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S. CONESCU
BOTTLE CARRIER

2,991,908

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2 Sheets-Sheet 2

FIG. 2

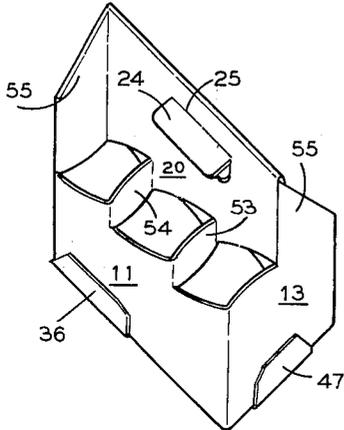


FIG. 3

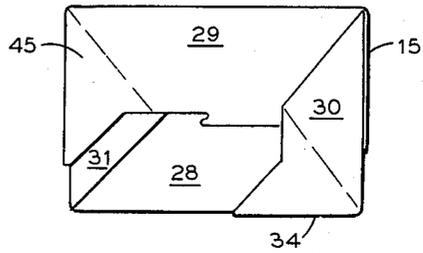
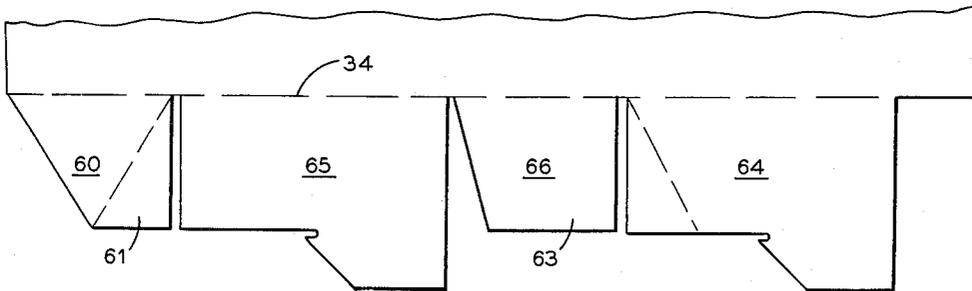


FIG. 4



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2,991,908

BOTTLE CARRIER

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The present invention relates to a bottle carrier and more particularly to a bottle carrier formed from folded cardboard or the like, and to the blank from which such bottle carrier is produced.

When manufacturing a bottle carrier consideration has to be given to providing strong construction to support the heavy weight of filled bottles. The carrier should be foldable in flat form yet capable of being opened with a minimum of effort. At the same time, the carrier must be inexpensive to produce.

It is an object of the present invention to provide a bottle carrier which will meet the foregoing and other requirements.

It is another object of the present invention to provide a bottle carrier the bottom portion of which will be free of any apertures.

It is a further object of the present invention to provide a bottle carrier having superior strength in the area connecting the handle portions to the wall sections.

Additional features and advantages of the present invention will be apparent from the following description and drawings in which:

FIG. 1 is a plan view of a blank from which the preferred embodiment of the present invention is formed;

FIG. 2 is a perspective view of the bottle carrier opened for use;

FIG. 3 is a bottom view of the carrier shown in FIG. 2; and

FIG. 4 is a plan view of a portion of a blank showing an alternate arrangement of the bottom sections of the carrier.

A bottle carrier, constructed from a blank 10, made of a unitary piece of sheet material, preferably cardboard, comprises a pair of side wall sections 11 and 12 of equal width, an end wall section 13 disposed between said side wall sections, a second end wall section 14 having the same width as the end wall section 13, and an end wall flap 15. The wall sections and flap are connected along vertical folding lines 16, 17, 18 and 19. Integral with, and extending upwardly from said side and end wall sections are handle portions 20 and 21 that are defined by folding lines 22. The width of the handle portions 20 and 21 is substantially equal to the width of the side wall sections 11 and 12, but the said handle portions are displaced with respect to the side wall sections by approximately one-half of the width of the end wall section 13 or 14.

Extending from the wall sections and the end wall flap substantially to the top of each side of the handle portions are webs 23 which are connected to the handle portions along the folding lines 22. Each of said handle portions 20 and 21 is provided with a finger slot 24. The finger slot 24 may be formed by cutting out a flap on three sides, leaving it connected to the blank at the upper edge 25 of the slot. Handle portion 20 also has a flap 26 connected to its upper edge along a folding line 27.

The bottom of the carrier is formed from two side bottom sections 28 and 29, and two end bottom sections 30 and 31 which extend downwardly along a peripheral folding line 32 from their respective wall sections along substantially the full length of said wall sections. In the preferred embodiment which is shown in FIG. 1, the end bottom section 30 is of triangular shape at one side of which is, connected along a folding line 33, a generally triangular glue flap 34. The glue flap 34 has foldably joined to it along a folding line 35 a second glue

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flap 36 of generally rectangular shape. The folding line 35 is aligned with its corresponding folding line 16 so that the flap 36 is positioned on the opposite side of the said folding line from the bottom section 30 and its glue flap 34. The glue flap 36 has its upper corner 37 trimmed away at an angle to permit the bottom section 28 to reach substantially to the folding line 16. As shown, the glue flap 36 has a length considerably greater than the length of the glue flap 34 and there is provided a generally triangular web 34' between the two.

The side bottom section 28 is of generally rectangular shape with an extension 36 at the side of its lower edge and a notch 39 at the inner point of juncture between the section 28 and its extension 38. A portion of the side edge of this bottom section 28 has been cut away at 40 to permit clearance with respect to the flap 36 and to permit the entire structure to be formed of a single sheet of material. A second side bottom section 29 has a main area 41 with an extension 42 at the side of its lower edge with a notch 43 provided at the juncture between the section 29 and its extension 42. The notches 39 and 43 extend in the same general direction and the combined lengths of the extensions 38 and 42 are substantially equal to the width of the side wall sections 28 and 29. In addition, the combined heights of the bottom sections 28 and 29 is substantially equal to the width of the end wall sections 13 and 14. As a result, the bottom sections 28 and 29 when folded and interlocked will form a substantially complete base for the carrier. A folding line 44 extending from the inner edge of the section 29 separates a generally triangular glue flap 45 from the main area 41. The glue flap 45 has foldably joined to it along a folding line 46 a second glue flap 47 which is shaped and arranged substantially in the same manner as the glue flap 36, being cut away at 48 and having a web 49 between it and the flap 45. The bottom section 31 located between the section 28 and the glue flap 47 is of generally rectangular shape with its sides cut away at 50 and 51 to clear the said section and flap and to permit the entire structure to be formed of a single sheet of material.

The blank 10 is provided with parallel sinusoidal cuts 52 that extend between the side wall sections 11 and 12 and the handle portions 20 and 21. These cuts cooperate with crease lines 53 to form connecting strips 54 when the carrier is folded to its useable form.

The various portions of the blank are folded and secured together, as by glue or the like, to form the bottle carrier. The bottom sections are folded up against the inner surfaces of the side and end walls. The end wall flap 15 is glued over the end wall 14 providing a substantial overlap so that the free edge of the wall 14 is aligned with the fold line 19. The glue flap 34 is secured to the side bottom section 28 and the glue flap 36 is secured to the outside of the side wall portion 11. Similarly, the glue flap 45 is secured to the end bottom section 31 and the glue flap 47 is secured to the outside of the end wall section 13. When the blank is folded the two handle portions extend upwardly between the wall sections and are secured together with their respective finger slots 24 brought into register. The handle flap 26, which has a height preferably equal to the distance from the upper edge of the finger slot 24 to the upper edge 27 of the handle portion, is folded over the handle portion 21 and secured thereto, providing an especially strong construction at the upper edge of the carrier. The handle portions are kept low in height so that when the filled bottle carriers are stacked, as is common in shipment and display, it will be the bottles which will bear the weight of the carrier placed above it and not the handle of the carrier.

Reference to FIG. 2 will show that the webs 23 pro-

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vide connection between the handle portions and their adjacent wall sections along the entire height of the handle portions to form two-ply struts 55 at each side of the handle. The handle thus strengthened will remain firm and will not tend to bend.

The bottle carrier when folded and glued as described is flat and may be stored and shipped without occupying an excessive bulk.

Opening the bottle carrier entails merely pushing inwardly simultaneously against the outer edges of the folded carrier whereupon the bottom sections descend and lock into place at notches 39 and 43 to form a strong, flat bottom with large areas of reinforcing overlap. It is particularly important to note that the bottom formed is integral with all four of the side and end wall portions along their entire length. In addition, the glue flaps 36 and 47 further connect the bottom to the side and end walls 11 and 13, respectively. There are, therefore, no apertures to weaken the strength of the carrier.

In the open position, the connecting strips 54 serve to link the side walls 11 and 12 to the handle portions 20 and 21, as well as to define the individual pockets in which the bottles will be placed.

An alternate construction of the bottom of the carrier is shown in FIG. 4 which differs from the bottom shown in FIG. 1 in that a triangular bottom section 60 is provided with a single triangular glue flap 61 extending from substantially the entire length of its side. Similarly, a fold line 62 divides a single triangular glue flap 63 from the side bottom section 64. Side bottom section 65 and end bottom section 66 resemble their respective sections in FIG. 1 but fewer clearance cut-aways are needed in this design.

In comparing the construction of the two carriers it will be seen that they differ only in that the embodiment shown in FIG. 1 has extra glue flaps 36 and 47 which are folded over and secured to the wall portions of the carrier. In both embodiments, however, the glue flaps which are secured to the bottom sections extend the full width of those sections.

The bottle carrier constructed in accordance with the present invention is especially strong in those areas which receive the greatest wear; the struts connecting the handle portions to the wall sections and the bottom area. Additionally, the carrier can be cut out in one operation and can be assembled with ease.

While specific embodiments of the invention have been shown and described in detail to illustrate the application of the invention, it will be understood that the invention may be embodied otherwise without departing from such principles.

What is claimed is:

1. A bottle carrier comprising four wall sections having a pair of side wall sections and a pair of end wall sections, two handle portions extending upwardly between said wall sections, webs extending from said wall sections to the top of each side of said handle portions thereby to form supporting struts between the handle portions and their adjacent wall sections, and four bottom sections with two side bottom sections and two end bottom sections extending integrally along a peripheral folding line from the entire length of their respective wall sections, one of said end bottom sections being of generally triangular shape and having a generally triangular first glue flap extending from substantially the entire length of one of its sides, said first glue flap being secured to the adjacent side bottom section, a second glue flap attached along one side of the first glue flap, said second glue flap being secured to the adjacent side wall section, the second of said end bottom sections being of generally rectangular shape with cut-aways at each side for clearance, each of said side bottom sections having an extension therefrom and being adapted for locking engagement, the second of said side bottom sections having a generally

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triangular glue flap connected along a folding line and secured to the adjacent end bottom section, and a second glue flap attached to the first glue flap, said second glue flap being secured to the adjacent end wall section.

2. A bottle carrier comprising four wall sections with a pair of side wall sections and a pair of end wall sections, four bottom sections with two side bottom sections and two end bottom sections extending integrally along a peripheral folding line from the entire length of their respective wall sections, one of said end bottom sections being of generally triangular shape and having a generally triangular first glue flap extending from one of its sides, said first glue flap being secured to the adjacent side bottom section, a second glue flap attached along one side of the first glue flap, said second glue flap being secured to the adjacent side wall section, the second of said end bottom sections being of generally rectangular shape with cut-aways at each side for clearance, each of said side bottom sections having an extension therefrom and being adapted for locking engagement, the second of said side bottom sections having a generally triangular glue flap connected along a folding line and secured to the adjacent end bottom section, and a second glue flap attached to the first glue flap, said second glue flap being secured to the adjacent end wall section.

3. A bottle carrier comprising four wall sections with a pair of side wall sections and a pair of end wall sections connected along vertical folding lines, four bottom sections having two side bottom sections and two end bottom sections extending integrally along a peripheral folding line from the entire length of their respective wall sections, one of said end bottom sections being of generally triangular shape and having a generally triangular first glue flap extending from one of its sides, a second glue flap attached to one side of the first glue flap along a folding line, said folding line being in alignment with the folding line connecting the end wall corresponding to the said bottom section to an adjoining side wall, said second glue flap being secured to the adjacent side wall section, the side bottom section adjacent said second glue flap being cut away to clear the said second glue flap, each of said side bottom sections having an extension therefrom and being adapted for locking engagement, the second of said side bottom sections having a generally triangular glue flap connected along a folding line and secured to the adjacent end bottom section, and a second glue flap attached to one side of the first glue flap along a folding line, said folding line being in alignment with the folding line connecting the side wall corresponding to the said bottom section to an adjoining end wall, said second glue flap being secured to the adjacent end wall section, the end bottom section adjacent said second glue flap being cut away to clear the said second glue flap.

4. A bottle carrier as in claim 3 in which both second glue flaps are cut away at an angle to permit the bottom sections adjacent to said glue flaps to reach substantially to the folding line whereby there is continuity of the integral relationship between said bottom sections and their respective wall sections along the entire length thereof.

5. A blank for a bottle carrier comprising four wall sections having a pair of side wall sections and a pair of end wall sections joined together along folding lines at their common vertical edges, the free vertical edges of said wall sections being adapted for joining together when the carrier is formed into shape, two handle portions extending upwardly from said wall sections, webs extending from said wall sections to the top of each side of said handle portions, sinusoidal cuts extending between said side wall sections and said handle portions and cooperating with crease lines to form connecting strips, four bottom sections having two side bottom sections and two end bottom sections extending integrally along a peripheral folding line from the entire length of their respective wall sections, one of said end bottom sections being of

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generally triangular shape and having a generally triangular first glue flap extending from substantially the entire length of one of its sides, said first glue flap being adapted for securing to the adjacent side bottom section, a second glue flap attached along one side of the first glue flap, said second glue flap being adapted for securing to the adjacent side wall section, the second of said end bottom sections being of generally rectangular shape with cut-aways at each side for clearance, each of said side bottom sections having an extension therefrom and being adapted for locking engagement, the second of said side bottom sections having a generally triangular glue flap connected along a folding line and being adapted for securing to the adjacent end bottom section, and a second glue flap attached to the first glue flap, said second glue flap being adapted for securing to the adjacent end wall section.

6. A blank for a bottle carrier comprising four wall sections having a pair of side wall section and a pair of end wall sections joined together along folding lines at their common vertical edges, the free vertical edges of said wall sections being adapted for joining together when the carrier is formed into shape, four bottom sections having two side bottom sections and two end bottom sections extending integrally along a peripheral folding line from the entire length of their respective wall sections, one of said end bottom sections being of generally triangular shape and having a generally triangular first glue flap extending from one of its sides, said first glue flap being adapted for securing to the adjacent side bottom section, a second glue flap attached along one side of the first glue flap, said second glue flap being adapted for securing to the adjacent side wall section, the second of said end bottom sections being of generally rectangular shape with cut-aways at each side for clearance, each of said side bottom sections having an extension therefrom and being adapted for locking engagement, the second of said side bottom sections having a generally triangular glue flap connected along a folding line and being adapted for securing to the adjacent end bottom section, and a second glue flap attached to the first glue flap, said second glue flap being adapted for securing to the adjacent end wall section.

7. A blank for a bottle carrier comprising four wall sections having a pair of side wall sections and a pair of end wall sections joined together along folding lines at

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their common vertical edges, the free vertical edges of said wall sections being adapted for joining together when the carrier is formed into shape, four bottom sections having two side bottom sections and two end bottom sections extending integrally along a peripheral folding line from the entire length of their respective wall sections, one of said end bottom sections being of generally triangular shape and having a generally triangular first glue flap extending from one of its sides, a second glue flap attached to one side of the first glue flap along a folding line, said folding line being in alignment with the folding line connecting the end wall corresponding to the said bottom section to an adjoining side wall, said second glue flap being adapted for securing to the adjacent side wall section, the side bottom section adjacent said second glue flap being cut away to clear the said second glue flap, each of said side bottom sections having an extension therefrom and being adapted for locking engagement, the second of said side bottom sections having a generally triangular glue flap connected along a folding line and being adapted for securing to the adjacent end bottom section, and a second glue flap attached to one side of the first glue flap along a folding line, said folding line being in alignment with the folding line connecting the side wall corresponding to the said bottom section to an adjoining end wall, said second glue flap being adapted for securing to the adjacent end wall section, the end bottom section adjacent said second glue flap being cut away to clear the said second glue flap.

8. A blank for a bottle carrier as in claim 7 in which both second glue flaps are cut away at an angle to permit the bottom sections adjacent to said glue flaps to reach substantially to the folding line whereby there is continuity of the integral relationship between said bottom sections and their respective wall sections along the entire length thereof.

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