April 13, 1954 W. E. TURNER ET AL 2,675,157

RETRACTABLE HANDLE BOTTLE CARRIER

Filed April 12, 1948

4 Sheets-Sheet 1

Fig. 1

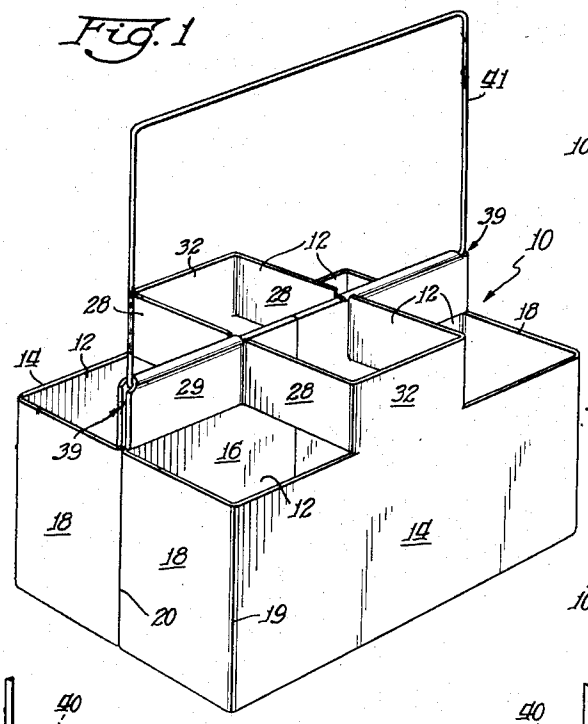


Fig. 2

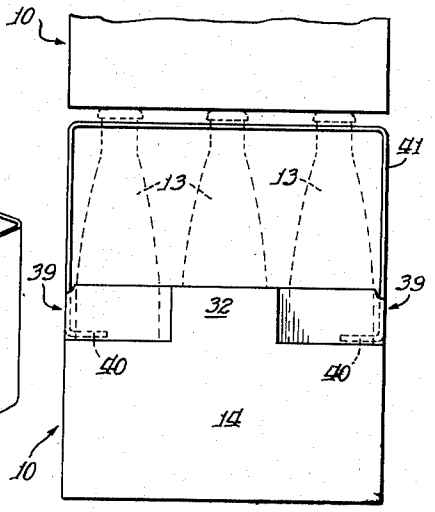
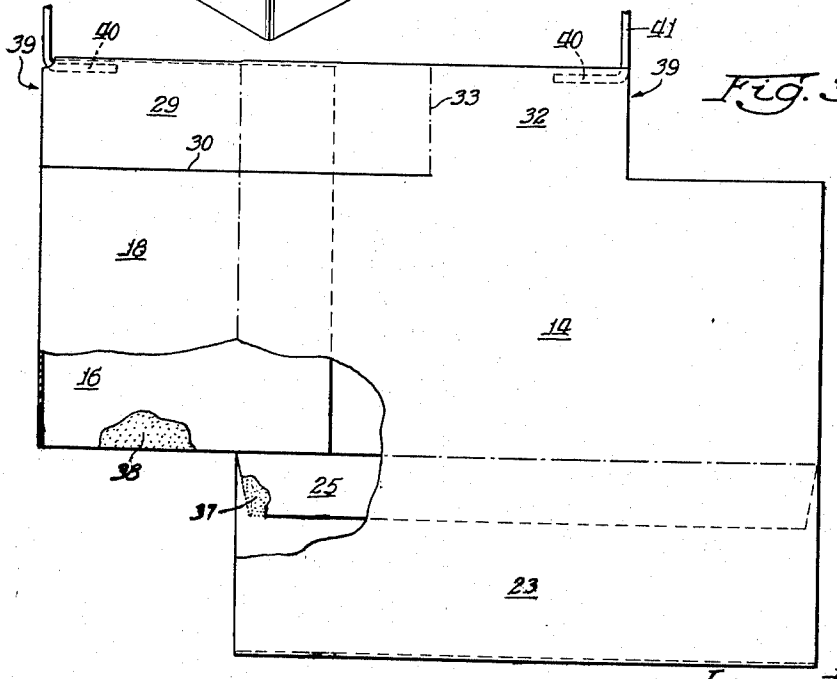


Fig. 3



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Fig. 6

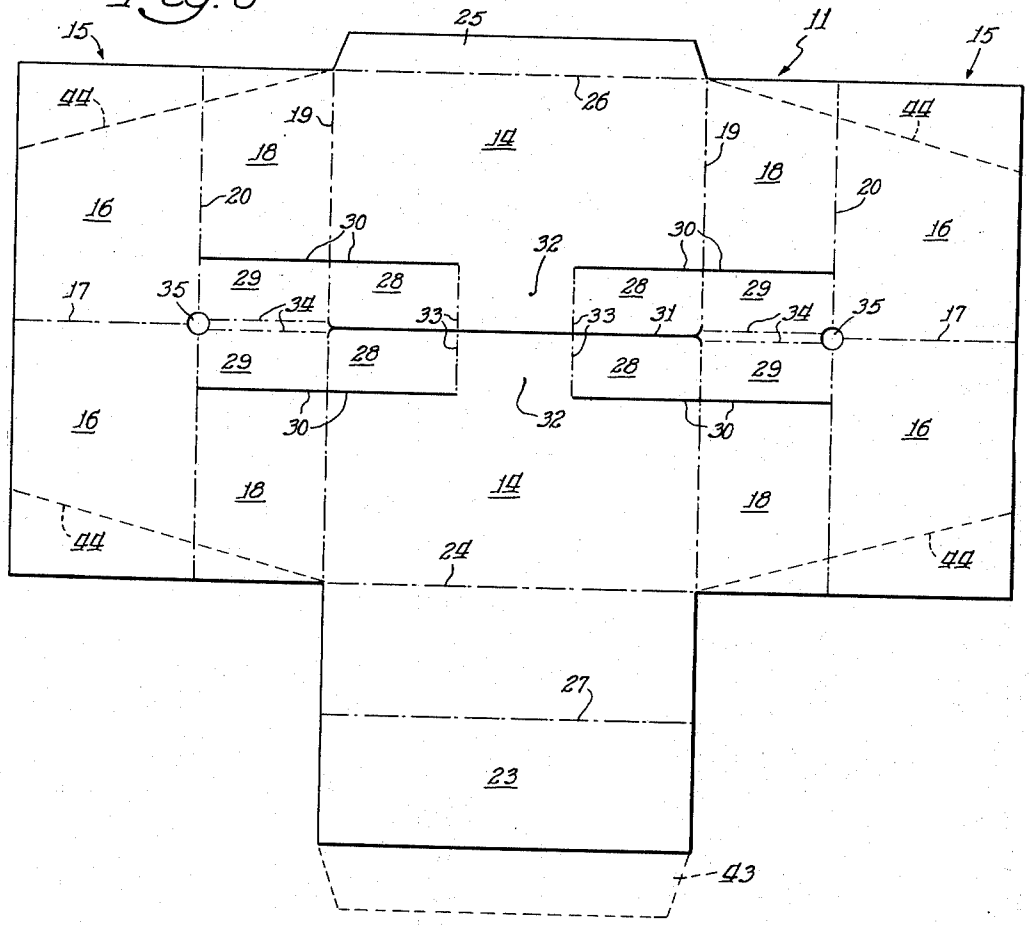


Fig. 4

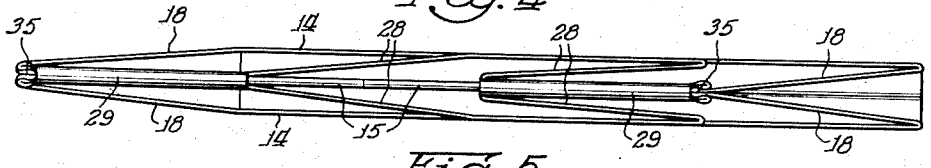
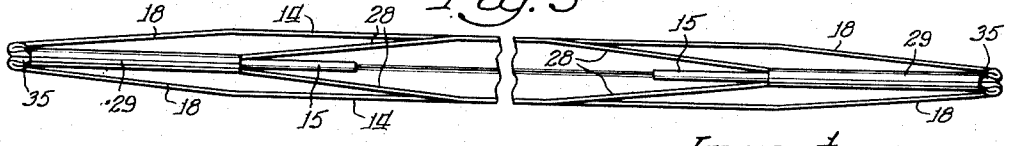


Fig. 5



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Fig. 7

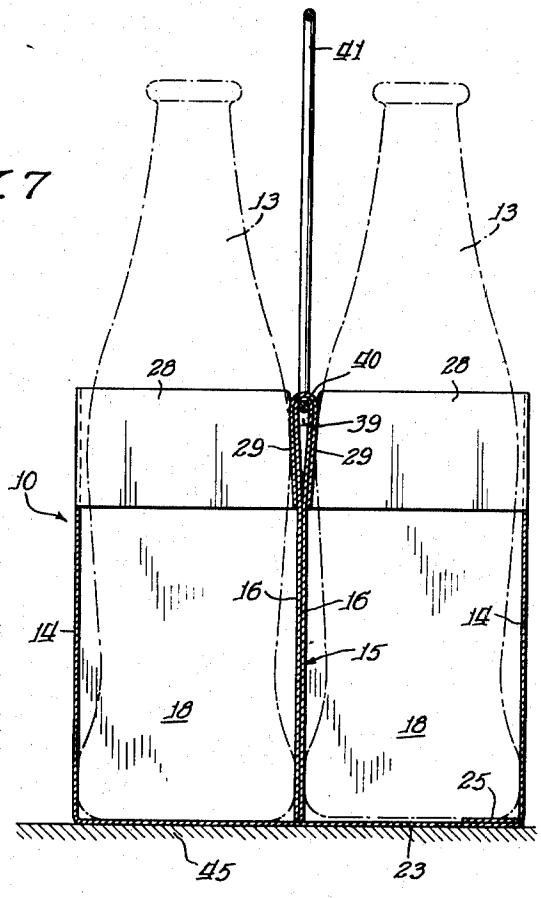
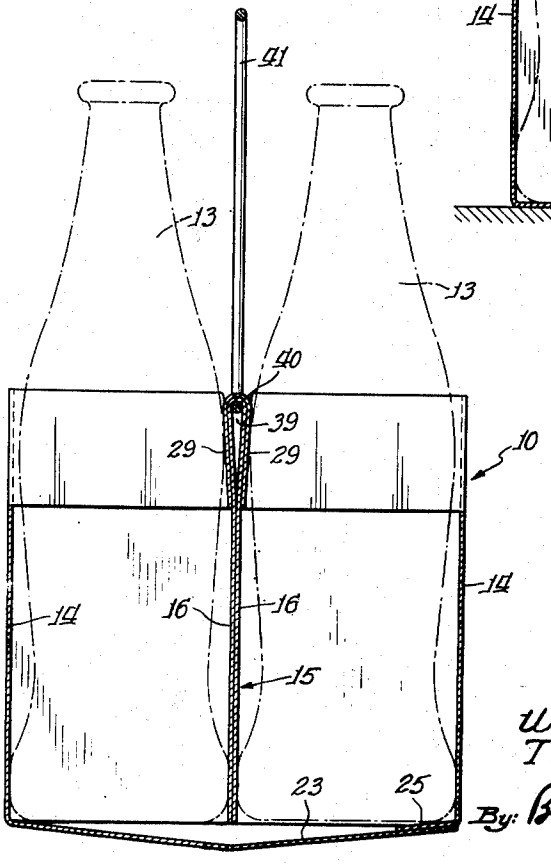


Fig. 8



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Fig. 9

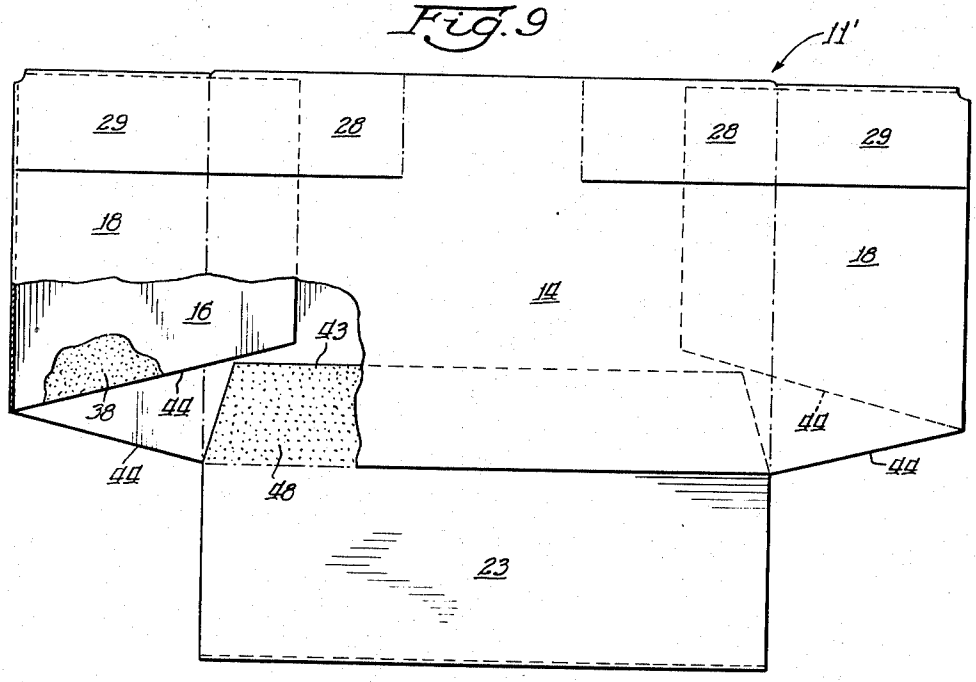
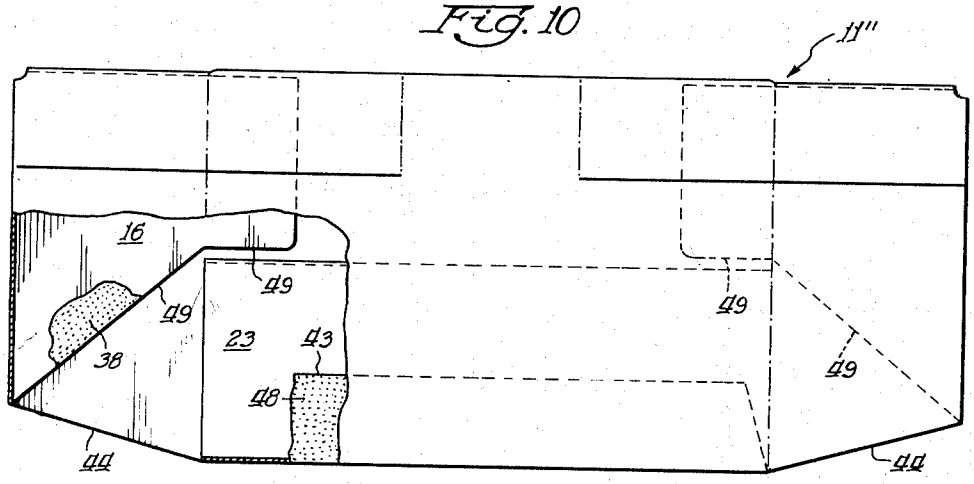


Fig. 10



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Patented Apr. 13, 1954

2,675,157

UNITED STATES PATENT OFFICE

2,675,157

RETRACTABLE HANDLE BOTTLE CARRIER

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Application April 12, 1948, Serial No. 20,566

5 Claims. (Cl. 229—28)

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This invention relates, generally, to carrying devices and it has particular relation to such devices for carrying bottles and the like.

It is customary at the present time to sell various brands of soft drinks in bottles in one half dozen lots. In order to facilitate handling of the filled bottles and return of the empty bottles, it is desirable to provide a carrier that is light in weight, strong enough to withstand several trips from and to the store, and is relatively inexpensive.

Accordingly, among the objects of this invention are: To provide a bottle carrier which fulfills the foregoing requirements; to form the carrier from a one piece paperboard blank; to construct the carrier so that it has six bottle receiving spaces; to provide the carrier with side walls interconnected along their lower edges by a bottom and an interior wall midway between the side walls having no connection to said bottom; to construct the carrier so that, when the bottom is supported from underneath, the bottles in the carrier are freely movable for loading and unloading; to apply lifting force to the carrier so that, when the carrier is picked up, the bottles are carried substantially out of contact with the bottom and are held against free movement by frictional engagement between their sides and the walls of the carrier; to hold the carrier in set up position by fastening means located along its longitudinal center line; to set up the carrier so that it can be collapsed by movement of the side walls toward the interior wall with the bottom being folded either inwardly or outwardly; to lift the carrier by a handle arranged to apply its lifting force to the upper edge of the interior wall, the handle extending upwardly therefrom; to construct the interior wall with pockets into which the handle can be retracted to permit stacking; and, to provide a double wall thickness along the upper edges of the interior wall sections in order to reenforce them for resisting the lifting force applied by the handle.

Other objects of this invention will, in part, be obvious and in part appear hereinafter.

This invention is disclosed in the embodiments thereof shown in the accompanying drawings and it comprises the features of construction, combination of elements and arrangement of parts which will be exemplified in the constructions hereinafter set forth and the scope of the application of which will be indicated in the appended claims.

For a more complete understanding of the nature and scope of this invention, reference can

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be had to the following detailed description, taken together with the accompanying drawings, in which;

Figure 1 is a perspective view of a carrier having a retractable handle constructed in accordance with this invention;

Figure 2 is a view, in side elevation, of the carrier shown in Figure 1 and illustrating how the handle can be retracted to permit stacking of the carriers one above the other when they are filled with bottles;

Figure 3 is a view, in side elevation, with certain parts being broken away, illustrating how the carrier shown in Figure 1 can be collapsed for shipping and storage purposes;

Figure 4 is a top plan view of the carrier shown in Figure 1 in the collapsed position with the end flaps being folded in the same direction;

Figure 5 is a view, similar to Figure 4, but showing how the carrier illustrated in Figure 1 can be collapsed with the end flaps being folded in opposite directions;

Figure 6 is a plan view of a one piece blank which can be folded to form the carrier illustrated in Figure 1, certain modifications being illustrated by broken lines;

Figure 7 is a view in section illustrating how the bottles are supported on the bottom of the carrier and are freely movable therein for loading and unloading when the bottom of the carrier is supported from underneath;

Figure 8 is a view, similar to Figure 7, but showing how the bottles are supported substantially out of engagement with the bottom of the carrier when lifting force is applied thereto by the handle along the upper edges of the interior wall in which case the bottles are gripped frictionally between their sides and the adjacent surfaces of the side and interior wall;

Figure 9 is a view, in side elevation, certain parts being broken away, illustrating a modified form of the carrier in partly set up condition with the bottom being folded outwardly; and

Figure 10 is a view similar to Figure 9 but showing a further modification of the carrier in which the bottom is folded inwardly when the carrier is in the collapsed position.

Referring now particularly to Figures 1, 2, 3 and 6 of the drawings, it will be observed that the reference character 10 designates, generally, a carrier which may be set up from a one piece paperboard blank that is indicated, generally, at 11 in Figure 6. When the carrier 10 is set up it provides six spaces 12 for receiving bottles 13 which are typical of the soft drink bottles now

used in large numbers. It will be understood that various shapes of bottles 13 can be employed and that various sizes may be used. However, it is preferable that the carrier 10 be designed with a particular size and shape of bottle 13 in mind in order to make most advantageous use of the present invention.

The carrier 10 includes side walls 14 and a two section interior wall that is indicated, generally, at 15, each section being made up of two panels 16 which are joined along score lines 17. As will appear hereinafter, the carrier 10 is supported by application of a handle underneath the score lines 17 joining the panels 16 which form the two section interior wall 15.

The panels 16 are joined to the side walls 14 by end flaps 18, the junctures being along score lines 19 and 20 as shown in Figure 6. The lower edges of the side walls 14 are joined together by a bottom 23. One of the side walls 14 may have a glue flap 25 separated therefrom by a score line 26 for fastening to the adjacent edge of the bottom 23 as illustrated in Figure 3. The bottom 23 has a score line 27 intermediate its edges which permits the same to fold outwardly as indicated in Figure 3. It will be pointed out hereinafter that the construction of the blank 11 can be such that the bottom 23 can fold inwardly rather than outwardly as illustrated in Figure 3.

With a view to providing the six spaces 12 for the bottles 13 and for joining the side walls 14 to the two section interior wall 15 dividers 28 are provided having extensions 29 separated therefrom along the score lines 19. The dividers 28 and extensions 29 are separated from the adjacent longitudinal portions of the side walls 14 and end flaps 18 by cut lines 30. In addition a cut line 31 separates the side walls 14 from each other and also the dividers 28 from each other. This construction provides extensions 32 from the side walls 14 which are contiguous with the dividers 28 along the score lines 33. Since the extensions 29 fold over the upper edges of the panels 16 along the score lines 17 to provide a double thickness of paperboard for reenforcing the carrier 10 at this point where the handle is applied, the extensions 29 have score lines 34 along which they are folded in the manner described when the carrier 10 is set up. Circular openings 35 are provided at the junctures of the score lines 17, 20 and 34, as shown, to receive the ends of the handle.

As illustrated in Figure 3 of the drawings, the glue flap 25 may be secured to the adjacent edge of the bottom 23 by suitable adhesive 37. If desired, the flap 25 can be secured to the bottom 26 by other means such as by stapling, stitching, etc.

The carrier 10 is held in the set up position along its longitudinal axis by the securing of the panels 16 forming the two section interior wall 15 together. As shown in Figure 3, the panels 16 can be secured together by adhesive 38. It will be understood that the adhesive 38 extends up to but not beyond the cut line 30. When the panels 16 are thus joined together, they form the two section interior wall 15 as described.

The portions of the panels 16 above the cut lines 30, as shown in Figure 3, provide pockets which are indicated, generally, at 39. The pockets 39 are provided for receiving the inturned ends 40 of a wire handle 41 and for permitting these ends 40 to be moved to the lower portions thereof so that the handle 41 can be retracted as shown in Figure 2. This permits the stacking of a second carrier 10 above the lower carrier which is filled with the bottles 13 without interference with the handle 41. When lifting force is applied to the handle 41, it is moved upwardly until the ends 40 engage the under side of the adjoining portions of the panels 16 which form the two section interior wall 15. Since the extensions 29 overlie these portions of the panels 16, a double thickness of the cardboard stock is provided for reenforcing the same to resist more advantageously the lifting force applied by the handle 41.

As illustrated in Figure 6 a glue flap 43 may be provided along one edge of the bottom 23 and the glue flap 25, previously described, may be omitted. The glue flap 43 is illustrated by broken lines to show the alternate construction. Also, if desired, the panels 16 and the end flaps 18 may be trimmed along lines 44 to reduce the amount of paperboard stock required for making the carrier 10.

As illustrated in Figure 4, when the carrier 10 is set up as described, the side walls 14 can be collapsed toward the two section interior wall 15 by causing the end flaps 18 to be folded in the same direction. This places the inner ends of the interior wall sections 15 adjacent each other. When the handle 41 is inserted as illustrated in Figures 1 and 3 of the drawings, these sections of the wall 15 are prevented from being moved apart.

In the absence of the handle 41 the carrier 10 can be collapsed as indicated in Figure 5. Here the end flaps 18 are folded in opposite directions so that they project oppositely from the ends of the side walls 14. It may be advantageous for shipping and storing purposes to collapse the carrier 10 in the manner illustrated in Figure 5. When so collapsed the inner edges of the interior wall sections 15 are moved apart the maximum distance.

Referring now particularly to Figure 7 of the drawings, it will be noted that the carrier 10 is filled with bottles 13 and that the bottom 23 is carried by a suitable support 45. The construction and proportioning of the blank 11 from which the carrier 10 is set up are such that the bottles 13 are freely movable in the carrier 10 for loading and unloading purposes. That is, the bottles 13 can be rotated freely within the spaces 12 provided therefor in the carrier 10.

In Figure 8 of the drawings, the carrier 10 is shown with a lifting force applied to the handle 41 sufficient to move it off from the support 45. Since the lifting force from the handle 41 is applied to the two section interior wall 15, a wedging action with the bottles 13 results between their sides and the adjacent surfaces of the side walls 14 and the two section interior wall 15. It will be observed that the bottom 23 is spaced slightly below the bottoms of the bottles 13 so that they are supported substantially out of engagement therewith in contrast to being fully supported thereby as shown in Figure 7. This wedging action results in the bottles 13 being gripped in the carrier 10 and held against free movement therein. An important advantage of this construction resides in the fact that the bottles 13 are not supported by the bottom 23 except as they may bear against the same near the juncture thereof with the lower edges of the side walls 14. When it is recalled that the bottom 23 may become weakened as a result of the dropping of

moisture onto the same resulting from condensation on the outer walls of the bottles 13, the carrying of these bottles by frictional engagement with side walls 14 and two section intermediate wall 15 is especially desirable.

In Figure 9 of the drawings a blank 11' is illustrated which is generally similar to the blank 11 described hereinbefore. It will be noted that it is provided with a glue flap 43 which extends from one edge of the bottom 23. It is secured by adhesive 48 along the lower portion of one of the side walls 14. In this construction the bottom 23 is folded outwardly. Also, the panels 16 and end flaps 18 are trimmed along the lines 44.

In Figure 10 of the drawings, the carrier 11'' is similar to the carriers 11 and 11' described hereinbefore. An important modification is that the bottom 23 is folded inwardly rather than outwardly as previously shown and described. In order to accommodate the inward folding of the bottom 23, the panels 16 are trimmed along the lines 49, as illustrated.

Since certain further changes can be made in the foregoing constructions and different embodiments of the invention can be made without departing from the spirit and scope thereof, it is intended that all matter shown in the accompanying drawings and described hereinbefore shall be interpreted as illustrative and not in a limiting sense.

What is claimed as new is:

1. In a bottle carrier, a one piece paperboard container comprising side walls, an interior wall midway between said side walls formed in two sections each formed of two panels folded together along their upper edges, end walls connecting the outer ends of said panels to the ends of said side walls, the latter and said end walls being of equal height and said interior wall extending above said side and end walls, said side walls being provided at the midlength of their upper edges with upward extensions, an element extending inward from the outer edges of said panels of each of said sections of said interior wall and folded downwardly over the upper edges of said panels providing therewith two thicknesses of material at the upper edge of each of said sections, dividers connecting the inner ends of said elements to the ends of said extensions, and a bottom wall connecting the lower edges of said side walls and foldable into substantial parallelism therewith.

2. A paperboard blank foldable to produce a one piece compartmented container, said blank being cut and scored to provide two rectangular side wall panels aligned transversely of said blank, a bottom wall panel attached along a fold line to the lower edge of one of said side wall panels, an end wall panel attached along a fold line to each end of each of said side panels, a pair of interior wall panels attached along a common fold line to the two end wall panels at each end of said side wall panels and connected together along a fold line extending lengthwise of said blank, an element attached to each pair of interior wall panels along a fold line continuous with the fold lines between said end wall and interior wall panels and having a central fold line aligned with said fold line between said pair of interior wall panels, said elements extending inwardly of said end wall panels and being separated therefrom by cut lines therebetween, and a pair of dividers connected to the inner end of each of said elements along fold lines continuous with the fold lines between said side and end wall

panels and extending inwardly of said side wall panels and connected to the latter at their inner ends along fold lines parallel with the fold lines between said element and dividers, the inner ends of said pairs of dividers being spaced apart providing therebetween extensions at the inner edges of said side wall panels, said extensions and said dividers of each pair thereof being separated by a common lengthwise cut line therebetween and said dividers and side wall panels being separated by lengthwise cut lines therebetween.

3. In a bottle carrier, a one piece paperboard container comprising when set up, a substantially rectangular bottom panel with a median fold line extending lengthwise thereof, side wall panels hingedly joined to opposite sides of said bottom panel, each of said side wall panels having a main portion and a central portion extending upwardly from said main portion and each of said central portions having substantially vertical side edges, end wall panels integrally joined along vertical score lines to the ends of each of said main portions of said side wall panels, said end wall panels being folded inwardly at substantially right angles to said side wall panels and being of such width that the inner edges of the end wall panels at each end of the container substantially meet in abutting relation, a longitudinal partition member integrally joined to each end wall panel along a vertical score line defining the inner edge of said end wall panel, the partition members at each end of the container being folded inwardly relatively to their associated end wall panels and secured together in face-to-face contact, a longitudinal extension member integrally joined to each partition member along a vertical score line in alignment with but above the score line defining the inner edge of the associated end wall panel, each longitudinal extension member being folded through 180° to overlie its associated partition member, a transverse partition member integrally joined along vertical score lines to each of said longitudinal extension members and to a vertical side edge of one of said central portions of said side wall panels, and means for maintaining each of said longitudinal extension members in position overlying its associated partition member, whereby said container may be expanded from collapsed condition to set up condition with said transverse partition members spaced from said end wall panels and from each other to form a plurality of cells adjacent each of said side wall panels.

4. In a bottle carrier, a one piece paperboard container comprising a substantially rectangular bottom wall panel with a lengthwise fold line, side wall panels hingedly joined to opposite sides of said bottom wall panel, each of said side wall panels having a main portion and a substantially rectangular central portion extending upward from said main portion and having substantially vertical side edges, end wall panels integrally joined along vertical fold lines to the ends of each of said main portions of said side wall panels, said end wall panels being folded inwardly substantially at right angles to said side wall panels and being of such width that the inner edges of said end wall panels at each end of the container substantially meet in abutting relation, a longitudinal partition member extending upward above and integrally joined to each end wall panel along a vertical fold line defining the inner edge of said end wall panel, the partition members at each end of the con-

tainer being folded inwardly relative to their associated end wall panels and secured together, longitudinal extension members integrally joined to said partition members along vertical fold lines in alignment with but above the fold lines defining the inner edges of the associated end wall panels, each longitudinal extension member extending inward along and seating on the outer face of its associated partition member, two transverse partition members at each side of said longitudinal partition members integrally joined along the vertical fold lines to the inner ends of said extension members and to the vertical side edges of said central portion of the corresponding side wall panel, and means comprising an element folded downwardly over said longitudinal partition members and secured to said longitudinal extension members and effective for maintaining the latter seated on the outer faces of said longitudinal partition members, whereby said container may be expanded from collapsed condition to set up condition with said transverse partition members spaced from said end wall panels and from each other to form a plurality of spaces adjacent each of said side wall panels.

5. In a bottle carrier, a one piece paperboard container comprising a substantially rectangular bottom wall panel with a lengthwise fold line, side wall panels hingedly joined to opposite sides of said bottom wall panel, each of said side wall panels having a main portion and a substantially rectangular central portion extending upward from said main portion and having substantially vertical side edges, end wall panels integrally joined along vertical fold lines to the end of each of said main portions of said side wall panels, said end wall panels being folded inwardly substantially at right angles to said side wall panels and being of such width that the inner edges of said end wall panels at each end of the container substantially meet in abutting relation, a longitudinal partition member extending

upward above and integrally joined to each end wall panel along a vertical fold line defining the inner edge of said end wall panel, the partition members at each end of the container being folded inwardly relative to their associated end wall panels and secured together, longitudinal extension members integrally joined to said partition members along vertical fold lines in alignment with but above the fold lines defining the inner edges of the associated end wall panels, each longitudinal extension member extending inward along and seating on the outer face of its associated partition member, two transverse partition members at each side of said longitudinal partition members integrally joined along vertical fold lines to the inner ends of said extension members and to the vertical side edges of said central portion of the corresponding side wall panel, and an element integrally attached to the upper edges of said longitudinal extension members at each end of said container and folded downward about the upper edges of the associated longitudinal partition members effective for maintaining said longitudinal extension members seated on the outer face of said longitudinal partition members, whereby said container may be expanded from collapsed condition to set up condition with said transverse partition members spaced from said end wall panels and from each other to form a plurality of spaces adjacent each of said side wall panels.

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