

United States Patent

[11] 3,568,880

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[21]	Appl. No.	851,414
[22]	Filed	Aug. 19, 1969
[45]	Patented	Mar. 9, 1971
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[56]

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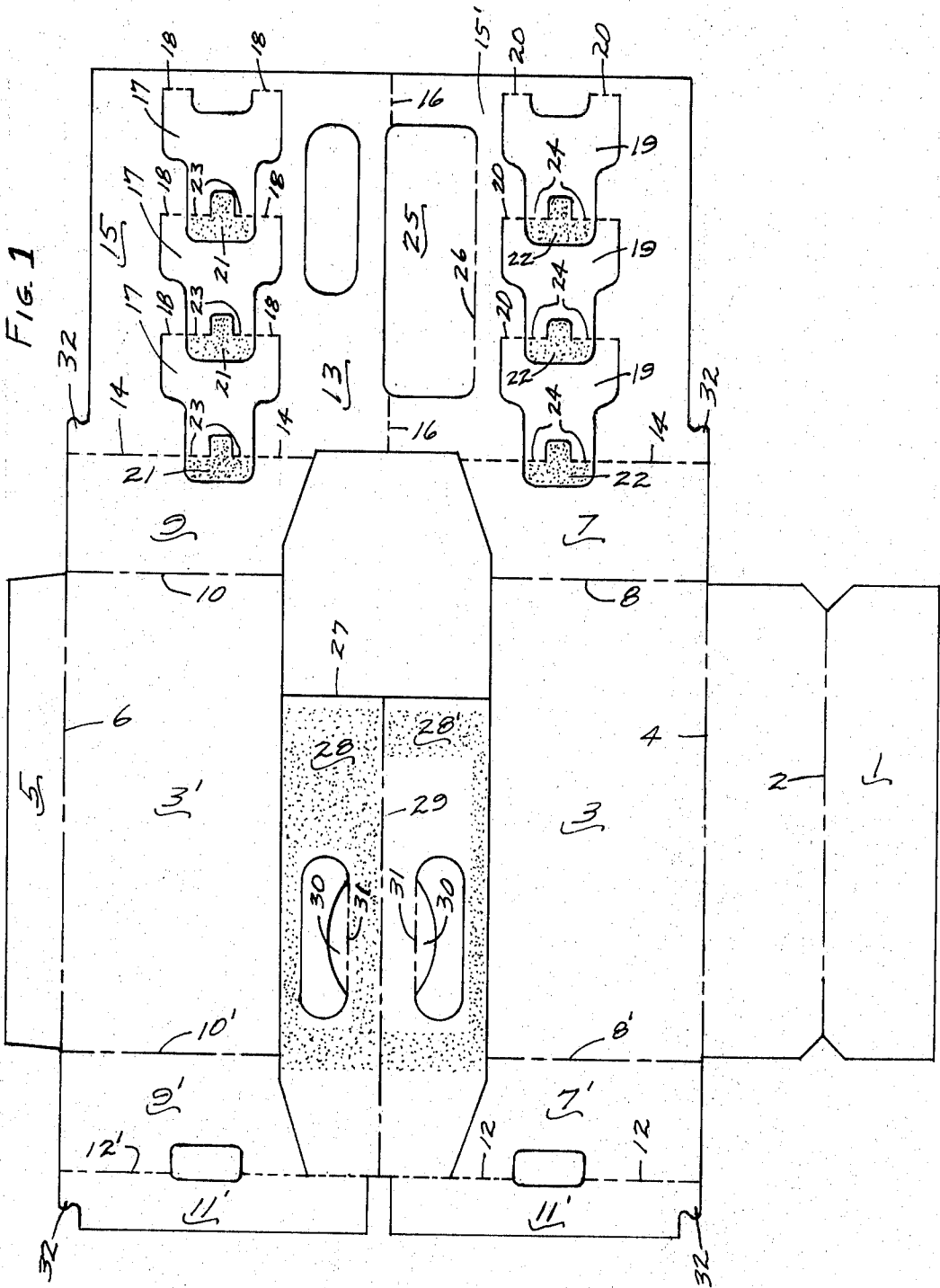
[54] BASKET STYLE CARRIERS
3 Claims, 6 Drawing Figs.

[52] U.S. Cl. 220/113

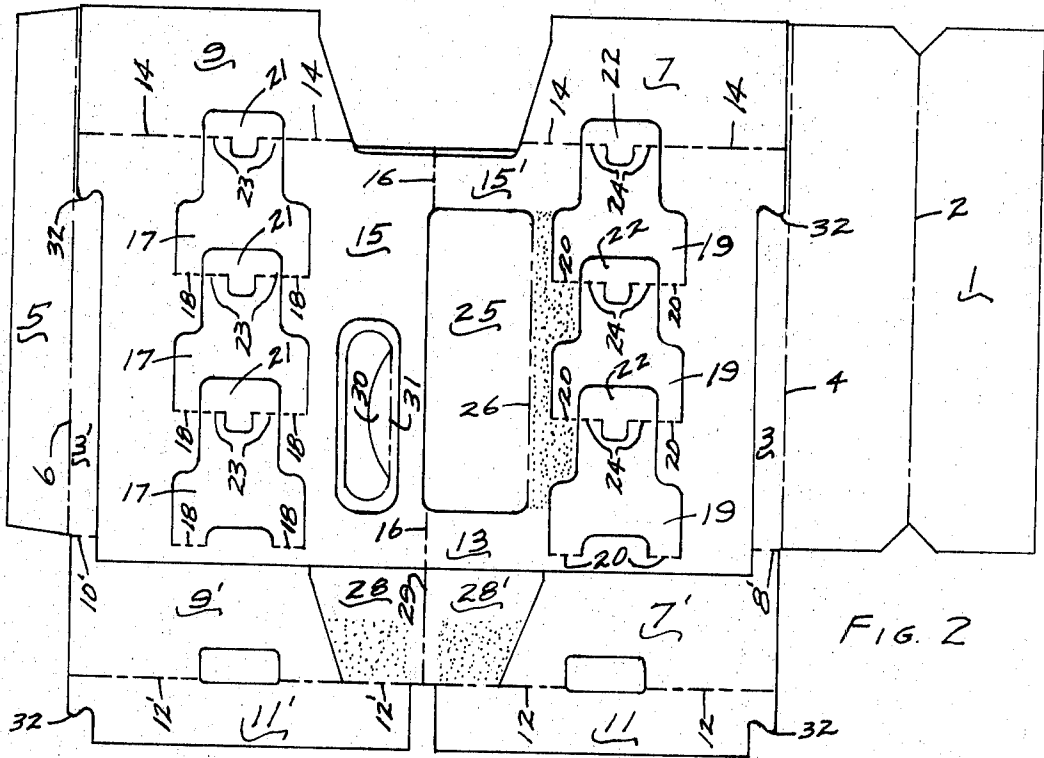
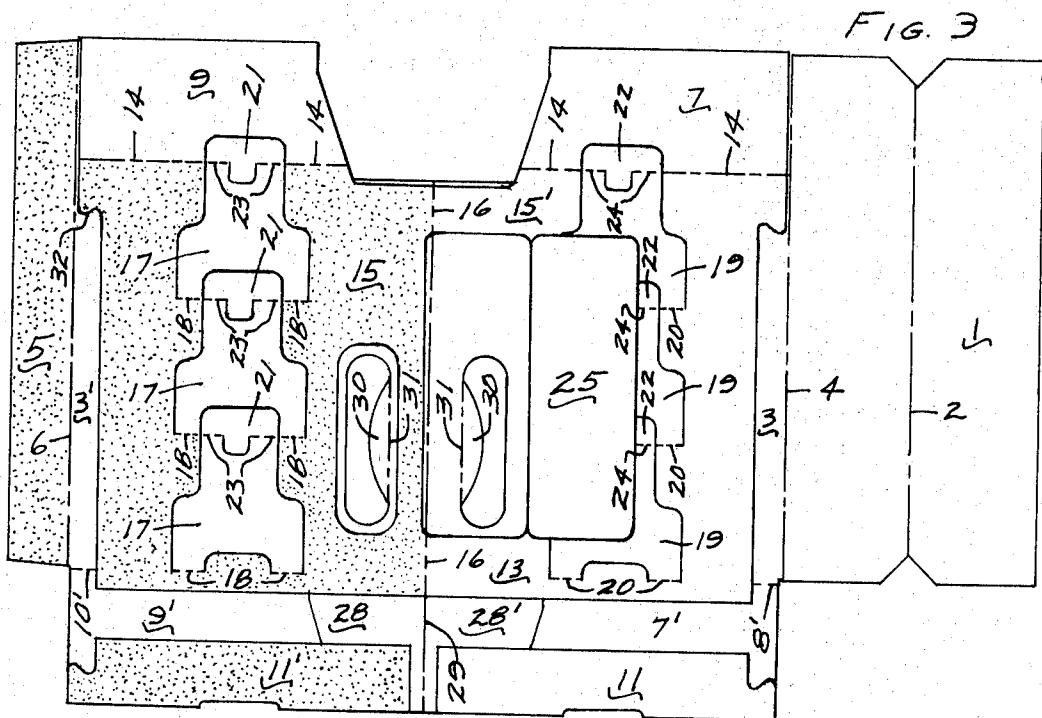
[51] Int. Cl. B65d 5/48,

B65d 5/02

[50] **Field of Search**..... B65d 5/02
220/113,
115, 111, 112, 114; 229/28 (BC)

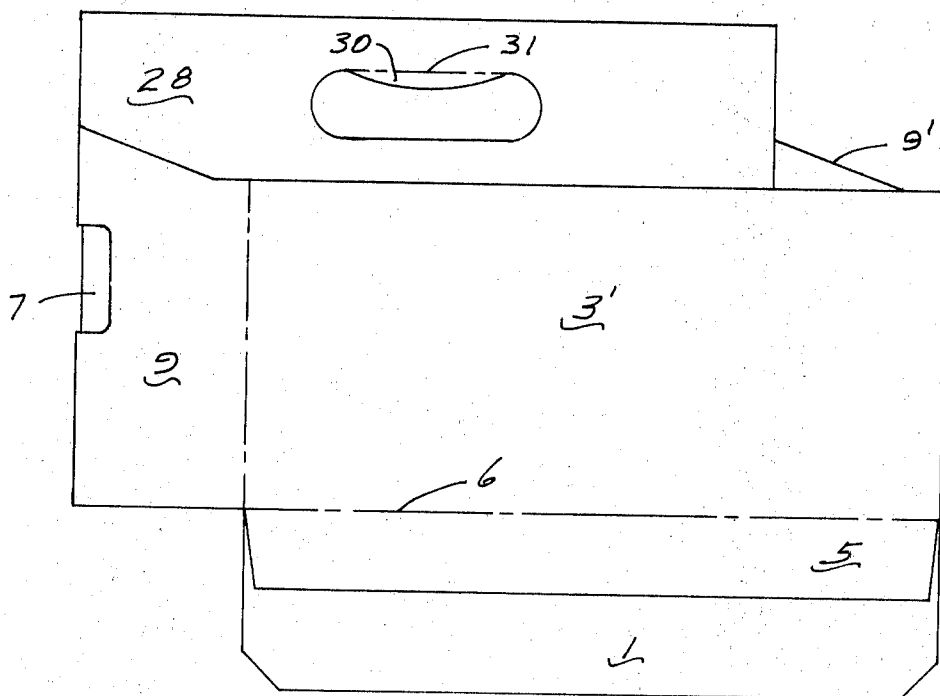


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FIG. 4



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FIG 5

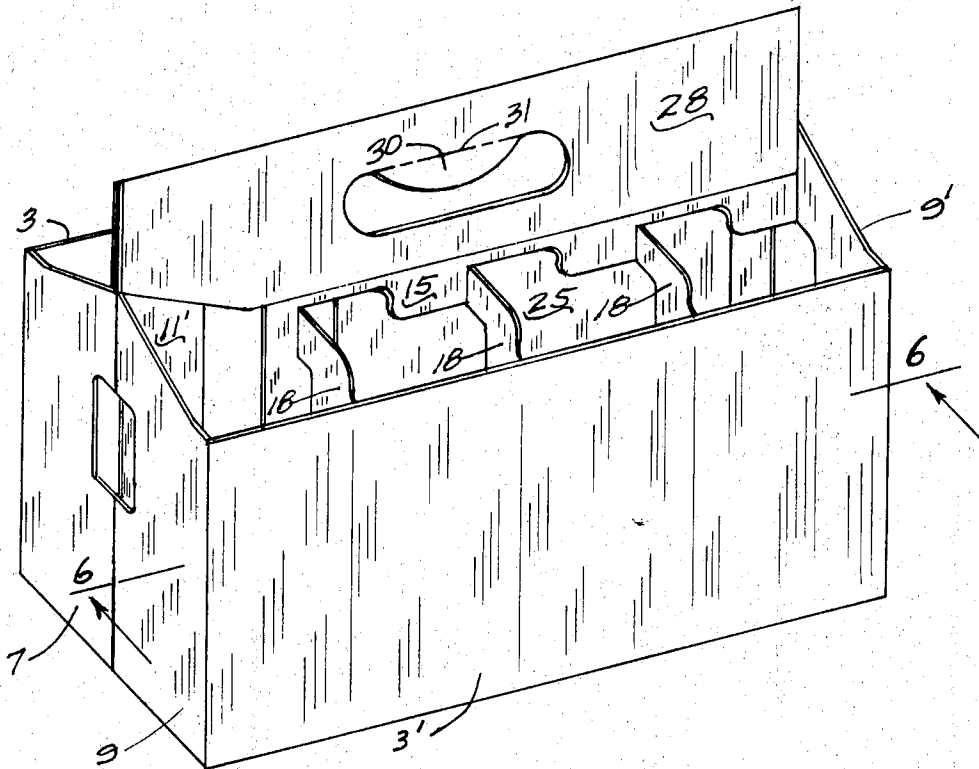
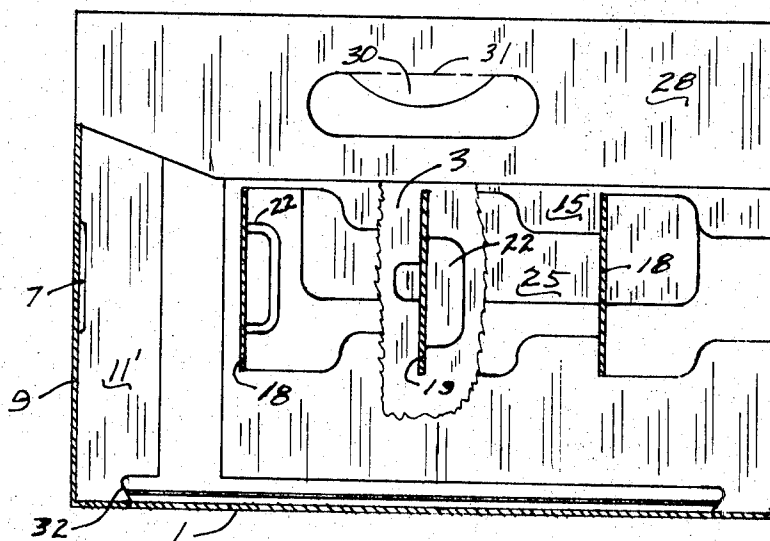


FIG. 6



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BASKET STYLE CARRIERS

BACKGROUND

This invention relates to an improved multiple-article carrier, the blank therefor and to a method for erecting same. More particularly, this invention relates to an improved, full or partial protection, multiple-article carrier, the blank therefor and to a method for erecting such a carrier which requires a reduced number of folding and gluing steps.

Full or partial protection carriers are, of course, well known in the prior art and have found wide acceptance in the packaging industry due to the additional protection afforded thereby, particularly in the packaging of breakable articles. The added protection is afforded by the addition of separation panels between adjacent articles both laterally and longitudinally. To insure adequate protection, these panels are extended over a substantial portion of the height of the articles. As is readily apparent, such carriers require considerably more blank material than the conventional basket style carriers. For this reason, substantial effort has been expended in an effort to develop a full or partial protection carrier requiring a minimum amount of blank material. Such a carrier is disclosed and claimed in copending application, Ser. No. 818,871, filed Apr. 24, 1969, in the name of the present inventor.

In copending application, Ser. No. 818,871 there is disclosed and claimed a full-protection carrier requiring a reduced amount of sheet material. As set forth in the disclosure of said copending application, which disclosure is hereby incorporated by reference, the subject carrier may be produced from a single sheet of blank material and affords adequate protection to all articles, notwithstanding the reduction in blank material. A principal drawback, however, to this carrier is the fact that its erection requires several gluing steps. Moreover, it is not possible to incorporate maximum strength into the handle section of the carrier as disclosed and claimed.

BRIEF DESCRIPTION OF THE INVENTION

Accordingly, it is an object of this invention to provide an improved full or partial protection multiple-article carrier and blank therefor. Another object of this invention is to provide such a carrier which may be prepared from a single sheet of blank material. Still another object of this invention is to provide such a carrier requiring a reduced amount of sheet material. Yet another object of this invention is to provide such a carrier which may be erected with a reduced number of gluing steps. A still further object of this invention is to provide such a carrier having increased strength in the handle area. These and other objects and advantages will be apparent from the description hereinafter set forth in the accompanying drawings.

In accordance with the present invention, the foregoing, and other objects are accomplished with a carrier wherein the lateral or cross partitions are cut from and rotated out of a single pair of riser panels. Moreover, the reinforcement in the handle section of the carrier will also be provided by this same pair or riser panels. As will be more apparent from the disclosure hereinafter, the carrier of the present invention can be erected with a reduced number of folding and gluing steps and will have at least a continuous three-ply handle.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view of a unitary blank cut and scored in a manner necessary to the formation of a carrier within the scope of the present invention and as shown in FIG. 5;

FIGS. 2 and 3 are plan views of the blank of FIG. 1 showing the intermediate stages in a succession of folding operations performed to transform the blank of FIG. 1 into the collapsed carrier shown in FIG. 4;

FIG. 4 is a plan view of a collapsed carrier within the scope of the present invention and as shown fully erected in FIG. 5;

FIG. 5 is a perspective view of a carrier within the scope of the present invention and erected from the blank shown in FIG. 1; and

FIG. 6 is a sectional view of the carrier shown in FIG. 5, said section being taken along line 6-6 of FIG. 5.

DETAILED DESCRIPTION OF THE INVENTION
(PREFERRED EMBODIMENT)

For purpose of clarity, the present invention will be described by reference to a preferred embodiment thereof, as illustrated in FIGS. 1-6. Turning then to FIG. 1, there is shown a blank for forming a carrier within the scope of the present invention. It will be appreciated that the blank may be cut from paper, paperboard or other suitable material. The blank comprises a bottom wall panel, 1, bisected by a longitudinal fold line, 2. The bottom wall panel, 1, is hinged to a first sidewall panel, 3, along a fold line, 4. A second sidewall panel, 3', is disposed on the opposite side of the blank from said first sidewall panel and has a glue tab, 5, hinged thereto along scored fold line 6. End wall panels, 7 and 7', are hinged to said first side wall panel, 3, along scored fold lines, 8 and 8', respectively. Similarly, endwall panels, 9 and 9' are hinged to said second sidewall panel, 3', along scored fold lines, 10 and 10', respectively. A pair of riser panels, 11 and 11', are hinged to end wall panels, 7' and 9', respectively along scored fold lines, 12-12 and 12'-12'. A single riser panel, 13, is hinged to end wall panels, 7 and 9, along scored fold lines, 14-14. Riser panel, 13, is divided into substantially equal panels, 15 and 15', by longitudinally extending scored fold line, 16-16. As will be shown more clearly, hereinafter, the two panels, 15 and 15', can be folded along scored line, 16-16, into a back-to-back relationship, thus effectively providing two riser panels. Lateral or cross partition panels, 17-17', are cut from panel, 15, and are hinged thereto along scored fold lines, 18-18. Similarly, lateral or cross partition panels, 19-19', are cut from panel, 15', and hinged thereto along scored fold lines, 20-20. It should particularly be noted that the lateral partition panels are hinged to the riser panels at the ends thereof farther from the end wall panels. The lateral partition panels, 17-17' and 19-19', are provided with glue tabs, 21-21 and 22-22, respectively. As can be seen in the FIG., the glue tabs, 21-21 and 22-22, are hinged, respectively, to lateral partition panels, 17-17' and 19-19' along scored fold lines, 23-23 and 24-24. As can also be seen from the drawing, the glue tabs, 21-21 and 22-22, are cut, in part, from the respective end walls, 7 and 9, and in part from the next adjacent lateral partition panel. It will be appreciated that this nesting of the lateral partition panels minimizes the required overall length of the blank. For reasons more fully set forth hereinafter, filler or center keel panel, 25, is cut from riser panel, 13, and hinged to panel, 15', along scored line, 26.

A handle-forming panel, 27, is hinged, in part, to riser panel, 11, along scored fold line, 12-12, and, in part, to riser panel, 11', along scored fold line, 12'-12'. The handle panel, 27, is divided into handle panels, 28 and 28' by longitudinally extending scored fold line, 29. Each of said handle panels, 28 and 28', is provided with a handle support panel, 30-30, hinged to said panels along scored fold lines, 31-31. The riser panels are cut so as to define bottom panel support tabs, 32-32.

The blank shown in FIG. 1, can be erected into a carrier through a gluing and folding sequence as shown in FIGS. 2-4. In referring to these drawings, it should be noted that those portions of the blank which are coated with glue or other adhesive during the erection of the carrier are shown as being stippled. It should also be noted, that for purposes of clarity, the several glue areas are shown only in one FIG. and in each case, are shown only in those areas in which glue is essential to obtaining the configuration shown in the next successive FIG.

As can be seen in FIG. 1, in erecting the carrier of the present invention, glue is first applied to the handle panels, 28 and 28', and the glue tabs, 21-21 and 22-22. Riser panel 13, is then rotated about scored fold line, 14-14, to the position as shown in FIG. 2. It will be appreciated that care should be exercised in the application of glue during this step to avoid

securing filler or center keel panel, 25, in the position as shown in FIG. 2.

Having thus secured the riser panel, 13, in the position as shown in FIG. 2, glue may then be applied to the handle panels, 28 and 28' and panel 15' as shown in FIG. 2. The riser panels, 11 and 11' and the filler or center keel panel, 25, can then be rotated, respectively, about scored fold lines, 12-12, 12'-12' and 26, and secured in the position as shown in FIG. 3. It will be appreciated, that the riser panels, 11 and 11', could have been secured in the position as shown in FIG. 3 simultaneously with the first glue step herein described. It will also be appreciated that care should be exercised in applying glue to panel, 15', to avoid securing filler or center keel panel, 25, to the lateral partitions, 19-19, and thereby preventing erection of the carrier from its collapsed state as shown in FIG. 4. As can be clearly seen in FIG. 3, filler or center keel panel, 25, will occupy a substantial portion of the void created by rotating the lateral partitions, 17-17 and 19-19 out of panels 15 and 15', respectively, when the carrier is fully erected. As can also be seen in FIG. 3, a portion of panel, 15, extends through the handle area thus providing a continuous 3-ply handle. It should be noted, though not shown, a portion of filler panel, 25, could be used to provide a fourth-ply in the handle section.

With the various panels secured as shown in FIG. 3, glue can then be applied to the riser panel, 11', glue tab, 5, and panel, 15, also as shown in FIG. 3. The carrier can then be erected into a collapsed state, as shown in FIG. 4, by first folding the bottom panel, 1, along scored fold line 2, and then rotating the various panels about scored fold lines, 16 and 29.

To transform the collapsed carrier of FIG. 4 into the erected carrier of FIG. 5, one need merely pull the side walls, 7 and 7' and 9 and 9', away from each other in a conventional manner. As can be seen in FIG. 6, the lateral partition panels, 18-18, extend outwardly from panel, 15, and are secured to sidewall panel, 3', (not shown) with glue tabs, 21-21. Similarly, though not shown, lateral partitions 19-19 extend outwardly from panel, 15', and are secured to sidewall panel, 3. As can also be seen in FIG. 5, filler panel, 25, extends downwardly between panels 15 and 15' (not shown) and occupies a substantial portion of the void created by rotating the lateral partitions 18-18 and 19-19 (not shown), thus preventing contact between the articles packaged in said carrier. Moreover, as can be seen in FIG. 6, there is a gap between riser panels, 11 and 11', and panels 15 and 15'. As is readily apparent, the size of this gap must be controlled to prevent direct contact between the articles carried in the terminal cells of the carrier while at the

same time maximizing board savings due to the provision of such a gap.

Referring now to FIG. 7, there is shown a sectional view, partially cut away, of the erected carrier shown in FIG. 6, said section being cut along line 6-6. This FIG. clearly shown how filler panel, 25, is used to fill the voids created by rotating the lateral partition panels, 17-17 and 19-19, out of panels 15 and 15'. It is also clearly shown, in the cutaway portion of this FIG, how the tabs, 21-21 and 22-22, are rotated, respectively, about scored fold lines 23-23 and 24-24, to secure the lateral partition panels, 17-17 and 19-19 to the sidewalls, 3 and 3'. This is specifically illustrated with respect to tab 22 as shown in the FIG.

Although the present invention has been described and illustrated by reference to a preferred embodiment, it will be readily apparent that the present invention lends itself to various modifications which will be obvious to those skilled in the art. Accordingly, reference should be made solely to the appended claims to determine the scope of the invention.

I claim:

1. A carrier blank, cut and scored to define the elements of a multicell basket-style carrier comprising:

- a. a bottom wall panel;
- b. a sidewall panel pivotally connected to said bottom wall panel along a scored fold line;
- c. a second side wall panel;
- d. end wall panels hingedly connected, along scored fold lines, to the longitudinal ends of each of said side wall panels;
- e. a first pair of riser panels hingedly connected along scored fold lines to at least two of said end wall panels, the riser panels comprising said pair of riser panels being hingedly connected to each other;
- f. at least six lateral partition panels defined by cut lines in said pair of riser panels and hingedly connected to said riser panels along scored fold lines, said partition panels comprising a glue tab, at least two such glue tabs being defined by one or more cut lines in the end panels to which said pair of riser panels is hingedly connected; and
- g. handle-forming panels hingedly connected to a second pair of riser panels.

2. The blank of claim 1 wherein a portion of one of said pair of riser panels is capable of providing a reinforcing strip in the handle section, thus providing a continuous 3-ply or 4-ply handle.

3. The blank of claim 1 wherein a center keel panel is hinged to one of said first pair of riser panels.