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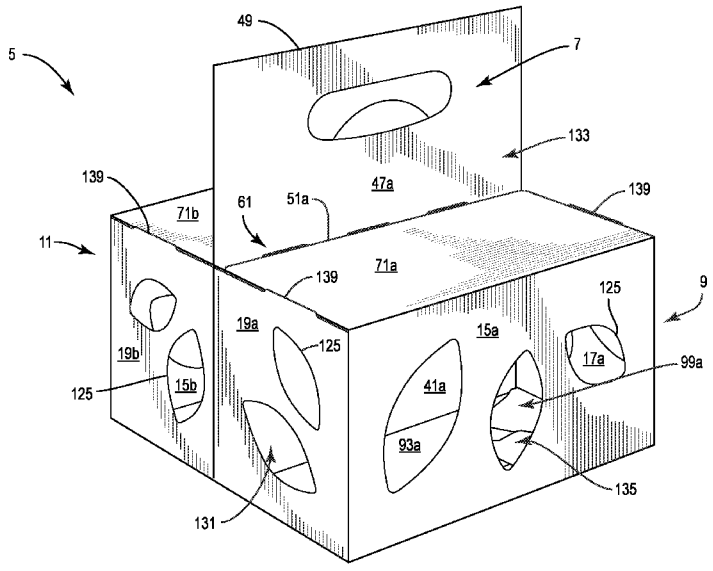


FIG. 5

(57) Abstract: A carrier for holding one or more products. The carrier can comprise a plurality of panels that extends at least partially around an interior of the carrier, the plurality of panels comprising at least a front panel and a side panel. A central panel can at least partially divide the interior of the carrier into a front portion and a back portion. The side panel can extend at least partially from the front panel to the central panel. A lid can at least partially close a top of the carrier

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CARRIER WITH LID

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 63/028,631, filed on May 22, 2020.

INCORPORATION BY REFERENCE

[0002] The disclosures of U.S. Provisional Patent Application No. 63/028,631, which was filed on May 22, 2020, and U.S. Design Patent Application No. 29/736,956, which was filed on June 4, 2020, are hereby incorporated by reference for all purposes as if presented herein in their entirety.

BACKGROUND OF THE DISCLOSURE

[0003] The present disclosure generally relates to carriers or cartons for holding and/or displaying products. More specifically, the present disclosure relates to basket-style carriers that may include tamper-resistant features.

SUMMARY OF THE DISCLOSURE

[0004] In general, one aspect of the disclosure is directed to a carrier for holding one or more products. The carrier can comprise a plurality of panels that extends at least partially around an interior of the carrier, the plurality of panels comprising at least a front panel and a side panel. A central panel can at least partially divide the interior of the carrier into a front portion and a back portion. The side panel can extend at least partially from the front panel to the central panel. A lid can at least partially close a top of the carrier.

[0005] In another aspect, the disclosure is generally directed to a blank for forming a carrier for holding one or more products. The blank can comprise a plurality of panels comprising at least a front panel and a side panel. A central panel can be for at least partially dividing the carrier formed from the blank into a front portion and a back portion. The side panel can be for extending at least partially from the front panel to the central panel when the carrier is formed from the blank. A cover feature can be for at least partially closing a top of the carrier formed from the blank.

[0006] In another aspect, the disclosure is generally directed to a method of forming a carrier for holding one or more products. The method can comprise obtaining a blank comprising a plurality of panels, a central panel, and a cover feature. The plurality of panels can comprise at least a front panel and a side panel. The method further can comprise forming an interior of the carrier by positioning the panels of the plurality of panels to extend at least partially around the interior of the carrier and positioning the central panel to at least partially divide the interior of the carrier into a front portion and a back portion. The side panel can extend at least partially between the front panel and the central panel. Also, the method can comprise folding the cover feature to at least partially close a top of the carrier.

[0007] Those skilled in the art will appreciate the above stated advantages and other advantages and benefits of various additional embodiments reading the following detailed description of the embodiments with reference to the below-listed drawing figures.

[0008] According to common practice, the various features of the drawings discussed below are not necessarily drawn to scale. Dimensions of various features and elements in the drawings may be expanded or reduced to more clearly illustrate the embodiments of the disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] Fig. 1 is an exterior plan view of a blank used to form a carrier according to an exemplary embodiment of the disclosure.

[0010] Figs. 2A-2C are plan views showing the folding of the blank of Fig. 1 to form a folded construct according to the exemplary embodiment of the disclosure.

[0011] Fig. 3 is a plan view of the construct in the form of a flattened carrier according to the exemplary embodiment of the disclosure.

[0012] Fig. 4A is a perspective view of an interior of an erected carrier formed from the flattened carrier of Fig. 3 according to the exemplary embodiment of the disclosure.

[0013] Fig. 4B is a perspective view of the carrier of Fig. 4A showing the closing of the top of the carrier according to the exemplary embodiment of the disclosure

[0014] Fig. 5 is a perspective view of the erected carrier of Figs. 4A and 4B according to the exemplary embodiment of the disclosure.

[0015] Figs. 6A and 6B are views of folding features in the interior of the carrier of Fig. 5 according to the exemplary embodiment of the disclosure.

[0016] Fig. 7 is a perspective view of the carrier of Fig. 5 with the handle panel folded and a portion of the carrier broken away to show the folding features of Fig. 6A according to the exemplary embodiment of the disclosure.

[0017] Corresponding parts are designated by corresponding reference numbers throughout the drawings.

DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENT

[0018] The present disclosure generally relates to carriers, packages, constructs, sleeves, cartons, or the like, for holding and displaying products such as produce (e.g., fruits and/or vegetables), other suitable food items, and/or other suitable articles. Carriers according to the present disclosure can accommodate products of numerous different shapes. In this specification, the terms "inner," "interior," "outer," "exterior," "lower," "bottom," "upper," "top," "front," "forward," "back," "rear," and "rearward" indicate orientations determined in relation to fully erected carriers.

[0019] Fig. 1 is a plan view of an exterior side 1 of a blank 3 used to form a basket-style carrier 5 (Fig. 5) for holding products (not shown), in accordance with an exemplary embodiment of the present disclosure. In one embodiment, the carrier 5 is configured to contain one or more products in a front portion of the carrier and one or more products in a back portion of the carrier. The carrier 5 can be sized and shaped to hold more or fewer products without departing from the disclosure. In the illustrated embodiment, the carrier 5 includes a reinforced handle 7 (Figs. 4B, 5, and 7), which can include handle features 14 (Fig. 1) as described in more detail below. In one embodiment, the blank 3 and the carrier 5 can include front cover features 16a for forming a lid for closing the top of the front portion of the carrier 5 and back cover features 16b for forming a lid for closing the top of the back portion of the carrier 5 as described in more detail below. In the illustrated embodiment, the carrier 5 is the erected carrier 5 of Figs. 4A-7 that receives the products. As shown in Fig. 3, the carrier 5 can be in a collapsed configuration, which can be referred to as a folded or collapsed carrier 5a in one embodiment.

[0020] In the illustrated embodiment, the carrier blank 3 has a longitudinal axis L1 and a lateral or transverse axis L2 and has a front portion 9, a back portion 11, front bottom features 12a foldably connected to the front portion, and back bottom features 12b foldably connected

to the back portion. In the illustrated embodiment, the front portion 9 and back portion 11 are for being folded about a lateral centerline CL (Figs. 1 and 2C) when the carrier blank 3 is formed into the carrier. As discussed in more detail below, the carrier blank 3 is formed into the collapsed carrier 5a by folding the carrier blank 3 about the centerline CL so that the front portion 9 and the back portion 11 are generally overlapped (e.g., Fig. 3).

[0021] In the illustrated embodiment, the front portion 9, comprises a front panel 15a foldably connected to a first side panel 17a and a second side panel 19a. A front central flap 27a is foldably connected to the first side panel 17a at a longitudinal fold line 29a. Longitudinal fold lines 31a, 33a foldably connect the respective first and second side panel 17a, 19a to the front panel 15a. A lateral fold line 35a connects the front cover features 16a to the front panel 15a, the first side panel 17a, and the second side panel 19a.—In one embodiment, the front portion 9 includes a front central panel 41a foldably connected to the second side panel 19a along a longitudinal fold line 43a.

[0022] In the illustrated embodiment, the features of the back portion 11 of the blank 3 include a back panel 15b, a first side panel 17b, a second side panel 19b, a back central flap 27b and a back central panel 41b that are generally a mirror-image of the corresponding panel or flap of the front portion 9. As shown in Fig. 1, the back central flap 27b and the front central flap 27a are foldably connected along a lateral fold line 45, which can be collinear (e.g., at least partially collinear, generally collinear, and/or substantially collinear) with the centerline CL. Corresponding components (e.g., panels, flaps, fold lines, cuts, etc.) have been designated by corresponding reference numbers that differ by the "a" or "b" suffix, with the "a" components corresponding to the front portion 9 and the "b" components corresponding to the back portion 11 of the blank 3.

[0023] Any of the front portion 9, the back portion 11, the front and back panels 15a, 15b, the side panels 17a, 19a, 17b, 19b, the central flaps 27a, 27b, the central panels 41a, 41b, could be omitted or could be alternatively shaped, arranged, positioned, and/or configured without departing from the present disclosure.

[0024] As shown in Fig. 1, the handle features 14 and the cover features 16a, 16b are generally disposed between the front and back portions 9, 11 in the blank 3. In the illustrated embodiment, the handle features 14 include a front handle panel 47a and a back handle panel 47b foldably connected to the front handle panel 47a along a lateral fold line or other line of weakening 49. In one embodiment, the lateral fold line 49 is collinear (e.g., at least partially collinear, generally collinear, and/or substantially collinear) with the centerline CL of the blank 3. The front handle panel 47a is foldably connected to the front central panel 41a along a lateral fold line 51a, and the back handle panel 47b is foldably connected to the back central

panel 41b along a lateral fold line 51b. In one embodiment, the lateral fold lines 51a, 51b can be collinear (e.g., at least partially collinear, generally collinear, and/or substantially collinear) with the respective lateral fold lines 35a, 35b. The front handle panel 47a can include a front handle opening 53a and a front handle cushion flap 55a foldably connected to the front handle panel along a lateral fold line 57a adjacent the front handle opening 53a. The back handle panel 47b can include a back handle opening 53b and a back handle cushion flap 55b foldably connected to the back handle panel along a lateral fold line 57b adjacent the back handle opening 53b. The handle cushion flaps 55a, 55b can be separable from the respective central panels 41a, 41b along respective cuts 59.

[0025] As shown in Fig. 1, the blank 3 can include folding features 61 for facilitating folding of the handle panels 47a, 47b along the lateral fold lines 51a, 51b in the erected carton 5 (e.g., for stacking the carton 5 with other cartons 5) as described in more detail below. In the illustrated embodiment, the folding features 61 can include one or more folding apertures 63a (e.g., three folding apertures 63a) extending in the front central panel 41a and/or the front handle panel 47a, interrupting the lateral fold line 51a and one or more folding apertures 63b (e.g., four folding apertures 63b) extending in the back central panel 41b and/or the back handle panel 47b, interrupting the lateral fold line 51b. In one embodiment, a cut line 52a can extend from an end of the lateral fold line 51a to an edge of the blank 3 and a cut line 52b can extend from one of the folding apertures 63b or adjacent to one of the folding apertures 63b to the edge of the blank 3. As shown in Fig. 1, the folding apertures 63a and the folding apertures 63b are offset from one another (e.g., in the lateral direction L2) so that the folding apertures 63a are aligned (e.g., at least partially aligned, substantially aligned, and/or generally aligned) along the longitudinal direction L1 with respective portions or segments of the lateral fold line 51b extending between the folding apertures 63b and the folding apertures 63b are aligned (e.g., at least partially aligned, substantially aligned, and/or generally aligned) along the longitudinal direction L1 with respective portions or segments of the lateral fold line 51a extending between the folding apertures 63a. For example, the fold line 51a can have four segments aligned with the four folding apertures 63b, respectively, and the fold line 51b can have three segments aligned with the three folding apertures 63a, respectively. Accordingly, when the carrier 5 is formed, the folding apertures 63a, 63b are aligned with the portions of the respective fold lines 51b, 51a (Figs. 6A and 6B) so that the portions of the lateral fold line 51a can extend at least partially into the respective folding apertures 63b or the portions of the lateral fold line 51b can extend at least partially into the respective folding apertures 63a when the handle panels 47a, 47b are folded relative to the central panels 41a, 41b in the formed carton 5 (Fig. 7) as described in more detail below.

[0026] The handle features 14 could be omitted or could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure.

[0027] As shown in Fig. 1, the front cover features 16a can include a front top or cover panel 71a and front top or cover flaps 73a, 75a each foldably connected to the respective front panel 15a, first side panel 17a, and second side panel 19a along the lateral fold line 35a. Similarly, the back cover features 16b can include a back top or cover panel 71b and back top or cover flaps 73b, 75b each foldably connected to the respective back panel 15b, first side panel 17b, and second side panel 19b along the lateral fold line 35b. In one embodiment, the cover panels 71a, 71b can be separable from one another along a lateral cut line 77, which can be collinear (e.g., at least partially collinear, generally collinear, and/or substantially collinear) with the centerline CL, the cover flaps 73a, 73b can be spaced apart from one another by a cutout 78, and the cover flaps 75a, 75b can be spaced apart from one another by a cutout 79. As shown in Fig. 1, the cover flaps 73a, 73b can be separable from the respective central flaps 27a, 27b along respective longitudinal cut lines 81 and the cover flaps 73a, 73b can be separable from the respective handle panels 47a, 47b along respective longitudinal cuts 83.

[0028] In the illustrated embodiment, the cover features 16a, 16b can include locking tabs 85 foldably connected to the cover panels 71a, 71b along respective longitudinal fold lines 86. In one embodiment, the locking tabs 85 can be separable from the respective cover flaps 73a, 73b, 75a, 75b along respective cut lines 87 and can be at least partially separable from the cover panels 71a, 71b along longitudinal cut lines or tear lines 88 extending on either side of the respective fold lines 86 (e.g., extending from respective ends of the respective fold lines 86). In one embodiment, portions of the cover flaps 73a, 75a, 73b, 75b can be separable from portions of the respective cover panels 71a, 71b along portions of the respective longitudinal cut lines 88. As shown in Fig. 1, the cover flaps 73a, 73b, 75a, 75b can be partially separable from the respective side panels 17a, 17b, 19a, 19b along respective cuts 89 for forming respective slots 139 (Figs. 4B and 5) that can at least partially receive the respective locking tabs 85 as described in more detail below. The cover features 16a, 16b could be omitted or could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure.

[0029] As shown in Fig. 1, the front bottom features 12a can include a front bottom panel 91a foldably connected to the front panel 15a, a central bottom panel 93a foldably connected to the central panel 41a, and a bottom flap 95a foldably connected to the second side panel 19a. In the illustrated embodiment, the front bottom panel 91a, the central bottom panel 93a, and the bottom flap 95a are foldably connected to the respective front panel 15a, central panel 41a, and second side panel 19a along a lateral fold line 97a. As shown in Fig. 1, the front

bottom panel 91a can be connected to the first side panel 17a by a gusset 99a, which can include a first gusset panel 101a foldably connected to a second gusset panel 103a along an oblique fold line 105a and an intermediate gusset panel 107a foldably connected to the first gusset panel 101a and the second gusset panel 103a along respective oblique fold lines 109a, 111a. In one embodiment, the first gusset panel 101a can be separable from the second gusset panel 103a and the intermediate gusset panel 107a along a cut line 113a and an opening can extend along the gusset 99a, the front bottom panel 91a, and the first side panel 17a. In the illustrated embodiment, the first gusset panel 101a can be foldably connected to the front bottom panel 91a along a longitudinal fold line 115a and the second gusset panel 103a can be foldably connected to the first side panel 17a along a lateral fold line 117a. As shown in Fig. 1, the central bottom panel 93a can include an attachment flap 119a at least partially defined by an oblique fold line 121a.

[0030] In the illustrated embodiment, the back bottom features 12b can include a back bottom panel 91b, a central bottom panel 93b, and a bottom flap 95b foldably connected to the respective back panel 15b, central panel 41b, and second side panel 19b along a lateral fold line 97b. As shown in Fig. 1, the back bottom panel 91b can be connected to the first side panel 17b by a gusset 99b, which can include a first gusset panel 101b foldably connected to a second gusset panel 103b along an oblique fold line 105b and an intermediate gusset panel 107b foldably connected to the first gusset panel 101b and the second gusset panel 103b along respective oblique fold lines 109b, 111b. In one embodiment, the first gusset panel 101b can be separable from the second gusset panel 103b and the intermediate gusset panel 107b along a cut line 113b and an opening can extend along the gusset 99b, the back bottom panel 91b, and the first side panel 17b. In the illustrated embodiment, the first gusset panel 101b can be foldably connected to the front bottom panel 91b along a longitudinal fold line 115b and the second gusset panel 103b can be foldably connected to the first side panel 17b along a lateral fold line 117b. As shown in Fig. 1, the central bottom panel 93b can include an attachment flap 119b at least partially defined by an oblique fold line 121b. In one embodiment, the back bottom panel 91b can be larger than the front bottom panel 91a, and the back bottom panel 91b can include a lateral fold line 123.

[0031] Any of the bottom features 12a, 12b could be omitted or could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure.

[0032] As shown in Fig. 1, the blank 3 can include a plurality of openings or cutouts 125 (e.g., decorative openings or windows) in the front panel 15a, the back panel 15b, any of the side panels 17a, 17b, 19a, 19b, and/or in other portions of the blank 3 for displaying the products contained in the carton 5. Any of the cutouts 125 could be omitted or could be

otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure.

[0033] Any of the panels, flaps, fold lines, cuts, or other features could be omitted or could be otherwise shaped, arranged, positioned, and/or configured in the blank 3 without departing from the disclosure. The blank 3 could be sized and/or shaped to accommodate any suitable size or number of products without departing from this disclosure.

[0034] With reference to Figs. 2A-3, in one exemplary method of erection, the collapsed carton 5a can be formed from the blank 3 by positioning the panels 15a, 15b, 17a, 17b, 19a, 19b, the central flaps 27a, 27b, the central panels 41a, 41b, the handle panels 47a, 47b, the bottom panels 91a, 91b, 93a, 93b, the bottom flaps 95a, 95b, and the gussets 99a, 99b relative to each other to form the front portion 9 and the back portion 11 and by folding along the centerline CL to form the collapsed carrier 5a (Fig. 3). As shown in Figs. 2A-2C, the glue strips or lines G1, G2, G3, G4, G5 can be applied to different portions of the blank 3 or the partially-formed carrier during the folding of the blank to form the carrier such as by a folder/gluer system (not shown).

[0035] As shown in Fig. 2A, the blank 3 is positioned with the interior side 2 facing up, and the central bottom panels 93a, 93b are folded along the respective fold lines 97a, 97b over the respective central panels 41a, 41b and the attachment flaps 119a, 119b are folded along the respective oblique fold lines 121a, 121b over the respective central bottom panels 93a, 93b. Further, as shown in Fig. 2A, the bottom flaps 95a, 95b are folded along the respective fold lines 97a, 97b over the respective side panels 19a, 19b and glue lines G1 are applied to the exterior side 1 of the bottom flaps 95a, 95b.

[0036] As shown in Fig. 2B, the central panels 41a, 41b and the handle panels 47a, 47b are folded over a remainder of the partially folded blank with the central panels 41a, 41b being folded along the fold lines 43a, 43b so that the handle panels 47a, 47b at least partially overlap the respective cover flaps 75a, 75b and the respective cover panels 71a, 71b and so that the central panels 41a, 41b at least partially overlap the respective side panels 19a, 19b and the respective front and back panels 15a, 15b. As the central panels 41a, 41b are folded, the attachment flaps 119a, 119b are brought into face-to-face contact with the respective bottom flaps 95a, 95b so that the glue lines G1 glue the interior side 2 of the attachment flaps 119a, 119b to the exterior side 1 of the respective bottom flaps 95a, 95b. Further, as shown in Fig. 2, glue lines G2 are applied along the exterior side 1 of the central panels 41a, 41b and the handle panels 47a, 47b and glue lines G3 are applied along the interior side 2 of the bottom panels 91a, 91b.

[0037] As shown in Fig. 2C, the side panels 17a, 17b, the cover flaps 73a, 73b, and the gussets 99a, 99b are folded over the remainder of the partially folded blank with the side panels 17a, 17b being folded along the respective fold lines 31a, 31b and the gussets 99a, 99b being folded along the respective fold lines 115a, 115b. As the side panels 17a, 17b are folded, the central flaps 27a, 27b are brought into face-to-face contact with the respective central panels 41a, 41b and the respective handle panels 47a, 47b so that the glue lines G2 glue the central flaps 27a, 27b to the respective central panels 41a, 41b and the respective handle panels 47a, 47b. Additionally, as the side panels 17a, 17b are folded, the gussets 99a, 99b are brought into face-to-face contact with the respective bottom panels 91a, 91b so that the glue lines G3 glue the first gusset panels 101a, 101b to the respective bottom panels 91a, 91b. In one embodiment, the locking tabs 85 that are adjacent the cover flaps 73a, 73b can be at least partially connected to the cover flaps 73a, 73b by one or more nicks (not shown) interrupting the cut lines 87 so that the locking tabs 85 are folded along the fold lines 86 along with the cover flaps 73a, 73b. This can help keep the locking tabs 85 from protruding outwardly from the partially folded carrier and the collapsed carrier 5a. In other embodiments, any of the locking tabs 85 could be at least partially connected to the respective cover flaps 73a, 73b, 75a, 75b with nicks and/or any of the cut lines 87 could be tear lines. As shown in Fig. 2C, glue lines G4 can be applied to the exterior surface 1 of the front central panel 41a, the front handle panel 47a, and the front central flap 27a and a glue line G5 is applied to the exterior surface 1 of the front bottom panel 91a, wherein the exterior surface of the front bottom panel 91a is the hidden side in the view of Fig. 2C. Alternatively, or in addition, the glue lines G4 could be applied to the exterior surface 1 of the back central panel 41b, the back handle panel 47b, and the back central flap 27b and/or the glue line G5 could be applied to the interior surface 2 of the back bottom panel 91b.

[0038] In the exemplary embodiment, the collapsed carrier 5a can be formed as shown in Fig. 3, by folding the partially folded carrier of Fig. 2C along the centerline CL (e.g., along fold lines 45, 49) so that the front central flap 27a, the front central panel 41a, and the front handle panel 47a are in overlapping relationships with the respective back central flap 27b, back central panel 41b, and back handle panel 47b. In the illustrated embodiment, the front central flap 27a, the front central panel 41a, and the front handle panel 47b can be glued in face-to-face contact with to the respective back central flap 27b, back central panel 41b, and back handle panel 47b. As shown in Fig. 3, the collapsed carrier 5a further can be formed by folding the back bottom panel 91b along the fold line 123 so that the interior side 2 of the distal portion of the back bottom panel 91b is glued to exterior side 1 of the front bottom panel 91a by the glue line G5. Any of the glue lines G1, G2, G3, G4, G5 could be omitted or could be otherwise shaped, arranged, positioned, and/or configured without departing from

the disclosure. Additionally, the blank 3 could be otherwise folded to form the collapsed carrier 5a without departing from the disclosure.

[0039] In one embodiment, the central flaps 27a, 27b are glued to the respective central panels 41a, 41b and the respective handle panels 47a, 47b by the glue lines G2 (Figs. 2B and 2C) and, when the partially folded carrier is folded along the centerline CL (Figs. 2C and 3), the central flaps 27a, 27b are glued together, the central panels 41a, 41b are glued together, and the handle panels 47a, 47b are glued together by glue lines G4. Accordingly, the central panels 41a, 41b and portions of the central flaps 27a, 27b cooperate to form a central wall 131, and the handle panels 47a, 47b and portions of the central flaps 27a, 27b cooperate to form the handle wall 133 extending upwardly from the central wall 131. In one embodiment, each of the central flaps 27a, 27b can be considered to have a lower portion foldably connected to an upper portion along a respective fold line 127a, 127b (Fig. 1). As shown in Fig. 2C, the fold lines 127a, 127b can be aligned with the respective fold lines 51a, 51b (and can at least partially overlap the respective cut lines 52a, 52b when the central flaps 27a, 27b are glued to the central panels 41a, 41b and the handle panels 47a, 47b. Accordingly, the lower portions of the central flaps 27a, 27b can be parts of the central wall 131 and the upper portions of the central flaps 27a, 27b can be parts of the handle wall 133 when the central wall 131 and the handle wall 133 are formed.

[0040] As described above, the bottom flaps 95a, 95b can be glued to the respective attachment flaps 119a, 119b of the central bottom panels 93a, 93b with glue lines G1 (Figs. 2A and 2B), the first gusset panels 101a, 101b can be glued to the respective front bottom panel 91a and back bottom panel 91b with glue lines G3 (Figs. 2B and 2C), and the back bottom panel 91b can be folded along the lateral fold line 123 and can be glued to the exterior surface of the front bottom panel 91a with the glue line G5 (Figs. 2C and 3). Accordingly, in one embodiment, the bottom panels 91a, 93a, 91b, 93b, the bottom flaps 95a, 95b, and the gussets 99a, 99b can cooperate to at least partially form a bottom wall 135 when the carton 5 is formed and erected. In the illustrated embodiment, the bottom wall 135 is foldably connected to each of the front panel 15a, the back panel 15b, the central wall 131, and the side panels 19a, 19b along fold lines 97a, 97b and to each of the side panels 17a, 17b along fold lines 117a, 117b to help retain items in the interior 137 of the carrier 5. The central wall 131, the handle wall 133, and/or the bottom wall 135 could be omitted or could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure.

[0041] As shown in Figs. 3-5, the folded carrier 5a can be further formed into the erected carrier 5 (e.g., manually and/or by a packaging system). For example, the first side panels 17a, 17b and second side panels 19a, 19b can be positioned to be in a generally spaced-apart,

parallel planar relationship, and the front panel 15a and back panel 15b can be positioned to be in a generally spaced-apart, parallel planar relationship with the central wall 131 dividing the interior 137 of the carrier 5 into the front portion 9 and the back portion 11 (Figs. 4 and 5). Such movement of the side panels 17a, 17b, 19a, 19b and front and back panels 15a, 15b, causes the back bottom panel 91b to fold at least partially flat across the bottom of the carrier 5 and causes the central bottom panels 93a, 93b and the bottom flaps 95a, 95b to fold down from the interior of the carrier to extend at least partially across the bottom (Fig. 4).

[0042] In the illustrated embodiment, once the carrier 5 is erected, one or more products can be loaded into the front portion 9 and/or the back portion 11 of the interior 137 and the cover features 16a, 16b can be closed (Fig. 5). In one embodiment, the front portion 9 can be closed by folding the front cover flaps 73a, 75a along the lateral fold line 35a over the open top of the front portion 9 (Fig. 4B). In the illustrated embodiment, the cuts 89 can form slots 139 (Fig. 4B) between the side panels 17a, 19a and the respective front cover flaps 73a, 75a for receiving the locking tabs 85. As shown in Fig. 4B, the locking tabs 85 can be folded along the respective longitudinal fold lines 86 toward the handle wall 133 and the front cover panel 71a can be folded along the lateral fold line 35a over the front cover flaps 73a, 75a and the partially open top of the front portion 9. As the front cover panel 71a is folded down, the locking tabs 85 can be inserted into the respective slots 139 formed by the cuts 89 and the ends of the locking tabs 89 (e.g., where the locking tabs 89 separate from the cover panel 71a along the cuts 88) can at least partially engage the front cover flaps 73a, 75a adjacent the slots in the interior of the carrier to help retain the front cover panel 71a in the closed position. In one embodiment, the back cover flaps 73b, 75b and the back cover panel 71b can be closed in a similar or identical manner as the front cover panel and flaps. As shown in Fig. 4B and 5, the front cover panel 71a can overlap the front cover flaps 73a, 75a and can extend from the front panel 15a to the central wall 131 so that the front cover panel 71a and the front cover flaps 73a, 75a at least partially cover the front portion of the carrier 5. Further as shown in Figs. 4B and 5, the back cover panel 71b can overlap the back cover flaps 73b, 75b and can extend from the back panel 15b to the central wall 131 so that the back cover panel 71b and the back cover flaps 73b, 75b can at least partially cover the back portion of the carrier 5.

[0043] In one embodiment, the closure of the top panels 71a, 71b and the cover flaps 73a, 75a, 73b, 75b and the locking engagement of the locking tabs 89 can facilitate the tamper resistance feature of the carrier 5. For example, the time required to open the top of the carrier 5 to access the contents makes it less likely that products in the carrier will be accessed unnoticed and less likely that the products will be removed and/or engaged with prior to purchase. Also, in some embodiments, the locking tabs 89 and/or other features of the carrier

5 can be torn and/or creased when opening the top of the carrier so that an observer can see that the carrier has been opened. For example, the edges of the locking tabs 89 formed along the cuts 88 (e.g., extending from the ends of the fold lines 86) can abut the undersides of the front cover flaps 73a, 75a to resist removal of the locking tabs 89 from the slot 139, which can lead to tearing and/or creasing of the locking tabs 89 and/or adjacent the slots 139 when the locking tabs 89 are forcibly removed from the slots 139. Accordingly, the carrier 5 can help protect the personal health security of a consumer/costumer (e.g., the consumer can be assured that there has been limited contact with the products in the carrier or can observe the evidence that the package has been previously opened).

[0044] In the illustrated embodiment, the closed carrier 5 can be stacked with other closed carriers 5 by folding the handle wall 133 from a vertical configuration (Fig. 5) either over the closed top of the front portion 9 or the back portion 11 of the carrier 5 to a folded configuration (e.g., Fig. 7). In an exemplary embodiment, the folding features 61 can facilitate folding of the handle wall 133 relative to the central wall 131. As shown in Figs. 6A and 6B, segments of the fold line 51b connecting the handle panel 47b to the central panel 41b are aligned with the respective folding apertures 63a in the central panel 41a and the handle panel 47a, and segments of the fold line 51a connecting the handle panel 47a to the central panel 41a are aligned with the respective folding apertures 63b in the central panel 41b and the handle panel 47b when the central wall 131 and the handle wall 133 are formed by overlapping the central panel 41a and the handle panel 47a with the respective central panel 41b and the handle 47b. In one embodiment, as shown in Fig. 7, the handle wall 133 can be folded over the back portion 11 of the carrier 5 (e.g., to at least partially overlap the back cover panel 71b) by folding the handle panels 47a, 47b along the lateral fold lines 51a, 51b. The segments of the lateral fold line 51b and portions of the back central panel 41b and the back handle panel 47b connected along the segments on the inside of the fold can extend at least partially into respective front folding apertures 63a in the front central panel 41a and the front handle panel 47a on the outside of the fold to facilitate the folding of the overlapped and glued handle panels 47a, 47b (e.g., the handle wall 133). In one embodiment, the segments of the lateral fold line 51a and portions of the front central panel 41a and the front handle panel 47a connected along the segments on the outside of the fold can be at least partially received in the back folding apertures 63b on the inside of the fold as the segments of the fold line 51b extend through the front folding apertures 63a (Fig. 7). With the handle wall 133 folded against the back cover panel 71b (e.g., as shown in Fig. 7), another carrier can be stacked on top of the carrier 5 in an exemplary embodiment. The handle wall 133 could be folded over the front portion 9 of the carrier 5 in a similar manner.

[0045] Any of the features of the various embodiments of the disclosure can be combined with, replaced by, or otherwise configured with other features of other embodiments of the disclosure without departing from the scope of this disclosure.

[0046] In general, the blank may be constructed from paperboard having a caliper so that it is heavier and more rigid than ordinary paper. The blank can also be constructed of other materials, such as cardboard, or any other material having properties suitable for enabling the carrier or carton to function at least generally as described above. The blank can be coated with, for example, a clay coating. The clay coating may then be printed over with product, advertising, and other information or images. The blanks may then be coated with a varnish to protect information printed on the blanks. The blanks may also be coated with, for example, a moisture barrier layer, on either or both sides of the blanks. The blanks can also be laminated to or coated with one or more sheet-like materials at selected panels or panel sections.

[0047] As an example, a tear line can include: a slit that extends partially into the material along the desired line of weakness, and/or a series of spaced apart slits that extend partially into and/or completely through the material along the desired line of weakness, or various combinations of these features. As a more specific example, one type tear line is in the form of a series of spaced apart slits that extend completely through the material, with adjacent slits being spaced apart slightly so that a nick (e.g., a small somewhat bridging-like piece of the material) is defined between the adjacent slits for typically temporarily connecting the material across the tear line. The nicks are broken during tearing along the tear line. The nicks typically are a relatively small percentage of the tear line, and alternatively the nicks can be omitted from or torn in a tear line such that the tear line is a continuous cut line. That is, it is within the scope of the present disclosure for each of the tear lines to be replaced with a continuous slit, or the like. For example, a cut line can be a continuous slit or could be wider than a slit without departing from the present disclosure.

[0048] In accordance with the exemplary embodiments, a fold line can be any substantially linear, although not necessarily straight, form of weakening that facilitates folding therealong. More specifically, but not for the purpose of narrowing the scope of the present disclosure, fold lines include: a score line, such as lines formed with a blunt scoring knife, or the like, which creates a crushed or depressed portion in the material along the desired line of weakness; a cut that extends partially into a material along the desired line of weakness, and/or a series of cuts that extend partially into and/or completely through the material along the desired line of weakness; and various combinations of these features. In situations where

cutting is used to create a fold line, typically the cutting will not be overly extensive in a manner that might cause a reasonable user to incorrectly consider the fold line to be a tear line.

[0049] The above embodiments may be described as having one or more panels adhered together by glue during erection of the carrier embodiments. The term "glue" is intended to encompass all manner of adhesives commonly used to secure carrier panels in place.

[0050] The foregoing description of the disclosure illustrates and describes various exemplary embodiments. Various additions, modifications, changes, etc., could be made to the exemplary embodiments without departing from the spirit and scope of the disclosure. It is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense. Additionally, the disclosure shows and describes only selected embodiments of the disclosure, but the disclosure is capable of use in various other combinations, modifications, and environments and is capable of changes or modifications within the scope of the inventive concept as expressed herein, commensurate with the above teachings, and/or within the skill or knowledge of the relevant art. Furthermore, certain features and characteristics of each embodiment may be selectively interchanged and applied to other illustrated and non-illustrated embodiments of the disclosure.

WHAT IS CLAIMED IS:

1. A carrier for holding one or more products, the carrier comprising:

a plurality of panels that extends at least partially around an interior of the carrier, the plurality of panels comprising at least a front panel and a side panel;

a central panel at least partially dividing the interior of the carrier into a front portion and a back portion, the side panel extending at least partially from the front panel to the central panel; and

a lid at least partially closing a top of the carrier.

2. The carrier of claim 1, wherein the lid comprises a cover panel foldably connected to the front panel and extending at least partially from the front panel to the central panel to at least partially cover the front portion of the carrier.

3. The carrier of claim 2, wherein the lid further comprises a cover flap foldably connected to the side panel, and the cover panel at least partially overlaps the cover flap.

4. The carrier of claim 3, wherein the lid further comprises a locking tab foldably connected to the cover panel and a slot extending between the cover flap and the side panel, and the locking flap is at least partially inserted into the slot.

5. The carrier of claim 4, wherein the locking tab is foldably connected to the cover panel along a fold line, the locking tab has an edge extending from an end of the fold line, and the edge at least partially engages the cover flap adjacent the slot to resist removal of the locking tab from the slot.

6. The carrier of claim 2, wherein the side panel is a first side panel, the plurality of panels comprises a second side panel extending at least partially from the front panel to the central panel, the lid further comprises a first cover flap foldably connected to the first side panel a second cover flap foldably connected to the second side panel, and the cover panel at least partially overlaps the first cover flap and the second cover flap.

7. The carrier of claim 2, further comprising a central wall, a handle wall extending upwardly from the central wall, and a handle extending in the handle wall, wherein the central wall comprises at least the central panel.

8. The carrier of claim 2, wherein the plurality of panels further comprises a back panel, the cover panel is a front cover panel, and the lid further comprises a back cover panel foldably connected to the back panel and extending at least partially from the back panel to the central panel to at least partially cover the back portion of the carrier.

9. The carrier of claim 1, further comprising a central wall, a handle wall foldably connected to the central wall, and folding features that facilitate folding the handle wall from an upright configuration to a folded configuration, wherein the central wall comprises at least the central panel.

10. The carrier of claim 9, wherein the central panel is a front central panel, the central wall further comprises a back central panel in an overlapping relationship with the front central panel, the handle wall comprises a front handle panel in an overlapping relationship with a back handle panel, the front handle panel is foldably connected to the front central panel along a first fold line, and the back handle panel is foldably connected to the back central panel along a second fold line.

11. The carrier of claim 10, wherein the folding features comprise a plurality of folding apertures extending in at least one of the front central panel and the front handle panel, each folding aperture of the plurality of folding apertures is aligned with a respective segment of the second fold line so that the segments can be at least partially received through the respective folding apertures when the handle is in the folded configuration.

12. The carrier of claim 11, wherein the plurality of panels further comprises a back panel, the lid comprises a cover panel foldably connected to the back panel, the cover panel at least partially covers the back portion of the carrier, and the handle wall at least partially overlaps the cover panel when the handle wall is in the folded configuration.

13. The carrier of claim 10, wherein the folding features comprise a plurality of front folding apertures extending in at least one of the front central panel and the front handle panel and a plurality of back folding apertures extending in at least one of the back central panel and the back handle panel, each front folding aperture of the plurality of front folding apertures is aligned with a respective segment of the second fold line so that the segments can be at least partially received through the respective front folding apertures when the handle is in the folded configuration, and each back folding aperture of the plurality of back front folding apertures is aligned with a respective segment of the first fold line so that the segments can be

at least partially received through the respective back folding apertures when the handle is in the folded configuration.

14. The carrier of claim 9, wherein the handle wall is folded over one of the back portion and the front portion of the carrier in the folded configuration.

15. The carrier of claim 9, further comprising a handle opening extending in the handle wall.

16. A blank for forming a carrier for holding one or more products, the blank comprising:

a plurality of panels comprising at least a front panel and a side panel;

a central panel for at least partially dividing the carrier formed from the blank into a front portion and a back portion, the side panel being for extending at least partially from the front panel to the central panel when the carrier is formed from the blank; and

a cover feature for at least partially closing a top of the carrier formed from the blank.

17. The blank of claim 16, wherein the cover feature comprises a cover panel foldably connected to the front panel, the cover panel being for extending at least partially from the front panel to the central panel to at least partially cover the front portion of the carrier formed from the blank.

18. The blank of claim 17, wherein the cover feature further comprises a cover flap foldably connected to the side panel, the cover panel being for at least partially overlapping the cover flap when the carrier is formed from the blank.

19. The blank of claim 18, wherein the cover feature further comprises a locking tab foldably connected to the cover panel, the cover flap is at least partially separable from the side panel along a cut, and the cut is for forming a slot for at least partially receiving the locking tab when the carrier is formed from the blank.

20. The blank of claim 19, wherein the locking tab is separable from the cover flap along a cut line.

21. The blank of claim 17, wherein the side panel is a first side panel, the plurality of panels comprises a second side panel for extending at least partially from the front panel to the central panel when the carrier is formed from the blank, the cover feature further comprises a first cover flap foldably connected to the first side panel and a second cover flap foldably

connected to the second side panel, and the first cover flap and the second cover flap are separable from the cover panel along respective cut lines.

22. The blank of claim 17, wherein the plurality of panels further comprises a back panel, the cover panel is a front cover panel, the cover feature further comprises a back cover panel foldably connected to the back panel, and the front cover panel is separable from the back cover panel along a cut line.

23. The blank of claim 17, wherein the side panel is a front side panel, the plurality of panels further comprises a back panel and a back side panel, the cover panel is a front cover panel, the cover feature further comprises a back cover panel foldably connected to the back panel, a front cover flap foldably connected to the front side panel, and a back cover flap foldably connected to the back side panel, the front cover panel and the back cover panel extend between at least the front panel and the back panel in the blank, and the front cover flap and the back cover flap extend between at least the front side panel and the back side panel in the blank.

24. The blank of claim 16, further comprising a handle panel foldably connected to the central panel, wherein the central panel is for at least partially forming a central wall when the carrier is formed from the blank, the handle panel is for at least partially forming a handle wall when the carrier is formed from the blank, and the blank further comprises folding features in at least one of the handle panel and the central panel for facilitating folding the handle wall from an upright configuration to a folded configuration when the carrier is formed from the blank.

25. The blank of claim 24, wherein the central panel is a front central panel, the handle panel is a front handle panel, the front central panel is foldably connected to the front handle panel along a first fold line, the blank further comprises a back central panel foldably connected to a back handle panel along a second fold line, and the front central panel and the front handle panel are for being in an overlapping relationship with the respective back central panel and back handle panel to form the respective central wall and handle wall when the carrier is formed from the blank.

26. The blank of claim 25, wherein the folding features comprise a plurality of folding apertures extending in at least one of the front central panel and the front handle panel, each folding aperture of the plurality of folding apertures is aligned with a respective segment of the second fold line along a longitudinal direction of the blank.

27. The blank of claim 25, wherein the folding features comprise a plurality of front folding apertures extending in at least one of the front central panel and the front handle panel and a plurality of back folding apertures extending in at least one of the back central panel and the back handle panel, each front folding aperture of the plurality of front folding apertures is aligned with a respective segment of the second fold line along a longitudinal direction of the blank, and each back folding aperture of the plurality of back front folding apertures is aligned with a respective segment of the first fold line along the longitudinal direction of the blank.

28. The blank of claim 27, wherein each of the back folding apertures is offset from the front folding apertures along a lateral direction of the blank.

29. The blank of claim 24, further comprising a handle opening extending in the handle panel.

30. A method of forming a carrier for holding one or more products, the method comprising:

obtaining a blank comprising a plurality of panels, a central panel, and a cover feature, the plurality of panels comprising at least a front panel and a side panel; and

forming an interior of the carrier by positioning the panels of the plurality of panels to extend at least partially around the interior of the carrier and positioning the central panel to at least partially divide the interior of the carrier into a front portion and a back portion, the side panel extending at least partially between the front panel and the central panel; and

folding the cover feature to at least partially close a top of the carrier.

31. The method of claim 30, wherein the cover feature comprises a cover panel foldably connected to the front panel, and the folding the cover feature comprises folding the cover panel to extend at least partially from the front panel to the central panel to at least partially cover the front portion of the carrier.

32. The method of claim 31, wherein the cover feature further comprises a cover flap foldably connected to the side panel, the folding the cover feature further comprises folding the cover flap over the front portion of the carrier, and the folding the cover panel comprises positioning the cover panel to at least partially overlap the cover flap.

33. The method of claim 32, wherein the cover feature further comprises a locking tab foldably connected to the cover panel, the cover flap is at least partially separable from the side panel along a cut, and the folding the cover flap forms the cut into a slot, and the method further comprises at least partially inserting the locking tab into the slot during the folding the cover panel.

34. The method of claim 30, wherein the central panel is a front central panel, the blank further comprises a back central panel, a front handle panel foldably connected to the front central panel along a first fold line, and a back handle panel foldably connected to the back central panel along a second fold line, the method further comprises positioning the front central panel and the back central panel into an overlapping relationship to form a central wall and positioning the front handle panel and the back handle panel into an overlapping relationship to form a handle wall, and the blank further comprises folding features that facilitate folding the handle wall from an upright configuration to a folded configuration.

35. The method of claim 34, wherein the folding features comprise a plurality of folding apertures extending in at least one of the front central panel and the front handle panel, each folding aperture of the plurality of folding apertures is aligned with a respective segment of the second fold line so that the segments can be at least partially received through the respective folding apertures when the handle is in the folded configuration.

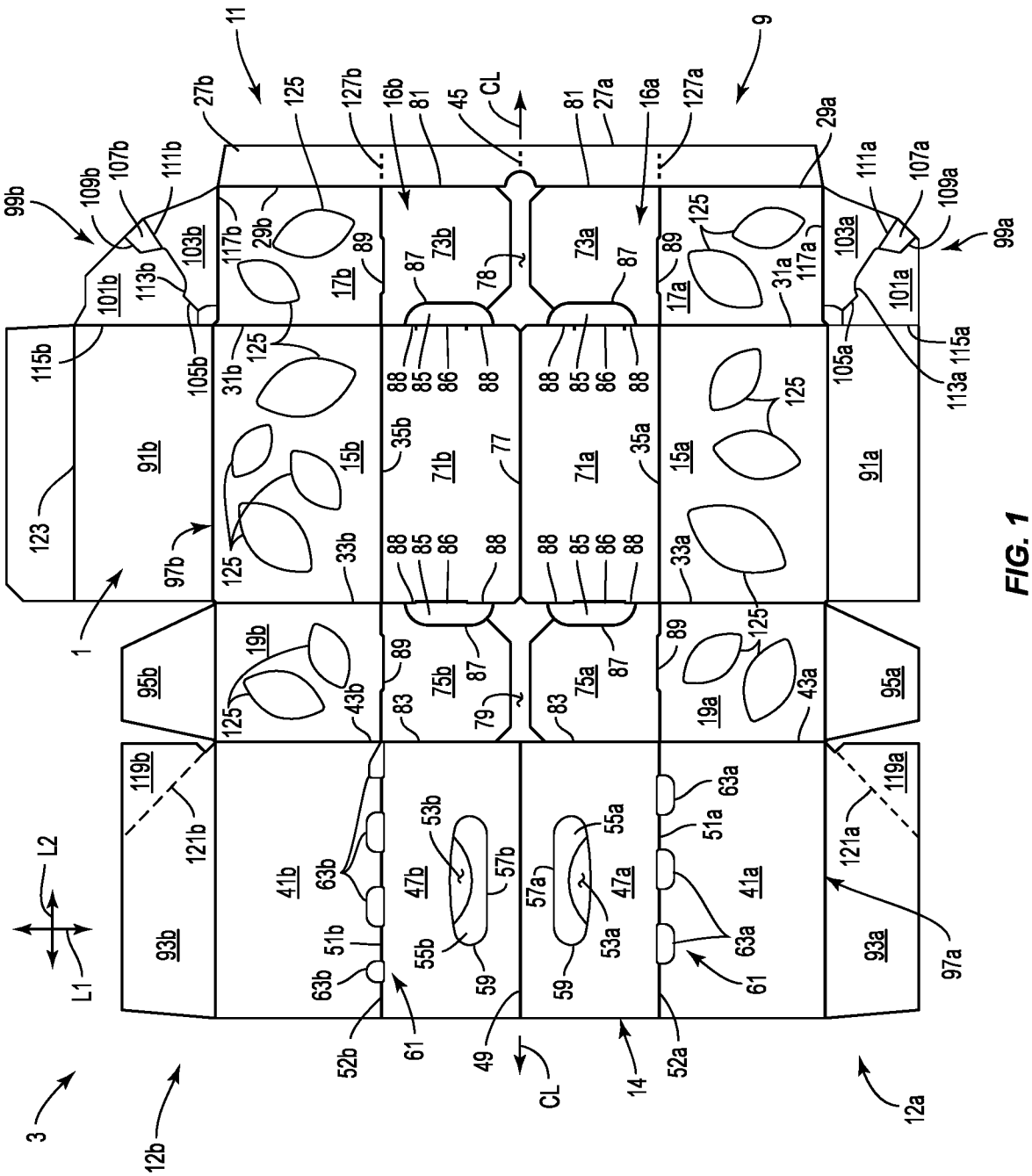

11
9
27b
125
127b
16b
81
45
CL
81
27a
16a
127a
29a
99b
109b
107b
111b
103b
117b
29b
89
17b
87
73b
78
73a
87
89
17a
125
31a
117a
103a
111a
107a
109a
99a
101b
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86
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105a
101a
115b
115a
113a
123
91b
35b
71b
77
71a
35a
15a
125
91a
97b
125
33b
88
85
86
88
88
85
86
88
33a
125
1
95b
19b
125
43b
89
83
75b
87
79
83
75a
87
89
125
19a
43a
95a
119b
121b
L2
L1
93b
41b
63b
51b
63b
53b
55b
47b
57b
59
57a
55a
53a
47a
59
63a
51a
41a
63a
61
121a
119a
97a
93a
52b
61
49
CL
14
52a
3
12b
12a

FIG. 1

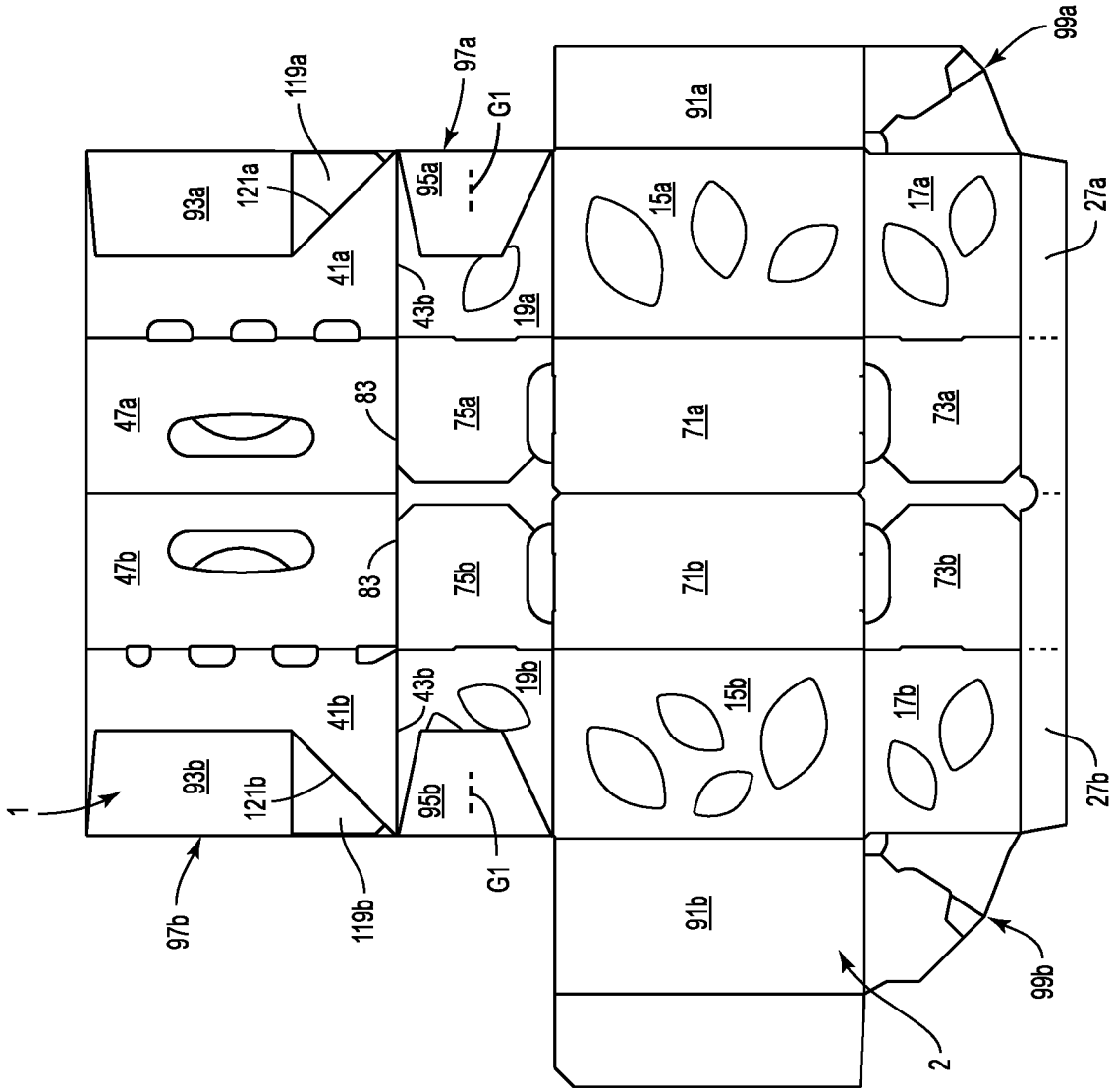

1
2
93a
121a
119a
41a
97a
G1
95a
43b
19a
91a
99a
15a
17a
27a
47a
83
75a
71a
73a
47b
83
75b
71b
73b
41b
43b
19b
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17b
27b
93b
121b
95b
G1
97b
119b
91b
99b

FIG. 2A

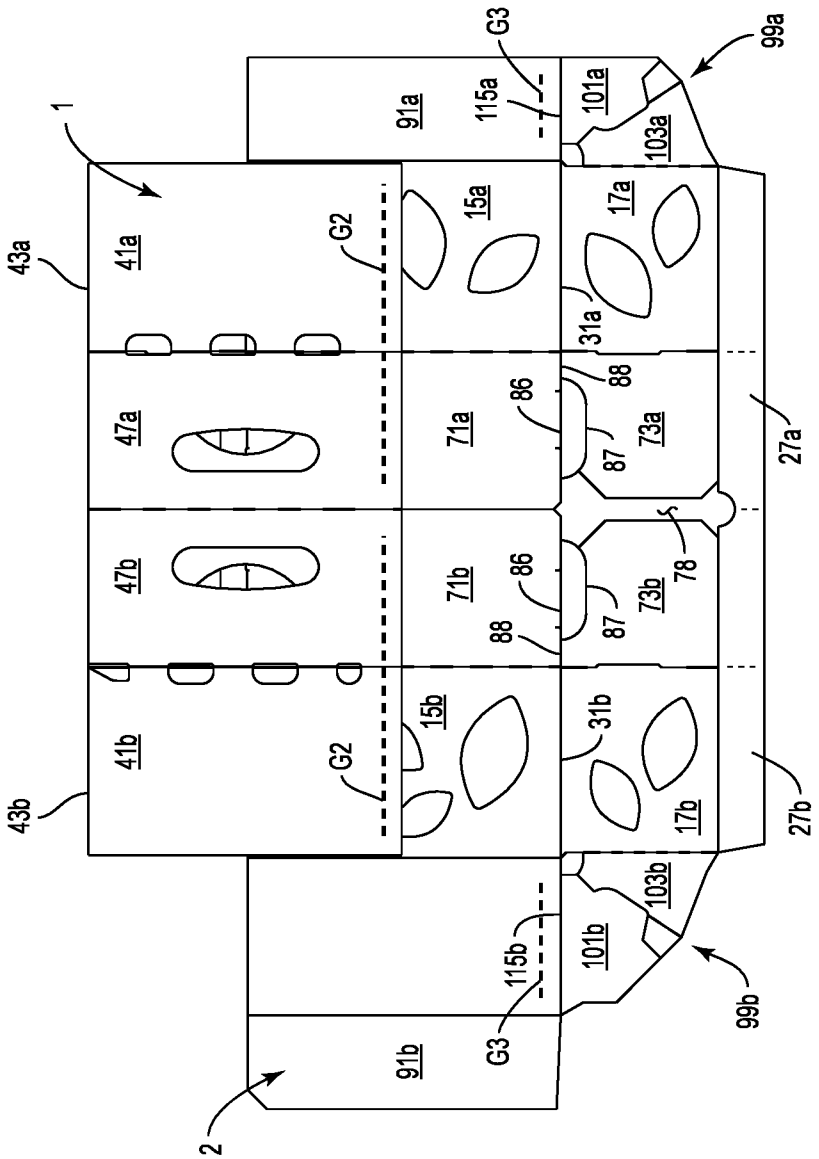

1
2
43a
43b
41a
41b
47a
47b
91a
91b
G2
G3
15a
15b
71a
71b
115a
115b
86
87
88
31a
31b
17a
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73a
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78
101a
101b
103a
103b
99a
99b
27a
27b

FIG. 2B

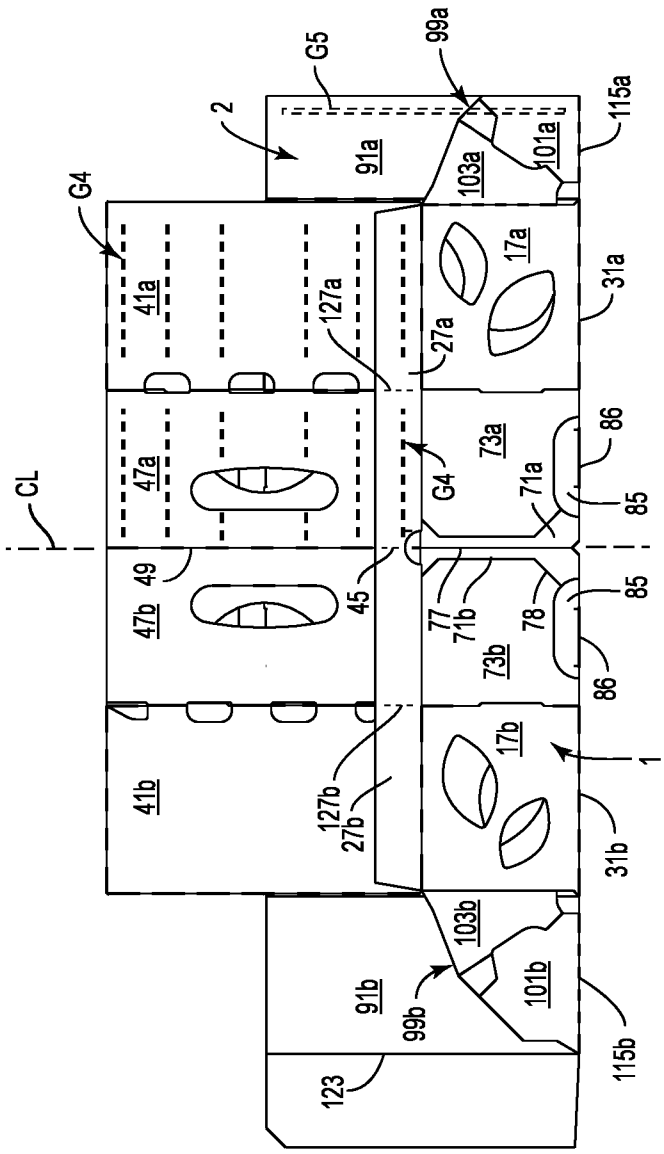

G5
99a
2
115a
91a
101a
103a
G4
17a
31a
41a
127a
27a
73a
86
CL
47a
G4
71a
85
49
45
77
71b
78
85
47b
73b
86
17b
1
41b
127b
27b
31b
103b
91b
99b
101b
115b
123

FIG. 2C

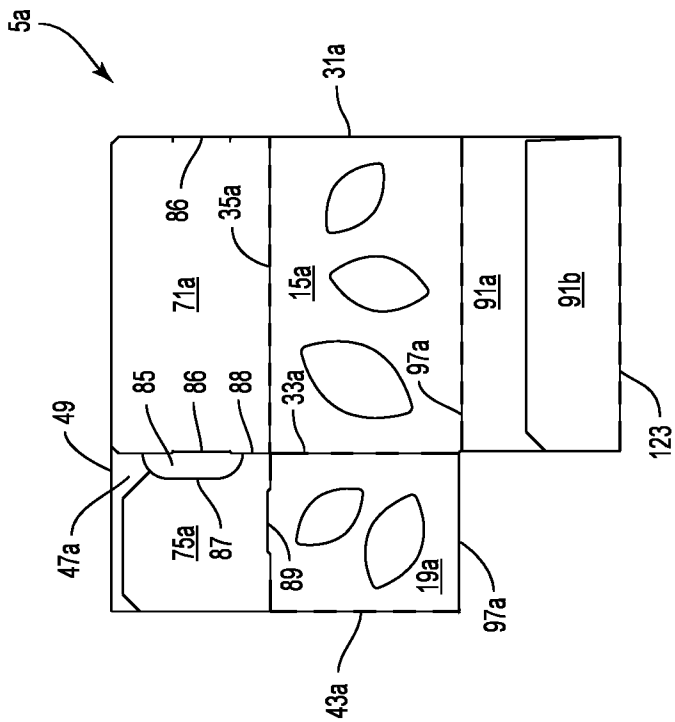

5a
31a
86
35a
71a
15a
91a
91b
85
86
88
33a
97a
49
123
47a
75a
87
89
19a
97a
43a

FIG. 3

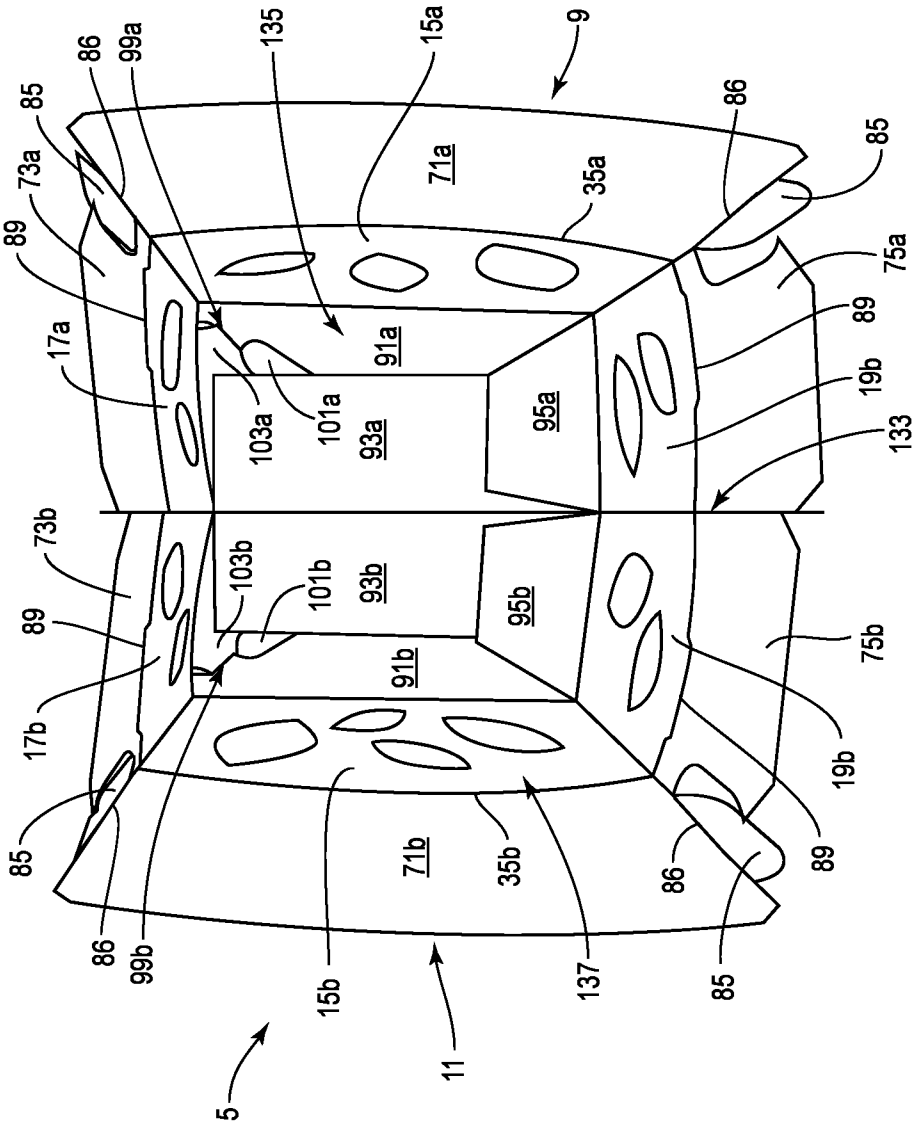

9
135
15a
99a
86
85
73a
89
17a
71a
35a
75a
91a
103a
101a
93a
95a
19b
133
73b
103b
101b
93b
95b
75b
89
91b
17b
19b
85
71b
35b
86
89
99b
15b
137
85
5
11

FIG. 4A

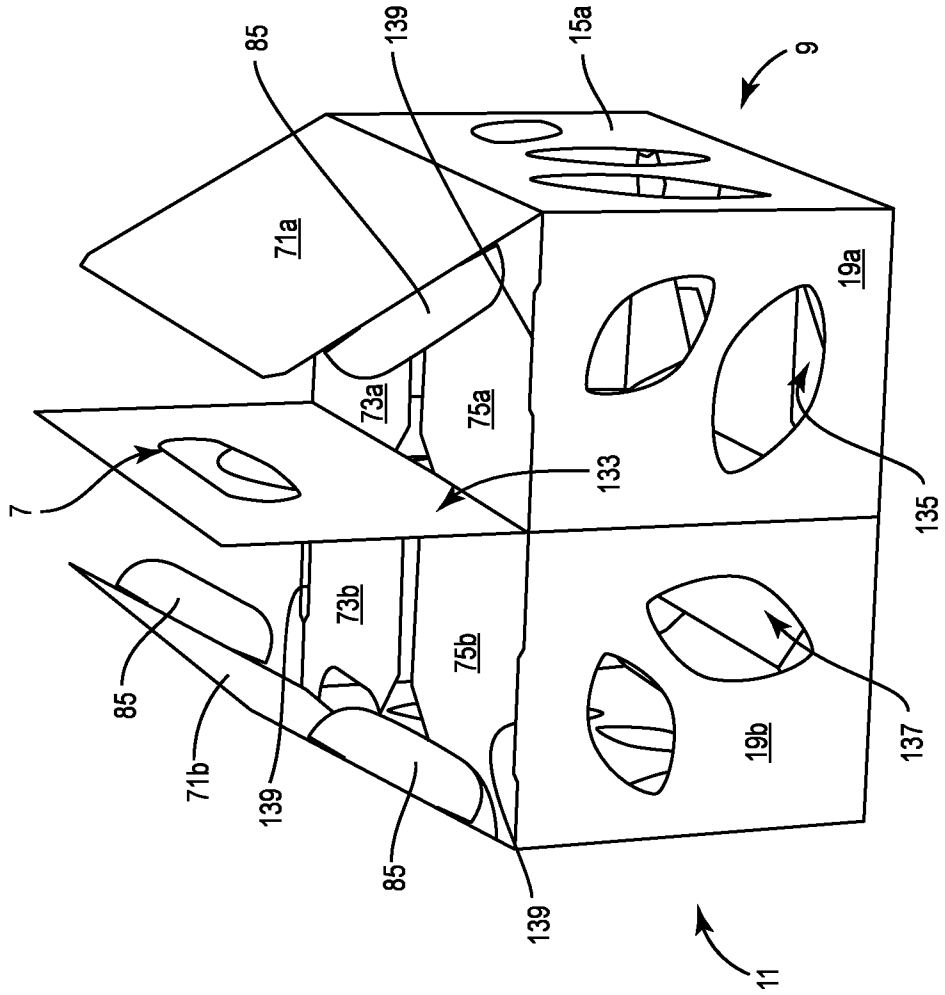

85
139
15a
9
71a
19a
73a
75a
7
133
135
73b
75b
85
71b
139
19b
137
85
139
11

FIG. 4B

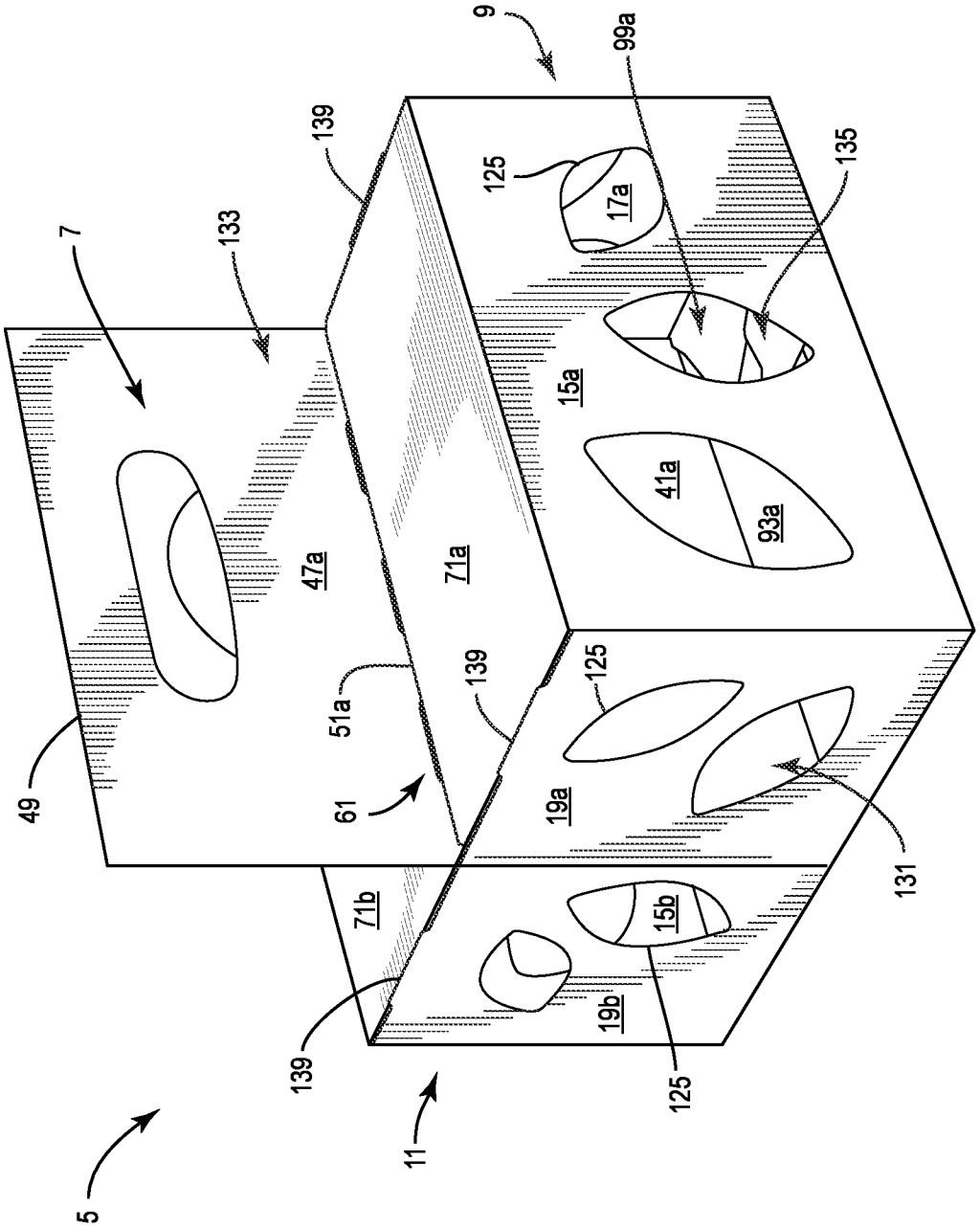

9
99a
139
125
17a
135
7
133
15a
41a
93a
47a
71a
51a
139
125
49
61
19a
131
71b
15b
19b
139
125
11
5

FIG. 5

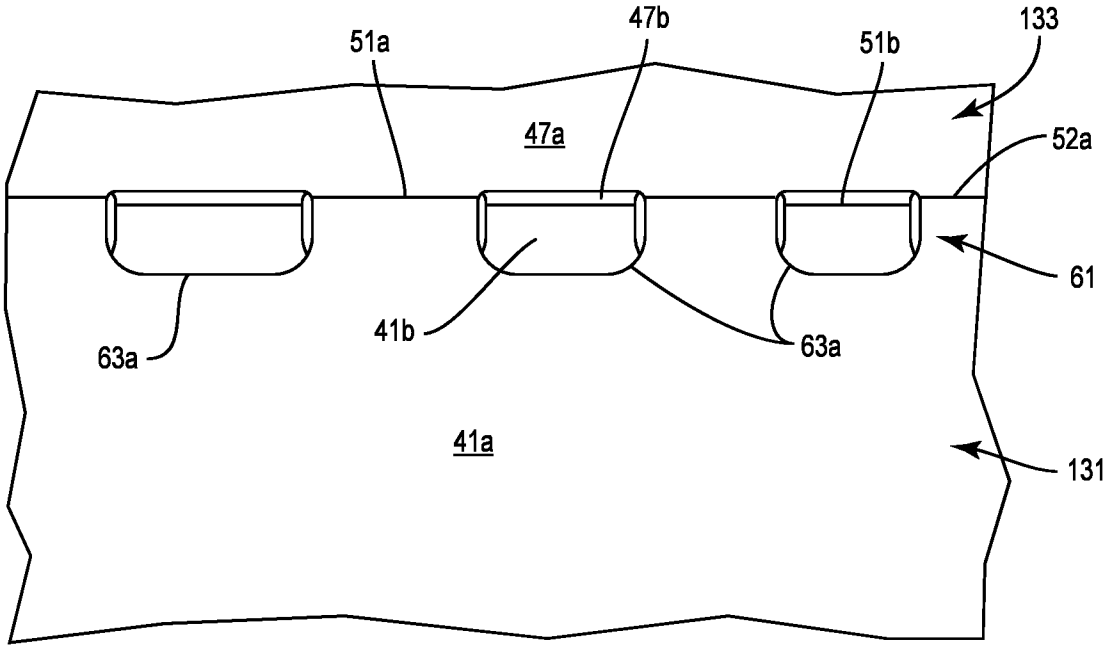

51a
47b
51b
133
47a
52a
61
63a
41b
63a
41a
131

FIG. 6A

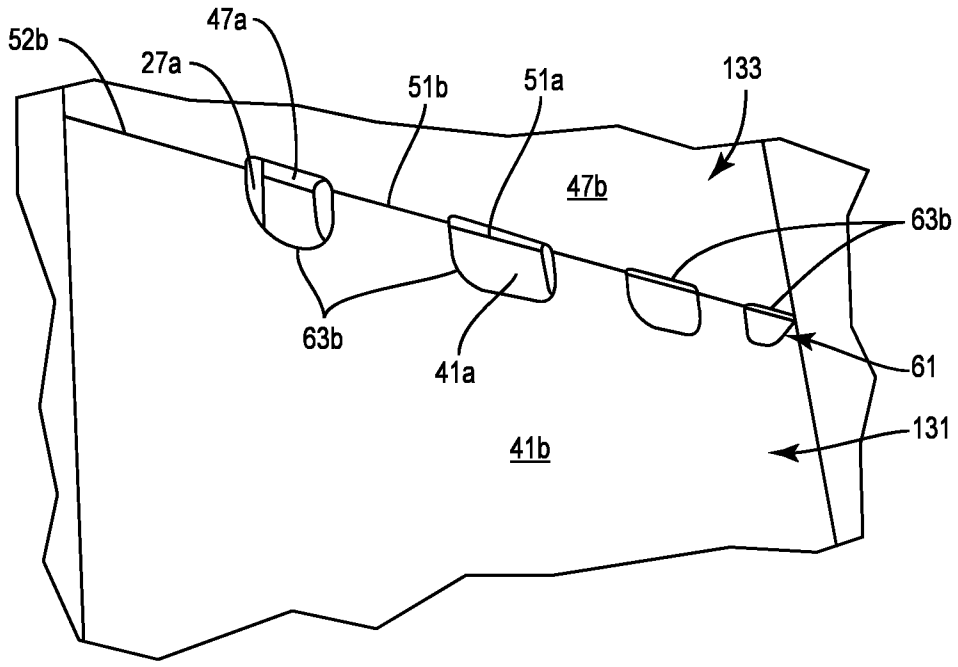

52b
47a
27a
51b
51a
133
47b
63b
63b
41a
61
131
41b

FIG. 6B

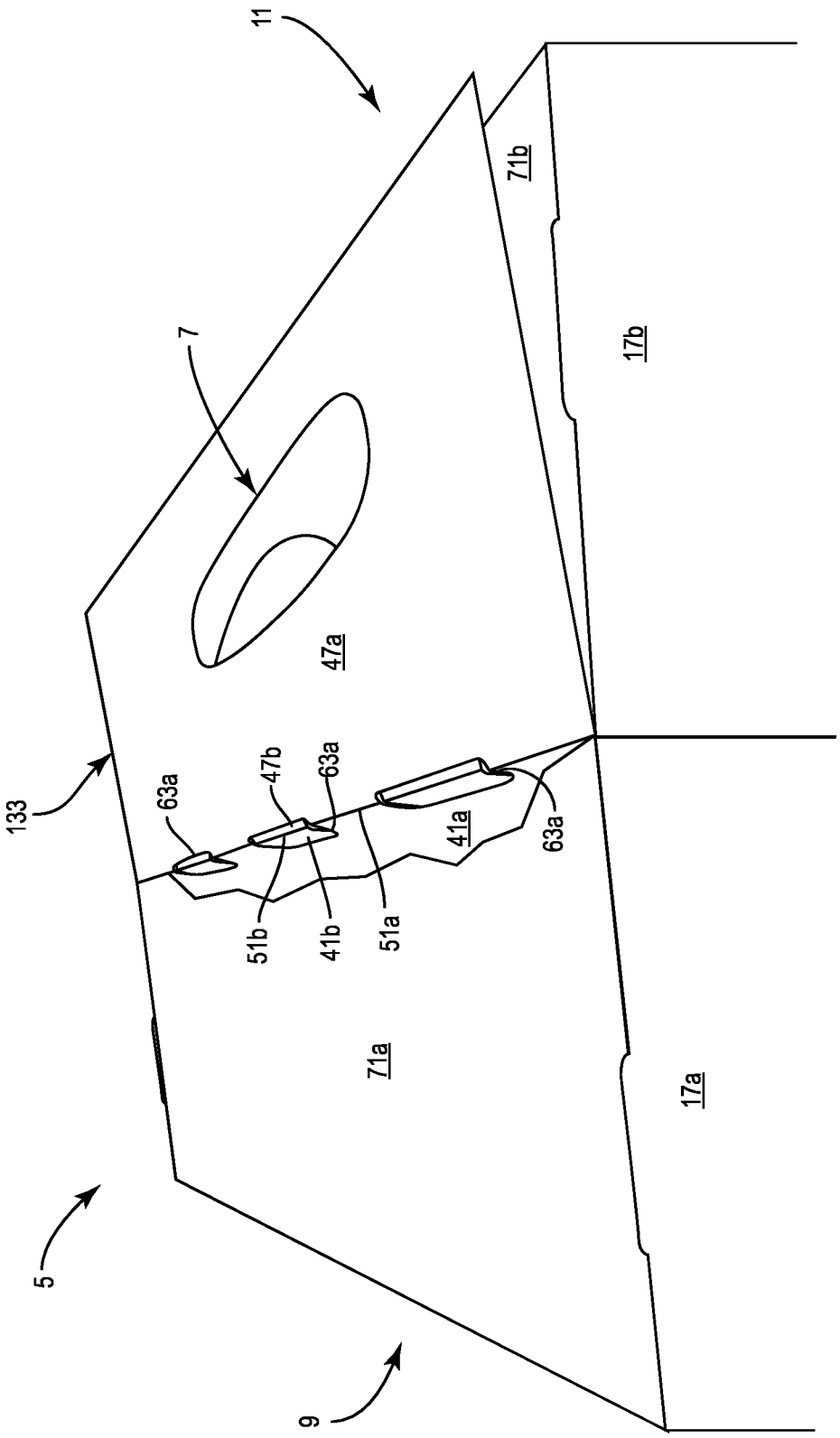


FIG. 7

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2021/033059

A. CLASSIFICATION OF SUBJECT MATTER

B65D 71/54(2006.01)i; **B65D 5/46**(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B65D 71/54(2006.01); B65D 25/04(2006.01); B65D 5/00(2006.01); B65D 5/02(2006.01); B65D 5/18(2006.01); B65D 5/46(2006.01); B65D 5/462(2006.01); B65D 5/4805(2006.01); B65D 71/12(2006.01)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: carrier, central panel, lid, fold, handle

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 10-2103278 B1 (GOMUNDANG PRINTING INC.) 22 April 2020 (2020-04-22) paragraphs [0028]-[0029], [0056], claims 1-2, and figures 1-5	1-3,6-8,16-18, 22-23,30-32
Y		4-5,9-15,19-21,24-29,33-35
Y	US 2007-0194092 A1 (DONNELLY, BRIAN) 23 August 2007 (2007-08-23) paragraph [0056] and figures 1-2, 5	4-5,19-21,33
Y	JP 2010-265027 A (DAINIPPON PRINTING CO., LTD.) 25 November 2010 (2010-11-25) paragraphs [0023], [0033] and figures 1-3, 6	9-15,24-29,34-35
X	US 2009-0121001 A1 (MIQUEL PEREZ et al.) 14 May 2009 (2009-05-14) paragraphs [0037]-[0052] and figures 1-5	1-3,6-8,16-18,30-32

☑ Further documents are listed in the continuation of Box C. ☑ See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
07 September 2021	**07 September 2021**

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2021/033059

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 204236871 U (TIANJIN UNIVERSITY OF COMMERCE) 01 April 2015 (2015-04-01) claims 1-2 and figures 1-2	1-35

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/US2021/033059

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KR	10-2103278	B1	22 April 2020	None			
US	2007-0194092	A1	23 August 2007	CA	2537175	A1	20 August 2007
				US	7780068	B2	24 August 2010
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				ES	2350272	T3	20 January 2011
				JP	2009-533285	A	17 September 2009
				PL	2007648	T3	31 January 2011
				PT	2007648	E	09 November 2010
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				RU	2401225	C2	10 October 2010
				US	8646678	B2	11 February 2014
				WO	2007-116087	A1	18 October 2007
CN	204236871	U	01 April 2015	None			