Aug. 11, 1959 H. A. BARNBY 2,899,051

CARRIER FOR BOTTLES AND OTHER CONTAINERS

Filed July 10, 1957 2 Sheets-Sheet 1

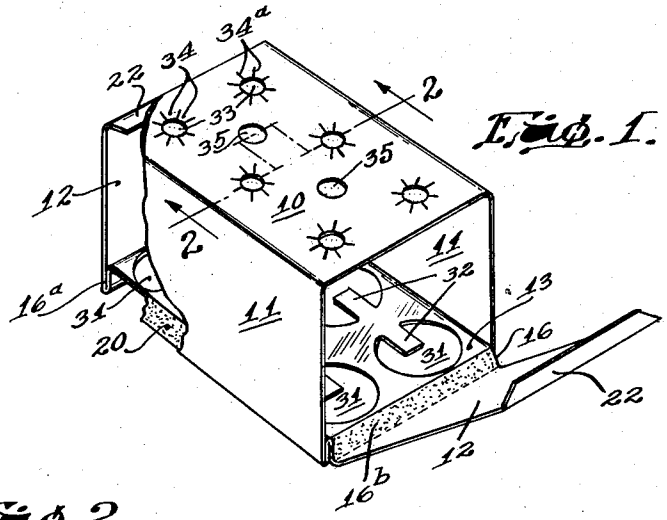
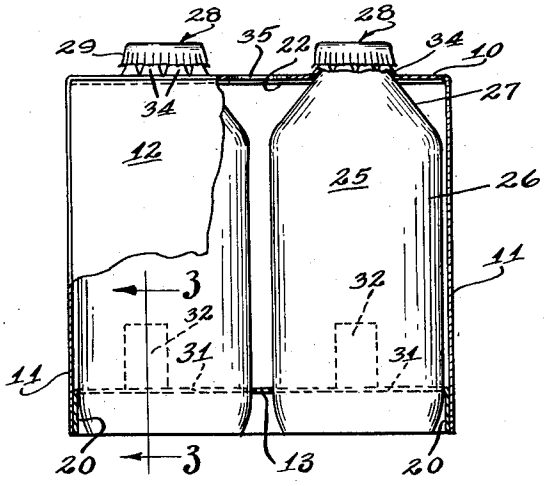



FIG. 1.

FIG. 2.



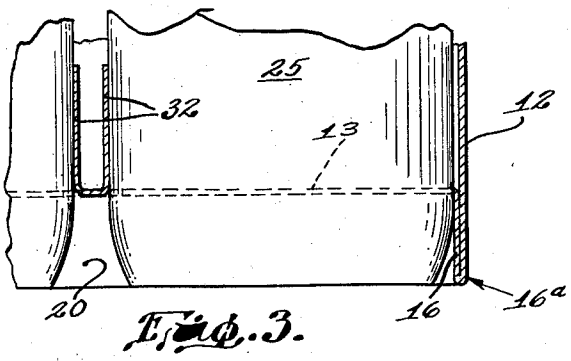




FIG. 3.

FIG. 4.

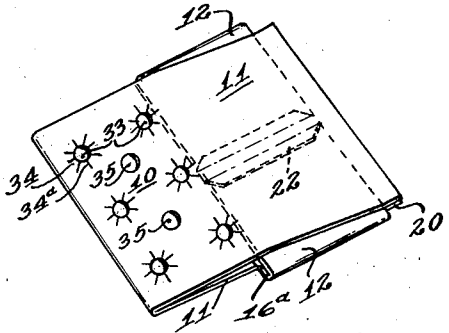
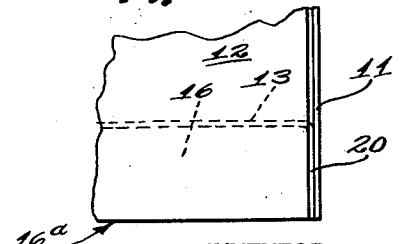



FIG. 5




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Aug. 11, 1959 H. A. BARNBY 2,899,051

CARRIER FOR BOTTLES AND OTHER CONTAINERS

Filed July 10, 1957 2 Sheets-Sheet 2

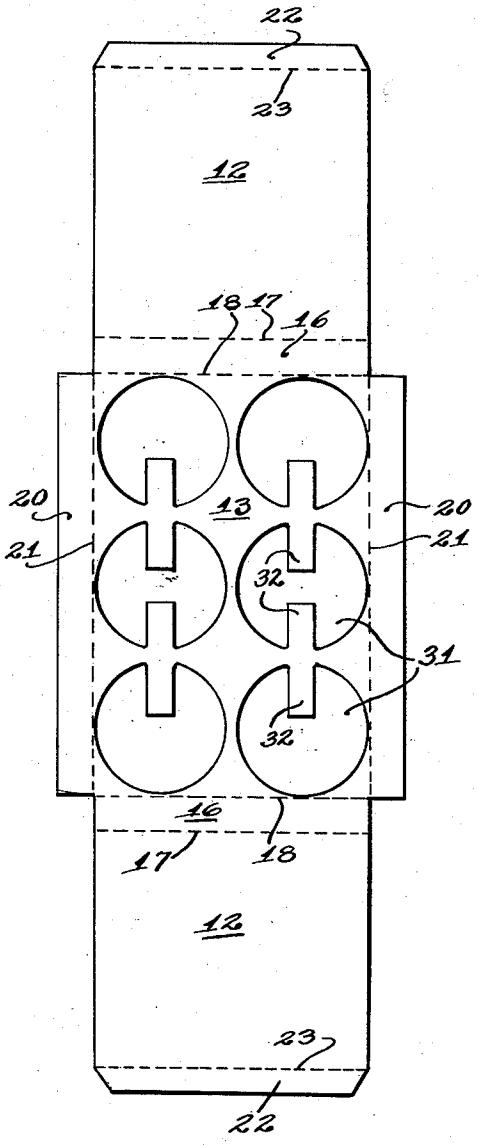



Fig. 6.

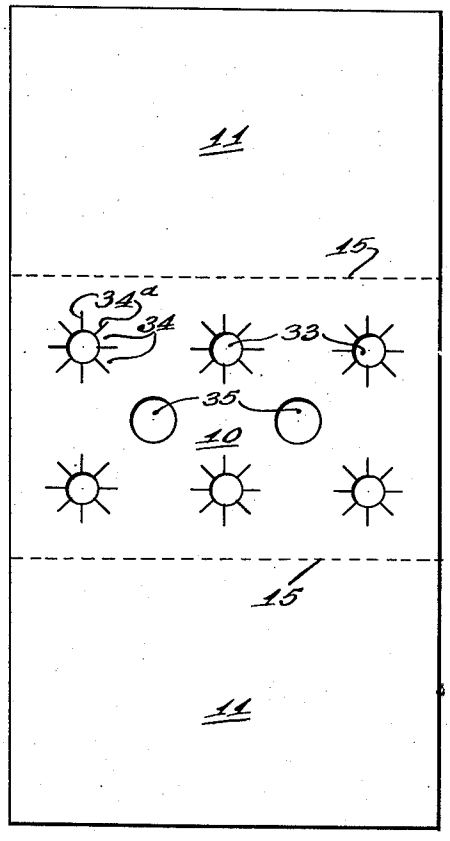



Fig. 7.

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# CARRIER FOR BOTTLES AND OTHER CONTAINERS

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Application July 10, 1957, Serial No. 671,044

4 Claims. (Cl. 206—65)

My invention relates to carriers for groups of bottles or other containers, and to packages comprising such carriers with groups of bottles assembled therein and having interlocking connection with the carriers.

An object of the invention is to provide a carrier of simple construction made of inexpensive sheet material and which can be readily and cheaply made. The invention provides such a carrier adapted for use as a one-way carrier that may be discarded after a single use.

A further object of the invention is to provide a carrier of the type indicated which is collapsible for shipping or storing.

Other objects of the invention will appear hereinafter.

The carrier is formed from two single piece blanks of foldable sheet material. One of the blanks is foldable to form a horizontal rectangular top panel and vertically depending side wall panels. The other blank is foldable to provide a false bottom or spacer panel and end wall panels folded vertically upward therefrom. The bottom panel is formed with integral marginal strips folded downwardly and attached to the side wall panels. The carrier is assembled with the group of bottles or containers by moving the carrier downward over the assembled containers, the false bottom being provided with openings through which the containers extend. The top panel is also formed with smaller openings through which the neck ends of the containers are protruded as the carrier completes its downward assembling movement, the top panel being constructed to interlock with the container necks or the closure caps on such necks.

The present application discloses subject matter also disclosed in my copending application for Bottle Carriers, Ser. No. 671,043, filed July 10, 1957.

Referring to the accompanying drawings:

Fig. 1 is a perspective view of the carrier with parts broken away;

Fig. 2 is an end elevation, part sectional at the line 2—2 on Fig. 1, showing the carrier and containers assembled therein;

Fig. 3 is a fragmentary sectional view on a comparatively large scale at the line 3—3 on Fig. 2;

Fig. 4 is a perspective view of the carrier folded or collapsed;

Fig. 5 is a fragmentary end elevation of a corner portion of the carrier;

Fig. 6 is a plan view of a blank which is foldable to form the bottom and end wall panels of the carrier; and

Fig. 7 is a plan view of a blank comprising a top panel and side wall panels.

Referring to the drawings, the carrier consists of a rectangular box-like structure including a rectangular top panel **10**, side wall panels **11**, end wall panels **12**, and a false bottom panel or spacer **13**. As shown in Fig. 7 the top panel **10** and side wall panels **11** are formed from a single sheet of foldable paperboard, cardboard or other foldable material. The side panels **11** are folded



vertically downward from the top panel at fold lines **15**. The bottom panel or spacer **13** and end wall panels **12** are formed from a single piece blank as shown in Fig. 6. Each end wall includes a narrow strip **16** defined by broken lines **17** and **18**. The strips **16** are folded vertically downward at the lines **18** which define the end edges of the false bottom or spacer **13**. The end wall panels **12** are then folded vertically upward along the fold lines **17**. In this manner, a two-ply strip **16a** is formed at each end of the carrier. The blank is also formed with marginal strips **20** extending lengthwise of the panel **13** and which are folded vertically downward at the fold lines **21**, the strips **20** and **16** being of the same width. In this manner the bottom panel **13** is supported at a level above the bottom edges of the carrier equal to the width of said strips **16** and **20**. A layer of adhesive material **16b** may be applied to the strips **16** for adhering together the contacting surfaces of the two-ply strips **16a**. When the blanks, Figs. 6 and 7, are folded and assembled the side wall panels **11** extend downward in overlapping relation to the downwardly folded side strips **20** and may be secured thereto by an adhesive as indicated in Fig. 1 or by other attaching means. The end panels **12** are formed at their free ends with end strips **22** folded inwardly along fold lines **23**, which end strips may be tucked beneath the top panel **10** and glued or otherwise secured thereto.

The carrier, in the form illustrated, is adapted to be assembled with a group of containers **25** comprising cylindrical bodies **26**, tapered shoulder portions **27** and short necks to which closure caps **28** are attached for closing and sealing the containers. The caps **28** may be conventional metal, crown caps with depending skirts **29** by which the caps are secured to the containers. The bottom panel **13** is formed with circular openings **31** of the same or slightly greater diameter than that of the cylindrical bodies **26** of the bottles **25**. These openings as shown are arranged in two parallel rows with three openings in each row. The openings are a short distance apart in each direction to hold the bottles narrowly and uniformly spaced apart. The bottom panel is also formed with tabs **32** extending radially inward from the margins of the openings **31**. In the operation of assembling the bottles and carrier, as presently described, the tabs **32** are bent upwardly as shown in Figs. 2 and 3. These tabs give added strength to the bottom panel, particularly at the narrow strips between adjacent openings **31**.

The top panel **10** is formed with openings **33** in axial alignment or vertical register with the openings **31**. Slits **34a** extending radially outward from the openings **33** define resilient prongs or tongues **34** which, when the bottles are assembled in the carrier, grip the bottle necks or engage beneath the skirts **29** of the closure caps, thereby interlocking the top panel and the bottles.

The carrier and a group of containers or bottles **25** are assembled by moving the carrier vertically downward to enclose the bottles. During this movement neck and shoulder portions of the bottles pass through the openings **31** in the spacer **13**, the tapered shoulders **27** serving to shift and align with the openings any of the bottles which are out of position. In the final part of the downward movement of the carrier the neck ends of the bottles engage the top panel and are protruded through the openings **33**. These openings being of smaller diameter than the bottle caps, the latter force the resilient tongues **34** upwardly. These tongues then snap beneath the closure caps, locking the panel and bottles together. The bottles are thus held in fixed position within the carrier, the false bottom or spacer **13** serving to prevent any lateral or swinging movement of the bottles while the top panel holds

the neck ends of the bottles in a manner to prevent relative movement in any direction.

Finger holes **35** in the top panel **10** provide a convenient means for holding or carrying the package comprising the bottles and their carrier. These holes **35** are also designed to permit the insertion of plungers which may be used in telescoping the carrier over a group of the containers. The carrier may be folded to a collapsed position as shown in Fig. 4 for convenience in storing and transportation.

When the carrier blanks have been folded and assembled as shown in Fig. 1 the carrier as a whole may be folded to the collapsed form shown in Fig. 4 for convenience in storing and transportation. In collapsing the carrier the end wall panels **12** are folded inwardly to overlie the bottom panel **13**, the top and side wall panels are then swung to one side, hinging at the fold lines **21**, thereby flattening the carrier. When the carrier has again been set up preparatory to receiving the containers **25** the end panels may be secured in position as above described.

Modifications may be resorted to within the spirit and scope of my invention.

I claim:

1. A carrier for bottles or other containers, said carrier formed of foldable sheet material comprising a blank including a horizontal top panel and side wall panels folded to extend vertically downward from the side edges of the top panel to the bottom of the carrier, the end edges of the blank forming bottom edges of the carrier, and a second blank comprising a horizontal spacer panel and end wall panels, the spacer panel being spaced above the bottom of the carrier, the said second blank being folded downwardly at the ends of the spacer panel to extend downward to the bottom of the carrier and folded at the bottom of the carrier to extend vertically upward to the top of the carrier, thereby providing two-ply end wall strips extending from the spacer panel to the bottom of the carrier and single-ply end wall panels extending from the spacer panel to the top of the carrier, the said second blank having strip portions folded vertically downward from the side edges of the spacer panel and forming side strips extending to the bottom of the carrier, the said side wall panels overlying said side strips, means for adhering the side wall panels to said side strips, the end wall panels being formed at their upper edges with end strips folded inwardly and attached to the top panel, the spacer panel being formed with openings therethrough to permit assembly of the carrier with a group of containers, the top panel being formed with openings in vertical register with said first mentioned openings, to receive the neck end portions of the containers, said carrier being adapted for assembly with a group of the containers by a vertical downward movement by which the spacer panel is telescoped with the containers and the neck ends of the containers are protruded through the openings in the top panel and held within the top panel.



2. A package comprising the carrier defined in claim 1 and the said group of containers, the bodies of the containers being of substantially greater cross-sectional area than that of the said neck end portions, the openings in the spacer panel being of a size and shape to permit the passage of the containers and to hold the containers against lateral movement when assembled in the package.

3. A package comprising a carrier and a group of bottles, said bottles having cylindrical bodies, tapered shoulder portions and neck portions, the carrier being formed of assembled blanks of foldable sheet material including a blank comprising a horizontal rectangular top panel and vertical side wall panels folded downwardly from the side edges of the top panel, and a second blank comprising a rectangular spacer panel of substantially the same dimensions as the top panel and rectangular end wall panels, the said second blank comprising narrow strips interposed between the end wall panels and the spacer panel, said narrow strips being folded vertically downward from the spacer panel at the end edges of the latter, the end wall panels being folded vertically upward from the lower edges of said strips, the second blank comprising longitudinal strips folded downward from the side edges of the spacer panel and lying against inner surface of the side wall panels, means for adhering the said longitudinal strips to the side wall panels, the spacer being formed with circular openings through which the said bodies of the bottles extend, the openings being arranged in rows and spaced apart, said openings being of substantially the same diameter as the cylindrical bodies of the said bottles, the top panel being formed with circular openings in axial alignment with said first mentioned openings to receive the neck end portions of the bottles, the top panel having interlocking engagement with the neck end portions of the bottles.

4. The package defined in claim 3, the end walls of the carrier when the latter is empty being foldable inwardly to overlie the spacer panel and the carrier then collapsible by hinging the side wall panels about the side edges of the spacer panel and thereby bringing the side wall panels and top panels downward to substantially horizontal position, the end wall panels being formed with foldable strips at their free ends in position to be tucked beneath the end portions of the top panel when the carrier is set up.

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