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- The application is published incomplete as filed (Rule 68(1) EPC).
- A request for correction of the claims's numbering has been filed pursuant to Rule 139 EPC. A decision on the request will be taken during the proceedings before the Examining Division (Guidelines for Examination in the EPO, A-V, 3.).

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(54) **Carrier for articles**

(57) A carrier (290) for securing one or more articles (182) includes a central wall (210,232), a handle (292), a pair of base securing structures (296), and a pair of cantilevered top securing structures (294). The carrier (290) is formed by securing a pair of carrier parts together and the outside surface of substantially each carrier part is the surface of one side of a blank (200) that forms the carrier part (290). The top securing structures (294) each include a tubular structure and one or more neck receiving apertures (214,216,218). The neck receiving apertures (214,216,218) include resistive tabs (215,217,219) disposed along part of the edge of the neck receiving apertures (214,216,218). The carrier (290) can be formed to carry articles upside down or right side up.

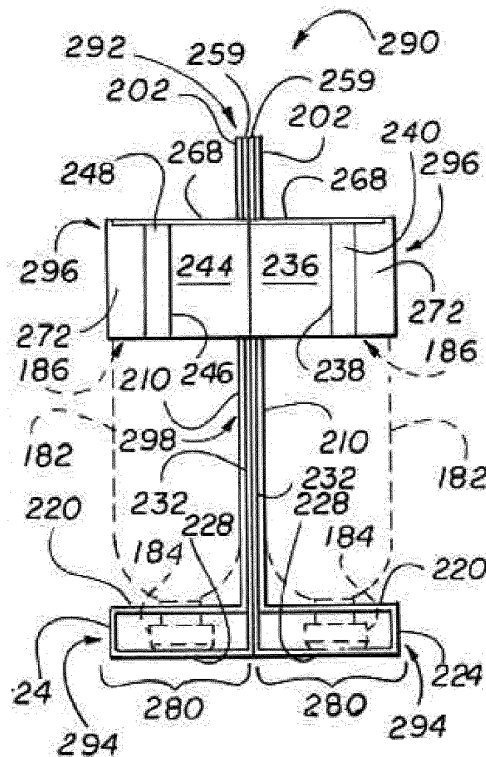


FIGURE 16

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Description

FIELD OF THE INVENTION

[0001] This invention relates generally to carriers and, more particularly, to carriers for articles, more specifically, but not necessarily exclusively, to carriers for bottles.

BACKGROUND OF THE INVENTION

[0002] Carriers for articles such as beverage bottles are useful to enable consumers to transport and store the articles. Such carriers may be designed to expose articles, but the carrier may obstruct the articles and may also provide have limited space for displaying information such as advertising copy and graphics, because to securely enclose the articles, much of the surface area of the typical carrier faces inward. For example, the typical six-pack carrier includes the same amount of inside surface as outside surface, and bottles usually obstruct the view of copy on the handle panel. It is particularly challenging to provide carriers that work in concert with the aesthetics of high-end articles, such as bottles for so-called designer water brands. Depending on the material and contents of the articles, transparent articles may reveal the unattractive reverse side of the carrier, which is often brown paperboard.

[0003] Furthermore some beverages, for example fruit juices, which have a fleshy sediment, when stored can become separated into a watery first liquid and a thicker, second sediment. A consumer is required to mix the beverage prior to opening. A package that facilitates the mixing of two-part beverages, such as flavoured waters and juices as examples, would be advantageous.

SUMMARY OF THE INVENTION

[0004] The present invention overcomes the shortcomings of the prior art by providing, in one aspect, a carrier that is configured to maximize the surface area that is available for displaying information, while otherwise promoting the aesthetics of the articles substantially without revealing the reverse side of the carrier material that need not be attractive so as to bear information or graphics, or to otherwise provide an aesthetic backdrop for a transparent article. The carrier is also configured to easily and securely engage articles during loading and to provide a structure that supports articles well when the carrier is carried. The carrier is also tamper resistant and tamper evident. Optionally, another aspect of the invention provides a carrier for bottles disposed in an inverted configuration.

[0005] More specifically, according to an aspect of the various embodiments, a carrier for securing multiple articles each having a base and a top is formed to define a composite handle and central wall that extends vertically between a pair of cantilevered top securing structures and between a pair of base securing structures that

stabilize the respective tops and bases of cylindrical articles such as beverage bottles that are positioned along each side of the central wall. In certain embodiments, for example, the central wall is formed as the composite of at least two central panels and extends between two rows of three bottles, although any number of articles may be retained in the carrier. The composite handle extends upward from the central wall, and is formed from at least two handle panels, at least one of which is contiguous to one of the central panels that define the composite central wall. Thus, the central wall is a strong composite that can support the articles from lateral movement, and together with the composite handle, provides primary weight bearing capacity of the carrier.

[0006] According to another aspect of the various embodiments, the handle extends upward, and may extend adjacent either the base securing structures or the top securing structures, as the cylindrical articles may be carried upright or upside down. According to another aspect of the embodiments, the top securing structures retain the top of each cylindrical article by engaging a small part of the uppermost portion, while minimizing obstruction of the remainder of the cylindrical article. For example, the top securing structures may engage a cap or other uppermost portion of a beverage bottle, while exposing the shoulder and midsection of the bottle. According to another aspect of the embodiments, the base securing structures include heel panels that include encircling strips that retain the bases of cylindrical articles, such as the heels of beverage bottles.

[0007] According to another aspect, substantially all outside surfaces of the carrier are formed from the art side of a suitable substrate, such as the laminated, bleached and/or coated side of a paperboard substrate.

[0008] According to another aspect of certain embodiments, the carrier may be formed by securing a pair of carrier parts together such that substantially all of the exposed surfaces of each carrier part are formed from the art side surface of a blank that forms the carrier part. In certain embodiments, the top securing structures each include a tubular structure and one or more neck receiving apertures that define a yoke panel. The yoke panel functions to restrain the necks or other uppermost portions of each article in substantially fixed relation to one another, thereby maintaining optimal spacing between the articles while retaining each article in the carrier. Each neck receiving aperture includes resistive tabs disposed, at least, along part of the periphery of the neck receiving aperture so as to be configured to resist the undesired movement of an article in a direction that is not obstructed by the central wall or by other articles, while allowing intentional removal of the article when desired. The cap or other uppermost portion of each article may be received in a neck receiving aperture, and thus, the uppermost portion may extend into the tubular structure. Alone and in combination, the neck receiving apertures, resistive tabs, and heel panels create a tamper resistant and tamper evident enclosure that leaves the majority of each

article in view of the consumer.

[0009] According to a first exemplary embodiment, the handle extends adjacent to the top securing structures at the top of the carrier and the carrier is configured to rest on the base securing structures, with the articles positioned upright along both sides of the central wall. In this embodiment, the cantilevered tubular top securing structures stabilize the upper portions of the articles, but are not configured to bear substantial weight. Rather, the weight of the articles is at least substantially borne by the handle via the central wall and by the bottom receiving structures. To remove articles, the top securing structures can be rotated upward to release the upper portions of the articles from neck receiving apertures.

[0010] According to a second exemplary embodiment, the handle extends adjacent to the base securing structures and the bottom of the carrier, and the carrier is configured to rest on the top securing structures, with the articles positioned upside down (in an inverted configuration) along both sides of the central wall. In this embodiment, the cantilevered top securing structures stabilize the upper portions of the articles, and cooperate with one another and with the handle to bear the weight of the articles, although some deformation may occur when the carrier is lifted. Heel panels define encircling strips that enable the base securing structures to retain the bottoms of the articles, and have sufficient width to prevent escape even if the top securing structures deform during carrying.

[0011] According to yet a further aspect of the invention, there is provided a carrier for securing one or more articles having a base and a top, the carrier comprising:

- a composite central wall formed from at least two central panels;
- a composite handle being formed from the at least two handle panels;
- at least one article top securing structure; and
- at least one article base securing structure, wherein the at least one article top securing structure is disposed at an elevation within the carrier that is below the elevation of at least one base securing structure such that the carrier is configured to support one or more articles in an inverted position, wherein the base of the article is uppermost and the top of the article is lowermost. It will be appreciated that the directional references, such as uppermost and lowermost, may be made with reference to the position of the carrying handle. Typically in a normal, in-use position of the carrier, the carrying handle will be uppermost, thus defining a general orientation of the carrier. Within this general orientation of the carrier, the at least one article base securing structure is disposed at an elevation above the at least one article top securing structure.

[0012] The foregoing has broadly outlined some of the aspects and features of the present invention, which

should be construed to be merely illustrative of various potential applications of the invention. Other beneficial results can be obtained by applying the disclosed information in a different manner or by modifying the disclosed embodiments. Accordingly, other aspects and a more comprehensive understanding of the invention may be obtained by referring to the detailed description of the exemplary embodiments taken in conjunction with the accompanying drawings, in addition to the scope of the invention defined by the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013]

FIG. 1 is a plan view of a carrier blank for forming one carrier part, in accordance with an exemplary embodiment of the present invention.

FIGs. 2 and 3 are plan views illustrating steps of an exemplary method of folding the carrier blank of **FIG. 1**.

FIG. 4 is a partial side elevational view of a step of the method of folding the carrier blank of **FIG. 1**.

FIG. 5 is a plan view of a step of the method of folding the carrier blank of **FIG. 1**.

FIG. 6 is a partial side elevational view of a step of the method of folding the carrier blank of **FIG. 1**.

FIG. 7 is a plan view of a collapsed carrier part formed from the carrier blank of **FIG. 1**.

FIG. 8 is a perspective view of an erected carrier formed from a pair of the collapsed carrier parts of **FIG. 7**, showing bottles at least partially loaded in the carrier and operation of a top securing structure.

FIG. 9 is a side elevational view of the carrier of **FIG. 8**, with the bottles completely loaded into the carrier.

FIG. 10 is an end elevational view of the carrier of **FIG. 8**.

FIG. 11 is a plan view of a carrier blank for forming one carrier part, in accordance with a second exemplary embodiment of the present invention.

FIGs. 12-13 are plan views illustrating steps of an exemplary method of folding the carrier blank of **FIG. 11**.

FIG. 14 is a plan view of a collapsed carrier part formed from the carrier blank of **FIG. 11**.

FIG. 15 is a side elevational view of a carrier formed from two of the carrier part of **FIG. 14**.

FIG. 16 is an end elevational view of the carrier of **FIG. 15**.

FIG. 17 is a perspective view of the carrier of **FIG. 15**.

FIG. 18 is a perspective view of an erected carrier part formed from the collapsed carrier part of **FIG. 14**.

FIG. 19 is a perspective view of the carrier of **FIG. 15** showing operation of the top securing structure as a handle is engaged to lift the carrier.

FIG. 20 is a blank for forming a basket style carrier according to a third embodiment of the invention.

FIG. 21 is a plan view of the other-side of the blank

of **FIG. 20** showing where adhesive may be applied in accordance with a first optional step in the construction of the basket carrier.

FIG. 22 is a plan view of a part-formed blank, wherein folding and adhesion of the central handle panels of the blank of **FIG. 21** is shown.

FIG. 23 is a plan view of the blank of **FIG. 22** wherein further folding steps are illustrated.

FIG. 24 is a plan view of the blank of **FIG. 23** wherein the application of glue and yet further folding steps are shown.

FIG. 25 is a plan view of a basket carrier in flat-form.

FIG. 26 is a perspective view from above and from the side of a basket carrier formed by opening the flat-form carrier of **FIG. 25**.

FIG. 27 is a perspective view from above and from the side of a basket carrier formed by opening the flat-form carrier of **FIG. 25**.

FIG. 28 is a perspective view from above of the carrier of **FIG. 27** having bottles disposed upon their tops in compartments formed from a retention structure, wherein the tops and necks of the bottles are supported by a supplementary retention feature.

FIG. 29 is a side view of the basket carrier of **FIG. 27** fully loaded with articles and showing the neck portions of the bottom-up bottles being retained by the supplementary retention feature.

DETAILED DESCRIPTION

[0014] As required, detailed embodiments of the present invention are disclosed herein. It must be understood that the disclosed embodiments are merely exemplary of the invention that may be embodied in various and alternative forms, and combinations thereof. As used herein, the word "exemplary" is used expansively to refer to embodiments that serve as illustrations, specimens, models, or patterns. The figures are not necessarily to scale and some features may be exaggerated or minimized to show details of particular components. In other instances, well-known components, systems, materials, or methods have not been described in detail in order to avoid obscuring the present invention. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the present invention.

[0015] Referring now to the drawings, the drawings illustrate certain of the various aspects of exemplary embodiments of a carrier. Like numerals have, where possible, been used to denote similar features in the embodiments of Figures 1 - 19; the reference numerals used in Figures 20 - 29 do not necessarily correlate to the numerals used in Figures 1- 19).

[0016] In the embodiments detailed herein, the term carrier refers, for the non-limiting purpose of illustrating the various features of the invention, to a container for engaging, carrying, and dispensing articles, such as clear

plastic bottles. However, it is contemplated that the teachings of the invention can be applied to various containers, which may or may not be tapered and/or cylindrical. Other exemplary articles include metallic or glass bottles, aluminum cans, bowling pins, candles, and the like.

[0017] As used herein, the term "neck" refers to a portion of a container adjacent an opening through which the container can dispense its contents. Typically, the opening is capped. The neck of a container may be, but is not necessarily, tapered with respect to a body of the article. As used herein, the term "heel" or base refers to the portion of a beverage container (e.g., a bottle) that is opposite the opening. Typically, the article rests on its base. In certain embodiments, the body (the primary content containing portion of the container) is tapered or curves at its base (the support surface of the container).

[0018] Referring to the exemplary embodiment illustrated in **FIGs. 1-10**, a carrier **190** is formed from a pair of blanks **100**. Referring to **FIG. 1**, the inside surface of the blank **100** is shown and the opposite side (not shown) of the blank **100** is its outside surface. The outside surface is used as its art side, which may bear printed product information, decorative designs, and brand specific indicia, such as logos, trademarks and associated copy. Either or both the inside and outside surface may be laminated or otherwise treated to make the carrier water-resistant, more durable, or to insulate the contents of the carrier. One advantage of the carrier **190** described in further detail below is that substantially all of the exposed surfaces of the carrier **190** are formed from the outside surface of the blanks **100**. Thus, substantially all of the exposed surfaces of the carrier **190** can be used to display printed matter, and the often less attractive inside surface opposite the art side is at least largely obscured. This is useful when used with transparent plastic or glass bottles having substantially clear contents (such as water) since the bottles and their contents do not substantially obstruct the exposed inside surfaces of the carrier.

[0019] The blank **100** is formed from a sheet of suitable substrate. It is to be understood that, as used herein, the term "suitable substrate" includes all manner of foldable sheet material such as paperboard, corrugated board, cardboard, plastic, combinations thereof, and the like. In the illustrated embodiments, a pair of the unitary blanks **100** is used to form the carrier **190**. However, it should be recognized that one or other numbers of blanks may be employed, for example, to provide the carrier structure described in more detail below.

[0020] In the exemplary embodiment, the blank **100** is configured to form part of a carrier for packaging an exemplary arrangement of exemplary articles **182**. For example, the arrangement is a matrix including rows and columns such as a 2x3 arrangement of articles **182**. The blank can be alternatively configured to form a carrier for packaging other articles and/or different arrangements of articles.

[0021] Referring again to **FIG. 1**, the blank **100** in-

cludes a series of panels that at least partially define a handle **192**, top and base securing structures **194**, **196**, and a central wall of the carrier **190**. The panels are aligned along a longitudinal axis of the blank **100** and are hingedly connected one to the next along fold lines that extend transversely with respect to the longitudinal axis.

[0022] As used herein, the term "fold line" refers to all manner of lines that define hinge features of the blank, facilitate folding portions of the blank with respect to one another, or otherwise indicate optimal panel folding locations for the blank. A fold line is typically a scored line, an embossed line, or a debossed line.

[0023] As used herein, the term "severance line" refers to all manner of lines that facilitate separating portions of the substrate from one another or that indicate optimal separation locations. Severance lines may be frangible or otherwise weakened lines, tear lines, cut lines, or slits.

[0024] It should be understood that severance lines and fold lines can each include elements that are formed in the substrate of the blank including perforations, a line of perforations, a line of short slits, a line of half-cuts, a single half-cut, a cut line, an interrupted cut line, slits, scores, any combination thereof, and the like. The elements can be dimensioned and arranged to provide the desired functionality. For example, a line of perforations can be dimensioned or designed with degrees of weakness to define a fold line and/or a severance line. The line of perforations can be designed to facilitate folding and resist breaking, to facilitate folding and facilitate breaking with more effort, or to facilitate breaking with little effort.

[0025] The panels include: an inner handle panel **102**; an outer handle panel **106**; a top panel **116**; a cap panel **120**; a yoke panel **130**; a central panel **134**; a rear base panel **138**; a front base panel **142**; an inner heel panel **146**; and an outer heel panel **150**. The inner handle panel **102** is hingedly connected to the outer handle panel **106** along a fold line **104**. The outer handle panel **106** is hingedly connected to the top panel **116** along fold line **112**, and the top panel **116** is hingedly connected to the cap panel **120** along a fold line **118**. The cap panel **120** is hingedly connected to the yoke panel **130** along a fold line **122** and the yoke panel **130** is hingedly connected to the central panel **134** along fold line **132**. The central panel **134** is hingedly connected to the rear base panel **138** along fold line **136** and the rear base panel **138** is hingedly connected to the front base panel **142** along fold line **140**. The front base panel **142** is hingedly connected to the inner heel panel **146** along fold line **144**, and the inner heel panel **146** is hingedly connected to the outer heel panel **150** along the fold line **148**. It should be noted that the fold line **140** is primarily used in collapsing the blank **100** prior to fully erecting the carrier **190**, as will be described in more detail below. A handle flap **110** is hingedly connected to outer handle panel **106** along fold line **108**.

[0026] Side heel panels **154**, **162** are hingedly connected to the opposed edges of the outer heel panel **150**

along the fold lines **152**, **160**. The blank **100** further includes a heel panel tab **158** that is hingedly connected to the side heel panel **154** along a fold line **156** and a heel panel tab **166** that is hingedly connected to the side heel panel **162** along a fold line **164**. In addition, the handle cushion panel **110** is hingedly connected to the outer handle panel **106** along a fold line **108**.

[0027] The illustrated yoke panel **130** includes neck retaining structures **124**, **126**, **128** each optionally including a number of resistance tabs **125**, **127**, **129** optionally disposed at least along part of the periphery of the neck retaining structures **124**, **126**, **128**. The resistance tabs **125**, **127**, **129** are similar to one another but are disposed along different parts of the peripheries of the neck retaining structures as a function of the possible direction of movement of the associated article as is described in further detail below.

[0028] Assembling a carrier part **180** from the blank **100** may be accomplished with the folding and securing operations as described herein. The operations can be performed by automatic erecting machinery and/or manually. The method of performing the assembling process is not limited to the exemplary method described herein. Particularly, the order of the steps can be altered according to manufacturing requirements, steps may be added or omitted, and the means for securing components to one another may vary. The surfaces of sheet material may be secured together by suitable means for securing including tape, staples, interlocking folds, VELCRO®, glue or other adhesives, combinations thereof, and the like.

[0029] Referring to **FIGs. 1-7**, the blank **100** is assembled to form a collapsed carrier part **180**. Referring to **FIGs. 1** and **2**, with the artwork side facing downward, the blank **100** is folded inwardly along the fold line **118**, such that at least the inner handle panel **102** overlaps the central panel **134**. Referring to **FIGs. 2-4**, the outer handle panel **106** is folded outwardly along the fold lines **112**, **114** and the inner handle panel **102** is folded along the fold line **104** to overlay the outer handle panel **106**. The inner handle panel **102** and the central panel **134** are secured to one another.

[0030] Referring to **FIGs. 3, 5** and **6**, the blank **100** is folded inwardly along fold lines **140**, **148** so that the front base panel **142**, inner heel panel **146**, and outer heel panel **150** are collapsed beneath the central panel **134** and the rear base panel **138**. Referring to **FIGs. 5** and **7**, the side heel panels **154**, **162** are folded inwardly along fold lines **152**, **160** to place the rear heel panels **158**, **166** in flat face contact with the central panel **134**. The rear heel panels **158**, **166** and the central panel **134** are secured together to define an encircling strip comprising the outer heel panel **150** and side heel panels **154**, **162**. Referring to **FIG. 7**, the carrier part **180** is formed in a collapsed condition. The non-artwork surface of central panels **134** of two of the collapsed carrier parts **180** are secured together (see **FIG. 10**) to form a carrier **190** in a collapsed condition.

[0031] The illustrated carriers **190** are adapted to hold a group of similarly dimensioned articles, such as the clear plastic bottles **182**, in a matrix arrangement of rows. Here, each carrier part **180** holds a row of three bottles **182** such that the carrier **190** holds two rows of three bottles **182**. Each bottle **182** is substantially cylindrical with a capped top end **184** and a base end **186**. The bottle **182** includes a tapered neck **188** and cap at the top end **184**.

[0032] Referring to FIGs. 8-10, the carrier **190** can be erected from the collapsed condition. Generally, the front handle panels **102**, **106** provide a handle **192**; the top panel **116**, the cap panel **120**, and the yoke panel **130** provided a top securing structure **192**; the rear base panel **138**, the front base panel **142**, the outer heel panel **150**, and the side heel panels **154**, **162** provide a base securing structure **196**; and the central panels **134** provide opposing surfaces of a central wall **198**. In this embodiment, the handle **192** is adjacent the top securing structure **194** with the bottles **182** carried right side up (in other words, in a normal configuration).

[0033] Referring to FIG. 8, the carrier **190** can be partially erected and then loaded with bottles **182** prior to fully erecting the carrier **190** to hold the bottles **182** in place. More specifically, the carrier **190** is partially erected as follows. Two collapsed carrier parts **180** are secured to one another by adhering the inside (non-art) surface of each respective central panel **134** in a face contacting arrangement to form the composite central wall **198**. The two central panels **134**, one from each collapsed carrier part **180**, can be secured to one another using any suitable means, including but not limited to, glue or other adhesives, tape, staples or other connectors, and the like.

[0034] Prior to or after securing the two carrier parts **180** together, the base securing structures **196** are erected to partially erect the carrier **190**. The outer heel panel **150** and the side heel panels **154**, **162** are folded away from one another along fold lines **152**, **160** and the rear base panel **138** and the front base panel **142** are folded away from one another along fold line **140** until they are substantially coplanar. As such, each of the base securing structures **196** are erected as a trough that is configured to receive the base ends **186** of bottles **182**. The bottles **182** are loaded into the base securing structures **196** such that the base ends **186** are supported from below by the rear base panel **138** and the front base panel **142** and are laterally supported by the outer heel panel **150**, the side heel panels **154**, **162**, and the central panel **134**.

[0035] Referring to FIGs. 8 and 10, the carrier **190** is fully erected when the top securing structure **194** is then lowered over the top ends **184** of the bottles **182**. The top securing structure **194** is folded along fold lines **112**, **118**, **122**, **132** such that the inner handle panel **102**, the top panel **116**, the cap panel **120**, and the yoke panel **130** form a tubular structure and the top ends **184** are received in the tubular structure through the neck retain-

ing structures **124**, **126**, **128**. The resistance tabs **125**, **127**, **129** contact the neck **188** of the bottles **182** under the cap **184** (top end). The resistance tabs **125**, **127**, **129** resist the movement of the caps **184** through the neck retaining structures **124**, **126**, **128** and thus function to hold the top securing structure **194** over the top ends **184** of the bottles **182**.

[0036] The resistance tabs **125**, **127**, **129** are positioned along portions of the peripheries of the neck retaining structures **124**, **126**, **128** that are substantially opposite the fold line **132** or otherwise the central wall **198**. In the illustrated embodiment, the resistance tabs **125**, **127**, **129** are positioned along different portions of the peripheries of respective neck receiving apertures **124**, **126**, **128** to resist the likely direction of movement of the bottles **182**. The direction of movement of each bottle **182** is limited by the structure of the carrier **190** and the adjacent bottles **182**. For example, lateral movement of the middle bottle **182** in each row is restricted by both the outer bottles **182** and the central wall **198**. The neck retaining structure **126** allows some movement due to tolerances so the middle bottle **182** can have some movement normal to the central wall **198**. The resistance tabs **127** are positioned opposite the central wall **198** to resist this movement and thus force the middle bottle **182** against the central wall **198**. Similarly, the resistance tabs **125**, **129** force the outer bottles **182** against the middle bottle **182** and the central wall **198**. In general, the resistance tabs **125**, **127**, **129** force the bottles **182** inwardly and resist movement away from the carrier **190**.

[0037] When the handle **192** is engaged, the two carrier parts **180** of the carrier **190** are configured such that the forces applied by the weight of the bottles **182** in one carrier part **180** counter-balance forces applied by the weight of the bottles **182** in the other carrier part. By engaging the handle **192**, the carrier parts **180** are forced together, particularly at the lower end, by the weight of the bottles **182**. As such, each carrier part **180** is configured to provide structural support to the other carrier part **180**.

[0038] The carrier **190** is tamper evident and tamper resistant, in part because to remove a bottle **182**, a user must dislodge the cap from a neck receiving aperture **124**, **126**, **128**, which is difficult to do without deforming the top securing structure **194** or tearing the base securing structure **196**. Thus, unlike the typical 6-pack carrier, unwitting or intentional removal of a single item without detection is discouraged.

[0039] Referring to FIGs. 11-18, a second exemplary embodiment of the invention is described. A blank **200** of the second exemplary embodiment has features that are substantially the same as the blank **100** of the first exemplary embodiment. However, the first embodiment is configured for upright article packaging (also referred to as 'normal orientation'), whereas the second exemplary embodiment is configured for upside down (also referred to as 'inverted orientation') article packaging.

[0040] The description of elements of the first exem-

ply embodiment that are substantially similar to elements of the second exemplary embodiment may not be repeated for the elements of the second exemplary embodiment. Rather, the description of the second exemplary embodiment will be directed to the alternative features of the second exemplary embodiment.

[0041] Referring to FIG. 11, the blank 200 includes: a handle panel 202; an outer central panel 210; a yoke panel 220; a cap panel 224; a bottom panel 228; an inner central panel 232; a rear top panel 258; a handle panel 259; a front top panel 260; and an outer heel panel 272. The handle panel 202 is hingedly connected to the outer central panel 210 along fold lines 208 and 209. The outer central panel 210 is hingedly connected to the yoke panel 220 along a fold line 212 and the yoke panel 220 is hingedly connected to the cap panel 224 along a fold line 222. The cap panel 224 is hingedly connected to the bottom panel 228 along a fold line 226 and the bottom panel 228 is hingedly connected to the inner central panel 232 along a fold line 230. The inner central panel 232 is hingedly connected to the top rear top panel 258 along fold line 250 and the rear top panel 258 is hingedly connected to the front top panel 260 along fold line 262. The front top panel 260 is hingedly connected to the outer heel panel 272 along fold line 270. Together, the front top panel 260 and rear top panel 258 define a top wall 268. The illustrated yoke panel 220 includes neck retaining structures 214, 216, 218 and resistance tabs 215, 217, 219.

[0042] A handle panel 259 is hingedly connected to the inner central panel 232 along fold line 250. The handle panel 259 is defined in part in the front top panel 260 and in part in the rear top panel 258 along a severance line 264. When handle 259 is separated from the front top panel 260 and the rear top panel 258, referring momentarily to FIGs. 16 and 17, an aperture 293 is revealed in the bottom support structure 296 adjacent the handle 292. Continuing with FIG. 11, a handle panel 206 is hingedly connected to the handle panel 202 along a fold line 204.

[0043] The side heel panels 236, 244 are hingedly connected to the opposed edges of the inner central panel 232 along the fold lines 234, 242. A heel panel tab 240 is hingedly connected to the side heel panel 236 along a fold line 238 and a heel panel tab 248 is hingedly connected to the side heel panel 244 along a fold line 246.

[0044] Referring to FIGs. 11-18, the blank 200 is assembled to form a carrier part 280 in a collapsed condition according to an exemplary method. Referring to FIGs. 11 and 12, with the artwork side facing downward, the blank 200 is folded inwardly along the fold line 226 such that outer central panel 210 overlaps the inner central panel 232. The outer central panel 210 and the inner central panel 232 are secured together. Referring to FIGs. 12 and 13, the front top panel 260 is folded inwardly along the fold line 262 to overlap the handle panel 202 and rear top panel 258; the heel panel 272 overlaps the outer central panel 210. Referring to FIGs. 13 and 14,

the heel panel tabs 240, 248 are folded inwardly along fold lines 238, 246 and are secured to ends of the outer heel panel 272 to define an encircling strip comprising the outer heel panel 272 and side heel panels 240, 248.

Thereafter, referring to FIG. 14, the carrier part 280 is formed in a collapsed condition, which can be erected as shown in FIG. 18. It should be noted that the fold lines 262 and 266 are useful primarily in flattening the carrier part 280 prior to fully erecting the carrier 290.

[0045] A pair of collapsed carrier parts 280 is secured to one another to form carrier 290 in collapsed condition. As above, substantially every exposed outer surface of the carrier 290 is the outer surface or artwork side of the blank 200 and thus the surface area that is available for purposes of displaying information is maximized, particularly when clear plastic bottles 182 with clear contents are loaded in the carrier 290 since they do not obstruct the display on the outer central panel 210.

[0046] Referring to FIGs. 15-17, similar to above, the carrier 290 includes a handle 292, a top securing structure 294, a base securing structure 296, and a central wall 298. In this embodiment, the handle 292 is adjacent the base securing structure 296 with the bottles 182 carried upside down. The aperture 293 is defined in the top wall 268 of the base securing structure 196 and is configured to allow light through the base structure 296 to illuminate the bottles 182.

[0047] As above, the carrier 290 is partially erected, loaded, and then fully erected to secure articles such as bottles 182. The articles 182 are loaded upside down with the bases received in the base securing structure 296. The top securing structure 294 is then folded upwardly such that the caps 184 are received in the neck receiving apertures 214, 216, 218 and engaged by the resistance tabs 215, 217, 219.

[0048] Referring to FIG. 19, when the handle 292 is engaged to lift the carrier 290, the top securing structures 294 flex downward and inward. As above, the carrier parts 280 support one another as the weight of the bottles 182 forces the carrier parts against one another. For example, the carrier parts 280 work together to maintain the position of the central wall 298, which keeps the top securing structures 294 from over-rotating. The resistance tabs 215, 217, 219 are all positioned along the respective outside parts of the peripheries of the neck receiving apertures 214, 216, 218 since gravity generally pulls the top ends 184 to these parts.

[0049] Referring to FIG. 20 there is shown a blank 310 for forming a basket style carrier 397 (which is shown in FIGs. 26 to 29) according to a third illustrated optional and exemplary embodiment of the invention. The reference numerals used to denote features of the third embodiment do not necessarily accord to the reference numerals used in Figures 1-19 illustrating the first and second embodiments.

[0050] The blank 310 is formed from a unitary piece of foldable sheet material such as paperboard. The blank 310 comprises: a first handle panel 324 foldably connect-

ed along a side connection **344** to a second handle panel **322**. Optionally the side connection **344** extends for between about 40% and about 60% of the height of the handle panels **322, 324** to provide a strong connection therebetween which is unlikely to fail during the manipulation, folding and construction of the basket carrier **397** from the blank **310**. Each handle panel **324, 322** comprises a handle aperture **390** with an arrangement of cushioning flaps **392, 394, 396** hinged thereto along fold line **388** formed in an upper portion **325, 323** of the handle panels **324, 322** respectively. The first and second handle panels **324/325** and **322/323** may also be referred to as central panels as they are disposed, albeit optionally, substantially centrally of the basket carrier **397** once formed. Using two central handle panels **324, 322** disposed back-to-back (as is further described below in relation to the construction of the carrier **397**) means that the outwardly facing surfaces are the "art side", printed or coated sides of the paperboard material. The illustrated configuration of the handle aperture **390** and cushioning flaps **392, 394, 396** is entirely optional. Two handle panels **324, 322** are preferably provided for strength and in order that retention structures can be provided on either side of the basket carrier body. The retention structures are described in further detail below.

[0051] Returning to the blank **310**, the blank **310** comprises: a first bottom panel **316** hinged directly to the first handle panel **324** along fold line **346a**; a first side panel **312** foldably connected to the first bottom panel **316** along fold line **346b**; a second side panel **314**; and a second bottom panel **318** foldably connected to the second side panel **314** along a fold line **348b** and connected to a glue panel **320** along a further fold line **348a**.

[0052] A series of end wall forming panels **326, 328, 330, 332, 334, 336, 338, 340** are provided either side of the first side panel **312** and are hinged thereto along fold lines **350a** and **350b**. Part of the series of end wall forming panels **332, 334, 336, 338** is disposed between the first and second side panels **312, 314** as is shown in **FIG 1**. These panels **332, 334, 336, 338** form a first end wall whereas the other panels of the series, **326, 328, 330** and **340** form a second end wall.

[0053] Optional fold lines **354, 356, 358, 360, 362, 364** enable the end wall forming panels **326, 328, 330, 332, 334, 336, 338, 340, 342** to fold in a slightly rounded manner in order to allow the end panels to follow the contour of round articles (such as bottles). In other envisaged embodiments, the end walls are straight or flat and fold lines **354, 356, 358, 360, 362, 364** are omitted. An end wall glue panel **342** is provided to adhere end wall panel **340** to end wall panel **326**.

[0054] Optional apertures **366, 368** are provided to assist in the folding and construction of the blank **310** into a basket carrier **397**. During construction, the material either side of apertures **366** and **368** forms part of a three-ply layer of panels **322, 324/316, 320/318** that is folded (about fold lines **346a** and **348a**) so that the bottom panels **316, 318** can be folded substantially perpendicularly

relative to the handle panels **322, 324**. The apertures **366, 368** are provided to remove some of the thickness of material around this fold **346a, 348a** and to mitigate against undesired creasing of the paperboard material.

[0055] Referring now to the retention structures **384/378/386/382** that are struck from the handle panels **322, 324**, each retention structure **384/378/386/382** comprises a pair of partition tabs **384/378, 386/382**. Each partition tab **384/378, 386/382** is optionally split into two integral and contiguous parts, a first part **378, 382** which is optionally shaped similarly to the base of a wine glass; and a second part **384, 386**, which is optionally shaped similarly to the bowl of a wine glass. As such each partition tab **384/378, 386/382** has a shape approximately similar to a wine glass. The shape of the partition tabs **384/378, 386/382** is optional, but arises at least to some extent because of the provision of corner joints **371, 373, 375, 377** that are defined at least in part by fold lines **370, 376, 374, 372**. The corner joints **371, 373, 375, 377** enable each partition tab **384/378, 386/382** once folded, approximately 90°, out of the plane of the first and second handle panels **324, 322** (see **FIG. 8**), to rotate or hinge, approximately another 90°, out of the plane of the corner joints **371, 373, 375, 377** so that each partition tab **384/378, 386/382** defines a cell and forms a barrier between two adjacent articles (see **FIG. 11**).

[0056] Each corner joint **371, 373, 375, 377** is defined by two fold lines **370/374; 372/374; 372/376; 370/376** that are linked by a radiused or arcuate line of separation **379**. The arcuate lines of separation **379** define the bowl-shaped portions or second parts **384, 386** of the pairs of partition tabs **384/378, 386/382**. What becomes, in a set up basket, a lower edge of each of the partition tabs **384/378; 386/382** is defined by a common line of separation **381** that separates each pair of partition tabs **384/378, 386/382** of each retention structure **384/378/386/382**.

[0057] The first parts **378, 382** of each pair of partition tabs **384/378, 386/382** of each retention structure **384/378/386/382** are connected to the handle panels **322, 324** by means of the corner joints **371** and **373**. More specifically, the first parts **378, 382** of each retention structure are hingedly connected to the corner joints **371, 373** along the fold lines **376, 374** respectively, while those corner joints **371** and **373** are hingedly connected to the respective handle panel **322** or **324** along the fold lines **370**. The fold lines **376, 374** are disposed generally perpendicularly to the fold lines **370, 372** which are disposed generally parallel to the fold line **346a, 348a** for hingedly connecting the handle panels **322, 324** to the bottom panels **316, 318** and/or to the fold lines **346b, 348b** for hingedly connecting the bottom panels **316, 318** to the side panels **312, 314**, respectively. As such, all the corner joint fold lines **370, 372, 374, 376** are disposed horizontally or otherwise substantially parallel to the bottom panels **316, 318** when the basket carrier **397** is erected. The first parts **378, 382** of each pair of partition tabs **384/378, 386/382** are integrally formed with and are contiguous

with the second parts **384, 386** respectively, by what may be described as the stem of the wine glass. The partition tabs **384/378, 386/382** of each retention structure are further hingedly connected to a glue flap **380** by virtue of the corner joints **377, 375**. More specifically, the glue flap **380** is hinged to the corner joints **377, 375** along fold lines **370, 372** and each pair of partition tabs **384/378, 386/382** are hinged to the same corner joints **377, 375** respectively by means of fold lines **376, 374**. In the constructed/erected carrier **397**, the glue flaps **380** connect the retention structures to the internal faces of the side panels **312, 314**. In this way, a single glue flap **380** is required for two partition tabs **384/378, 386/382** thus making construction easier compared to prior art carriers where each partition tab requires its own glue flap.

[0058] The glue panel **320** is provided to affix the second bottom panel **318** to the first handle panel **324**.

[0059] The end wall forming panels **340, 338, 336, 334, 332, 330, 328, 326**; first and second side panels **312, 314** and end wall panel glue flap **342** of the blank **310** are sufficiently sized so that the basket carrier **397** formed from the blank **310** can accommodate a supplementary retention structure for supporting and retaining the tops and necks of bottles 'A'. Each of the first and second side panels **312, 314** is provided with a supplementary retention structure that is provided, in part, by a retention panel **321, 317** that is hinged to the first and second side panel **312, 314** along a fold line **339a** and **331a** respectively. Each retention panel **321, 317** is otherwise separated or separable from the first or second side panel **312, 314** from which it is formed. The fold lines **339a** and **331a** are disposed substantially parallel to the bottom panel fold lines **346b** and **348b** so that they are disposed horizontally or otherwise substantially parallel to the bottom panels **316** and **318** when the basket carrier **397** is erected. A retention panel glue flap **319, 315** is provided to affix the retention panel **321, 317** to the juxtaposed second and first handle panels **322, 324** respectively (see **FIGs. 26** and **29** for an illustration of the supplementary retention structure formed from the retention panel **321** struck from the first side wall **312**).

[0060] Optionally, an article support **341, 343, 345, 333, 335, 337** is provided by the retention panels **321, 317** for each article to be held by the basket carrier **397**. In the illustrated example a circular aperture **341, 333** is provided by each retention panel **321, 317**, into which a neck portion of a rounded article (such as a bottle 'A') can be placed to support a bottle and limit the degree of freedom of movement that bottle 'A' then has. A semi-circular notch **343, 345, 335, 337** is formed at each end of each retention panel **321, 317** for supporting, in a similar manner, a neck portion of a rounded article (such as a bottle 'A').

[0061] Turning to the construction of a basket carrier **397** (illustrated in **FIGs. 26 - 29**), it is envisaged that the carrier **397** can be formed by a series of sequential folding operations, optionally in a straight line machine so that the carrier is not required to be rotated or inverted to

complete its construction. The folding process is not limited to that described below and may be altered according to particular manufacturing requirements.

[0062] Referring now to **FIGs. 21 to 25** a sequence of folding and gluing operations is illustrated. The first and second handle panels **322, 324** are affixed together and the second handle panel **322** is affixed to the first bottom panel **316**, (optionally by means of adhesive applied in regions **G1', G2'** and **G3'** and folding in the direction of arrow **F1**). Subsequently, affixing means may be applied to the retention panel glue flaps **319, 315** in optional regions **G4'**. Adhesive in the region of **G5'** is also applied for affixing the glue flap **380** to the first side panel **312**. In **FIG. 22**, it is shown how the second and first handle panels **322, 324** are folded in the direction indicated by arrow **F3'** (see **FIG. 23**), into overlapping relationship with the first side panel **312**. In this way, the retention panel glue flap **319** and the glue flap **380** of the retention structure **384/378/386/382** are affixed to the second handle panel **322**. Additionally, the second bottom panel **318** and glue panel **320** are together folded about fold line **348b** so that the glue panel **320** is affixed to the retention panel glue flap **315** as indicated by arrow **F2'** illustrated in **FIG. 23**.

[0063] The subsequent construction of the basket carrier **397** is illustrated in **FIG. 16**. Glue panel **320** is then affixed (by using adhesive applied in optional regions **G6'**) to the first handle panel **324**. In this way, the retention panel **317** is indirectly affixed to the first handle panel **324**.

[0064] Adhesive, optionally a hot melt glue, may be applied in optional glue regions **G8', G6', G7'**, on the second side panel **314**; glue panel **320**; and end wall glue panel **342** respectively (as is illustrated in **FIG. 24**). The part-formed blank is then folded about fold line **360** (as indicated by arrow **F5'** in **FIG. 25**) until the first bottom panel **316** overlays the second bottom panel **318**; the glue flap **380** is affixed to the second side panel **314**; the glue panel **320** is affixed to the first handle panel **324**; and the end wall glue panel **342** is affixed to the end wall panel **326**. The resulting structure, as shown in **FIG. 25**, is a flat-folded basket carrier.

[0065] The basket carrier **397** opened out from the flat-form structure of **FIG. 25** is illustrated in perspective view in **FIG. 26**. The configuration, structure and operation of the retention structure **384/378/386/382** is now described further. The open basket carrier **397** comprises a retention structure **384/378/386/382** that extends from each of the second and first handle panels **322, 324** across the body of the basket carrier to the opposite first and second side panel **312, 314** respectively. The plane of each retention structure **384/378/386/382** is below the top edge of each of the first and second side panels **312, 314**. In use (as described above), each retention structure is separated by moving its constituent partition tabs **384/378, 386/382** away from one another by rotating each partition tab **384/378, 386/382** about fold line **376, 374** of the corner joints **371, 373, 375, 377**. In this illus-

trated embodiment, the partition tabs **384/378**, **386/382** are separated by a cut line; in other embodiments, the partition tabs **384/378**, **386/382** may be frangibly connected by a perforation line or connecting nick portions. Optionally, though preferably, top-loading of a bottle **A**, leading with the bottle top and neck, into a central cell (relative to the side walls **312**, **314**) can automatically cause the separation of the partition tabs **384/378**, **386/382** and cause the pivotal rotation of the partition tabs **384/378**, **386/382** about fold line **376**, **374** of the corner joints **371**, **373**, **375**, **377**. In **FIG. 28**, bottles 'A' have been top-loaded (leading with the bottle top) into cells between the partition tabs **386/382**. In its constructed and in-use position the partition tab **386/382** has been rotated substantially 90° relative to the plane of the second handle panel **322** and has been further rotated substantially 90° relative to the plane of the corner joints **371**, **373**, **375**, **377**.

[0066] The pivotal movement of the partition tab **386/382** can be described with reference to Cartesian axes of the set-up basket carrier **397** depicted in **FIG. 26**. An axis between the top edge and bottom edge (**346b**) of the first handle panel **324** is an x-axis; an axis along the width of that first handle panel **324**, as defined by fold line **346a**, is a y-axis; and an orthogonal axis between the upright first handle panel **324** and the first side panel **314** (in a set-up basket carrier **397** - see **FIG. 26**) is a z-axis. The retention structure **384/378/386/382** is, at least in part, moved from the x-y plane into the y-z plane and then into the x-z plane. This is achieved because the partition tabs of the retention structure **384/378/386/382** are rotated about fold lines **370/372** and **374/376** that are disposed at 90° relative to one another. The substantially horizontally disposed corner joints **371**, **373**, **375**, **377** (disposed in the x-z plane) further assist in the retention of the centrally disposed article 'A'.

[0067] The formation of retention structures **384/378/386/382** directly from the first and second handle panels **322**, **324** may provide a blank **310** that is manipulable at high speeds in an automated packaging line in a straightforward manner avoiding the need to handle small connecting nick portions and loose flapping panels that are only weakly connected to the blank structure (as is the case with some prior art basket carrier blanks). Furthermore, the provision of a central handle structure that is affixed to the bottom panels and that is fully extensive from the bottom of the carrier **397** to the top of the carrier **397** may provide strength, structural integrity and robustness to the basket carrier **397**. Further, the provision of partition tabs **384/378**, **386/382** that rotate from a y-z plane into an x-z may assist with bottle alignment as there is a clear target to direct the central inverted-bottle toward.

[0068] Alternative or additional retention panels **317**, **321** are disposed in the y-z plane (see definition above) extending between the second and first handle panels **322**, **324** and the second and first side panels respec-

tively **316**, **312**. The retention panels **317**, **321** provide a supporting structure above the plane of the bottom panels **318/316** into which the necks and/or top portions of the bottles 'A' can be positioned and thereby supported. In **FIG. 28** six bottles 'A' are shown in an upside down (inverted) configuration with the base of the bottles 'A' disposed uppermost and the necks of the bottles supported in bottle supports **343**, **341**, **345**. Bottles oriented in this manner may allow for example, sediment (for example fleshy parts of a juice), flavouring or a first-part of a two-part beverage to settle in the neck of the bottle. Then, prior to opening of the bottle 'A', when the bottle is replaced into a normal upright position with the neck uppermost, the sediment, flavouring or first-part of a two-part beverage will flow through other liquid within the bottle to mix or distribute the sediment, flavouring or first-part of a two-part beverage.

[0069] It can be appreciated that various changes may be made within the scope of the present invention, for example, the size and shape of the panels and apertures may be adjusted to accommodate articles of differing size or shape. In other embodiments of the invention it is envisaged that in a 2 x 2 basket carrier, the first retention structure may be omitted or may comprise only one partition tab **384/378**, **386/382**. In further embodiments only one supplementary retention structure may be provided. It is also envisaged that basket carriers utilizing the retention structure of the present invention may be shaped, sized and configured to accommodate more or fewer than six articles. Further, the supplementary retention structure **317**, **321** for supporting articles disposed in an inverted configuration may be utilized in different styles of carrier other than basket carrier (for example, top gripping, fully enclosed, wraparound) and be utilized without the partition tabs. The articles contained in the basket carrier are not limited to bottles as illustrated, but other containers may be placed in the basket carriers of the invention. Furthermore, the partition tabs **384/378**, **386/382**, may take many and various shapes and are not limited to the "wine-glass-shaped" partition tabs **384/378**, **386/382** shown.

[0070] It is also envisaged that where provided the article supports **341**, **343**, **345**, **333**, **335**, **337** may all be similarly shaped, or differently sized. Furthermore, one or more of the article supports **341**, **343**, **345**, **333**, **335**, **337** may be sized to support a base portion of an article and the basket carrier may comprise a combination of upright and inverted articles. Alternatively, the retention panels in other embodiments, may be sized sufficiently such that each article support **341**, **343**, **345**, **333**, **335**, **337** is an endlessly edged aperture (as per the supports **341** and **333**).

[0071] It will be recognised that as used herein, directional references such as "top", "bottom", "front", "back", "end", "side", "inner", "outer", "upper" and "lower" do not limit the respective panels to such orientation, but merely serve to distinguish these panels from one another. Any reference to hinged connection should not be construed

as necessarily referring to a single fold line only; indeed it is envisaged that hinged connection can be formed from one or more of the following, a short slit, a frangible line or a fold line without departing from the scope of the invention.

[0072] The present invention has been illustrated in relation to particular embodiments that are intended in all respects to be illustrative rather than restrictive. Those skilled in the art will recognize that the present invention is capable of many modifications and variations without departing from the scope of the invention. For example, as used herein, directional references such as top, base, bottom, end, side, inner, outer, upper, middle, lower, front, and rear do not limit the respective walls of the carrier to such orientation, but merely serve to distinguish these walls from one another. Any reference to hinged connection should not be construed as necessarily referring to a junction including a single hinge only; indeed, it is envisaged that hinged connection can be formed from one or more potentially disparate means for hinged-ly connecting materials.

[0073] The above-described embodiments are merely exemplary illustrations of implementations set forth for a clear understanding of the principles of the invention. Variations, modifications, and combinations may be made to the above-described embodiments without departing from the scope of the claims. All such variations, modifications, and combinations are included herein by the scope of this disclosure and the following claims.

Claims

1. A carrier for securing a plurality of articles having a base and a top, comprising:

a composite central wall formed from at least two central panels;

a composite handle extending from the central wall, the composite handle being formed from at least two handle panels, wherein at least one of the handle panels is contiguous to one of the central panels;

a pair of cantilevered top securing structures that extend substantially perpendicularly from opposite sides of an upper end of the composite central wall, each top securing structure comprising a yoke panel for retaining the top of at least one article; and

a pair of base securing structures, each comprising an encircling strip that is connected at opposed ends thereof to opposed sides of the composite central wall, the encircling strip being configured to retain the base of at least one article.

2. The carrier of claim 1, formed from a pair of substantially identical carrier parts secured together.

3. The carrier of claim 2, wherein substantially all of the outward facing surfaces of each of the carrier part are formed from the surface of one side of a respective unitary blank that forms the each carrier part.

4. The carrier of claim 1, wherein the handle is adjacent the pair of top securing structures.

5. The carrier of claim 1, wherein the handle is adjacent the pair of base securing structures.

6. The carrier of claim 5, wherein the base securing structure includes an aperture adjacent the handle.

5. The carrier of claim 1, wherein at least one of the top securing structures comprises a tubular structure comprising the yoke panel in which at least one neck receiving aperture is defined.

6. The carrier of claim 5, wherein the at least one neck receiving aperture comprises resistive tabs.

7. The carrier of claim 6, wherein the resistive tabs are disposed along only part of a periphery of the at least one neck receiving aperture.

8. The carrier of claim 7, wherein the part of the periphery of the at least one neck receiving aperture is opposite the central wall.

9. The carrier of claim 7, wherein the at least one neck receiving aperture comprises a first neck receiving aperture and a second neck receiving aperture, wherein the part of the periphery of the first neck receiving aperture is oriented in a different direction than that of the part of the periphery of the second neck receiving aperture.

10. The carrier of claim 7, wherein the resistive tabs are configured to resist the movement of an article in a direction that is not obstructed by the central wall or other articles.

11. A carrier for securing one or more articles having a base and a top, the carrier comprising:

a composite central wall formed from at least two central panels;

a composite handle being formed from the at least two handle panels;

at least one article top securing structure; and at least one article base securing structure, wherein the at least one article top securing structure is disposed at an elevation within the carrier that is below the elevation of at least one base securing structure such that the carrier is configured to support one or more articles in an

inverted position, wherein the base of the article is uppermost and the top of the article is lowermost.

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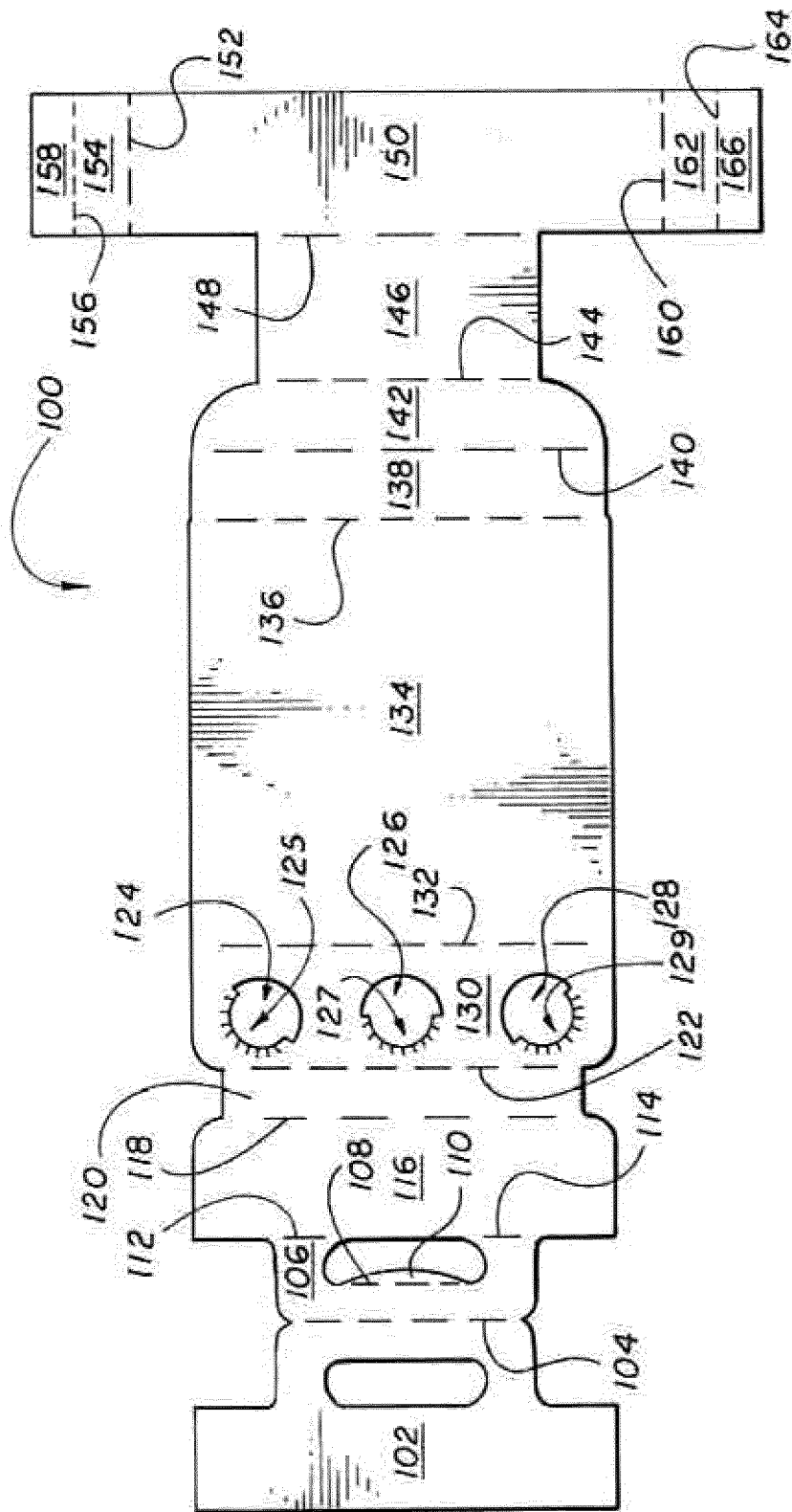


FIGURE 1

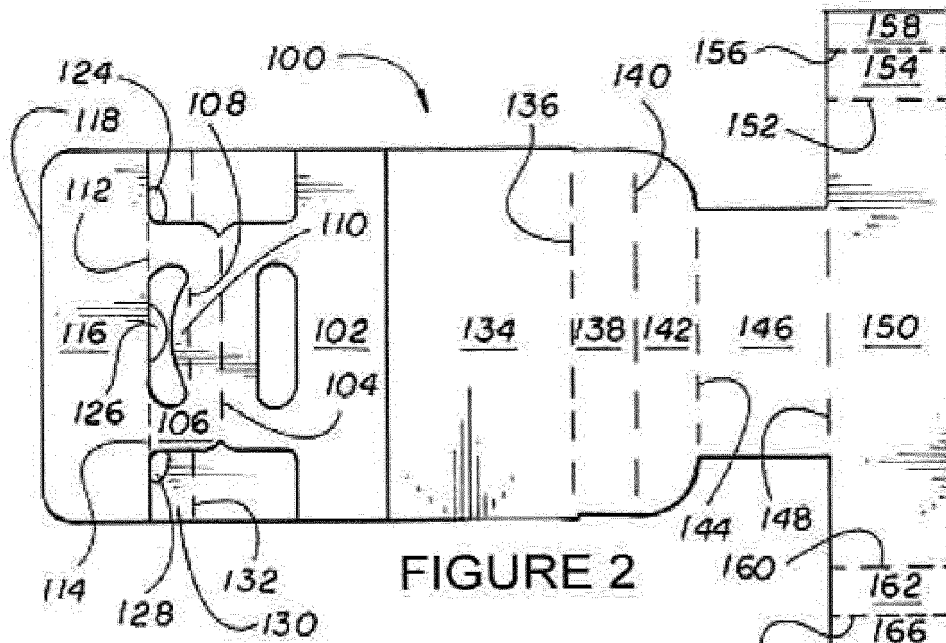


FIGURE 2

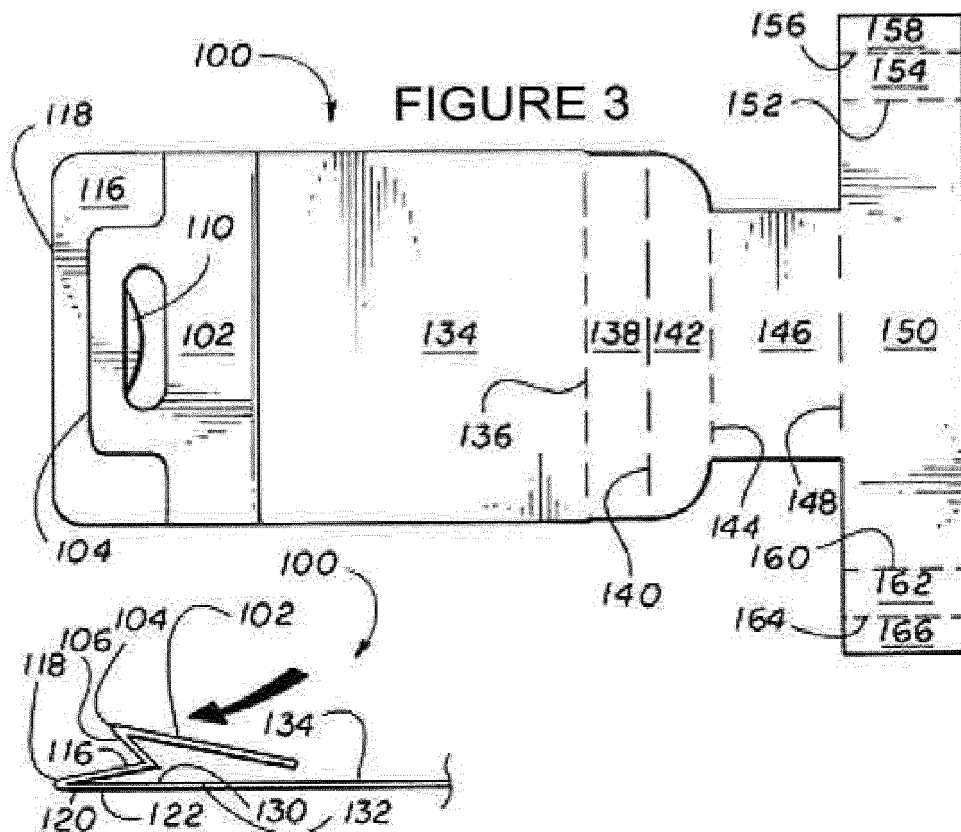


FIGURE 3

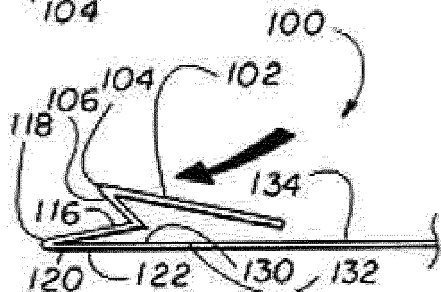


FIGURE 4

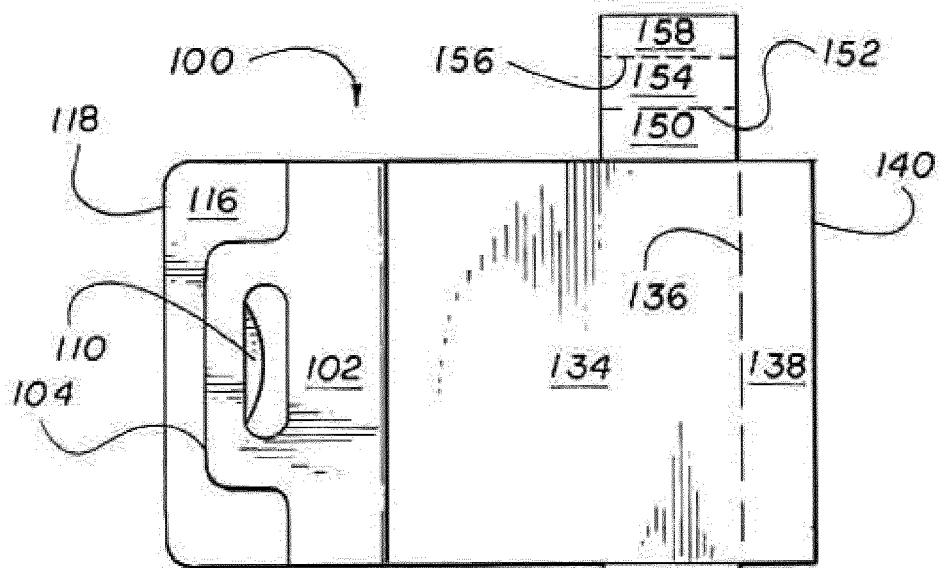


FIGURE 5

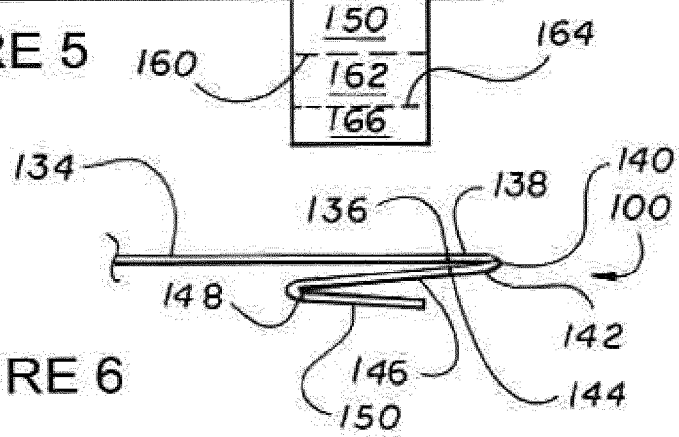


FIGURE 6

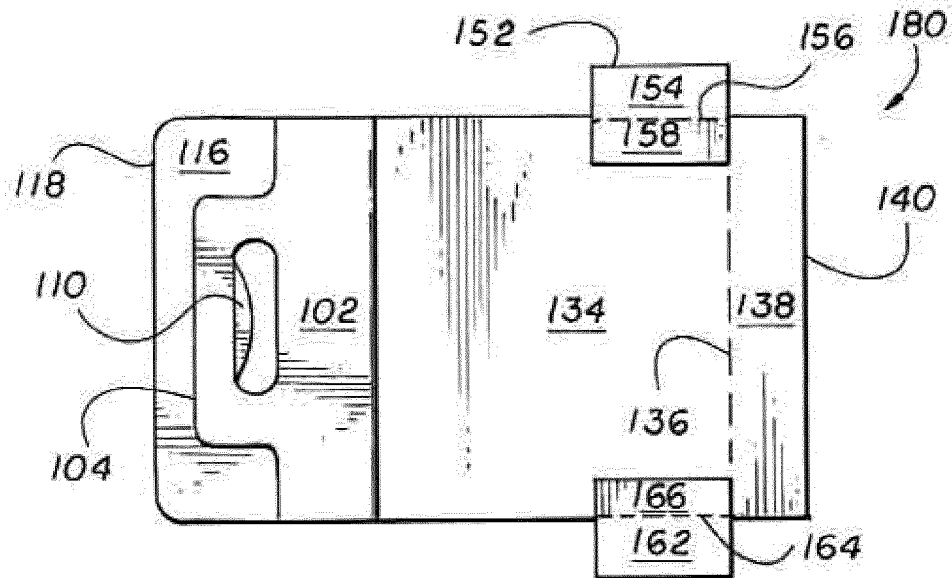


FIGURE 7

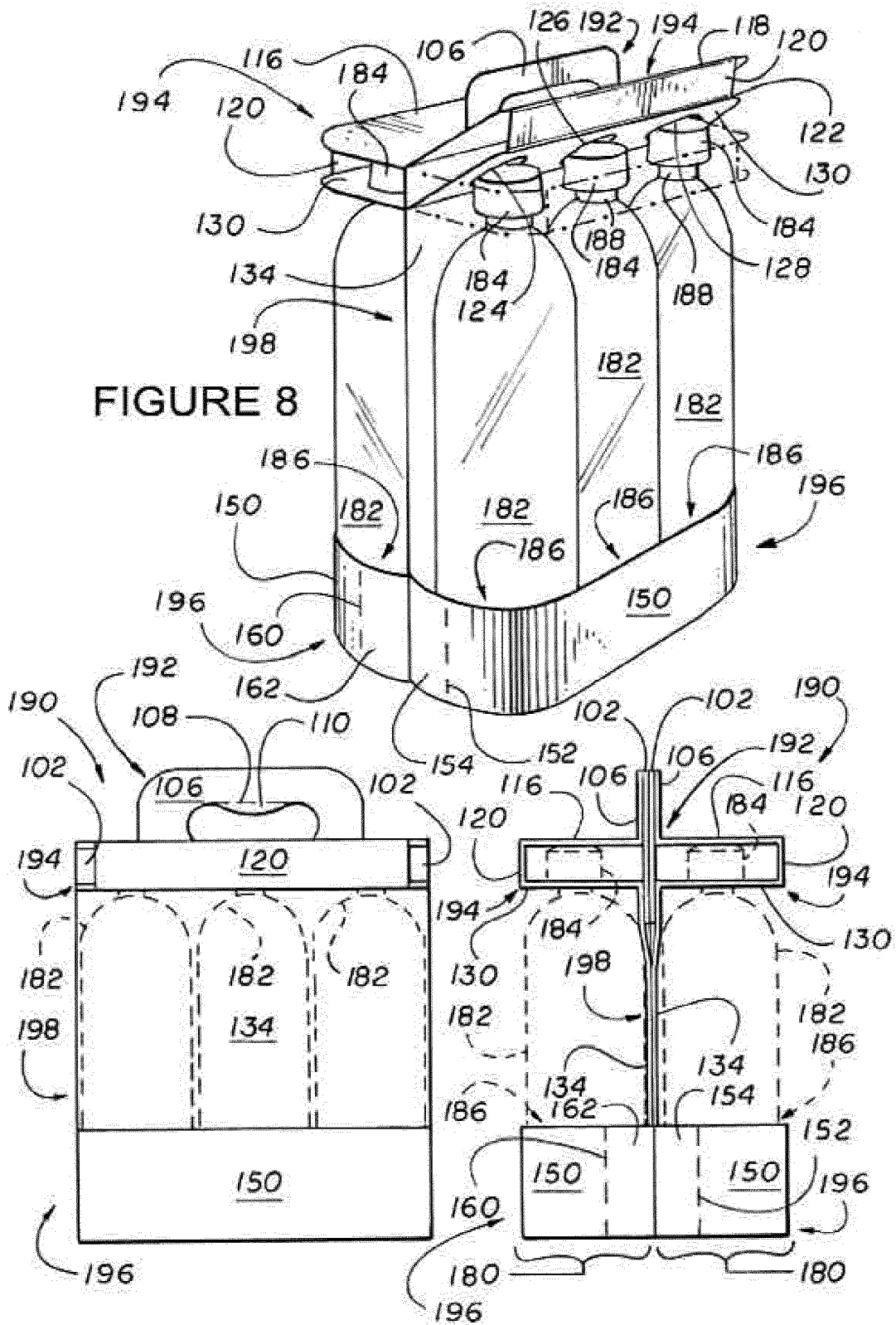


FIGURE 8

FIGURE 9

FIGURE 10

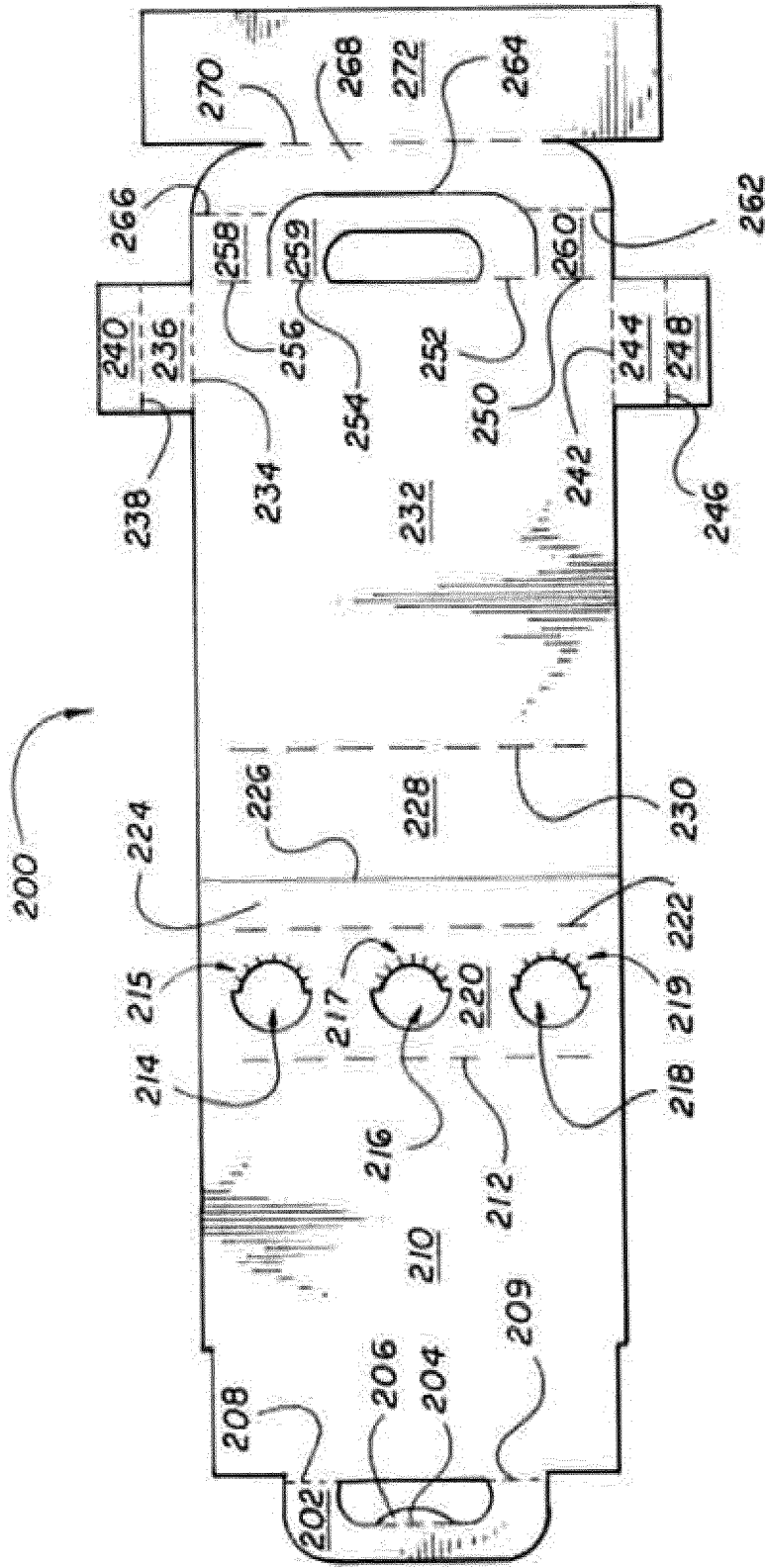


FIGURE 11

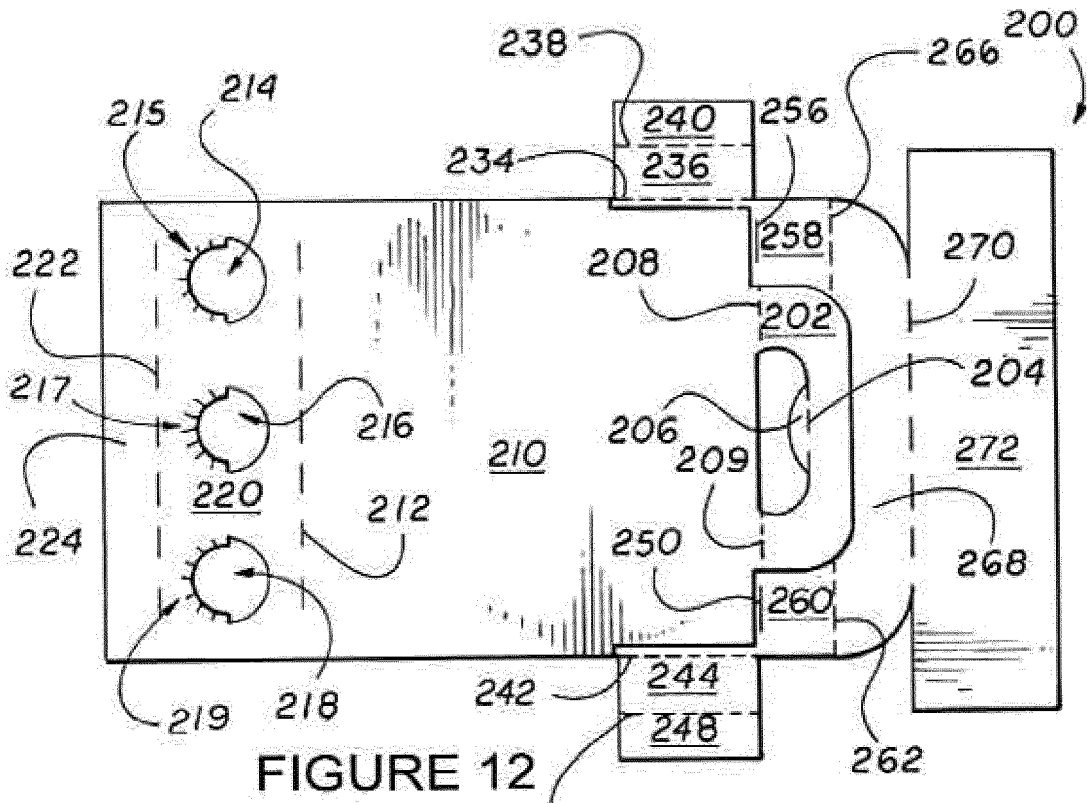


FIGURE 12

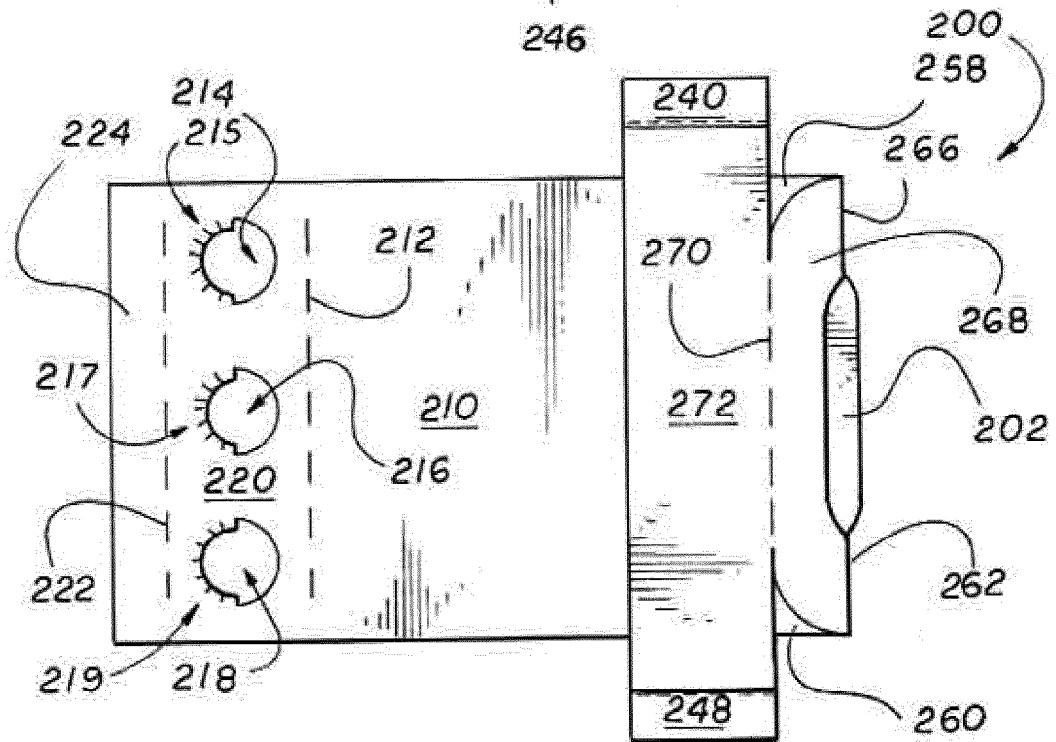


FIGURE 13

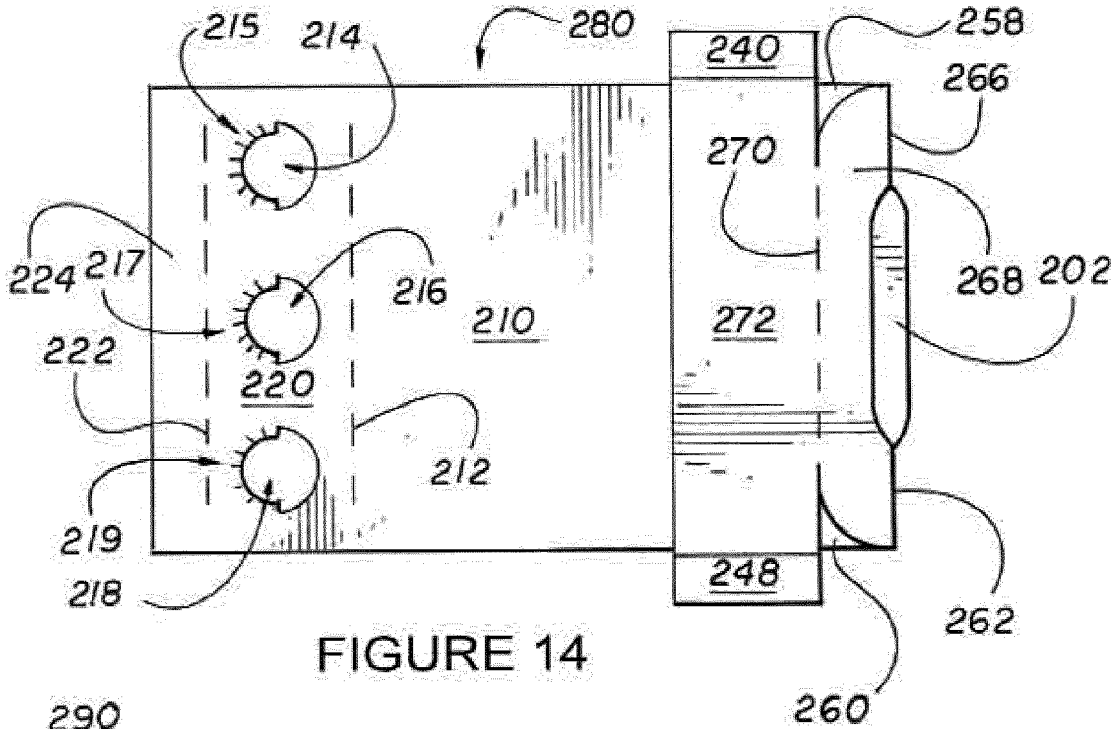


FIGURE 14

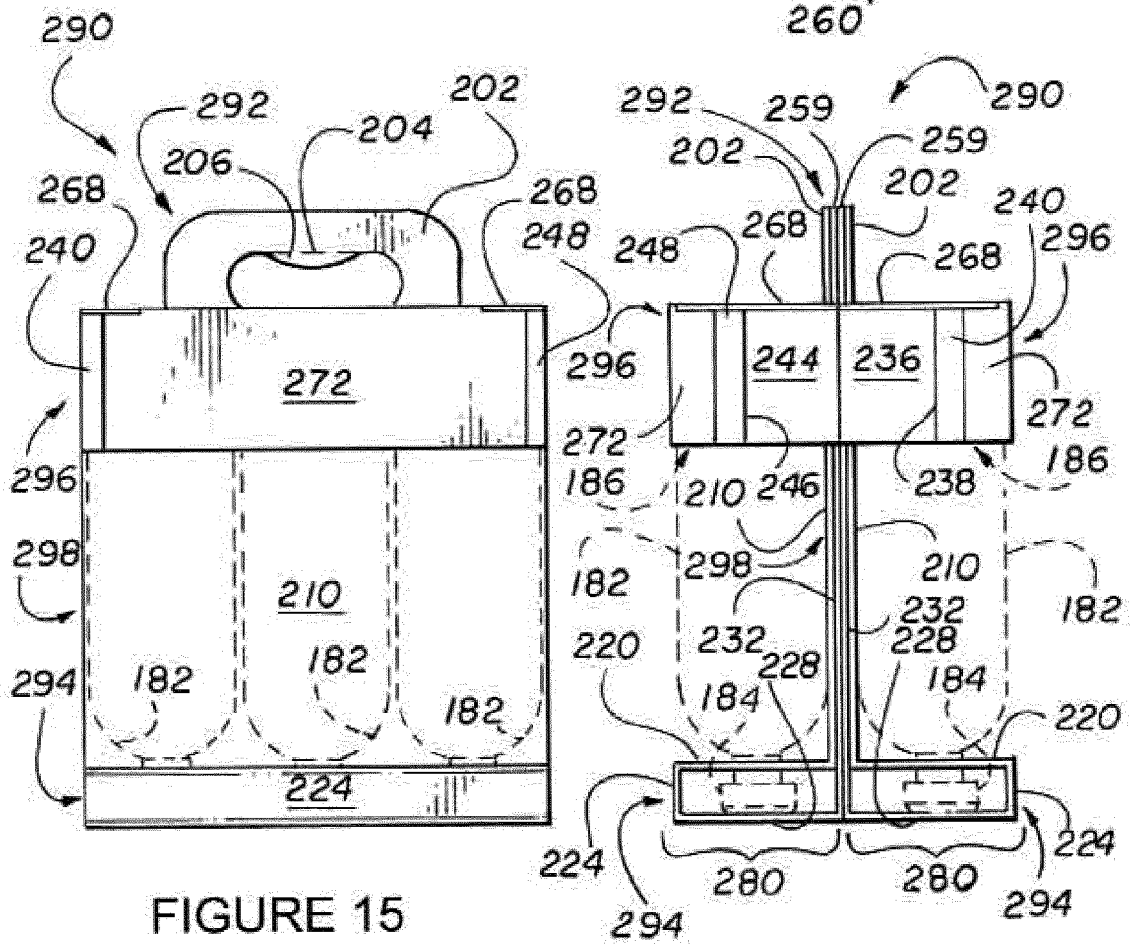
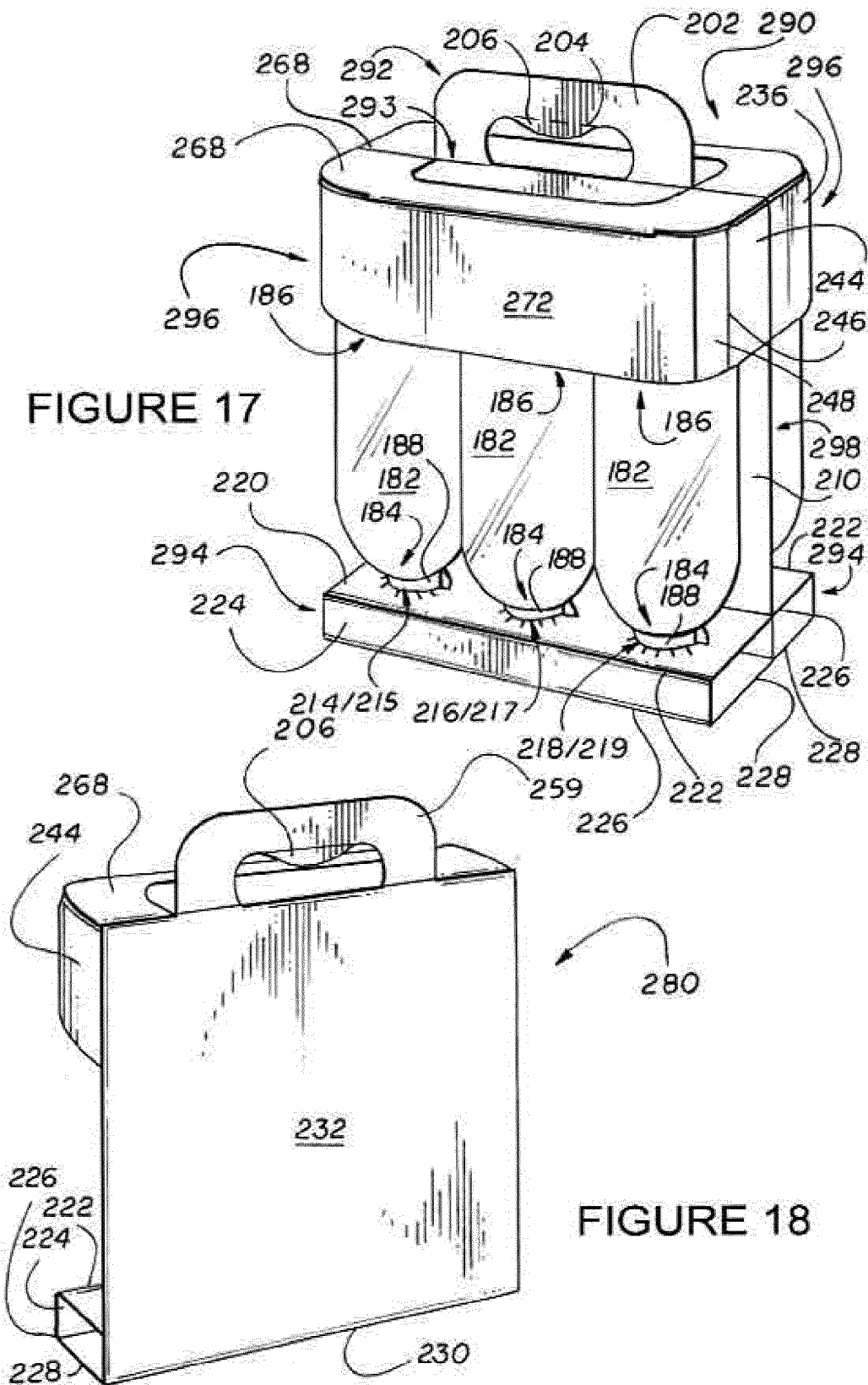


FIGURE 15

FIGURE 16



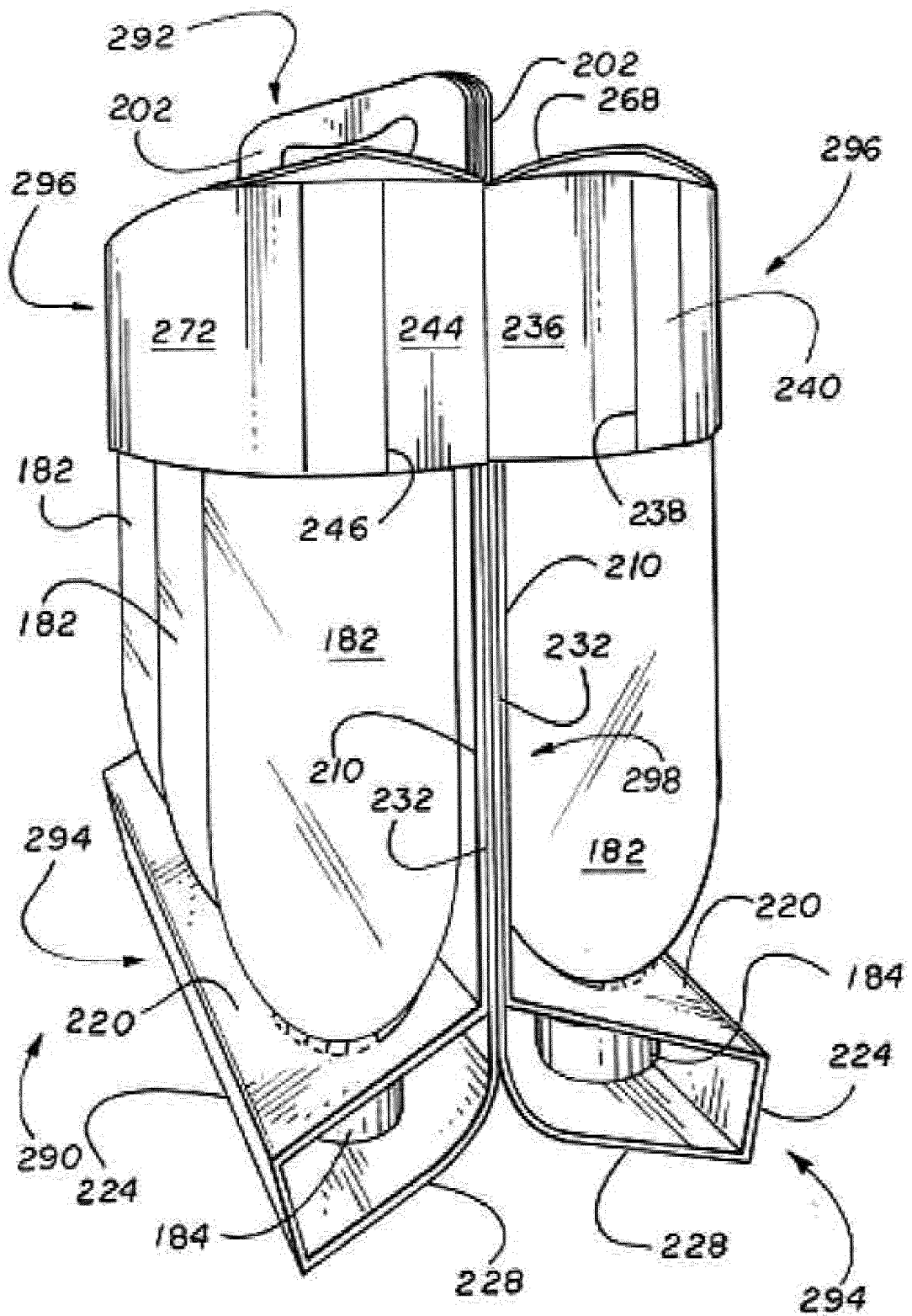


FIGURE 19

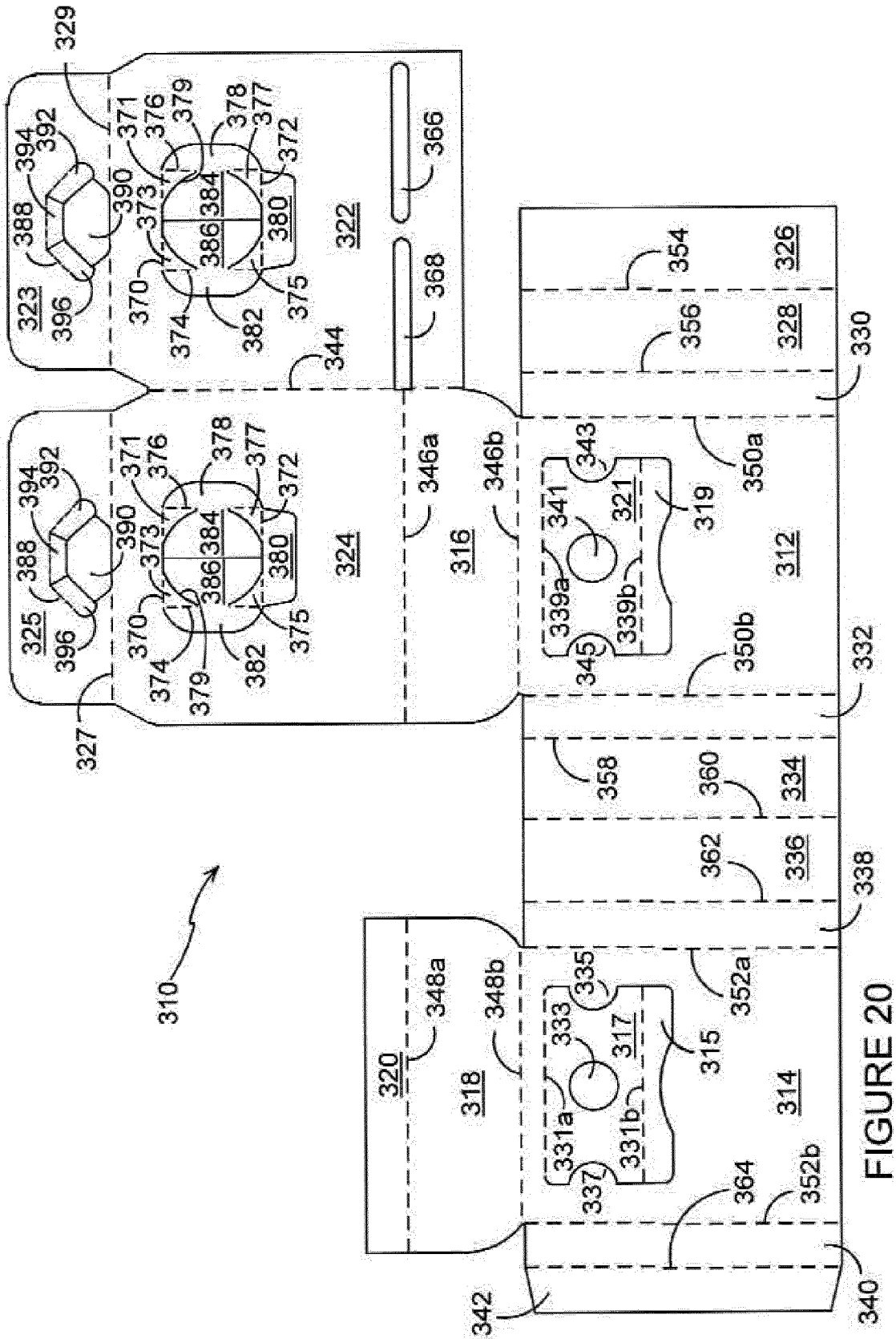


FIGURE 20

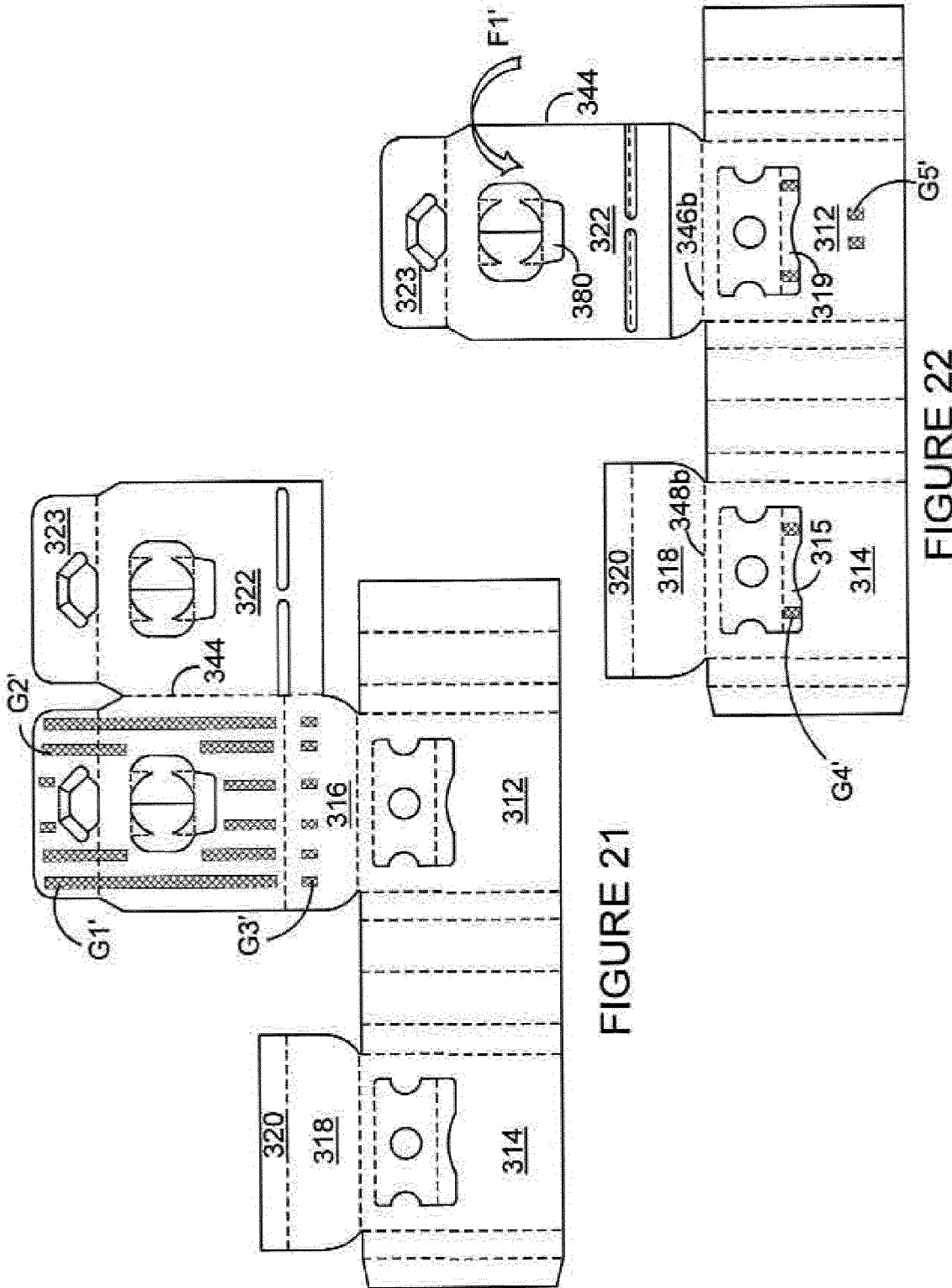


FIGURE 21

FIGURE 22

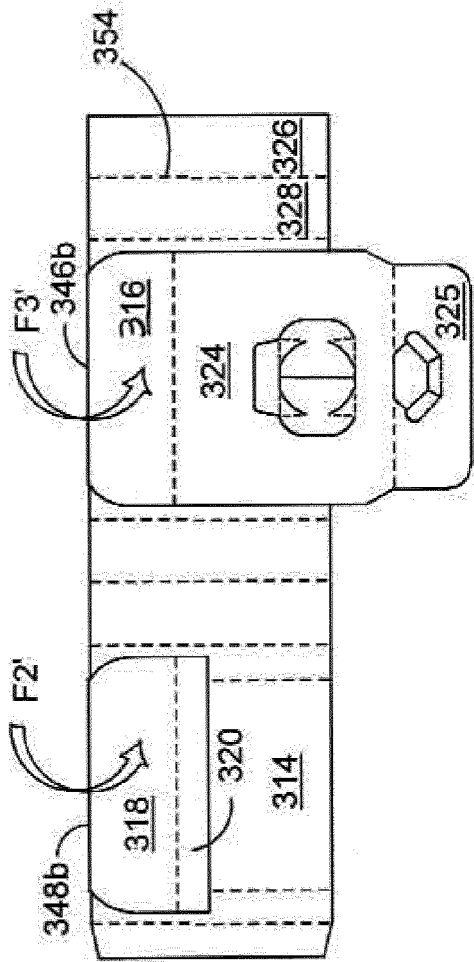


FIGURE 23

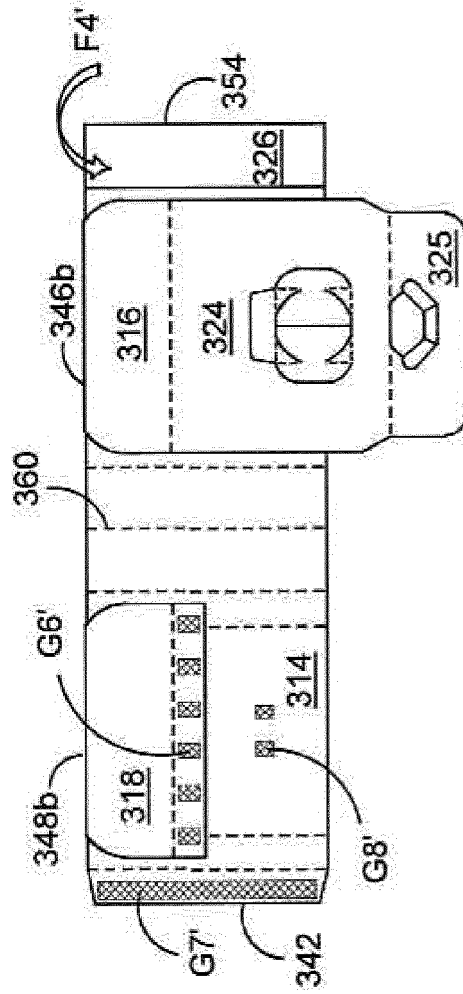


FIGURE 24

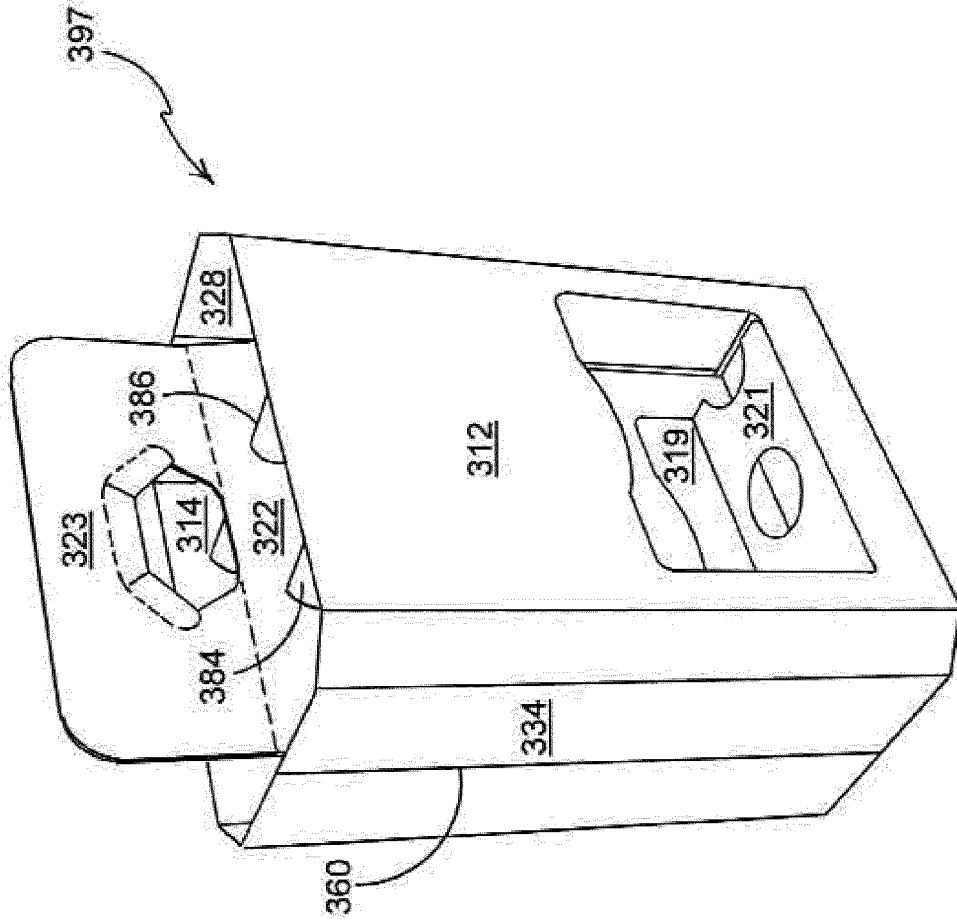


FIGURE 26

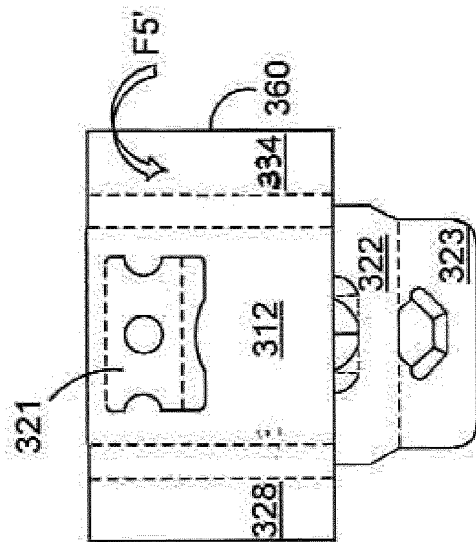


FIGURE 25

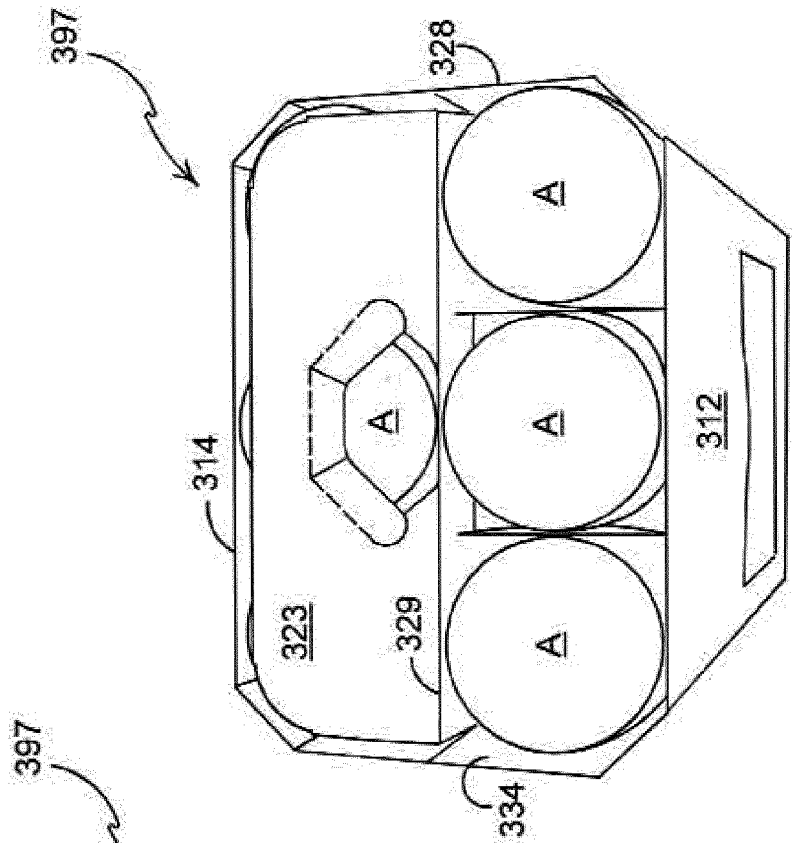


FIGURE 28

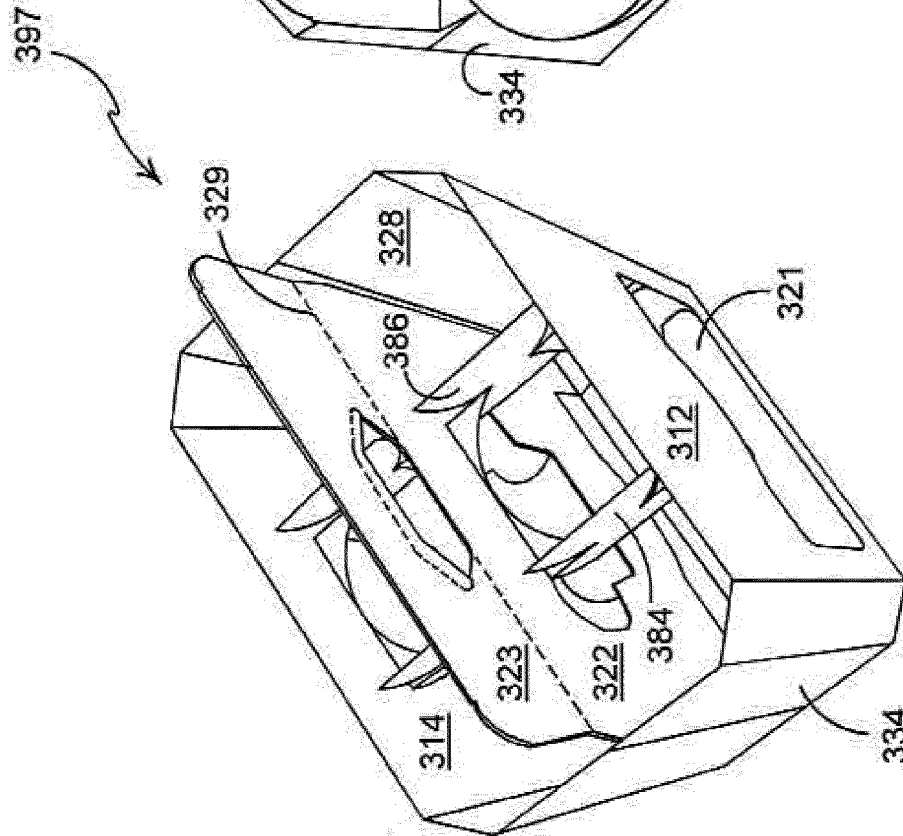


FIGURE 27

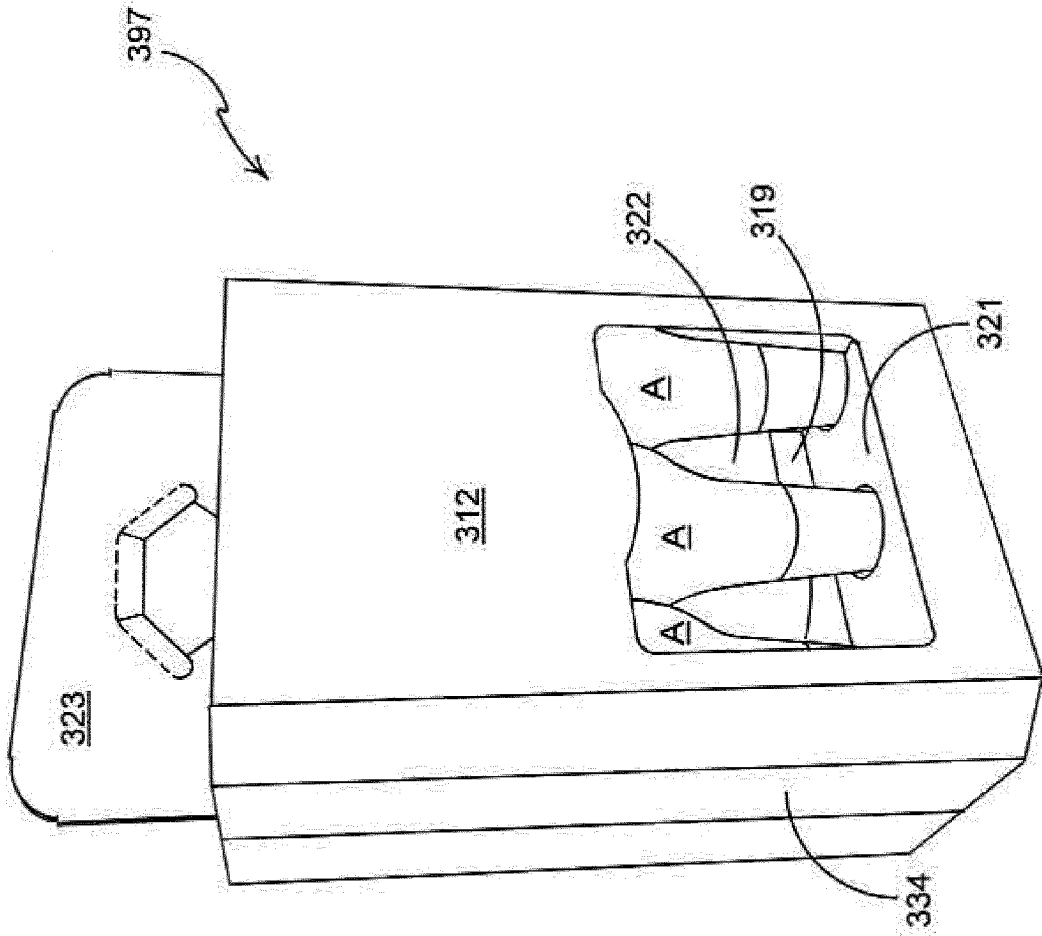


FIGURE 29



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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 21 August 2012	Examiner Vigilante, Marco
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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