United States Patent [19]

Klygis

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[54] **BOTTLE CARRIER**

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Related U.S. Application Data

[63] Continuation of Ser. No. 292,268, Sept. 25, 1972.

[52] **U.S. Cl.** **206/153;** 294/87.2

[51] **Int. Cl.²** **B65D 75/00;** B65D 85/62

[58] **Field of Search** 206/153, 145, 140; 294/87.2

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Attorney, Agent, or Firm—Olson, Trexler, Wolters, Bushnell & Fosse, Ltd.

[57] **ABSTRACT**

The embodiment of the invention disclosed herein is directed to a bottle carrier formed from a blank of thin sheet material having a plurality of panels. The panels of the blank are folded to form elongated spaced apart side wall portions, a bottom wall portion, and a top wall portion. Apertures are formed in the bottom wall portion and holes are formed in the top wall portion in registry with the apertures so that the neck of bottles can be inserted therethrough. Annular beads about the periphery of the neck adjacent the opening of the bottle passes through the holes to become locked into the bottle carrier. Tab means are formed along the top edge of one of the side panels so that as the bottles are inserted through the apertures and holes the tabs are urged upwardly to engage tab receiving recesses so as to lock the panels in a multi-sided hollow configuration. The sides of the bottle carrier are maintained under compression so as to bulge slightly outwardly thereby increasing the stiffness or rigidity of the carrier for added strength.

5 Claims, 6 Drawing Figures

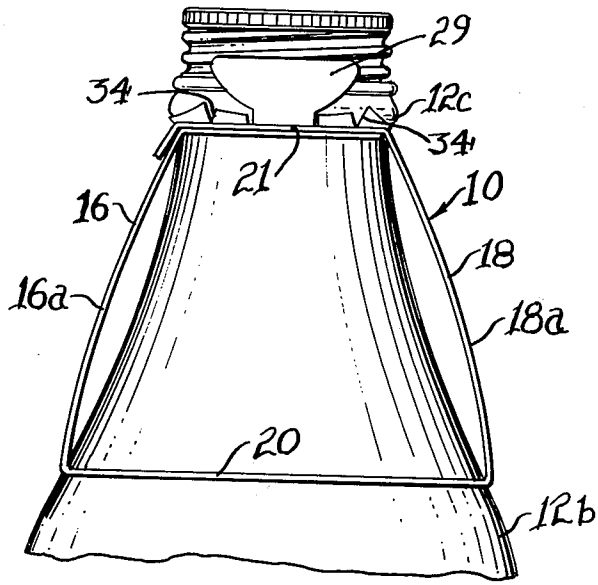


Fig-1

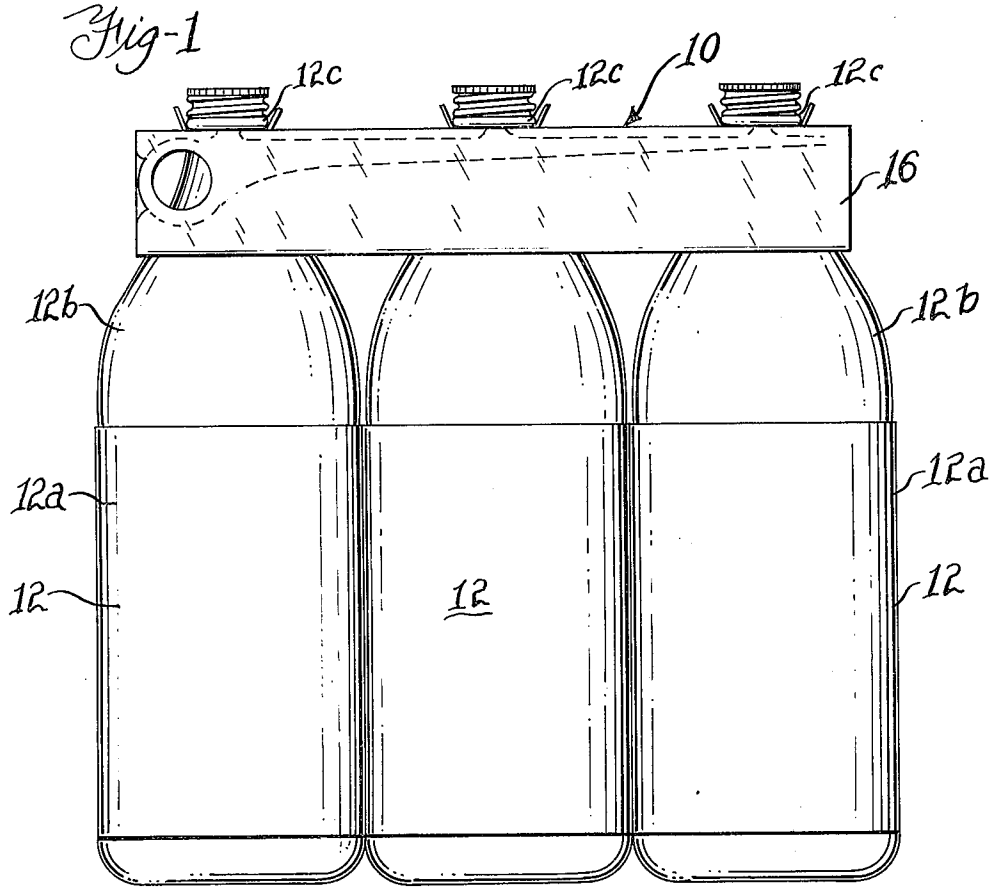


Fig-5

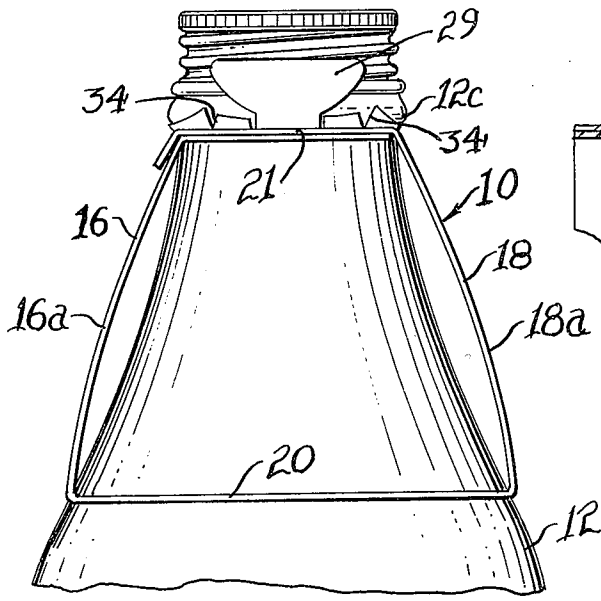


Fig-6

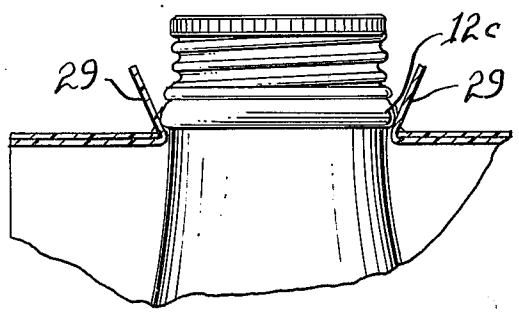


Fig-2

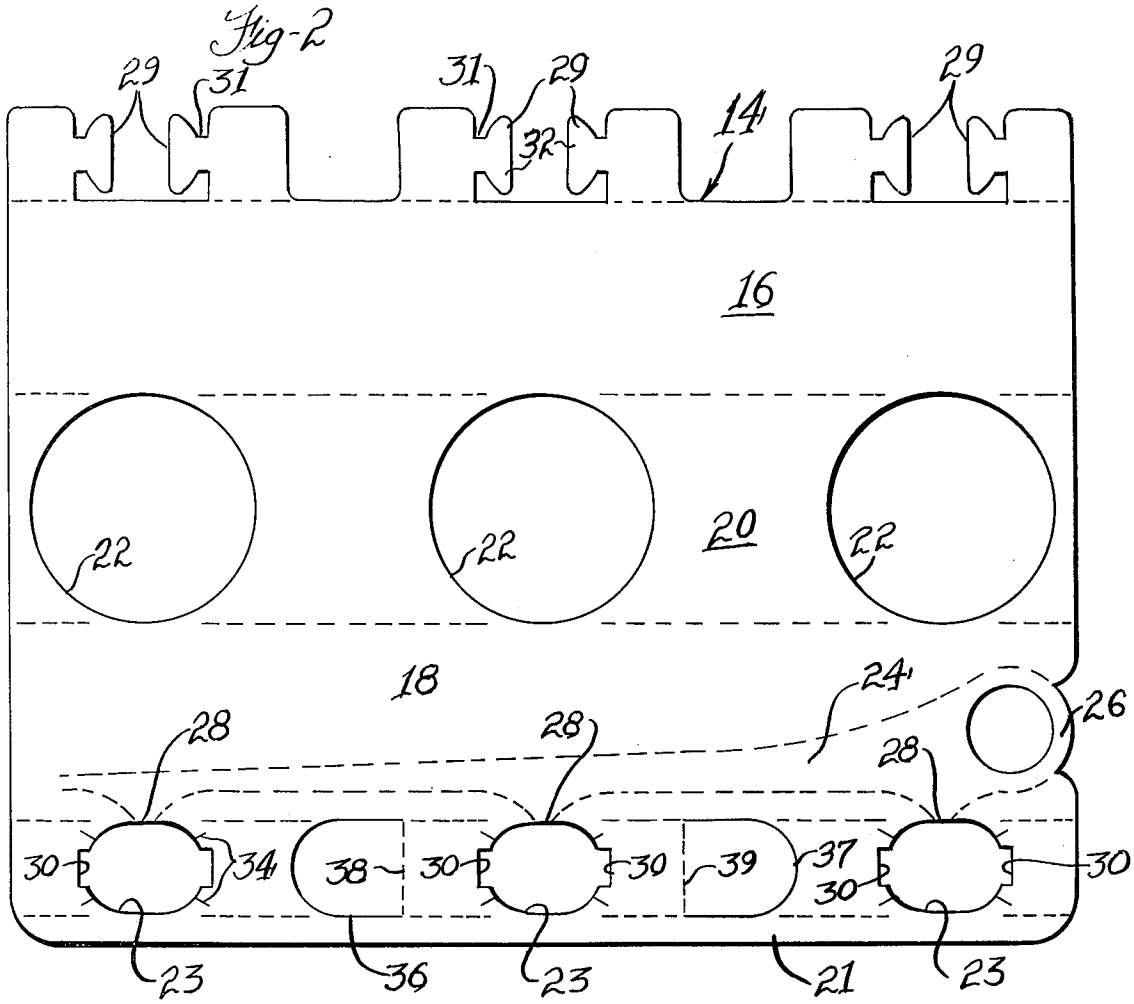


Fig-3

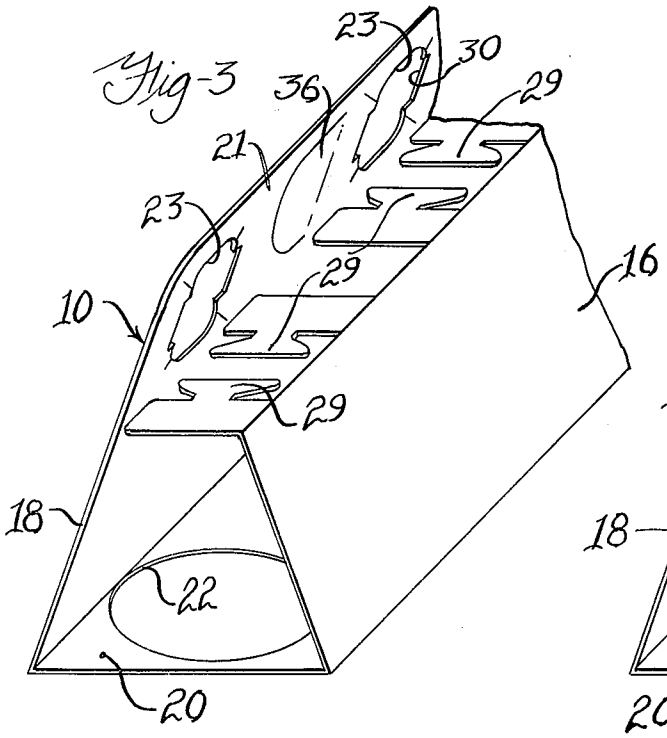
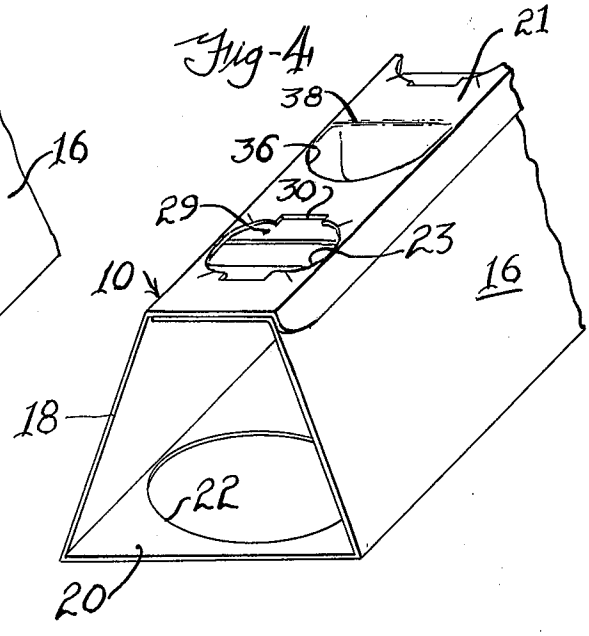


Fig-4



BOTTLE CARRIER

RELATED APPLICATION

This is a continuation application of application Ser. No. 292,268 filed Sept. 25, 1972.

BACKGROUND OF THE INVENTION

This invention relates to a carrier for a plurality of bottles, such as quarts, and is concerned more particularly with a novel carrier structure for bottles of the type having an annular bead about the top of the bottle and downwardly tapered shoulders leading into a major diameter portion of the bottle. The bottle carrier is formed of a single blank of sheet material having panels folded into a multi-sided hollow configuration.

Heretofore, bottle carriers have been provided such as cardboard cartons having six or more pouches with an upstanding gripping handle portion substantially centrally of the pouches so as to distribute the weight evenly for carrying bottles of the 12 and 16 ounce type. However, when carrying larger bottles such as quarts, these large bottles are placed in cases because of their weight. Also, because the large bottles are sold in cases containing twelve bottles, they are not very popular.

SUMMARY OF THE INVENTION

Accordingly, it is an object of this invention to provide a bottle carrier for holding less than twelve bottles of the quart size so that it is more convenient to buy three or so bottles of the larger size of such things as soft drinks or the like.

Another object of this invention is to provide a bottle carrier which is simple and inexpensive to manufacture yet efficient and reliable in use.

Briefly, the bottle carrier of this invention is formed from a blank of sheet material arranged to have spaced apart bend lines defining a plurality of panels forming sides and top and bottom wall members. A plurality of apertures are formed in the bottom wall member while a plurality of openings are formed in the top wall member, the apertures and openings being in registry with one another. Bottles to be inserted into the bottle carrier are inserted through the aperture in the bottom wall and then through the opening in the top wall so that the annular bead about the top of the bottle passes through the opening. A plurality of tab receiving recesses are formed within the periphery of the openings in the top wall so that corresponding tab members extending from one of the side walls and underlying the top wall will be urged through the opening when a bottle is inserted therein. This urging of tab means into tab receiving recesses causes the panels of the blank to be maintained in a folded locked condition for carrying of the bottles.

A tear strip is arranged to have a tear line extending into the periphery of each of the openings along the top of the carrier so that when pulled to tear through the sheet material forming the panels the bottles are completely released. Two or more finger holes are provided in the top wall of the carrier for lifting and carrying the bottles inserted therein.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevational view of a bottle carrier constructed in accordance with the principles of this invention and shows three bottles inserted therein for transport;

FIG. 2 is a plan view of a blank of sheet material forming the panels to be folded to form the bottle carrier of FIG. 1;

FIG. 3 is an enlarged perspective view showing the folding operation of the blank of FIG. 2;

FIG. 4 further illustrates the folded condition of the bottle carrier of FIG. 3;

FIG. 5 is an enlarged end view of the bottle carrier of FIG. 1; and

FIG. 6 is an enlarged fragmentary side view of the bottle carrier of FIG. 1.

DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

Referring now to FIG. 1 there is seen a bottle carrier designated generally by reference numeral 10 for receiving and carrying a plurality of bottles 12. In the illustrated embodiment there are three bottles shown in the carrier, it being understood that more or less than three bottles can be carried at a single time by a bottle carrier constructed in accordance with this invention. Also, when the bottles utilized in conjunction with the carrier are to be in touching proximity to one another, bottles such as those having a plastic coating 12*a* formed on the outside thereof are used. If, on the other hand, the bottles are to be spaced apart from one another, such exterior plastic coating of the bottles is eliminated. Also, it will be understood that containers of tin or plastic are included in the term bottles as used throughout the specification and claims.

The bottles 12 are of the type having either a pry-off or a screw-off cap as shown and include an annular bead 12*c* adjacent the top opening thereof and downwardly sloping shoulders 12*b* leading into the major diameter of the bottle.

Referring now to FIG. 2, the bottle carrier 10 is seen as being formed from a single blank 14 of relatively thin sheet-like material of plastic or the like. The blank 14 includes a plurality of panels defined by spaced apart fold lines to form elongated side wall portions 16 and 18 tied together by a bottom wall portion 20 and a top wall portion 21. A plurality of apertures 22 are formed at spaced apart locations in the bottom wall portion 20 into which the top and neck portion of bottles are inserted. A corresponding plurality of openings 23 are formed in the top wall portion 21 and are substantially in registry with the apertures 22 to insure complete passage of the neck through the openings so that the annular bead 12*c* of the bottles is forced to the outside of the top wall, as shown in FIGS. 5 and 6.

While a plurality of bottles are held by the carrier 10 they are easily separated therefrom by pulling a tear strip 24 which has a finger engaging ring portion 26 formed at one end thereof. The tear strip 24 has spaced apart sections 28 which lead directly into the openings 23 so as to substantially enlarge the opening about the neck of the bottle for release thereof.

Referring now to FIGS. 3 and 4, the blank 14 is folded as shown to have the top edge portion of the side wall 16 beneath the top wall 21 so that a plurality of tab members 29 underlie the adjacent top wall panel 21 and are located in registry with the openings 23, as best seen in FIG. 4. Each of the openings 23 is provided with tab receiving recesses 30 into which are urged the tabs 29. As best seen in FIG. 2, the tabs 29 have reduced dimension portions 31 spaced from an enlarged end portion 32 so as to become locked in position in the recess 30 upon pushing the head of the bottle through the

opening. This will cause the tab **29** to extend above the top wall and lock the panels together in an elongated hollow shape.

Each of the openings **23** are provided with severed portions **34** so as to cause slight deformation of the periphery about the openings **23** as the bottle is inserted therein for better gripping action, this being shown more clearly in FIG. **5.**

A pair of finger holes **36** and **37** are used for lifting and carrying the bottles within the bottle carrier from one place to another. The finger holes **36** and **37** preferably are formed by a cut-through section which may be C-shaped or U-shaped in configuration with a bend down portion indicated by the broken lines **38** and **39.**

Referring now to FIG. **5,** the bottle carrier **10** is shown at the end view thereof. Here it can be seen that a slight bulge **16***a* and **18***a* of the side walls **16** and **18,** respectively, will occur when the bottle carrier is in full contact with the bottles inserted therein. The diameter of the shoulder of the bottle engaging the periphery of the apertures **22** within the bottom wall **20** is at a vertical extent of the bottle which causes compression to be exerted on the side walls **16** and **18** to cause the corresponding bulges thereof. This bulging action adds to the rigidity of the bottle carrier, thus allowing greater strength to be obtained from thin flexible material from which the blank is formed.

Accordingly, the bottle carrier of this invention is highly efficient for carrying large bottles such as quarts in a simple and efficient manner while also being relatively inexpensive in manufacture thus allowing it to be completely disposable. Variations and modifications of this invention may be effected without departing from the spirit and scope of the novel concepts disclosed and claimed herein.

The invention is claimed as follows:

1. A package of a plurality of bottles and a carrier, each of said bottles comprising an enlarged crown portion and a neck portion divering downwardly from said crown portion, said carrier comprising a folded blank of a resilient plastic material arranged to define a pair of elongated downwardly diverging side walls, an elongated bottom wall integrally interconnected between the longitudinally extending lower marginal edges of said side walls, and an elongated top wall integrally interconnected between the longitudinally extending upper marginal edges of said side walls, upper openings formed through said top wall in a longitudinally spaced apart relationship, lower openings formed through said bottom wall in registry with respective ones of said openings in said top wall, said carrier mounted on said plurality of bottles with said lower openings engaging said neck portions of said bottles and said upper openings engaging said neck portions of said bottles immediately below said crown portions of said bottles, and the distance between the junctions of said top wall with said side walls down to the junctions of said side walls with said bottom wall in said package being less than the vertical length dimension of said side walls, said side walls being compressed into convex surfaces which are curvilinear about axes extending longitudinally of said package to resiliently urge said bottom and top walls apart and to resiliently stabilize said bottles in said carrier in a parallel spaced apart relationship.

2. The package plurality of bottles and a carrier as set forth in claim **1** further including tab means formed along the top edge of one of the side wall portions and underlying the top wall portion in registry with the openings formed therein for upward folding of the tab means into the openings as bottles are inserted therethrough for locking the panels of the blank into a hollow elongated bottle carrier.

3. The bottle carrier of claim **1** further including a perforated tear strip formed on one side wall portion and leading therefrom to said top wall portion and having a severable perforated parting line leading into each of said openings, whereby manual pulling of said tear strip will cause said top wall portion to part at the periphery of each of said openings for releasing the bottles from the bottle carrier.

4. The bottle carrier of claim **1** wherein said top wall portion includes at least two holes formed therein for lifting the bottle carrier when bottles are inserted therein.

5. A bottle carrier for a plurality of bottles, each bottle having an upper annular bead adjacent the top opening thereof and downwardly sloping shoulders leading to an enlarged diameter portion of the bottle, which comprises: a preformed blank of thin sheet material having a plurality of panels, said blank being folded to have the panels thereof form elongated spaced apart side wall portions, bottom wall portion, and a top portion, a plurality of apertures formed in said bottom wall portion to receive the neck of the bottles therethrough, a plurality of openings formed in said top wall portion in registry with said apertures to receive the top of the bottles inserted therein, said openings being arranged to allow passage of the bead at the top of the bottles to the outside of said top wall portion and configurated to provide a tab receiving recess, and tab means formed along and extending from the top edge of one of said side wall portions and underlying said top wall portion in registry with associated ones of said openings, said tab means including a reduced portion to fit into said tab receiving recess and an extended portion to overlie said top wall portion for locking said one of said side wall portions with said top wall portion.

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