

SPECIFICATION

Bottle carrier

5 This invention relates to bottle carriers.

Bottle carriers of the elongate, tubular, top-gripping type have been previously proposed for use in conjunction with compression caps or with screw on caps by engaging the lower edges of such caps. An example of such a top gripping carrier is that disclosed in our U.S. Patent 3,860,281.

According to a first aspect of the present invention, we provide for bottles having
15 flanged neck portions, a carrier comprising: an elongate tubular structure including a bottom wall having a plurality of neck receiving apertures therein for respectively receiving the necks of a plurality of bottles, and a pair of inwardly inclined side walls foldably joined along their bottom edges to the side edges of said bottom wall; each side wall being formed of a pair of panels secured together in face contacting relation over at least a substantial
20 portion of the areas thereof, a plurality of bottle flange receiving apertures being formed in the upper portions of said side wall panels and in transversely aligned relationship with said neck receiving apertures respectively, a plurality of single ply downwardly projecting pull tabs being struck from material otherwise removed to define the respective neck receiving apertures and disposed in coplanar relation with the inner one of one pair of said
35 panels, a pair of weakened severance lines being formed in said inner one panel and in general alignment with the side edges of each of said pull tabs, and a pair of weakened severance lines being formed in the outer one of said one pair of panels and in general coincidence with each pair of severance lines formed in said inner one panel.

In a second aspect of the present invention we provide a package comprising a carrier as aforesaid, and a plurality of bottles held thereby, each bottle having a flanged neck portion received through a respective neck receiving aperture in said bottom wall and with its flange supported by a respective
50 flange receiving aperture in each inclined side wall.

Our preferred embodiment of carrier described hereinbelow is especially adapted for use in conjunction with large bottles having
55 such neck flanges and is constructed so as not only to provide a secure package from which inadvertent dislodgement of the bottles is unlikely but which is also especially adapted for easy removal of one or more packaged bottles at the point of use. The pairs of registering severance lines suitably define two-ply tear strips which respectively extend from the bottom edge of the side walls to the respective flange receiving aperture in that one side wall,
65 whereby ready removal of each bottle is made

possible without impairing the strength and integrity of the carrier.

The invention is hereinafter more particularly described by way of example only with reference to the accompanying drawings, in which:—

Figure 1 is a perspective view of an embodiment of carrier formed according to the invention and showing the carrier applied to
75 three bottles;

Figure 2 is a plan view of a blank from which the carrier of Fig. 1 is formed;

Figures 3 and 4 depict intermediate stages through which the blank of Fig. 2 is manipulated;
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Figure 5 shows the completed carrier in collapsed condition;

Figures 6 and 7 are end views of the carrier showing the handle in straight up and turned down positions respectively; and
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Figure 8 is a perspective view of the carrier similar in some respects to Fig. 1 and which depicts pull tabs and their associated tear strips in partially and in completely torn out condition.
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In the drawings the numeral 1 designates the bottom wall in which a longitudinal medial fold line 2 is formed and in which a plurality of bottle neck receiving apertures 3, 4 and 5
95 are formed. The side edges of the bottom wall 1 are defined by fold lines 6 and 7.

An inner side wall panel 8 is foldably joined to one side edge of bottom wall along fold line 6 and the upper edge of inner side wall panel 8 is defined by interrupted fold line 9 which separates inner side wall panel 8 from inner side wall panel 10. A plurality of bottle flange receiving apertures 11, 12 and 13 are formed in the upper portions of inner side wall panels 8 and 10 as is best seen in Fig. 2. Outer side wall panel 14 is foldably joined to bottom wall 1 along fold line 7 and includes portions of a plurality of bottle flange receiving apertures 15, 16, and 17. A handle panel 18 is foldably joined to outer side wall panel 14 along interrupted fold line 19 and is provided with a pair of finger gripping apertures 20 and 21. A second handle panel 22 is foldably joined along top medial fold line 23 to handle panel 18 and includes a pair of finger gripping apertures 24 and 25.
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Foldably joined to handle panel 22 along fold line 26 is an outer side wall panel 27 in which parts of bottle flange receiving apertures 28, 29 and 30 are formed. As is apparent particularly from Fig. 2, parts of bottle flange receiving apertures 28, 29 and 30 may be formed in handle panel 22.

For rendering removal of the bottles from the carrier feasible and practical, a plurality of pull tabs 31, 32 and 33 are struck from bottle neck receiving apertures 3, 4, and 5 respectively and constitute downwardly extending coplanar projections of inner side wall panel 8 as is apparent from Fig. 1.
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Formed as continuations of the side edges such as 31a and 31b of pull tab 31 are a pair of severance lines 34 and 35. Similarly severance lines 36 and 37 are formed in panel 8 and are in general alignment with the sides 32a and 32b of pull tab 32 while severance lines 38 and 39 are formed as general continuations of the side edges 33a and 33b of pull tab 33.

Disposed in coincidence with the severance lines 34 and 35 are the severance lines 40 and 41 formed in outer side wall panel 27 while severance lines 42 and 43 also formed in outer side wall panel 27 are in coincidence with several lines 36 and 37 formed in inner side wall panel 8. Similarly severance lines 44 and 45 formed in outer side wall panel 27 are disposed in coincidence with severance lines 38 and 39 respectively formed in inner side wall panel 8.

In order to form the carrier shown for example in Fig. 1 from the blank shown in Fig. 2, inner side wall panel 10 is folded upwardly and over into flat face contracting relation with inner side wall panel 8 and an application of glue is made to outer panel 14 as is indicated by stippling in Fig. 3. Thereafter inner side wall panels 8 and 10 are elevated and bottom wall 1 is folded along its longitudinal medial fold line 2 in order to cause the inner side panel 10 to adhere in flat face contacting relation to outer panel 14. These panels are secured together over at least substantial portions of their areas. The carrier then appears as shown in Fig. 4.

Thereafter an application of glue is made to handle panel 18 and to outer side wall panel 27 as shown by stippling in Fig. 4 following which outer side wall panel 27 and handle panel 22 are elevated and folded along fold line 23 to cause the outer side wall panel 27 to adhere to inner side wall panel 8 and to cause handle panel 22 to adhere to handle panel 18. The carrier is then complete and in collapsed form as shown in Fig. 5. In order to set the carrier up, it is necessary simply to fold the portions of bottom panel 1 into coplanar relationship along fold line 2 and the carrier then appears as shown for example in Fig. 1. The bottles B1, B2 and B3 are loaded into the carrier by simply lowering the set-up carrier downwardly over the bottle caps and necks so as to cause the flanges F of the bottles to move into the bottle flange receiving apertures 15, 16, 17, 28, 29 and 30 so that the flanges rest on the lower edges such as E1, E2 and E3 of flange receiving apertures 28, 29 and 30 and on the corresponding edges of flange receiving apertures 15, 16 and 17 while the necks of the bottles are disposed within neck receiving apertures 3, 4 and 5 formed in bottom wall 1.

With the carrier assembled as shown in Fig. 1, for example, the bottle flanges are securely held in place due in part to the double thick-

ness of the inwardly tapered side walls and to the fact that the board itself is preferably made of heavy duty paperboard.

For the purpose of dislodging the bottles from the carrier, it is simply necessary manually to grasp the pull tabs such as 31, 32 and 33 and to exert an outward upward pull thereon which effectively removes the tear strips TS1, TS2 and TS3. For example tear strip TS1 is of double thickness and is defined by severance lines 34 and 35 and the registering severance lines 40 and 41. Once the tear strip TS1 is removed, bottle B1 may obviously be removed from the carrier as indicated in Fig. 8. In like fashion tear strip TS2 is defined by severance lines 36 and 37 and their registering severance lines 42 and 43 respectively while tear strip TS3 is defined by severance lines 38 and 39 and their registering severance lines 44 and 45 respectively. In Fig. 8 tear strip TS2 is shown in partially torn out condition while tear strip TS3 is shown in bottle holding condition.

While the embodiment of carrier described and illustrated herein is primarily intended for use in conjunction with large two-litre heavy bottles having flanges, it is obvious that carriers in accordance with this invention may also be used in conjunction with small light weight bottles in which event a larger number of bottles could be accommodated on one carrier due to the substantial strength of the carrier without impairing easy and ready removal of the bottles at the point of use.

Our carriers are primarily intended to utilize heavy duty paperboard of the type used in conjunction with folding boxes, for example. The invention is not limited to such material and may use sheet material formed of plastics or other semirigid material.

CLAIMS

1. For bottles having flanged neck portions, a carrier comprising: an elongate tubular structure including a bottom wall having a plurality of neck receiving apertures therein for respectively receiving the necks of a plurality of bottles, and a pair of inwardly inclined side walls foldably joined along their bottom edges to the side edges of said bottom wall; each side wall being formed of a pair of panels secured together in face contacting relation over at least a substantial portion of the areas thereof, a plurality of bottle flange receiving apertures being formed in the upper portions of said side wall panels and in transversely aligned relationship with said neck receiving apertures respectively, a plurality of single ply downwardly projecting pull tabs being struck from material otherwise removed to define the respective neck receiving apertures and disposed in coplanar relation with the inner one of one pair of said panels, a pair of weakened severance lines being formed in said inner one panel and in general alignment



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with the side edges of each of said pull tabs, and a pair of weakened severance lines being formed in the outer one of said one pair of panels and in general coincidence with each pair of severance lines formed in said inner one panel.

2. A carrier according to Claim 1, wherein the pairs of registering severance lines in said outer and inner panels define two-ply tear strips which respectively extend from the bottom edge of one of said side walls to the respective flange receiving apertures in said one side wall.

3. A carrier according to Claims 1 or 2, wherein a medial fold line is formed longitudinally in said bottom wall for accommodating collapsible folding of said tubular structure.

4. A carrier according to any preceding Claim, wherein a pair of handle panels are secured together in face contacting relation over at least a substantial portion of the areas thereof and are respectively foldably joined along their lower edges to the upper edges of the outer ones of said side wall panels.

5. For bottles having flanged neck portions, a carrier substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

6. A package comprising a carrier according to any preceding claim, and a plurality of bottles held thereby, each bottle having a flanged neck portion received through a respective neck receiving aperture in said bottom wall and with its flange supported by a respective flange receiving aperture in each inclined side wall.

7. A package substantially as hereinbefore described with reference to and as shown in Figs. 1, 6, 7 and 8 of the accompanying drawings.