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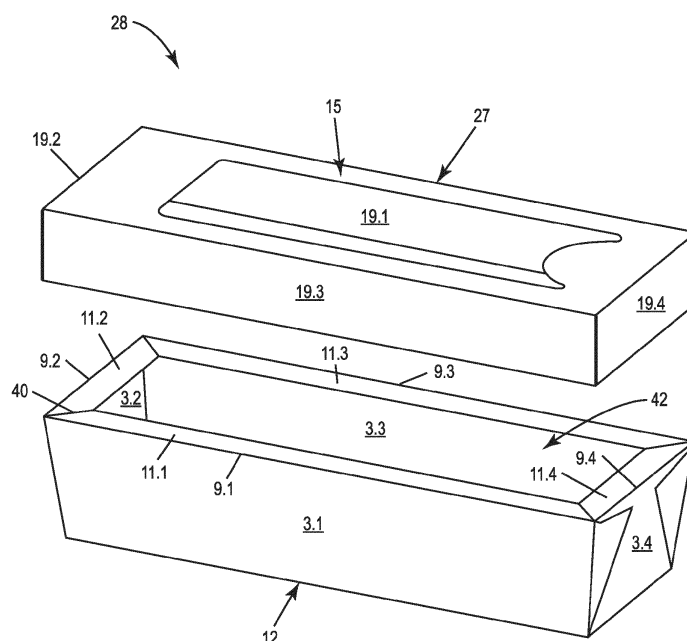
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(54) **CONSTRUCT WITH LOCKING FEATURES**

(57) A carton (28) for holding one or more products. The carton (28) can comprise a lid (27) comprising at least a top panel (14). Further, the carton can comprise a tray (12) comprising a bottom panel (2) and a plurality of tray side panels (3.1, 3.2, 3.3, 3.4) respectively foldably connected to the bottom panel (2). The plurality of tray side panels (3.1, 3.2, 3.3, 3.4) and the bottom panel (2) can extend at least partially around an interior (42) of the carton (28). The tray further can comprise a plurality of

closure flaps (11.1, 11.2, 11.3, 11.4). Each closure flap (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) can be foldably connected to respective tray side panels (3.1, 3.2, 3.3, 3.4) of the plurality of tray side panels (3.1, 3.2, 3.3, 3.4). The tray (12) can be at least partially received within the lid (27) with each of the closure flaps (11.1, 11.2, 11.3, 11.4) at least partially in contact with the top panel (14) when the carton (28) is in a closed configuration.

FIG. 8



Description

CROSS-REFERENCED TO RELATED APPLICATIONS

[0001] This application claims the benefit of German Utility Model Application No. 202022101893.6, filed on April 7, 2022.

INCORPORATION BY REFERENCE

[0002] The disclosure of German Utility Model Application No. 202022101893.6, which was filed on April 7, 2022, is hereby incorporated by reference as if presented herein in its entirety and is incorporated by reference for all purposes.

BACKGROUND OF THE DISCLOSURE

[0003] The present disclosure generally relates to cartons, trays, lids and/or other constructs for holding food products and/or other types of articles. More specifically, the present disclosure relates to assemblies of trays and lids with features for reducing loss of moisture and/or oils from the food products in the interiors of the assemblies.

SUMMARY OF THE DISCLOSURE

[0004] In general, one aspect of the disclosure is generally directed to a carton (28) for holding one or more products. The carton (28) can comprise a lid (27) comprising at least a top panel (14). Further, the carton can comprise a tray (12) comprising a bottom panel (2) and a plurality of tray side panels (3.1, 3.2, 3.3, 3.4) respectively foldably connected to the bottom panel (2). The plurality of tray side panels (3.1, 3.2, 3.3, 3.4) and the bottom panel (2) can extend at least partially around an interior (42) of the carton (28). The tray further can comprise a plurality of closure flaps (11.1, 11.2, 11.3, 11.4). Each closure flap (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) can be foldably connected to respective tray side panels (3.1, 3.2, 3.3, 3.4) of the plurality of tray side panels (3.1, 3.2, 3.3, 3.4). The tray (12) can be at least partially received within the lid (27) with each of the closure flaps (11.1, 11.2, 11.3, 11.4) at least partially in contact with the top panel (14) when the carton (28) is in a closed configuration.

[0005] In another aspect, the disclosure is generally directed to, in combination, a tray blank (1) and a lid blank (13) for forming a carton (28) for holding one or more products. The lid blank (13) can comprise at least a top panel (14), and the lid blank (13) can be for at least partially forming a lid (27) of the carton (28). The tray blank (1) can comprise a bottom panel (2), a plurality of tray side panels (3.1, 3.2, 3.3, 3.4) respectively foldably connected to the bottom panel (2), and a plurality of closure flaps (11.1, 11.2, 11.3, 11.4). Each closure flap (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1,

11.2, 11.3, 11.4) can be foldably connected to respective tray side panels (3.1, 3.2, 3.3, 3.4) of the plurality of tray side panels (3.1, 3.2, 3.3, 3.4). The tray blank (1) can be for at least partially forming a tray (12) of the carton (28). When the carton (28) is formed from the tray blank (1) and the lid blank (27) and is in a closed configuration, the tray (12) formed from the tray blank (1) is at least partially received within the lid (27) formed from the lid blank (13) with each of the closure flaps (11.1, 11.2, 11.3, 11.4) at least partially in contact with the top panel (14).

[0006] In another aspect, the disclosure is generally directed to a method of forming a carton (28) for holding one or more products. The method can comprise obtaining a lid blank (13) comprising at least a top panel (14), forming a lid (27) from the lid blank (13), and obtaining a tray blank (1). The tray blank can comprise a bottom panel (2), a plurality of tray side panels (3.1, 3.2, 3.3, 3.4) respectively foldably connected to the bottom panel (2), and a plurality of closure flaps (11.1, 11.2, 11.3, 11.4). Each closure flap (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) can be foldably connected to respective tray side panels (3.1, 3.2, 3.3, 3.4) of the plurality of tray side panels (3.1, 3.2, 3.3, 3.4). The method further can comprise forming a tray (12) from the tray blank (1) by folding the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) relative to the bottom panel (2). The tray (12) can cooperate with the lid (27) to form the carton (28), and the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) and the bottom panel (2) can extend at least partially around an interior (42) of the carton (28). The method also can comprise arranging the carton (28) in a closed configuration in which the tray (12) is at least partially received within the lid (27) with each of the closure flaps (11.1, 11.2, 11.3, 11.4) at least partially in contact with the top panel (14).

[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 an oblique view of a tray blank used to form a tray according to exemplary embodiments of the present disclosure.

Fig. 2 is a top perspective view of an erected tray formed from the tray blank of Fig. 1 according to exemplary embodiments of the present disclosure.

Fig. 3 is an oblique view of a lid blank used to form a lid according to exemplary embodiments of the present disclosure.

Figs. 4 and 5 are oblique views of the lid formed from the lid blank of Fig. 3 according to exemplary embodiments of the present disclosure, wherein the lid is in a flattened configuration.

Fig. 6 is a perspective view showing the erection of the lid of Figs. 4 and 5 according to exemplary embodiments of the present disclosure.

Fig. 7 is a perspective view of the erected lid according to exemplary embodiments of the present disclosure.

Fig. 8 is a perspective view showing the assembly of the lid of Fig. 7 and the tray of Fig. 2 to form a carton assembly according to exemplary embodiments of the present disclosure.

Figs. 9-12 are perspective views of the assembled carton according to exemplary embodiments of the present disclosure.

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

DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENTS

[0010] The package or carton assembly of the present disclosure can be useful in containing one or more products (e.g., a food product) or other articles such as any suitable type of product that can be stored, transported, served, sold, cooled, frozen, heated, and/or cooked. Some suitable products could comprise sushi, a sandwich, hot dog, French fries, nachos, fruits, vegetables, popcorn, cuts of meat, or any other suitable food product or other article. In embodiments, the food items can be prepared food products, such as those that may include moisture and/or oils and that may benefit from protection against drying out, for example. It is understood that food products (or non-food products) other than the food products listed herein may be contained in the package or carton assembly.

[0011] Constructs according to the present disclosure can accommodate one or more products or articles that may be generally cylindrical, rectangular, triangular, round, square, irregular, or any other shape. In this specification, the terms "inner," "interior," "outer," "exterior," "lower," "bottom," "upper," and "top" indicate orientations determined in relation to fully erected and upright constructs or packages. As described herein, constructs can be formed with multiple walls, panels, portions, tabs, flaps, and/or other aspects, which may be designated herein in terms relative to one another, e.g., "first", "sec-

ond", "third", etc., in sequential or nonsequential reference, without departing from the disclosure.

[0012] Fig. 1 is a view of a tray blank, generally indicated at 1, used to form a lower part or tray 12 (Figs. 2 and 8-12) of exemplary embodiments of the disclosure. Fig. 3 is a view of a lid blank, generally indicated at 13, used to form a lid 27 (Figs. 7-12) of exemplary embodiments of the disclosure. In the illustrated embodiments, the tray 12 and the lid 27 can cooperate to form a box or carton or assembly 28 (Figs. 8-12). The carton assembly or container 28 can include features in the tray 12 and/or the lid 27 for preventing and/or reducing the loss of moisture, oils, and/or other suitable fluids, such as due to leaking, seeping/soaking through layers of material, evaporation, entrainment in air, etc. In embodiments, carton assembly 28 can be used to hold and/or support and/or cover a food product (not shown), such as sushi, a sandwich, a hot dog, a turnover, a burrito, meats, French fries, and/or any other food product, during serving, display, and/or sale of the food product (e.g., at a quick-service and/or takeout restaurant, at a supermarket, food store, convenience store, etc.) and/or during storage, cooking, refrigerating, freezing, etc. of the food product. In alternative embodiments, the carton assembly 28 can hold and/or support and/or cover a non-food item or article.

[0013] In exemplary embodiments, the tray blank 1 can be a single- or multi-layer material. In embodiments, the material of the tray blank can include cardboard or paperboard (e.g., made with bleached cellulose and/or refined pine fibers) with a starch layer on the inner side. In exemplary embodiments, the material can include a layer of uncoated kraft board with a layer of brown paper with a release action on the side that comes into contact with a food item in the tray. The material can include a middle layer located between the two layers so that the middle layer connects the two outer layers to one another. The inner, food-facing layer can be a water- and/or oil-tight material and can be similar to parchment paper, perlite paper, baking paper, butter bread paper, wax paper, etc. In some embodiments, the inner, food contacting layer of the material could be a polymer barrier layer and/or another suitable material that is resistant and/or impervious to moisture and/or oils and/or other materials. In embodiments, the tray blank 1 can be formed from a multi-layer material with a layer of compacted cardboard or paper on its inner side with a density of at least 850 kg/m³ (e.g., at least 50 kg/m³ more than other cardboard or paperboard densities). This increased density can help prevent moisture and/or fat from penetrating into the blank material on the inside. In examples, the density of the board material can be at least 900 kg/m³, at least 1000 kg/m³, or at least 1200 kg/m³ in order to further help reduce the penetration of moisture and/or fat.

[0014] In exemplary embodiments, the lid blank 13 can be formed from a material that is different from the material of the tray blank 1. For example, the lid blank 13 could be formed from a coated primary fiber board. Alternatively, the lid blank 13 could be formed from the

same material as the tray blank 1. In embodiments, some or all of the paper-based materials of the tray and lid can be formed with primary (fresh) fibers (e.g., the food contacting layers). In some embodiments, one or more layers of the lid or tray can be kraft board. In alternative embodiments, the lid blank 13 and/or the tray blank 1 could be formed of any suitable material.

[0015] The tray blank 1 includes a central or bottom panel 2 (a bottom wall) foldably connected to four tray side panels 3.1, 3.2, 3.3, 3.4 along respective bottom fold lines 4.1, 4.2, 4.3, 4.4. In exemplary embodiments, the bottom panel 2 is rectangular with the fold lines 4.1, 4.3 extending in a longitudinal direction and the fold lines 4.2, 4.4 extending in a lateral direction. Further, the tray side panels 3.1, 3.2, 3.3, 3.4 can be trapezoidal so that they are wider opposite to the respective fold lines 4.1, 4.2, 4.3, 4.4 than they are along the fold lines 4.1, 4.2, 4.3, 4.4. The bottom panel 2 and/or the tray side panels 3.1, 3.2, 3.3, 3.4 could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure. For example, the bottom panel 2 could be square or any other suitable shape and/or the tray side panels 3.1, 3.2, 3.3, 3.4 could be rectangular, square, or any other suitable shape.

[0016] In the illustrated embodiment, the tray blank 1 includes corner connections or gussets 5.1, 5.2, 5.3, 5.4, each foldably connected to two adjacent tray side panels 3.1, 3.2, 3.3, 3.4 at respective corners of the bottom panel 2. As shown in Fig. 1, each of the gussets 5.1, 5.2, 5.3, 5.4 includes two gusset panels 6.1, 6.2; 6.3, 6.4; 6.5, 6.6; 6.7, 6.8, respectively, wherein each pair of gusset panels is foldably connected along a respective central fold line or gusset fold line 7.1, 7.2, 7.3, 7.4, each of which extending in an oblique direction from the respective corners of the bottom panel 2. In the illustrated embodiments, the gusset panels 6.1, 6.2 are foldably connected to the respective tray side panels 3.4, 3.1 along respective oblique fold lines 8.1, 8.2 so that the first gusset 5.1 is foldably connected to the respective tray side panels 3.4, 3.1 along the respective fold lines 8.1, 8.2. Similarly, the gusset panels 6.3, 6.4 are foldably connected to the respective tray side panels 3.1, 3.2 along respective oblique fold lines 8.3, 8.4 so that the second gusset 5.2 is foldably connected to the respective tray side panels 3.1, 3.2 along the respective fold lines 8.3, 8.4. The gusset panels 6.5, 6.6 are foldably connected to the respective tray side panels 3.2, 3.3 along respective oblique fold lines 8.5, 8.6 so that the third gusset 5.3 is foldably connected to the respective tray side panels 3.2, 3.3 along the respective fold lines 8.5, 8.6. The gusset panels 6.7, 6.8 are foldably connected to the respective tray side panels 3.3, 3.4 along respective oblique fold lines 8.7, 8.8 so that the fourth gusset 5.4 is foldably connected to the respective tray side panels 3.3, 3.4 along the respective fold lines 8.7, 8.8. As shown in Fig. 1, each of the gusset panels 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8 can be triangular and each of the gusset panels 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, the gusset fold lines 7.1, 7.2, 7.3,

7.4, and the fold lines 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8 extend to the respective corners of the bottom panel 2 so that gaps are not formed at the corners of the tray 12 along the junctions between the tray side panels 3.4, 3.1, 3.2, 3.3 or at the corners of the bottom panel 2. Any of the gussets 5.1, 5.2, 5.3, 5.4 could be omitted or could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure. For example, one or more of the gussets could be replaced by one or more adhesive tabs foldably connected to ends of one or more of the tray side panels and can be glued to other tray side panels to form the tray (e.g., using precise manufacturing to reduce or eliminate gaps to avoid leaks).

[0017] As shown in Fig. 1, each of the side panels 3.1, 3.2, 3.3, 3.4 is foldably connected to a respective sealing tab or closure flap 11.1, 11.2, 11.3, 11.4 along a respective closure fold line 9.1, 9.2, 9.3, 9.4. In embodiments, the closure flaps 11.1, 11.2, 11.3, 11.4 each can be trapezoidal with their wider sides extending along the respective closure fold lines 9.1, 9.2, 9.3, 9.4 and their outer free edges opposite to the respective fold lines 9.1, 9.2, 9.3, 9.4 being shorter. Accordingly, the closure flaps 11.1, 11.2, 11.3, 11.4 each have two oblique end edges 40, which can be free edges extending from the ends of the closure fold lines 9.1, 9.2, 9.3, 9.4, and the closure flaps each have a width that decreases with increasing distance from the respective closure fold lines 9.1, 9.2, 9.3, 9.4. In embodiments, the configuration (e.g., angle and length) of the oblique edges 40 can be arranged so that the closure flaps 11.1, 11.2, 11.3, 11.4 meet edge-to-edge at the edges 49 at the corners of the erected tray 12 (e.g., as shown in Fig. 8). Any of the closure flaps 11.1, 11.2, 11.3, 11.4 could be omitted or could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure.

[0018] As shown in Fig. 2, the tray 12 can be formed from the tray blank 1, according to embodiments, by folding the tray side panels 3.1, 3.2, 3.3, 3.4 upwardly along respective fold lines 4.1, 4.2, 4.3, 4.4 while folding the gusset panels 6.1, 6.2; 6.3, 6.4; 6.5, 6.6; 6.7, 6.8 of the respective gusset panels 5.1, 5.2, 5.3, 5.4 are folded along the respective gusset fold lines 7.1, 7.2, 7.3, 7.4 respectively against one another (e.g., the gusset panels 6.1, 6.2 are folded into face-to-face contact, the gusset panels 6.3, 6.4 are folded into face-to-face contact, the gusset panels 6.5, 6.6 are folded into face-to-face contact, and the gusset panels 6.7, 6.8 are folded into face-to-face contact). Further, as shown in Fig. 2, the gussets 5.1, 5.4 are folded along the respective fold lines 8.1, 8.8 against the side panel 3.4 (e.g., with the gusset panels 6.1, 6.8 in face-to-face contact with the exterior face of the side panel 3.4). Similarly, the gussets 5.2, 5.3 are folded along the respective fold lines 8.4, 8.5 against the side panel 3.2 (e.g., with the gusset panels 6.4, 6.5 in face-to-face contact with the exterior face of the side panel 3.2). In the illustrated embodiments, the gusset panels 6.1, 6.8 can be glued in face-to-face contact with the side panel 3.4 and the gusset panels 6.4, 6.5 can be glued in

face-to-face contact with the side panels 3.2 to secure the tray 12 in the erected configuration of Fig. 2. In embodiments, gusset panels of each of the gussets 5.1, 5.2, 5.3, 5.4 can be glued together. In the illustrated embodiments, the fold lines 8.1, 8.2; 8.3, 8.4; 8.5, 8.6; 8.7, 8.8 can be respectively brought together at the respective corners of the tray 12 with the gussets 5.1, 5.2, 5.3, 5.4 folded against the exterior of the tray 12 so that the side panels 3.1, 3.2, 3.3, 3.4 form a smooth sidewall along the interior of the tray 12 for ease of loading and unloading of items in the tray 12.

[0019] In the illustrated embodiments, the erected configuration of the tray 12 shown in Fig. 2 is stackable with other trays 12 in a nested configuration. For example, the trapezoidal shape of the side panels 3.1, 3.2, 3.3, 3.4 can result in the side panels 3.1, 3.2, 3.3, 3.4 extending upwardly and outwardly from the bottom panel 2 so that the open top of the tray 12 is wider than its bottom (e.g., the lateral and longitudinal cross-sections of the tray 12 are upward widening). In addition, as shown in Fig. 2, the unfolded closure flaps 11.1, 11.2, 11.3, 11.4 can extend upwardly and outwardly as extensions of the respective side panels 3.1, 3.2, 3.3, 3.4. Accordingly, a plurality of trays 12 can be stacked, one at least partially received within another, for storage and/or transportation of the trays 12. The tray(s) could be otherwise formed without departing from the disclosure. For example, one or more of the gussets 5.1, 5.2, 5.3, 5.4 could be folded against the exterior surfaces of the side panels 3.1, 3.3 and/or one or more of the gussets 5.1, 5.2, 5.3, 5.4 could be folded to the interior of the tray 12.

[0020] As shown in Fig. 3, the lid blank 13 can include a central or top panel 14 (a top wall), which can be rectangular or any other suitable shape. An elongated window opening 15 can be formed in the top panel 14 and can be defined by three edges 16.1, 16.2, 16.3 that are parallel to the adjacent edges of the top panel 14 (e.g., the edges 16.1, 16.3 can extend in a longitudinal direction and the edge 16.2 can extend in a lateral direction of the lid blank 13). As shown in Fig. 3, the window opening 15 further can be defined by a circular, arc-shaped edge 16.4, wherein the ends of the arc-shaped edge 16.4 merge into the adjacent straight edges 16.2, 16.3 via radii 17.1, 17.2, which are curved in an opposite direction from the arc-shaped edge 16.4. the area of the window opening 15 can be two thirds or less of the area of the top panel 14 or can be half or less of the area of the top panel to help avoid deformations in the lid 27 (e.g., due to stresses in the film 25, such as those caused by moistening of the film material). The window opening 15 could be omitted or could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure.

[0021] In the illustrated embodiments, the top panel 14 can be foldably connected to four lid side tabs or panels 19.1, 19.2, 19.3, 19.4 along respective top fold lines 18.1, 18.2, 18.3, 18.4. In embodiments, the lid side panels 19.1, 19.2, 19.3, 19.4 can be rectangular or any other suitable

shape. In exemplary embodiments, the top fold lines 18.1, 18.3 can extend in a longitudinal direction and the top fold lines 18.2, 18.4 can extend in a lateral direction. The top panel 14 and/or the lid side panels 19.1, 19.2, 19.3, 19.4 could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure.

[0022] As shown in Fig. 3, the lid blank 13 can include corner connections 21.1, 21.2, 21.3, 21.4, each foldably connected to two adjacent lid side panels 19.1, 19.2, 19.3, 19.4 at respective corners of the top panel 14 via respective fold lines 20.1, 20.2; 20.3, 20.4; 20.5, 20.6; 20.7, 20.8. In the illustrated embodiments, each of the corner connections 21.1, 21.2, 21.3, 21.4 can include two connector tabs 22.1, 22.2; 22.3, 22.4; 22.5, 22.6; 22.7, 22.8, respectively, wherein each pair of connector tabs is foldably connected along a respective central fold line or connector fold line 23.1, 23.2, 23.3, 23.4, each of which extending in an oblique direction with respect to the top fold lines 18.1, 18.2, 18.3, 18.4. In embodiments, the respectively adjacent connector tabs 22.1, 22.2; 22.3, 22.4; 22.5, 22.6; 22.7, 22.8 can be separable from one another along respective cut lines 24.1, 24.2, 24.3, 24.4, which could be any suitable line of weakening (e.g., tear lines, cuts, etc.). In exemplary embodiments, the cut lines 24.1, 24.2, 24.3, 24.4 can be at least partially curved, e.g., so that connector tabs 22.1, 22.8 are curved away from the lid side panel 19.4 to which they are connected via respective fold lines 20.1, 20.8, and so that connector tabs 22.4, 22.5 are curved away from the lid side panel 19.2 to which they are connected via respective fold lines 20.4, 20.5. In this way, the connector tabs 22.1, 22.8; 22.4, 22.5 that are connected to the respective shorter lid side panels 19.4, 19.2 can be larger than the connector tabs 22.2, 22.3; 22.6, 22.7 that are connected to the longer lid side panels 19.1, 19.3. Any of the corner connections 21.1, 21.2, 21.3, 21.4 could be omitted or could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure. For example, one or more of the corner connections could be replaced by one or more adhesive tabs foldably connected to ends of one or more of the lid side panels and can be glued to other lid side panels to form the tray. In embodiments, such a configuration of the lid could be formed with inclined side panels so that the lids could be stacked (nested) for storage and/or transportation.

[0023] As shown in Fig. 3, a film 25 (e.g., a transparent film or a film that is semi-transparent, translucent, colored, opaque, etc.) can be applied to the inner face of the top panel 14 so that the film 25 covers (e.g., completely covers) the window opening 15. In an example, the film 25 is cellulose acetate or another suitable material. In the illustrated embodiments, the film 25 can allow a potential buyer or others to view the article(s) within the package via the window opening 15. In embodiments, the film 25 can be adhered or otherwise attached to the inner face of the top wall 14 around a perimeter of the window opening 15 by an adhesive 26. In an exemplary

embodiment, the adhesive can be applied in an adhesive line 26, which can be a continuous, uninterrupted line of adhesive (e.g., so that the adhesive forms a continuous seal around the perimeter of the window opening) or can be a series of spaced lines or dots arranged around the perimeter of the window opening 15. The film 25 could be omitted or could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure.

[0024] As shown in Figs. 4 and 5, according to embodiments, the cover or lid 27 can be formed in a flattened configuration by folding the long lid side panels 19.1, 19.3 along the respective top fold lines 18.1, 18.3 over the inner face of the top panel 14 so that the lid side panels 19.1, 19.3 are in face-to-face contact with the top panel 14. As the lid side panels 19.1, 19.3 are folded over the top panel 14, the corner connections 21.1, 21.4 and 21.2, 21.3 are folded over the respective short lid side panels 19.2, 19.4 so that the corner connections 21.1, 21.4 are in face-to-face contact with the inner face of the lid side panel 19.4 and the corner connections 21.2, 21.3 are in face-to-face contact with the inner face of the lid side panel 19.2. In exemplary embodiments, the connector tabs 22.1, 22.8 can be glued to the lid side panel 19.4 and the connector tabs 22.4, 22.5 can be glued to the lid side panel 19.2. In embodiments, a plurality of the lids 27 in the flattened configuration of Figs. 4 and 5 can be stacked for storage and/or transportation.

[0025] As shown in Figs. 6 and 7, the lid 27 can be moved from the flattened configuration of Figs. 4 and 5 to an erected configuration, ready for assembly with a respective tray 12. As shown in Fig. 6, the lid side panels 19.1, 19.2, 19.3, 19.4 are folded relative to the top panel 14 (e.g., the long lid side panels 19.1, 19.3 are folded away from the top panel 14 and the short lid side panels 19.2, 19.4 are folded toward one another) to extend vertically from the top panel 14. In embodiments, as the lid side panels 19.1, 19.2, 19.3, 19.4 are moved to the erected configuration, the connector tabs 22.2, 22.7 and 22.3, 22.6 fold along the respective fold lines 23.1, 20.2; 23.4, 20.7; 23.2, 20.3; 23.3, 20.6, separating from the respective connector tabs 22.1, 22.8 and 22.4, 22.5, so that the connector tabs 22.2, 22.7 and 22.3, 22.6 are folded over and in face-to-face contact with the respective connector tabs 22.1, 22.8 and 22.4, 22.5 (Fig. 7). The lid 27 is shown in its erected configuration in Figs. 7 and 8. The lid 27 could be otherwise formed without departing from the disclosure.

[0026] As shown in Fig. 8, the carton assembly 28 can be formed from the erected tray 12 and the erected lid 27 and can define an interior 42 of the carton 28 in which one or more food items can be placed. In exemplary embodiments, after one or more food items or other products are placed in the tray 12, the closure flaps 11.1, 11.2, 11.3, 11.4 can be folded along the respective fold lines 9.1, 9.2, 9.3, 9.4 over the open top of the tray 12 so that the oblique edges 40 of the closure flaps 11.1, 11.2, 11.3, 11.4 are brought together in edge-to-edge contact. In em-

bodiments, folded the closure flaps 11.1, 11.2, 11.3, 11.4 can be parallel to the bottom panel 2 on the inner side of the tray side panels 3.1, 3.2, 3.3, 3.4 and can form a continuous or at least partially continuous sealing feature at the top of the tray 12. In exemplary embodiments, the folded closure flaps 11.1, 11.2, 11.3, 11.4 can help align the closure fold lines 9.1, 9.2, 9.3, 9.4 of the tray 12 (e.g., for being tightly received in the lid 27) and can help stiffen the upper edges of the tray side panels 3.1, 3.2, 3.3, 3.4 along the fold lines 9.1, 9.2, 9.3, 9.4.

[0027] In the illustrated embodiments, the lid 27 can be moved over the tray 12 and lowered so that the inner faces of the lid side panels 19.1, 19.2, 19.3, 19.4 over the closure fold lines 9.1, 9.2, 9.3, 9.4 at the upper edges of the tray side panels 3.1, 3.2, 3.3, 3.4 until the top panel 14 rests tightly against the fold lines 9.1, 9.2, 9.3, 9.4. In embodiments, the fold lines 9.1, 9.2, 9.3, 9.4 of the tray 12 are enclosed precisely by the corners between the lid side panels 19.1, 19.2, 19.3, 19.4 and the top panel 14. In exemplary embodiments, the closure fold lines 9.1, 9.2, 9.3, 9.4 of the tray 12 can be positioned in contact with or in close proximity to the respective top fold lines 18.1, 18.2, 18.3, 18.4 of the lid 27 in the carton assembly 28 when the lid 27 is fully installed over the tray 12. In embodiments, this tight fitting between the lid 27 and the upper edges of the tray side panels 3.1, 3.2, 3.3, 3.4 (e.g., aligned and stiffened by the folded and edge contacting closure flaps 11.1, 11.2, 11.3, 11.4) can help reduce or eliminate the movement of air, moisture, oil, and/or other fluids between the lid 27 and the tray 12. In some embodiments, the closure flaps 11.1, 11.2, 11.3, 11.4 can be biased upwardly (e.g., according to the configuration of the respective fold lines 9.1, 9.2, 9.3, 9.4) so that the closure flaps 11.1, 11.2, 11.3, 11.4 are urged upwardly against the top panel 14 when the lid 27 is fully assembled onto the tray 12 to further help reduce or prevent fluid from moving in or out of the carton 28 at the juncture between the lid 27 and the tray 12. For example, restoring forces can act on the closure fold lines 9.1, 9.2, 9.3, 9.4 to push the closure flaps 11.1, 11.2, 11.3, 11.4 upwardly. In embodiments, the closure flaps 11.1, 11.2, 11.3, 11.4 can be at least partially in contact (e.g., face-to-face contact) with the top panel 14. In exemplary embodiments, the stiffening of the tray 12 by the folded closure flaps 11.1, 11.2, 11.3, 11.4 also can help the top panel 14 to bear uniformly against (e.g., bear circumferentially tightly against) the closure flaps. Also, the bias of the closure flaps against the top panel 14 can help compensate for production tolerances in the forming of the blanks 1, 13, the tray 12, and/or the lid 27.

[0028] The carton assembly 28 is shown in its closed configuration in Figs. 9 and 10. The carton assembly 28 could be otherwise formed without departing from the disclosure.

[0029] As shown in Figs. 11 and 12, labels 29, 30 can be attached (e.g., adhered) to the two narrow sides of the carton assembly 28. In embodiments, the labels 29, 30 can have respective lower label sections 29.1, 30.1

fixed on the outer surface of the tray 12 and can have respective upper label sections 29.2, 30.2 fixed on the outer surface of the lid 27. In the illustrated embodiments, the label 29 is rectangular and the label 30 has a circular upper end portion 30.3 that is fixed to the circular projection 31 of the top panel 14 defined by the circular edge 16.4 of the window opening 15. In the illustrated embodiments, the circular upper end portion 30.3 of the label 30 can have a similar or the same radius as the circular projection 31. In exemplary embodiments, the circular projection 31 can help create a uniform support for attachment of the label 30 to the lid 27 and can help guide the placement of the label on the lid for promoting proper placement of the label. In embodiments, the labels 29, 30 can serve as a tamper-evident closures and can be used as flexible information carriers, such as to display various manufacturers, marks, and contents of the folding box. The lid 27 and the tray 12 could be otherwise secured together in the carton assembly 28 without departing from the disclosure.

[0030] In embodiments, the carton assembly 28 can help reduce moisture and/or oil loss from food items contained in the interior 42 over a period of time. For example, sushi or other prepared food items may be on display in refrigerated cases for sale for up to 48 hours or any other suitable time period. It can be desirable to contain the sushi or other prepared food in containers that retain the moisture and/or oils of the food in the interior of the package. For example, plastic (e.g., PET) containers can be impervious to moisture and oils and can be sealed against air flow to help retain moisture and oils and to prevent drying out of the food item (e.g., while it is on display in the refrigerated display case. As discussed above, the carton 28 can be formed from materials with barrier layers (e.g., parchment paper, films, etc.) that can help retain moisture and/or oils in the interior 42 of the carton 28. In embodiments, the gussets 5.1, 5.2, 5.3, 5.4 can help eliminate or avoid gaps or openings in the sides and bottom of the tray 12 to prevent or reduce leaking of moisture and/or oils from the interior 42 of the container. Further, the tight fit of the lid 27 over the upper edges of the tray side panels 3.1, 3.2, 3.3, 3.4, which upper edges are stiffened by the folded closure flaps 11.1, 11.2, 11.3, 11.4 as described above, and the bias of the folded closure flaps 11.1, 11.2, 11.3, 11.4 that causes the top panel 14 of the lid 27 to bear against the closure flaps 11.1, 11.2, 11.3, 11.4 can help retain moisture and/or oil in the interior 42 of the carton 28 and can help prevent air from moving into and out of the package. For example, the cool, dry air of a refrigerated display case could undesirably dry out sushi or other foods contained in the carton 28 if it were to flow through the container. The tight fit of the lid 27 against the fold lines 9.1, 9.2, 9.3, 9.4 and the closure flaps 11.1, 11.2, 11.3, 11.4 of the tray 12 can help prevent air flow at the interface between the tray 12 and the lid 27. Accordingly, the sealing features of the carton assembly 28 can help avoid drying out of the food items.

[0031] Further, as described above, the materials of

the carton assembly 28 can be renewable materials that can replace the disposable plastic containers previously used to contain sushi and other food items. This can be beneficial, for example, in regions with high demand for renewable packaging materials and/or where single use plastics are banned or subject to limitations (e.g., the Single Use Plastic Directive in the European Union).

[0032] In embodiments, the lid 27 and the tray 12 can be separated, which can facilitate loading items into the interior 42 of the container 28 and/or removal of the items. Also, the tray 12 can be used as a plate or bowl after the lid 27 is removed.

[0033] The tray blank 1, the lid blank 13, the tray 12, the lid 27, and/or the carton 28 could be otherwise shaped, arranged, positioned, and/or configured without departing from the disclosure. The blanks and constructs described above are included by way of example. For example, the shapes of the overall tray and lid could be any suitable shape. The shapes described above and included in the figures are included by way of example.

[0034] 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 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 blank may then be coated with a varnish to protect information printed on the blanks. The blank may also be coated with, for example, a moisture barrier layer, on either or both sides of the blanks. The blank can also be laminated to or coated with one or more sheet-like materials at selected panels or panel sections.

[0035] 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.

[0036] 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.

[0037] The foregoing description of the disclosure il-

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.

Claims

1. A carton (28) for holding one or more products, the carton (28) comprising:

a lid (27) comprising at least a top panel (14); and
a tray (12) comprising:

a bottom panel (2);
a plurality of tray side panels (3.1, 3.2, 3.3, 3.4) respectively foldably connected to the bottom panel (2), the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) and the bottom panel (2) extending at least partially around an interior (42) of the carton (28); and
a plurality of closure flaps (11.1, 11.2, 11.3, 11.4), each closure flap (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) being foldably connected to respective tray side panels (3.1, 3.2, 3.3, 3.4) of the plurality of tray side panels (3.1, 3.2, 3.3, 3.4);

wherein the tray (12) is at least partially received within the lid (27) with each of the closure flaps (11.1, 11.2, 11.3, 11.4) at least partially in contact with the top panel (14) when the carton (28) is in a closed configuration.

2. The carton (28) of claim 1, wherein the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) comprises a first tray side panel (3.1) and a second tray side panel (3.2), and the tray (12) further comprises a gusset (5.2) foldably connected to the first tray side panel (3.1) and the second tray side panel (3.2) at a corner of the bottom panel (2).

3. The carton (28) of claim 2, wherein the gusset (5.2)

comprises a first gusset panel (6.3) foldably connected to a second gusset panel (6.4) along a gusset fold line (7.2), and the first gusset panel (6.3), the second gusset panel (6.4), and the gusset fold line (7.2) extend to the corner of the bottom panel (2).

4. The carton (28) of claim 2, wherein at least a portion of the gusset (5.2) is attached to an exterior side of one of the first tray side panel (3.1) and the second tray side panel (3.2).

5. The carton (28) of claim 1, wherein the tray (12) further comprises a plurality of gussets (5.1, 5.2, 5.3, 5.4), each gusset (5.1, 5.2, 5.3, 5.4) of the plurality of gussets (5.1, 5.2, 5.3, 5.4) being foldably connected to two tray side panels (3.1, 3.2, 3.3, 3.4) of the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) at respective corners of the bottom panel (2).

6. The carton (28) of claim 1, wherein the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) comprises a first tray side panel (3.1) and a second tray side panel (3.2), the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) comprises a first closure flap (11.1) foldably connected to the first tray side panel (3.1) and a second closure flap (11.2) foldably connected to the second tray side panel (3.2), the first closure flap (11.1) and the second closure flap (11.2) are nonparallel with the first tray side panel (3.1) and the second tray side panel (3.2) and have respective oblique edges (40) that at least partially contact one another.

7. The carton (28) of claim 1, wherein the closure flaps (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) extend inwardly from the respective tray side panels (3.1, 3.2, 3.3, 3.4), and the closure flaps (11.1, 11.2, 11.3, 11.4) are foldably connected to the respective tray side panels (3.1, 3.2, 3.3, 3.4) along respective closure fold lines (9.1, 9.2, 9.3, 9.4), wherein the closure fold lines (9.1, 9.2, 9.3, 9.4) are configured to bias the respective closure flaps (11.1, 11.2, 11.3, 11.4) upwardly, toward the top panel (14).

8. The carton (28) of claim 1, wherein the closure flaps (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) are foldably connected to the respective tray side panels (3.1, 3.2, 3.3, 3.4) along respective closure fold lines (9.1, 9.2, 9.3, 9.4), the lid (27) comprises a plurality of lid side panels (19.1, 19.2, 19.3, 19.4) foldably connected to the top panel (14) along respective top fold lines (18.1, 18.2, 18.3, 18.4), and the closure fold lines (9.1, 9.2, 9.3, 9.4) are positioned proximate to or in contact with the respective top fold lines (18.1, 18.2, 18.3, 18.4) when the carton (28) is in the closed configuration.

9. The carton (28) of claim 1, wherein the lid (27) com-

- prises a plurality of lid side panels (19.1, 19.2, 19.3, 19.4) foldably connected to the top panel (14) and a plurality of corner connections (21.1, 21.2, 21.3, 12.4), each corner connections (21.1, 21.2, 21.3, 12.4) of the plurality of corner connections (21.1, 21.2, 21.3, 12.4) being foldably connected to two lid side panels (19.1, 19.2, 19.3, 19.4) of the plurality of lid side panels (19.1, 19.2, 19.3, 19.4) and comprising a first connector panel (22.1, 22.4, 22.5, 22.8) foldably connected to a second connector panel (22.2, 22.3, 22.6, 22.7) along a respective oblique fold line (23.1, 23.2, 23.3, 23.4), each of the first connector panels (22.1, 22.4, 22.5, 22.8) being separable from the respective second connector panels (22.2, 22.3, 22.6, 22.7) along respective cut lines (24.1, 24.2, 24.3, 24.4).
- 10.** The carton (28) of claim 1, wherein the lid (27) comprises a window opening (15) extending in the top panel, the window opening (15) being spaced apart from the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) when the carton (28) is in the closed configuration, and wherein a film (25) is sealed to the top panel (14) around a perimeter of the window opening (15).
- 11.** The carton (28) of claim 1, further comprising at least a paperboard layer and a barrier layer, wherein at least a portion of the barrier layer extends along the interior (42) of the carton (28), and the barrier layer is at least partially resistant to the passage of moisture and oil through the barrier layer.
- 12.** In combination, a tray blank (1) and a lid blank (13) for forming a carton (28) for holding one or more products,
- the lid blank (13) comprising at least a top panel (14), wherein the lid blank (13) is for at least partially forming a lid (27) of the carton (28); and the tray blank (1) comprising:
- a bottom panel (2);
- a plurality of tray side panels (3.1, 3.2, 3.3, 3.4) respectively foldably connected to the bottom panel (2); and
- a plurality of closure flaps (11.1, 11.2, 11.3, 11.4), each closure flap (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) being foldably connected to respective tray side panels (3.1, 3.2, 3.3, 3.4) of the plurality of tray side panels (3.1, 3.2, 3.3, 3.4);
- wherein the tray blank (1) is for at least partially forming a tray (12) of the carton (28);
- wherein, when the carton (28) is formed from the tray blank (1) and the lid blank (27) and is in a closed configuration, the tray (12) formed from the tray blank (1) is at least partially received within the lid (27) with each of the closure flaps (11.1, 11.2, 11.3, 11.4) at least partially in contact with the top panel (14).
- 13.** The combination of claim 12, wherein the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) comprises a first tray side panel (3.1) and a second tray side panel (3.2), and the tray blank (1) further comprises a gusset (5.2) foldably connected to the first tray side panel (3.1) and the second tray side panel (3.2) at a corner of the bottom panel (2).
- 14.** The combination of claim 13, wherein the gusset (5.2) comprises a first gusset panel (6.3) foldably connected to a second gusset panel (6.4) along a gusset fold line (7.2), and the first gusset panel (6.3), the second gusset panel (6.4), and the gusset fold line (7.2) extend to the corner of the bottom panel (2).
- 15.** The combination of claim 12, wherein the tray blank (1) further comprises a plurality of gussets (5.1, 5.2, 5.3, 5.4), each gusset (5.1, 5.2, 5.3, 5.4) of the plurality of gussets (5.1, 5.2, 5.3, 5.4) being foldably connected to two tray side panels (3.1, 3.2, 3.3, 3.4) of the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) at respective corners of the bottom panel (2).
- 16.** The combination of claim 12, wherein the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) comprises a first tray side panel (3.1) and a second tray side panel (3.2), the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) comprises a first closure flap (11.1) foldably connected to the first tray side panel (3.1) and a second closure flap (11.2) foldably connected to the second tray side panel (3.2), the first closure flap (11.1) and the second closure flap (11.2) are for being positioned nonparallel with the first tray side panel (3.1) and the second tray side panel (3.2) and have respective oblique edges (40) that are for at least partially contacting one another when the tray (12) is formed from the tray blank (1).
- 17.** The combination of claim 12, wherein the closure flaps (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) are for extending inwardly from the respective tray side panels (3.1, 3.2, 3.3, 3.4) when the tray (12) is formed from the tray blank (1), and the closure flaps (11.1, 11.2, 11.3, 11.4) are foldably connected to the respective tray side panels (3.1, 3.2, 3.3, 3.4) along respective closure fold lines (9.1, 9.2, 9.3, 9.4), wherein the closure fold lines (9.1, 9.2, 9.3, 9.4) are configured to bias the respective closure flaps (11.1, 11.2, 11.3, 11.4) upwardly when the tray (12) is formed from the tray blank (1).

18. The combination of claim 12, wherein the lid blank (13) comprises a plurality of lid side panels (19.1, 19.2, 19.3, 19.4) foldably connected to the top panel (14) and a plurality of corner connections (21.1, 21.2, 21.3, 12.4), each corner connection (21.1, 21.2, 21.3, 12.4) of the plurality of corner connections (21.1, 21.2, 21.3, 12.4) being foldably connected to two lid side panels (19.1, 19.2, 19.3, 19.4) of the plurality of lid side panels (19.1, 19.2, 19.3, 19.4) and comprising a first connector panel (22.1, 22.4, 22.5, 22.8) foldably connected to a second connector panel (22.2, 22.3, 22.6, 22.7) along a respective oblique fold line (23.1, 23.2, 23.3, 23.4), each of the first connector panels (22.1, 22.4, 22.5, 22.8) being separable from the respective second connector panels (22.2, 22.3, 22.6, 22.7) along respective cut lines (24.1, 24.2, 24.3, 24.4).
19. The combination of claim 12, wherein the lid blank (13) comprises a window opening (15) extending in the top panel, and wherein a film (25) is sealed to the top panel (14) around a perimeter of the window opening (15).
20. The combination of claim 12, further comprising at least a paperboard layer and a barrier layer, wherein at least a portion of the barrier layer extends along the interior (42) of the carton (28) formed from the tray blank (1) and the lid blank (13), and the barrier layer is at least partially resistant to the passage of moisture and oil through the barrier layer.
21. A method of forming a carton (28) for holding one or more products, the method comprising:
- obtaining a lid blank (13) comprising at least a top panel (14);
 - forming a lid (27) from the lid blank (13);
 - obtaining a tray blank (1) comprising:
 - a bottom panel (2);
 - a plurality of tray side panels (3.1, 3.2, 3.3, 3.4) respectively foldably connected to the bottom panel (2); and
 - a plurality of closure flaps (11.1, 11.2, 11.3, 11.4), each closure flap (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) being foldably connected to respective tray side panels (3.1, 3.2, 3.3, 3.4) of the plurality of tray side panels (3.1, 3.2, 3.3, 3.4);
 - forming a tray (12) from the tray blank (1) by folding the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) relative to the bottom panel (2), wherein the tray (12) cooperates with the lid (27) to form the carton (28), and the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) and the bottom panel (2) extend at least partially around an interior (42) of the carton (28); and
 - arranging the carton (28) in a closed configuration in which the tray (12) is at least partially received within the lid (27) with each of the closure flaps (11.1, 11.2, 11.3, 11.4) at least partially in contact with the top panel (14).
22. The method of claim 21, wherein the tray blank (1) further comprises a plurality of gussets (5.1, 5.2, 5.3, 5.4), each gusset (5.1, 5.2, 5.3, 5.4) of the plurality of gussets (5.1, 5.2, 5.3, 5.4) being foldably connected to two tray side panels (3.1, 3.2, 3.3, 3.4) of the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) at respective corners of the bottom panel (2), and the forming the tray (12) comprises folding each of the gussets (5.1, 5.2, 5.3, 5.4) into contact with respectively adjacent ones of the tray side panels (3.1, 3.2, 3.3, 3.4).
23. The method of claim 21, wherein the plurality of tray side panels (3.1, 3.2, 3.3, 3.4) comprises a first tray side panel (3.1) and a second tray side panel (3.2), the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) comprises a first closure flap (11.1) foldably connected to the first tray side panel (3.1) and a second closure flap (11.2) foldably connected to the second tray side panel (3.2), each of the first closure flap (11.1) and the second closure flap (11.2) having an oblique edge (40), the forming the tray (12) comprises folding the first closure flap (11.1) and the second closure flap (11.2) to extend inwardly from the respective first tray side panel (3.1) and second tray side panel (3.2) and to bring the oblique edges (40) of the first closure flap (11.1) and the second closure flap (11.2) into contact.
24. The method of claim 21, wherein the closure flaps (11.1, 11.2, 11.3, 11.4) of the plurality of closure flaps (11.1, 11.2, 11.3, 11.4) are foldably connected to the respective tray side panels (3.1, 3.2, 3.3, 3.4) along respective closure fold lines (9.1, 9.2, 9.3, 9.4), the lid (27) comprises a plurality of lid side panels (19.1, 19.2, 19.3, 19.4) foldably connected to the top panel (14) along respective top fold lines (18.1, 18.2, 18.3, 18.4), and the arranging the carton (28) in the closed configuration comprises positioning the closure fold lines (9.1, 9.2, 9.3, 9.4) proximate to or in contact with the respective top fold lines (18.1, 18.2, 18.3, 18.4).
25. The method of claim 21, wherein the lid blank (13) comprises a plurality of lid side panels (19.1, 19.2, 19.3, 19.4) foldably connected to the top panel (14), and the forming the lid (27) comprises folding one or more lid side panels (19.1, 19.2, 19.3, 19.4) of the plurality of lid side panels (19.1, 19.2, 19.3, 19.4) over the top panel (14) to place the lid (27) in a flat-

tened configuration and folding the plurality of lid side panels (19.1, 19.2, 19.3, 19.4) to extend away from the top panel (14) to place the lid (27) in an erected configuration.

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FIG. 1

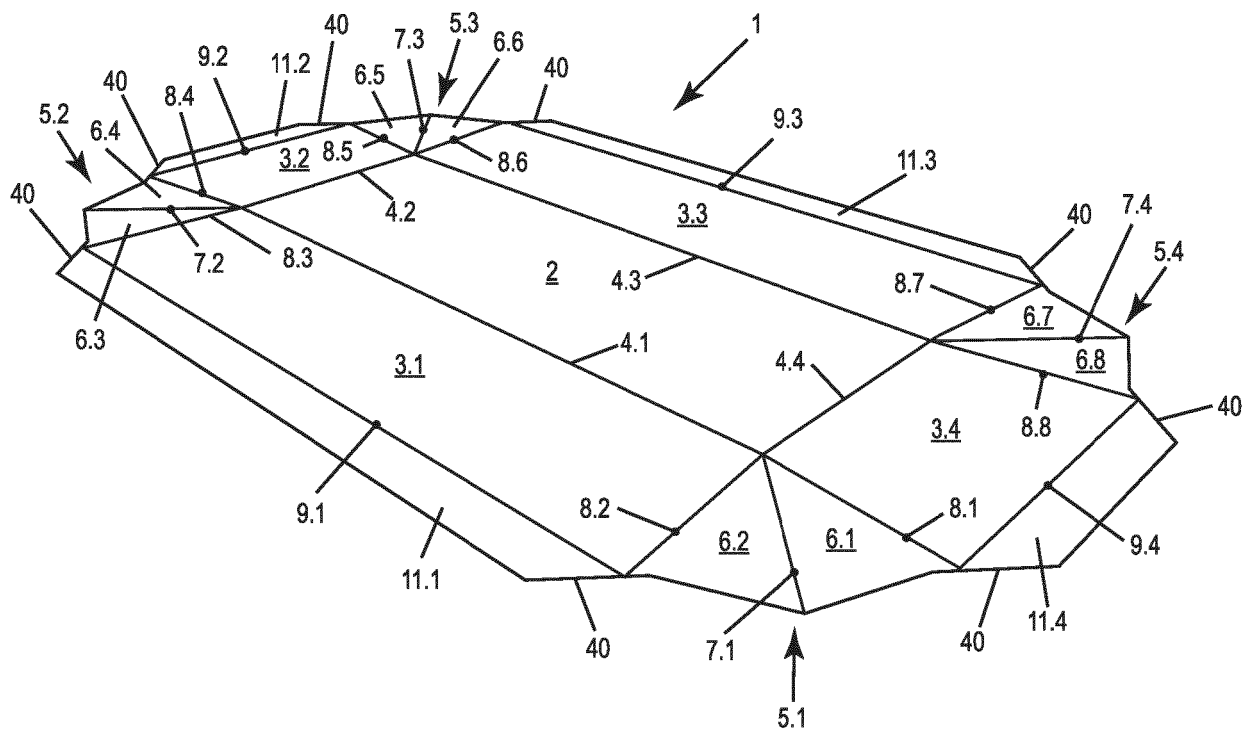


FIG. 2

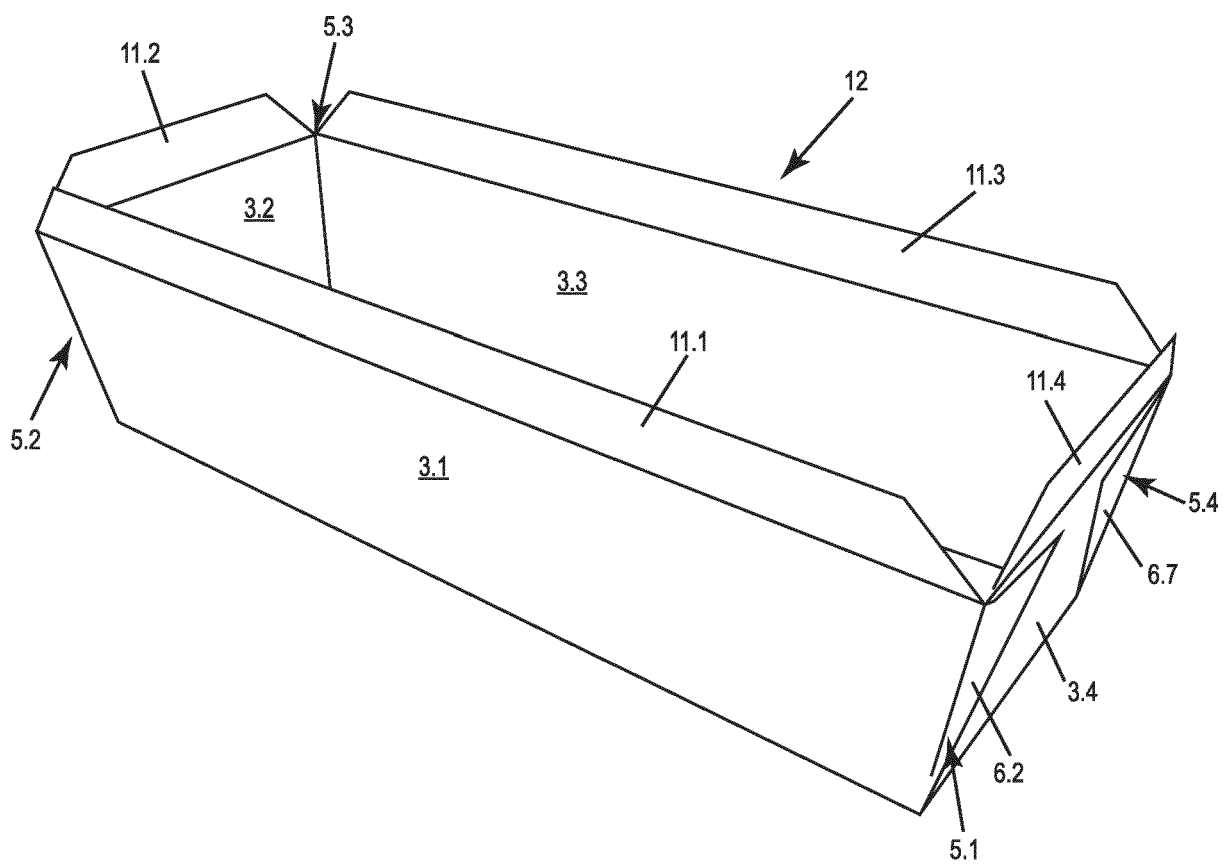


FIG. 3

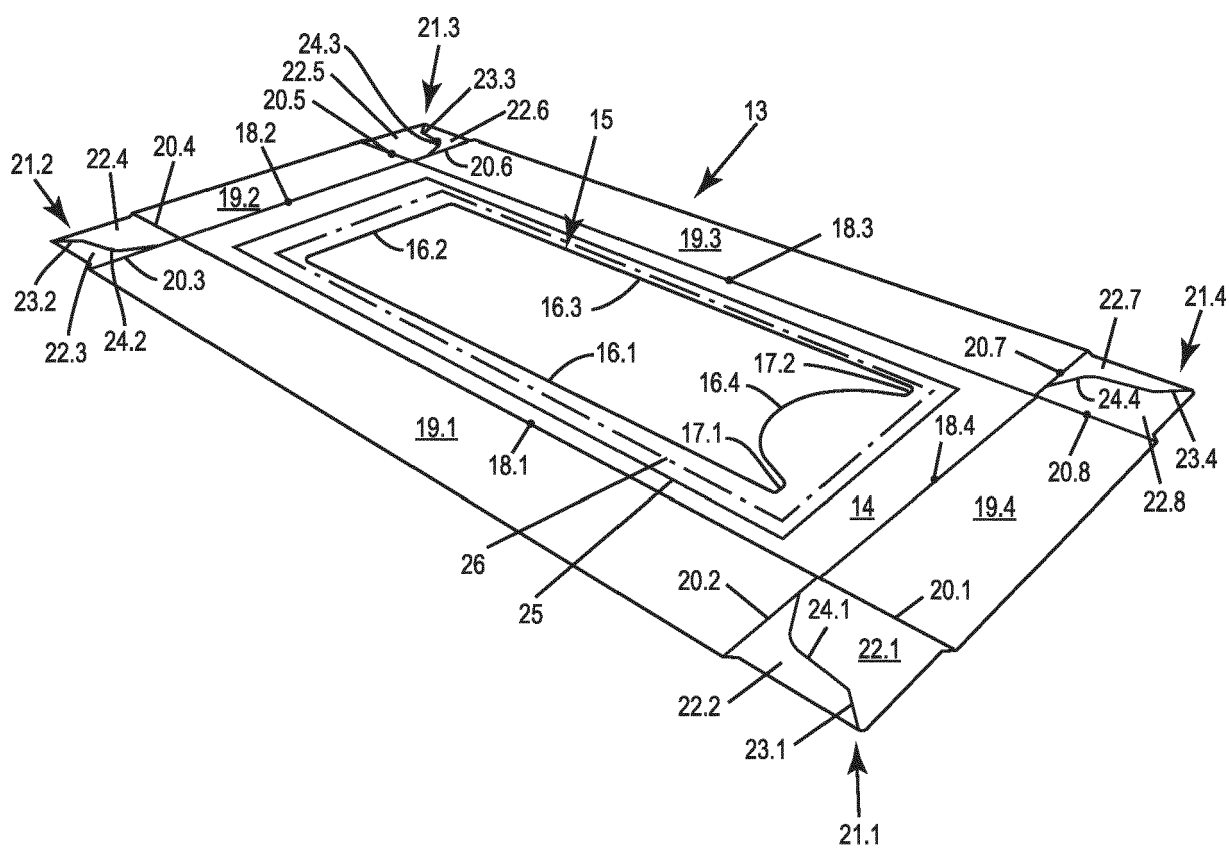


FIG. 4

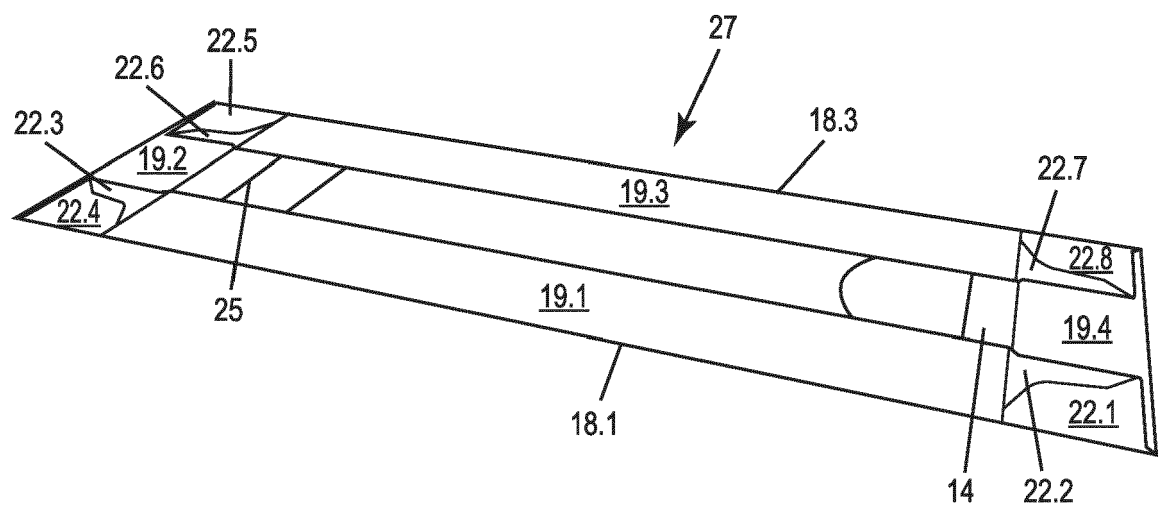


FIG. 5

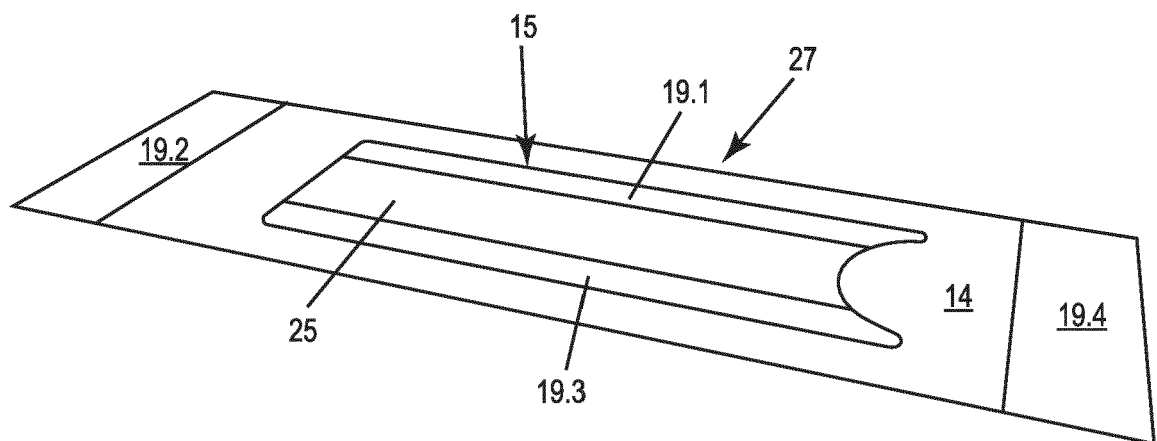


FIG. 6

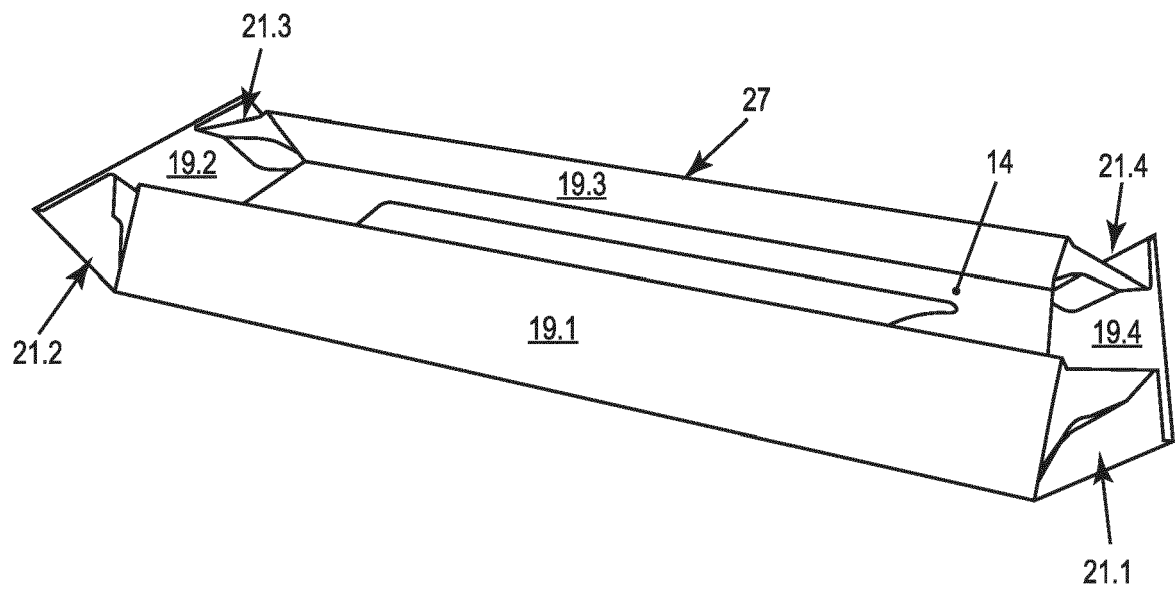


FIG. 7

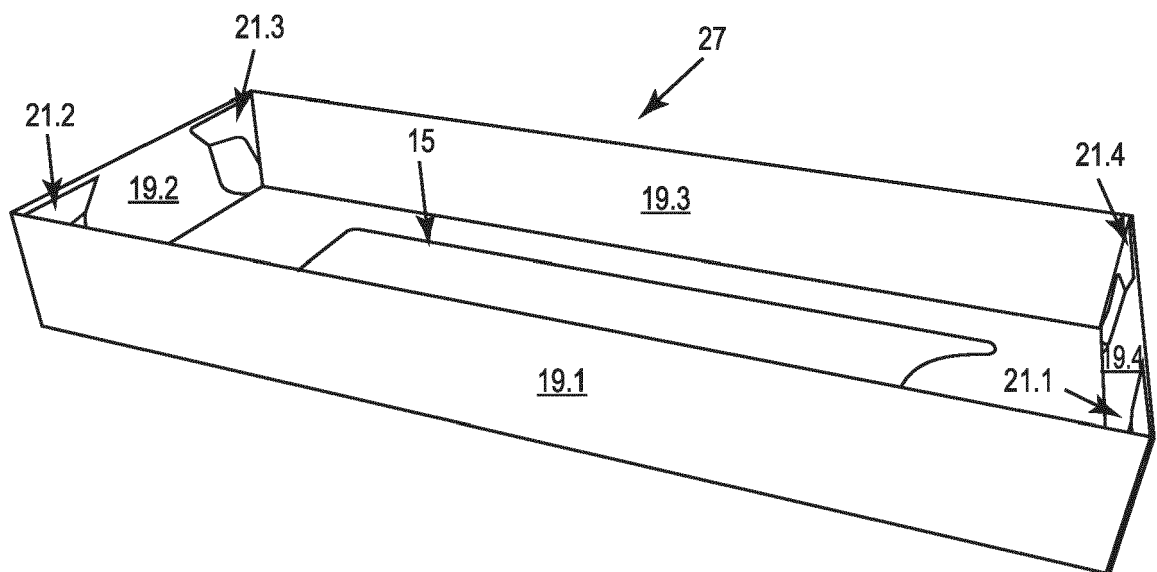


FIG. 8

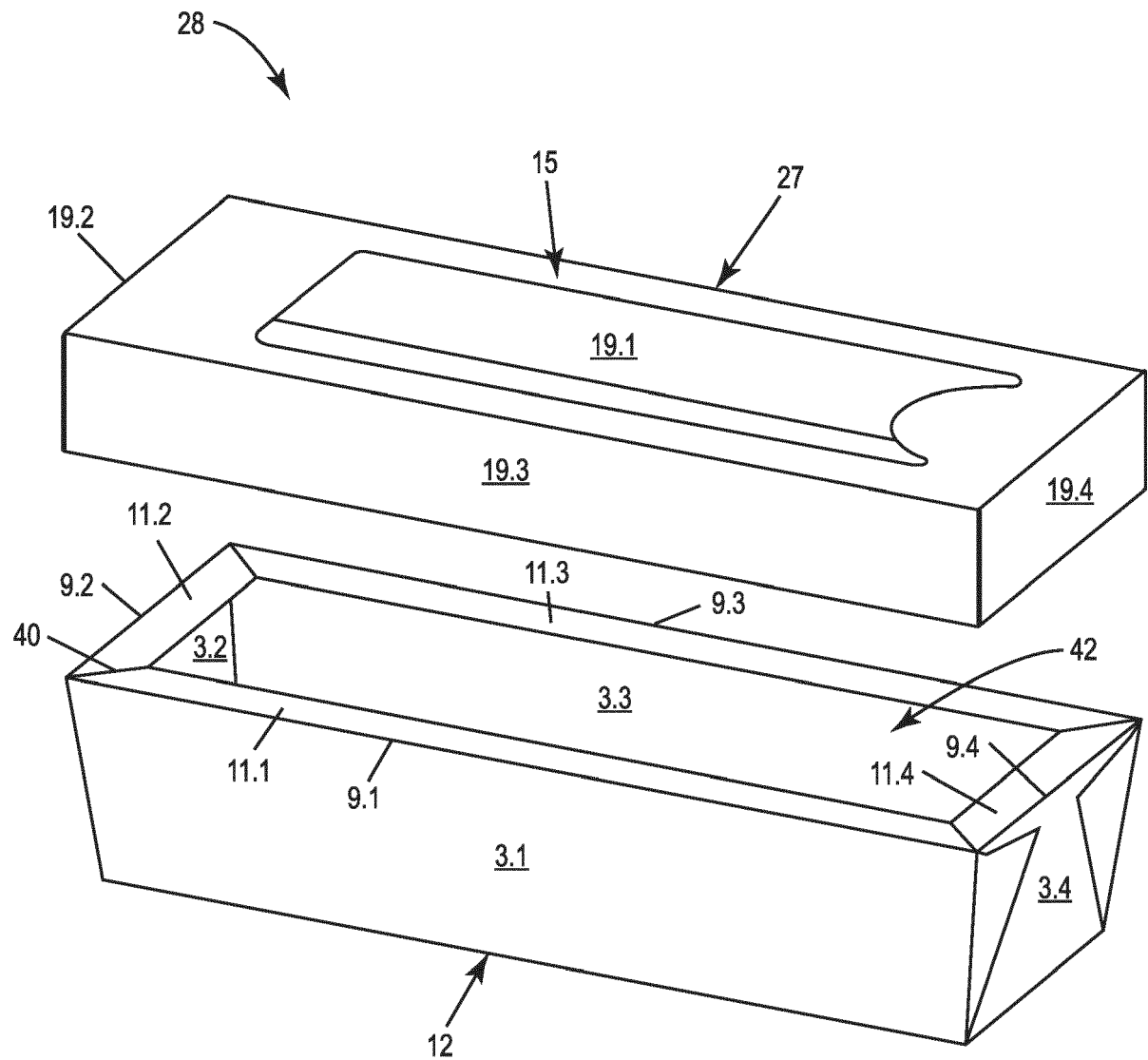


FIG. 9

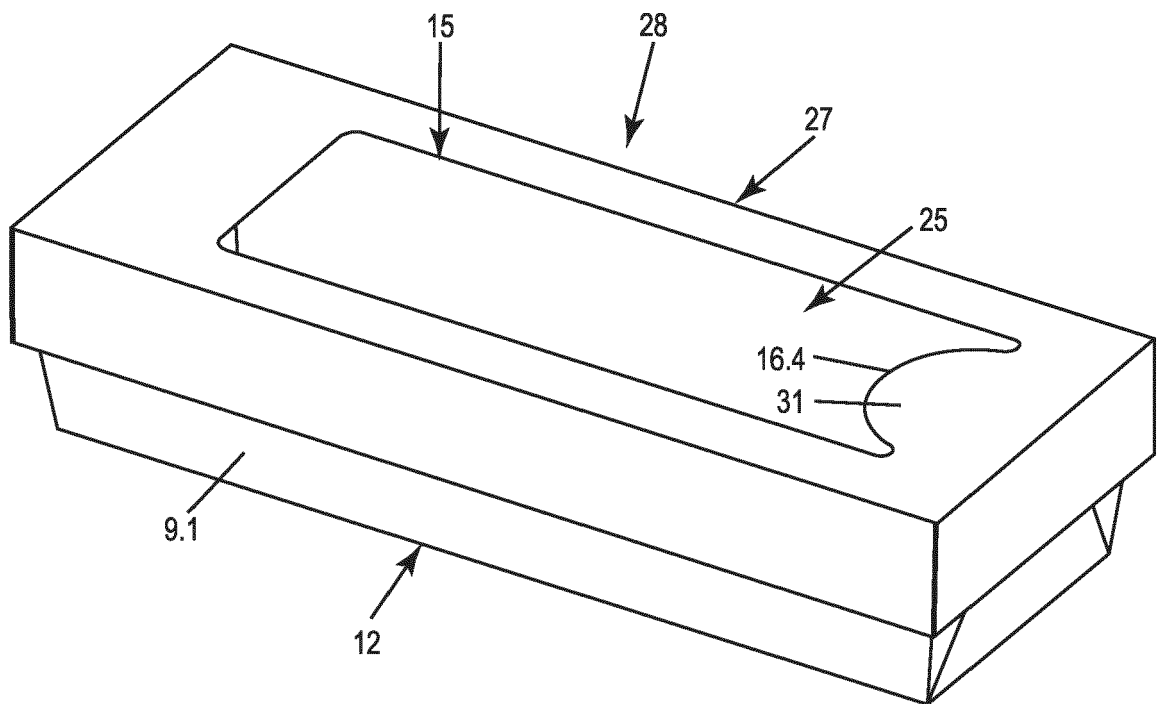


FIG. 10

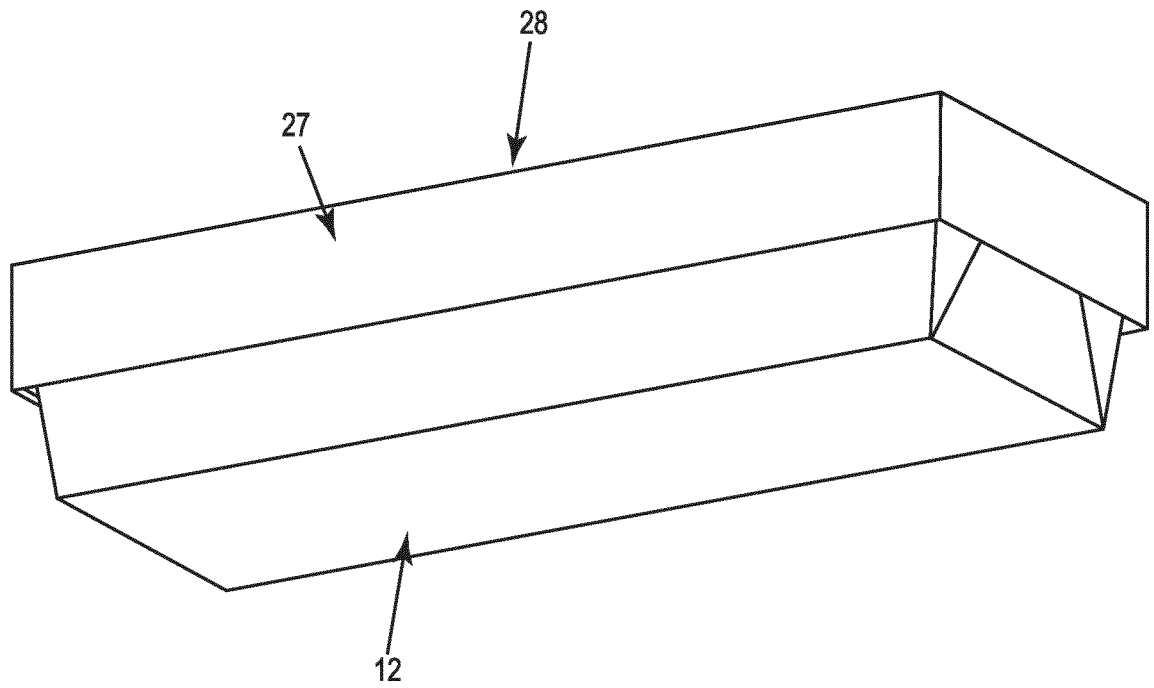


FIG. 11

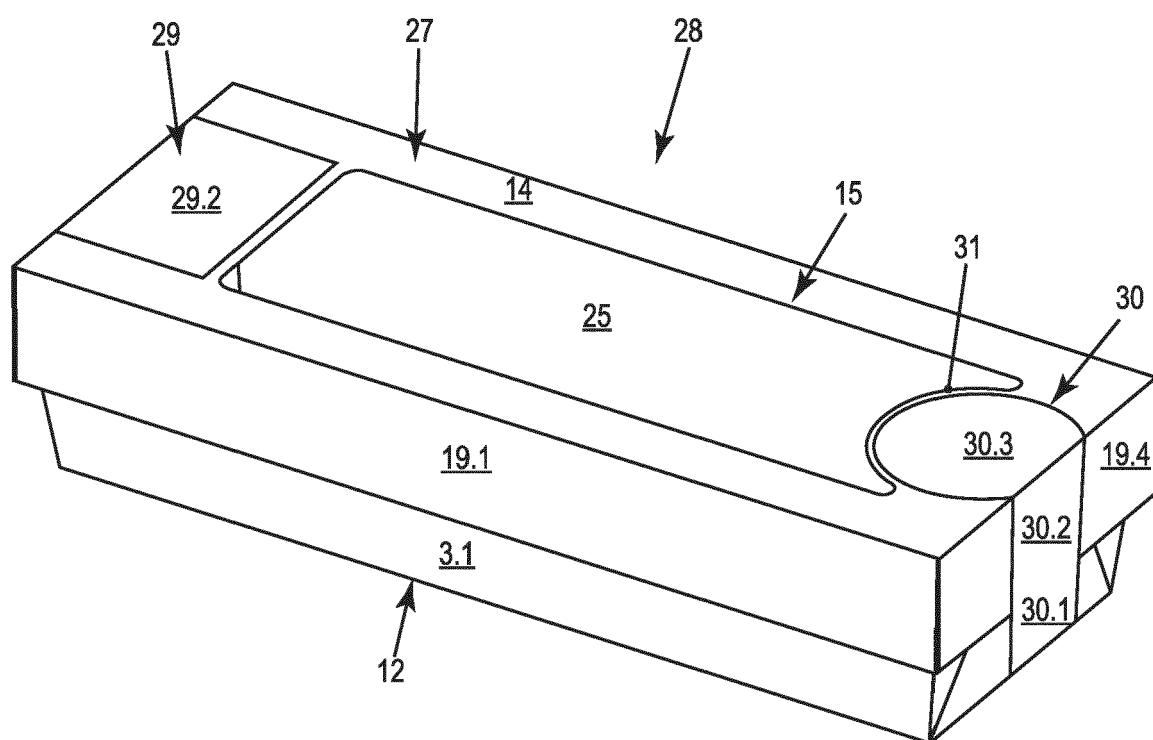
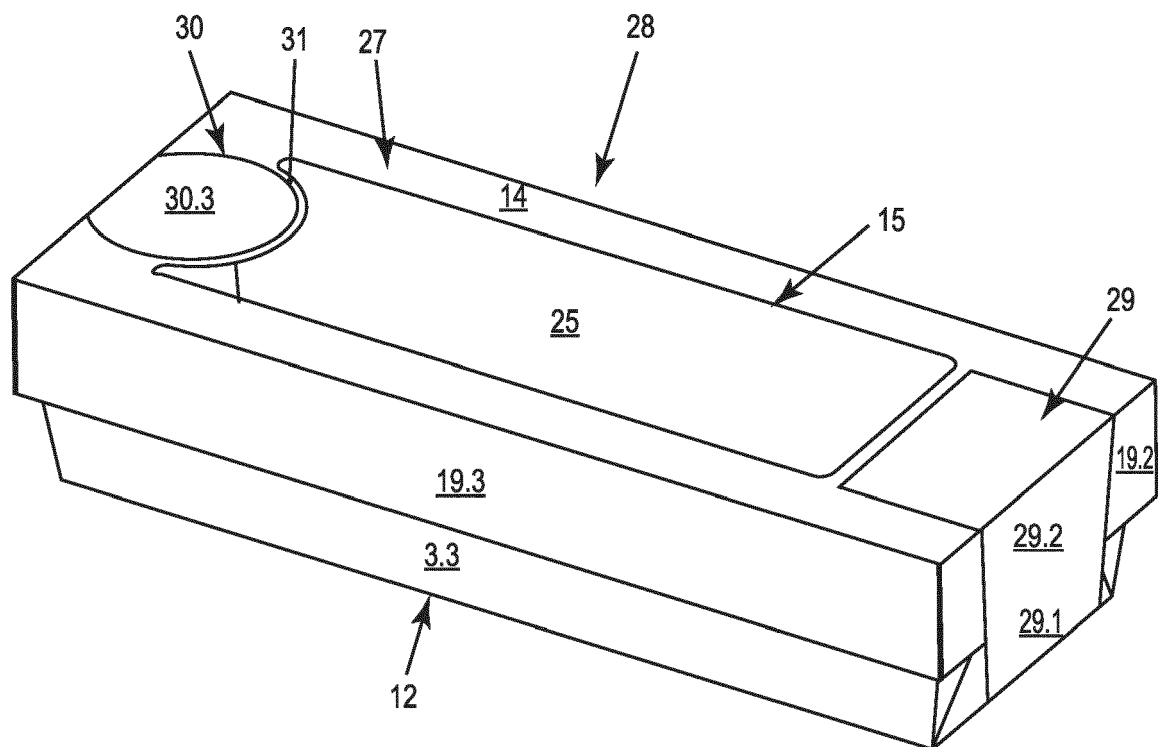


FIG. 12



REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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