

[54] ARTICLE CARRIER

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[51] Int. Cl. B65d 75/00

[58] Field of Search 206/173-194;
229/52 BC

[56]

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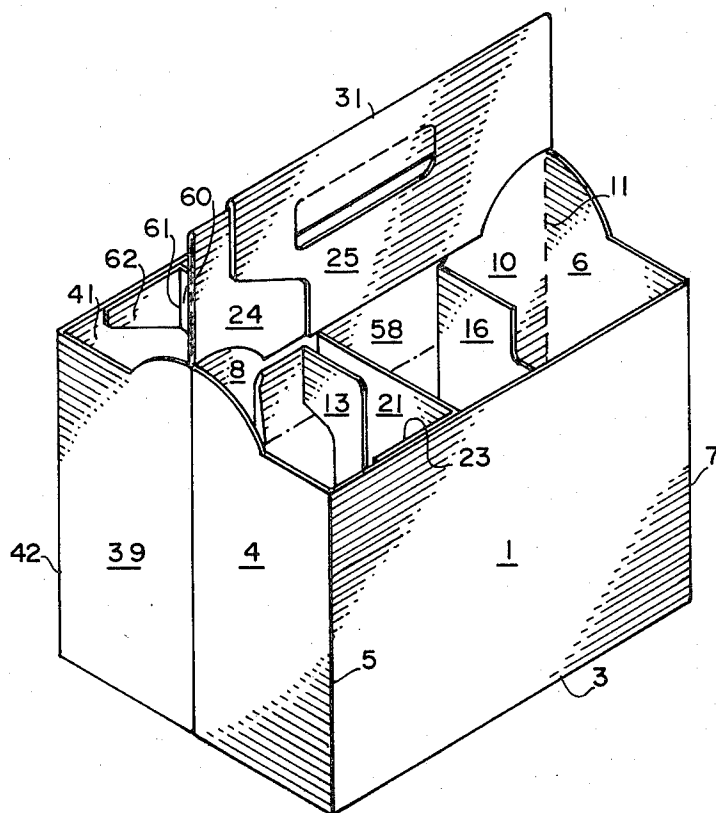
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[57]

ABSTRACT

A basket style article carrier having full depth medial and transverse partitions is formed from a single blank and is characterized by economy in the use of material, the carrier including a bottom wall, side walls joined to the side edges of the bottom wall, end wall panels joined to the end edges of the side walls, riser panels joined to the inner edges of the end wall panels and extending medially inward of the carrier, a multiple-ply handle secured at its ends to the upwardly extending ends of the riser panels, and a plurality of transverse partitions at least some of which are of a composite construction each including a transverse partition panel joined to a riser panel, a transverse partition tab secured to the transverse partition panel and anchored to the side wall via an anchoring flap foldably joined to the top edge of a side wall and secured to the inner surface of the side wall.

4 Claims, 8 Drawing Figures



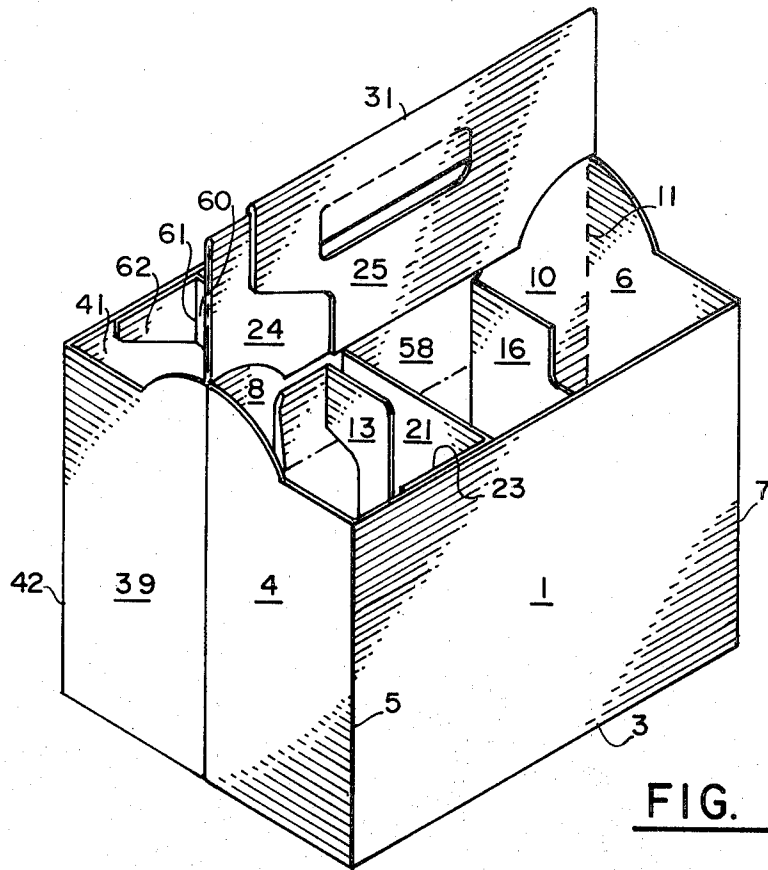


FIG. 1

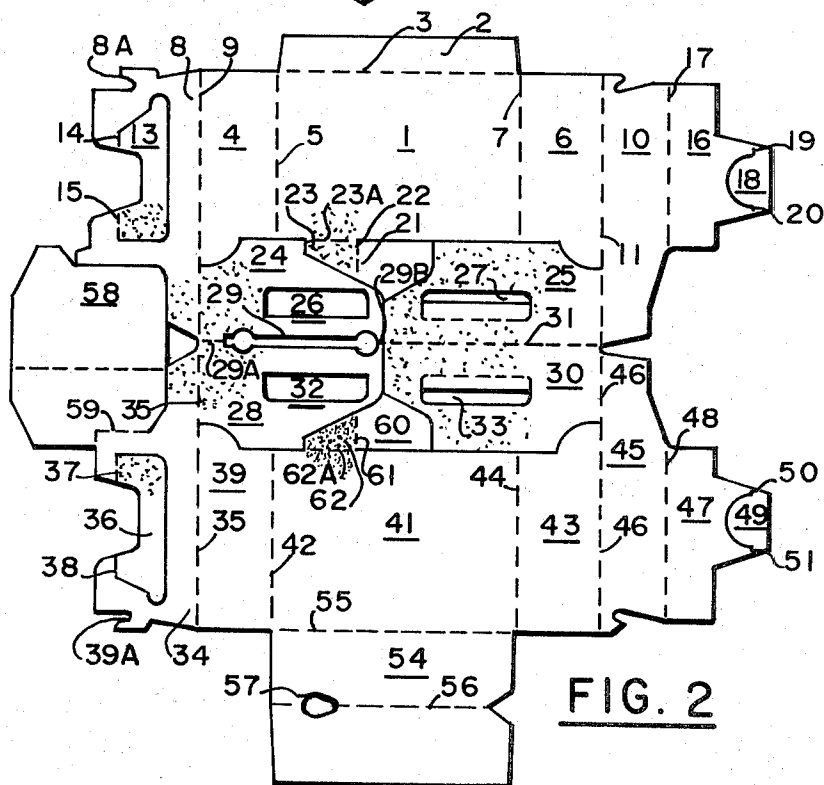


FIG. 2

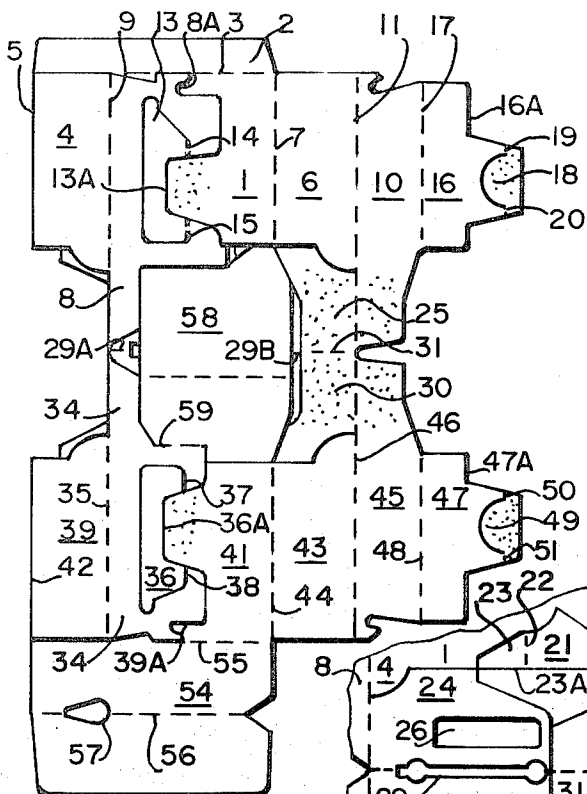


FIG. 4

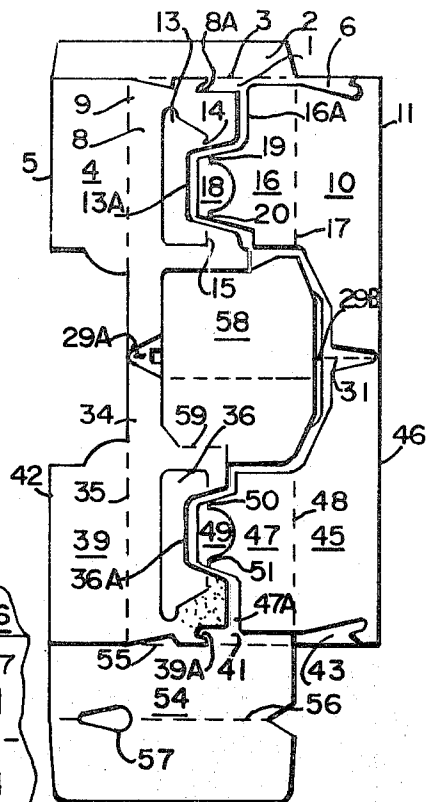


FIG. 5

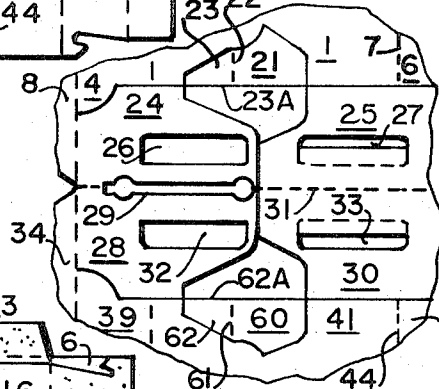


FIG. 3

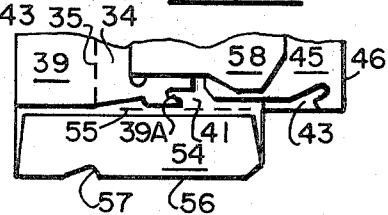


FIG. 7

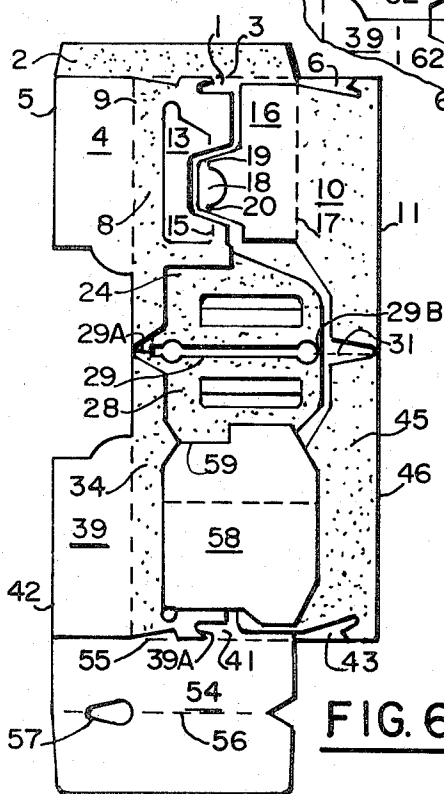


FIG. 6

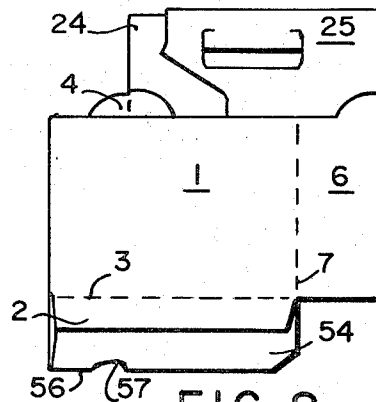


FIG. 8

ARTICLE CARRIER

Article carriers are known in which composite partition structures are provided and in which at least two partition elements are secured together in face contacting relation and which are secured respectively to a side wall and to the handle. Furthermore carrier partition elements are known in which an anchoring flap is foldably joined to the top edge of a carrier side wall and secured to the inner surface thereof at a location intermediate the end walls of the carrier.

Generally speaking the aforementioned partitions are known only in connection with carriers having handhold apertures formed in their medial partitions or which otherwise utilize handle panels which are relatively easy to manipulate and which are characterized by a substantial degree of simplicity.

According to this invention a basket style article carrier having bottom, side and end walls together with a medial partition is provided with at least some partition structures which are of a composite nature and which comprise a transverse partition panel foldably joined to a riser panel together with a transverse partition tab secured to the transverse partition panel in face contacting relation together with an anchoring flap secured to the part of the carrier side wall which forms a part of an end cell of the carrier. According to a feature of the invention, the adjacent edges of certain transverse partition panels which are foldably joined to riser panels at opposite ends of the carrier and on the same side of the handle are of generally complementary configuration and are spaced slightly apart when the carrier is collapsed thereby facilitating formation and manipulation of the carrier from collapsed to set-up condition and vice versa.

For a better understanding of the invention reference may be had to the following detailed description taken in conjunction with the accompanying drawings in which FIG. 1 is a perspective view of a set-up carrier formed according to the invention; FIG. 2 is a plan view of a blank from which the carrier shown in FIG. 1 is formed. FIGS. 3, 4, 5, 6 and 7 depict intermediate stages through which the blank of FIG. 2 is manipulated in order to form a complete and collapsed carrier as is depicted in FIG. 8.

In the drawings the numeral 1 represents a side wall of the carrier to the bottom edge of which a glue flap 2 is foldably joined along fold line 3. End wall panel 4 is foldably joined to an end edge of side wall 1 along fold line 5 while end wall panel 6 is foldably joined to the opposite edge of side wall 1 along the fold line 7. Riser panel 8 is foldably joined to end wall panel 4 along fold line 9 while riser panel 10 is foldably joined to end wall panel 6 along fold line 11. Riser panel 8 is formed with a locking notch 8A and a transverse partition panel 13 is struck from riser panel 8 and is foldably joined thereto along vertically coincidental fold lines 14 and 15. At the other end of the carrier a transverse partition panel 16 is foldably joined to riser panel 10 along fold line 17 and is provided with an anchoring flap 18 foldably joined to transverse partition panel 16 along a pair of vertically coincidental fold lines 19 and 20. A transverse partition tab 21 is foldably joined along fold line 22 to anchoring flap 23 which is foldably joined to side wall 1 along fold line 23A. Inner handle panel 24 is foldably joined to riser panel 8 along fold line 9 while outer handle panel 25 is foldably joined to riser panel 10 along fold line 11. Hand gripping aper-

tures 26 and 27 are formed in handle panels 24 and 25 respectively.

On the other side of the blank, inner handle panel 28 is foldably joined to handle panel 24 along fold lines 29A and 29B which are disposed at the ends of medial slit 29. Outer handle panel 30 is foldably joined to outer handle panel 25 along medial fold line 31. Hand gripping apertures 32 and 33 are formed in handle panels 28 and 30 respectively.

The cell structure on the opposite side of the blank is similar to that just described and includes riser panel 34 which is foldably joined to handle panel 28 along fold line 35 and which is provided with locking notch 39A. Transverse partition panel 36 is struck from riser panel 34 and is foldably joined thereto along vertically coincidental fold lines 37 and 38. End wall panel 39 is foldably joined to riser panel 34 along fold line 35 and side wall 41 is foldably joined to end wall 39 along fold line 42. End wall panel 43 is foldably joined to side wall 41 along fold line 44 and riser panel 45 is foldably joined to end wall panel 43 along fold line 46 and to outer handle panel 30 along fold line 46. Transverse partition panel 47 is foldably joined to riser panel 45 along fold line 48. Anchoring flap 49 is foldably joined to transverse partition panel 47 along vertically coincidental fold lines 50 and 51.

The bottom of the carrier includes a bottom wall 54 which is foldably joined to side wall 41 along fold line 55. Bottom wall 54 includes a medial fold line 56 and a locking aperture 57 formed on fold line 56.

For strengthening the carrier underneath the handle and for providing medial separation between the articles on opposite sides of the handle, a medial partition panel 58 is provided and is foldably joined to riser panel 34 along fold line 59. Transverse partitioning tab 60 is joined along fold line 61 to anchoring flap 62 which is foldably joined to side wall 41 along fold line 62A.

In order to form the completed carrier from the blank shown in FIG. 2, an application of glue is first made to the anchoring flaps 23 and 62 and to the adjacent portions of the side walls as shown by slipping in FIG. 2. Thereafter anchoring flaps 23 and 62 are elevated and folded along their respective fold lines 23A and 62A into positions of flat face contacting relation with the inner surfaces of side walls 1 and 41 respectively. This folding operation of course causes the transverse partitioning tabs 21 and 60 to fold into generally flat face contacting relation with their associated side walls 1 and 41. Upon completion of this folding operation these parts occupy the positions depicted in FIG. 3 which is a fragmentary enlarged view of the center portion of the blank of FIG. 2.

Thereafter an application of glue is made to the transverse partitioning panels 13 and 36, the riser panels 8 and 34, and to all the handle panels 24, 25, 28 and 30 as indicated by stippling in FIG. 2. Following this application of glue, the end wall panels 4 and 39 are elevated and folded toward the right along fold lines 5 and 42. Simultaneously handle panels 24 and 28 are folded along fold lines 9 and 35 and when this folding operation is completed the blank appears as shown in FIG. 4 with the handle panels 24 and 28 adhered to the inner surfaces of outer handle panels 25 and 30 and with the riser panels 8 and 34 secured to the inner surfaces of inner handle panels 24 and 28 respectively. This folding operation also causes the transverse partitioning

panels 13 and 36 to adhere to the transverse partitioning tabs 21 and 60 respectively. This ease of folding and coincidence of the transverse partitioning panels 13 and 34 and their adjoined transverse partitioning tabs 21 and 60 constitute one facet of the invention.

With the parts in the positions shown in FIG. 4, an application of glue is made to the inner surfaces of outer handle panels 25 and 30 and to the riser panels 10 and 45 as well as to the anchoring flaps 18 and 49 as indicated by stippling in FIG. 4. Thereafter riser panels 10 and 45 are elevated and folded toward the left along fold lines 11 and 46 respectively and when this folding operation is completed the parts appear as shown in FIG. 5. The riser panels 10 and 45 are thus secured to the handle panels 25 and 30 and the anchoring flaps 18 and 49 are adhered to side walls 1 and 41 respectively.

With the parts in the positions depicted in FIG. 5, an application of glue is made to the riser panel 34 as indicated by stippling in that figure and medial panel 58 is elevated and folded along fold line 59 into the position depicted in FIG. 6. This operation causes the medial panel 58 to become adhered to riser panel 34.

Thereafter the bottom panel 54 is folded along its medial fold line 56 to occupy the position depicted in the fragmentary view designated FIG. 7. Following this folding operation an application of glue is made to the blank as shown in FIG. 6 by stippling. More specifically glue is applied to the glue flap 2, to the riser panels 8, 10, 34 and 45 and to the inner handle panels 24 and 28. Thereafter the portions of the blank which are disposed above the slit 29 and the fold line 31 as viewed for example in FIG. 6 are elevated and folded into the position depicted in FIG. 8 which represents the completed carrier in collapsed condition.

In order to set the carrier up from its collapsed condition shown in FIG. 8 into the set-up condition shown in FIG. 1, it is simply necessary to secure the side walls 1 and 41 against movement toward the left and to apply a force toward the left to the medial edges of end wall panels 6 and 43. This expands the carrier and moves the side walls apart. Simultaneously the bottom wall 54 folds into a flat plane. The carrier is maintained in set-up condition by inserting the locking notch made up of notches 8A and 39A into the locking aperture designated 57. The carrier then appears as shown in FIG. 1.

According to a feature of the invention and as is apparent in FIG. 5, the outer edges 16A and 47A of the transverse partition panels 16 and 47 are of similar configuration to the inner edges 13A and 36A of transverse partition panels 13 and 36. Furthermore these edges of both sets of transverse partition panels are spaced slightly apart when the carrier is in collapsed condition as is apparent from an inspection of FIGS. 5 and 6. Since the carrier shown in FIG. 6 is simply folded along fold line 31 and slit 29 into the collapsed condition shown in FIG. 8, it is apparent that no shifting of the internal parts of the carrier occurs and, therefore, the transverse partition panels are spaced apart during the intermediate folding operations as well as in the collapsed carrier. Thus there is no interference of parts when the carrier is formed or when it is set-up from its collapsed condition represented in FIG. 8 through its fully set-up condition represented in FIG. 1.

While the invention is shown applied to a six cell carrier having telescoping handles, it is not limited to such structure and may be applied to carriers having a differ-

ent number of cells and having a different handle structure.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A collapsible article carrier formed from a unitary blank comprising a bottom wall, opposed side walls joined to said bottom wall along opposite side edges thereof, end wall panels joined to the ends of said side walls and extending transversely inward therefrom, riser panels joined to the inwardly extending edges of said end wall panels and extending medially inward of the carrier, a multiple-ply handle secured at its ends to said riser panels, a first transverse partition panel joined to at least one of said riser panels at one end of the carrier, a transverse partition tab struck from the portion of the blank between the top of one side wall and the handle and having its inner portion secured in face contacting relation with said transverse partition panel and arranged with its outer end adjacent said one side wall to define an end cell at said one end of the carrier, and an anchoring flap struck from the portion of the blank between the top of said one side wall and the handle and secured to the inner surface of said one side wall and foldably joined to the top edge of said one side wall intermediate said partition tab and said one end of the carrier, said anchoring flap being joined to the outer end of said transverse partition tab.

2. A carrier according to claim 1 wherein a second transverse partition panel is joined to a riser panel at the opposite end of the carrier and on the same side of the carrier as said first transverse partition panel and wherein the inner edge of said first transverse partition panel is of irregular and generally complementary configuration to at least a part of the outer edge of said second transverse partition panel.

3. A carrier according to claim 2 wherein the complementary edges of said transverse partition panels are spaced slightly apart and in substantially the same plane when the carrier is collapsed.

4. An article carrier blank comprising a bottom wall, a first side wall foldably joined to a side edge of said bottom wall, a first pair of end wall panels foldably joined respectively to the end edges of said first side wall, a first pair of riser panels foldably joined respectively to said first pair of end wall panels along the edges thereof remote from said first side wall, a first pair of handle panels each foldably joined along an end edge thereof to one of said first pair of riser panels, a second pair of handle panels foldably joined respectively to said first pair of handle panels along the top edges thereof, a second pair of riser panels each foldably joined to an end edge of one of said second pair of handle panels, a second pair of end wall panels foldably joined respectively to said second pair of riser panels, a second side wall foldably joined to said second pair of end wall panels along the edges thereof remote from said second pair of riser panels, a pair of anchoring flaps foldably joined respectively to the top edges of said side walls, a pair of transverse partition tabs foldably joined respectively to said pair of anchoring flaps, a first pair of transverse partition panels foldably joined to the riser panels at one end of the carrier, a pair of anchoring flaps foldably joined respectively to said first pair of transverse partition panels along fold lines remote from the riser panels at said one end of the carrier, and a second pair of transverse partition panels foldably joined respectively to the riser panels at the other end of the carrier, said second pair of transverse partition panels being struck from said riser panels at said other end of the carrier.

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