

[54] **ARTICLE CARRIER**

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[51] Int. Cl. **B65d 5/46, B65d 5/48**

[58] Field of Search **220/111, 112, 113, 220/115; 229/28 BC, 52 BC**

[56] **References Cited**
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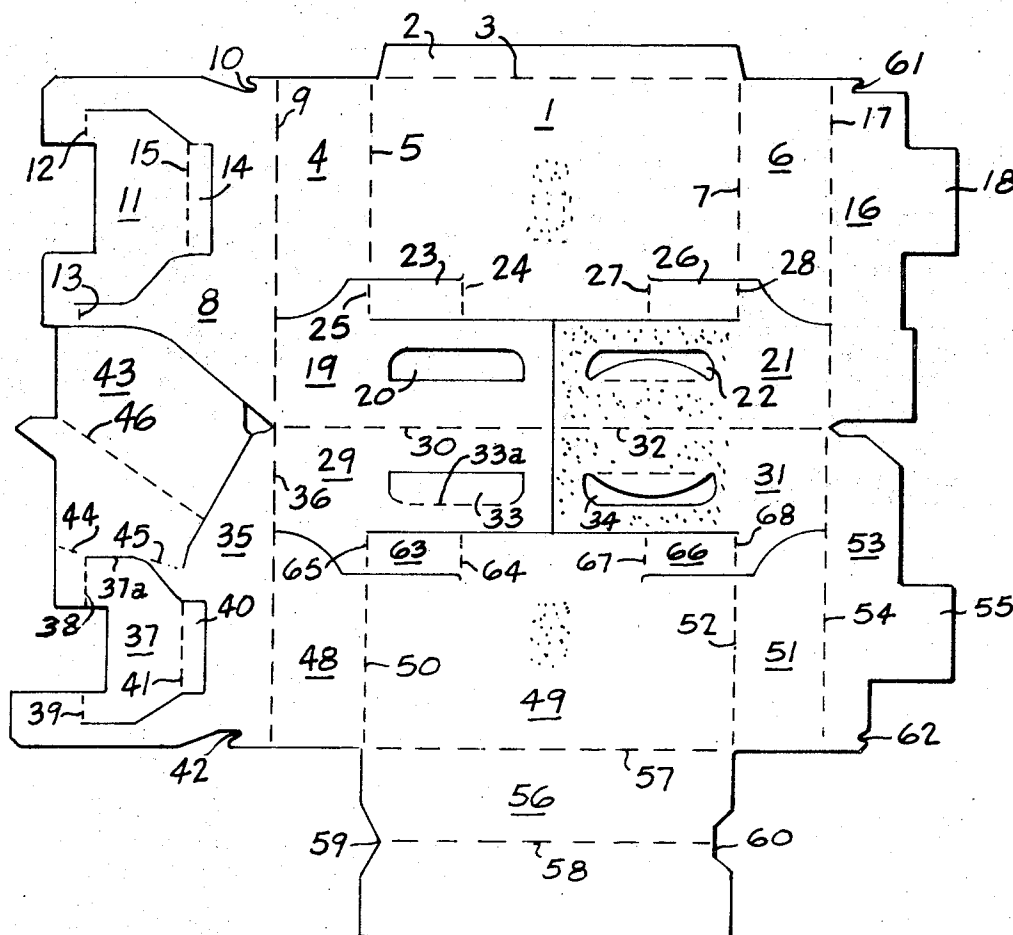
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[57] **ABSTRACT**

An article carrier of the basket style comprises a bottom wall, side walls foldably joined to the side edges of the bottom wall, end wall panels foldably joined to the end edges of the side walls and extending inwardly therefrom, medial partition structure including a pair of medial panels foldably joined respectively to said end wall panels at one end of the carrier and extending medially inward of the carrier, riser panels foldably joined to the end wall panels at the other end of the carrier and extending medially inward of the carrier, handle structure secured at one end to the upper ends of the riser panels and at the other end to the upper portion of the medial panels together with auxiliary partition structure struck from said medial partition structure and foldably joined to one of said medial panels along a diagonal fold line and folded into flat face contacting relation therewith and arranged so that a portion of the auxiliary partition structure is interposed between and secured to the riser panels.

3 Claims, 6 Drawing Figures



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3,754,680

2 Sheets-Sheet 1

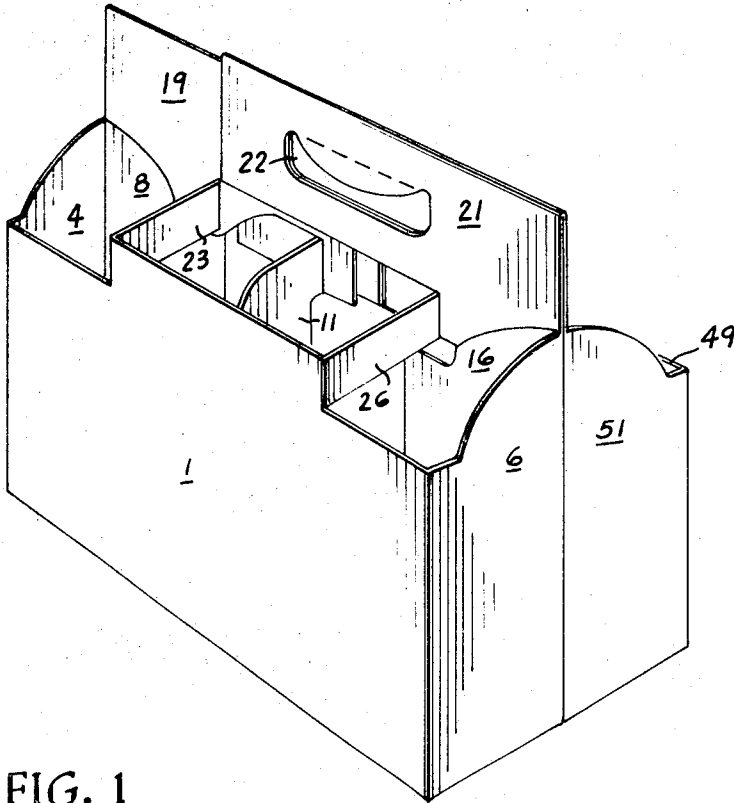


FIG. 1

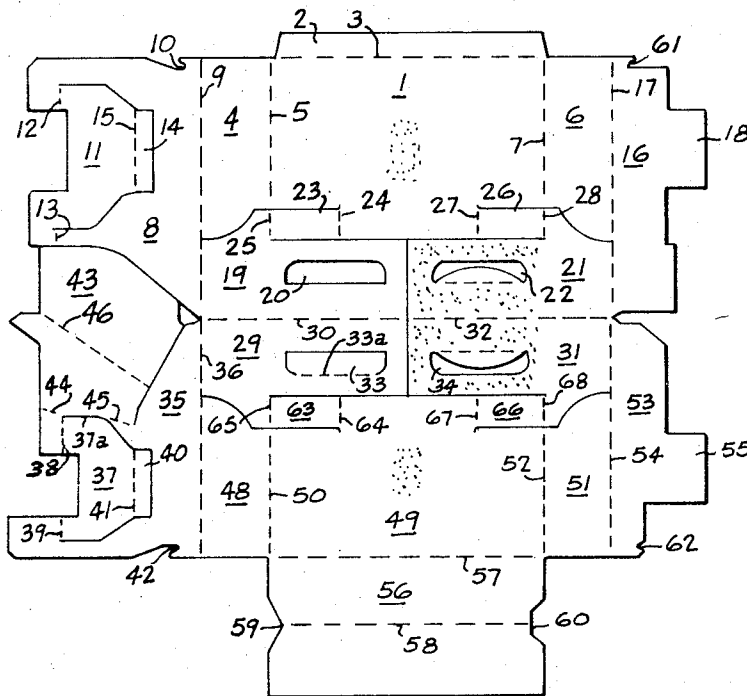


FIG. 2

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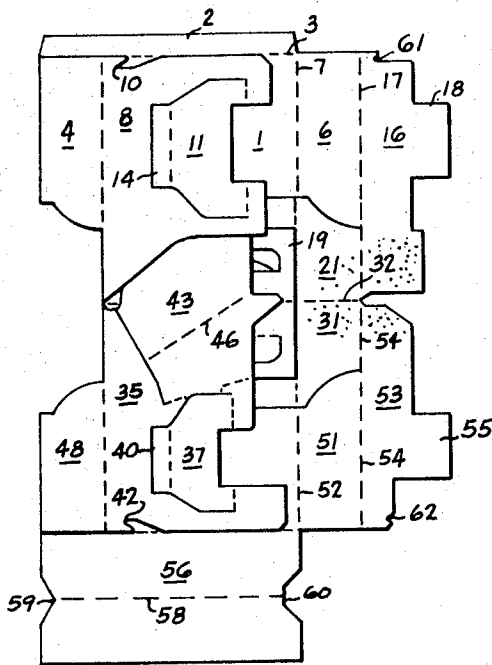


FIG. 3

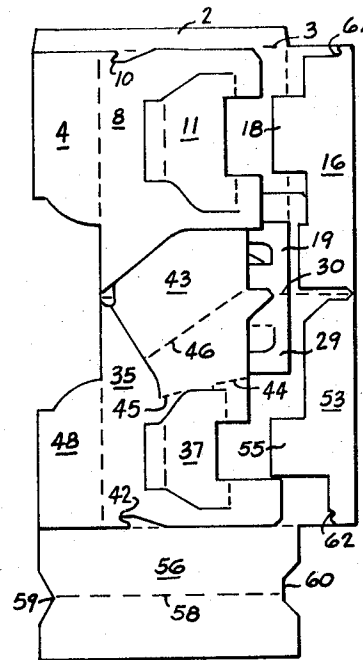


FIG. 4

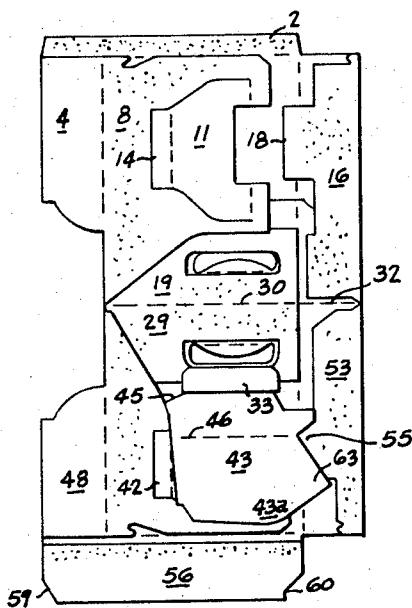


FIG. 5

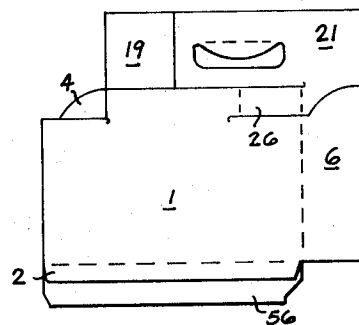


FIG. 6

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ARTICLE CARRIER

So-called basket style article carriers having a medial handle and a tray section are known wherein transverse partition elements are struck from medial panels secured to the ends of the carrier and disposed immediately below the handle structure. Such carriers do not protect the articles disposed on one side of the handle structure from undesired collision with adjacent articles disposed on the other side of the handle structure.

According to this invention a basket style article carrier having a tray portion and a handle portion and provided with riser panels at one end for interconnecting one end wall with one end of the handle and also provided at the other end with medial partition structure is provided with auxiliary partition structure struck from the medial partition structure and foldably joined to one medial panel constituting a part of the medial partition structure and folded into flat face contacting relation therewith and secured to the riser panels at the other end of the carrier to provide a medial partition underneath the handle whereby the articles on one side of the handle are separated from the articles on the other side of the handle.

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 constructed according to the invention; FIG. 2 is a plan view of a unitary blank from which the carrier of FIG. 1 is formed and in which FIGS. 3, 4, 5 and 6 represent sequential gluing and folding operations through which the blank of FIG. 2 is manipulated in order to form the complete collapsed carrier as shown in FIG. 6.

In the drawings the numeral 1 designates a side wall 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 side wall 1 along fold line 5 while end wall panel 6 is foldably joined to side wall 1 along fold line 7. Medial panel 8 is foldably joined to end wall panel 4 along fold line 9 and is provided with a locking notch 10 of conventional construction. Transverse partition panel 11 is foldably joined to medial panel 8 along a pair of fold lines 12 and 13 and is provided with a glue flap 14 foldably joined to transverse partition 11 along fold line 15.

At the other end of the carrier a riser panel 16 is foldably joined to end wall panel 6 along fold line 17 and is provided with an anchoring tab designated by the numeral 18.

A handle panel 19 is foldably joined to medial panel 8 along fold line 9 and is provided with a hand gripping aperture 20. At the other end of the carrier a handle panel 21 is foldably joined to riser panel 16 along fold line 17 and is provided with a hand gripping aperture 22.

For dividing the carrier on one side of the handle into cells, a partition element 23 is foldably joined to side wall 1 along fold line 24 and to handle panel 19 along a fold line 25. Similarly a partition element 26 is foldably joined to side wall 1 along fold line 27 and to handle panel 21 along fold line 28.

The other side of the carrier is of similar construction and comprises a handle panel 29 which is foldably joined along medial fold line 30 to the top edge of handle panel 19. Handle panel 31 is foldably joined along its top edge to handle panel 21 along fold line 32. A hand gripping aperture is defined in handle panel 29 by

a flap 33 struck therefrom and foldably joined thereto along fold line 33a and aperture 34 is formed in handle panel 31.

Medial panel 35 is foldably joined to handle panel 29 along fold line 36 and includes a transverse partition 37 struck therefrom and foldably joined thereto along fold lines 38 and 39. A glue flap 40 is foldably joined along fold line 41 to transverse panel 37 and medial panel 35 is provided with a locking notch 42 of known construction.

The medial panels 8 and 35 are herein sometimes referred to collectively and are designated by the term "medial partition structure" which term in the form of the blank as shown in FIG. 2 is deemed to include the auxiliary partition structure designated in the drawings by the numeral 43 which structure is foldably joined to medial panel 35 along a pair of aligned diagonal fold lines 44 and 45. A fold line 46 is formed in auxiliary partition structure 43.

Foldably joined to medial panel 35 along fold line 36 is an end wall panel 48. Side wall 49 is foldably joined to end wall panel 48 along fold line 50 and to end wall panel 51 along fold line 52. Riser panel 53 is foldably joined to end wall panel 51 along a fold line 54 and to handle panel 31 along the same fold line. An anchoring tab 55 is formed along an edge of riser panel 53.

Bottom panel 56 is foldably joined to side wall 49 along fold line 57 and is provided with a medial fold line 58 at the ends of which a pair of notches 59 and 60 are formed. Notch 59 cooperates with notches 10 and 42 formed in medial panels 8 and 35 respectively while notch 60 cooperates with notches 61 and 62 formed in riser panels 16 and 53 respectively.

For dividing the carrier into cells on one side of the handle, a partition element 63 is foldably joined to side wall 49 along fold line 64 and to handle panel 29 along a fold line 65. Similarly a partition element 66 is foldably joined to side wall 49 along a fold line 67 and to handle panel 31 along fold line 68.

To initiate formation of the carrier, an application of glue is made to the inner surfaces of handle panels 21 and 31 and to the inner surfaces of the side walls 1 and 49 as indicated by stippling in FIG. 2. Thereafter end wall panels 4 and 48, medial panels 8 and 35 together with transverse panels 11 and 37 and auxiliary partition structure 43 are elevated and folded toward the right along fold lines 5 and 50 to occupy the positions shown in FIG. 3. This operation causes the handle panels 19 and 29 to adhere to the inner surfaces of the handle panels 21 and 31 and also causes the glue flaps 14 and 40 to adhere to the side walls 1 and 49 respectively. The carrier then appears as shown in FIG. 3.

An application of glue is then made to the inner surfaces of the handle panels 21 and 31 and to the inner surfaces of riser panels 16 and 53 as indicated by stippling in FIG. 3. Thereafter riser panels 16 and 53 are elevated and folded toward the left along fold lines 17 and 54 respectively to occupy the positions depicted in FIG. 4. This operation of course causes the riser panels 16 and 53 to become adhered to the inner surfaces of handle panels 21 and 31 respectively. The carrier then appears as shown in FIG. 4.

With the parts disposed as shown in FIG. 4, it is necessary to manipulate the auxiliary partitioning structure 43 into position before effecting any further gluing operations. Toward this end a suitable machine element moves upwardly from below to engage the flap 33 and

to push that flap upwardly to cause folding of the flap along its fold line 33a. This operation exerts an upward force on auxiliary partition structure 43 and causes that structure to rise and to fold along aligned fold lines 44 and 45. Upon completion of this folding operation and upon collapsing of bottom panel 56 along its medial fold line 58, the blank appears as shown in FIG. 5. The portion 63 of auxiliary partition structure 43 is then disposed in overlying relationship with respect to the anchoring tab 55 of riser panel 53.

The bottom portion 43a of auxiliary partition structure 43 is then folded upwardly along fold line 46 to allow an application of glue to be made to anchoring tab 55 following which the portion 43a of auxiliary panel 43 is folded downwardly into position shown in FIG. 5.

An application of glue is then made to the blank as shown in FIG. 5 as indicated by stippling in that figure following which the side wall 1 and all elements associated therewith above the fold lines 30 and 32 are elevated and folded forwardly along fold lines 30 and 32 to occupy the positions shown in FIG. 6. From FIG. 5 it is apparent that the bottom portion 43a of the auxiliary partitioning structure 43 is captured between the anchoring tabs 18 and 55 of riser panels 16 and 53. Furthermore since the auxiliary partitioning structure 43 is foldably joined to medial panel 35 along fold lines 44 and 45 it is securely anchored at its upper and left-hand end. Furthermore it is apparent particularly from FIG. 5 that auxiliary partition structure 43 constitutes a separator between the articles on one side of the handle and those on the opposite side thereof and the auxiliary partitioning structure serves to reinforce the carrier medially thereof and hence adds a substantial measure of mechanical strength to the carrier underneath the handle whereby the handle is strengthened and the overall stability of the carrier significantly improved.

It is also apparent from the above description and from the drawings that the transverse partition 11 divides the portion of the carrier between the partition elements 23 and 26. Partition 11 is struck out of an area of medial panel 8 and defines an open area which is effectively covered by the auxiliary partition structure 43 which structure as is apparent from FIG. 2 is taken from a portion of the blank which would otherwise be waste material so that the advantages of the invention are achieved without requiring any additional material. Auxiliary partitioning structure 43 also covers

an aperture formed in medial panel 35 by transverse partition 37. Furthermore transverse partition 37 along its upper edge portion 37a is in effect struck from the adjacent portion of auxiliary partition structure 43 as is apparent from FIG. 2. This protrusion of transverse partition 37 into auxiliary partition structure 43 in effect interrupts the fold line for the auxiliary partition 43 and in effect establishes the two aligned fold lines 44 and 45 by which the auxiliary partition structure 43 is foldably joined to medial panel 35.

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

1. An article carrier comprising a bottom wall, side walls foldably joined to the side edges of said bottom wall, end wall panels foldably joined to the end edges of said side walls and extending inwardly therefrom, medial partition structure including a pair of medial panels foldably joined respectively to said end wall panels at one end of the carrier along the edges thereof remote from said side walls and extending medially inward of the carrier, riser panels foldably joined respectively to said end wall panels at the other end of the carrier along the edges thereof remote from said side walls and extending medially inward of the carrier, auxiliary partition structure struck from said medial partition structure and foldably joined to only one of said medial panels along a diagonal fold line and folded into flat face contacting relation therewith and a portion of said auxiliary partition structure being affixed in flat face contacting relation to at least one of said riser panels, and an anchoring tab formed along the inner edge of each of said riser panels and said portion of said auxiliary partition structure being interposed between said anchoring tabs and secured thereto.

2. A carrier according to claim 1 wherein at least one transverse partition is struck from each of said medial panels and folded into normal transverse relation thereto and with the outer end thereof secured to one of said side walls, an upper edge portion of one of said transverse partitions being struck from said auxiliary partition structure.

3. A carrier according to claim 2 wherein said auxiliary partition structure is adjoined to said one medial panel along a fold line interrupted by said upper edge portion of said one transverse partition to define a pair of aligned fold lines.

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