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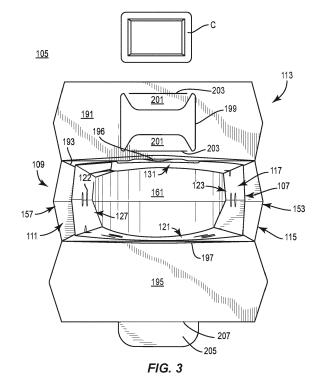
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- (71) Applicant: Graphic Packaging International, LLC Atlanta, Georgia 30328 (US)
- (72) Inventor: Weddington, Paul Castleford WF10 2HG (GB)
- (74) Representative: Grättinger Möhring von Poschinger Patentanwälte Partnerschaft mbB Wittelsbacherstrasse 2b 82319 Starnberg (DE)

# (54) CARTON FOR FOOD PRODUCTS, BLANK AND METHOD OF FORMING A CARTON

(57)A carton for holding at least one food product includes a plurality of panels extending at least partially around an interior chamber of the inner container portion for holding at least one food product, the plurality of panels of the inner container portion including an inner front panel, an inner back panel, at least one inner side panel, and a bottom panel. The carton further includes an outer sleeve portion comprising a plurality of panels extending at least partially around the inner container portion, the plurality of panels of the outer sleeve portion includes an outer front panel, an outer back panel, and at least one outer side panel, the inner container portion is spaced apart from the outer sleeve portion to form a pocket between the inner container portion and the outer sleeve portion.



#### Description

#### **CROSS-REFERENCE TO RELATED APPLICATION**

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**[0001]** This application claims the benefit of U.S. Provisional Patent Application No. 63/056,064, filed on July 24, 2020.

#### **INCORPORATION BY REFERENCE**

**[0002]** The disclosure of U.S. Provisional Patent Application No. 63/056,064, filed on July 24, 2020, is hereby incorporated by reference for all purposes as if set forth in its entirety.

#### **BACKGROUND OF THE DISCLOSURE**

**[0003]** The present disclosure generally relates to cartons for holding and dispensing one or more food products.

#### SUMMARY OF THE DISCLOSURE

[0004] According to one aspect, the disclosure is generally directed to a carton for holding at least one food product, the carton comprising an inner container portion comprising a plurality of panels extending at least partially around an interior chamber of the inner container portion for holding at least one food product, the plurality of panels of the inner container portion comprising an inner front panel, an inner back panel, at least one inner side panel, and a bottom panel. The carton further comprises an outer sleeve portion comprising a plurality of panels extending at least partially around the inner container portion, the plurality of panels of the outer sleeve portion comprising an outer front panel, an outer back panel, and at least one outer side panel, the inner container portion is spaced apart from the outer sleeve portion to form a pocket between the inner container portion and the outer sleeve portion.

[0005] According to another aspect, the disclosure is generally directed to a blank for forming a carton for holding at least one food product, the blank comprising an inner container portion comprising a plurality of panels for at least partially extending at least partially around an interior chamber of an inner container portion of the carton for holding at least one food product when the carton is formed from the blank, the plurality of panels of the inner container portion comprising an inner front panel, an inner back panel, at least one inner side panel, and a bottom panel. The blank further comprises an outer sleeve portion comprising a plurality of panels for extending at least partially around the inner container portion to form an outer sleeve portion of the carton when the carton is formed from the blank, the plurality of panels of the outer sleeve portion comprising an outer front panel, an outer back panel, and at least one outer side panel, the inner container portion of the carton is for being spaced

apart from the outer sleeve portion of the carton for forming a pocket between the inner container portion of the carton and the outer sleeve portion of the carton when the carton is formed from the blank.

[0006] According to another aspect, the disclosure is generally directed to a method of forming a carton for holding at least one food product, the method comprising obtaining a blank comprising an inner container portion comprising a plurality of panels comprising an inner front panel, an inner back panel, at least one inner side panel, and a bottom panel, the blank further comprising an outer sleeve portion comprising a plurality of panels comprising an outer front panel, an outer back panel, and at least one outer side panel. The method further comprises folding the plurality of panels of the inner container portion of the blank to form an inner container portion of the carton, and folding the plurality of panels of the outer sleeve portion of the blank around the inner container portion of the carton to form an outer sleeve portion of the carton such that the inner container portion of the carton is spaced apart from the outer sleeve portion of the carton and such that a pocket is formed between the inner container portion of the carton and the outer sleeve portion of the carton.

**[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.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

**[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.

Fig. 1 is a plan view of an exterior surface of a blank used to form a carton according to a first exemplary embodiment of the disclosure.

Fig. 2 is a plan view of a partially folded configuration of the blank of Fig. 1.

Fig. 3 is a plan view of a carton formed from the blank of Fig. 1 and in an open configuration according to the first exemplary embodiment of the disclosure.

Fig. 4 is a perspective view of various configurations of the carton of Fig. 4.

Fig. 5 is a plan view of an exterior surface of a blank used to form a carton according to a second exemplary embodiment of the disclosure.

Fig. 6 is a plan view of an exterior surface of a blank

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used to form a carton according to a third exemplary embodiment of the disclosure.

**[0009]** Corresponding parts are designated by corresponding reference numbers throughout the drawings.

# DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENTS

[0010] The present disclosure generally relates to cartons (e.g., carriers) with features for containing and facilitating dispensing articles such as food products, cooked food products, fried food products, hot and/or moist articles, etc. The articles can include, but are not limited to, fast food products, take-out products, meal leftovers, and the like, or any combination thereof. Examples of such products include, but are not limited to, fish, chicken (such as chicken nuggets, chicken strips, chicken fingers, etc.), popcorn, peanuts, candy, French fries (such as waffle fries, steak fries, shoestring fries, curly fries, etc.), French toast sticks, sandwich, pizza, calzone, turnover, burrito, or any other food product that may be packaged for consumption by a consumer. In this specification, the terms "inner," "interior," "outer," "exterior," "lower," "bottom," "upper," and "top" indicate orientations determined in relation to fully erected and upright cartons.

**[0011]** As described herein, cartons 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 blanks 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.

[0012] Fig. 1 is a plan view of an exterior surface 101 of a blank, generally indicated at 103, used to form a container assembly or carton 105 (Fig. 4) according to a first exemplary embodiment of the disclosure. The carton 105 has an inner container portion 107 for holding one or more food products (e.g., French fries) and an outer sleeve portion 109 surrounding the inner container portion 107 for grasping, carrying, and otherwise operating the carton 105. As described further herein, the carton 105 has insulating features that include at least a thermally insulating pocket 111 positioned between the inner container portion 107 and the outer sleeve portion 109, which can inhibit, minimize, and/or prevent heat transfer from the inner container portion 107 of the carton 105 to the outer sleeve portion 109 of the carton 105, e.g., to reduce the temperature of the exterior surface of the carton and provide a comfortable surface for a user to grasp, to maintain one or more conditions of food products in the inner container portion 107 of the carton 105, etc.

**[0013]** Accordingly, the carton 105 can be shaped and/or sized to fit in a hand of a customer and/or can have a generally tapered configuration. In one embodiment, the carton 105 can be used for holding, packaging, and/or serving cooked/fried food products from a fast

food or quick service restaurant, but the carton 105 could hold other types of food products or other non-food products without departing from the disclosure.

[0014] In the illustrated embodiment, the blank 103 has a longitudinal axis L1 and a lateral axis L2. The blank 103 can have an inner container portion 106 for forming the inner container portion 107 of the carton 105, and the blank 103 can have an outer sleeve portion 108 for forming the outer sleeve portion 109 of the carton 105.

[0015] As shown, the inner container portion 107 of the blank 103 can include an inner front panel 121, a first inner side panel 123 foldably connected to the inner front panel 121 at an oblique fold line 125, a second inner side panel 127 foldably connected to the inner front panel 121 at an oblique fold line 129, and a bottom panel 161 foldably connected to the inner front panel 121 at a curved fold line 190. An inner back panel 131 can be foldably connected to the first inner side panel 123 at an oblique fold line 133, as also shown, and an attachment flap 135 can be foldably connected to the second inner side panel 127 at an oblique fold line 137.

[0016] The inner front panel 121, as shown, can include a plurality of venting apertures 122 formed and positioned therein, and which can facilitate the egress/flow of fluids (e.g., air, moisture, etc.) from the inner container portion 107 of the carton 105, as described further herein. In addition, one or more venting apertures 122 can be provided interrupting respective fold lines 125, 129, 133, 143, 149, and/or on another portion of the blank 103. While the venting apertures 122 are illustrated as having a generally circular profile, it will be understood that one or more of the venting apertures 122 can have a different configuration (e.g., slits, slots, otherwise shaped apertures, etc.), and/or can be provided in a different number or arrangement without departing from the disclosure.

[0017] The first inner side panel 123, as shown, can include a first portion 139 foldably connected to the inner front panel 121 at the fold line 125, and a second portion 141 foldably connected to the first portion 139 at the oblique fold line 143. The second portion 141 of the first inner side panel 123 is thus foldably connected to the inner back panel 131 at the fold line 133.

[0018] Similarly, the second inner side panel 127 can include a first portion 145 foldably connected to the inner font panel 121 at the fold line 129, and a second portion 147 foldably connected to the first portion 145 at the oblique fold line 149, the second portion 147 foldably connected to the attachment flap 135 at the fold line 137.

[0019] The bottom panel 161 can include a first portion 185 foldably connected to an outer back panel 151 at the curved fold line 163, and a second portion 187 foldably connected to the first portion 153 at a lateral fold line 189. As shown, the second portion 187 of the bottom panel 161 is also foldably connected to the inner front panel 121 at the curved fold line 190 that forms a curved bottom edge of the carton 105 formed from the blank 103.

[0020] Still referring to Fig. 1, the outer sleeve portion

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108 of the blank 103 can include the outer back panel 151, a first outer side panel 153 foldably connected to the outer back panel 151 at an oblique fold line 155, and a second outer side panel 157 foldably connected to the outer back panel 151 at an oblique fold line 159. An outer front panel 165 can be foldably connected to the first outer side panel 153 at an oblique fold line 167, as also shown, and an attachment flap 169 can be foldably connected to the second outer side panel 157 at an oblique fold line 171. As shown, the bottom panel 161 can be foldably connected to the outer back panel 151 at the curved fold line 163 such that the outer sleeve portion 108 of the blank 103/outer sleeve portion 109 of the carton 105 is foldably connected to the inner container portion 106 of the blank 103/inner container portion 108 of the carton 105.

[0021] The first outer side panel 153, as shown, can include a first portion 173 foldably connected to the outer back panel 151 at the fold line 155, and a second portion 175 foldably connected to the first portion 173 at an oblique fold line 177. The second portion 175 of the first inner side panel 173 is thus foldably connected to the outer front panel 165 at the fold line 167.

[0022] Similarly, the second outer side panel 157 can include a first portion 179 foldably connected to the outer font panel 151 at the fold line 159, and a second portion 181 foldably connected to the first portion 179 at an oblique fold line 183, with the second portion 181 foldably connected to the attachment flap 169 at the fold line 171. [0023] With continued reference to Fig. 1, the blank 103 can include a plurality of end flaps for at least partially closing a top end 113 (Fig. 4) of the carton 105. As shown, the plurality of end flaps can include a first top end flap 191 foldably connected to the outer back panel 151 at a lateral fold line 193 that is interrupted by a cut/opening 196, and a second top end flap 195 foldably connected to the outer front panel 165 at an oblique fold line 197. As shown, a relief cut 198 can be provided adjacent the cut/opening 196.

**[0024]** The blank 103/carton 105 can be provided with accessory retaining features for engaging/at least partially receiving one or more accessories for food products, e.g., a sauce or condiment container/cup. In the illustrated embodiment, the accessory retaining features can include an opening 199 in the top end flap 191 and a pair of opposed retaining flaps 201 extending into the opening 199 and foldably connected to the top end flap 191 at respective lateral fold lines 203.

[0025] As also shown, a locking tab 205 can be foldably connected to the top end flap 195 at an oblique fold line 207. Upon formation of the carton 105, the locking tab 205 can be positioned for at least partial insertion through the cut/opening 196 to maintain a closed condition of the top end 113 of the carton 105. In this regard, the locking tab 205 and the cut/opening 196 can form locking features of the blank 103/carton 105.

**[0026]** It will be understood that one or more of the panels, end flaps, and/or other features of the blank 103

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

**[0027]** Turning to Figs. 2-4, formation of the carton 105 from the blank 103 will be illustrated and described according to one exemplary embodiment of the disclosure. **[0028]** As shown, in Fig. 2, the blank 103 can be positioned with the exterior surface 101 facing down, e.g., on a supporting surface, and with an interior surface 102 of the blank 103 facing upwardly.

[0029] In order to form the interior container portion 107 of the carton 105, the second portion 147 of the inner side panel 127 can be folded at the fold line 149 into at least partial face-to-face contact with the first portion 145 of the inner side panel 127, and such that the attachment flap 135 is carried into at least partial face-to-face contact with a portion of the inner front panel 121. Simultaneously or thereafter, the second portion 141 of the inner side panel 123 can be folded at the fold line 143 and into at least partial face-to-face contact with the first portion 139 of the end panel 123, and such that the inner back panel 131 is carried into at least partial face-to-face contact with respective portions of the inner front panel 121 and the attachment flap 135.

[0030] Simultaneously or thereafter, the bottom panel 161 can be folded at the fold line 163 such that the inner back panel 131 is carried into at least partial face-to-face contact with the outer back panel 151, resulting in the configuration illustrated in Fig. 2. In one embodiment, the second portion 187 of the bottom panel 161 can be at least partially folded at the fold line 189 to facilitate such configuration of the carton 105.

[0031] The second portion 181 of the outer side panel 157 can be folded at the fold line 183 into at least partial overlapping and/or face-to-face contact with the second portion 147 of the inner side panel 127, and such that the attachment flap 169 is carried into at least partial face-to-face contact with a portion of the inner front panel 121. Simultaneously or thereafter, the second portion 175 of the outer side panel 153 can be folded at the fold line 177 into at least partial overlapping and/or face-to-face contact with the second portion 141 of the inner side panel 123, and such that the outer front panel 165 is carried into overlapping and/or at least partial face-to-face contact with respective portions of the inner front panel 121 and the attachment flap 169.

**[0032]** It will be understood that the aforementioned folded arrangement can be maintained with one or more applications of an adhesive, such as glue G (Fig. 1), and that the carton 105 can be provided in an erected configuration, e.g., in which various panels and flaps are spaced apart from one another to define an interior, and a collapsed or generally flat configuration.

**[0033]** Turning to Fig. 3, the carton 105 is illustrated with a top end 113 thereof in an open condition, e.g., with at least one of the end flaps 191, 195 folded away from the respective panels 151, 165 to provide access to an interior 115 of the carton 105. The interior 115 of the carton 105, as shown, can include an interior chamber

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117 about which the panels of the interior container portion 107 of the carton 105 at least partially extend, and the pocket 111 between the interior container portion 107 of the carton 105 and the panels of the outer sleeve portion 109 of the carton 105. In the aforementioned arrangement the outer front panel 165 is spaced apart from the inner front panel 121, the outer side panel 153 is spaced apart from the inner side panel 123, and the outer side panel 157 is spaced apart from the inner side panel 127 to form the pocket 111. Furthermore, the first portion 173 of the outer side panel 153 can be obliquely arranged relative to the second portion 175 of the outer side panel 157 can be obliquely arranged relative to the second portion 181 of the outer side panel 157.

**[0034]** In the illustrated open configuration of the carton 105, one or more food products, e.g., French fries, chicken nuggets, etc., can be placed in the interior chamber 117 of the inner container portion 107 of the carton 105 prior to service to a customer.

[0035] In instances in which the food products in the interior chamber 117 of the carton 105 are heated food products, e.g., such as those provided by a quick service restaurant or other food vendor, the venting apertures 122 are positioned to provide a path for one or more fluids associated with such food products, e.g., steam, condensation, runoff, etc., to exit the interior chamber 117 and enter the pocket 111 between the interior container portion 107 and the outer sleeve portion 109 of the carton 105. In this regard, the venting apertures 122 are positioned to vent the interior chamber 117 into the pocket 111 and enhance the quality of the heated food product. [0036] In this regard, the pocket 111 can be a region of the interior 115 of the carton 105 into which fluids associated with food products in the interior container portion 107 of the carton 105 can flow to maintain one or more properties of the food products, for example, crispness (and/or minimizing, inhibiting, and or preventing sogginess), temperature, grease/oil content, tenderness, other taste and texture properties, etc.

[0037] In addition, the pocket 111 can provide a thermally insulating buffer between the outer sleeve 109 portion of the carton 105 and the interior container portion 107 of the container 105, e.g., such that a thermal gradient can be provided between the relatively high heat environment of the interior chamber 117 of the carton 105 in which one or more heated food products are stored, the pocket 111, and the outer surface of the outer sleeve portion 109 of the carton 105 about which a user grasps the carton 105. Accordingly, the thermally insulating pocket 111 can be provided to maintain a comfortable contact surface on the exterior of the outer sleeve portion 109 for a user's hands, and can minimize, inhibit, and/or prevent undesirably high heat transfer that could occur without the presence of the pocket 111. In this regard, the temperature of the outer surface of the outer sleeve portion 109 can be less than the temperature on the outer surface of the inner container portion 107 of the

carton 105 and/or a temperature of the thermally insulating pocket 111.

[0038] In one embodiment, heated fluids in the pocket 111 can support/maintain a desired temperature of the food products in the interior chamber 117 of the carton 105 by preventing the escape of heat from the carton 105. The pocket 111 can hold the heat that is vented from the interior chamber 117 so as to wrap the interior chamber 117 with a layer that is heated and help maintain the food product in the interior chamber 117 at an elevated temperature for a longer period of time.

**[0039]** As shown, in the open configuration of the carton 105, the top end flap 191 can be positioned away from the interior 115 of the carton 105 such that the accessory retention features are presented for receiving one or more accessories C, e.g., a sauce or condiment cup/container.

**[0040]** In this regard, an accessory C can be lowered into the opening 199, and such movement of the accessory can urge the retention flaps 201 to fold downwardly relative to the end flap 191 at the respective fold lines 203 so as to enlarge the opening 199 and accommodate the accessory therein. As such, the accessory can be retained via engagement with edges/surfaces of the top end flap 191 and/or the retention flaps 201. In one embodiment, a rim or flange of an accessory cup or container can rest upon/engage surrounding portions of the top end flap 191.

[0041] In order to close the top end 113 of the carton 105, the top end flaps 191, 195 can be folded toward one another at the respective fold lines 193, 197 into at least partial overlapping relation. In the illustrated embodiment, the end flap 195 can be positioned in at least partial face-to-face contact overlying the top end flap 191. To secure such closed configuration of the top 113 of the carton, the locking tab 205 extending from the top end flap 195 can be inserted into the cut/opening 196 such that frictional/interfering engagement of the locking tab 205 with the end flap 191, the back panel 151, and/or the back panel 131 maintains a closed configuration of the top end 113 of the carton 105.

[0042] In one embodiment, the inner back panel 131 can include a recessed notch 132 (Fig. 1) sized and configured to provide a clearance for insertion of the locking tab 205 into the interior 115 of the carton 105. Such sequence of steps can be reversed to provide the carton 105 with the ability to selectively close, open, and reclose. The closed configuration of the carton 105 are illustrated in Fig. 4.

[0043] Turning to Fig. 5 a plan view of an exterior surface 301 of a blank 303 for forming a carton 305 is illustrated. The blank 303 and the carton 305 formed therefrom can have one or more features that are the same or similar to those of the blank 103 and the carton 105 described above, and like or similar reference numerals designate like or similar features.

**[0044]** As shown, the bottom panel 161 of the blank 303/carton 305 is foldably connected to the inner front

panel 121 at a lateral fold line 390, as opposed to the curved fold line 190 of the blank 103/carton 105. In this regard, with additional reference to Figs. 8 and 9, the carton 305 can be formed and operated in a manner similar to that described above with regard to the carton 105, which can be provided with a straight bottom edge via the arrangement of the fold line 390.

**[0045]** Turning to Fig. 6, a plan view of an exterior surface 401 of a blank 403 for forming a carton 405 is illustrated. The blank 403 and the carton 405 formed therefrom can have one or more features that are the same or similar to those of the blanks 103, 303 and the cartons 105, 305 described above, and like or similar reference numerals designate like or similar features.

[0046] As shown, blank 403/carton 405 can be provided with a different arrangement of venting apertures 122 as compared to the blanks 103, 303 and cartons 105, 305 described above. In this regard, with additional reference to Fig. 11, the carton 405 can be formed and operated in a manner similar to that described above with regard to the cartons 105, 305.

[0047] The blanks according to the present disclosure can be, for example, formed from coated paperboard and similar materials. For example, 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 blanks. In accordance with the above-described embodiments, the blank 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 cartons, to function at least generally as described above. The blanks can also be laminated to or coated with one or more sheet-like materials at selected panels or panel sections.

[0048] In accordance with the above-described embodiments of the present disclosure, 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.

[0049] 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 spaced apart slits to be replaced with a continuous slit, a continuous score, 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. Also, a tear line can be a series of cut scores passing completely, or partially, through the material, that are separated by nicks.

**[0050]** The term "glue" is intended to encompass all manner of adhesives commonly used to secure carton panels in place.

[0051] 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.

#### 45 Claims

**1.** A carton for holding at least one food product, the carton comprising:

an inner container portion comprising a plurality of panels extending at least partially around an interior chamber of the inner container portion for holding at least one food product, the plurality of panels of the inner container portion comprising an inner front panel, an inner back panel, at least one inner side panel, and a bottom panel; and

an outer sleeve portion comprising a plurality of

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panels extending at least partially around the inner container portion, the plurality of panels of the outer sleeve portion comprising an outer front panel, an outer back panel, and at least one outer side panel,

the inner container portion is spaced apart from the outer sleeve portion to form a pocket between the inner container portion and the outer sleeve portion.

- 2. The carton of claim 1, wherein the pocket provides insulation between the inner container portion and the outer sleeve portion.
- The carton of claim 1, wherein the pocket receives steam and moisture from the inner container portion to maintain freshness of the at least one food product.
- **4.** The carton of claim 1, wherein the outer front panel is spaced apart from the inner front panel.
- 5. The carton of claim 4, wherein the at least one outer side panel is spaced apart from the at least one inner side panel.
- **6.** The carton of claim 5, further comprising a plurality of venting apertures formed in the inner container portion for venting the interior chamber of the inner container portion to the pocket.
- 7. The carton of claim 6, wherein at least one venting aperture is positioned in the inner front panel, and at least one venting aperture is positioned in the at least one inner side panel.
- **8.** The carton of claim 1, wherein at least one panel of the plurality of panels of the outer sleeve portion is foldably connected to the bottom panel.
- **9.** The carton of claim 8, wherein the outer front panel is foldably connected to the bottom panel.
- **10.** The carton of claim 9, wherein the bottom panel comprises a first portion foldably connected to a second portion.
- 11. The carton of claim 8, wherein the at least one outer side panel comprises a first portion foldably connected to a second portion such that the first portion of the at least one outer side panel is obliquely disposed relative to the second portion of the at least one outer side panel.
- **12.** The carton of claim 8, further comprising a plurality of end flaps foldably connected to a respective panel of the plurality of panels of the outer sleeve portion for forming a closed top end of the carton,

the plurality of end flaps comprises a first top end flap foldably connected to the outer back panel and a second top end flap foldably connected to the outer front panel, the first top end flap in at least partial overlapping relation with the second top end flap to form the closed top end of the carton.

**13.** A blank for forming a carton for holding at least one food product, the blank comprising:

an inner container portion comprising a plurality of panels for at least partially extending at least partially around an interior chamber of an inner container portion of the carton for holding at least one food product when the carton is formed from the blank, the plurality of panels of the inner container portion of the blank comprising an inner front panel, an inner back panel, at least one inner side panel, and a bottom panel; and an outer sleeve portion comprising a plurality of panels for extending at least partially around the inner container portion of the carton to form an outer sleeve portion of the carton when the carton is formed from the blank, the plurality of panels of the outer sleeve portion of the blank comprising an outer front panel, an outer back panel, and at least one outer side panel, the inner container portion of the carton is for being spaced apart from the outer sleeve portion of the carton for forming a pocket between the inner container portion of the carton and the outer sleeve portion of the carton when the carton

14. The blank of claim 13, further comprising a plurality of venting apertures formed in the inner container portion of the blank for venting the interior chamber of the inner container portion of the carton to the pocket when the carton is formed from the blank, wherein at least one venting aperture is positioned in the inner front panel, and at least one venting aperture is positioned in the at least one inner side panel.

is formed from the blank.

- 45 **15.** The blank of claim 13, wherein the outer front panel is foldably connected to the bottom panel.
  - 16. The blank of claim 15, further comprising a plurality of end flaps foldably connected to a respective panel of the plurality of panels of the outer sleeve portion of the blank for forming a closed top end of the carton formed from the blank,

the plurality of end flaps comprises a first top end flap foldably connected to the outer back panel and a second top end flap foldably connected to the outer front panel, the first top end flap for being positioned in at least partial overlapping relation with the second top end flap to form the closed top end of the carton

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formed from the blank.

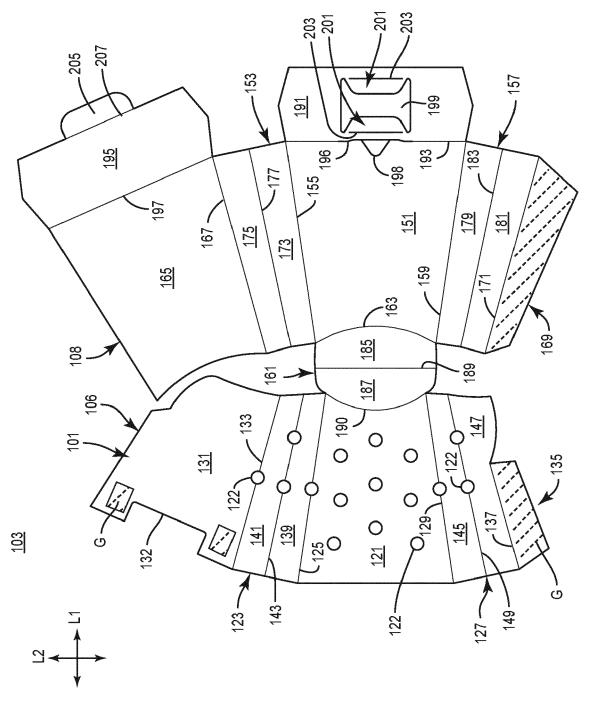
**17.** A method of forming a carton for holding at least one food product, the method comprising:

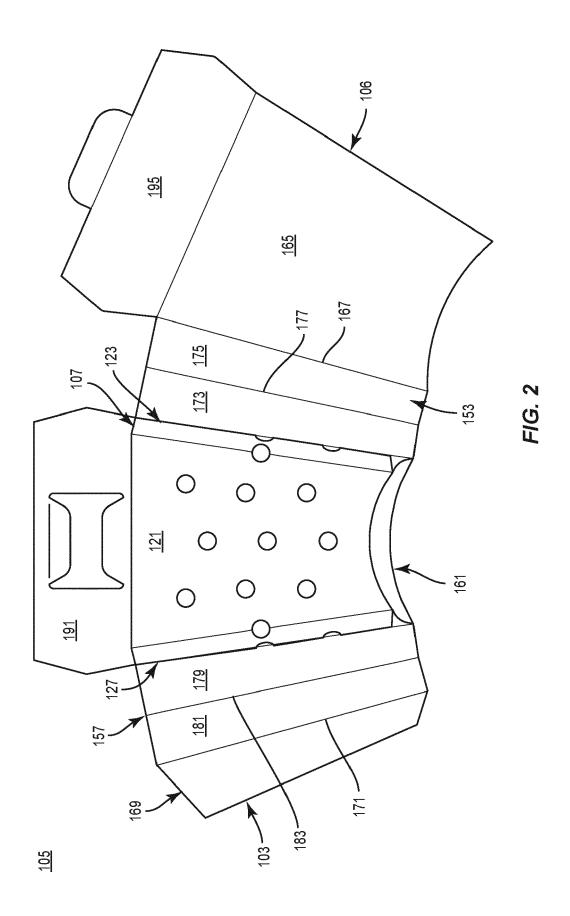
obtaining a blank comprising an inner container portion comprising a plurality of panels comprising an inner front panel, an inner back panel, at least one inner side panel, and a bottom panel, the blank further comprising an outer sleeve portion comprising a plurality of panels comprising an outer front panel, an outer back panel, and at least one outer side panel; folding the plurality of panels of the inner container portion of the blank to form an inner container portion of the carton; and folding the plurality of panels of the outer sleeve portion of the blank around the inner container portion of the carton to form an outer sleeve portion of the carton such that the inner container portion of the carton is spaced apart from the outer sleeve portion of the carton and such that a pocket is formed between the inner container portion of the carton and the outer sleeve portion of the carton.

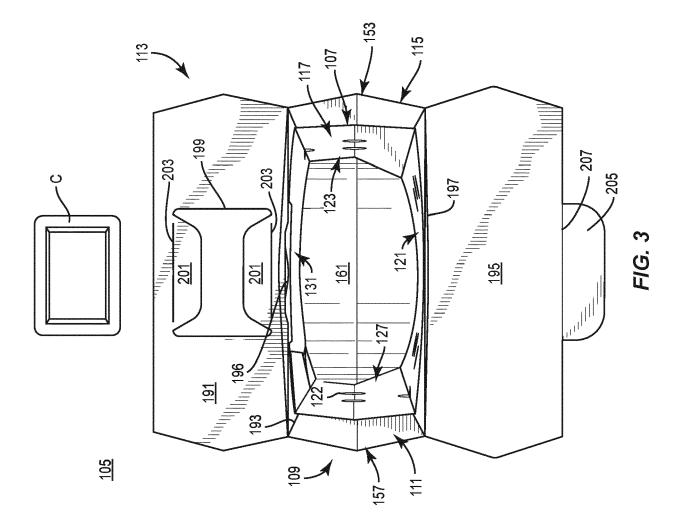
- **18.** The method of claim 17, wherein the pocket provides insulation between the inner container portion of the carton and the outer sleeve portion of the carton.
- 19. The method of claim 17, wherein the pocket receives steam and moisture from the inner container portion of the carton to maintain freshness of the at least one food product.
- 20. The method of claim 17, wherein the outer sleeve portion of the carton and the inner container portion of the carton are formed such that the outer front panel is spaced apart from the inner front panel.
- 21. The method of claim 20, wherein the outer sleeve portion of the carton and the inner container portion of the carton are formed such that the at least one outer side panel is spaced apart from the at least one inner side panel.
- 22. The method of claim 21, further comprising a plurality of venting apertures formed in the inner container portion of the carton for venting the interior chamber of the inner container portion to the pocket, wherein at least one venting aperture is positioned in the inner front panel, and at least one venting aperture is positioned in the at least one inner side panel.
- **23.** The method of claim 22, wherein the outer front panel is foldably connected to the bottom panel.
- 24. The method of claim 23, wherein the bottom panel

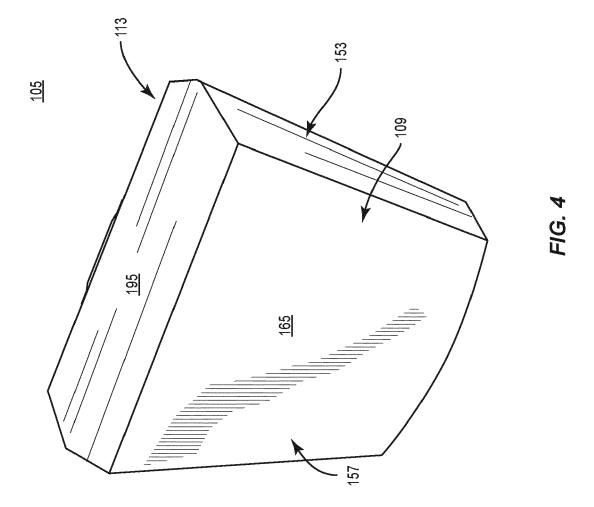
comprises a first portion foldably connected to a second portion, and at least one outer side panel comprises a first portion foldably connected to a second portion such that the first portion of the at least one outer side panel is obliquely disposed relative to the second portion of the at least one outer side panel.

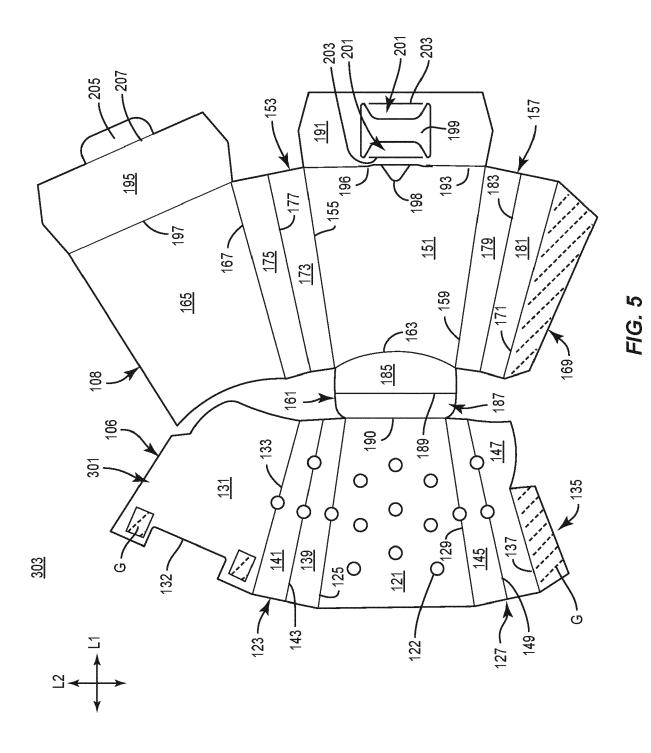
of end flaps foldably connected to a respective panel of the plurality of panels of the outer sleeve portion of the blank, the plurality of end flaps comprises a first top end flap foldably connected to the outer back panel and a second top end flap foldably connected to the outer front panel, and the method further comprises positioning the first top end flap in at least partial overlapping relation with the second top end flap to form a closed top end of the carton.

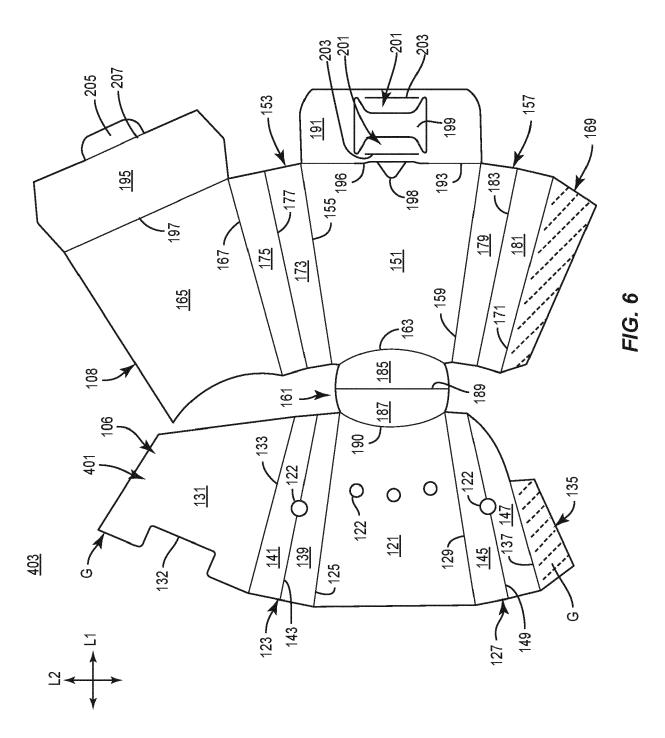












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#### REFERENCES CITED IN THE DESCRIPTION

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# Patent documents cited in the description

• US 63056064 [0001] [0002]