

[54] CARRIER FOR FLANGED ARTICLE
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[52] U.S. CL.....294/87.2, 206/65 E
[51] Int. Cl.....B65d 69/00
[58] Field of Search.....294/31.2, 87.2; 206/65 E

[56] References Cited
UNITED STATES PATENTS

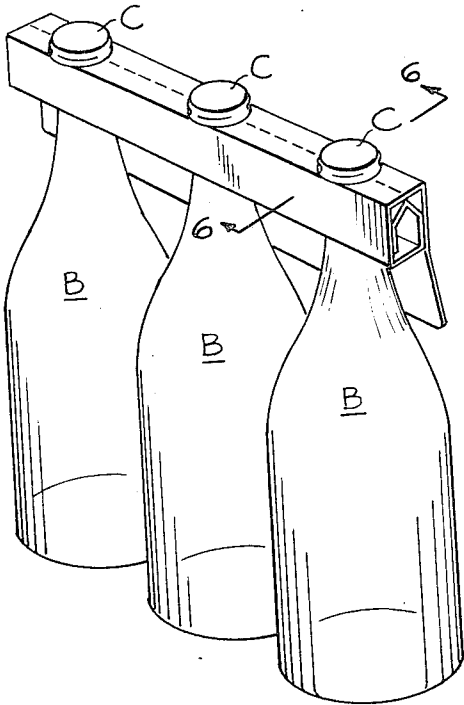
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[57] ABSTRACT

A carrier for elongated flanged articles comprises an elongated tubular structure formed from a single rectangular blank and folded along transverse fold lines so as to form a generally rectangular exterior tubular structure inside of which a pair of upwardly converging support panels are disposed, the support panels being foldably joined to each other along their top edges and being hingedly secured to the interior of the sidewalls and a plurality of aligned apertures being formed in the top and bottom panels and in the support panels, the apertures in the support panels being disposed astride the fold line therebetween.

5 Claims, 7 Drawing Figures



SHEET 1 OF 2

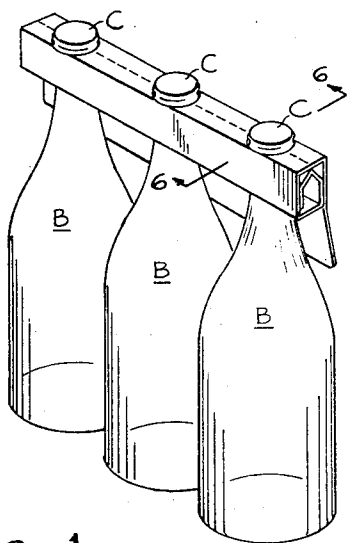


FIG. 1

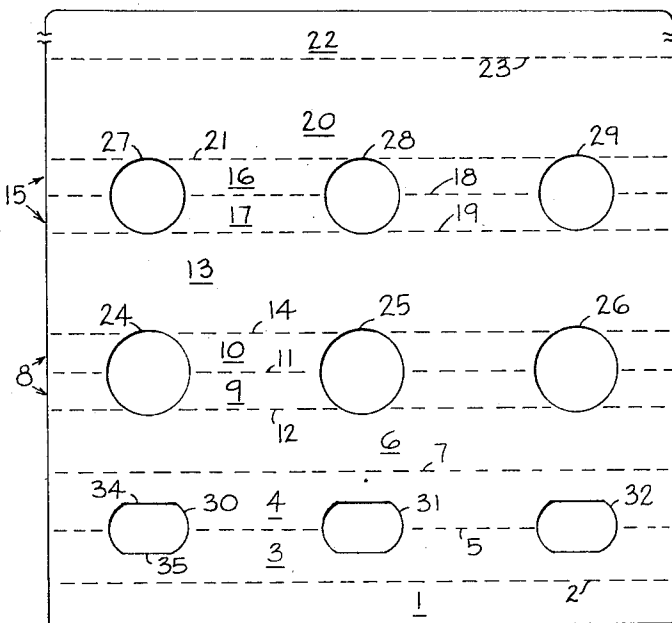


FIG. 2

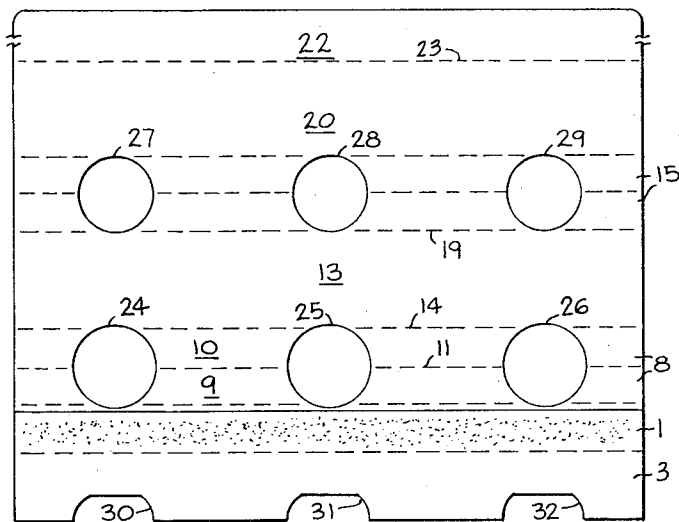


FIG. 3

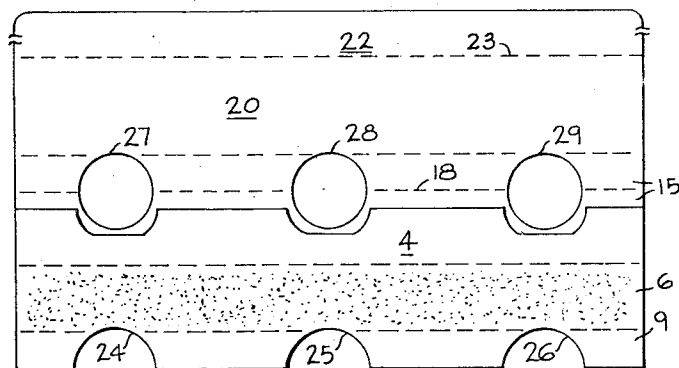


FIG. 4

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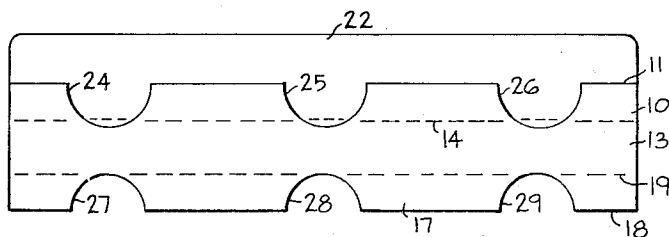


FIG. 5

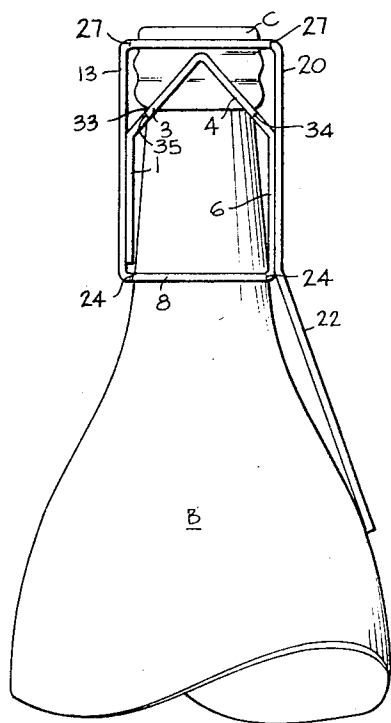


FIG. 7

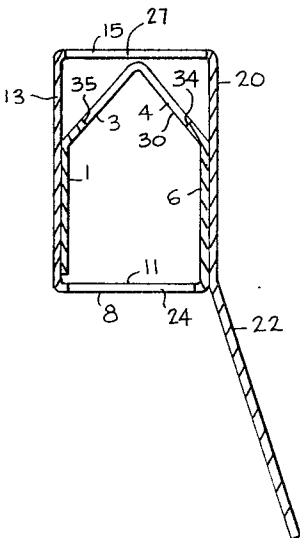


FIG. 6

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CARRIER FOR FLANGED ARTICLE

Article carriers of the so-called top-engaging type ordinarily are arranged in such manner that openings are provided in the top and bottom panels and the opening in the top panel is specially constructed so as to grip the packaged articles such as a flanged or capped bottle immediately below the cap or flange. Known carriers of this type function well in conjunction with capped bottles particularly where the bottles are of small and medium size.

According to this invention a so-called cap-engaging carrier is provided which is particularly well suited for large-size bottles which are provided with screwcaps the lower edge portion of which ordinarily is rounded and hence does not present a well-defined edge which may be gripped by the carrier. More specifically this invention provides a top-engaging carrier wherein a generally rectangular tubular structure is provided inside of which a pair of sturdy support panels are arranged with their upper edges foldably joined together and with their lower edges secured to the interior surfaces of the sidewalls, apertures being provided in the carrier in aligned relationship in the top and bottom walls as well as in the support panels for receiving and gripping the bottle necks underneath the lower edges of their caps. According to a feature of the invention, the top wall effectively grips and stabilizes the top portion of the packaged article and also prevents outward bowing of the carrier sidewalls thereby to provide snug sturdy support of the article.

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

FIG. 1 is a perspective view of a complete package formed according to the invention;

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

FIGS. 3, 4 and 5 represent folding and gluing operations through which the blank of FIG. 2 is manipulated to form the completed carrier shown in collapsed form in FIG. 5;

FIG. 6 is an enlarged cross-sectional view of a setup carrier such as is shown in FIG. 1 taken along line 6—6 in FIG. 1; and, in which

FIG. 7 is a view similar to FIG. 6 but which shows the carrier applied to an article to be packaged such as a bottle.

In the drawings the numeral 1 designates an anchoring and reinforcing panel which is foldably joined along fold line 2 to support panel 3. Support panel 4 is foldably joined to support panel 3 along medial fold line 5. Anchoring and reinforcing panel 6 is foldably joined to support panel 4 along fold line 7. The parts 1-7 inclusive constitute the interior supporting structure which is disposed within an exterior tubular structure.

The exterior tubular structure of the carrier comprises bottom wall 8 which comprises a pair of wall sections 9 and 10 foldably joined to each other along a medial fold line 11. Half-section 9 is foldably joined to reinforcing and anchoring panel 6 along fold line 12 and half-section 10 is foldably joined to sidewall 13 along fold line 14. The top wall of the carrier is generally designated by the numeral 15 and comprises a pair of half-sections 16 and 17 which are foldably joined to each other along medial fold line 18. Wall half-section 17 is foldably joined to sidewall 13 along fold line 19 while top wall half-section 16 is foldably joined to sidewall 20 along fold line 21. Extension panel 22 is foldably joined to sidewall 20 along a weakened severance line 23.

For receiving the necks of the packaged articles such as bottles B, a plurality of apertures 24, 25 and 26 are formed in bottom wall 8 and similar apertures 27, 28 and 29 are formed in top wall 15.

For snugly gripping the bottlenecks underneath the lower edges of the screw-type caps, a plurality of apertures 30, 31 and 32 are formed in support panels 3 and 4 and are disposed astride the medial fold line 5 which foldably joins these two support panels.

In order to form the completed carrier depicted in FIGS. 1, 5, 6 and 7 from the blank shown in FIG. 2, the blank of FIG. 2

is reinforcing and anchoring panel 1 together with half-section 3 are elevated and folded forwardly along medial fold line 5 by which support panel 3 is foldably joined to support panel 4. The blank then appears as depicted in FIG. 3.

An application of glue is then made to reinforcing and anchoring panel 1 as indicated by stippling in FIG. 3. Thereafter all panels of the blank as shown in FIG. 3 which are disposed below the fold line 11 are elevated and folded forwardly so as to cause the anchoring and reinforcing panel 1 to adhere to the interior surface of sidewall 13. The blank then appears as shown in FIG. 4. Thereafter an application of glue is made to anchoring and reinforcing panel 6 as indicated by stippling in FIG. 4 and those portions of the blank as shown in FIG. 4 which are disposed below the fold line 18 are then elevated and folded forwardly to occupy the positions depicted in FIG. 5. This operation causes anchoring and reinforcing panel 6 to adhere to the interior surface of the sidewall 20 and the blank then appears as shown in 5 in completed and collapsed form.

With the carrier in the condition depicted in FIG. 5, the panels 17 and 22 are pressed inwardly toward each other by urging areas adjacent fold lines 11 and 18 toward each other. This action causes the tubular structure to expand into substantially the condition depicted in FIG. 6. Thereafter the carrier as shown in FIG. 6 is placed atop one or more articles such as the three bottles B with the apertures such as 27, 24 and 30 disposed in coincidence with the neck of the end bottle and with the other bottles similarly disposed. The carrier is then pressed downwardly to cause the bottlenecks to be received within the apertures until the position of the various elements as shown in FIG. 7 is achieved. As is apparent in FIG. 7, the lower edge portion 33 of the cap C rests securely on the edges 34 and 35 of the aperture 30. Support panels 3 and 4 converge upwardly as is apparent in FIGS. 1, 6 and 7 and the sidewalls are prevented from bowing outwardly by the top wall 15 which holds the support panels 3 and 4 and sidewalls in substantially the angular relationship depicted in FIGS. 1, 6 and 7.

From the above description it is apparent that a carrier constructed according to this invention is particularly well suited for large articles such as large bottles B and that due to its sturdy and braced construction including the holding action of the top wall 15, the sturdy support panels 3 and 4 securely grip the bottleneck below the rounded lower edge portion 33 of the screwcap C. Thus, according to the invention, an improved heavy duty carrier is provided which is well adapted for use in conjunction with heavy articles and which also is usable in connection with articles having screwcaps the lower edges of which are rounded or are otherwise difficult to grip and hold securely.

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 sidewalls, said top and bottom walls having aligned apertures for receiving a part of the article, a pair of upwardly convergent support panels disposed within said tubular structure and foldably joined together along a fold line constituting their top edge portions and hingedly connected respectively to said sidewalls, a third aperture formed in said support panels and disposed astride said fold line in alignment with said apertures in said top and bottom walls, said third aperture being arranged to engage the article underneath the flange thereof.

2. A carrier according to claim 1 wherein said top and bottom walls each includes a medial fold line defining wall half sections foldable into substantially parallel planes so as to render the carrier collapsible.

3. A carrier according to claim 1 wherein the lower interior portion of each of said sidewalls comprises an anchoring and reinforcing panel to the upper edge of which one of said support panels is foldably joined.

4. A carrier according to claim 1 wherein the aperture formed in said top wall dimensioned and configured so as snugly to engage the adjacent portion of the article thereby to secure the article in position relative to the carrier.

5. A carrier according to claim 1 wherein an extension panel is joined to an exterior ply of one of said sidewalls along a weakened severance line whereby said extension panel is detachable from the carrier without materially affecting the strength of said one sidewall.

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