Nov. 22, 1960 J. P. BOYDAK ET AL 2,961,123

MOLDED PULP BOTTLE CARRIER

Filed June 27, 1958

2 Sheets-Sheet 1

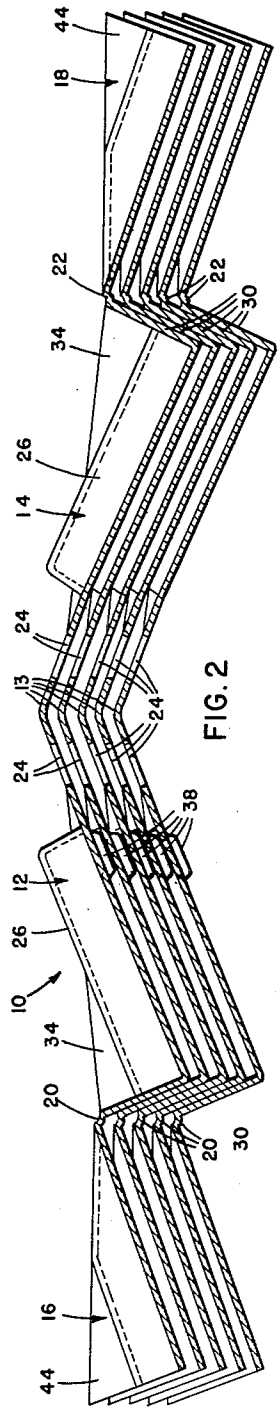


FIG. 2

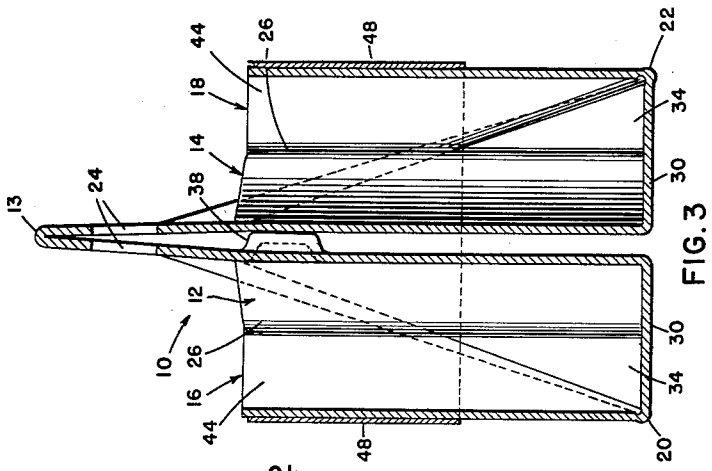


FIG. 3

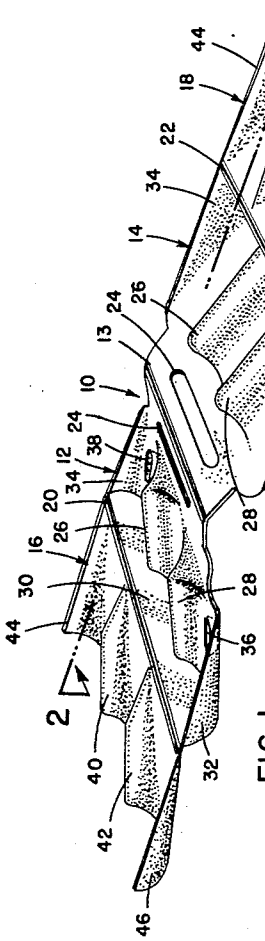


FIG. 1

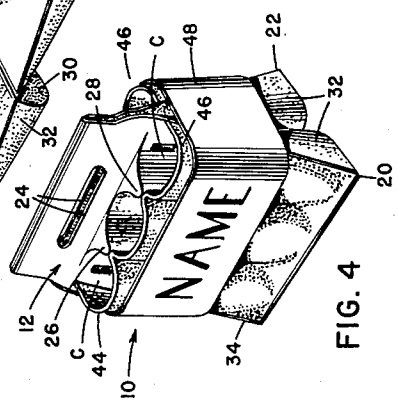


FIG. 4

INVENTORS
Joseph P. Boydak
Henry A. Lord

BY Karl W. Flocks

ATTORNEY

Nov. 22, 1960 J. P. BOYDAK ET AL 2,961,123

MOLDED PULP BOTTLE CARRIER

Filed June 27, 1958 2 Sheets-Sheet 2

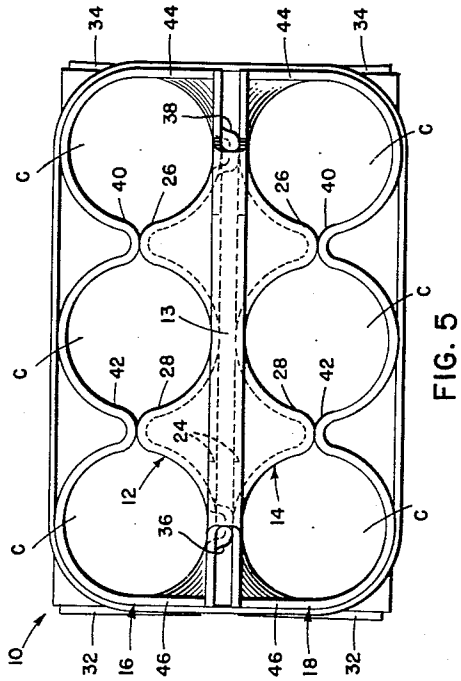


FIG. 5

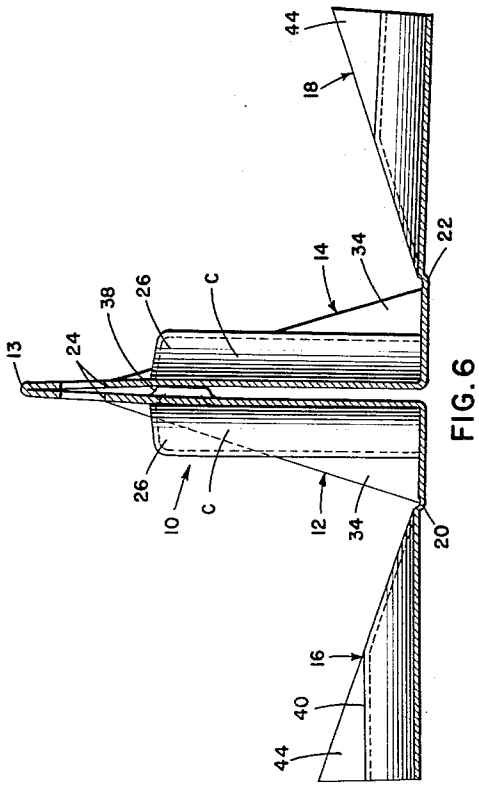


FIG. 6

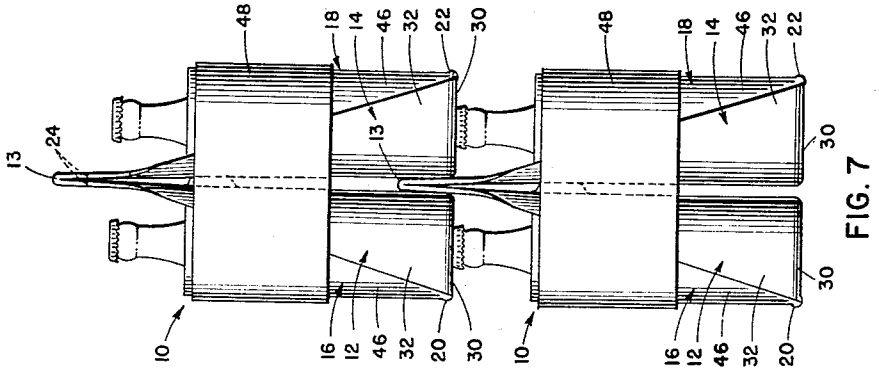


FIG. 7

INVENTORS

Joseph P. Boydak

Henry A. Lord

BY Karl W. Flocks

ATTORNEY

United States Patent Office 2,961,123 Patented Nov. 22, 1960

2,961,123

MOLDED PULP BOTTLE CARRIER

Joseph P. Boydak and Henry A. Lord, Palmer, Mass., assignors to Diamond National Corporation, a corporation of Delaware

Filed June 27, 1958, Ser. No. 745,128

7 Claims. (Cl. 220—102)

The present invention relates to a bottle carrier and more particularly to a molded pulp bottle carrier having two inner and two outer sections that serve to enclose two rows of bottles.

In recent years there has come into widespread use bottle carriers that are made to support six small soft drink or beer bottles. The most widely used of these bottle carriers are of paperboard, and these paperboard carriers are usually assembled with the aid of staples and/or glue. Thus, after the paperboard sheets are made, the carrier blanks are cut therefrom, and then the blanks are assembled, and it will thus be understood that there are several expensive manufacturing steps involved after the making of the paperboard. These additional steps have been found to add to the cost of the paperboard bottle carriers. In addition, the blanks are often passed through a printing press in order to impart to them desirable color and advertising material. Thus, in order to make these blanks attractive, it is necessary to further process them, and this further adds to the expense.

Another well known type of bottle carrier is made of metal, and these carriers are even more expensive than the paperboard carriers above discussed. This is so because the metal of which these materials are made, as a base material, is more expensive than the paperboard, and in addition, all of the printing and assembling processes above noted are even more expensive for metal. Thus, it is common with the metal carriers to assemble them with rivets, welding, soldering, etc. and in comparison these operations are also expensive.

An object of the present invention is to provide a bottle carrier that is relatively inexpensive to manufacture.

Another object of the present invention is the provision of a bottle carrier that will give superior protection to the bottles therein.

Still another object of the present invention is to provide a bottle carrier that can be made without expensive assembly steps in the manufacture thereof.

A still further object of the present invention is to provide a bottle carrier that readily nests for shipment from the point of manufacture to the point where bottles are placed in them.

Still another object of the present invention is to provide a bottle carrier that is relatively strong and provides for stacking into a stable structure by virtue of interlock between superposed carriers.

Yet another object of the present invention is the provision of a bottle carrier that may be readily carried and still meet the objects noted above.

Still another object of the present invention is to provide a bottle carrier that can be made attractive without expensive printing steps in the process of its manufacture.

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 perspective view of a bottle carrier in accordance with the present invention and showing the four sections thereof in unfolded relationship.

Fig. 2 is a cross-sectional view taken on the line 2—2 of Fig. 1 and showing how the carton of the present invention may be nested and stacked for shipment.

Fig. 3 is a cross-sectional view showing the carrier in bottle carrying position.

Fig. 4 is a perspective view of the carrier of the present invention in bottle carrying position.

Fig. 5 is a plan view of the carrier in bottle carrying position.

Fig. 6 is a cross-sectional view of the carrier in a position to receive bottles therein.

Fig. 7 is an elevational view showing a plurality of carriers in accordance with the present invention having bottles therein and in stacked relationship.

Turning now to the drawings, wherein like reference characters are used to designate like or corresponding parts throughout the several views, there is shown in Fig. 1 a bottle carrier **10** comprising a pair of inner sections **12** and **14** which are joined together along a transverse fold **13**. The carrier **10**, which is made of molded pulp to obtain the objects and advantages above noted, also comprises the outer sections **16** and **18**; outer section **16** is joined at transverse fold **20** to inner section **12** and outer section **18** is joined at transverse fold **22** to inner section **14**.

Spaced slightly away from the fold **13** in the inner section **14** is an elongated hand-receiving aperture **24**, and there is a similar aperture in the inner section **12**. Because the two inner sections **12** and **14** are mirror images of each other, and because the two outer sections **16** and **18** are similarly mirror images of each other, only the inner section **14** and the outer section **18** will be described in detail.

Inner section **14** further has a pair of outstanding hollow separator members **26** and **28**, each separator member comprising cylindrical side walls as may best be seen in Fig. 5. Inner section **14** also has an outstanding bottle supporting floor **30** and side portions **32** and **34** at each side thereof. When the main plane of section **14** is vertical, as shown in Figs. 3 and 6, the separator members **26** and **28** are also vertically extending, while the floor **30** is generally horizontally extending. Side portions **32** and **34** serve as braces to aid in the support of the floor **30**.

In order to insure that when the package is assembled there remains a space between the sections **12** and **14**, there is provided on section **12**, for example, a pair of spacer members **36** and **38**, and to the extent of the provision of these spacer members, the inner sections **12** and **14** depart from being mirror images.

Outer section **18** has a pair of hollow separator members **40** and **42**, and these members are placed in opposing relationship to the separator members **26** and **28**, respectively, of the corresponding inner section **14**. Outer section **18** also has side portions **44** and **46**. It will be noted from Fig. 3, for example, that the side portions **44** and **46** of the outer section **18** are generally triangular with the base of the triangle at the top, and that the side portions **32** and **34** are also generally triangular with the base at the bottom, thus providing for a meeting, or preferably an overlapping of the side portions so as to insure superior bottle protection. As will be seen from Fig. 3, the side portions of the inner and outer sections do overlap in the preferred embodiment of the invention.

Referring now to Fig. 4, there is shown the bottle carrier **10** with the inner and outer sections vertical, the sections being held in this relationship by the securing band **48**. As may be seen from Figs. 4 and 5, the inner and

outer sections have the separator members thereof meeting and forming therebetween generally cylindrical bottle receiving compartments C.

The bottle carrier of the present invention is, as noted above, molded from pulp slurry and when molded has the shape and position shown in Fig. 1. It may be conveniently stacked and nested for shipment, as is illustrated in Fig. 2, and as thus stacked it will be seen to be an economical article to ship as well as an inherently economical article to manufacture. The inner sections 12 and 14 are then folded on fold 13 so that the carrier 10 has the configuration shown in Fig. 6, and in this configuration or position the bottles may be readily inserted between the separator members of the inner sections 12 and 14. Thereafter, the outer sections may be folded up and the securing band 48 applied to known manner. Alternatively, the outer sections may be folded up and the band 48 applied before insertion of the bottles. By either method of assembly, it will be apparent that the completed carrier, including the bottles and band 48 will be strong and will afford good protection to the bottles contained therein. The carrier and bottles may be easily transported by use of the apertures 24 in the inner sections.

When it is desired to stack a plurality of filled carriers 10 for display or storage purposes, the spacer members 36 and 38 will keep the inner sections 12 and 14 spaced apart as is shown in Figs. 3 and 7, and the carriers 10 may thus be stacked upon one another as shown in Fig. 7 with the floor 30 of an upper carrier resting on the tops of the bottles carried in the lower carrier and with the upper part of the sections 12 and 14 of the bottom carrier extending between the sections 12 and 14 of the upper carrier.

It will be understood that when stacked for display as provided in Fig. 7, the carriers 10, together with the band 48, will make an extremely attractive and appealing sales package, and this is particularly so since the molded pulp carriers may be of various colors because of the ease with which molded pulp articles may have a dye imparted thereto during the forming thereof.

There has thus been provided a bottle carrier that is extremely inexpensive to manufacture and also inexpensive to assemble. The bottle carrier of this invention readily nests for shipment and also nests in stacking relationship when filled with bottles. In addition, the present bottle carrier provides great protection for the bottles therein while permitting the filled carrier to be readily and securely carried. In addition, the present bottle carrier provides for an attractive and eye-appealing sales package.

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. A molded pulp bottle carrier comprising a pair of inner sections and a pair of outer sections, the inner sections being joined together along a transverse fold and each outer section being joined to one of the inner sections along a transverse fold, said inner sections being upstanding when said carrier is in carrying position and having at the tops thereof below said first mentioned fold an elongated hand receiving aperture, said inner sections having outstanding hollow vertically extending separator members having cylindrical side walls, said inner sections further having outstanding generally horizontally extending bottle supporting floors and generally triangular side portions having their bases at the lateral edges of said floors and merging into said inner sections at the sides thereof, said outer sections having hollow outstanding vertically extending separator members with cylindrical side walls, and generally triangular side portions having their apices adjacent the transverse fold lines between said inner and outer sections, separator members of adjacent inner and outer sections meeting and forming therebetween generally cylindrical bottle receiving compartments, a spacer member on one of said inner sections and extending toward the other of said inner sections to thereby provide a space between said inner sections to receive the upper part of the inner sections of a similar carrier placed therebelow, and a receiving band extending around said carrier to hold the sections thereof in carrying position.

2. The carrier of claim 1, said triangular side portions overlapping.

3. A carrier for a plurality of articles comprising an elongated, stackable one-piece molded member, a pair of inner and outer sections, said inner sections being joined at a first transverse fold and each outer section being joined to an inner section by a second transverse fold defining the lower margin of said inner sections, said inner sections including overlying handle-forming portions including hand-receiving means adjacent said first transverse fold, said second sections including a marginal edge positioned below said hand-receiving means, said inner sections including longitudinally extending separator members forming transversely spaced cells, said inner sections including cell floors extending away from said second transverse folds into the general plane of said inner sections and forming the entire support surface for articles being carried, said inner sections including generally triangular sides extending at a base portion the entire width of said floors at the lower marginal edge thereof and having apex portions extending upwardly and merging into the general plane of said inner sections generally at said handle-forming portions for transferring the entire weight of articles supported on said cell floors directly to said handle-forming portions, said outer sections including portions mating with said side walls and separators to provide an outer side for said cells, and retaining means engageable between said outer and inner sections for retaining articles on said cell floors.

4. The structure of claim 3; said outer section portions comprising raised longitudinal separator members engageable with said separators of said inner sections, said outer sections including triangular sides having an apex portion terminating at said second folds and complementary to an adjacent edge of the triangular sides of said inner sections.

5. The structure of claim 3; and spacer means on the inner surface of at least one of said inner sections for engaging the inner surface of the other inner section to provide a transverse space therebetween, said spacer means being spaced longitudinally from said first transverse fold a distance less than the distance to said second transverse folds for permitting stable stacking of a plurality of erected carriers with the handle-forming portions inserted between the inner surfaces of said inner sections at the cell floors.

6. In a carrier for a plurality of articles, an elongated one-piece molded member comprising a pair of inner sections, said inner sections being joined at a transverse fold, said inner sections including overlying handle-forming portions including hand-receiving means adjacent said transverse fold, said inner sections including longitudinally extending raised separator members spaced below said hand-receiving means and forming transversely spaced cells, said inner sections including cell floors extending out of the plane of said inner sections and into the lower marginal edge thereof and forming the entire support surface for articles to be carried, said inner sections including generally triangular sides having bases extending the entire width of said floors and from the lower marginal edge thereof and having an apex portion merging into the general plane of said inner sections

adjacent said handle forming portions for transmitting the entire weight of articles supported on said cell floors directly to said handle forming portions, and an article-stabilizing band circumpositional about said carrier for retaining the articles on said floors.

7. The structure of claim 6; and spacer means on the inner surface of at least one inner section for engaging the adjacent inner surface of the other inner section to provide a transverse space therebetween, said spacer means being spaced longitudinally from said transverse fold a distance less than the distance to said cell floors for permitting stable stacking of a plurality of erected carriers with the handle forming portions inserted between the inner surfaces of said inner sections at the cell floors.

References Cited in the file of this patent

UNITED STATES PATENTS

2,089,297	Read et al.	Aug. 10, 1937
2,361,926	Brogden	Nov. 7, 1944
2,821,327	Glazer	Jan. 28, 1958

FOREIGN PATENTS

705,279	Great Britain	Mar. 10, 1954