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[54] CONTAINER CARRIER PACKAGE  
2 Claims, 6 Drawing Figs.

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294/87

[51] Int. Cl. .... B65d 71/00

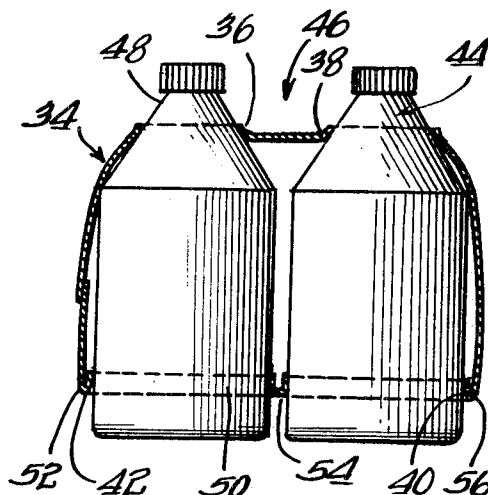
[50] Field of Search ..... 206/65(S),  
65(Misc. Foreign); 206/65 (C), 65 (E); 229/40;  
220/116, 115; 220/112; 224/45 (B); 294/87.2

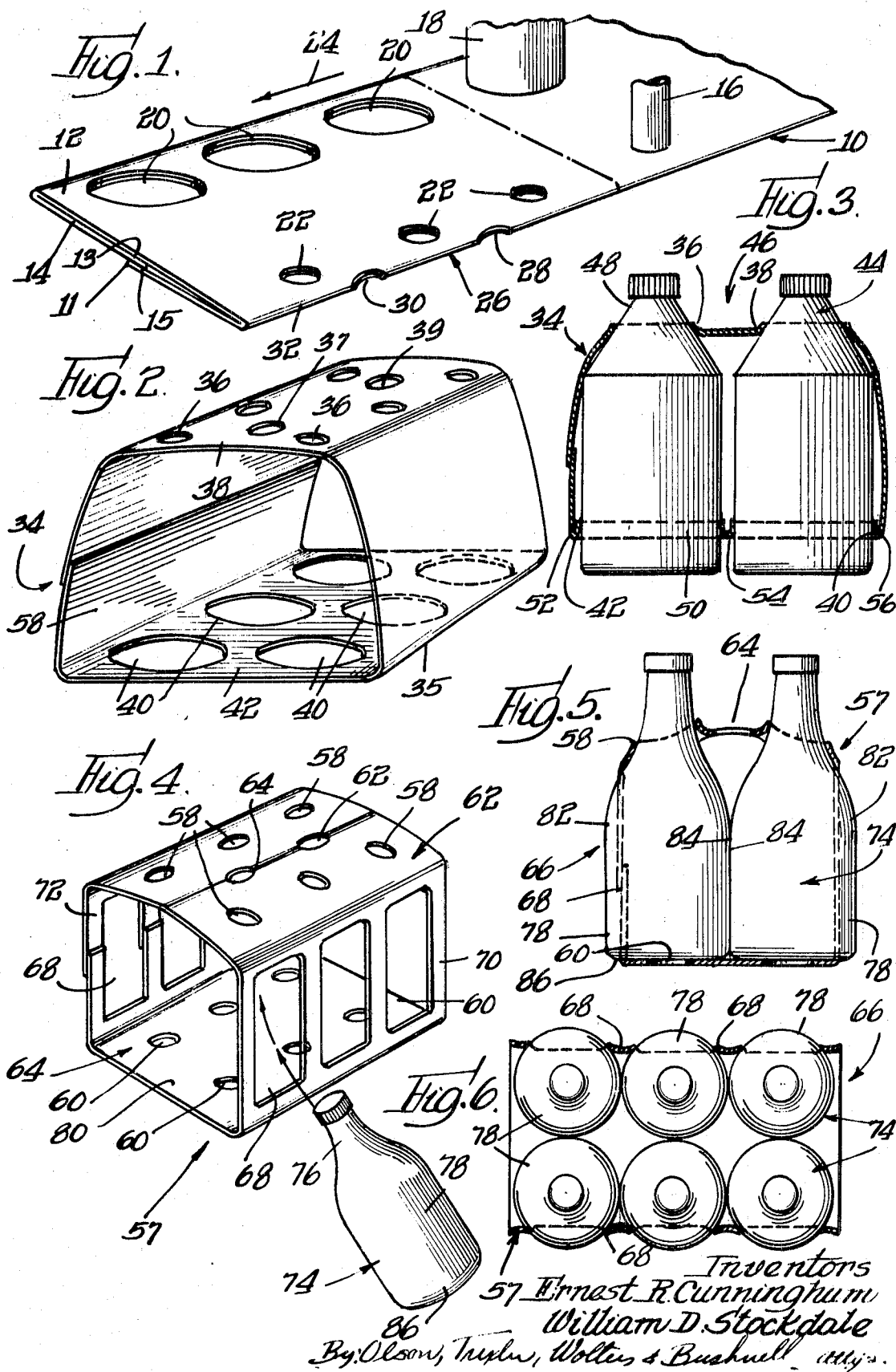
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**ABSTRACT:** A container carrier package. The carrier comprises an open-ended tubular or endless length of flexible material oriented so as to provide an upper and lower layer interconnected by a pair of opposing sidewalls. A plurality of aligned apertures is provided in each of the layers for receiving respective ends of containers therein, thereby to secure and cushion said containers within said carrier.





## CONTAINER CARRIER PACKAGE

This invention relates to container carrying devices and more particularly to a bottle or can carrier package.

Many different types of container carriers for beverage bottles or cans are now available. For the most part, these carriers are satisfactory, however, it is a primary object of the present invention to provide a new and improved container carrier which is relatively simple in construction and easily and inexpensively produced.

A further object is to provide a novel carrier of simple construction and capable of retaining opposite end portions of a plurality of containers therein.

It is a more specific object of the present invention to provide a new and improved tubular, plastic container carrier which efficiently and easily accommodates a plurality of containers such as bottles or cans.

It is still another object of this invention to provide a novel method for producing a container carrier of the above described type.

It is yet another object of this invention to provide a new and improved multicontainer package for easily transporting a plurality of containers without damage to the latter.

It is still another object of this invention to provide a multicontainer package as described above wherein said containers are easily removed therefrom.

It is yet another object of this invention to provide an improved carrier pack for packaging bottles.

Briefly, a container carrier according to the invention comprises an open-ended tubular or endless section of flexible plastic or the like material folded to provide first and second opposing layers of material each having a plurality of holes therethrough; the holes of the respective layers being in alignment with each other. In a first embodiment of the carrier a container is received in each pair of aligned holes in the layers of material, with the first layer of material being held about the upper portions of the containers, the second layer of material being held about the lower portion of the containers and the interconnecting material extending along the outer sidewalls of the containers. An alternative embodiment of the carrier includes a plurality of side cutouts into which the containers are placed, so that the containers are received in holes in the first layer of material and the bottom or base of the containers rests on the second layer of material.

A better understanding of the present invention and its organization and construction may be had by referring to the description below in conjunction with the accompanying drawings wherein:

FIG. 1 is a perspective view illustrating a process for making a container carrier according to the invention;

FIG. 3 is an end sectional view of a beverage bottle package using the container carrier of FIG. 2;

FIG. 4 is a perspective view of an alternative embodiment of a container carrier according to the invention;

FIG. 5 is an end sectional view of a beverage bottle package using the container carrier of FIG. 4; and

FIG. 6 is a top plan view of the beverage bottle package of FIG. 5.

Referring now to the drawings in greater detail, FIG. 1 thereof illustrates a preferred method by which a container carrier according to the invention is produced. An open-ended tubular or endless length of flexible, elastic plastic or the like material 10 is first provided. The tubular length of plastic material may be formed by heat sealing the ends, 11, 13, of a sheet of plastic material to form a lengthwise seam 15 therealong. The tubular length is folded and flattened so that a first upper, and a second lower, layer, 12 and 14, respectively, are adjacent each other in substantially abutting engagement, as shown in FIG. 1.

First and second predeterminedly spaced-apart dies 16 and 18, respectively, located at a station beneath which the length of flexible plastic tubing passes, are provided to cut spaced-apart apertures 20 and 22, respectively, in the tubing; the dies being movable toward and away from the latter. As the tubular length of plastic material is moved beneath the dies, the

latter are lowered in a single step to cut through both layers 12 and 14 of the plastic, thereby to form the apertures 20 and 22 therein. The dies are raised out of contact with the plastic tubing thereafter and the tube length is moved in the direction of arrow 24 (FIG. 1) a predetermined distance. The operation is then repeated. After the length of tubular material has had apertures such as 20 and 22 formed therethrough, the length is cut into sections such as, for example, section 26 which includes three pairs of spaced-apart apertures 20, 22.

Once such a section is severed from the length of plastic tubing it may be used to accommodate six containers to form a package commonly referred to as a "six pack." A pair of half-circle cutouts along the folded edge 32 of the section also may be provided to form holes for carrying the "six pack," as will be explained more fully hereinafter.

The dies 16 and 18 referred to above are shown as having different diameter sizes and thus produce different sized apertures 20, 22 in the plastic tubing. In this case the resulting container carriers are primarily for use with bottles. The container carriers may be provided with holes having substantially the same diameter, and may then be used for carrying cylindrical cans or the like. This, too, will be explained in greater detail hereinafter.

Turning now to FIG. 2, there is shown therein a container carrier 34 formed according to the above-described method. The carrier comprises a tubular section of plastic or the like material 35 having a plurality of apertures 36 and 40 formed therein. As will be noted, the positioning of the carrier 34 is such that the smaller apertures 36 (corresponding to apertures 22 of the tubular section 26 of FIG. 1) are located in the same plane or layer 38 above and in alignment with the larger diameter apertures 40 (corresponding to apertures 20 in the tubular section 26 of FIG. 1) which are in a lower plane or layer 42. The alignment of the apertures in this manner is accomplished by unfolding a flattened section such as 26 of FIG. 1 and reorienting, in effect by rotation about the tubular axis thereof, the section to the position of carrier 35 of FIG. 2. In this position, the cutouts such as 28 and 30 of the tubular section 26 of FIG. 1, are opened to form holes such as 37, 39, (FIG. 2) of carrier 34.

Bottles such as 44 are held in container carrier 34 to form a resulting carrier package, or in this case a "six pack," 46 (FIG. 3). As can be seen, the necks 48 of bottles 44 are positioned in respective apertures 36 of the upper layer 38 of carrier 34. The plastic material, being flexible and elastic, can be stretched over the bottle neck to fit tightly thereabout as shown. Each of the larger apertures in the lower layer 42 of the carrier 34 receives a lower body portion 50 of a bottle 44. It should be noted that the carrier material surrounding each of the lower layer apertures 40, is preferably caused to be folded over about a respective body portion, as shown at 52, 54, 56. This provides a double thickness of material between 54 and about 52 and 56, the lower body portions of the bottles, keeping the bottles separated, thereby to prevent them from contacting each other in transporting the package. This is especially important when the containers carried in the carrier are breakable, since they could be shattered if hit against each other or on an externally located object.

The bottles 44 when placed into container 34 may be so placed in one of two practical ways. A first preferred manner is to extend the bottle neck into one open end 58 of the tubular section 35 comprising the carrier (FIG. 2). The neck of the bottle 48 is then inserted into one of the smaller apertures 36 in the upper layer 38 of the carrier. Once the neck portion is secured, the bottle may be moved to a substantially vertical position, so that the lower end and body portion 50 of the bottle may be received in one of the larger apertures 40 in the lower layer 42 directly beneath and aligned with the upper aperture 36 into which the neck of the bottle already has been inserted.

The bottle may be rotated or twisted to force the body portion thereof into the aperture 40. Preferably, the aperture 40 is of a diameter slightly less than the outside diameter of the

container so that a snug fit is insured. The diameters of the upper apertures are slightly less than the outside diameter of the portion of the container which is received therein, again to insure a snug fit.

A second way to install the bottles in the carrier is to flatten the tubular section 35 into a form similar to that of FIG. 1, only keeping the respective apertures 36 and 40 in alignment with each other, as in FIG. 2. Then, with the bottles arranged in a group, corresponding to the arrangement of the apertures in the carrier, the carrier, with layer 42 being beneath layer 38, is pulled downwardly over the bottle necks. The necks pass easily through apertures 40 but as the carrier continues to be pulled downwardly the necks are fitted snugly into upper layer apertures 36. At this time, the lower layer 42 only is pulled downwardly about the bodies of the bottles until the bottles also fit snugly in the lower apertures 40.

In either case, the material about the lower layer apertures 40 tends to be folded over as shown in FIG. 3 at areas 52, 54 and 56, as mentioned above, to form a double thickness which serves as a spacer and cushion to prevent noise and breakage of the bottles due to their being hit against one another, or on an external object.

A second, modified embodiment 57 of the container carrier according to the invention is shown in FIG. 4, and a bottle pack formed with the use of the last-mentioned carrier embodiment is shown in FIGS. 5 and 6. This carrier embodiment is similar to the container carrier 34 of FIG. 2 in that it, too, is made from a tubular section of plastic or the like material.

The apertures 58, 60, in the upper and lower layers 62 and 64, respectively, are formed in the same manner as the apertures 36 and 40 of carrier 34 (FIG. 2). Likewise, a pair of holes 62 and 64 is provided in upper layer 62 for insertion of fingers therein to carry a completed package, such as 66 of FIGS. 5 and 6.

In addition to the apertures 58 and 60, which in this case are of the same diameter size, a plurality of elongated openings, each designated by the numeral 68, is formed in opposite sidewalls 70 and 72 of the carrier 57. Each of the elongated openings is aligned with a pair of apertures, 58 and 60, in upper and lower layers, respectively, of carrier 57.

The elongated openings 68 are provided in carrier 57 to accommodate containers such as bottles 74 shown in FIG. 4, inserted therethrough as indicated by the arrows, to form a completed package 66 (FIGS. 5 and 6).

In this embodiment (carrier 57) a bottle is inserted neck (76) first into an elongated opening 68. The neck 76 is received in an aperture 58 in layer 62, and the bottle continues to be moved thereinto until neck 76 engages the material of layer 62 surrounding the aperture 58. At that time, the lower body of the bottle is swung through opening 68 to rest on the inner surface 80 of layer 64 over an aperture 60 aligned with aperture 58 through which neck 76 extends. Each of the bottles is positioned into an elongated opening as described to form a carrier package 66 (FIGS. 5 and 6). Once all of the bottles are accommodated in the package, an outer side portion 82 of body 78 of each of the bottles extends outwardly through a corresponding elongated opening, thus securing the bottles in position so they will not move when the carrier package is transported. The inner side portions 84 of bottles 74 are in abutting engagement within the carrier 57.

In the case of carrier 57, the container bottles 74 are held both about the necks 76 thereof and longitudinally along the outer side portions of bodies 78, between the base 86 thereof and the neck 76. In this manner the bottles are prevented from excessive movement within the carrier. FIG. 6 of the drawings illustrates in greater detail the manner in which the side portions of the bottles 74 in package 66 extend outwardly from respective elongated openings in carrier 57.

While the carrier embodiments according to the invention have been shown in the drawings accommodating bottles 44 or 74 of different design, the carriers are equally as able to accommodate other containers of different variety such as beverage cans or the like. In the case of accommodating cans, as mentioned heretofore, the apertures in the above and lower layers will have equal diameters, to grip the cans about the cylindrical outer wall thereof.

While particular embodiments of the invention have been shown and described, it should be understood that the invention is not limited thereto, since many modifications may be made.

We claim:

1. A container package comprising, in combination carrier means including an endless section of flexible plastic material oriented to as to provide upper and lower layers joined by a pair of interconnecting side means, said upper layer including a plurality of spaced-apart upper apertures therein arranged in a predetermined pattern and said lower layer including a plurality of spaced-apart lower apertures therein, said lower apertures being aligned with the apertures of said upper layer, said container package further including a plurality of containers mounted within said endless section of flexible material, said containers being arranged in a pattern like that of said apertures with first ends of said containers extending through respective upper apertures for securing said containers within said carrier means, said containers having second ends receivable in said lower apertures in said lower layer of flexible plastic material, said second layer of said carrier means surrounding each of said lower apertures therein including an upwardly directed inner peripheral wall forming with adjacent similar peripheral walls a U-shaped double thickness portion serving as cushions preventing contact between adjacent containers and forming with corresponding side means substantially U-shaped exterior side cushions preventing contact therealong with external objects, and said cushions serving to wedgingly support the containers above the bottoms of the second ends thereof for transport.

2. A container package as claimed in claim 1 wherein said upper apertures in said upper layer are of a smaller diameter than the apertures in said lower layer, wherein said containers include bottles each having a body of a predetermined diameter and a tapered neck, and wherein the tapered necks of said bottles are received snugly in respective ones of said apertures in said upper layer of said carrier means with the necked ends of said bottles extending a substantial distance outwardly therefrom and the bodies of said bottles are received snugly in corresponding lower apertures in said lower layer of lower apertures in said lower layer of said carrier means with the bases of said bottles extending outwardly therefrom in a direction opposite from said bottle necks.

UNITED STATES PATENT OFFICE  
CERTIFICATE OF CORRECTION

Patent No. 3,570,663 Dated March 16, 1971

Inventor(s) Ernest R. Cunningham and William D. Stockdale

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 1, line 49, after "the" insert "--present--;

Column 1, between lines 49 and 50 insert the following as a separate paragraph: --Fig. 2 is a perspective view of a first embodiment of a container carrier according to the invention;--

Column 4, line 56, after "of" delete "lower";

Column 4, line 57, delete "apertures in said lower layer of

Signed and sealed this 24th day of August 1971.

(SEAL)  
Attest:

EDWARD M. FLETCHER, JR.  
Attesting Officer

WILLIAM E. SCHUYLER, JR.  
Commissioner of Patents