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(54) Title: CARRIER FOR CONTAINERS

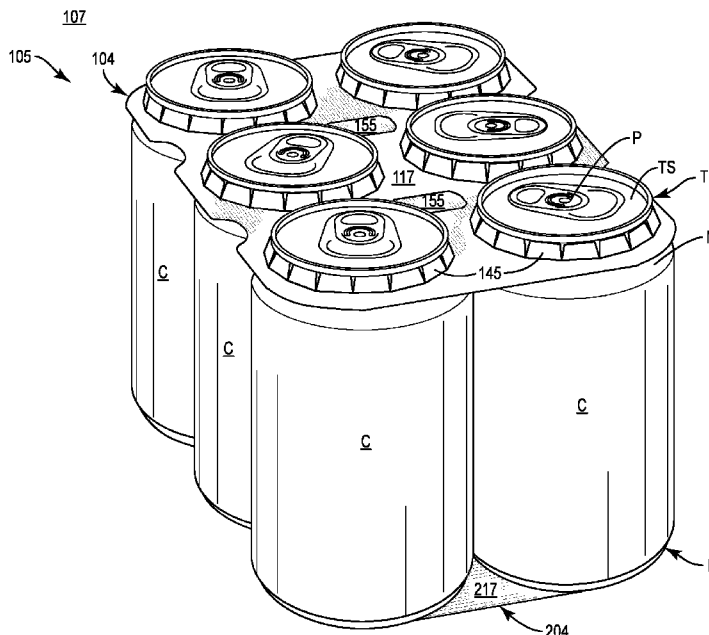


FIG. 3

(57) Abstract: A carrier for holding a plurality of containers includes a top retainer comprising a top attachment panel for at least partially receiving the plurality of containers, and a bottom retainer comprising a bottom attachment panel for being attached to the plurality of containers.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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CARRIER FOR CONTAINERS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of each of U.S. Provisional Patent Application No. 63/219,648, filed on July 8, 2021, and U.S. Provisional Patent Application No. 63/203,882, filed on August 3, 2021.

INCORPORATION BY REFERENCE

[0002] The disclosures of each of U.S. Provisional Patent Application No. 63/219,648, filed on July 8, 2021, U.S. Provisional Patent Application No. 63/203,882, filed on August 3, 2021, and U.S. Design Patent Application No. 29/838,184, filed on May 11, 2022, 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 carrying containers.

SUMMARY OF THE DISCLOSURE

[0004] According to one aspect, the disclosure is generally directed to a carrier for holding a plurality of containers, the carrier comprising a top retainer comprising a top attachment panel for at least partially receiving the plurality of containers, and a bottom retainer comprising a bottom attachment panel for being attached to the plurality of containers.

[0005] According to another aspect, the disclosure is generally directed to the combination of a top container retention blank and a bottom retention container blank for forming a carrier for holding a plurality of containers, the combination comprising a top container retention blank comprising a top attachment panel for at least partially receiving the plurality of containers when the carrier is formed from the top container retention blank and the bottom container retention blank, and a bottom container retainer retention blank comprising a bottom attachment panel for being attached to the plurality of containers when the carrier is formed from the combination of the top container retention blank and the bottom container retention blank.

[0006] According to another aspect, the disclosure is generally directed to a method of forming a carrier for holding a plurality of containers, the method comprising obtaining a top container retention blank comprising a top attachment panel, obtaining a bottom container retention blank comprising a bottom attachment panel, arranging the top attachment panel to form a top retainer for at least partially receiving the plurality of containers, and arranging the bottom attachment panel to form a bottom retainer for being attached to the plurality of containers.

[0007] According to another aspect, the disclosure is generally directed to a package, the package comprising a plurality of containers, and a carrier holding the plurality of containers. The carrier comprises a top retainer comprising a top attachment panel at least partially receiving the plurality of containers, and a bottom retainer comprising a bottom attachment panel attached to the plurality of containers.

[0008] 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.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] 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.

[0010] Fig. 1 is a plan view of a top container retention blank for forming a carrier according to a first exemplary embodiment of the disclosure.

[0011] Fig. 2 is a plan view of a bottom container retention blank for forming a carrier according to the first exemplary embodiment of the disclosure.

[0012] Figs. 3 is a perspective view of a carrier and package formed from the blanks of Figs. 1 and 2 according to the first exemplary embodiment of the disclosure.

[0013] Fig. 4 is a bottom view of the carrier and package of Fig. 3.

[0014] Corresponding parts are designated by corresponding reference numbers throughout the drawings.

DETAILED DESCRIPTION

- [0015] The present disclosure generally relates to constructs, sleeves, cartons, or the like, and packages for holding and displaying containers such as cans, jars, bottles, etc. The containers can be used for packaging food and beverage products, for example. The containers can be made from materials suitable in composition for packaging the particular food or beverage item, and the materials include, but are not limited to, aluminum and/or other metals, plastics such as PET, LDPE, LLDPE, HDPE, PP, PS, PVC, EVOH, and Nylon; and the like; glass; or any combination thereof.
- [0016] Packages and carriers according to the present disclosure can accommodate containers of numerous different shapes. For the purpose of illustration and not for the purpose of limiting the scope of the disclosure, the following detailed description describes beverage containers (e.g., generally cylindrical containers such as aluminum cans) at least partially disposed within the package and carrier embodiments. In this specification, the terms “lower,” “bottom,” “upper” and “top” indicate orientations determined in relation to fully erected packages and carriers.
- [0017] As described herein, packages and carriers may be formed by multiple overlapping panels, end flaps, and/or other portions of blanks. Such panels, end flaps, and/or other portions of the blank can be designated in relative terms to one another, e.g., “first”, “second”, “third”, etc., in sequential or non-sequential reference, without departing from the disclosure.
- [0018] Fig. 1 is a plan view of an exterior surface 101 of a top container retention blank 103 used to at least partially form a top portion of a carrier 105 (Fig. 3) according to an exemplary embodiment of the disclosure. As described further herein, the carrier 105 can be configured for holding/supporting/retaining/receiving a plurality of containers C. The carrier 105 can be provided with one or more containers C to form a package 107 (Fig. 3).
- [0019] As described herein, the top container retention blank 103 can be provided in combination with a bottom container retention blank 203 (Fig. 2) to form the carrier 105/package 107. The bottom container retention blank 203 can form a bottom portion of the carrier 105. In this regard, the top container retention blank 103 can form a top retainer 104 of the carrier 105 and the bottom container retention blank 203 can form a bottom retainer 104 of the carrier 105.
- [0020] As shown in Fig. 2, containers C for use with the carriers of the present disclosure are illustrated as beverage containers having a lower base portion B, a top portion T generally comprising a neck N that tapers inwardly from the lower base portion, a flange portion F at the top of the neck portion that extends radially outward from the neck portion, and a top surface TS below the flange portion that includes a pull-tab P. Containers of other sizes, shapes, and configurations, may be held in the carriers without departing from the disclosure.

- [0021] Referring to Fig. 1, the top container retention blank 103 has a longitudinal axis L1 and a lateral axis L2. The blank 103 comprises a top central panel or attachment panel 117 that includes top container retention features for engaging containers C when the carrier 105 is formed from the blank 103. In the illustrated embodiment, the top container retention features include six container retention openings 137 in the top attachment panel 117.
- [0022] The top container retention features can also include a plurality of container retention tabs (broadly, “top container retention tabs”) 145 foldably attached to the central panel 117 at respective fold lines 147 and circumferentially arranged to extend into the respective container retention openings 137. In the illustrated embodiment, the container retention tabs 145 can be positioned in generally abutting relation and separated from one another at cut lines 146. In one embodiment, one or more pairs of adjacent container retention tabs 145 can be spaced apart from one another.
- [0023] While the container retention tabs 145 are illustrated as generally trapezoidal elements with their wider end foldably attached to the top central panel 117, it will be understood that the shape and geometry of the container retention openings 137 and/or the container retention tabs 145 or of other/additional container retention features of the blank 103/carrier 105, could vary to increase the retention forces applied to the container C and/or to accommodate various sizes and configurations of containers, without departing from the scope of the disclosure.
- [0024] The blank 103/carrier 105 can also include handle features that include one or more handle flaps 155 foldably connected to the attachment panel 117 at respective lateral fold lines 156 and at least partially defined by respective cuts 157 so as to be at least partially separable from the attachment panel 117 for exposing a handle opening. As shown, the cuts 157 can have one or more curved, angled, and or straight portions so as to have a generally tapered bracket-shaped profile. In one embodiment, the handle features of the blank 103/carrier 105 can include one or more cutouts formed in the attachment panel 117.
- [0025] Turning to Fig. 2, an exterior surface 201 of the bottom container retention blank 203 is illustrated. As shown, the bottom container retention blank 203 has the longitudinal axis L1 and the lateral axis L2, and includes a bottom central panel or bottom attachment panel 217 that is free from attachment to the top attachment panel 117.
- [0026] The bottom container retention blank 203 can include bottom container retention features that include a plurality of container retention tabs 245 (broadly, “bottom container retention tabs”) that are at least partially defined by curved cuts 247 and foldably connected to the attachment panel 217 at respective curved fold lines 249. As shown, each container retention tab 245 can include a plurality of lateral fold lines or lines of weakening 251, 253, 255, 257 to define a plurality of adjacent and

reconfigurable sections 259, 261, 263, 265, 267 to facilitate at least partial reconfiguration of the container retention tabs 245, as described further herein.

[0027] In this regard, adjacent reconfigurable sections 259, 261, 263, 265, 267 can be repositionable relative to one another at the respective lines of weakening 251, 253, 255, 257. It will be understood that the container retention tabs 245 can include a different number, configuration, and/or arrangement of lines of weakening and associated reconfigurable sections without departing from the disclosure.

[0028] Still referring to Fig. 1, and referring additionally to Figs. 3 and 4, in one embodiment, a method of forming a package 107 that includes the carrier 105 and one or more of the containers C comprises obtaining the top container blank 103/top retainer 104 and obtaining the group of containers C (e.g., six containers, but more or less than six containers can be included in the package). The blank 103/retainer 104 can be positioned on top of the group of containers C and the attachment panel 117 of the blank 103/retainer 104 is pushed downward so that the flanges of the containers C are inserted through a respective opening 137.

[0029] Upon pressing the blank 103/retainer 104 downward onto the containers C, the retention container retention tabs 145 can be urged to fold upwardly at the respective fold lines 147 and at least partially separate from one another at respective cuts 146 to contact a respective container C at the neck portion thereof below a respective flange F. Such upward/oblique arrangement of the container retention tabs 145 extending from the top attachment panel 117 to a top structure of the respective containers C, e.g., flanges F or rims, can provide a reinforced, braced, stabilized, etc. engagement of the top container retention blank 103/top retainer 104 with the containers C.

[0030] As also shown, the bottom container retention blank 203/bottom retainer 204 can be engaged with and attached to bottom portions of the respective containers C. In the illustrated embodiment, the bottom attachment panel 217 can be positioned in a generally planar relationship with base portions B of the containers C, e.g., rims or lips formed along the base portions B thereof. In such an arrangement, the top attachment panel 117 can be positioned in generally spaced and parallel relation to the bottom attachment panel 217.

[0031] Simultaneously or thereafter, the respective container retention tabs 245 can be separated from the bottom attachment panel 217 at the respective cuts 247 and folded upwardly at the respective fold lines 249 into engagement with the respective containers C.

[0032] In this regard, the container retention tabs 245 can at least partially reconfigure, e.g., fold, flex, bend, contour, etc. at the respective fold lines 251, 253, 255, 257 to at least partially contour/extend around the bottom rim/bottom structure of the respective generally cylindrical containers C. In some embodiments, the bottom structure of the respective containers C can have the form of a curved recess such that the respective reconfigurable sections 259, 261, 263, 265, 267 can reposition via relative folding at the fold lines 251, 253, 255, 257, with each reconfigurable section 259, 261, 263, 265, 267 obliquely arranged relative to an adjacent reconfigurable section so as to approximate the curvature of the base portion B of the respective containers C to which they are attached.

[0033] In some embodiments, the curved fold lines 249 can facilitate such contoured engagement of the container retention tabs 245 with the respective containers C, e.g., by facilitating the aforementioned repositioning of the reconfigurable sections 259, 261, 263, 265, 267 so as to avoid bunching, buckling, creasing, or other unwanted tensioning or deformation of the container retention tabs 245 or surrounding portions of the bottom attachment panel 217. Such engagement of the container retention tabs 245 with the containers C can be achieved/maintained with an adhesive such as glue G (shown in hidden lines in Fig. 4). In one embodiment, one or more of the container retention tabs 245 can contour about a vertical side of the container C.

[0034] The aforementioned arrangement of the bottom container retention blank 203/bottom retainer 204 with the containers C can stabilize, e.g., inhibit/prevent/minimize/avoid undesirable shifting/tilting of the bottoms of the containers C so as to provide a more secure carrier 105/package 107. Accordingly, the engagement of the container retention tabs 245 with the containers C and their connection to each other via the attachment panel 217 can bind/attach/connect the bottom portions of the containers C for stabilizing effect on the carrier 105/package 107.

[0035] It will be understood that the bottom container retention blank 203/bottom retainer 204 can engage one or more of the containers C in a different manner with the result of attaching a bottom portion of the one or more of the containers C to another container C.

[0036] In this regard, the bottom container retention blank 203/bottom retainer 204 can stabilize the containers C of the carrier 105/package 107 so as to assist/minimize the support given to the containers C by the features of the top container retention blank 103/top retainer 104. Accordingly, the top container retention blank 103/top retainer 104 can be selected with a relatively low gauge/weight, stiffness, strength, can have minimized container retention features, etc., for example, as compared to a carrier 105 that is devoid of a bottom container retention blank 203/bottom retainer 204.

[0037] It will be understood that the blanks and carriers described herein can have one or more additional/alternative features without departing from the disclosure. For example, in one embodiment, the bottom container retention blank can be applied to containers without the use or with a minimized/optimized use of adhesive, e.g., so as to have one or more surfaces/edges that mechanically engage portions of the respective containers. In another embodiment, a carrier/package can be devoid of a bottom container retention blank.

[0038] The blanks according to the present disclosure can be, for example, formed from coated paperboard and similar materials. For instance, the interior and/or exterior sides of the blanks can be coated with a clay coating. The clay coating may then be printed over with product, advertising, price coding, and other information or images. The blanks may then be coated with a varnish to protect any information printed on the blank. The blanks may also be coated with, for example, a moisture barrier layer, on either or both sides of the blank. In accordance with the above-described embodiments, the blanks may be constructed of paperboard of a caliper such that it is heavier and more rigid than ordinary paper. The blanks can also be constructed of other materials, such as cardboard, hard paper, or any other material having properties suitable for enabling the carton to function at least generally as described herein. The blanks can also be laminated or coated with one or more sheet-like materials at selected panels or panel sections.

[0039] In accordance with the above-described 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 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.

[0040] 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.

[0041] The above embodiments may be described as having one or more panels adhered together by glue during erection of the carton embodiments. The term “glue” is intended to encompass all manner of adhesives commonly used to secure carton panels in place.

[0042] The foregoing description 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 disclosure, 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 a plurality of containers, the carrier comprising:

a top retainer comprising a top attachment panel for at least partially receiving the plurality of containers; and

a bottom retainer comprising a bottom attachment panel for being attached to the plurality of containers.
2. The carrier of claim 1, wherein the bottom retainer comprises bottom container retention features including a plurality of bottom container retention tabs foldably connected to the bottom attachment panel for being attached to a respective container of the plurality of containers.
3. The carrier of claim 2, wherein each bottom container retention tab of the plurality of bottom container retention tabs comprises a plurality of lines of weakening defining a plurality of reconfigurable sections of the respective bottom container retention tab.
4. The carrier of claim 3, wherein each reconfigurable section of the plurality of reconfigurable sections is repositionable relative to an adjacent reconfigurable section of the plurality of reconfigurable sections at the respective line of weakening.
5. The carrier of claim 4, wherein each bottom container retention tab of the plurality of bottom container retention tabs is at least partially separably connected to the bottom attachment panel at a respective cut and each bottom container retention tab of the plurality of bottom container retention tabs is foldably connected to the bottom attachment panel at a respective curved fold line.
6. The carrier of claim 5, wherein the plurality of bottom container retention tabs is for being adhered to a respective container of the plurality of containers with glue.
7. The carrier of claim 3, wherein the top retainer comprises top container retention features, the top container retention features comprising a plurality of container openings for at least partially receiving a respective container of the plurality of containers.
8. The carrier of claim 7, wherein the top container retention features further comprises a plurality of top container retention tabs foldably connected to the top attachment panel and positioned extending into a respective container opening of the plurality of container openings for engaging a respective container of the plurality of containers.
9. The carrier of claim 3, wherein the top attachment panel is free from attachment to the bottom attachment panel.

10. The carrier of claim 9, wherein the top attachment panel is in generally parallel and spaced relation to the bottom panel.

11. The carrier of claim 9, further comprising handle features, the handle features comprising at least one handle flap foldably connected to the top attachment panel, the at least one handle flap at least partially separable from the top attachment panel for exposing a handle opening.

12. In combination, a top container retention blank and a bottom retention container blank for forming a carrier for holding a plurality of containers, the combination comprising:

a top container retention blank comprising a top attachment panel for at least partially receiving the plurality of containers when the carrier is formed from the top container retention blank and the bottom container retention blank; and

a bottom container retainer retention blank comprising a bottom attachment panel for being attached to the plurality of containers when the carrier is formed from the combination of the top container retention blank and the bottom container retention blank.

13. The combination of claim 12, wherein the bottom container retention blank comprises bottom container retention features including a plurality of bottom container retention tabs foldably connected to the bottom attachment panel for being attached to a respective container of the plurality of containers when the carrier is formed from the top container retention blank and the bottom retainer retention blank.

14. The combination of claim 13, wherein each bottom container retention tab of the plurality of bottom container retention tabs comprises a plurality of lines of weakening defining a plurality of reconfigurable sections of the respective bottom container retention tab.

15. The combination of claim 14, wherein each reconfigurable section of the plurality of reconfigurable sections is repositionable relative to an adjacent reconfigurable section of the plurality of reconfigurable sections at the respective line of weakening.

16. The combination of claim 15, wherein each bottom container retention tab of the plurality of bottom container retention tabs is at least partially separably connected to the bottom attachment panel at a respective cut and each bottom container retention tab of the plurality of bottom container retention tabs is foldably connected to the bottom attachment panel at a respective curved fold line.

17. The combination of claim 16, wherein the plurality of bottom container retention tabs is for being adhered to a respective container of the plurality of containers with glue when the carrier is formed from the top container retention blank and the bottom retainer retention blank.

18. The combination of claim 14, wherein the top container retention blank comprises top container retention features, the top container retention features comprising a plurality of container openings for at least partially receiving a respective container of the plurality of containers when the carrier is formed from the top container retention blank and the bottom retainer retention blank.

19. The combination of claim 18, wherein the top container retention features further comprises a plurality of top container retention tabs foldably connected to the top attachment panel and positioned extending into a respective container opening of the plurality of container openings for engaging a respective container of the plurality of containers when the carrier is formed from the top container retention blank and the bottom retainer retention blank.

20. The combination of claim 14, wherein the top attachment panel is free from attachment to the bottom attachment panel.

21. The combination of claim 20, further comprising handle features, the handle features comprising at least one handle flap foldably connected to the top attachment panel, the at least one handle flap at least partially separable from the top attachment panel for exposing a handle opening.

22. A method of forming a carrier for holding a plurality of containers, the method comprising:

obtaining a top container retention blank comprising a top attachment panel;

obtaining a bottom container retention blank comprising a bottom attachment panel;

arranging the top attachment panel to form a top retainer for at least partially receiving the plurality of containers; and

arranging the bottom attachment panel to form a bottom retainer for being attached to the plurality of containers.

23. The method of claim 22, wherein the bottom container retention blank comprises bottom container retention features including a plurality of bottom container retention tabs foldably connected to the bottom attachment panel for being attached to a respective container of the plurality of containers.

24. The method of claim 23, wherein each bottom container retention tab of the plurality of bottom container retention tabs comprises a plurality of lines of weakening defining a plurality of reconfigurable sections of the respective bottom container retention tab.

25. The method of claim 24, wherein each reconfigurable section of the plurality of reconfigurable sections is repositionable relative to an adjacent reconfigurable section of the plurality of reconfigurable sections at the respective line of weakening.

26. The method of claim 25, wherein each bottom container retention tab of the plurality of bottom container retention tabs is at least partially separably connected to the bottom attachment panel at a respective cut and each bottom container retention tab of the plurality of bottom container retention tabs is foldably connected to the bottom attachment panel at a respective curved fold line.

27. The method of claim 26, wherein the plurality of bottom container retention tabs is for being adhered to a respective container of the plurality of containers with glue.

28. The method of claim 24, wherein the top container retention blank comprises top container retention features, the top container retention features comprising a plurality of container openings for at least partially receiving a respective container of the plurality of containers.

29. The method of claim 28, wherein the top container retention features further comprises a plurality of top container retention tabs foldably connected to the top attachment panel and positioned extending into a respective container opening of the plurality of container openings for engaging a respective container of the plurality of containers.

30. The method of claim 24, wherein the top attachment panel is free from attachment to the bottom attachment panel.

31. The method of claim 30, wherein arranging the top attachment panel and the bottom attachment panel comprises positioning the top attachment panel in generally parallel and spaced relation to the bottom panel.

32. The method of claim 30, wherein the top attachment panel further comprises handle features, the handle features comprising at least one handle flap foldably connected to the top attachment panel, the at least one handle flap at least partially separable from the top attachment panel for exposing a handle opening.

33. A package, the package comprising:

a plurality of containers; and

a carrier holding the plurality of containers, the carrier comprising:

a top retainer comprising a top attachment panel at least partially receiving the plurality of containers; and

a bottom retainer comprising a bottom attachment panel attached to the plurality of containers.

34. The package of claim 33, wherein the bottom retainer comprises bottom container retention features including a plurality of bottom container retention tabs foldably connected to the bottom attachment panel and attached to a respective container of the plurality of containers.

35. The package of claim 34, wherein each bottom container retention tab of the plurality of bottom container retention tabs comprises a plurality of lines of weakening defining a plurality of reconfigurable sections of the respective bottom container retention tab.

36. The package of claim 35, wherein each reconfigurable section of the plurality of reconfigurable sections is repositionable relative to an adjacent reconfigurable section of the plurality of reconfigurable sections at the respective line of weakening.

37. The package of claim 36, wherein each bottom container retention tab of the plurality of bottom container retention tabs is at least partially separably connected to the bottom attachment panel at a respective cut and each bottom container retention tab of the plurality of bottom container retention tabs is foldably connected to the bottom attachment panel at a respective curved fold line.

38. The package of claim 37, wherein the plurality of bottom container retention tabs is adhered to a respective container of the plurality of containers with glue.

39. The package of claim 35, wherein the top retainer comprises top container retention features, the top container retention features comprising a plurality of container openings at least partially receiving a respective container of the plurality of containers.

40. The package of claim 39, wherein the top container retention features further comprises a plurality of top container retention tabs foldably connected to the top attachment panel and positioned extending into a respective container opening of the plurality of container openings and engaging a respective container of the plurality of containers.

41. The package of claim 35, wherein the top attachment panel is free from attachment to the bottom attachment panel.

42. The package of claim 41, wherein the top attachment panel is in generally parallel and spaced relation to the bottom panel.

43. The package of claim 41, further comprising handle features, the handle features comprising at least one handle flap foldably connected to the top attachment panel, the at least one handle flap at least partially separable from the top attachment panel for exposing a handle opening.

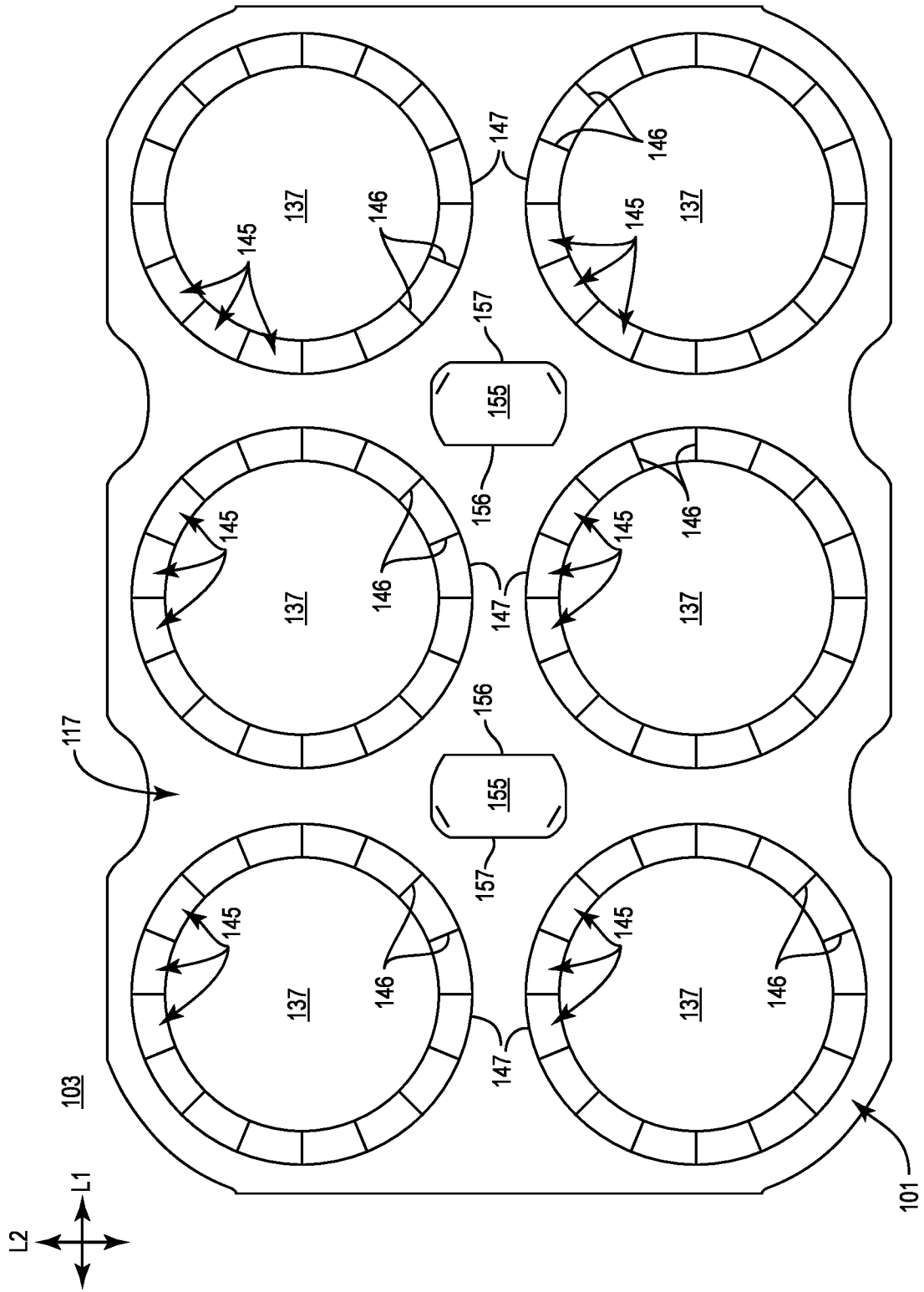


FIG. 1

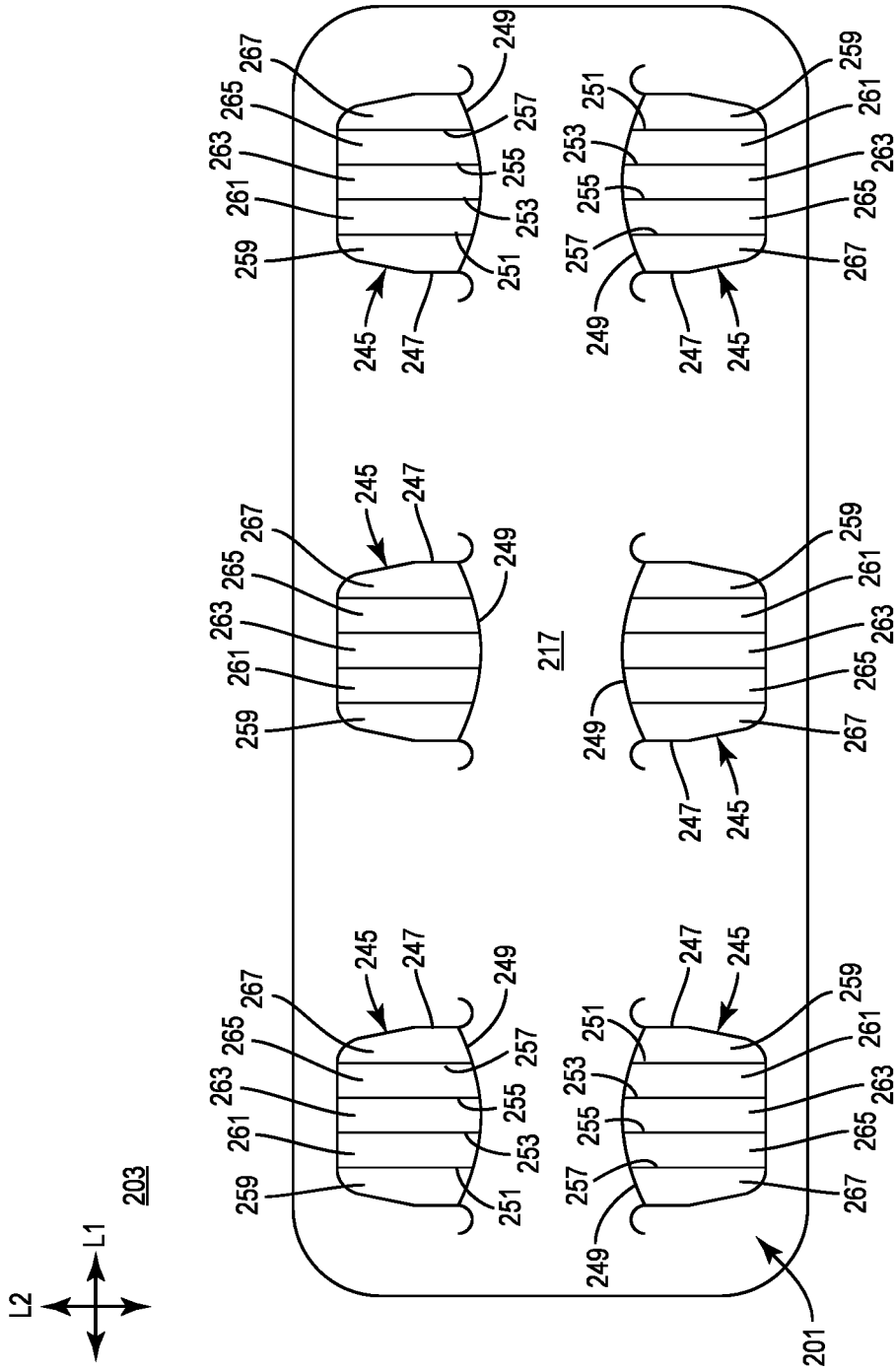


FIG. 2

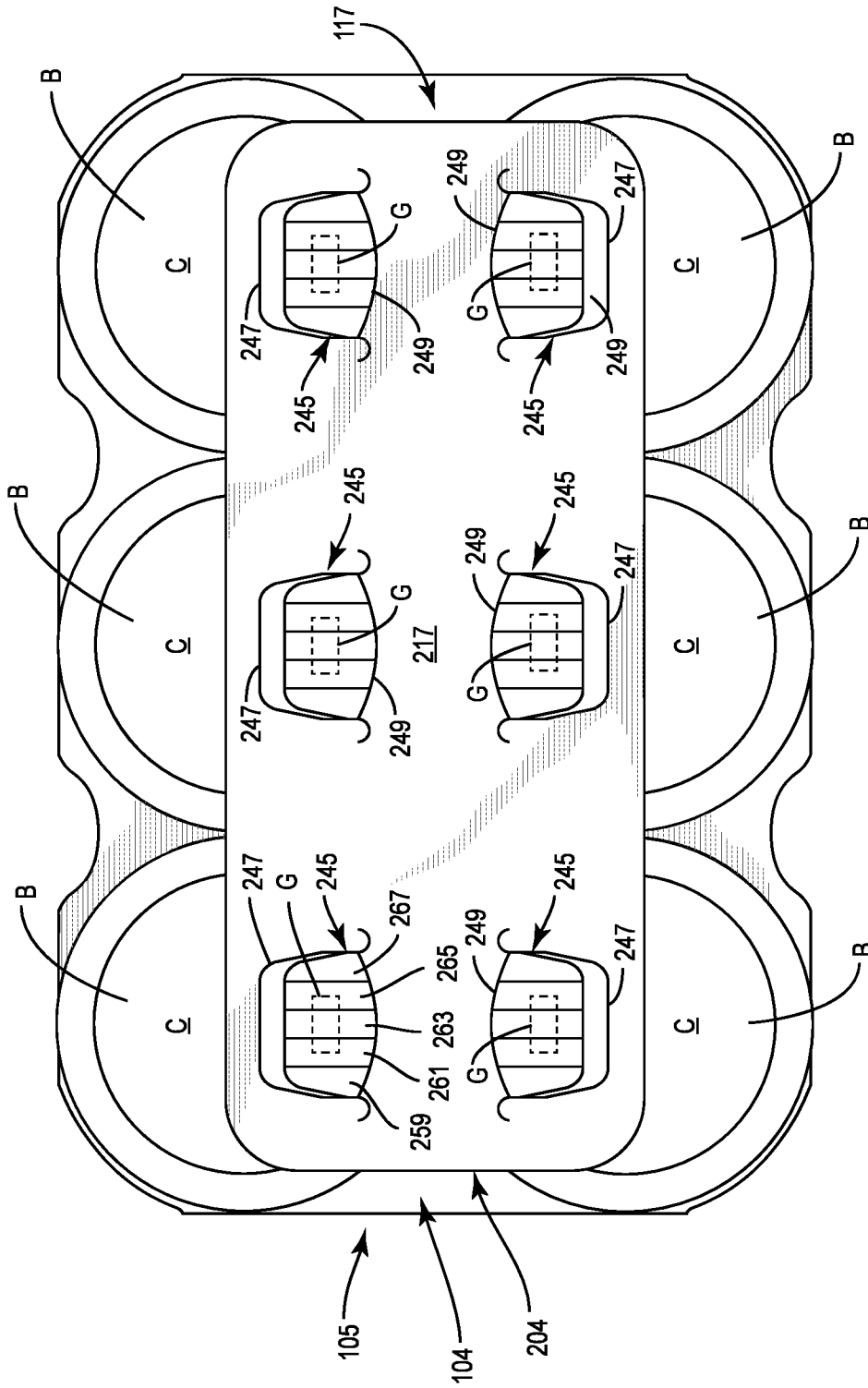


FIG. 4

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2022/036297

A. CLASSIFICATION OF SUBJECT MATTER B65D 71/42(2006.01)i; B65D 71/70(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 71/42(2006.01); B65D 21/02(2006.01); B65D 71/50(2006.01); B65D 75/00(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, container, top retainer, top attachment panel, bottom retainer, bottom attachment panel		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	WO 2021-038516 A1 (ELETTRIC 80 S.P.A.) 04 March 2021 (2021-03-04) claims 1, 6-8 and figures 1, 10, 12, 19	1,12,22,33 2-11,13-21,23-32,34-43
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A	GB 2221666 A (WHYTE & MACKAY DISTILLERS LIMITED) 14 February 1990 claims 1-4 and figures 1-4	1-43
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "D" document cited by the applicant in the international application "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 21 October 2022		Date of mailing of the international search report 21 October 2022
Name and mailing address of the ISA/KR Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon 35208, Republic of Korea Facsimile No. +82-42-481-8578		Authorized officer PARK, Tae Wook Telephone No. +82-42-481-3405

INTERNATIONAL SEARCH REPORT
Information on patent family members

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