

March 12, 1946.

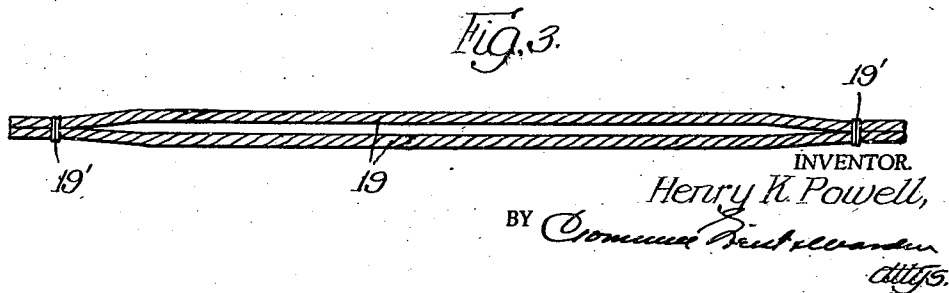
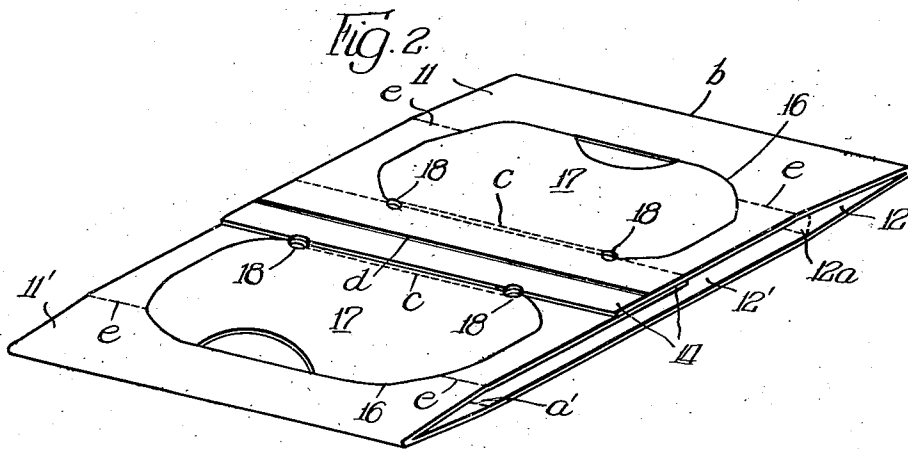
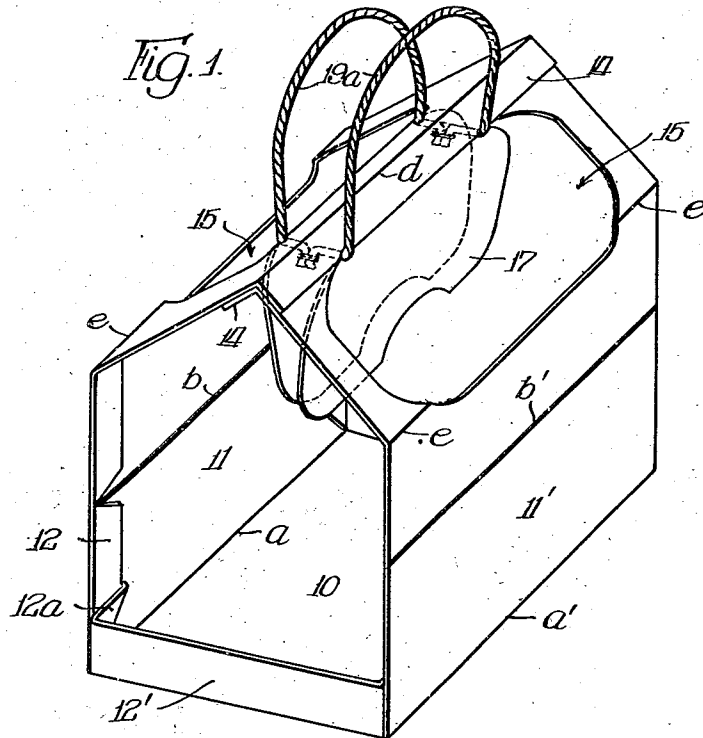
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2,396,473

BOTTLE CARRIER

Filed March 17, 1941

2 Sheets-Sheet 1



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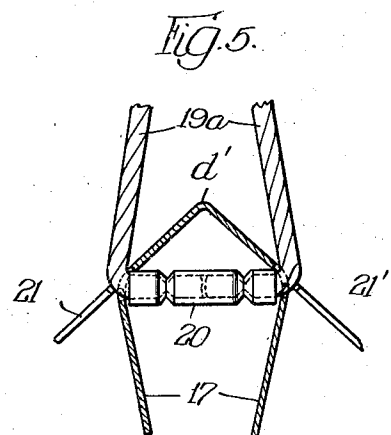
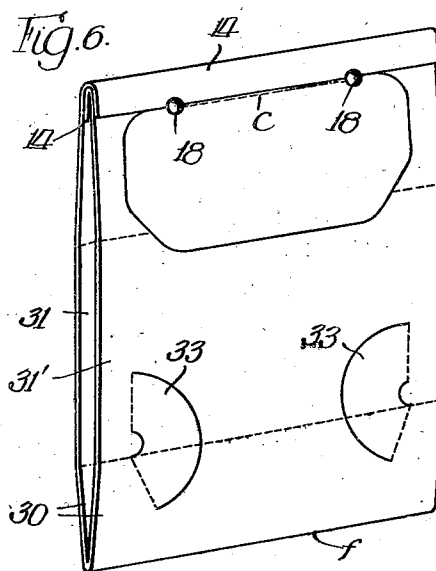
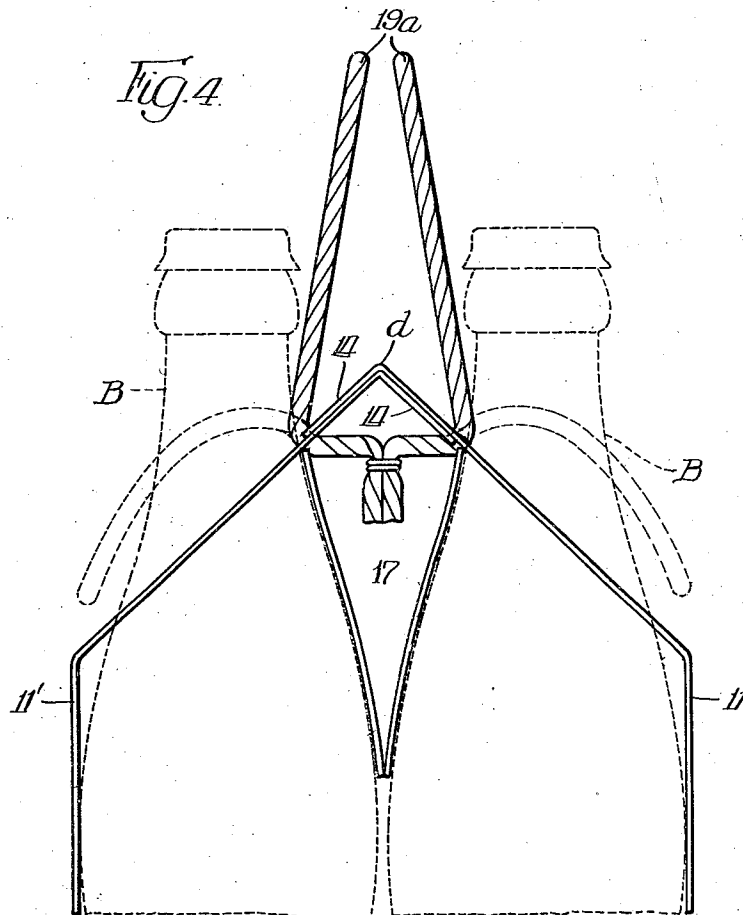
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BOTTLE CARRIER

Filed March 17, 1941

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,396,473

BOTTLE CARRIER

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Application March 17, 1941, Serial No. 383,729

5 Claims. (Cl. 224—45)

This invention relates to packaging containers designed for the packaging of a plurality of bottles of beverage or the like in a fashion to permit their being carried with convenience.

In order to be commercially feasible, it is essential that the cost of such packaging containers be quite low. It is the established practice among retailers to charge less for six bottles when sold at one time than for a like number of bottles sold individually. Moreover, it is not feasible for retailers to make a special charge for the packaging container. Hence, the cost of the container must be absorbed by the retailer or by the bottler who supplies him.

Moreover, in order to be commercially acceptable, it is necessary that such packaging containers be of knock-down or collapsible character so that they may be shipped and stored in compact form, and also that they be susceptible of being set up in complete form for reception of their contents by the bottler or the retailer quite easily and quickly and without requiring any special equipment or any additional fastenings for so doing.

The general object of the present invention is to provide a packaging container which is of sufficient strength and stability to support the very considerable weight of a half dozen bottles of beverage or the like and which can be supplied to the user in collapsed or knock-down condition at very low cost and which can be quickly and easily set up by him without the use of special equipment or additional fastenings.

Another object is the provision of such a packaging container which does not involve any distortion or mutilation of it for removal of its contents, and which consequently remains in condition for re-use, as for returning the empty bottles and reception of a new lot.

Other objects and advantages of the invention will be pointed out or indicated hereinafter or will be apparent from an understanding of it or use of it in actual practice.

To aid in explaining the invention, I show in the accompanying drawings forming a part of this specification, and hereinafter describe, certain forms in which it may be embodied. It is to be understood, however, that these are presented merely for purpose of illustration and are not to be construed in any fashion for the purpose of limiting the appended claims short of the true and most comprehensive scope of the invention in the art.

In such drawings:

Fig. 1 is a perspective view of one form of pack-

aging container embodying the invention, showing same in its set-up condition ready for reception of its intended contents;

Fig. 2 is a perspective view of such container body in collapsed or knocked-down condition;

Fig. 3 is a view of a handle for such container before attachment to the body member;

Fig. 4 is an end elevational view of the upper portion of such container in set-up condition and with bottles therein;

Fig. 5 is a detail in the nature of a transverse section through the upper portion of a modified form of container with modified form of handle; and

Fig. 6 is a perspective view of a further modified form of body member in collapsed condition.

In the embodiment of the invention illustrated in Figs. 1 to 4 inclusive, the body member of the container is formed from a sheet of paper board or similar material having suitable stiffness and strength, same being provided with transverse bend creases *a* and *a'* to define the lateral margins of a bottom panel 10 and the lower margins of side panels 11 and 11' which are foldable to upstanding positions along said bend creases. Marginal portions of the sheet are folded inwardly onto the bottom and side panels to form margin strips 12 and 12' and the portions of said strips which overlie the side panels are adhesively secured to them, whereas the portions 12' which overlie the bottom panel are not adhesively secured to it but remain connected to the portions 12 by gore portions 12*a*. This permits the portions 12' to swing to upstanding positions at the ends of the bottom panels 10 when the side panels 11, 11' are swung to upstanding positions.

Near their upper ends the side panels are creased transversely to provide terminal flaps 14 and they are also provided with transverse fold creases *b* and *b'* so located as to permit the upper portions of the side panels to be folded inwardly upon their lower portions and upon the bottom panel in relationship such that each of said terminal flaps overlaps the opposite side panel beyond its terminal flap, as illustrated in Fig. 2. The terminal flap of each side panel is adhesively secured to the opposite side panel in this relationship, thus connecting the side panels to each other at their upper ends.

In their upper portions the side panels are provided with bottle receiving apertures 15 which are defined by slots 16 which outline portions of tabs 17. These tabs remain connected to the respective side panels along crease lines *c* at the upper margins of the flaps 14, said crease lines *c*

being formed to provide lines of bend along which the tabs 17 may be swung inwardly. The slots 16 terminate at handle holes 18 which are punched through the sheet at the terminal margins of the tabs 14, and which may be formed partly in said tabs, the holes in opposite side panels being disposed opposite each other transversely of the tabs 14. The body member is thus completed in the box factory in its collapsed form, illustrated approximately in Fig. 2, and is shipped to the user in its collapsed condition.

The handle for this container, as supplied by the manufacturer, is formed of a strand of flexible cordage, twisted craft paper, or similar flexible material having the necessary tensile strength. It is in the form of a closed or continuous loop which, as illustrated in Fig. 3, may be made by permanently connecting sections of the strand to each other near their ends by means of rigid bindings of strong wire. The strand is designated by the reference numeral 19 and the connecting bindings by 19'.

The cross-sectional size of the strand is preferably such that it will fit closely in the holes 18, and the extent of the loop is such as to permit the tabs 17 to pass through it when their lower portions are swung inwardly in juxtaposition to each other.

Such a handle is adapted to be quickly and easily attached to the body member by the user in the setting up of the device. To accomplish this, the upper portions of the side panels are drawn away from the bottom panel and the tabs 17 are swung inwardly along the crease lines *c*. The handle is then passed under the depending tabs 17 and they are inserted through its loop. The portions of the strand which are thus positioned along the outer surfaces of the tabs 17 are then drawn outwardly through the apertures 15 until the strand enters all four of the handle holes 18.

As thus attached to the body member, the handle affords two bights extending outwardly from the handle holes 18 of the opposite side panels to approximately equal length, and rest portions underlying the angular top portion of the receptacle and forming supports for it.

The setting-up is completed by swinging the side panels upwardly to their full height, where their upper portions assume an anticlinal relationship from the crest bend line *d* to crease lines *e*, whereupon the container is ready for reception of its contents. The bottle receiving apertures 15 are of size such as to permit insertion of the intended bottles bottoms first through them to standing position on the bottom panel 10, in which positions the necks of the bottles project through the apertures 15 and to locations above the crest line *d*, as illustrated in Fig. 4. When so loaded, the package may be carried conveniently and comfortably by means of the two handle bights 19a which extend sufficiently above the tops of the bottles to permit their being grasped in the hand.

The construction is well qualified to sustain the considerable weight of a half dozen bottles of beverage without distortion or injury to the paper board container. The portions of the side panels which are above the apertures 15, by virtue of their anticlinal relationship, form a ridge pole structure which is quite stiff, and which is further stiffened by tabs 17 in their inwardly swung positions as illustrated in Fig. 4. Additional rigidity is obtained by proportioning the parts so that the necks of the bottles bear at their inner sides against the portions of the side panels at the

upper margins of the bottle receiving apertures, as illustrated approximately in said figure. The double thickness of sheet material afforded by the side panels and overlapping terminal flaps 14 is effective to prevent the handle tearing through the ridge pole under the weight of the container's contents, and their flexible connection and anticlinal relationship permit them to give or swing slightly on the crest crease *d* to accommodate jolting stresses and thus relieve the material of tearing stresses at the handle holes. The handle is adequately retained against dropping out of the handle holes, even in the absence of bottles, by the underlying engagement and pinching effect of the tabs 17 upon portions of the strand adjacent the holes, and the connected end portions of the strand prevent either bight of the handle being drawn out excessively in proportion to the other.

The construction affords additional advantage in that it permits the stacking of the packages one upon another without involving any distortion of the container or imposing any additional stresses upon its walls or top. The flexible handle bights may be swung downwardly to positions below the tops of the bottles, so that another package may be set directly upon the bottles and be supported by them entirely independently of the receptacle itself. This mobility of the handle bights is of additional advantage in that it permits the packages to be packed in boxes or trays of standard depth, corresponding to the height of the bottles or less, for purpose of transportation or handling.

In some instances it may be desirable to use a construction which does not have a double thickness of sheet material at the upper ends of the side panels. In such instances it may be desirable to employ an arrangement such as illustrated in Fig. 5, wherein rigid spacer tubes 20 are threaded on the handle strand and are of sufficient length to span the space between opposite handle holes when the container is set up with its side panels 21 and 21' in the intended anticlinal relationship. In such construction, the handle is connected to the body member as above described, and when set up with the handle attached, the spacer tubes 20 reinforce the ridge portion transversely and restrain the handle strand from exerting pinching and tearing pressure upon the upper margins of the handle holes. Such a spacer tube may serve the additional purpose of connecting end portions of the handle strand by being pinched into gripping engagement with it, as illustrated in Fig. 5, and when so connected they function also as stops engaging against the upper side wall portions or tabs 17 to prevent either of the bights being drawn out excessively in proportion to the other.

In Fig. 6 I show one of various other forms of body members which may be employed. Here the side panels 31 and 31' are connected at their upper ends as above described and provided with the bottle receiving apertures, tabs 17 and handle holes 18 as above explained. This body member is adapted to be collapsed by folding the bottom panel 30 along a medial crease line *f*, and bottle retaining members for holding the bottoms of the bottles against sliding off of the bottom panel may be provided in the form of flaps or strips 32 slotted out of the side and bottom panels and bendable inwardly to positions where portions of them project inwardly from the side panels and upwardly from the bottom panel adjacent the ends of the latter when the container is set up.

A handle of the sort first above described may be attached to this body member as above explained and with like functions and advantages.

What I claim is:

1. A knock-down bottle carrier adapted to be assembled by the user comprising a body member formed of paper board or the like and having a bottom panel and side panels extending upwardly from opposite side margins thereof, each of said side panels having a connecting flap extending along its upper end from a fold crease which runs transversely of the side panel, said side panels being connected to each other at their upper ends with said fold creases in superposed relationship and their connecting flaps extending from said creases in anticlinal relationship, each of said side panels being provided in its upper portion with an aperture terminating adjacent the margin of the connecting flap of the other side panel, and a separate pre-formed handle comprising a pliant strand formed as a closed loop and arranged with bights of the loop passing through said apertures and intermediate portions of the strand affording rests underlying portions of the side panels which are between said apertures, said bights extending upwardly from the margins of the connecting flaps as collaterally disposed handles, and wherein the side panels are provided with notches spaced from each other adjacent the margins of the connecting flaps and the strand is retentively engaged in said notches at opposite ends of said rest portions.

2. A knock-down bottle carrier comprising a receptacle formed of paper board or the like and having a bottom panel and a pair of side panels which are joined to each other along their upper ends at a crest from which they diverge in anticlinal relationship, the height of said crest from the bottom panel being not greater than the height of the intended bottles, said side panels being provided with bottle receiving apertures spaced below their upper ends and extending throughout the greater portion of their width, and a separate pre-formed handle adapted to be mounted on and dismounted from the body member and comprising a flexible strand formed as a closed loop and having bights of the loop extending through said apertures and upwardly beyond the junction of the side panels and with the portions of the strand which connect said bights passing under the portions of the side panels which are between said apertures and forming rests for the receptacle adjacent opposite ends of said apertures, and wherein the side panels are provided with portions for retaining the rest portions of the strand spaced from each other transversely of the side panels.

3. A knock-down bottle carrier comprising a receptacle formed of paper board or the like and having a bottom panel and a pair of side panels which are joined to each other along their upper ends at a crest from which they diverge in anti-

clinal relationship, the height of said crest from the bottom panel being not greater than the height of the intended bottles, said side panels being provided with bottle receiving apertures spaced below their upper ends and extending throughout the greater portion of their width, and a separate pre-formed handle adapted to be mounted on and dismounted from the body member and comprising a flexible strand formed as a closed loop and having bights of the loop extending through said apertures and upwardly beyond the junction of the side panels and with the portions of the strand which connect said bights passing under the portions of the side panels which are between said apertures and forming rests for the receptacle adjacent opposite ends of said apertures, and wherein the side panels have stiffening flaps extending transversely thereof along the upper margins of said apertures and depending therefrom in synclinal relationship and having parts underlying the rest portions of the strand to retain the strand in the apertures.

4. A knock-down bottle carrier comprising a receptacle formed of paper board or the like and having a bottom panel and a pair of side panels which are joined to each other along their upper ends and from which they diverge in anticlinal relationship, said side panels being provided with bottle receiving apertures spaced below their upper ends, and a handle comprising a flexible strand formed as a closed loop extending through said apertures and upwardly beyond the upper ends of the side panels to form handle bights, the portions of the strand which connect said bights passing under the portions of the side panels which are between said apertures and forming rests for the receptacle adjacent opposite ends of said apertures, the strand being provided with stops engageable with adjacent portions of the receptacle to prevent either of the bights being lengthened materially relative to the other.

5. A knock-down bottle carrier comprising a receptacle formed of paper board or the like and having a bottom panel and a pair of side panels which are joined to each other along their upper ends and from which they diverge in anticlinal relationship, said side panels being provided with bottle receiving apertures spaced below their upper ends, and a handle comprising a flexible strand formed as a closed loop extending through said apertures and upwardly beyond the upper ends of the side panels to form handle bights, the portions of the strand which connect said bights passing under the portions of the side panels which are between said apertures and forming rests for the receptacle adjacent opposite ends of said apertures, said rest portions of the strand being provided with stiff spacers spanning the space below the superjacent portions of the side panels.

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