May 19, 1959 D. LEVKOFF 2,887,246

CARTON

Filed May 5, 1958

FIG. 1

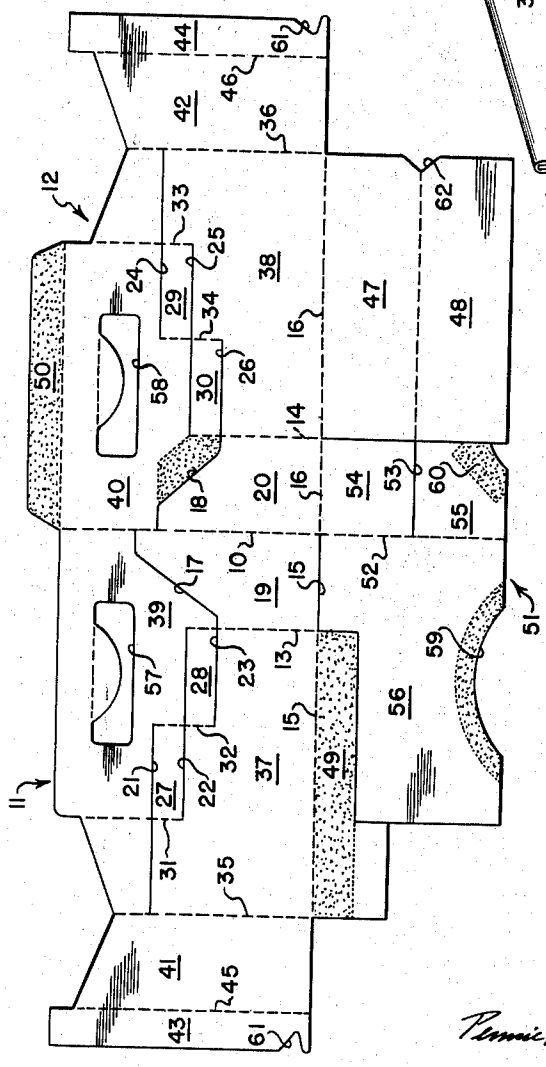
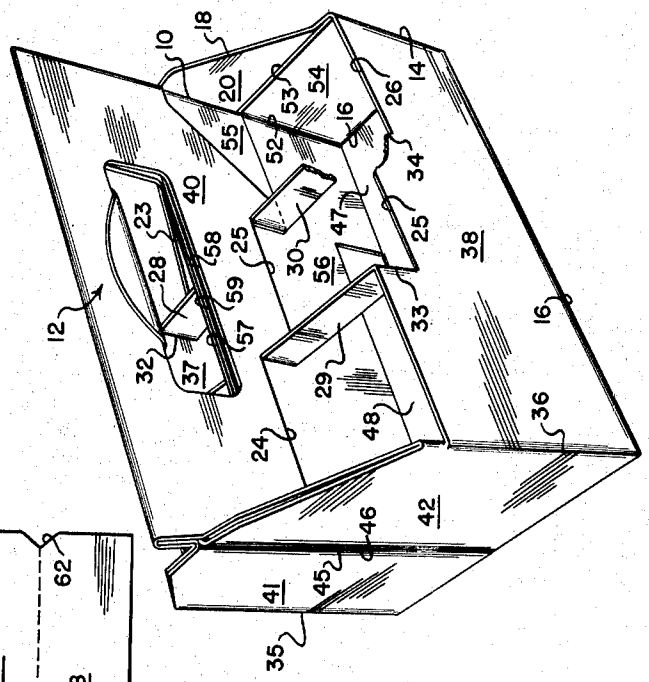


FIG. 2



INVENTOR.

BY David Levkoff

ATTORNEYS

Pennie, Edmonds, Morton, Barrows & Taylor

United States Patent Office 2,887,246 Patented May 19, 1959

2,887,246

CARTON

David Levkoff, Great Neck, N.Y.

Application May 5, 1958, Serial No. 733,006

4 Claims. (Cl. 220—115)

This invention relates to cartons, and, more particularly, to a carton for carrying beverage bottles and the like.

In my co-pending application Serial No. 672,662, filed July 18, 1957, I described and claimed a bottle carrier structure characterized by such efficient use of paperboard and gluing as to offer considerable savings in raw material costs. The one-piece paperboard carton blank described in that application comprises two substantially mirror image portions integrally connected along a substantially centrally disposed transverse fold line. Each of these portions comprises serially outboard from said adjacent edges an end wall section, a main panel and an opposite end wall section. Each main panel is provided with at least one longitudinal cut line separating the main panel into a lower portion comprising a side wall panel and an upper portion comprising a handle panel, and a bottom panel is arranged adjacent the lower longitudinal edge of each of the side wall panels.

I have now found that the end wall sections of the erected carton can be more rigidly anchored in their proper planar position and that a more effective central partition panel can be obtained which is securely anchored to both the handle portion and to the end wall sections by rearranging and re-proportioning the anchor panel and the bottom panels. Pursuant to my present invention, the two bottom panels are transversely serially arranged adjacent the lower longitudinal edge of one of the side wall panels, and the portion of the anchor panel on that side of its transverse fold line proximate the other side wall panel is substantially coextensive longitudinally with the handle panel and has a transverse width exceeding the distance between the lower longitudinal edge of the proximate main panel and the lower edge of the handle panel.

The bottle carrier formed from the one-piece blank of my invention comprises two juxtaposed handle panels, a side wall panel spaced from the proximate handle panel and integrally connected thereto by divider strips, and a bottom panel joining the lower edges of the two side wall panels. One end wall panel of the carrier extends substantially the full height thereof and is joined along the lower portion of its side edges to the ends of the two side wall panels and is joined along the upper portion of its side edges to a connecting panel integrally connected to the proximate ends of the juxtaposed handle panels. A second end wall panel is joined along the lower portion of its side edges to the other ends of the two side wall panels and is joined at its top to the lower extremity of the other ends of the juxtaposed handle panels. An anchor panel is integrally joined to at least a portion of the lower edge of the second end wall panel, the portion of the anchor panel joined to the second end wall panel being folded upwardly into juxtaposition with the interior surface of the second end wall panel and being provided with an adjacent fold portion connected to the first-mentioned portion along a vertically positioned fold line. The latter portion of the anchor panel extends

centrally of the carton to form a substantially full-height central partition and is adhesively secured along its upper portion to the inner surface of the proximate handle panel so as to anchor the second end wall in place and thus maintain the rigidity of the carrier in use.

These and other novel features of the carton structure of my invention will be more readily understood by reference to the accompanying drawings in which:

Fig. 1 is a plan view of a carton blank embodying the invention; and

Fig. 2 is a perspective view of the assembled carrier erected from the blank of Fig. 1.

The carton blank shown in Fig. 1 comprises an approximately rectangular carton blank provided with a substantially central transverse fold line **10** which divides the main body of the blank into two substantially mirror-image main portions **11** and **12**. A pair of transverse fold lines **13** and **14** is positioned astride the central transverse fold line **10**, each of the fold lines **13** and **14** extending upwardly from the lower edges **15** and **16** of each main portion and across a part of the main portion. Cut lines **17** and **18** extend from the upper end of each of the transverse fold lines **13** and **14**, respectively, in a diagonally upward direction to vertically spaced points along the central transverse fold line **10**. Thus, the two cut lines **17** and **18**, the pair of transverse fold lines **13** and **14**, the lower edges **15** and **16** of the two main portions and the central transverse fold line **10** define two substantially symmetrical end wall sections **19** and **20**.

Each of the main portions **11** and **12** is provided with three longitudinal cut lines **21**, **22**, **23** and **24**, **25**, **26**, respectively. The three longitudinal cut lines in each main portion are spaced from one another in a laterally staggered relationship so as to define in each of the main portions two hinged divider strips **27**, **28** and **29**, **30**, respectively. The divider strips are appropriately hinged by transverse fold lines **31**, **32** and **33**, **34**, respectively, symmetrically placed between the inner pair of transverse fold lines **13** and **14** and an outer pair of transverse fold lines **35** and **36**. These outer transverse fold lines **35** and **36** are equally spaced from the central transverse fold line **10** and define the outermost boundaries of side wall panels **37** and **38** in the main portions **11** and **12**, the inner boundaries of the side wall panels being defined by the inner transverse fold lines **13** and **14**. The part of the main portions above the cut lines **13** and **14**. The part of the main portions above the cut lines **21**, **22** and **17** and **18**, **25**, **24** comprise handle panels **39** and **40**, respectively.

The outboard ends of the main portions **11** and **12** are provided with end wall sections **41** and **42** advantageously integrally connected to the two main portions along the outer pair of fold lines **35** and **36**, respectively. The end wall sections are also advantageously provided with folding outboard glue panels **43** and **44** integrally connected to the end wall sections along a pair of transverse fold lines **45** and **46**. The lower longitudinal edge **16** of the side panel **38** is defined by a fold line by which this wall panel is integrally connected to a pair of bottom walls **47** and **48**. The lower longitudinal edge **15** of the other side wall panel **37** is provided with a glue flap **49**, and one of the handle panels **39** and **40** is provided with a glue flap **50**.

The center anchor panel **51**, as shown in Fig. 1, is integrally connected to one of the symmetrical end wall sections **20** along the lower longitudinal edge **16** thereof. The anchor panel is provided with a transverse fold line **52** substantially aligned with the central transverse fold line **10**. The portion of the anchor panel on that side of its transverse fold line which is integrally connected to the end wall section **20** is provided with a longitudinal cut line **53** positioned between the out-

board longitudinal edge of the anchor panel and the longitudinal fold line **16** and thus divides this portion of the anchor panel into two sections **54** and **55**. The other portion **56** of the center anchor panel disposed on the side of its transverse fold line opposite the longitudinal cut line **53** is proportioned so as to be substantially coextensive longitudinally with the handle panel **39** and to have a transverse width exceeding the distance between the lower longitudinal edge of the proximate main portion **11** (i.e. the longitudinal fold line **15**) and the lower edge of the handle panel **39** (i.e. the uppermost longitudinal cut line **21**). Thus, when the anchor panel **51** is folded over about the line **16**, the lowermost extremity of the anchor panel portion **56** comes into juxtaposition with the handle panel **39**. When the handle panels are provided with arcuately curved handle openings **57** and **58** as shown in Fig. 1, the lowermost extremity of the anchor panel portion **56** is provided with a matching arcuate contour **59**.

The bottle carrier of my invention is assembled as follows:

Glue or other adhesive is applied along the arcuate lowermost edge **59** of the anchor panel portion **56** and along the opposite diagonal outboard corner portion **60** of the anchor panel as indicated by the stippled areas shown in Fig. 1. The anchor panel is then folded upwardly and inwardly as a unit about the fold line **16** so that its glued areas make contact with the handle panels **39** and **40**. The two end wall panels **41** and **42** are then folded upwardly and inwardly about the outer transverse fold lines **35** and **36**, whereupon glue is applied to the then upper surfaces of the glue flaps **43** and **44**. The lowermost bottom panel **48** is thus folded up over the other bottom panel **47**, and one side of the thus-folded blank is thereafter folded upwardly and over about the aligned transverse fold lines **10** and **52** until the glue panels **43** and **44** come into juxtaposition with and are secured to the lateral end of the anchor panel portion **56** opposite the transverse fold line **52**. In the final operation, glue is applied to the glue flaps **49** and **50**, and these flaps are then folded over into contact with their cooperating bottom panel and handle panel, respectively.

The thus-assembled carton is then erected simply by applying compressive pressure to the two lateral ends of the folded structure. As the pressure is exerted, the divider strips **27**, **28**, **29** and **30** swing outwardly and permit the side wall sections **37** and **38** to swing outwardly to the final erected position shown in Fig. 2. In this position it can be seen that the portion **56** of the anchor panel forms a substantially complete central partition for the carrier. The resulting vertical fold between the anchor panel portions **56** on one side and portions **54** and **55** on the other side of the transverse fold line **52** insures the rigidity of this fold line in a vertical position, and the vertical position of this fold line of the anchor panel is maintained by the gluing of the anchor panel portion **56** between the handle panels **39** and **40**. Thus, inasmuch as the position of the fold about the line **52** is maintained in a fixed vertical position, the lowermost end of the fold line **52** maintains the lower end of the central transverse fold line **10** in a fixed position by virtue of the integral fold along the longitudinal fold line **16** between the end wall section **20** and the adjacent portion **55**. By thus fixing the position of the lowermost central portion of the end wall composed of the symmetrical end wall sections **19** and **20**, and by anchoring this assembly by the gluing of the laterally extending portion **56** of this panel to the handle panels **39** and **40**, the resulting end wall structure remains rigidly upright and securely holds the bottles in the end wall sections. At the same time, the strain of the weight of bottles in the loaded carrier is distributed from the bottom edge of the end wall sections to the entire area of the handle panels. The entire carrier assembly is held locked in its erected position by engagement of the juxtaposed locking notches **61** formed in the glue panels **43** and **44** with the proximate locking notch **62** formed in the bottom panels **47** and **48**. Inasmuch as this locking action resists the normal resilience of the folded and erected carton, the lock holds firmly and securely.

I claim:

1. In a blank for a bottle carrier comprising two substantially mirror image portions integrally connected along a substantially centrally disposed transverse fold line and each portion comprising serially outboard from said adjacent edges an end wall section, a main panel and an opposite end wall section, each main panel being provided with at least one longitudinal cut line separating the main panel into a lower portion comprising a side wall panel and an upper portion comprising a handle panel, and a pair of bottom panels transversely serially arranged adjacent the lower longitudinal edge of one of the side wall panels, the improvement which comprises a center anchor panel integrally connected to the lower longitudinal edge of at least one of the innermost end wall sections along a longitudinal fold line, the anchor panel having a transverse fold line substantially aligned with the central transverse fold line and being provided on one side of its transverse fold line with a longitudinal cut line positioned between the outboard longitudinal edge of the anchor panel and the longitudinal fold line by which the anchor panel is joined to the end wall section, the portion of the anchor panel on the other side of its transverse fold line being substantially coextensive longitudinally with the handle panel and having a transverse width exceeding the distance between the lower longitudinal edge of the proximate main panel and the lower edge of the handle panel.

2. In a blank for a bottle carrier comprising two substantially mirror image portions integrally connected along a substantially centrally disposed transverse fold line and each portion comprising serially outboard from said adjacent edges an end wall section, a main panel and an opposite end wall section, each main panel being provided with at least one longitudinal cut line separating the main panel into a lower portion comprising a side wall panel and an upper portion comprising a handle panel, a pair of bottom panels transversely serially arranged adjacent the lower longitudinal edge of one of the side wall panels, and a bottom glue panel adjacent the lower longitudinal edge of the other side wall panel, the improvement which comprises a center anchor panel integrally connected to the lower longitudinal edge of at least one of the innnermost end wall sections along a longitudinal fold line, the anchor panel having a transverse fold line substantially aligned with the central transverse fold line and being provided on one side of its transverse fold line with a longitudinal cut line positioned between the outboard longitudinal edge of the anchor panel and the longitudinal fold line by which the anchor panel is joined to the end wall section, the portion of the anchor panel on the other side of its transverse fold line encompassing a major portion of the bottom glue panel and being substantially coextensive longitudinally with the handle panel, said anchor panel portion also having a transverse width which exceeds the distance between the lower longitudinal edge of the proximate main panel and the lower edge of the handle panel.

3. In a blank for a bottle carrier comprising two substantially mirror-image main panels integrally connected along their adjacent edges by a substantially central transverse fold line, a pair of transverse fold lines positioned astride the central transverse fold line extending upwardly from the lower edge of each main panel and across a portion of the panel, a cut line extending from the upper end of each of the pair of transverse fold lines diagonally upwardly to vertically spaced points along the central transverse fold line so that the two cut lines, the pair of transverse fold lines, the lower edge of the two main panels and the central transverse fold line define two

substantially symmetrical end wall sections, each of the main panels also being provided with three longitudinal cut lines vertically spaced from one another in laterally staggered relation so as to define in the main panel two hinged divider strips between the cut lines and a handle portion above the uppermost cut line, the lowermost of the longitudinal cut lines joining the lower end of the proximate diagonal cut line, the improvement which comprises a bottom panel integrally connected to the lower longitudinal edge of one main panel outboard of the proximate transverse fold line of the pair thereof and a second bottom panel integrally connected to the other longitudinal edge of the first bottom panel, a bottom glue panel integrally connected to the lower longitudinal edge of the other main panel outboard of the proximate transverse fold line of the pair thereof, a center anchor panel integrally connected to the lower edge of at least one of the symmetrical end wall sections along a longitudinal fold line, the anchor panel having a transverse fold line substantially aligned with the central transverse fold line and being provided on one side of the transverse fold line with a longitudinal cut line positioned between the longitudinal edge of the anchor panel and the fold line by which the anchor panel is joined to the end wall section, the portion of the anchor panel on the other side of its transverse fold line having a transverse depth exceeding the distance from the lower longitudinal edge of the adjoining main panel to the uppermost of the three longitudinal cut lines in the main panel.

4. In a folding bottle carrier formed from a one-piece blank and comprising when erected two juxtaposed handle panels, a side wall panel spaced from each proximate handle panel and integrally connected thereto by divider strips, a bottom panel joining the lower edges of the two side wall panels, an end wall panel extending substantially the full height of the carrier, said end wall panel being joined along the lower portion of its side edges to the ends of the two side wall panels and along the upper portion of its side edges to a connecting panel integrally connected to the proximate ends of the juxtaposed handle panels, a second end wall panel joined along the lower portion of its side edges to the other ends of the two side wall panels and joined at its top to the lower extremity of the other ends of the juxtaposed handle panels, and an anchor panel integrally joined to at least a portion of the lower edge of the second end wall panel, the portion of the anchor panel joined to the second end wall panel being folded upwardly into juxtaposition with the interior surface of the second end wall panel and being provided with an adjacent fold portion connected to the first-mentioned portion along a vertically positioned fold line, the latter portion of the anchor panel extending centrally of the carton to form a substantially full-height central partition and being adhesively secured along its upper portion to the inner surface of the proximate handle panel.

No references cited.