May 26, 1959 H. E. CORWIN 2,888,164

MOLDED FIBER SUPPORT FOR CONTAINER CARRIER

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Fig. 1

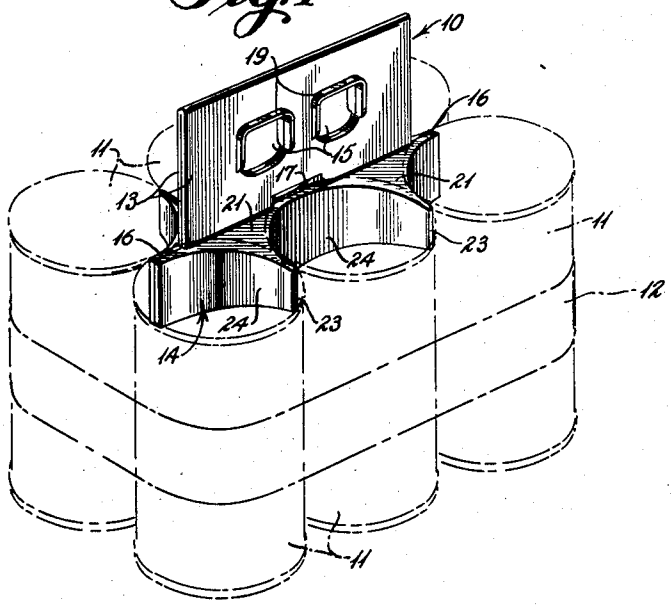


Fig. 2

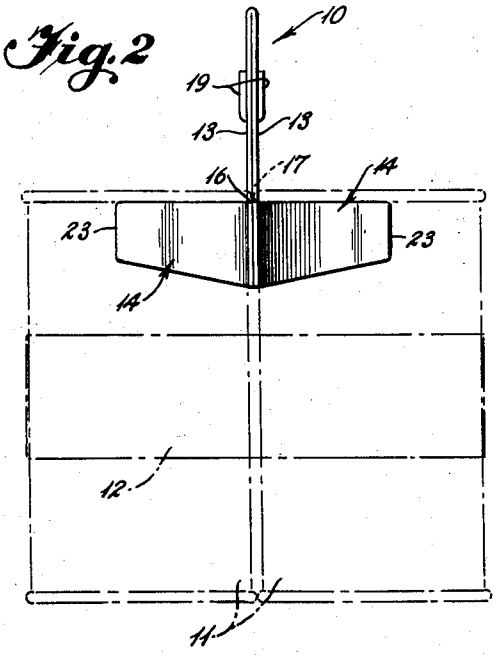
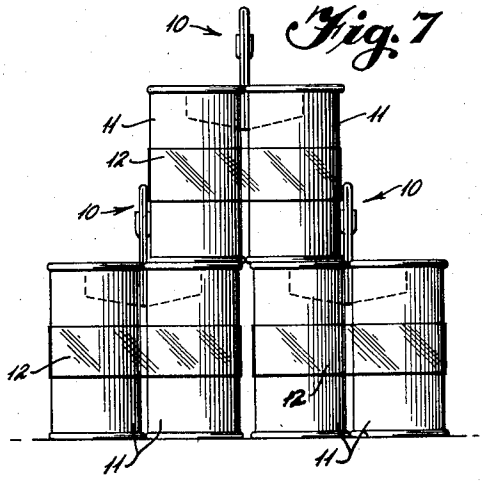


Fig. 7



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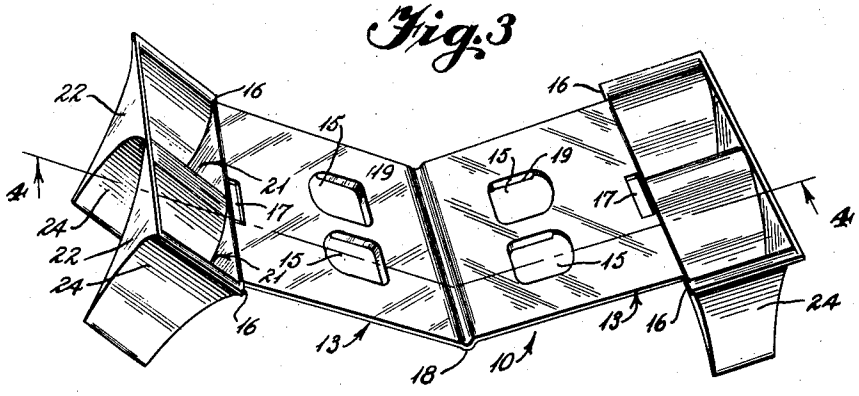
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MOLDED FIBER SUPPORT FOR CONTAINER CARRIER

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Fig. 3



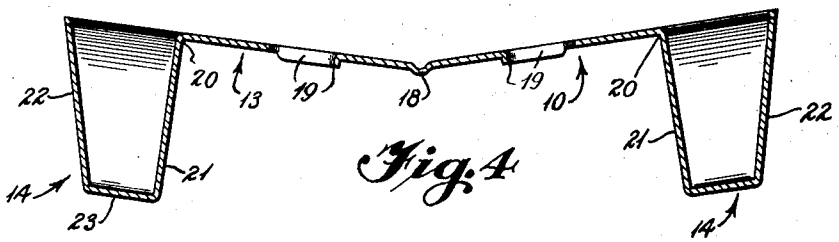


Fig. 4

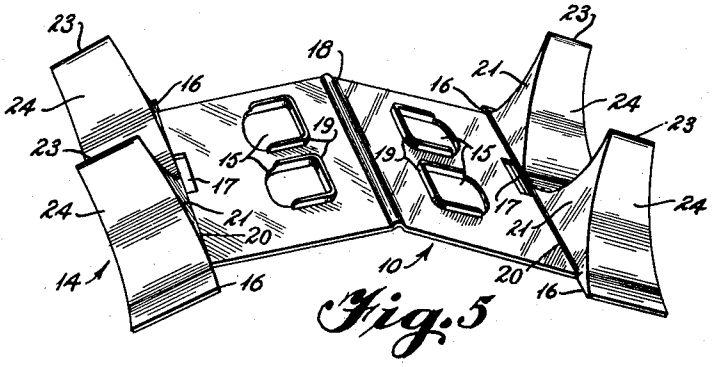
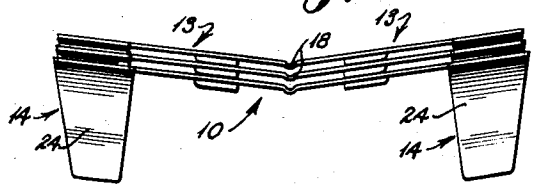


Fig. 5

Fig. 6



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United States Patent Office

2,888,164

Patented May 26, 1959

2,888,164

MOLDED FIBER SUPPORT FOR CONTAINER CARRIER

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Application October 11, 1956, Serial No. 615,352

17 Claims. (Cl. 220—106)

This invention relates to package carriers and more particularly to an inexpensive integral one-piece paper pulp molded carrier for six cylindrical top-beaded beer cans.

Prior to the instant invention, it has been found desirable to package cans of beer in assemblies of six cans bound together by a transparent elastic plactic band and such prior assemblies have been provided with carrying handles. Beer cans are and have been conventionally decorated on their cylindrical faces and include the trademarks of the beer companies which manufacture their particular types and qualities of beer. It is important to the beer company that the style and character of the markings on the beer can be displayed to the consumer or purchased at all times even when the beer cans are assembled in a carrying package. Accordingly, it will be understood that efforts have been made to provide a six-unit carrying package in which the cylindrical surfaces of the beer cans are visible to the purchaser. In such prior six-unit packages, it has been conventional to arrange the cans in two rows of three and the handle assembly has been located between the two rows of beer cans.

In such prior six-beer can assemblies, attempts have been made to manufacture the carrying device in an inexpensive manner but, nevertheless, these prior carriers have been expensive or they have been unsatisfactory because the assemblies become disarranged and disengaged from the carrying device when handled. Materials heretofore utilized for the carrying device have included chipboard, wire, staples, glue, solder and sheet metal. In those devices which have been made of combinations of wire and sheet materials, expensive assembly operations are inherent. In those devices which have been made exclusively of chipboard, die cutting, folding, gluing, or stapling operations are required, and these operations are inherently expensive. In some simplified forms of carriers in which some of the aforementioned operations have been omitted, the carriers have been relatively weak and the package subject to disarrangement upon handling.

It is an object of the instant invention to provide a novel beer can carrier made of one piece of molded fiber which will be relatively strong, comfortable, insofar as carrying is concerned, to the user, and which will be attractive in appearance.

It is another object of the instant invention to provide an inexpensive one-piece molded package carrier.

It is still another object of the instant invention to provide a novel inexpensive molded fiber carrier having molded fold lines, obviating the need for scoring operations, which will be of integral construction, eliminating assembly operations such as, for example, gluing or stapling, and the like, and in which hand holes or openings are preformed in the device.

It is a further object of the instant invention to provide a novel carrier having a back-to-back relatively rigid cantilever construction.

Other objects and the nature and advantages of the instant invention will be apparent from the following description taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is a view in perspective of a carrier in accordance with the invention, showing the device in full lines and the packages associated therewith in relatively light dotted lines;

Fig. 2 is an end view in elevation of the package illustrated in Fig. 1;

Fig. 3 is a view in perspective of the carrier in accordance with the invention as it comes from the molding die;

Fig. 4 is a vertical section taken along lines 4—4 of Fig. 3 and looking in the direction of the arrows;

Fig. 5 is a view in perspective of the device illustrated in Fig. 3 turned upside down and prior to assembly with the packages to be supported;

Fig. 6 is a view in elevation of a nest of the carriers illustrated in Fig. 3; and

Fig. 7 is an end view in elevation of a display stack of packages illustrated in Fig. 1.

Referring to the drawings, and specifically to Figs. 1 and 2, the integral one-piece paper pulp molded carrier **10** is shown associated with six cylindrical top-beaded beer cans **11**. About the six cans is the transparent elastic plastic band **12** which may be formed of vinyl or polyethylene or Saran, or ethyl cellulose film, or the like. The band **12** may be assembled with the cans by stretch fit or shrink fit or the like.

The carrier **10** comprises a pair of twin handle members **13** and a pair of twin collar sections **14**.

The handle members **13** are provided with convenient and comfortable rimmed finger openings **15**. Free portions **16** of the collar sections **14** extend somewhat beyond the handle members **13** to provide space for the overhanging bead at the tops of the beer cans **11**. Similarly, a slot-like opening **17** is formed in the lower central portion of the handle members **13** to receive a portion of the top bead of the middle beer can in each of the two rows of three cans.

Referring specifically to Figs. 3, 4 and 5, it will be understood that the carrier **10** is manufactured on a pulp molding forming die and that allowance have been made for the proper construction of the device to give it exceptional strength and to provide draft so that it may be removed from the die. Figs. 3 and 4 illustrate the device as it is removed from the die, and Fig. 5 illustrates the device immediately prior to its assembly with beer cans as already described.

The two handle members **13** as they come from the die are planular in form and are at an angle to each other of somewhat less than 180°. The fold location **18** is preformed as are the holes **15** which are provided with comfortable rims **19**. Within the handle portions **13** the slot **17** is preformed adjacent the preformed angular junction **20** of the collar sections **14** with the handle members **13**. The walls **21**, which form the tops of the collar sections **14**, as shown in Fig. 1, are at an angle of 90° to the handle members **13**. The walls **22**, which form the bottoms of the collar sections **14**, are not parallel to the tops **21** and are at an angle of more than 90° to the ridges **23**, which ridges **23** are parallel to the handle members **13** and are at an angle of 90° to the tops **21**. The tops **21**, bottoms **22**, together with the arcuate sides **24**, form relatively strong rigid beam-like cantilever supports for the beer cans or packages to be supported. The cup-like beams thus described have their open ends parallel to or in the same plane as the handle members **13**, and as the walls which form these cup-like open-ended beams are tapered, proper draft for molding is inherent in the construction of the

novel carrier while accomplishing a relatively rigid and strong cantilever structure.

The term "cup" as used in the specification and claims does not mean simply an arch or a collar, but means a shape like a container or a drinking cup which comprises a planular mouth and walls enclosing a space with the exception of the area of the mouth, which mouth is planular. The axis of each cup coincides with an imaginary line drawn perpendicular to the plane extending across the mouth of the cup and intersecting said plane of the mouth of the cup at its center.

Not only is the novel carrier in accordance with the instant invention capable of being readily molded, but a plurality of carriers may be nested as illustrated in Fig. 6.

When the carriers are assembled with beer cans, as described particularly in connection with Figs. 1 and 2, they may be stacked for display as illustrated in Fig. 7 and accomplish the desired merchandising by those engaged in the manufacture and sale of packaged and branded articles such as canned beer.

It will be obvious to those skilled in the art that various changes may be made without departing from the spirit of the invention and therefore the invention is not limited to what is shown in the drawings and described in the specification but only as indicated in the appended claims.

What is claimed is:

1. An integral one-piece paper pulp molded carrier for six cylindrical top beaded beer cans comprising a pair of generally planular and normally vertically upstanding twin handle members and a pair of twin collar sections, each of said collar sections comprising two relatively rigid hollow container-like cups cantilevered from each of said handle members, each of said cups having normally a generally horizontal axis, each of said cups being adapted to give support to two cans at the top beads thereof, said cups having their open ends in the planes of said planular handle members when beer cans are associated with said cups in normal carrying position, each of said cups having walls forming a mouth, the mouth of each of said cups corresponding to an imaginary plane intersecting the margins of said walls away from the bottoms of said cups, said margins of said walls forming a closed geometric figure in the plane of the mouth of said cups, the axis of each of said cups coinciding with an imaginary line drawn perpendicular to the plane extending across the mouth of the cup and intersecting said plane of the mouth of the cup at its center.

2. An integral one-piece paper pulp molded carrier for at least two packages comprising a pair of generally planular and normally vertically upstanding twin handle members and a pair of twin package engaging sections, each of said package engaging sections comprising at least one rigid hollow container-like cup cantilevered from each of said handle members, each of said cups having normally a generally horizontal axis, said cups having their open ends in the planes of said planular handle members when packages are associated with said cups in normal carrying position, each of said cups having walls forming a mouth, the mouth of each of said cups corresponding to an imaginary plane intersecting the margins of said walls away from the bottoms of said cups, said margins of said walls forming a closed geometric figure in the plane of the mouth of said cups, the axis of each of said cups coinciding with an imaginary line drawn perpendicular to the plane extending across the mouth of the cup and intersecting said plane of the mouth of the cup at its center.

3. An integral one-piece paper pulp molded carrier for at least two packages comprising a pair of generally planular and normally vertically upstanding twin handle members and a pair of twin package engaging sections, each of said package engaging sections comprising at least one generally horizontally disposed hollow cantilevered beam having one of its ends open and in the plane of one planular handle member, each of said beams comprising a top, a bottom, and two sides, said bottom being in a plane arranged at an angle of less than 90° to the plane of said top, the margins of the top, bottom and two sides of each of said beams at the ends in the plane of the planular handle member forming a closed geometric figure.

4. An integral one-piece paper pulp molded carrier for at least two packages comprising a pair of generally planular and normally vertically upstanding twin handle members and a pair of twin package engaging sections, each of said package engaging sections comprising at least one generally horizontally disposed hollow cantilevered beam open at one of its ends and closed on its top, bottom, and two sides, the margins of the top, bottom and two sides at the open end of the beam forming a closed geometric figure.

5. The structure recited in claim 1, each of said cups comprising a planular top, a planular bottom, and two sides.

6. The structure recited in claim 1, each of said cups being formed of walls which extend away and inwardly from the opening at its end.

7. The structure recited in claim 5, each of said sides being in the shape of a portion of the surface of a cylinder.

8. The structure recited in claim 5, said planular top being substantially perpendicular to a handle member, said planular bottom being in a plane at an angle of less than 90° to the plane of said planular top.

9. The structure recited in claim 2, each of said cups comprising a planular top, a planular bottom, and two sides.

10. The structure recited in claim 9, each of said sides being in the shape of a portion of the surface of a cylinder.

11. The structure recited in claim 9, said planular top being substantially perpendicular to a handle member, said planular bottom being in a plane at an angle of less than 90° to the plane of said planular top.

12. The structure recited in claim 4, each of said beams comprising a top, a bottom, and two sides, said bottom being in a plane arranged at an angle of less than 90° to the plane of said top.

13. The structure recited in claim 1, each of said handle members being formed with a pair of openings, each having margins and a generally horizontal wall projecting from one of said margins of each of said openings.

14. The structure recited in claim 2, each of said handle members being formed with a pair of openings each having margins and a generally horizontal wall projecting from one of said margins of each of said openings.

15. The structure recited in claim 3, each of said handle members being formed with a pair of openings each having margins and a generally horizontal wall projecting from one of said margins of each of said openings.

16. The structure recited in claim 3, each of said handle members being formed with a pair of openings each having margins and a generally horizontal wall projecting from one of said margins of each of said openings.

17. An integral one-piece paper pulp molded carrier comprising a generally planar and normally vertically upstanding apertured handle member having a free upper edge and a collar section integrally and fixedly connected to the lower margin thereof, said collar section comprising two relatively rigid hollow container-like cups rigidly cantilevered therefrom, each of said cups having an open mouth and continuous walls completely about the area of said cups, which walls terminate at the mouth of each of said cups, the mouth of each of said cups

corresponding to an imaginary plane intersecting the continuous walls of the cup so that the walls of the cup at their margins lie in the plane of the mouth of the cup in the form of a closed geometric figure, the axis of each of said cups coinciding with an imaginary line drawn perpendicular to the plane extending across the mouth of the cup and intersecting said plane of the mouth of the cup at its center, each of said cups having an upper wall at substantially 90° to the plane of said handle and thereby being adapted to give support to a package to be carried by said carrier, said cups having their open ends in the plane of said handle member when articles

being carried are associated with said cups in normal carrying position.

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