

- [54] **BOTTLE CARRIER**
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- [52] **U.S. Cl.:** 206/427; 206/199; 229/44 R
- [51] **Int. Cl.:** B65d 1/22; B65d 81/00; B65d 85/00
- [58] **Field of Search:** 229/28 BC, 33, 36, 44 R, 229/52 BC, 2.5, 40; 206/145, 147, 156, 158, 168, 194, 199, 203, 427, 434, 435; 220/31 S, DIG. 15, 9 F

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[57] **ABSTRACT**

A bottle carrier or self-hinged, one piece design thermoformed from thermoplastic material such as polystyrene foam. The carrier has three sections, a rectangular box-like bottom section and two side walls, flexibly hinged along the sides of the bottom section and containing openings to accommodate bottle tops when the carrier is in a closed position.

2 Claims, 5 Drawing Figures

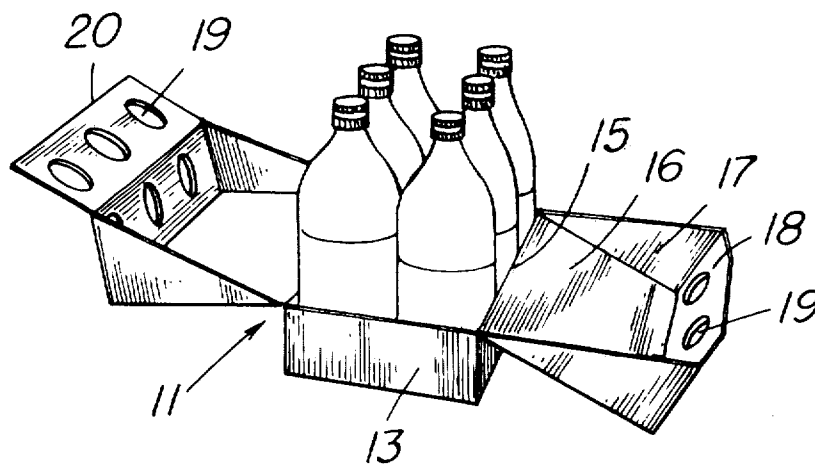


FIG. 1

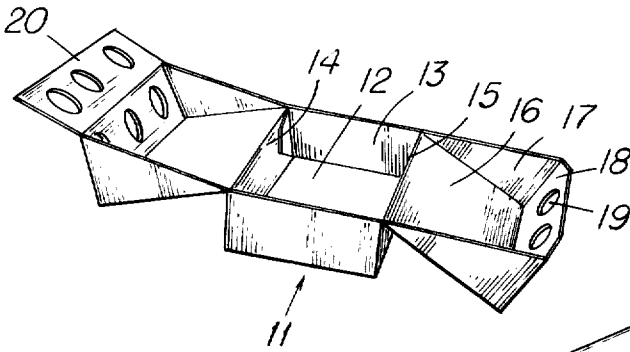


FIG. 2

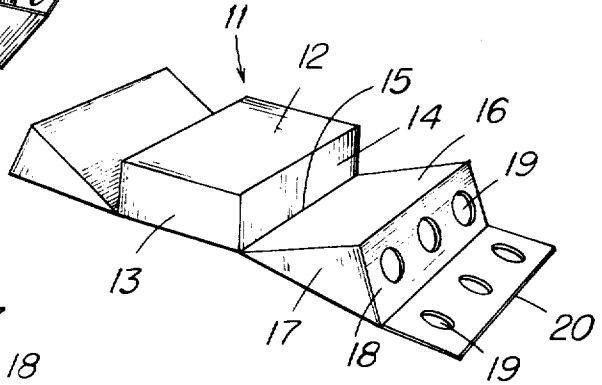


FIG. 3

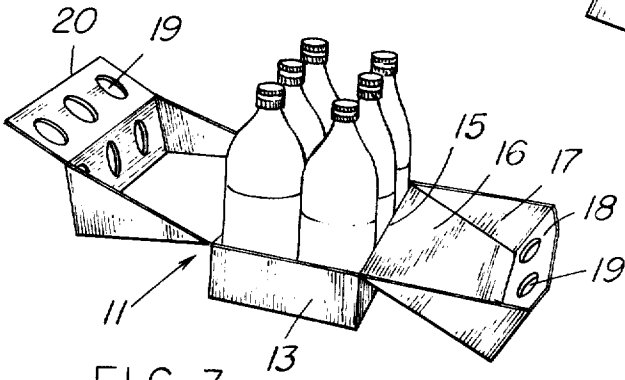


FIG. 4

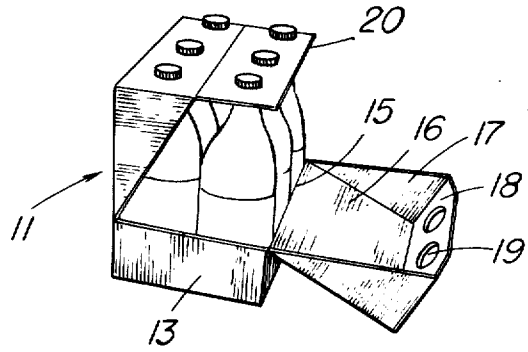
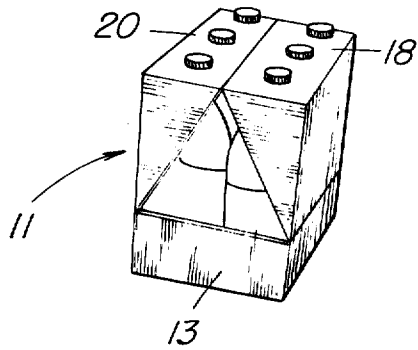


FIG. 5



BOTTLE CARRIER**BACKGROUND OF THE INVENTION**

The present invention relates to packaging and is more particularly concerned with improvements in a packaging unit comprising a one piece molded container or carrier which is adapted to hold a plurality of cylindrical articles such as bottled beverages which are arranged in row formation therein.

A variety of packaging units have been developed for bottled beverages and similar products which are generally designed from paperboard blanks cut and scored so as to be set up into container configuration in the bottling and packaging plant. One type of prior art container for bottles is in the form of a basket in which a plurality of individual, open top cells are provided for receiving the bottles. Another type of package is the wrap around or sleeve-type unit in which two rows of bottles are encased. Such packaging units all have a common disadvantage, namely, the necessity to employ special equipment to properly form and erect the container from the paperboard blank and, in most instances, the necessity for the employment of special adhesives to maintain such containers in an erect condition. The bottle carrier containers of the present invention are molded in such a fashion that the containers are formed in a condition to immediately receive articles to be packaged therein thereby avoiding the necessity of any blank cutting, scoring, folding and gluing operations.

SUMMARY OF THE INVENTION

A bottle carrier comprising a box-like bottom support member having a rectangular base and four upstanding side and end wall panels. Each of the two side wall members have upper side wall members flexibly hinged along their upper edges. The upper side wall members have triangular shaped end panels joined along their side edges at approximately right angles thereto. The upper edges of both the triangular end panels and the upper side wall members are connected by a rectangular, bottle top retaining panel which has apertures in it to receive the neck portions of bottles positioned in the carrier. An additional bottle top retaining panel may be provided which is integrally hinged along the longitudinal edge of one of the bottle top retaining panels which is joined to an upper side wall member.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the interior of the carrier container in open position;

FIG. 2 is a perspective view of the exterior of the container in open position;

FIG. 3 illustrates a cluster of bottles grouped inside of the open container;

FIG. 4 illustrates the container in a partially closed position;

FIG. 5 shows the container in a completely closed position.

DESCRIPTION OF SPECIFIC EMBODIMENTS

The container structures of the present invention are preferably fabricated from thermoplastic materials utilizing conventional thermoforming techniques such as matched metal molding for example. An especially pre-

ferred material of construction is polystyrene foam which may be thermoformed, in a one piece construction, to form the present containers.

As shown in FIGS. 1 and 2 of the accompanying drawings, the container structure of the present invention comprises a box-like bottom support member generally designated as 11. The support member 11 is formed as a substantially rectangular base 12 having two upstanding side walls 14 and two upstanding end walls 13 integrally joined about the periphery of base 12. Although in the illustrated embodiment the surface of base 12 is shown as substantially planar, it will be understood that individual support cells may be molded, i.e. thermoformed, in base 12 to provide bottom support for, and assist in positioning the bottoms of bottles placed in the container. Such support cells may have a generally circular configuration.

Flexibly hinged at 15 to the upper edges of side walls 14 are upper side wall members 16. Upper side wall members 16 are free to rotate around integral hinge 15 from a generally horizontal position to an upstanding vertical position as illustrated in FIG. 5. Triangularly shaped side walls 17 are joined along the opposite sides of upper side wall member 16 and form an angle of about 90° with member 16. The upper edge of upper side wall 16 are connected by, transversely disposed, rectangular bottle top retaining panel 18. Panel 18 has apertures 19 therein to accommodate the upper neck portion of bottles contained in the carrier as illustrated in FIGS. 4 and 5. In the specific embodiment of the bottle carrier shown in FIGS. 1 through 5, an auxiliary top retaining panel 20, containing apertures 19 therein, is hinged to one of the retaining panels 18 joined to upper side wall 16. Panel 20 acts to reinforce the top portion of the bottle container and assists in the positive securing of the bottle neck portions. It will be understood that this extra retaining panel 20 is optional and may be omitted from the container structures of the present invention.

As shown in FIGS. 3, 4 and 5, bottles are arranged in laterally paired and longitudinally arranged row formation in bottom support member 11. Next, as shown in FIG. 3, to close the carton, one side wall 16 is rotated about hinge line 15 to a vertical position, the upper neck portions of the rows of bottles being positioned in apertures 19 located on panels 18 and 20 as seen in FIG. 4. Finally, the opposite side member 16 is rotated to a vertical position and the apertures 19 in top panel 18 engage a row of bottle necks as shown in FIG. 5.

Although not shown in the illustrated embodiment of the present carton, it will be understood that finger engaging apertures may be positioned in the top panel area of the carton, or in the upper portions of side members 16, to assist in transporting or carrying the containers when loaded with bottles.

Although the present invention has been described with preferred embodiments, it is to be understood that modifications and variations may be resorted to, without departing from the spirit and scope of this invention, as those skilled in the art will readily understand. Such variations and modifications are considered to be within the purview and scope of the appended claims.

What is claimed is:

1. An integral, one-piece, thermoformed, polystyrene foam bottle carrier comprising a bottom support member, said member comprising a substantially rectangular base surrounded by four-up-standing side and end

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wall members integrally joined to said base, each of said side wall members having integrally hinged along their upper edges an upper side-wall member; said upper wall members having triangular shaped end panels joined, at an angle of about 90°, along their opposite longitudinal edges, said triangular end panels having their apex portions adjacent the lower hinged edge of said upper side wall members and their base portion adjacent the opposed upper edge of said upper sidewall member, the base edges of said triangular end panels and the upper edge of said side-wall member being connected by a transversely extending rectangular top retaining panel, said retaining panel having apertures therein

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to receive the upper neck portion of bottles positioned in said support member, whereby said bottle carrier is adapted for closure by the upward rotation of said upper side-wall members about their hinged edges whereby the apertures in said retaining panel engage the upper neck portions of bottles positioned in said carrier and said triangularly shaped end panels permit a partial view of the contents of said carrier.

2. A carrier as defined in claim 1 wherein one of said retaining panels has flexibly hinged, along its longitudinal edge, a second retaining panel.

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