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[54] CONTAINER CARRIER

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[52] **U.S. Cl.**.....**220/111,** 220/113

[51] **Int. Cl.** **B65d 75/00**

[58] **Field of Search**.....220/105, 111, 113, 115, 116

[56] **References Cited**

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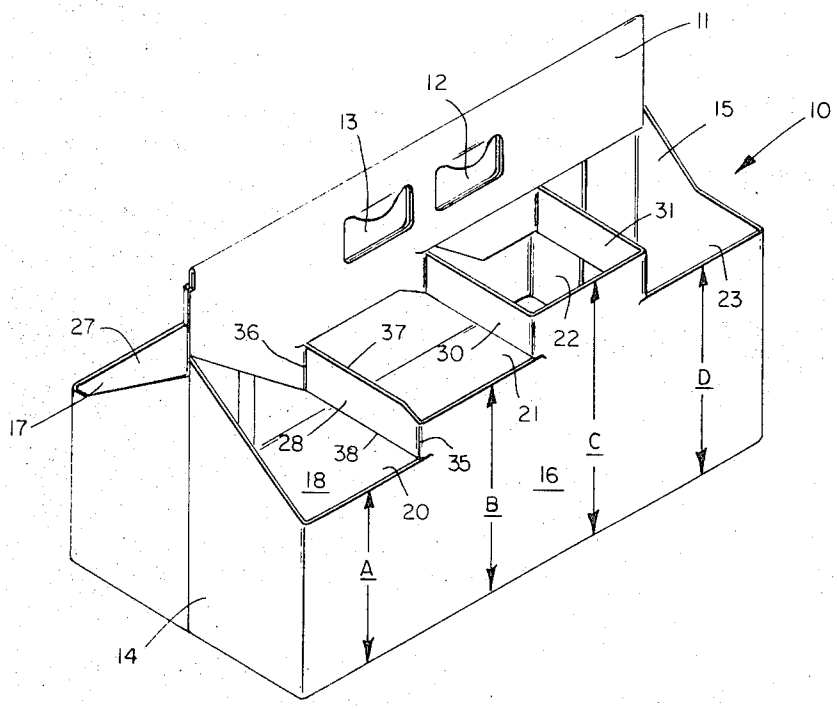
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[57] **ABSTRACT**

A carrier is provided, for containers such as bottles and the like, the carrier being of paperboard or like construction, and being formed by folding the same from a blank, to have at least eight cells for receiving bottles or the like therein, the cells being spaced by separators in such a manner as to comprise a novel overall construction.

7 Claims, 4 Drawing Figures

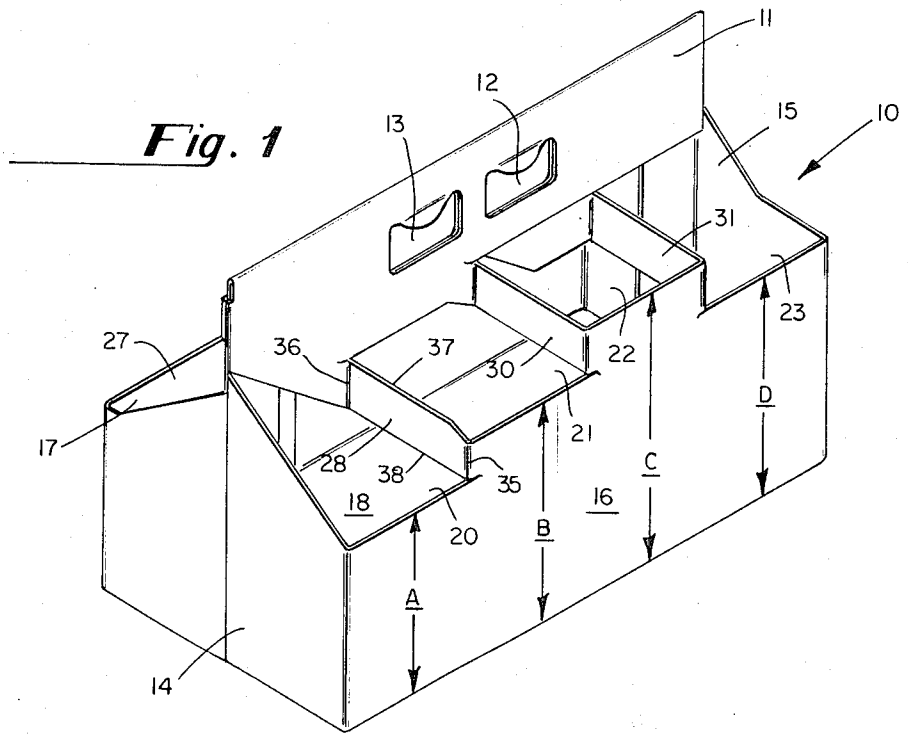


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SHEET 1 OF 2

Fig. 1



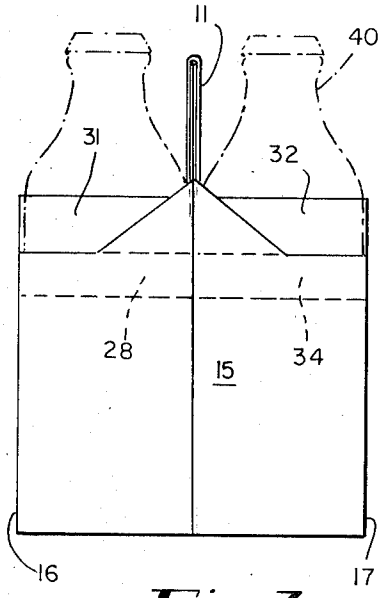


Fig. 3

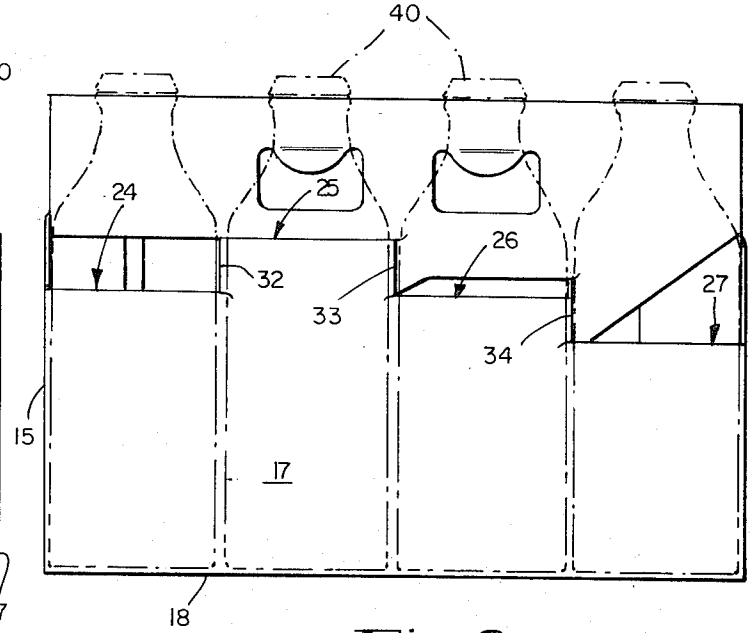


Fig. 2

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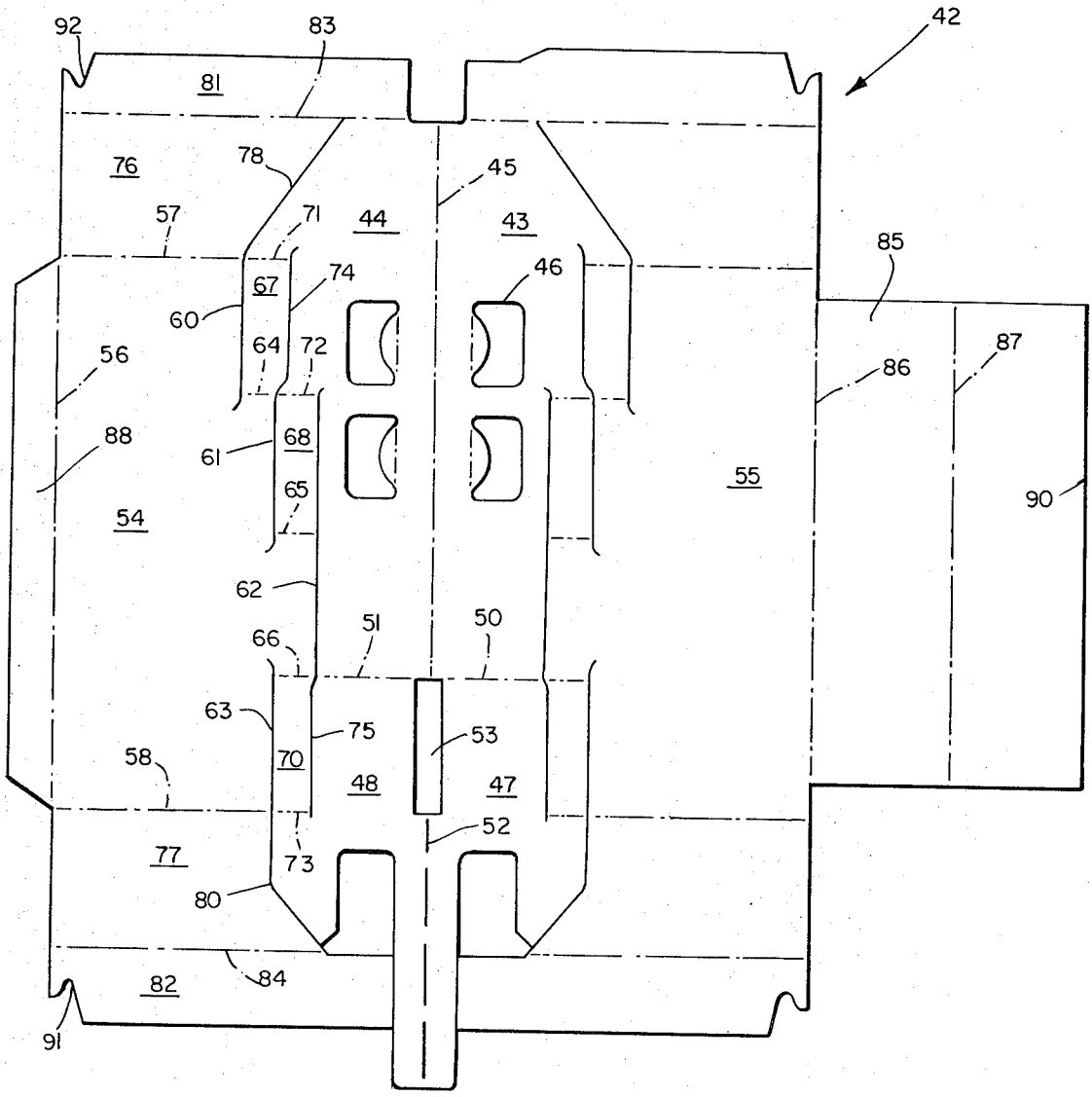


Fig. 4

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CONTAINER CARRIER

BACKGROUND OF THE INVENTION

Folded blank bottle carriers of prior art types are known, particularly six cell carriers, utilizing separators between adjacent cells. Such separators are sometimes formed from material of the carrier side panels, such that the centermost cell on each side of the handle has greater support along the sidewall than the two end cells on opposite sides of the center cell. Such carriers are often referred to as the "high center cell carriers."

With the tendency toward packaging of greater numbers of bottles in carriers, such as eight bottles or more, and particularly in the realm of throw-away carriers wherein it is desired to make the carriers of as little material as possible for single use only, folded carriers have been made which utilized separators between cells on each side of the handle, with the separators generally extending at acute angles between the handles and low side panels, the separators being struck from a blank in which they are nested with respect to each other. Such constructions yield geometrically configured carriers, but often result in other problems, particularly when thin paperboard is utilized, and with heavier or larger bottles, such as 16 ounce bottles. Some of these problems reside in stacking difficulties, as in supermarkets or the like, or in transport, or other instances in which carriers are stacked one upon the other, demanding from the carrier disposed therebeneath a high degree of support. Furthermore, such carriers that have been developed to hold eight bottles or more, particularly when the bottles are of larger sizes, and wherein the carriers are constructed of minimal amounts of paperboard material for single use only, with sloped or slanted separator strips as discussed above, leave little area for display or printing on the sides of the carrier.

SUMMARY OF THE INVENTION

The present invention is directed toward providing a carrier for containing bottles in quantities of eight (or more), wherein the carrier is of folded blank construction, utilizing separators disposed between a generally centermost handle and carrier sidewall, with the separators being generally horizontal, and being vertically stepped, to provide high support for a bottle in a cell disposed adjacent an end cell on each side of the handle of the carrier, for purposes of support in stacking of carriers, and for increasing display area on sides of carriers.

Accordingly, it is an object of this invention to provide a novel multiple cell carrier.

It is a further object of this invention to provide a novel blank for forming a multiple cell carrier.

It is a further object of this invention to provide a novel carrier of eight or more cells, wherein the separators between cells on each side of the handle are generally horizontally disposed.

It is a further object of this invention to provide a novel carrier wherein separators between adjacent carrier cells, in instances when the separators extend between handles and sidewalls of the carrier, are vertically stepped relative to one another.

It is a further object of this invention to provide a novel blank and bottle carrier made therefrom, wherein the bottles are provided with greater support for increasing the capability of carriers with bottles therein being stacked.

It is another object of this invention to provide a novel bottle carrier with increased display area.

It is a further object of this invention to accomplish each of the objects set forth immediately above, wherein the carrier is constructed of minimal amounts of paperboard material or the like, for single use only.

Other objects and advantages of the present invention will be readily apparent to those skilled in the art from a reading of the following brief descriptions of the drawing figures, detailed description of the preferred embodiment, and the appended claims.

In the drawings:

FIG. 1 is a top perspective view of an eight cell carrier in accordance with this invention.

FIG. 2 is a side elevational view of the carrier of FIG. 1, as viewed from the side opposite that illustrated in FIG. 1.

FIG. 3 is a view of the left-most end of the carrier illustrated in FIG. 2.

In each of FIGS. 2 and 3, bottles are illustrated in phantom, in order to demonstrate the disposition of bottles within the carrier.

FIG. 4 is a plan view of a blank for constructing the carrier illustrated in FIGS. 1 through 3 of this invention.

Referring now to the drawings in detail, reference is first made to FIG. 1, wherein there is illustrated a carrier, generally designated by the numeral **10**, comprising a centermost, generally vertically disposed handle **11**, having finger holes **12** and **13** therein, and extending between and connecting endwalls **14** and **15**.

A pair of side panels **16** and **17**, are each disposed generally parallel to the handle **11**, and connect the endwalls **14** and **15**, as illustrated, and with a bottom wall **18**, being illustrated as connecting the sidewalls **16** and **17**, at bottoms or lower ends thereof.

The carrier **10** is constructed to have four cells **20**, **21**, **22** and **23**, in the side best illustrated in FIG. 1, and four cells on the opposite sides of the handle **11**, and designated by the numerals **24**, **25**, **26** and **27** in FIG. 2. Thus, eight cells are illustrated, although more could be provided, upon making the necessary constructions in the blank from which carrier **10** is formed.

The carrier **10** is formed of paperboard material, although cardboard, heavy paper, and other suitable materials may be utilized, if desired, even perhaps plastic foam, if desired. For purposes of this application, all such materials will be referred to as being paperboard.

The cells are divided from each other by a plurality of separator strips **28**, **30**, **31**, **32**, **33** and **34**, that extend between one of the sidewalls **16** and **17**, and the centrally disposed handle **11**, being foldably connected to an associated sidewall portion and handle portion, along fold lines, such as those **35** and **36** illustrated in FIG. 1. The separator strips **28**, **30**, **31**, **32**, **33** and **34** are generally horizontally disposed; i.e., their upper edges, such as that **37**, and their lower edges such as that **38** (for strip **28**) are generally horizontally disposed, generally parallel to the bottom wall **18**, and the fold lines **35** and **36** are parallel to each other, and disposed substantially at the same height above the bottom wall **18**, relative to each other. The cells are thus

substantially of equivalent size, except that cells 22 and 25, which are adjacent respectively associated endmost cells 23 and 24, comprise the high cells, that have the greatest support, from the highest ones of the separator strips such as 30 and 31, and from these sidewalls. The support from the sidewall is designated by that portion of the sidewall identified by the dimension C, which will be clearly seen, with reference to FIG. 1, to be higher than the dimension of that portion of the sidewall designated by D. Cells 21 and 23 are of the same substantial height, with the dimension B substantially equalling that D, and with the upper edge 37 of the separator strip 28 being substantially at the same vertical elevation above the bottom wall 18 as the lower edges of the separator strips 30 and 31, to form a downwardly stepped arrangement as regards cell height for the cell 21. Similarly, the cell 20 is downwardly stepped relative to the cell 21, an amount equivalent to the difference between the dimensions A and B of FIG. 1. With respect to cells being comprised in part by the sidewall 17, rather than the sidewall 16, it will be noted that the cell 25 is constructed to be of the same general size and height as the cell 22, and is essentially a mirror image of the same, with the cell 24 being similar to the cell 23, the cell 26 being similar to the cell 21, and the cell 27 being similar to the cell 20.

With particular reference to FIGS. 2 and 3, it will be apparent that a plurality of bottles 40 are disposed in the cells, with those bottles in the cells 22 and 25 receiving the greatest sidewall support, as well as the greatest separator support, to be supported at the greatest vertical height, for facilitating rigidity of the overall carrier and bottle combination, for stacking purposes or the like, with those bottles 40 disposed within cells 21, 23, 24 and 26 receiving slightly less support from the sidewall. However, it will be noted that the cells 23 and 24 receive separator support from separators between themselves and the next adjacent cell, such as next adjacent cell 22 being separated by the separator strip 31, such that the support in that direction is as high for the cell 23 for example, as it is for the cell 22. However, with respect to the cell 21, the separator strip support is lower at its left-most end in FIG. 1, being at the level of separator strip 28, whereas the sidewall support is at the level B, the same as that D for the cell 23. Similarly, these remarks directed to cells 23 and 21 apply equally as well to cells 24 and 26.

Cells 20 and 27 receive the same separator strip support as do cells 21 and 26, such support being provided by separator strips 28 and 34, although their sidewall support is lower, such being provided up to a vertical elevation designated the dimension A, only. However, the sidewall and separator strip support provided for the cells 21, 22, 23, 24, 25 and 26, are believed to render the carrier 10, with bottles 40 therein to be substantially stable and well supported, for stacking purposes, such that the reduced support provided to bottles within the cell 20 is not believed to significantly affect the overall stability of a carrier having eight bottles disposed in cells thereof.

It will further be noted that the high sidewall support in the zones of the sidewalls 16 and 17 having dimensions B and D allow substantial space for display, such as printing with indicia or the like, and that the zone designated by the dimension C for each of the sidewalls allows the maximum display area, and that such three zones comprise the bulk of the carton sidewall area, with the area having a vertical dimension A, of each sidewall, being only the area occupied by a single end cell, and therefore not adversely affecting to any substantial degree, the allowable display area on the sidewalls 16 and 17 of the carrier 10.

Referring now to FIG. 4 in detail, the blank 42, from which the carrier 10 of FIG. 1 was constructed, is illustrated, as comprising a pair of handle panels 43 and 44, foldably connected along a generally longitudinally disposed fold line 45, with a plurality of finger or gripping holes 46 being cut therein, and with a pair of handle support panels 47 and 48 being respectively foldably connected to panels 43 and 44, along transverse fold lines 50 and 51, respectively, and with the panels 47 and 48 being foldably connected to each other along a longitudinal fold line 52, substantially in line with fold line 45, such that the panels 47 and 48 may be folded into engagement with lower portions of the panels 43 and 44, respectively, as viewed in FIG. 4. It will be noted that a cut-out 53 is provided, between the panels 47 and 48, for facilitating foldability of the same without kinking.

A pair of side panels 54 and 55 are provided, with the panel 54 being associated with the handle panel 44 and the handle support panel 48, and with the side panel 55 being associated with the handle panel 43 and the handle support panel 47. The side panel 54 is defined by longitudinal fold line 56, and at its ends by transverse fold lines 57 and 58, and at its right-most side as viewed in FIG. 4, by a plurality of longitudinally disposed cut lines 60, 61, 62 and 63. A fold line 64, transverse in direction, connects longitudinally disposed cut lines 60 and 61, as does a fold line 65 connect cut lines 61 and 62, and a fold line 66 connect cut lines 62 and 63, with separator panels 67, 68 and 70, being connected to the side panel 54, along the fold lines 64, 65 and 66, respectively. The separator panels 67, 68 and 70 are connected to either the handle panel 44 or the handle support panel 48, as illustrated in FIG. 4, along transverse fold lines 71, 72 and 73, respectively, with the panels 44 and 48 being separated from the panels 67, 68 and 70 by longitudinally disposed cut lines 74, 62 and 75. It will be noted that cut line 75 is almost, but not completely in line with cut line 62, although the lines 75 and 62 could be in line, if desired. It will be assumed that the same are substantially in line with respect to this disclosure.

A pair of end panels 76 and 77 are foldably connected to the side panel 54, along respectively associated fold lines 57 and 58, and are separated from the handle panel 44 and the handle support panel 48 by respectively associated cut lines 78 and 80, with the cut line 78 merging into the cut line 60, and the cut line 80 merging into and having its longitudinally directed portion in line with the cut line 63.

A pair of central separator panels 81 and 82 are respectively connected to the panels 76 and 77 along respectively associated fold lines 83 and 84, with the panel 81 also being connected to the handle panel 44 along the fold line 83. The blank on the right side of the longitudinally disposed fold line 45 is essentially a mirror image of that on the left side thereof, as viewed in FIG. 4, with the exception of a bottom panel 85 that is

foldably connected to the side panel 55, along a fold line 86, with the bottom panel 85 having a longitudinally disposed fold line 87 therein, and with a connecting tab 88 being provided, foldably connected to the side panel 54, along the fold line 56, for securement with the bottom panel 85, along or adjacent to a free edge 90 thereof.

It will be noted that the tab 88 may be adhesively secured, if desired, to the bottom panel 85, in a conventional manner, as may the handle support panels 47 and 48 be respectively adhesively secured to the handle panels 43 and 44, respectively, in a conventional manner. Furthermore, locking notches 91, 92 and the like may engage transverse edges of the bottom panel 85, when the same is folded into erect condition illustrated in FIG. 1, as desired.

It will be apparent from the foregoing that the above-indicated objectives of the invention are satisfied, in providing a novel blank, and a bottle carrier formed therefrom, which is adapted for containing eight bottles therein, with increased support, and increased display area. It will be noted that a greater number of cells than eight may be adapted into the blank, and consequently into the carrier of this invention. For example, the handle panels 44 and 45 could be elongated in an upper direction as viewed in FIG. 4, and amount to sufficient space for an additional separator panel above and to the left of the panel 67, as viewed in FIG. 4, with the sidewall panel 54 being increased in length longitudinally by that same amount and the line 57 also being moved upwardly that same amount, as viewed in FIG. 4. Thus, it will be apparent that a carrier of ten cells may be constructed in the same general manner as the carrier described in detail herein, with slight modifications, and that by similar construction a carrier of twelve cells may also be constructed.

What is claimed is:

1. A bottle carrier of paperboard or like construction comprising a pair of generally upstanding sidewalls, endwalls connecting adjacent ends of sidewalls, a bottom wall connecting lower ends of the sidewalls, an upstanding handle carried by said endwalls and extending therebetween substantially midway between and parallel to said sidewalls, at least three separator strips on each side of said handle integrally connected therewith and with an adjacent said sidewall along fold lines, dividing the zone between each sidewall and the handle into at least four cells, said separator strips each being generally horizontally disposed.

2. The bottle carrier of claim 1, wherein at least two of said separator strips are at different vertical elevations in stepped relation.

3. The bottle carrier of claim 2, wherein a cell on each side of said handle and immediately adjacent an end cell on an associated side of said handle is comprised in part by a portion of an associated said sidewall of greatest height of said sidewall.

4. The bottle carrier of claim 2, wherein a cell on each side of said handle and immediately adjacent an end cell on an associated side of said handle is comprised in part by a pair of said separator strips that are disposed at the same general elevation and at the greatest elevation of any of said strips above said carrier bottom.

5. The bottle carrier of claim 2, wherein said carrier includes a total of eight said cells.

6. The bottle carrier of claim 5, wherein a cell on each side of said handle and immediately adjacent an end cell on an associated side of said handle is comprised in part by a portion of an associated said sidewall of greatest height of said sidewall, and wherein an end cell on each said side of said handle and spaced from an associated said end cell by a cell having said sidewall portion of greatest height are each comprised in part by portions of an associated said sidewall of substantially the same intermediate height relative to said sidewall portions of greatest height, and wherein opposite end cells on each side of said handle are comprised in part by a portion of an associated said sidewall of least height.

7. A carrier blank cut and creased for forming a multiple cell bottle carrier of at least eight cells upon folding and securing thereof, comprising a pair of handle panels connected together along a longitudinally disposed fold line, a pair of handle support panels connected respectively to said handle panels at an end thereof along transverse fold lines, six separator panels in sets of three, each defined at their sides by longitudinally disposed cut lines and at their ends by transverse separator fold lines, said separator fold lines comprising means for connecting said separator panels to one of a handle panel, a handle support panel, or a side panel, including a said side panel associated with each set of three separator panels, said side panels having end panels connected thereto along transverse fold lines at each end thereof, with each said end panel having another panel connected thereto along a transverse fold line, and with a bottom panel being provided connected to a side panel along a longitudinal fold line.

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