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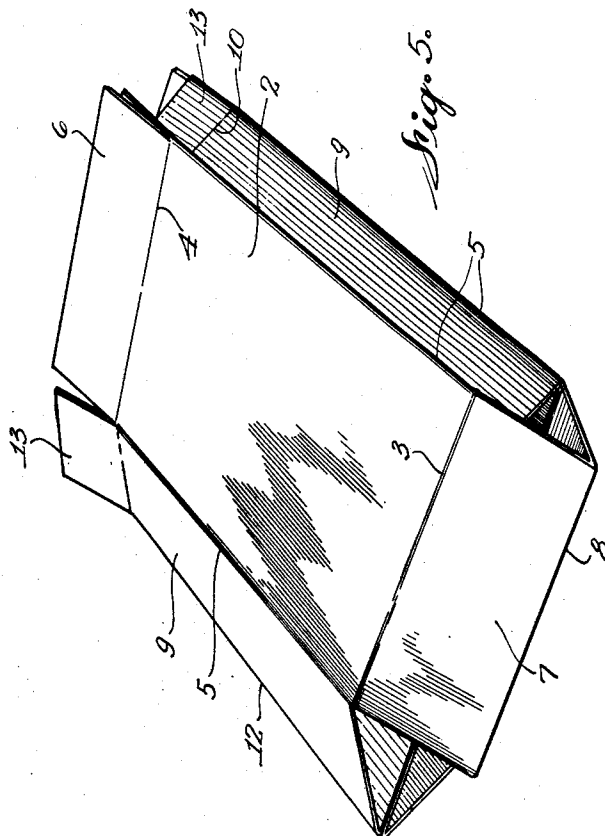
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CARTON AND HANDLE STRUCTURE THEREFOR

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**CARTON AND HANDLE STRUCTURE THEREFOR**  
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This invention relates to a beverage carton and a handle structure therefor.

It is substantially essential that cartons for bottled beverages provide adequate protection for the bottles of beverages contained therein throughout the period of handling and transportation thereof for which the carton is provided. Obviously, consistent with such protection, it is highly desirable that the carton be (a) of low cost as possible, (b) capable of convenient and rapid erection for reception of the beverage containers and (c) subject to easy handling in the hands of the purchaser of the beverages.

It is an object of this invention to provide a carton for beverage containers which is of reduced cost while providing adequate protection for the containers, and which incorporates therein a handle structure having a cooperative relationship to such protection.

The invention will be described with reference to the accompanying drawing, in which

FIGURE 1 is a plan view of a carton forming blank in accordance with the invention,

FIGURE 2 is a sectional side elevation of a carton in accordance with the invention, showing one position of a handle member therein,

FIGURE 3 is a sectional side elevation of the carton showing another position of the handle member,

FIGURE 4 is a section on line 4-4 of FIGURE 2, and

FIGURE 5 is a perspective view of the carton in partially collapsed position.

Referring to FIGURE 1, 1 is a one-piece blank of paperboard, cardboard, or the like. The blank comprises a pair of rectangular side wall panels 2 in laterally aligned spaced relation: Each panel 2 has score lines defining a bottom edge 3, a top edge 4 and end edges 5. The edges 3 and 4 are in laterally aligned parallel relation. Each pair of edges 5 are in longitudinally aligned relation. Each panel 2 has a closure flap 6 connected thereto along the top edge 4.

The panels 2 are joined by a bottom panel 7 connecting the edges 3 thereof and having a longitudinal medial fold line 8.

An end wall panel portion 9 is connected to each end of each panel 2 along the end edge 5. Each panel portion 9 has a score line defining a top edge 10, a bottom edge 11 and a score line defining an end edge 12 in parallel relation to end edge 5 of panel 2. Each panel portion 9 has a closure flap 13 connected thereto along edge 10. Each of three of the panel portions 9 has an erecting tab or flap 14 connected thereto along edge 12.

The other panel portion 9 has an interior partition forming panel 15 extending from the edge 12 thereof.

Panel 15 comprises two main sections 16 and 17 of approximately equivalent extent as to overall length and width with respect to each other and to side wall panel 2. Panel section 16 is in longitudinal alignment with the adjacent side wall panel 2 and panel portions 9. Panel section 17 extends laterally outwardly from section 16 and is connected thereto along a longitudinal fold line 18.

Each panel section 16 and 17 has a series of transverse walls 19 partially severed therefrom. Each wall 19 is of generally rectangular shape as defined by a cut 20 extending around three sides thereof and a hinge or fold line 21 defining an edge thereof connecting the wall

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to the main body portion of the section. Each hinge line 21 is in substantially right angular relation to the side edges of the panel. Each wall 19 has an erecting tab 22 on the free edge thereof opposed to hinge line 21.

The fold line 18 constitutes the top edge of each panel section 16 and 17, section 16 having an opposed bottom edge 23 and section 17 has an opposed bottom edge 24. Each wall 19 has a top edge 25 spaced from the section top edge 18 and a bottom edge 26 spaced from the section bottom edge 23 or 24. Thus, section 16 has an imperforate top edge marginal portion 27 and an imperforate bottom edge marginal portion 28 extending from end to end of the panel section. Similarly, section 17 has an imperforate top edge marginal portion 29 and an imperforate bottom edge marginal portion 30 extending from end to end of the panel section.

Marginal portion 31 of panel section 17 has a tab 31 projecting from its free end edge.

A handle receiving aperture 32 is provided along the juncture fold line 18 of panel sections 16 and 17.

One or both pairs of end wall panel portions 9 is provided with a projecting shoulder 33 adjacent the bottom edges 11 thereof defining a hook for engaging the cut edge of the bottom panel 7 as shown in FIGS. 2 and 3.

A handle member 34, illustrated in FIGURES 2, 3 and 4, is provided and comprises a rectangular paperboard or like blank doubled upon itself along fold line 35 to provide abutting walls 36 and 37. The abutting walls 36 and 37 are cut away at each end thereof adjoining the fold line 35 to provide a recessed shoulder 38 at each end of the handle member with a central portion 39 projecting outwardly therefrom. A handhole 40 is formed in the central projecting portion 39. To conserve material, wall 36 may be of considerably less depth than wall 37, as shown. The walls 36 and 37 may be adhesively or otherwise secured together.

The carton is assembled by folding panel section 17 into overlying abutting relation with panel section 16 and positioning the handle member 34 therebetween with the central portion 39 thereof disposed in the aperture 32.

The partition forming panel 15 with the handle member 34 incorporated therein is now folded over the adjacent side wall panel 2 and the other panel 2 folded thereover with each pair of end wall panel portions 9 brought into end wall forming position by placing the portions of each pair in edge to edge planar relation. The opposed tabs 14 of one pair of portions 9 are adhesively secured together and the tab 14 of one of the other pair of portions 9 adhesively secured to the opposed edge portion of panel 15 to fix one end of panel 15 in position. The other end of panel 15 is fixed in position by adhesively securing the tab 31 to the first pair of tabs 14.

Transverse walls 19 are swung outwardly about their hinge lines 21 and their tabs 22 folded to place their side surfaces in abutting relation to the adjacent side wall panel 2 to which they are adhesively secured. It will be observed that each wall 19 has a major imperforate portion extending from edges 18 to 24 thereof.

Referring to FIGURE 5, it will be observed that the carton may be placed in fully collapsed condition, the fold line 8 of the bottom wall permitting such wall to be doubled upon itself to permit the collapsing thereof. It will be observed that the bottom wall 7 is of one-piece imperforate form.

The carton is readily erected from collapsed condition by applying pressure to the ends thereof. It is locked in erected position by snapping the edge portion of the bottom wall over one or both pairs of the mating shoulders 33 as shown in FIGURES 2 and 3.

The handle member 34 is slidable between the panel sections 16 and 17 in a direction perpendicular to the bottom wall 7. In the retracted position of the handle

member its upper edge defined by the fold line 35 is substantially aligned with the top edge 18 of the panel 15 and approximately in the plane of top edges 4, as shown in FIGURES 2 and 4. In this retracted position the wall 37 of the handle member occludes a substantial portion of the openings 41 formed in the body or longitudinal portion of the panel 15 by the severing of the transverse walls 19 therefrom. Thus, when bottles are placed in the carton, the handle wall 37 constitutes a longitudinally extending protective partition between the two rows of bottles. This protective partition remains in place during the packing of the carton and the handling and distribution of the filled carton. The closure flaps 6 and 13 are, of course, folded into closure forming relation and pasted in place when the carton is filled.

The purchaser of the carton of beverages inserts his fingers through the meeting edges of the closure flaps 6 to grasp the handle member and to facilitate this action depressable tab portions 42 may be formed in the flaps 6. On grasping the handle member, it may be withdrawn to place the portion 39 outwardly of the closure flaps, as shown in FIGURE 3, and the hand may be applied through the handhole 40 to carry the carton. It will be apparent that, in the carrying position of the handle member, the shoulders 38 thereof are in engagement with the inner surface of the edge fold 18.

The carton described may be formed of a minimum of material since the use of a panel member for closing the openings formed in the longitudinal partition by severing of the transverse partition walls therefrom is avoided and use is made of the associated handle structure for this purpose.

I claim:

1. A carton for bottled beverages comprising a pair of side wall panels, a unitary bottom wall panel integrally joining said side wall panels, a top wall panel integrally joined to each of said side wall panels, an end wall panel portion connected to each end of each said side wall panel and having a top-edge, bottom-edge, and side-edge, each said pair of end wall panel portions being secured together in side-edge to side-edge relation to form a two-part end wall of said carton, a partition-forming panel integral with one of said end wall panel portions and connected to the meeting edges of the other of said pairs of end wall panel portions and extending longitudinally of said carton between said side wall panels, said partition-forming panel having overlying abutting sections, each said section having a series of transverse partition walls partially severed therefrom, each said partition wall having a tab adhesively secured to one of said side wall panels and being swingable outwardly from said section, each said section having openings therein formed by swinging of said partition walls therefrom, and a handle member slidably disposed between said panel sections, said handle member having a retracted position and a withdrawn position, said handle member having a depending wall closing a substantial portion of said openings in said retracted position thereof.

2. A one-piece carton-forming blank comprising a pair of rectangular side wall panels in laterally spaced relation, each said panel having score lines defining top, bottom and end edges thereof, a top wall panel joined to each of said side wall panels along the top edge thereof, a bottom wall panel joining said bottom edges of said side wall panels, an end wall panel portion extending from each of said end edges of said side wall panels and having a top-edge, a bottom-edge and a side-edge, a partition-forming panel integrally joined to and extending from one of said end wall panel portions, said partition-forming panel having a longitudinally extending score line dividing it into a pair of sections, said sections being substantially coextensive in length and width with each other and with each of said side wall panels, each said section having a series of transverse partition walls partially severed therefrom, each said partition wall having a top

edge, a bottom edge, a side edge, a fold line connecting it to said partition-forming panel, and an erecting tab projecting from said side edge of each said partition wall, and each of said remaining end wall panels having an erecting flap integral with the side edge thereof for fixing said partition-forming panel sections in an erected carton.

3. A one-piece carton-forming blank as defined in claim 2, the major portion of each said transverse partition wall between the top and bottom edges thereof being imperforate.

4. A one-piece carton-forming blank as defined in claim 2, said tabs being in spaced, disconnected relation with respect to each other.

5. A carton for bottled beverages comprising a pair of side wall panels, a unitary bottom wall panel integrally joining said side wall panels, a top wall panel integrally joined to each of said side wall panels, an end wall panel portion connected to each end of each said side wall panel and having a top-edge, bottom-edge and side-edge, each pair of end wall panel portions being secured together in side-edge to side-edge relation to form a two-part end wall of said carton, a partition-forming panel integral with one of said end wall panel portions along a side-edge thereof and extending longitudinally of said carton intermediate said side wall panels, said partition-forming panel having overlying abutting sections, the remaining side wall panels each having an erecting flap adhesively secured to said sections to fix said partition forming panel in place intermediate said side wall panels and fix said end wall panel portions together in side-edge to side-edge relationship, each said section having a series of transverse partition walls partially severed therefrom, each said partition wall having a tab adhesively secured to one of said side wall panels and being swingable outwardly from said section, each said section having openings therein formed by swinging of said partition walls therefrom, means defining hooks on said end wall panel erecting flaps and on said partition-forming panel engaging and supporting said bottom wall panel, and a handle member slidably disposed between said panel sections, said handle member having a retracted position and a withdrawn position, said handle member having a depending wall closing a substantial portion of said openings in said retracted position thereof.

6. A one-piece carton-forming blank comprising a pair of rectangular side wall panels in laterally spaced relation, each said panel having score lines defining top, bottom and end edges thereof, a top wall panel joined to each of said side wall panels along the top-edge thereof, a bottom wall panel joining said bottom-edges of said side wall panels, an end wall panel portion extending from each of said end-edges of said side wall panels and having a top-edge, a bottom-edge, and a side-edge, a partition-forming panel integrally joined to and extending from one of said end wall panel portions, said partition-forming panel having a longitudinally extending score line dividing it into a pair of sections, said sections being substantially coextensive in length and width with each other and with each of said side wall panels, each said section having a series of transverse partition walls partially severed therefrom, each said partition wall having a top-edge, a bottom-edge, a side-edge, a fold line connecting it to said partition-forming panel, and an erecting tab projecting from said side-edge of each said partition wall, each of said remaining end wall panels having an erecting flap integral with the side-edge thereof for fixing said partition-forming panel sections in an erected carton, and means defining a hook on each said end wall panel erecting flap and on said partition-forming panel engaging and supporting said bottom wall panel.

7. A one-piece paperboard blank for forming a multiple celled carton having top, bottom, side and end wall panels and interior partition panels defining a plurality of compartments in said carton, said blank comprising a pair of spaced rectangular side wall panels integrally

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joined to a bottom panel along parallel score lines, said bottom panel having a longitudinal score line intermediate and parallel to said side wall score line, said bottom panel being coextensive in length with said side wall panels and having cut end edges, a top closure panel coextensive with and integrally joined to each said side wall panel along a score line parallel to said bottom panel score lines, said top closure panels having a longitudinal cut edge extending parallel to said score lines and transverse cut edges at each end thereof, said top panels being of a width substantially equal to one half the width of the bottom panel, an end panel coextensive with and integrally joined to said side wall panels along a transverse score line at each end thereof, said end panels having a width substantially equal to the width of said top closure panels, each end panel having a top sealing flap integrally joined thereto along a longitudinal score line at the edge thereof immediately underlying said top closure panels in the completed carton, the opposite longitudinal edge of said end flaps defining a cut edge, one of said end panels having integrally joined thereto along a transverse score line a first longitudinally extending partition panel, a second partition panel integrally joined to said first partition panel along a score line constituting an extension of the score line between the side wall panel to which said one end panel is joined and the corresponding top closure panel, said partition panels each having dimensions substantially equal to the dimensions of said side wall panels, said partition panels being adapted to be folded along said interrupted score line back against each other to define in the complete carton a double longitudinal partition wall extending parallel to said side wall panels and between said end wall panels and said top and bottom panels, each of said panels having a series of transverse partition wall panels defined and partially severed therefrom, each said transverse partition wall panel having cut top, bottom and side edges, a score line connecting each said transverse partition panel to said partition panel, each said transverse partition wall panel having an erecting tab integrally joined to the side-edge thereof along a score line, each of the remaining end panels having an erecting flap integrally joined thereto along a transverse score line, and each of said erecting flaps and said first partition panel having a projecting shoulder adjacent the bottom-edge thereof defining a hook, said blank being foldable into an erected carton wherein said partition panels are folded against each other and extend between folded end walls of the carton to which they are secured by means of said erecting flaps, the transverse partition wall panels are each secured by means of said erecting tabs to the adjacent carton side wall panel, and the cut edges of said bottom panels are engaged in said hooks whereby a stable carton is formed in which all of said panels are mutually supported.

8. A one-piece paperboard blank for forming a multiple celled carton having top, bottom, side and end wall panels and interior partition panels defining a plurality of compartments in said carton, said blank comprising a generally L-shaped arrangement of panels including a pair of spaced rectangular side wall panels integrally joined to a bottom panel along parallel score lines and constituting substantially one leg of said L-shaped arrangement, a top closure panel coextensive with and integrally joined to each said side wall panel along a score line parallel to said bottom panel score lines, an end panel coextensive with and integrally joined to said side wall panels along a transverse score line at each end thereof, said end panels having a width substantially equal to one-half the width of said bottom panel, each end panel having a top sealing flap integrally joined thereto along a longitudinal score line at the edge thereof immediately underlying said top closure panels in the completed carton, the opposite longitudinal edge of said end flaps defining a cut edge, one of said end panels having integrally joined thereto along a transverse score line a first longi-

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tudinally extending partition panel, a second partition panel integrally joined to said first partition panel along a score line constituting an extension of the score line between the side wall panel to which said one end panel is joined and the corresponding top closure panel, said partition panels each having dimensions substantially equal to the dimensions of said side wall panels and constituting substantially the other leg of said L-shaped arrangement, said partition panels being adapted to be folded along said interrupted score line back against each other to define in the complete carton a double longitudinal partition wall extending parallel to said side wall panels and between said end wall panels and said top and bottom panels, each of said panels having a series of transverse partition wall panels defined and partially severed therefrom, each said transverse partition wall panel having cut top, bottom and side edges, a score line connecting each said transverse partition panel to said partition panel, each said transverse partition wall panel having an erecting tab integrally joined to the side edge thereof along a score line, each of the remaining end panels having an erecting flap integrally joined thereto along a transverse score line, and each of said erecting flaps and said first partition panel having a projecting shoulder adjacent the bottom edge thereof defining a hook, said blank being foldable into an erected carton wherein said partition panels are folded against each other and extend between folded end walls of the carton to which they are secured by means of said erecting flaps, the transverse partition wall panels are each secured by means of said erecting tabs to the adjacent carton side wall panel, and each end of said bottom panel is engaged by said hooks whereby a stable carton is formed in which all of said panels are mutually supported.

9. A one-piece paperboard blank for forming a multiple celled carton having top, bottom, side end wall panels and interior partition panels defining a plurality of compartments in said carton, said blank comprising a pair of spaced rectangular side wall panels integrally joined to a bottom panel along parallel score lines, said bottom panel having a longitudinal score line intermediate and parallel to said side wall score line, said bottom panel being coextensive in length with said side wall panels and having cut end edges, a top closure panel coextensive with and integrally joined to each said side wall panel along a score line parallel to said bottom panel score lines, said top closure panels having a longitudinal cut edge extending parallel to said score lines and transverse cut edges at each end thereof, said top panels being of a width substantially equal to one-half the width of the bottom panel, an end panel coextensive with and integrally joined to said side wall panels along a transverse score line at each end thereof, said end panels having a width substantially equal to the width of said top closure panels, each end panel having a top sealing flap integrally joined thereto along a longitudinal score line at the edge thereof immediately underlying said top closure panels in the completed carton, the opposite longitudinal edge of said end flaps defining a cut edge, one of said end panels having integrally joined thereto along a transverse score line a first longitudinally extending partition panel, a second partition panel integrally joined to said first partition panel along a score line constituting an extension of the score line between the side wall panel to which said one end panel is joined and the corresponding top closure panel, said partition panels each having dimensions substantially equal to the dimensions of said side wall panels, a cut edge on each of said partition panels defining together an oblong opening interrupting said score line joining said partition panels, for receiving a handle in the completed carton, said partition panels being adapted to be folded along said interrupted score line back against each other to define in the complete carton a double longitudinal partition wall extending parallel to said side wall panels and between said end wall panels and said top and bottom panels and between which said handle is posi-

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tioned, each of said panels having a series of transverse partition wall panels defined and partially severed therefrom, each said transverse partition wall panel having cut top, bottom and side edges, a score line connecting each said transverse partition panel to said partition panel, each said transverse partition wall panel having an erecting tab integrally joined to the side edge thereof along a score line, each of the remaining end panels having an erecting flap integrally joined thereto along a transverse score line, and each of said erecting flaps and said first partition panel having a projecting shoulder adjacent the bottom edge thereof defining a hook, said blank being foldable into an erected carton wherein said partition panels are folded against each other and extend between folded end walls of the carton to which they are secured by means of said erecting flaps, the transverse partition

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wall panels are each secured by means of said erecting tabs to the adjacent carton side wall panel, and the cut edges of said bottom panel are engaged in said hooks whereby a stable carton is formed in which all of said panels are mutually supported.

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