United States Patent

Owen et al.

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[54] **ONE-PIECE CONTAINER CARRIER**

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[52] **U.S. Cl.** .....**215/100 A**, 220/85 H, 220/94 R, 294/31.2, 294/87.2

[51] **Int. Cl.**.....**B65d 2/12**, B16c 1/00

[58] **Field of Search**.....294/31.2, 87.2; 224/45 R, 45 AA, 224/45 BA, 45 P; 220/85 H, 94 R; 215/100 A; 206/65 C, 65 E; 229/52 AL

[56] **References Cited**

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[57] **ABSTRACT**

A one-piece container carrier is integrally formed from a flattened tube and comprises an endless band having a ring portion adapted to engage a complementary container and a bail portion which is situated above and transversely arranged relative to the ring portion engaging a complementary container.

2 Claims, 3 Drawing Figures

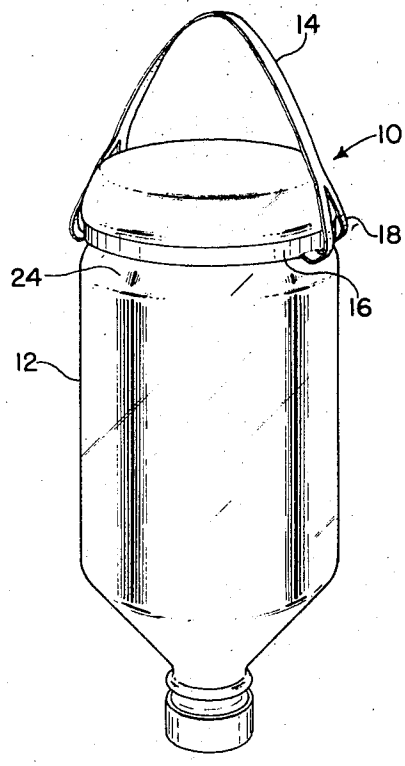


Fig. 1

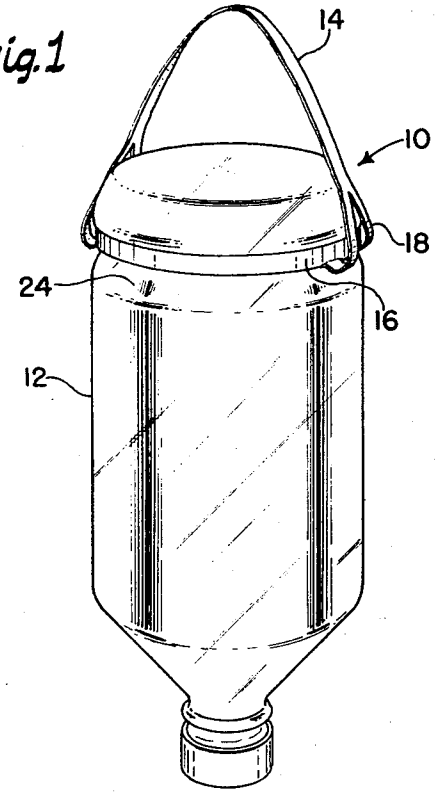
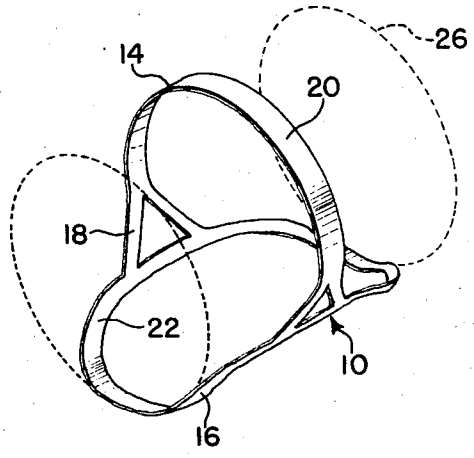


Fig. 2



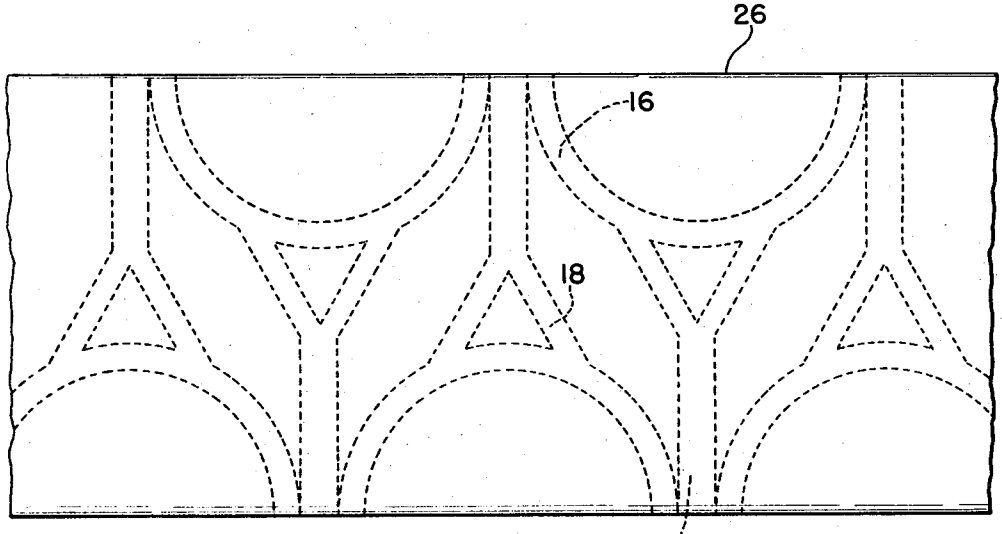


Fig. 3

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ONE-PIECE CONTAINER CARRIER

BACKGROUND OF THE INVENTION

Carriers or devices for holding or retaining a bottle are known generally by U.S. patents to Clancy - No. 1,596,076, Updegraff - No. 3,463,536, and Jennings - No. 3,000,527. Both Jennings and Updegraff are concerned with a thermoplastic container carrier adapted to be retained beneath the lip of a bottle or the like. The carriers represented by these patents also include integral bail portions which are normally positioned in the same plane as an endless band portion. Another form of container carrier, represented by Clancy, utilizes a bail portion which has interconnecting ends to form a generally U-shaped handle for the container. The prior art devices necessitate manual positioning of the bail of the container to be held and, in forms typified by Clancy, require an additional attaching step prior to positioning the bail. The prior art also utilizes designs requiring manufacturing techniques which are relatively expensive for mass production.

SUMMARY OF THE INVENTION

It is an object of the invention to provide an integral container carrier with a pre-positioned bail element.

It is another object of the invention to provide a container carrier which aggressively grips and retains a single container, but requires a minimum of preassembly relative thereto. It is still another object of the invention to provide a container carrier which may be readily and efficiently produced from a tube of thermoplastic material.

These and other objects and advantages of the invention are obtained through a container carrier formed from a flattened tube which consists of an endless band including a bail portion transversely disposed to an integral ring portion.

The carrier of this invention is formed by flattening a tube of thermoplastic material and stamping a series of carriers in the form of endless bands from the tube material. The endless band will be stamped in such a manner as to form a separated portion which takes the form of a ring-like configuration. The ring-like portion is thereafter fitted over a complementary container in such a manner as to aggressively grip and retain the container and yet provide a readily accessible predisposed bail portion for holding or transporting the container.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the container carrier holding a complementary bottle;

FIG. 2 is a perspective view of the carrier in a relaxed position showing, in dotted lines, the tube from which it is produced; and

FIG. 3 is a plan view of a tube showing a series of container carriers to be punched from the tube.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The carrier **10** generally assumes the configuration of an endless band which includes a bail portion **14** and a ring portion **16**. The ring portion **16** is integrally formed with the bail portion **14** and is transversely disposed to the bail portion.

FIG. 1 shows a package including the container carrier **10** holding a bottle **12**, such as an I.V. bottle, in an upright position. The ring portion **16** of the carrier extends around and aggressively grips the container in a complementary groove **24** on the container. In this configuration, the bail portion **14** of the endless band is prepositioned above the container and is adapted to carry or position the container.

The relaxed configuration of the carrier is shown in FIG. 2 as an endless band which is a portion of tube **26**, shown in dotted lines. The bail portion **14** is shown to extend in a plane generally transverse to the longitudinal axis of the tube **26**, while the ring portion **16** extends generally parallel to the longitudinal axis of the tube. The ring portion **16** and the bail portion **14** retain their transverse positioning relative to one another, when in actual use as shown in FIG. 1. Thus, the bail portion **14** of the carrier is prepositioned with respect to the ring portion **16** in order to be ready for use after installation of the ring portion **14** about the container without a secondary operation.

The utilization of a tube of thermoplastic material for the manufacture of container carriers, is an efficient manner of producing such carriers as shown generally, in FIG. 3. When a tube of thermoplastic material is flattened, there will be provided upper and lower superpositioned layers. This will permit the stamping of one-half of the ring and bail portions **16, 14** respectively in each of the upper and lower layers. Economic utilization of the tube may further be enhanced by alternating the carriers to be stamped from the tube, as shown by the dotted lines in FIG. 3.

The bail portion **14** of the endless band is connected integrally by means of a connecting bifurcated portion **18** to the outer periphery of the ring portion **16**, as shown in FIG. 2. The connecting portions **18** are shown to connect the bail portion **14** to the ring portion **16** at diametrically opposed segments of the ring portion **16**. The diametrically opposed connections thus insure stability in handling the package when the container and carrier are assembled.

In operation, each individual container carrier is applied to a complementary container, such as an I.V. bottle **12**, by slightly stretching the ring portion **16** to be received in the complementary groove **24**. Thus the outer or inner surface of the ring portion **16** of the endless band is positioned against the periphery of the complementary container and the ring portion **16** subsequently aggressively grips the container in such a manner as to securely retain the container in carrying or positioning the package. After the ring portion **16** is positioned within the complementary groove **24**, the bail portion **14** automatically assumes a position overlying the container and is immediately available for use without the necessity of utilizing a secondary step to position the bail.

The use of a flattened tube to produce a series of endless bands having bail portions **14** and ring portions **16** is thus shown to be an efficient manner for producing a carrier for a single container. Such a carrier is free of any preassembly or additional steps for positioning or attaching a bail portion to a container.

A will be understood, the invention is not limited to the specific embodiment set forth for illustrative purposes, but also includes all of the structural changes which come within the scope of the appended claims.

We claim:

1. A one-piece container carrier of a resilient deformable plastic material having a certain thickness, said carrier comprising an annular band and an integral bail member which in the relaxed state lie on and extend circumferentially continuously about the surface of an imaginary cylinder with said bail aligned substantially circumferentially of said cylinder and the ends of said bail being integrally connected to the outer marginal edges of said band with the axis of said band being disposed substantially perpendicular to the axis of said cylinder, said annular band and said bail member having said certain thickness in a direction radially of said cylinder, the radial width of said band being substantially greater than said certain thickness and the inner peripheral measurement of said band being less than the peripheral measurement of the container intended to be associated therewith whereby said band assumes a frustoconical shape when said band is stretched and applied to said container.

2. A carrier as defined in claim 1, and the ends of said bail integrally connected to said band being bifurcated.

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