 30.

Disposed between the tapering ends 32 of the beads 30 is a radially extending bulge or bead 36 which terminates at the

outer end 38 in the space between the tapering ends 32. Disposed about the opposite sides of the radially extending bead 36 is a score line 25.

A tear strip 21 is defined by the score line 25 which includes a bight portion 27 having a pair of outwardly diverging legs 28. The ends 29 of the legs 28 terminate at bead at the maximum height thereof. The bight portion 27 is disposed closely adjacent to the chuck wall 14 of the end closure.

Fixed to the tear strip 21 is a pull tab 22. The pull tab 22 is more or less of conventional structure and is fastened to the tear strip by means of a hollow rivet 24 formed integral with the tear strip. The pull tab 22 is arranged so as to be tiltable whereupon a nose portion is operative to initially sever the tear strip 28 at the bight portion 25. Thereafter, the pull tab 22 is pulled upwardly to sever the remainder of the tear strip 21 from the panel 13. When the tear strip 21 is severed to the terminal ends 29, the pull tab is pulled and folded over the rim of the container end wall as shown in FIG. 4. Upon folding, the radial bead 36 serves as a pivot axis causing a bending along the lines 40-40 extending between the bead 36 and the terminal ends 29-29. At the same time the panel portion containing the bead 36 also bends upwardly about a pair of spaced secondary score lines 46-46 located adjacent the outboard end 37 of the bead 36.

As shown, the portion of the arcuate beads 30 intercepted by the length of the score line 28 more or less forms upstanding side walls 35 to prevent inadvertent spillage over the corners of the pour opening upon separation of the tear strip 21 from the end panel 13. As the tear strip is bent over the rim 12, the strip forms more or less a concave surface 48. The concave surface forms in the nature of a pour spout which directs the contents of the container into another receptacle into which it may be poured.

What is claimed is:

- 35 1. An easy-opening container comprising a container body, an end closure fastened to one end of said container body, a pair of spaced oppositely disposed projecting beads formed in said panel, a tear strip defined by a substantially U-shaped score line disposed between said beads, said U-shaped score line having a bight portion and spaced legs terminating in said projecting beads, a pull tab fixed to said tear strip and having means for penetrating said score line at said bight portion for initially severing said score line, said pull tab being operative to sever the remainder of said tear strip along said score line upon pulling thereon and to fold said tear strip along a line extending generally between said terminal ends so that said tear strip forms a spout having upstanding walls at the juncture of said tear strip with said beads.
- 50 2. The invention as defined in claim 1 wherein said legs of said score line terminate in the crests of said projecting beads.
3. The invention as defined in claim 2 wherein said nests of said projecting beads taper inwardly toward each other inwardly of said score line.
4. The invention as defined in claim 2 wherein a radially extending bead is disposed between the ends of said oppositely disposed beads and said terminal ends of said score line.
- 55 5. The invention as defined in claim 4 wherein secondary score line means are formed at the outboard end of said radially bead to facilitate bending of said tear portion.