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CARRIER FOR CONTAINERS

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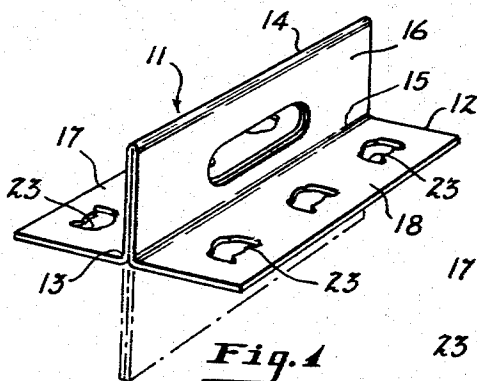


Fig. 1

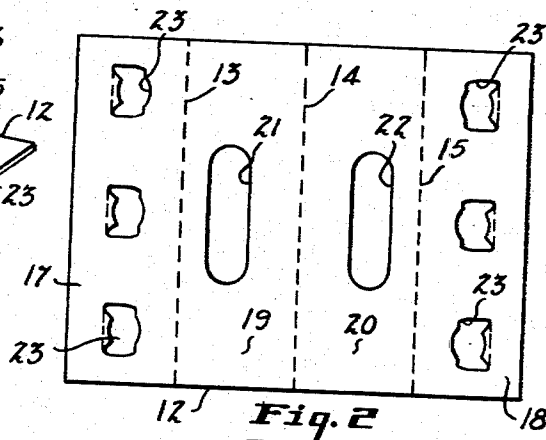


Fig. 2

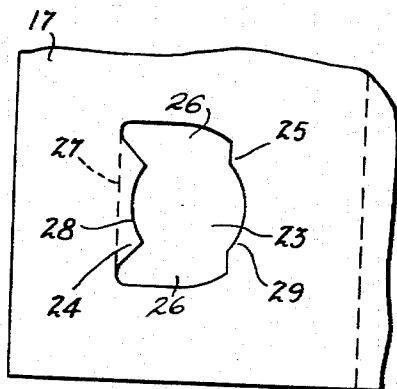


Fig. 3

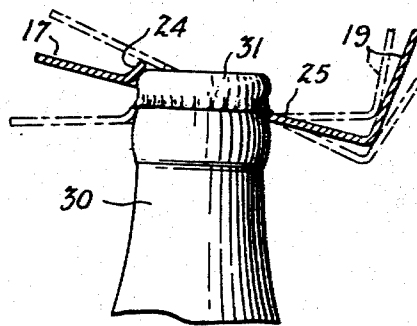


Fig. 4

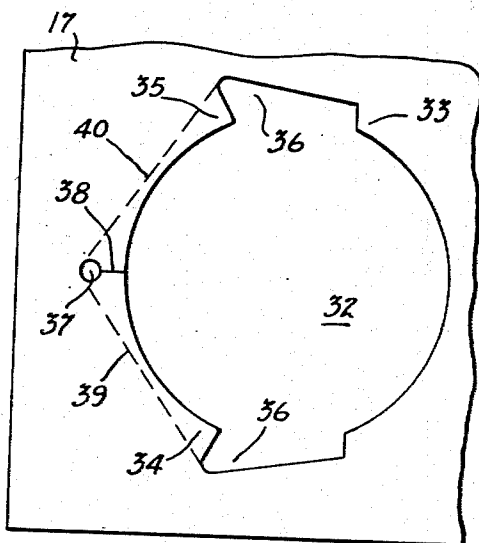


Fig. 5

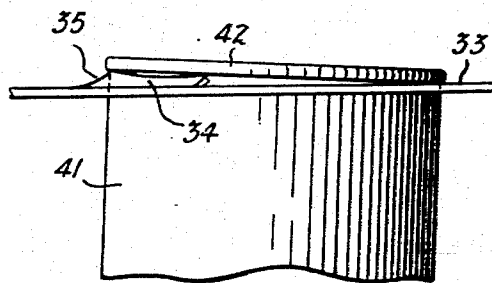


Fig. 6

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CARRIER FOR CONTAINERS

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14 Claims. (Cl. 294—87.2)

1 This invention relates to carriers for bottles and cans and more particularly to carriers for containers of the kind which are provided with beads or cap seals having projecting lips around the top thereof.

One of the principal objects of the present invention is to provide a carrier for such containers which can be made of foldable sheet material such as cardboard or other inexpensive and disposable material and which is simple and inexpensive to construct, yet will securely hold the containers in position.

Another object of the present invention is to provide a carrier which will retain its position with respect to the containers when at rest as well as when suspended.

A still further object is to provide a carrier which will permit several carriers to be stacked one upon the other.

Any type of container having a bead at or near its top or provided with a crown seal or the like can be securely supported by the carrier. For example, all types of bottles provided with the conventional crown cap or seal can be supported by the carrier, such as bottles for soft drinks and also cans provided with crown caps. In addition, conventional cans of the well-known type having circumferential beads at the top thereof and used for fruits, vegetables, meats, soups and beer can be supported and transported by the carrier of the present invention.

The invention will now be described with reference to the accompanying drawings in which: Figure 1 is a perspective view of a carrier showing in dotted lines the manner of folding into the operative position;

Figure 2 is a plan view of a blank before being folded into the operative position;

Figure 3 is a detailed plan view of a portion of a carrier adapted to carry bottles or cans provided with crown closures;

Figure 4 illustrates the manner of applying the carrier to a container;

Figure 5 is a detailed plan view of a portion of a modified carrier adapted to carry cans of the type having a bead around the top edge thereof; and

Figure 6 illustrates the manner in which a cylindrical container is supported by the carrier shown in Figure 5.

According to Figures 1 and 2, the carrier 11 is composed of a blank 12 which is preferably made of heavy cardboard of from about 25 point to about 55 point. The blank 12 is scored at lines 13, 14 and 15, so it may be folded, as shown in Figure 1, to provide a central handle section 16 and oppositely disposed lateral supporting por-

2 tions 17 and 18. The handle section 16 is composed of portions 19 and 20, each being provided with an aperture 21 and 22, respectively, which register as shown in Figure 1 to provide a handle when the blank is folded into operative position and secured, as by staples, or adhesive or the like. Obviously, a separate element, such as a wire or string, may be secured to the carrier to serve as a handle.

The lateral portions 17 and 18 are provided with one or more apertures 23 for receiving containers as described more fully hereinafter. Although Figures 1 and 2 disclose a carrier having six apertures, it is obvious that a carrier having a smaller or greater number of apertures may be provided.

The apertures shown in Figures 1 and 2, and in greater detail in Figure 3, are specifically designed for containers provided with crown caps or closures. Referring now to Figure 3, an inwardly extending flap 24 and a stiff lip 25, adapted to fit under the skirt or crimped edge of the crown cap are provided on opposite sides of the aperture. On opposed sides of the aperture 23 and located between the flap 24 and lip 25 are wing-shaped cut-out portions 26 as shown. These cut out portions 26 are so arranged and of such size that flap 24 is bent along dotted line 27 when inserting the neck or top of the container in the carrier as will be described hereinafter. The ends of the lip 25 are shaped as shown in Figure 3 so as to prevent any substantial hinging action. The lip 25 and flap 24 may each extend approximately 25% of the distance around the circumference of the container although this may be longer or shorter, for example from about 15 to about 45% of the circumference. Also the lip and flap may extend around the circumference for different distances.

The curved inner edges 28 and 29 of flap 24 and lip 25, respectively, are arcs of circles having their centers spaced a short distance from the midpoint between the opposed curved edges. Thus, the curved edges as shown in the drawing are not concentric and define a generally elliptical aperture. The distance between the centers of the flap 24 and lip 25 is preferably slightly less than the diameter of the neck of the container, so that the flap 24 will remain in its raised position after the container has been inserted, thus ensuring a snug friction fit. On the other hand, if desired, the curved edges may be concentric, so that the aperture is primarily circular.

For containers having a bead around the top thereof, such as ordinary cans for foodstuffs, beer, etc., an aperture 32 is provided, as shown

3 in Figure 5. This aperture has a stiff lip 33, similar to lip 25 in Figure 3, which bears against the container just below the bead. On the opposite side of the aperture two hingeable flaps 34 and 35 are provided. Wing-shaped cut-out portions 36, similar to cut-out portions 26, and a small hole 37 are provided as shown in the figure. The cardboard or other material is slit from the hole 37 to the aperture 32 along line 38, thus permitting flap 34 and flap 35 to bend in different directions along two intersecting lines 39 and 40 forming a V and terminating at the cut-out portions 36. When in use flap 34 will be hinged along dotted line 39 and flap 35 will be hinged along dotted line 40.

Some containers for food have a generally rectangular cross-section and are provided with a bead near the top thereof. Carriers for such containers may be provided with a generally rectangular aperture having a hingeable flap on one side to engage the bead of the rectangular can so that the can will be supported by the flap on one side and by the edge or lip of the aperture opposite the flap in a manner similar to that described for round or cylindrical containers. To permit the flap to be bent upwardly, cuts are provided at the ends of the flaps extending to the aperture similar to the slit between flaps 34 and 35 as shown in Figure 5.

In Figure 4 the manner of inserting a container 30 in the carrier is shown and more particularly the way in which flap 24 is hinged to pass over the crown cap 31 and then fits snugly under the cap 31.

The carrier can be placed over the top of one or more containers, the aperture being approximately centered over the top of the container. The stiff lip 25 is placed under the portion of the bead or cap adjacent thereto, as shown in Figure 4, and then the carrier is pressed down over the top of the container so it will push through the aperture bending the flap 24 upwardly as shown in Figure 4. The line along which the flap is bent is not scored so that the flap will tend to spring back to its initial position after the container has been inserted. This tendency of the flap 24 keeps the flap pressed against the wall of the container, thus ensuring its engagement with the container. In the final position the weight of the container causes the crimped edge of the crown cap or the bead of the can to press down on the upwardly raised edge of flap 24 causing the container to be securely disposed in the carrier. Thus, both flap 24 and lip 25 press firmly against the neck of the container just below the crown cap 31 to effect a sort of wedging action. It has been found in the case of conventional cans that the wedging action alone is sufficient to support such containers without any coaction between the bead and the edge of the flap.

As shown in Figure 6, a conventional can 41 having a bead 42 is supported on one side by the lip 33 and on the other side by flaps 34 and 35.

A container such as a bottle with a crown cap may be removed from the carrier by merely holding the carrier and firmly pulling the container downwardly so as to release it from the carrier. This generally tears the flap and/or lip so that the aperture cannot be used a second time. In the case of cylindrical containers, they may be removed by pulling upwardly from the carrier so that the lip and flaps are not torn, thus enabling the carrier to be used again.

The term "bead" as used herein and in the

appended claims is intended to include not only conventional beads but also crimped caps or the like which have flared skirts or other projection which function as a bead in so far as the present invention is concerned.

Although my invention has been described with reference to the specific embodiment shown in the drawings, it will be understood that modifications and variations which would be apparent to one skilled in the art are not excluded and that such modifications are intended to be included within the scope of the invention as defined by the appended claims. More specifically it will be understood that any one of the different modifications illustrated may be used with bottles having crown seals or with conventional cans or other containers of this general type, provided the aperture will accommodate the container in the manner described.

What is claimed is:

1. A carrier for containers having circumferential beads near the top thereof comprising a blank of foldable material provided with at least one aperture, a stiff lip and at least one bendable flap constituting a portion of said blank, said lip and said at least one flap having edges defining at least a portion of said at least one aperture in said blank, said lip and said at least one flap being located at substantially opposite sides of said aperture, the edges of said lip and said at least one flap being adapted to engage the container immediately beneath the circumferential bead thereof, the distance between the edges of said lip and said at least one flap being not greater than the distance between opposite sides of said container, said lip and said at least one flap constituting the sole supporting means for said container, said carrier being provided with means for lifting the same.
2. A carrier as claimed in claim 1 wherein the distance between the edges of said lip and said at least one flap is less than the distance between opposite sides of said container.
3. A carrier as claimed in claim 1 wherein the blank is provided with a plurality of apertures, at least one being located in each end portion of the blank.
4. A carrier for circular containers having circumferential beads near the top thereof comprising a blank of foldable material provided with at least one aperture therein, a stiff lip and at least one bendable flap constituting a portion of said blank, said lip and said at least one flap having curved edges defining said at least one aperture in said blank, said lip and said at least one flap being located at substantially opposite sides of said aperture, the curvature of the edges of said lip and said at least one flap being substantially the same as the curvature of the container to be carried, said lip and said at least one flap being adapted to embrace the container beneath the circumferential bead thereof, said blank being provided with cut-out portions contiguous with said aperture and adjacent the ends of said at least one flap to permit said at least one flap to be bent along a straight line when the container is inserted in the carrier, said lip and said at least one flap constituting the sole supporting means for said container.
5. A carrier as claimed in claim 4 wherein the cut-out portions have a wing-like shape and define the ends of said lip and said at least one flap.
6. A carrier as claimed in claim 4 wherein said

at least one flap is bendable along a line connecting one cut-out portion to the other.

7. A carrier as claimed in claim 4 comprising two bendable flaps adjoining each other, said flaps being bendable along two intersecting lines forming a V, and terminating at the cut-out portions, the curved edges of said two adjoining flaps being contiguous.

8. A carrier as claimed in claim 4 wherein the flap and lip each extend from about 15% to about 45% of the distance around the circumference of the container.

9. A holder for containers having circumferential beads near the top thereof comprising a blank of foldable material provided with at least one aperture, a stiff lip and at least one bendable flap constituting a portion of said blank, said lip and said at least one flap having edges defining at least a portion of said at least one aperture in said blank, said lip and said at least one flap being located at substantially opposite sides of said aperture, the edges of said lip and said at least one flap being adapted to engage the container immediately beneath the circumferential bead thereof, the distance between the edges of said lip and said at least one flap being not greater than the distance between opposite sides of said container, said lip and said at least one flap constituting the sole supporting means for said container, said carrier being provided with means for holding said carrier in an elevated position.

10. A carrier for containers having circumferential beads near the top thereof comprising a blank of foldable material provided with at least one aperture, a stiff lip and at least one bendable flap constituting a portion of said blank, said lip and said at least one flap having edges defining at least a portion of said at least one aperture in said blank, said lip and said at least one flap being located at substantially opposite sides of said aperture, the edges of said lip and said at least one flap being adapted to engage the container immediately beneath the circumferential bead thereof, the distance between the edges of said lip and said at least one flap being not greater than the distance between opposite sides of said container, said carrier being provided with means for lifting the same, said lip and said at least one flap constituting the sole supporting means for said container, wherein the blank is provided with a plurality of apertures, at least one being located in each end portion of the blank.

11. A carrier for circular containers having circumferential beads near the top thereof comprising a blank of foldable material provided with at least one aperture therein, a stiff lip and at least one bendable flap constituting a portion of said blank, said lip and said at least one flap having edges defining said at least one aperture in said blank, said lip and said at least one flap being located at substantially opposite sides of said aperture, the curvature of the edges of said lip and said at least one flap being substantially the same as the curvature of the container to be carried, said lip and said at least one flap being adapted to embrace the container beneath the circumferential bead thereof, said blank being provided with cut-out portions contiguous with said aperture and adjacent the ends of said at least one flap to permit said at least one flap to be bent along a straight line when the container is inserted in the carrier, said lip and said at least one flap constituting the sole sup-

porting means for said container, wherein the cutout portions have a wing-like shape and define the ends of said lip and said at least one flap.

12. A carrier for circular containers having circumferential beads near the top thereof comprising a blank of foldable material provided with at least one aperture therein, a stiff lip and at least one bendable flap constituting a portion of said blank, said lip and said at least one flap having edges defining said at least one aperture in said blank, said lip and said at least one flap being located at substantially opposite sides of said aperture, the curvature of the edges of said lip and said at least one flap being substantially the same as the curvature of the container to be carried, said lip and said at least one flap being adapted to embrace the container beneath the circumferential bead thereof, said blank being provided with cut-out portions contiguous with said aperture and adjacent the ends of said at least one flap to permit said at least one flap to be bent along a straight line when the container is inserted in the carrier, said lip and said at least one flap constituting the sole supporting means for said container, wherein said at least one flap is bendable along a line connecting one cut-out portion to the other.

13. A carrier for circular containers having circumferential beads near the top thereof comprising a blank of foldable material provided with at least one aperture therein, a stiff lip and at least one bendable flap constituting a portion of said blank, said lip and said at least one flap having edges defining said at least one aperture in said blank, said lip and said at least one flap being located at substantially opposite sides of said aperture, the curvature of the edges of said lip and said at least one flap being substantially the same as the curvature of the container to be carried, said lip and said at least one flap being adapted to embrace the container beneath the circumferential bead thereof, said blank being provided with cut-out portions contiguous with said aperture and adjacent the ends of said at least one flap to permit said at least one flap to be bent along a straight line when the container is inserted in the carrier, said lip and said at least one flap constituting the sole supporting means for said container, wherein the flap and lip each extend from about 15% to about 45% of the distance around the circumference of the container.

14. A carrier for a container comprising a shelf member of sheet material having an aperture therethrough for accommodating a container adjacent a peripheral protuberance carried thereon, said aperture having opposed sides, one of said sides comprising a relatively unyielding edge of the material of said shelf member, and the other of said sides comprising a flap resiliently rotatable out of the plane of said aperture and supportingly engageable with said protuberance said flap being adapted to bear against said container, said flap serving to confine said container between itself and said edge.

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