

- [54] **BOTTLE CARRIER PACKAGE**
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- [22] Filed: **Jan. 11, 1971**
- [21] Appl. No.: **105,186**

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Related U.S. Application Data

- [63] Continuation-in-part of Ser. No. 82,300, Oct. 20, 1970.
- [52] U.S. Cl.....206/65 E, 220/116, 229/52 BC
- [51] Int. Cl.....B65d 75/00, B65d 85/62
- [58] Field of Search.....206/65 E; 229/52 BC, 52 B, 229/28 BC; 320/108, 116, 115, 113, 112

[57] **ABSTRACT**

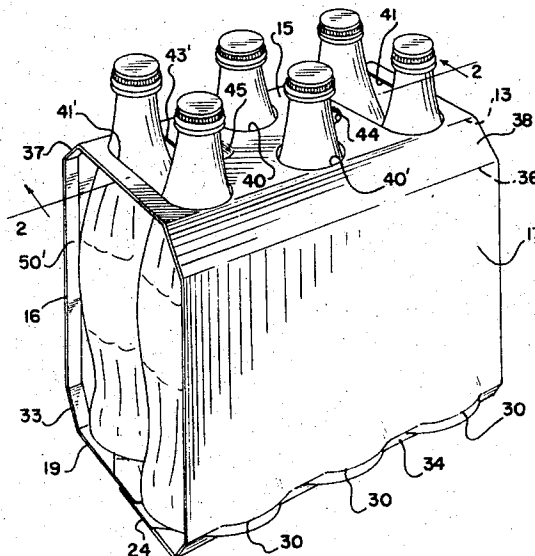
A wraparound or sleeve-type container or carrier for bottled goods which is formed of a single blank and wrapped around a cluster of bottles arranged in double row formation with the ends of the blank adapted to be connected beneath the cluster of bottles and the blank having infolding edge reinforcing panels and finger holes which are reinforced by infolding panels taken from the top portion of the package so as to leave apertures through which the tops of pairs of the bottles project.

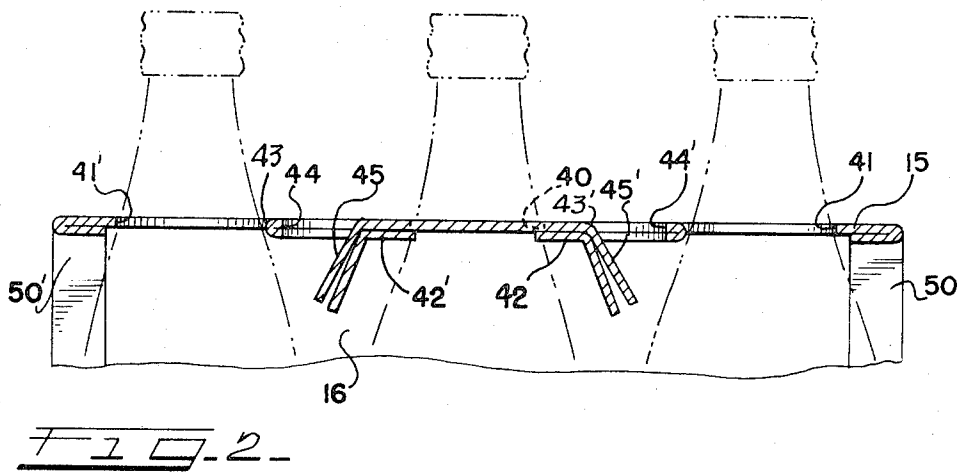
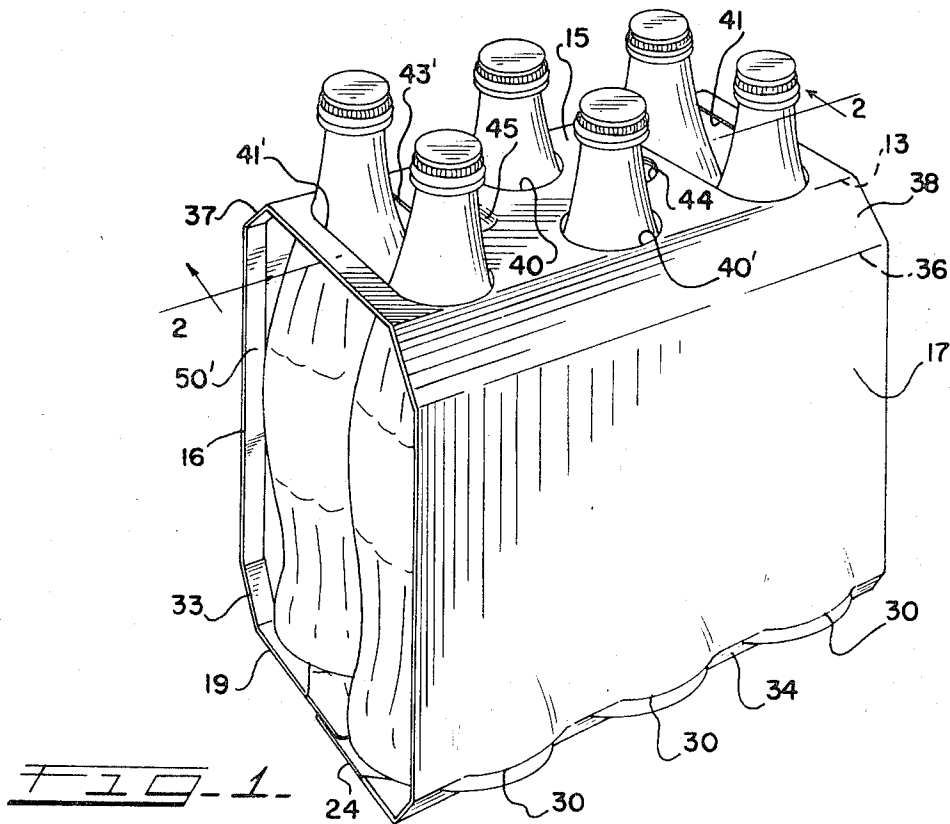
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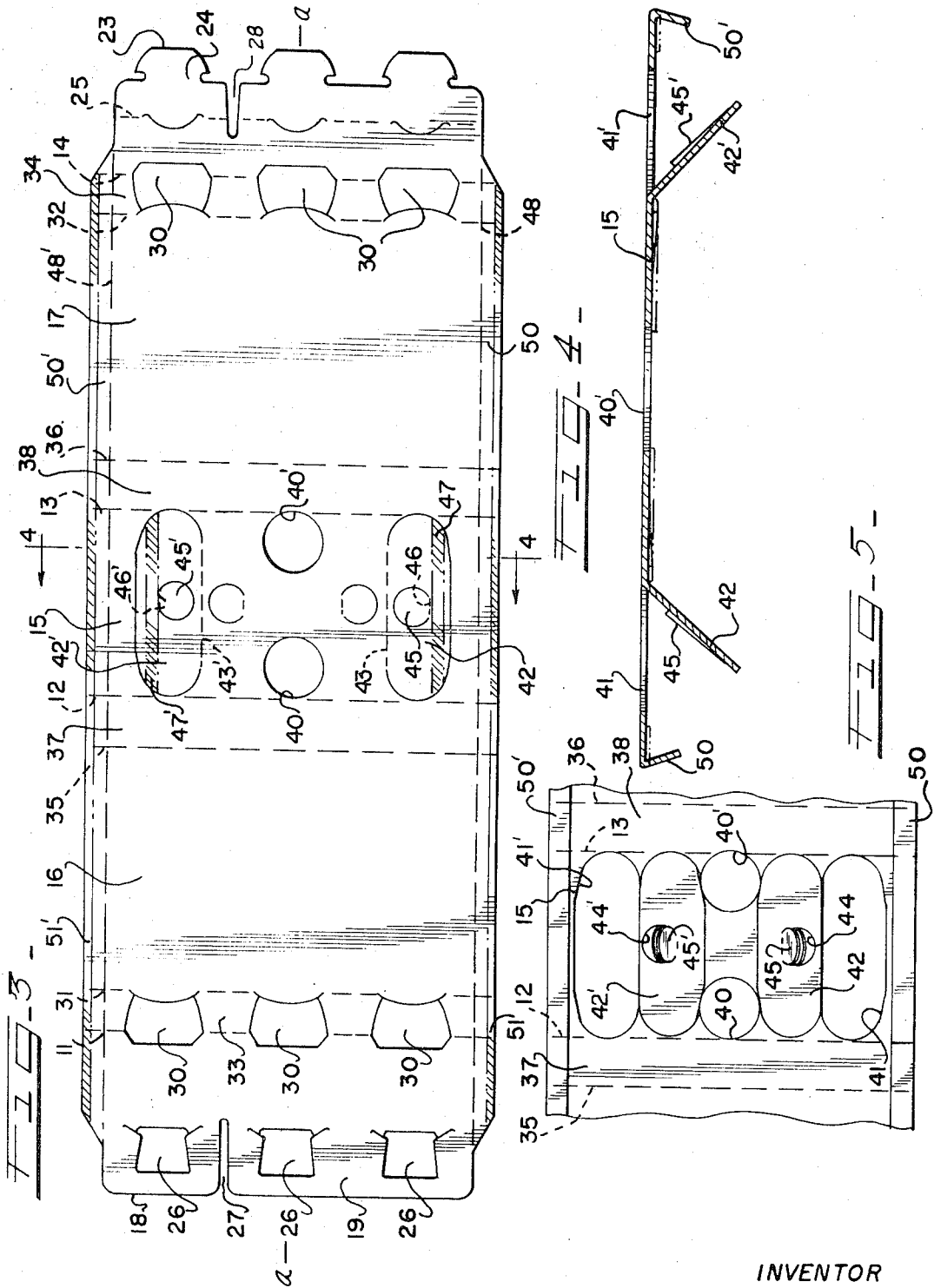
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3 Claims, 8 Drawing Figures





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FIG. 6

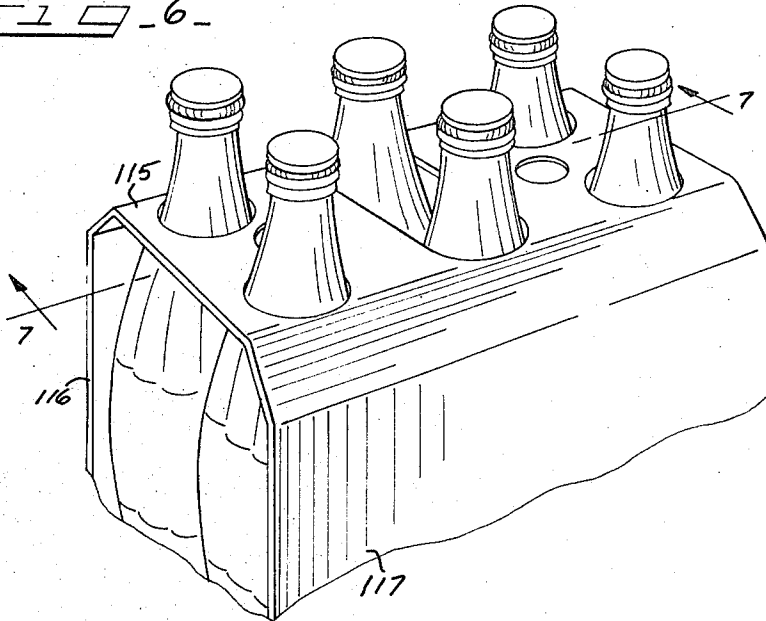


FIG. 8

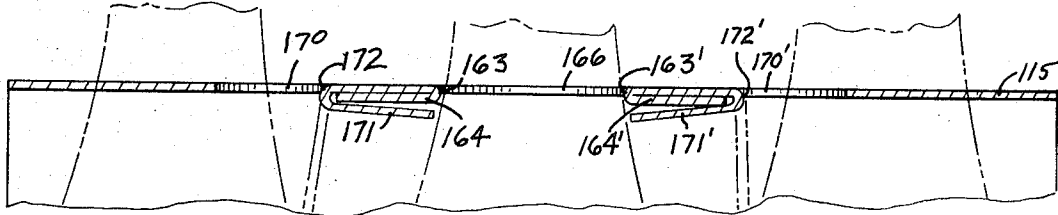
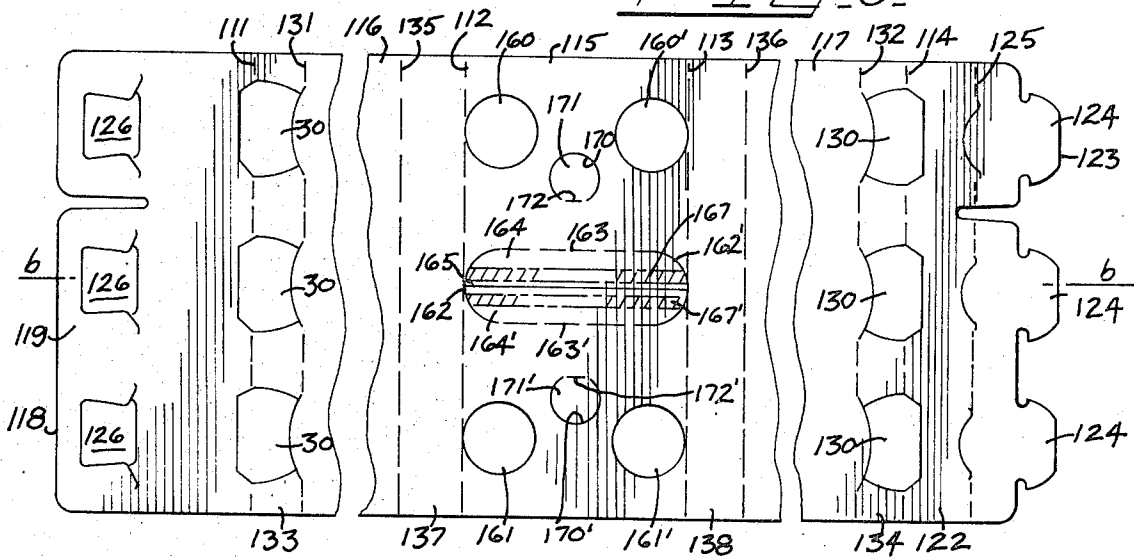


FIG. 7

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BOTTLE CARRIER PACKAGE

This application is a continuation-in-part of application Ser. No. 82,300, filed Oct. 20, 1970.

This invention relates to packaging and is more particularly concerned with improvements in a packaging unit comprising a container or carrier which is particularly adapted to hold a plurality of cylindrical articles such as bottled beverages which are arranged in row formation therein.

Various packaging units have been developed for bottled and canned beverages and similar products which are generally designed to be formed from paperboard blanks cut and scored so as to be set up into container formation in the bottling or canning plant. The most popular type carrier for bottled goods has been one in the form of a basket in which a plurality of open top cells are provided for receiving the bottles. The most popular package for the canned beverages has been the wraparound of sleeve-type unit in which two rows of the cans are encased. In the latter type carrier, which may be in the form shown in U.S. Pat. No. 2,985,294, most often the blank has been wrapped around the cans with the end panels overlapped on the top of the package and provided with a pair of finger holes arranged so that the package may be picked up and carried by inserting the thumb and one other finger of the hand in the finger holes. With the thickness or weight of paperboard material commonly employed for this type of package, and the relatively light weight of the cans, the two thicknesses of the overlapped ends of the blank provide sufficient strength in the material around the finger holes to prevent tearing when the unit is picked up. In another form of this type package or carrier such as shown in U.S. Pat. No. 2,993,618, provision has been made for a handle portion of double thickness material upstanding from the longitudinal center of the top wall panel. This has provided a satisfactory arrangement for carrying the package but involves the use of extra material in the blank and consequently is more expensive to produce.

More recently, efforts have been made to adapt the wraparound type blank to the packaging of bottled goods. This has necessitated the placing of the middle panel of the blank on the top of the package and providing apertures therein through which the tops of the bottles extend. With this arrangement, only one thickness of material is available in the top wall and finger holes provided therein for carrying the package have presented a rupture problem. With the single thickness of paperboard and the much greater weight of the bottled goods, tearing at the finger holes has been common. Various efforts have been made to reinforce the finger hole area, none of which have proven entirely successful. It is an object of the present invention to provide an improved carrier for bottled goods of the wraparound type in which the bottle necks project through apertures in the top wall panel and the margins of the blank are locked together beneath the bottle assembly wherein provision is made for reinforcing the area around the finger holes without resorting to additional material, so that when the fingers are inserted in the holes and the package lifted, tearing of the material is less likely to occur.

A more particular object of the invention is to provide a wraparound or sleeve-type carrier blank for bottled goods in which a middle panel of the blank is aper-

tured to receive the necks of a double row cluster of bottles and finger holes are provided in the panel which enable the package unit to be picked up and carried with the area around the finger holes having reinforcing material which is taken from adjoining portions of the panel and secured to the inner face of the panel in the areas surrounding the finger holes.

Another object of the invention is to provide a wraparound type carrier blank for packaging a cluster of bottles which are arranged in laterally paired and longitudinally aligned row formation wherein the top panel of the carrier or container formed by the blank comprises a single thickness of material and said top panel is provided with apertures for receiving the top or neck portions of the bottles and with a pair of finger holes which are spaced longitudinally with areas immediately adjacent the finger holes and between the same being reinforced by panel portions which are cut from the top panel so as to leave an opening for certain of the bottle necks.

A further object of the invention is to provide a wraparound type carrier blank for packaging a cluster of beverage bottles which are arranged in row formation, wherein the top panel of the container formed by the blank comprises a single thickness of material which is provided with apertures for receiving the top portions of the bottles and a pair of longitudinally spaced finger holes with the area about the finger holes being reinforced by panels cut from adjoining portions of the top panel so as to leave openings for the bottle necks, which reinforcing panels are folded inwardly and secured to the inside face of the top panel between pairs of the bottles, and preferably with the finger holes being cut therein so as to provide tabs of double thickness material hinged to the inner edges of the finger holes and foldable into a reinforcing position inside of the top wall panel.

A still further object of the invention is to provide a wraparound type carrier blank for packaging a cluster of bottles arranged in laterally paired and longitudinally aligned row formation wherein the top panel of the carrier formed by the blank comprises a single thickness of material and is provided with apertures for receiving the neck portions of the bottles and a pair of longitudinally spaced finger holes with finger hole reinforcing panels which are cut from the top panel so as to provide an aperture for a pair of bottles and which are folded into engagement with inside face portions of the top panel immediately adjacent the finger holes thereby forming a double thickness of material at the edges of the finger holes which are remote from the ends of the carrier.

These and other objects and advantages of the invention will be apparent from a consideration of the bottle container and carrier structure which is shown by way of illustration in the accompanying drawings wherein:

FIG. 1 is a perspective view of a bottle container and carrier in fully erected and filled condition which embodies therein the principal features of the invention;

FIG. 2 is a fragmentary section taken on the line 2-2 of FIG. 1, to an enlarged scale;

FIG. 3 is a plan view showing the inside face of the blank of paperboard which has been cut and scored preparatory to forming the carrier of FIG. 1;

FIG. 4 is a cross section taken on the line 4—4 of FIG. 3 illustrating the folding of portions of the blank preparatory to wrapping the same about a cluster of six bottles;

FIG. 5 is a fragmentary plan view illustrating the center portion of the blank of FIG. 3 with certain parts thereof folded and glued;

FIG. 6 is a perspective view of a top portion of modified form of the bottle carrier in fully erected and filled condition;

FIG. 7 is a fragmentary section taken on the line 7—7 of FIG. 6, to an enlarged scale; and

FIG. 8 is a plan view showing the inside face of the blank of paperboard which has been cut and scored preparatory to forming the carrier of FIG. 6.

Referring to the drawings, there is illustrated in FIG. 1 a packaging unit which comprises a group of six beverage bottles enclosed in a combination container and carrier which embodies therein the principal features of the invention. The carrier illustrated is adapted to be formed from a single blank of paperboard or other sheet material which is relatively flexible and bendable, which is capable of being cut and folded as shown, and which has sufficient strength and rigidity to support the bottles which it is designed to receive while at the same time being of a weight or thickness which will achieve the greatest economy in the use of the sheet material.

The paperboard blank 10, which is illustrated in FIG. 3, is cut and scored to provide the walls and reinforcing members for the carrier of FIG. 1. The blank 10 is generally rectangular in shape and is substantially symmetrical about the longitudinal center line *a—*a**. The blank 10 is divided by transversely extending score lines 11, 12, 13 and 14 into a plurality of integrally connected panels of rectangular shape which are adapted to be folded into wall forming relation in the completed container. The transverse score lines 12 and 13 define between them the rectangular panel 15 which is adapted to form the top wall of the carrier package. The transverse score lines 11 and 14 co-operate with the transverse score lines 12 and 13 to define a pair of rectangular side wall forming panels 16 and 17, which, in the set up form of the container, are in oppositely disposed relation. The transverse score line 11, at one end of the blank, defines with the end or marginal edge 18 of the blank a rectangular bottom wall forming panel or flap 19 while the transverse score line 14, at the other end of the blank, defines with the end edge 23 of the blank a bottom wall forming panel 22 for cooperation with the flap 19 in forming the bottom wall of the carrier. The panels 19 and 21 are adapted, in the erected position of the container, to be positioned in a plane at right angles to the side wall panels 16 and 17, respectively, and to bridge the bottle receiving space between the same thereby forming the bottom wall of the container.

The panel 21 at the one end of the blank is provided with locking tongue formations 24 which are spaced laterally of the blank and adapted to hinge about the score line 25. Apertures 26 are provided in the panel 19 at the opposite end of the blank for co-operation with the locking tongues 24 for securing the two panels in margin overlapped and locked relation beneath the cluster of bottles when the blank is wrapped around the

same in forming the package which is shown in FIG. 1. The panels 19 and 21 may be notched as shown at 27 and 28 to subdivide the same and facilitate the interengagement thereof on automatic machinery.

The side wall forming panels 16 and 17 are provided with apertures 30 spaced along the bottom edges thereof in accordance with the spacing of the bottles in the package which apertures 30 are adapted to receive bottom edge portions of the bottles when the blank 10 is wrapped about a cluster of the same in double row formation. Transverse score lines 31 and 32, which are parallel and spaced inwardly relative to the score lines 11 and 14, respectively, are provided so as to result in narrow panel portions 33 and 34 at the bottom of the side walls which taper inwardly and provide the recesses in which the bottom edges of the bottles are seated so as to hold the same against longitudinal movement in the carrier when the blank is wrapped tightly about the bottle assembly. Transverse score lines 35 and 36 which are parallel and spaced outwardly relative to the score lines 12 and 13, respectively, are provided in the side wall panels 16 and 17 so as to result, when the blank is wrapped around an assembly of bottles as shown in FIG. 1, in narrow panel portions 37 and 38 at the top of the side walls which taper inwardly so as to conform more nearly with the contour or upward and inward taper of the surfaces of the bottles against which these panel portions lie.

The top wall forming panel 15 is cut to provide a pair of center apertures 40 and 40' which are spaced longitudinally and transversely of the blank 10 so as to receive neck forming portions of the center pair of bottles in the six bottle cluster or assembly which is illustrated. The top wall panel 15 is also cut to provide laterally spaced apertures 41 and 41' which are of a size to accommodate the neck portions of the pair of bottles at each end of the package assembly, the apertures 41 and 41' being spaced laterally of the blank in accordance with the longitudinal spacing of the pairs of bottles in the assembly shown in FIG. 1. The apertures 41 and 41' are obtained by die cutting from the panel 15 the smaller subpanels 42 and 42' on C-shaped cutting lines so that the panels 42 and 42' are foldable inwardly about hinge forming score lines 43 and 43' for positioning in reinforcing relation against the inner face of the panel 15 in the areas between the apertures 41 and 41' and the center apertures 40 and 40' so as to reinforce these areas in which finger holes 44 and 44' are provided. The finger holes 44 and 44' are formed by cutting on C-shaped lines through the double thicknesses of material, which results from folding the panels 42, 42' inwardly, so as to provide double thickness tabs 45, 45' which are in turn adapted to be folded inwardly about hinge lines 46 and 46'. Normally the two plies forming each of the tabs 45, 45' will be cut in the blank 10, as shown in FIG. 3, prior to any folding of the panels 42, 42' with the cuts being made so as to obtain substantial registration when the panels 42, 42' are folded and to permit folding or bending of the tabs 45, 45' when the panels 42, 42' are disposed in reinforcing position, as shown in FIGS. 2 and 5. The reinforcing panels 42 and 42' are provided with an adhesive at 47, 47' so as to adhere the same to the inner face of the panel 15. The adhesive may, of course, be provided on the panel 15. The finger hole tabs 45, 45'

have the hinge lines, in the form shown, near the edges or margins of the subpanels 42 and 42' which are adhered to the panel 15 so that both thicknesses of the finger tab material remain for strengthening the hinge areas. The finger tabs 45, 45' provide with the main panel 15 no less than three thicknesses of material which are gripped by the fingers in lifting the package.

The longitudinal side margins of the blank 10, which form the end margins of the erected container, are extended and provided with parallel score lines 48, 48' which define outwardly extending, narrow edge reinforcing panels 50 and 50'. The reinforcing panels or strips 50 and 50' are adapted to be folded inwardly on the score lines 48, 48' and adhesively secured to the main body of the blank by strips of adhesive indicated at 51 and 51' which may be applied to either the panels 50 and 50' or the main body of the blank 10. The folded panels 50, 50', of course, form edge reinforcements for the ends of the carrier.

The edge reinforcing panels 50, 50' and the finger hole reinforcing panels are folded and adhered by the blank manufacturer prior to the delivery to the bottling plant, as shown in FIGS. 2, 4 and 5. In assembling the blank with the bottles which it is adapted to receive the bottles are positioned in a double row assembly or cluster, as shown in FIG. 1, and the blank, which is cut and scored and on which the reinforcing panels are folded and secured, is fed onto the top of the bottles and pulled down so that the bottle necks extend through the apertures 40, 40', 41, 41' in the top wall forming panel 15 after which the side wall panels are folded downwardly about the sides of the bottle assembly and the bottom wall forming panels 19 and 21 are folded inwardly beneath the assembly and the locking tabs engaged with the co-operating locking apertures 26 so that the blank is tightly wrapped about the bottle assembly.

In the assembled and erected condition of the carrier, as shown in FIG. 1, the bottles are securely held at the bottom in the apertures 30 in the lower side wall panels while the bottle necks extend through the apertures 41, 41' and 40, 40' in the top wall panel 15. The finger hole apertures 45, 45' are adequately reinforced so as to minimize or prevent any tendency to tear in the finger hole areas when the package is picked up for carrying or handling.

Referring to FIGS. 5 through 8 there is illustrated another form of the carrier and the blank for fabricating the same which embodies the principal features of the invention, the same being shown as provided for packaging a cluster of six bottles in the same manner as the carrier of FIGS. 1 to 5. It will be understood that the same principles may be incorporated in a carrier of either form for accommodating a larger cluster or assembly of bottles such as an eight or 12 bottle assembly, provision being made for an additional pair of bottles at one end of the carrier, in the case of the eight bottle package, and for doubling the size in the case of the 12 bottle package with the hand holes being off center, lengthwise of the package, of course, in the eight bottle package.

The blank 110 which is illustrated in FIG. 8 is generally rectangular in shape and is cut and scored in the same manner as the blank of FIG. 3, except for omitting the side edge reinforcing panels or strips 51,

51' which are incorporated in the package of FIG. 1, and providing a different arrangement in the panel which forms the top wall of the carrier. For convenience in describing the blank 110 the various panels and cutting and scoring lines will be identified by the same numerals which are applied to the corresponding items in the blank 10, plus 100, and only the arrangement in the top wall forming panel 115 will be described in detail. The blank 110 is substantially symmetrical about the longitudinal center line *b-b*. It is divided by transverse score lines 111, 112, 113 and 114 into a plurality of integrally connected panels of rectangular shape which are adapted to be folded into wall forming relation in the completed container. The transverse score lines 112 and 113 define between them the panel 115 which is adapted to form the top wall of the package. The score lines 111 and 114 cooperate with the score lines 112 and 113 to define a pair of rectangular side wall forming panels 116 and 117 which are in oppositely disposed relation in the set up container as shown in FIG. 6. The transverse score lines 111 and 114 near the ends of the blank 110 define with the end edges 118 and 123 bottom wall forming panels or flaps 119 and 122. The end panels 119 and 122 are provided with locking tongue formations 124 and tongue receiving apertures 126 for cooperation in securing the two bottom wall forming panels 119 and 121 in margin overlapped and locked relation beneath the cluster of bottles when the blank is wrapped around the same in forming the package shown in FIG. 6. The side wall forming panels 116 and 117 are each provided with a series of spaced transversely aligned apertures 130 and score lines 131 and 132, the latter being parallel with and spaced inwardly of score lines 111 and 114, so that, when the blank is wrapped around an assembly of bottles, the bottom edges of the bottles are seated in the recesses or apertures 130 in narrow inwardly tapering panel portions 133 and 134 and held against longitudinal movement in the carrier. The side wall forming panels 116 and 117 are also scored on the lines 135 and 136 to provide inwardly tapering narrow panel portions 137 and 138 at the top of the side walls which lie against the correspondingly tapered bottle surfaces as shown in FIG. 6.

The top wall forming panel 115 is cut to provide pairs of bottle neck accommodating or receiving apertures 160, 160' and 161, 161' with the apertures of each pair thereof being transversely aligned and spaced at the opposite free ends or edges of the top wall forming panel 115 according to the alignment and spacing of the end pairs of bottles in the double row six bottle assembly. The center portion of the panel 115 is cut on the semi-circular lines 162, 162' and scored on the parallel lines 163, 163', the latter connecting the ends of the semi-circular cutting lines and extending transversely of the panel 115 or in the lengthwise direction of the blank 110. The material within these cutting and score lines is divided into two reinforcing panels 164, 164' by an intermediate transversely extending cutting line 165, which reinforcing panels 164, 164' are adapted to be hinged on the score lines 163, 163' into engagement with the inside face of the top wall forming panel 115 in the areas immediately adjoining the aperture 166 which results from the cutting, scoring and folding operations and which is of a size and dimen-

sioned to accommodate the neck portions of the center pair of bottles in the six bottle assembly as shown in FIG. 6. The reinforcing panels 164, 164' are adapted to be secured to the panel 115 surface (FIG. 7) by adhesive strips 167, 167' applied on either the panels 164, 164' as shown or on the adjoining inside surface areas of the panel 115. Longitudinally aligned and spaced finger holes 170 and 170' are cut in the panel 115 in the areas between the center aperture 166 and the end pairs of apertures 160, 160' and 161, 161' so as to leave tabs 171, 171' which are adapted to hinge on the score lines 172, 172' so as to overlie portions of the panels 164, 164' as shown in FIG. 7.

I claim:

1. A blank for fabricating an open ended tubular carton which is adapted to enclose, when set up, a plurality of bottles arranged in double row forming relation and in longitudinal and transverse alignment, said blank comprising a generally rectangular sheet of relatively stiff bendable paperboard material which is divided by longitudinally spaced, transversely extending crease lines into a center top wall forming panel, adjoining side wall forming panels at opposite edges thereof, and bottom wall forming panels at opposite ends of the blank, said bottom wall forming panels having a dimension longitudinally of the blank sufficient to enable the free marginal portions to overlap and be secured together beneath the bottles to form the bottom wall of the carton when it is set up, said top wall forming panel having apertures cut therein which are spaced according to the spacing of the bottles and through which the neck portions of the bottles are received, and finger holes cut in said top wall forming panel which finger holes are spaced transversely of the blank in the central portion of said top wall forming panel, said bottle neck receiving apertures being arranged to accommodate the neck portions of bottles which are aligned in paired relation transversely of said top wall forming panel, said finger holes each being disposed between apertures for adjacent pairs of bottles, and reinforcing panels which are cut from said top wall forming panel material on generally C-shaped lines with the material scored on lines extending longitudinally of the blank and spaced transversely so as to enable said reinforcing

panels to be folded on said score lines and to lie against the inner face of said top wall forming panel whereby to reinforce the areas of said top wall forming panel which are between said adjacent pairs of bottles and in which said finger holes are cut, said reinforcing panels being cut from said material so as to provide at least one aperture in said top wall forming panel of sufficient dimensions to accommodate the neck portions of a pair of bottles, and said finger holes being cut in the material on generally C-shaped lines so as to provide finger hole reinforcing tabs with integral connecting hinge portions disposed so as to enable said tabs to be folded to overlie portions of said reinforcing panels.

2. A blank as set forth in claim 1, wherein said reinforcing panels are cut with hinge portions located so as to enable said panels to fold inwardly toward each other and to bring the same into engagement with the inner face of said top wall forming panel and wherein said finger holes are cut through said top wall forming panel and said reinforcing panels so as to leave said reinforcing tabs with the connecting hinge portions located so that they may be swung toward each other and beneath said top wall forming panel whereby to dispose the same in overlying relation with said reinforcing panels and provide reinforcing at the hinged inner edges of said finger holes.

3. A blank as set forth in claim 1, wherein a pair of said reinforcing panels are cut so as to provide an elongate aperture of dimensions sufficient for accommodating the neck portions of a pair of bottles and to provide also two separate panel members which are integrally hinged on opposite sides of said elongate aperture so as to enable said panel members to be folded inwardly and in opposite directions and secured to inside face portions of said top wall forming panel in the areas between the hinge connections of the finger holes and wherein said finger hole reinforcing tabs have hinge portions spaced outwardly of the hinge connection of said reinforcing panels enabling said tabs to be folded toward each other so as to overlie the free edges of said reinforcing panels whereby to provide reinforcement in the area between the finger holes for reducing the tendency of the top wall forming panel to tear when the carton is picked up for carrying.

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