

Dec. 16, 1969

W. GREENHALGH ETAL

3,484,011

DISPOSABLE CONTAINER LINER AND ADVERTISING MEANS

Filed April 16, 1968

2 Sheets-Sheet 1

Fig. 1.

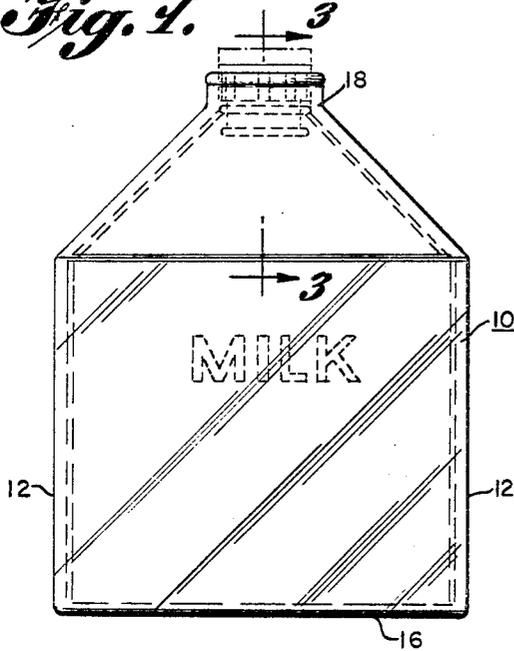


Fig. 2.

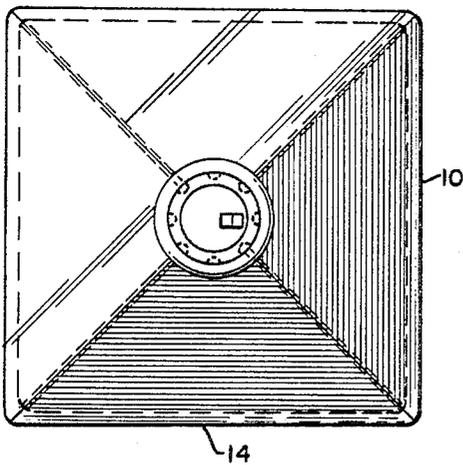


Fig. 6.

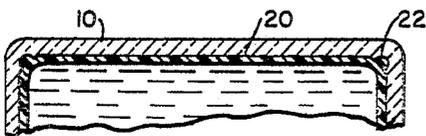


Fig. 3.

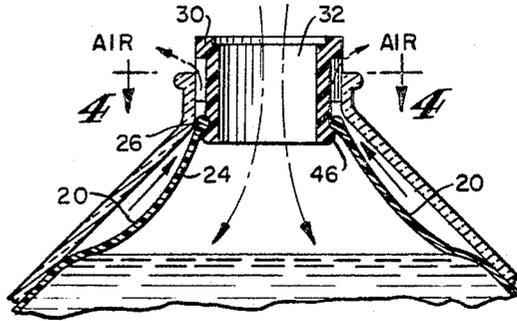


Fig. 4.

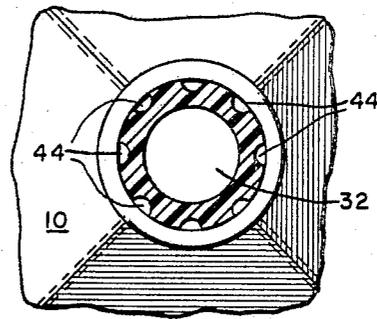
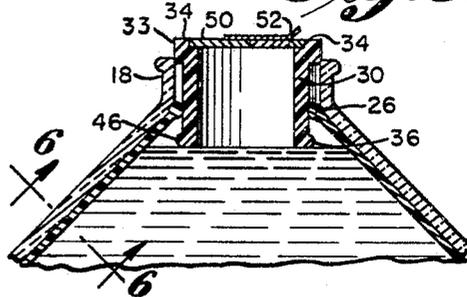


Fig. 5.



INVENTORS
William Greenhalgh &
David Kenneth Soper

BY *Lawrence J. Field*

ATTORNEY

Dec. 16, 1969

W. GREENHALGH ETAL

3,484,011

DISPOSABLE CONTAINER LINER AND ADVERTISING MEANS

Filed April 16, 1968

2 Sheets-Sheet 2

Fig. 7.

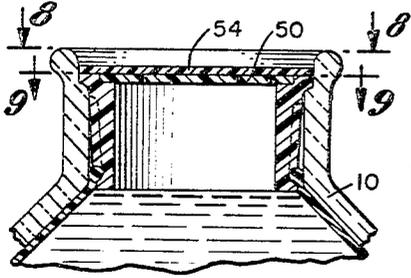


Fig. 8.

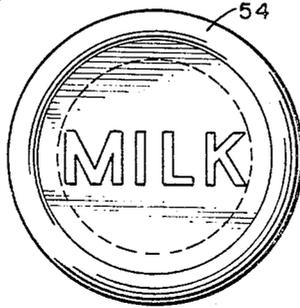


Fig. 9.

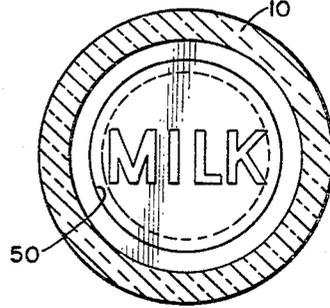


Fig. 10.

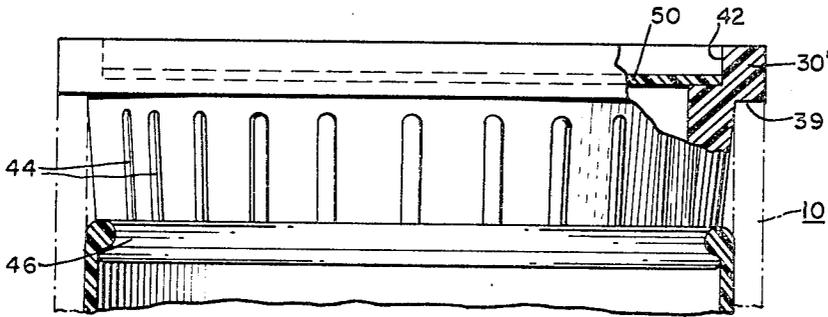


Fig. 11.

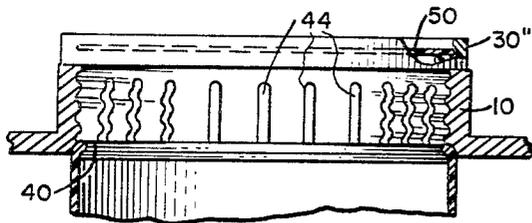


Fig. 12.

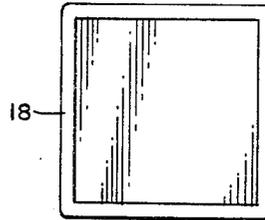


Fig. 13.

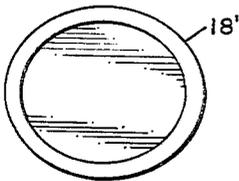
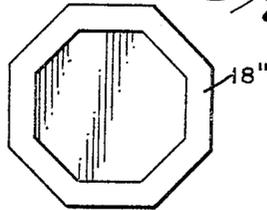


Fig. 14.



INVENTORS
William Greenhalgh &
David Kenneth Soper

BY *Lawrence J. Field*

ATTORNEY

1

2

3,484,011

**DISPOSABLE CONTAINER LINER AND
ADVERTISING MEANS**

William Greenhalgh, P.O. Box 521, Oshawa, Ontario,
Canada, and David Kenneth Soper, 48 Montgomery Ave.,
Brooklin, Ontario, Canada

Filed Apr. 16, 1968, Ser. No. 721,852

Int. Cl. B65d 5/60, 23/02, 25/16

U.S. Cl. 215—12

9 Claims

ABSTRACT OF THE DISCLOSURE

A container provided with a flexible sterile removable liner adapted to have advertising or other printed material on its outer surface.

This invention relates to a disposable flexible liner for containers and to means for supporting said liner therein. More particularly, it relates to a hygienically clean liner adapted to be inserted into a conventional container in order to provide an interior which is suitable for refilling, even with liquid foods such as milk. If desired, the liner may be provided with ornamentation or advertising which will be visible through the walls of the container. The expandible liner includes a molded adapter portion which may be integral with or separate from the bag shaped liner.

One object of this invention is to provide a means to insert a liner that will conform with the inner contour of a container when the lined container is filled with the required liquid or other materials to be contained therein.

A further object of this invention is to provide a liner that will be easily and readily removed from the container after the contents of the container has been removed.

Another object of this invention is to provide a means to display words or suitable pictures through a transparent or semi-transparent container so as to provide suitable means for advertising.

Still another object of this invention is to provide a new means to remove and dislodge an inner lining from the container when the liner has served its purpose.

Other objects will be apparent from the description which follows and from the drawings in which

FIGURE 1 is a view showing one form of liner in place in a bottle-type container, after the container has been filled;

FIGURE 2 is a plan view of the container of FIGURE 1 after a closure has been applied to the container;

FIGURE 3 is a view in section through the neck portion of the container during the filling of the container;

FIGURE 4 is a view partly in section, taken on plane 4—4 of FIGURE 3;

FIGURE 5 is a fragmentary section of FIGURE 1, after the container has been filled and capped;

FIGURE 6 is a section taken on plane 6—6 of FIGURE 5, showing a further detail of the liner;

FIGURE 7 is a fragmentary section showing the adapter in greater detail and another embodiment of closure;

FIGURE 8 is a plan view of one part of the closure in FIGURE 7;

FIGURE 9 is a plan view in section of the closure of FIGURE 7 taken on plane 9—9;

FIGURE 10 is an enlarged view, partly in section, showing one form of adapter in greater detail;

FIGURE 11 is a view partly in section showing the invention applied to a container with a threaded neck; and

FIGURES 12, 13 and 14 are plan views showing other neck configurations.

As shown in FIGURE 1, the device of the present invention is intended to be utilized as a sanitary liner for a container 10 which may be of any desired configuration, a square container being shown in the drawings for purposes of illustration. It will be readily apparent that the container may be rectangular, or of other polygonal shape, or round, oval or any other shape, e.g. as shown in FIGURES 12, 13 and 14.

Container 10 is of conventional construction and may be of glass, paper, cardboard, or synthetic polymer, or any other material. As shown in FIGURE 1, container 10 is preferably of glass or other transparent or translucent material whereby the contents of container 10 may be viewed through at least one front wall 14 of the container 10.

In addition to a flat base or bottom portion 16, container 10 has vertical sidewalls 12 which converge to form a preferably round neck 18 through which the liner 20 to be used to provide a disposable sanitary liner for container 10 may be inserted.

Disposable liner 20 comprises a flexible bag, provided with ribs 22 extending from the bottom of liner 20 to a filling opening or neck 24 provided with a peripheral bead 26. Ribs 22 are provided to give liner 20 additional support when it is expanded and serve to keep the liner firmly pressed against the container as the contents of the container are poured from the same.

Liner 20 is composed of material on which advertising messages may be printed or otherwise affixed. Since at least a portion of container 10 is transparent or semitransparent, the printed message or other display is readily seen by the consumer. In this way, as liners are changed, a single container can be utilized to advertise a variety of contents and sources of materials.

The disposable liner 20 is held in place by the material in container 10 when it has been filled, and by ribs 22 and by an adapter 30 which is insertable into neck 18 of container 10.

The liner and adapter may be molded as an integral unit or they may be two separate elements joined together by any suitable fastening means, including an adhesive. Adapter 30 is shaped to conform to the internal configuration of the neck of container 10. Adapter 30 has a central bore 32 extending axially between a top 34 and bottom 36. Top 34 has a neck closing portion 38 conforming to the interior of neck 18 so that when adapter 30 is inserted into neck 18 to such an extent that the upper portion of the adapter is received in neck 18, it is seated in said neck and seals against the neck, as shown in FIGURES 3 and 5, or the adapter may be provided with a flange 39 adapted to rest on the upper surface of the neck 18 of the container, as shown in FIGURE 10. The adapter may be provided with threads so that it can be screwed into the neck of the container, as shown in FIGURE 11. A recess 42 in the upper surface of adapter 30 is provided to receive a flat disc closure 50, provided with a pull tab 52, as best seen in FIGURE 5.

As best seen in FIGURES 7, 8 and 9, the closure disc 50 which may bear a printed legend or advertisement may be covered with a second disc 54 which may be either transparent or opaque and which may also have printing or other marking on its surface.

The adapter is tapered, as in FIGURES 7 and 10, in which the taper is shown in exaggerated form, to facilitate insertion of the adapter into the neck 18 of the container 10.

The tapered outer wall of adapted 30 is serrated or provided with grooves 44 which extend from the neck closing portion 38 of the adapter downwardly substantially to a peripheral bead 46 which extends outwardly along the lowermost part of adapted 30.

3

Grooves or serrations 44 act as air vents allowing the air between liner 20 and container 10 to escape during the filling process, as illustrated schematically in FIGURE 3.

The same grooves may be utilized to permit air, water or other gaseous or liquid fluid to be forced between liner 20 and container 10 for the purpose of collapsing the liner after the contents have been emptied from the container, so that the adapter and the liner may be withdrawn from the container 10.

It is believed that the manner in which the liner is utilized will be apparent from the foregoing description, but the following description will serve to further explain a preferred mode of utilization.

Liner 20, in collapsed (undistended) form, is inserted into the neck of container 10 with the open end 40 of the liner held near the upper portion of the container. Adapter 30 may be integral with flexible liner 20 in which case it is only partially inserted into neck 18 so that air venting grooves 44 freely communicate with the atmosphere, so that air between the liner and the container escapes as the container is being filled and expanded to fill container 10.

When the container has been filled to the desired extent, adapter 30 is pressed into neck 18 so that the neck engaging uppermost portion of the adapter is seated in neck 18 and access of grooves 44 to the atmosphere is closed.

The same procedure is followed when adapter 30 and liner 20 are separate elements, except that the bead 26 at the open end of liner 20 must be hooked over ring 46 at the bottom of adapter 30 before the adapter is drawn up to the filling position shown in broken lines in FIGURE 1 and in FIGURE 3.

In both instances, the adapter is pushed into sealing engagement with the neck 18 after filling and then covered with cap 50.

After the contents of container 10 have been dispensed and before the container is refilled, it is intended that adapter 30 be pulled outward from the neck and then fluid is forced into grooves 44 to collapse liner 20 and permit its withdrawal from container 10.

It will be apparent that the configuration of the adapter may be varied without departing from the scope of the invention provided that the grooves 44 are enabled to function in the manner indicated. For example, a flange or lip may be provided at the upper end of neck engaging ring 38, to about the top of container 10 and insure a more positive seal against the container when the adapter is pushed into the neck of the container after the container has been filled to the desired extent.

One or the other, or both caps 50 and 54 may be provided with advertising material or with information identifying the contents of container 10, or instructions concerning the use of the contents of the container.

The taper of adapter 30 should be such that the adapter is held in place by a force fit when pushed into the

4

neck 18 of the container 10, e.g., at the completion of filling the container (compare FIGURES 3 and 5), unless it is one which screws into place, as in FIGURE 11.

What is claimed is:

1. In combination with a generally rigid container having a discharge opening, a flexible liner removably positioned within said container, adapter means removably positioned in said discharge opening for supporting said liner, said means supporting said liner being movable between a first position communicating the space between said container and said liner with the atmosphere and a second position sealing off the space between said container and said liner from the atmosphere whereby fluid can be vented from the space between said container and said liner to conform said liner to said container.

2. The combination of claim 1 wherein the container is translucent and the liner bears a legend which is visible through at least one wall of the container.

3. The combination of claim 1 wherein the liner is provided with vertical ribs to reinforce the same.

4. The combination of claim 1 wherein the liner and the adapter are molded as an integral unit.

5. The combination of claim 1 wherein the adapter is tapered to facilitate insertion of the adapter into the neck of said container.

6. The combination of claim 1 wherein the adapter means is provided with grooves or serrations along its external periphery to permit air to escape between the liner and the container during the filling process.

7. The combination of claim 1 including, in addition, a closure adapted to seat in the upper portions of said adapter.

8. The combination of claim 7 including, in addition, a second closure made of transparent material so that a legend on the first closure will be visible, said second closure providing a more positive seal than the first closure alone.

9. The combination of claim 1 wherein the liner includes a peripheral bead at its upper most extremity adapted to fit within a peripheral groove adjacent the lower end of said adapter.

References Cited

UNITED STATES PATENTS

| | | | |
|-----------|--------|----------|----------|
| 2,338,604 | 1/1944 | Silveyra | 229—14 |
| 2,987,209 | 6/1961 | Leonard | 215—11 |
| 3,029,963 | 4/1962 | Evers | |
| 3,366,261 | 1/1968 | Dewey | 215—11.4 |
| 3,361,303 | 1/1968 | Jacuzzi | 222—183 |
| 3,374,911 | 3/1968 | White | 215—12 |

WILLIAM T. DIXSON, JR., Primary Examiner

U.S. Cl. X.R.

222—183; 229—14