

[54] CARRIER FOR FLANGED ARTICLES
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[58] Field of Search. 294/87.2, 87; 206/65 C, 206/65 E, 145, 147, 153, 158, 162, 170, 175, 427; 224/45 A, 45 AA, 45 AB, 45 BA

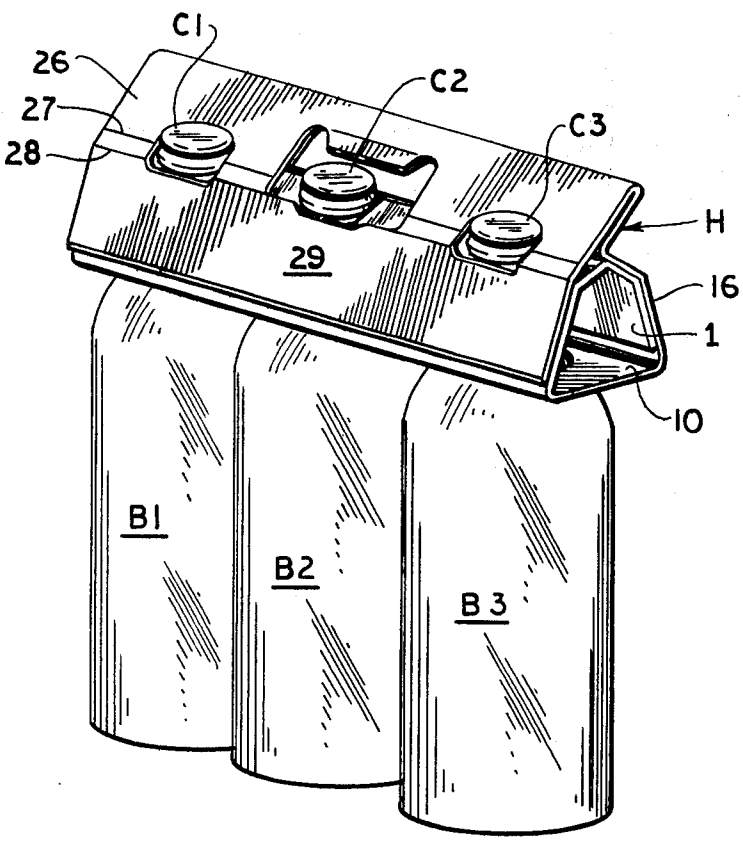
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[57] ABSTRACT

A carrier for elongated flanged articles comprises an elongated tubular structure having foldably joined top, bottom and side walls, aligned apertures formed in the top and bottom walls for receiving a part of the article in such manner that the flange is disposed immediately above the top wall to provide support for the article and a pair of handle panels forming parts of the side walls respectively and extending upwardly therefrom, the handle panels being formed with apertures adjacent the aperture in the top wall for receiving portions of the adjacent article especially during sidewise folding of said handle panels to accommodate stacking of the carrier.

4 Claims, 3 Drawing Figures



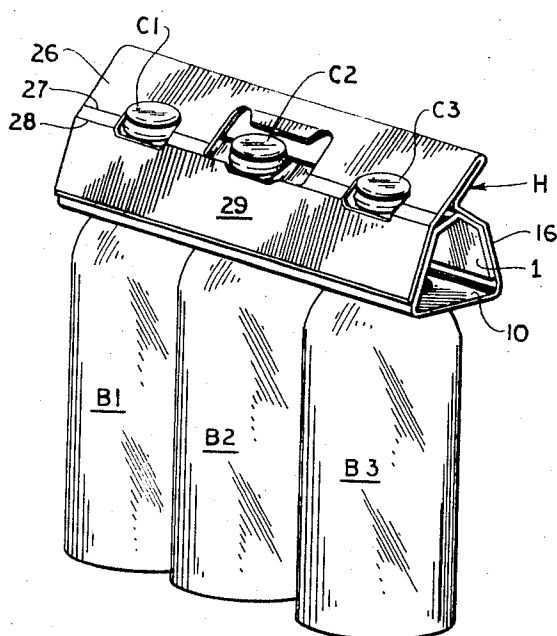


FIG 1

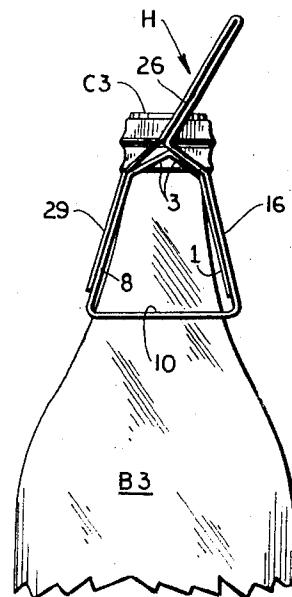


FIG 2

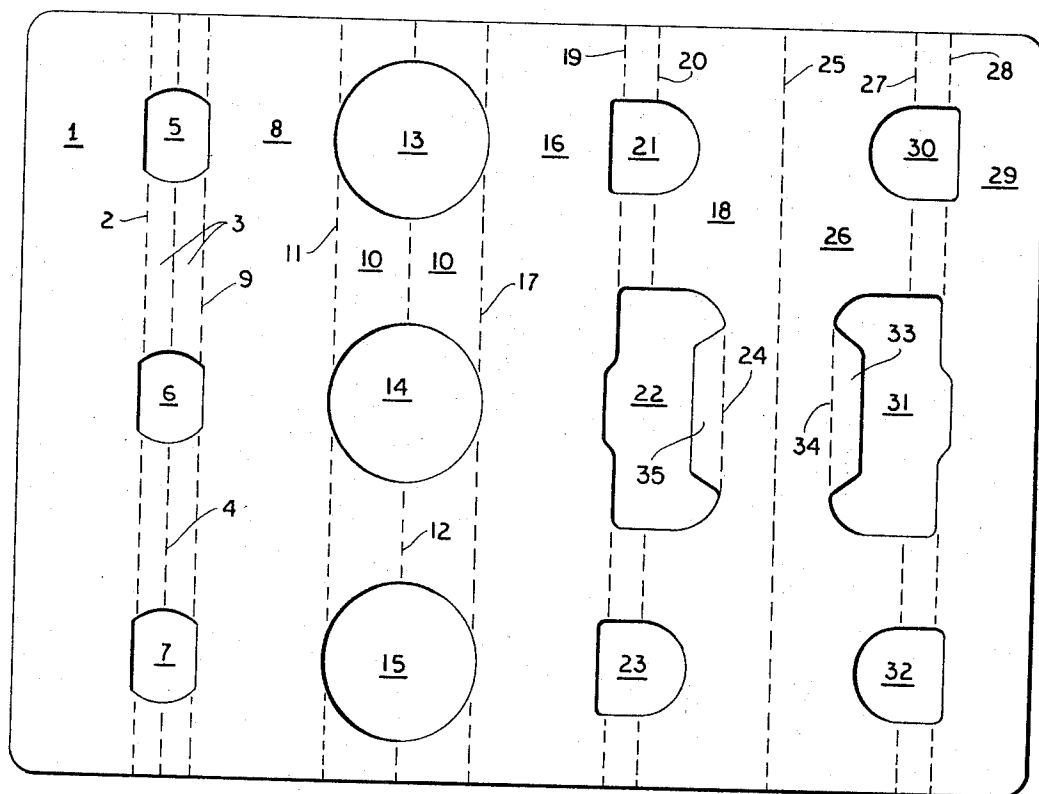


FIG 3

CARRIER FOR FLANGED ARTICLES

The current trend toward the use of larger and larger primary packages such as bottles having caps as closure elements has made it desirable to provide carriers having handle means adapted to accommodate substantial weight without impairing stacking of one carrier and its contents atop another similar carrier and contents and the present invention relates to carriers of the type disclosed in U.S. Pat. No. 3,016,259 Lawrence.

According to the invention a tubular structure having top, bottom and side walls foldably joined to form a tubular structure and having aligned apertures formed in the bottom and top walls for receiving portions of the packaged articles is provided with a collapsible handle structure comprising a pair of handle panels extending upwardly from the top edges of the side walls and secured together along their top edges, each handle panel being provided with an aperture adjacent the adjacent portion of a packaged article and adapted to receive such adjacent portion whereby sidewise folding of the handle panels is made possible so that stacking of one package atop another similar package is accommodated.

For a better understanding of the invention reference may be had to the following detailed description taken in conjunction with the accompanying drawing in which

FIG. 1 is a perspective view of a loaded carrier formed according to the invention;

FIG. 2 is a partial end view of the structure shown in FIG. 1;

and in which FIG. 3 is a plan view of the inside surface of a unitary blank from which the carrier shown in FIGS. 1 and 2 is formed.

In the drawings the numeral 1 designates a side wall panel having an edge designated by the numeral 2 to which top wall 3 is foldably joined. A medial fold line 4 is formed in top wall 3 and a plurality of apertures 5, 6 and 7 are formed in top wall 3. Side wall panel 8 is foldably joined along fold line 9 to an edge of top wall 3. Bottom wall 10 is foldably joined along a fold line 11 to an edge of side wall 8 and a medial fold line 12 is formed in bottom wall 10 along with a plurality of apertures 13, 14 and 15.

With the side, top and bottom walls formed into a tubular structure the neck portions of the packaged bottles such as B1, B2, and B3 are received within apertures 13, 14 and 15 while the cap portions C1, C2, and C3 of the bottles are inserted from below through the apertures 5, 6 and 7 formed in the top wall 3. The caps of the packaged articles such as C1, C2 and C3 are disposed immediately above the apertures 5, 6 and 7 respectively so as to provide support for the primary packages in known manner.

In order to provide handle structure H for the carrier and to aid in forming a secure tubular structure, side wall panel 16 is foldably joined along fold line 17 to one side of bottom wall 10 and handle panel 18 is foldably joined along fold line 19 to side wall panel 16. Fold line 20 is formed in handle panel 18 and is spaced from the bottom edge 19 of handle panel 18. Apertures 21, 22 and 23 are formed in handle panel 18 and if desired may extend somewhat into side wall panel 16 as is indicated in FIG. 1. Furthermore aperture 22 not only receives and accommodates passage of cap C2 but this aperture also serves to afford hand gripping space. A flap 35 is foldably joined along fold line 24 to handle

panel 18. Fold line 25 separates handle panel 18 from handle panel 26 which in turn is provided with fold line 27 spaced from fold line 28 which interconnects side wall panel 29 with handle panel 26. Apertures 30, 31 and 32 are provided in handle panel 26 and may extend somewhat into side wall panel 29 as is apparent in FIG. 3. Flap 33 is foldably joined along fold line 34 to handle panel 26.

In order to form the carrier as shown in FIGS. 1 and 2 from the blank depicted in FIG. 3, an application of glue is first made to the inner upper surface of side wall panel 16. Thereafter side wall 1 is elevated and folded toward the right along medial fold line 4 formed in top wall 3. This folding operation in effect collapses the top wall on itself along the medial fold line 4 and causes side wall panel 1 to lie in face contacting relation with the exposed inner surface of side wall 8. Following this folding operation the parts of the blank shown in FIG. 3 which are disposed to the left of fold line 12 are elevated and folded toward the right to cause side wall panel 1 to come into face contacting relation with side wall panel 16 and to become adhered thereto.

Following the above described folding and gluing operations, an application of glue is made to handle panels 18 and 26 in the region thereof of adjacent fold line 25 and to side wall panel 29 as indicated by stippling in FIG. 3. Following this application of glue, the parts of the blank which are disposed to the right of fold line 25 as viewed in FIG. 3 are elevated and folded toward the left. This operation causes the portions of handle panels 18 and 26 which are adjacent fold line 25 to adhere to each other and also causes the inner surface of side wall panel 29 to adhere to the outer exposed surface of side wall panel 8. The carrier then is complete and is in collapsed condition.

In order to load the carrier it is necessary to form a tubular structure as shown in FIGS. 1 and 2 by simply flattening top wall 3 and bottom wall 10 while simultaneously moving the side walls apart. Thereafter the bottles are assembled in aligned relationship as shown in FIG. 1 and the carrier is loaded by inserting the upper ends of the bottles through the openings 13, 14 and 15 and subsequently through the openings 5, 6 and 7. The package then appears in completed form as shown in FIGS. 1 and 2.

From the above described folding and gluing operations, it is apparent that handle panels 18 and 26 are disposed in flat face contacting relation to each other and that the apertures 30 and 31 are in general coincidence with each other. Such apertures are thus disposed adjacent the cap C1 of bottle B1. In similar fashion apertures 22 and 31 are generally coincident as are their flaps 35 and 33 and such apertures not only form hand gripping space as is apparent from FIG. 1 but apertures 22, 31 accommodate the cap C2 of bottle B2. In like fashion apertures 23 and 32 are generally coincident when the carton is assembled and such apertures serve to accommodate the cap C3 of bottle B3 when the handle structure is folded to one side or the other to an out-of-the-way position in such manner as to accommodate stacking of one package such as is shown in FIG. 1 atop another similar package such as is shown in that figure.

It is apparent that the caps C1, C2 and C3 constitute outwardly extending projections or flanges which in effect rest atop the top edges of the side wall panels 1, 8, 16 and 29. Furthermore it is apparent that maximum

stability and support are provided according to the invention because the handle panels 18 and 26 extend upwardly from the upper edges 19 and 28 of side wall panels 16 and 29 respectively. Furthermore it is apparent that fold lines 20 and 27 are spaced from the top edges 19 and 28 of side wall panels 16 and 29 and from the bottom edges of the handle panels 18 and 26 by approximately one-half the width of top wall 3. In this manner sidewise folding of the handle H is well accommodated as is apparent from FIG. 2. Furthermore it is also apparent that the handle panels 18 and 26 afford substantial reinforcement lengthwise of the carrier and thus aid substantially in accommodating large heavy primary packages such as bottles B1, B2 and B3. Strength and stability of the carrier are enhanced due to the fact that the side walls taper inwardly as is apparent from FIGS. 1 and 2 and thus enhance the security of the gripping action of the carrier underneath the caps or flanges C1, C2 and C3.

While the invention is shown in connection with capped bottles, it is not limited thereto and may have application to other flanged articles such as cans having outwardly projecting chimes or flanges.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A carrier for an elongated flanged article comprising an elongated tubular structure having foldably joined top, bottom and side walls, said top and bottom walls having aligned apertures for receiving a part of the article in such manner that the flange is disposed immediately above said top wall to provide support for the article, a pair of handle panels immediately adja-

cent one pair of side walls which overlie a second pair of sidewalls respectively, said handle panels extending upwardly therefrom, a fold line formed in at least one of said handle panels in spaced relation to the bottom edge of said one handle panel to facilitate sidewise folding thereof into a position below the top of the article to accommodate stacking of one carrier atop another carrier, an aperture formed in each of said handle panels adjacent the aperture in said top wall for receiving the adjacent end of a packaged article and facilitating the sidewise folding thereof, the lower portions of said handle panels and the side walls being tapered inwardly to facilitate tightening of said apertures formed in said top wall and in said handle panels around said flange when upward pressure is applied to said handle panels, and wherein the transverse dimension of said top wall is less than the diameter of the flange.

2. A carrier according to claim 1 wherein a fold line is formed in each of said handle panels and spaced above the top edge of the associated side wall for facilitating sidewise folding of said handle panels to a carrier stacking position.

3. A carrier according to claim 1 wherein said apertures formed in said handle panels are configured to define generally coincident hand gripping openings which constitute extensions of the article receiving parts thereof.

4. A carrier according to claim 1 wherein the space between the top edge of each side wall and said fold line in said one handle panel is approximately one-half the transverse dimension of said top wall.

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