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(54) **CARTON HAVING TILT FEATURES AND METHOD OF PLACING THE CARTON IN A TILT CONFIGURATION**

KARTON MIT KIPPMERKMALEN UND VERFAHREN ZUM POSITIONIEREN DES KARTONS IN EINE KIPP-STELLUNG

CARTONNAGE À ÉLÉMENTS INCLINABLES ET MÉTHODE POUR PLACER LE CARTONNAGE DANS UNE POSITION INCLINÉE

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Description

[0001] The present invention relates to a method of placing a carton in a tilt configuration according to the preamble of claim 1. Similarly, the present invention relates to a carton according to the preamble of claim 6.

BACKGROUND

[0002] Enclosed cartons with positioning features for displaying or dispensing articles have been used in the past. A carton as defined in the preamble of claim 6 which is suited to be placed in a tilt configuration as defined in the preamble of claim 1 is disclosed, e.g., in US 2004/0188508 A1. Due to the tilt configuration of the carton, articles accommodated within the carton are more easily accessible to users through the dispenser opening. Articles may therefore be retrieved from the carton interior without necessitating the user to reach into the carton interior. The dispenser flap of this carton extends into the top panel, the exiting end panel and both side panels. The dispenser flap mounting projection is formed in the top panel by a suitably curved frangible line. In its tilt configuration the side panel portions of the dispenser flap embrace the carton side panels adjacent the end panel what makes it cumbersome to correctly place the dispenser flap so as to place the carton in its tilt configuration. Further, the mounting feature sized to receive the dispenser flap mounting projection extends across the entire width of the carton. This, as in many other instances of use of positioning features, negatively affects the structural integrity of the carton. Additionally, many conventional carton positioning assemblies, like that of the named reference, are structurally weak and are relatively easily flattened by excessive weight, and/or may not provide a desired degree of stability for a carton. Accordingly, it is one object of the present invention to provide for a carton of the generic type as defined in the preamble of claim 6 and a method of placing a carton in a tilt configuration as defined in the preamble of claim 1 that allows supporting a relatively large weight without collapsing or deforming significantly.

SUMMARY

[0003] According to a first aspect of the invention, this object is achieved by a carton as defined in claim 6. Accordingly, the carton of the present invention includes a dispenser located at an exiting end of the carton. The dispenser can be opened by separating the dispenser flap from the exiting end of the carton, thereby forming a dispenser opening at the exiting end. The dispenser flap is then, at its mounting projection, engaged with a mounting feature at the bottom rear of the carton to tilt the carton in a manner such that articles within the carton are urged by gravity toward the exiting end. The dispenser flap comprises at least one fold line extending substantially laterally across the existing end panel along with at least one fold line the dispenser flap mounting projection is to be bent. Also according to the first aspect of the invention, the dispenser flap can be formed such that it is capable of supporting a relatively large weight without collapsing or deforming significantly. The relatively high strength of the dispenser flap allows heavy articles such as beverage containers to be supported in the carton while in the tilt configuration.

[0004] The opened exiting end of the opened carton can have one or more retainer walls so that articles are prevented from inadvertently rolling out of the carton, even when the carton is in the tilt configuration.

[0005] According to a second aspect of the invention, the method of placing a carton in a tilt configuration according to the present invention as defined in claim 1 comprises providing a carton having a first side panel, a top panel, a second side panel, a bottom panel, an end panel, an exiting end panel, and a dispenser pattern defining a dispenser flap at least in the exiting end panel and in the top panel, separating the dispenser flap from a remainder of the carton, wherein separating the dispenser flap forms a dispenser opening at least in the exiting end panel and in the top panel, and engaging the dispenser flap with a mounting feature proximate to the end panel, wherein the dispenser flap provides a nonzero angle of orientation of the carton with respect to horizontal.

[0006] The dispenser flap comprises a mounting projection, and engaging the dispenser flap with the mounting feature comprises inserting the mounting projection in the mounting feature. The dispenser flap comprises at least one fold line extending substantially laterally across the exiting end panel. A plurality of articles can be accommodated within the carton. A carton blank, which is not part of the present invention, may comprise a first side panel, a second side panel, a top panel, a bottom panel, at least one exiting end flap extending along a first marginal area of the blank, at least one end flap extending along a second marginal area of the blank, a dispenser pattern defining a dispenser flap at least in the at least one exiting end flap, the top panel, the first side panel, and the second side panel, and a mounting feature at or adjacent to the at least one end flap sized to receive at least a portion of the dispenser flap.

[0007] The at least one exiting end panel of the blank may comprise a first side exiting end flap connected to the first side panel, and a second side exiting end flap connected to the second side panel, the dispenser pattern extending through the first side exiting end flap and the second side exiting end flap. The dispenser pattern may comprise a first fold line extending generally transversely through first side exiting end flap and a second fold line extending generally transversely through the second side exiting end flap. The mounting feature may comprise a breachable line of disruption in the blank.

[0008] Other aspects, features, and details of the present invention can be more completely understood by reference to the following detailed description of ex-

emplary embodiments taken in conjunction with the drawings and from the appended claims.

[0009] According to common practice, the various features of the drawings discussed below are not necessarily drawn to scale. Dimensions of various features and elements in the drawings may be expanded or reduced to more clearly illustrate the embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

[0010] **FIG. 1** is a plan view of a blank from which a carton according to a first embodiment of the invention is formed.

[0011] **FIG. 2** is a top perspective view of the carton according to the first embodiment.

[0012] **FIG. 3** illustrates opening of the dispenser of the first carton embodiment.

[0013] **FIG. 4** is a perspective view of the dispenser flap of the first carton embodiment.

[0014] **FIG. 5** is a partial, bottom perspective view of the rear of the first carton embodiment.

[0015] **FIG. 6** illustrates the first carton embodiment being placed in a tilt configuration.

[0016] **FIG. 7** is a side view of the first carton embodiment in its tilt configuration.

[0017] **FIG. 8** is a partial, perspective view of the first carton embodiment in its tilt configuration.

[0018] **FIG. 9** is a plan view of a blank from which a carton according to a second embodiment of the invention is formed.

[0019] **FIG. 10** is a top perspective view of the carton according to the second embodiment.

[0020] **FIG. 11** is a perspective view of the dispenser flap of the second carton embodiment.

[0021] **FIG. 12** is a partial, bottom perspective view of the rear of the second carton embodiment.

[0022] **FIG. 13** is a side view of the second carton embodiment in its tilt configuration.

[0023] **FIG. 14** is a partial, perspective view of the second carton embodiment in its tilt configuration.

DETAILED DESCRIPTION

[0024] For a more complete understanding of the present invention, reference should be made to the following detailed description and accompanying drawings, wherein like or similar reference numerals designate corresponding parts throughout the figures.

[0025] The present invention generally relates to cartons having tilt features that enhance the dispensing capabilities of the cartons. The tilt features according to present invention can be used, for example, in cartons that contain articles or other items or products such as, for example, food and beverages. The articles can also include beverage containers such as, for example, cans, bottles, PET containers, or other containers such as those used in packaging foodstuffs. For the purposes of illustration and not for the purpose of limiting the scope of the invention, the following detailed description describes generally cylindrical beverage containers as disposed within the carton embodiments. In this specification, the terms "lower," "bottom," "upper" and "top" indicate orientations determined in relation to fully erected and upright cartons.

[0026] **FIG. 1** is a plan view of a blank **8** used to form a carton **190** (illustrated in **FIG. 2)** according to a first embodiment of the invention. The blank **8** comprises a first side panel **10** foldably connected to a top panel **20** at a first transverse fold line **21,** a second side panel **30** foldably connected to the top panel **20** at a second transverse fold line **31,** and a bottom panel **40** foldably connected to the first side panel **10** at a third transverse fold line **41.** An adhesive flap **50** may be foldably connected to the second side panel **30** at a fifth transverse fold line **51.** A handle **26** can be included in the top panel **20.**

[0027] The first side panel **10** is foldably connected to a first side exiting end flap **12** and a first side end flap **14.** The top panel **20** is foldably connected to a top exiting end flap **22** and a top end flap **24.** The second side panel **30** is foldably connected to a second side exiting end flap **32** and a second side end flap **34.** The bottom panel **40** is foldably connected to a bottom exiting end flap **42** and a bottom end flap **44.** The exiting end flaps **12, 22, 32, 42** extend along a first marginal area of the blank **8,** and may be foldably connected along a first longitudinally extending fold line **62.** The end flaps **14, 24, 34, 44** extend along a second marginal area of the blank **8,** and may be foldably connected along a second longitudinally extending fold line **64.** The longitudinally extending fold lines **62, 64** may be straight fold lines, or, the fold lines **62, 64** may be offset at one or more locations to account for, for example, blank thickness. When the carton **190** is erected, the exiting end flaps **12, 22, 32, 42** close a front or exiting end of the carton **190,** and the end flaps **14, 24, 34, 44** close a back end of the carton **190.**

[0028] A dispenser pattern **100** is formed in the blank **8** and defines a dispenser **150** in the erected carton **(FIG. 2).** The dispenser pattern **100** can generally be formed from, for example, tear lines or other lines of disruption that allow the dispenser **150** to be opened. When the dispenser **150** is opened, a dispenser flap **155** removed during opening of the dispenser **150** may be used to place the carton **190** in its tilt configuration.

[0029] The dispenser pattern **100** comprises a first end tear line **108** that extends through the first side exiting end flap **12,** and a second end tear line **128** that extends through the second side exiting end flap **32.** The first and second end tear lines **108, 128** have obliquely extending center sections that transition at each end into generally laterally extending sections. The first and second end tear lines **108, 128** define an end retainer wall **125** in the erected carton **190 (FIG. 2).**

[0030] The first end tear line **108** extends to a point at or adjacent to a first side tear line **102** that extends generally obliquely through the first side panel **10.** The sec-

ond end tear line **128** extends to a point at or adjacent to a second side tear line **122** that extends generally obliquely through the second side panel **30.** A first generally longitudinally extending tear line **104** extends between a point at or adjacent to the first side tear line **102** and an opening feature **106** in the top panel **20.** A second generally longitudinally extending tear line **124** extends between a point at or adjacent to the second side tear line **122** and the opening feature **106.** A first tilt fold line **132** extends from the first end tear line **108** to an edge of the first side exiting end flap **12.** A second tilt fold line **134** extends from the second end tear line **128** to an edge of the second side exiting end flap **32.** In accordance with a first exemplary embodiment, a mounting feature **136** is formed at the fold line **64** between the bottom panel **40** and the bottom end flap **44.** The mounting feature **136** cooperates with the dispenser flap **155** to tilt the carton **190 (FIG. 7).** First and second oblique score lines **26, 28** are formed in the top exiting end flap **22.** The oblique score lines **26, 28** allow the dispenser flap **155** to deform at the top exiting end flap **22** allowing the dispenser flap **155** to be removed more easily during opening of the dispenser **150.**

[0031] Referring again to **FIG. 1,** the tear lines **102, 104, 108, 122, 124, 128** of the dispenser pattern **100** can be formed from continuous or substantially continuous tear lines formed by, for example, scores, cuts, gaps, cut/creases, perforations, offset cuts, and combinations thereof. If cuts are used to form the tear lines **102, 104, 108, 122, 124, 128** the cuts may be, for example, interrupted by breachable nicks. The tilt fold lines **132, 134** can be, for example, creases, cut/creases, interrupted cuts, scores, or other lines of disruption in the blank **8.** The mounting feature **136** can in general be any breachable line of disruption in the blank **8** that allows an opening to be formed, preferably without necessitating the use of a tool, at the feature. For example, the mounting feature **136** can have the form of a tear line, a continuous cut, or a cut interrupted by breachable nicks. An elongate continuous or interrupted aperture can also be used to form the mounting feature **136.**

[0032] **FIG. 2** is a perspective view of the erected carton **190.** The carton **190** can be erected from the blank **8** by, for example, applying glue to the adhesive flap **50** and folding the blank **8** so that the adhesive flap **50** comes into contact with the bottom panel **40.** To complete the carton **190,** the exiting end flaps **12, 22, 32, 42** are folded inwardly and glued or otherwise adhered in place to form an exiting end panel **120,** and the end flaps **14, 24, 34, 44** are folded inwardly and glued or otherwise adhered to form an end panel **130.** Containers **C** (shown in **FIG. 7)** or other articles may be placed in the carton **190** at any time prior to forming either or both of the end panels **120, 130.** In the erected carton **190,** the dispenser pattern **100** defines the dispenser flap **155** that is used as a tilt element for the carton.

[0033] As shown in **FIG. 2,** the first and second end tear lines **108, 128** define a generally U-shaped retainer wall **125** in the exiting end panel **120.** When the dispenser flap **155** is removed, the retainer wall **125** at least partially occludes the exiting end of the carton **190** to prevent containers or other articles from inadvertently rolling out of or otherwise exiting the carton **190.**

[0034] **FIG. 3** illustrates opening of the dispenser **150** of the carton **190.** The carton dispenser **150** may be opened by inserting a finger or other object into the opening feature **106.** The opening feature **106** can include, for example, scores, continuous cuts and/or cuts interspersed with nicks, or other breachable lines of disruption, in order to provide relatively easy access to the dispenser **150.** The dispenser flap **155** is then removed by tearing along the tear lines **102, 104, 108, 122, 124, 128 (FIG. 1).** The oblique scores **26, 28** on the sides of the dispenser flap **155** allow the flap to deform slightly at its edges so that it is more easily pulled from the carton **190.**

[0035] **FIG. 4** is a perspective view of the dispenser flap **155** after removal from the exiting end of the carton **190** during opening of the dispenser **150.** The dispenser flap **155** serves as a tilt element for the carton **190,** as is discussed in detail below. In accordance with the first exemplary embodiment, the detached dispenser flap **155** includes a mounting projection **162,** a rear wall **164,** and a base **166** that may be oriented generally perpendicular to the mounting projection **162.** The mounting projection **162** is bendable with respect to the rear wall **164** about the tilt fold line lines **132, 134.**

[0036] **FIG. 5** is a bottom perspective view of the rear of the carton **190.** As shown in **FIG. 5,** the mounting feature **136** is disposed at the bottom rear of the carton **190,** and is at or adjacent to the bottom panel **40** and the end panel **130.** The mounting feature **136** is sized to receive the mounting projection **162** of the dispenser flap **155.**

[0037] **FIG. 6** illustrates the carton **190** being placed in the tilt configuration. In order to place the carton **190** in the tilt configuration, the mounting projection **162** is first folded or bent about the tilt fold line lines **132, 134** so that it is adjacent to or abutting the rear wall **164,** as shown in **FIG. 6.** The folded mounting projection **162** is then inserted into the mounting feature **136** until the base **166** of the flap **155** abuts the bottom panel **40.** The mounting projection **162** has a tapered shape that facilitates its insertion into the mounting feature **136.** The carton **190** is shown with its bottom side up in **FIG. 6** for the purposes of illustration. In practice, a user may place the carton **190** in the tilt configuration while the carton **190** is upright, in order to prevent articles from escaping through the dispenser opening **152 (FIG. 7)** formed during removal of the dispenser flap **155.** Alternatively, the dispensing opening **152** can be covered while the carton **190** is inverted.

[0038] **FIG. 7** is a side view of the carton **190** in the tilt configuration, and **FIG. 8** is a partial, perspective view of the carton **190** in the tilt configuration. As shown in **FIG. 7,** the dispenser flap **155** leaves a dispenser opening **152** when removed from the exiting end of the carton **190,** and also provides the carton **190** with a tilt angle α when

engaged with the mounting feature **136.** The tilt angle α causes containers **C** housed within the carton **190** to roll, slide, or otherwise advance toward the exiting end of the carton **190** by the action of gravity. The shape of the dispenser flap **155,** and accordingly the angle α, can be varied according to the desired dispenser opening **152** left by removal of the flap **155,** and/or according to the desired tilt angle α. For example, the angle α can be at least about three degrees. In other embodiments, the angle α is at least about five degrees.

[0039] According to the above embodiment, containers in the rear or back end of the carton **190** are advanced by the action of gravity to a front or exiting end of the carton **190,** without necessitating the user to reach into the carton. This provides a user ease of access to articles within the carton. Also according to the above embodiment, the "corner cutout" form of the dispenser flap **155** is capable of supporting a relatively large carton weight without collapsing, and provides a stable tilt platform for the carton.

[0040] **FIG. 9** is a plan view of a blank **208** used to form a carton **390** (illustrated in **FIG. 10)** according to a second embodiment of the invention. The blank **208** comprises a first side panel **210** foldably connected to a top panel **220** at a first transverse fold line **221,** a second side panel **230** foldably connected to the top panel **220** at a second transverse fold line **231,** and a bottom panel **240** foldably connected to the second side panel **230** at a third transverse fold line **241.** An adhesive flap **250** may be foldably connected to the first side panel **210** at a fifth transverse fold line **251.** A handle **226** can be included in the top panel **20.** The carton blank **208** and carton **390** may be generally similar to the carton blank **8** and carton **190** discussed above, respectively, and like or similar reference numbers in the two embodiments indicate like elements.

[0041] A dispenser pattern **300** is formed in the blank **8** and defines a dispenser **350** in the erected carton **(FIG. 10).** The dispenser pattern **300** can generally be formed from tear lines or other lines of disruption that allow all or a portion of the dispenser **350** to be opened. When the dispenser **350** is opened, a dispenser flap **355** removed during opening of the dispenser is used to place the carton **390** in its tilt configuration.

[0042] The dispenser pattern **300** comprises a first end tear line **308** that extends obliquely through the first side exiting end flap **212,** and a second end tear line **328** that extends obliquely through the second side exiting end flap **232.** The first and second end tear lines **308, 328** have obliquely extending sections that terminate in generally laterally extending sections. The first and second end tear lines **308, 328** define end retainer walls **325, 327** in the erected carton **390 (FIG. 10).**

[0043] The first end tear line **308** extends to a point at or adjacent to a first side tear line **302** that extends generally laterally through the first side panel **210.** The second end tear line **328** extends to a point at or adjacent to a second side tear line **322** that extends generally laterally through the second side panel **230.** A first generally longitudinally extending tear line **304** extends between a point at or adjacent to the first side tear line **302** and an opening feature **306** in the top panel **220.** A second generally longitudinally extending tear line **324** extends between a point at or adjacent to the second side tear line **322** and the opening feature **306.** A first tilt fold line **332** extends from the first end tear line **308** to an edge of the first side exiting end flap **212.** A second tilt fold line **334** extends from the second end tear line **328** to an edge of the second side exiting end flap **232.** In accordance with the second exemplary embodiment, a mounting feature **336** is formed at the fold line **264** between the bottom panel **240** and the bottom end flap **244.**

[0044] A tear-away section **322** may be formed in the bottom exiting end flap **240.** The tear away section **322** is shaped to align with the first and second end tear lines **308, 328** in the erected carton **390.** The tear-away section **322** in the bottom exiting end flap **242** allows articles in the bottom of the carton **390** to be accessed through the exiting end of the carton **390** when the dispenser flap **155** is removed from the carton **390 (FIG. 10).**

[0045] The tear lines **302, 304, 308, 322, 324, 328** of the dispenser pattern **300** can be formed from continuous or substantially continuous tear lines formed by, for example, scores, creases, cuts, gaps, cut/creases, perforations, offset cuts, and combinations thereof. If cuts are used to form the tear lines **302, 304, 308, 322, 324, 328,** the cuts may be, for example, interrupted by breachable nicks. The tilt fold lines **332, 334** can be, for example, creases, cut/creases, scores, or other lines of disruption in the blank **208.** The mounting feature **336** can comprise a breachable line of disruption such as, for example, a tear line, a continuous cut, or a cut interrupted by breachable nicks. An elongate aperture can also be used to form the mounting feature **336.**

[0046] **FIG. 10** is a perspective view of the erected carton **390.** Containers **C** (shown in **FIG. 13)** or other articles may be placed in the carton **390** at any time prior to forming either or both of the end panels **320, 330.** In the erected carton **390,** the dispenser pattern **300** forms the dispenser flap 355 that is used as a tilt element for the carton. The carton **390** may be opened by inserting a finger or other object into the opening feature **306** and tearing along the tear lines **302, 304, 308, 322, 324, 38 (FIG. 9),** thereby removing the dispenser flap **355.** The tear lines **308, 328** define the end retainer walls **325, 327** in the exiting end panel **320.** When the dispenser flap **355** is removed, the end retainer walls **325, 327** prevent containers or other articles from inadvertently rolling out of or otherwise exiting the carton **390.**

[0047] **FIG. 11** is a perspective view of the dispenser flap **355** after its removal from the exiting end of the carton **390.** The detached dispenser flap **355** includes a mounting projection **362,** a rear wall **364,** and a base **366** that extends generally perpendicularly to the mounting projection **362.** The mounting projection **362** is bendable with respect to the rear wall **364** about the first and second

tilt fold line lines **332, 334.**

[0048] **FIG. 12** is a bottom perspective view of the rear of the carton **390.** As shown in **FIG. 12** and in accordance with the second exemplary embodiment, the mounting feature **336** is disposed at the bottom rear of the carton **390** at or adjacent to the bottom panel **240** and to the end panel **320.** The mounting feature **336** is sized and shaped to receive the mounting projection **362** of the dispenser flap **355.**

[0049] The carton **390** may be placed in the tilt configuration in a manner similar to the carton **190** (illustrated in **FIG. 6).** In order to place the carton **390** in the tilt configuration, the mounting projection **362** is first folded or bent about the tilt fold line lines **332, 334** so that it is adjacent to or abutting the rear wall **364** of the dispenser flap **355.** The folded mounting projection **362** is then inserted into the mounting feature **336** until the base **366** of the flap **355** abuts the bottom panel **240.** The mounting projection **362** has a tapered shape that facilitates its insertion into the mounting feature **336.** In practice, a user may place the carton **390** in the tilt configuration while the carton **390** is upright, in order to prevent articles from escaping through the dispenser opening **352 (FIG. 13)** formed during removal of the dispenser flap **355.** The user may also invert the carton **390** and cover the dispenser opening **352** to prevent escape of articles from the carton.

[0050] **FIG. 13** is a side view of the carton **390** placed in the tilt configuration, and **FIG. 14** is a partial, perspective view of the carton **390** in the tilt configuration. As shown in **FIG. 13,** the dispenser flap **355** provides the carton **390** with a tilt angle β. The tilt angle β causes containers **C** housed within the carton **390** to roll, slide, or otherwise advance toward the exiting end of the carton **390** by the action of gravity. The shape of the dispenser flap **355,** and accordingly the size of the tilt angle β, can be varied according to a desired shape of the dispenser opening **352** left by removal of the flap **355,** and/or according to the desired tilt angle β. For example, the tilt angle β can be at least about three degrees. In other embodiments, the tilt angle β is at least about five degrees.

[0051] The cartons **190, 390** discussed in this specification are designed to accommodate twelve generally cylindrical 12 ounce beverage containers **C** in two rows (extending horizontally in **FIGS. 7** and **13)** and six columns (extending vertically in **FIGS. 7** and **13).** This arrangement is known as a 2x6 configuration. Other types of articles, however, can be accommodated within cartons according to the present invention. These articles can include beverage containers such as bottles and PET containers, as well as other containers cylindrical in shape, such as those used in packaging foodstuffs. Any other like containers holding non-food items or products, such as motor oil, lubricants, etc. can be held and automatically positioned in this type of carton. The principles of the present invention are also applicable to alternative arrangements of articles, including 3x4, 4x3, 2x4, 2x5, 4x6, 4x5, 3x6, 5x6, etc.

[0052] In the exemplary embodiments discussed above, the blanks may be formed from materials such as clay coated newsprint (CCN) and solid unbleached sulfate (SUS) board. In general, the blanks may be constructed of paperboard, having a caliper of at least about 14, so that it is heavier and more rigid than ordinary paper. The blanks, and thus the cartons, 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 first and second sides of the blanks can be coated with, for example, a clay coating. The clay coating may then be printed over with product, advertising, and other information or images. The blanks may then be coated with a varnish to protect any information printed on the blanks. The blanks may also be coated with, for example, a moisture barrier layer, on either or both sides of the blanks. The blanks can also be laminated to or coated with one or more sheet-like materials at selected panels or panel sections.

[0053] 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 invention, fold lines include: a score line, such as lines formed with a blunt scoring knife, or the like, which creates a crushed portion in the material along the desired line of weakness; a cut that extends partially into a material along the desired line of weakness, and/or a series of cuts that extend partially into and/or completely through the material along the desired line of weakness; and various combinations of these features.

[0054] A tear line can be any substantially linear, although not necessarily straight, line of disruption that facilitates tearing therealong. Specifically, but not for the purpose of narrowing the scope of the present invention, tear lines include: a cut that extends partially into the 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, or various combinations of these features. As a more specific example, one type of tear line is in the form of a series of cuts that extend completely through the material, with adjacent cuts being spaced apart slightly so that small somewhat bridge-like pieces of the material (e.g., 'nicks') are defined between adjacent cuts. The nicks are broken during tearing along the tear line. Such a tear line that includes nicks can also be referred to as a cut line, since the nicks typically are a relatively small in relation to the cuts.

[0055] The term "line" as used herein includes not only straight lines, but also other types of lines such as curved, curvilinear or angularly displaced lines.

[0056] 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 incor-

rectly consider the fold line to be a tear line. In contrast, where nicks are present in a cut line (e.g., tear line), typically the nicks will not be overly large or overly numerous in a manner that might cause a reasonable user to incorrectly consider the subject cut line to be a fold line.

[0057] The above embodiments may be described as having one or more panels adhered together by glue. The term "glue" is intended to encompass all manner of adhesives commonly used to secure paperboard carton panels in place.

[0058] The foregoing description of the invention illustrates and describes the present invention. Additionally, the disclosure shows and describes only selected embodiments of the invention, but it is to be understood that the invention 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 in the appended claims.

Claims

1. A method of placing a carton (190) in a tilt configuration, comprising:

providing a carton (190) having a first side panel (10) , a top panel (20), a second side panel (30), a bottom panel (40), an end panel (130), an exiting end panel (120), and a dispenser pattern (100) defining a dispenser flap (155) at least in the exiting end panel (120) and in the top panel (20);
separating the dispenser flap (155) from a remainder of the carton (190), wherein separating the dispenser flap (155) forms a dispenser opening (152) at least in the exiting end panel (120) and in the top panel (20);
bending the dispenser flap (155) at a mounting projection (162) of the dispenser flap (155); and
inserting the mounting projection (162) in a mounting feature (136) proximate to the end panel (130), wherein the dispenser flap (155) provides a nonzero angle of orientation (α) of the carton (190) with respect to horizontal;
characterized in that
the dispenser flap (155) comprises at least one fold line (132) extending substantially laterally across the exiting end panel (120), wherein bending the dispenser flap (155) at its mounting projection (162) comprises bending the mounting projection (162) along the at least one fold line (132).

2. The method of claim 1, wherein the mounting feature (136) comprises a breachable line of disruption at or adjacent to the end panel (130).

3. The method of claim 1, wherein the dispenser flap (155) further comprises a base (166) that extends substantially perpendicularly to the mounting projection (162), wherein the base (166) abuts a bottom panel (40) of the carton (190) when the carton (190) is in the tilt configuration.

4. The method of claim 1, wherein separating the dispenser flap (155) further forms the dispenser opening (152) in the first and second side panels (10, 30).

5. The method of claim 1, wherein providing a carton (190) further comprises providing at least one of generally cylindrical beverage containers (C) and petaloid beverage containers within the carton (190) .

6. A carton (190), comprising:

a first side panel (10);
a second side panel (30);
a top panel (20);
a bottom panel (40);
an end panel (130);
an exiting end panel (120) that is opposite from the end panel (130);
a dispenser pattern (100) defining a dispenser flap (155) at least in the exiting end panel (120) and in the top panel (20); and
a mounting feature (136) at or adjacent to the end panel (130) sized to receive at least a portion of the dispenser flap (155) when the dispenser flap (155) is separated from a remainder of the carton (190), wherein
the dispenser flap (155) comprises a mounting projection (162) sized to be received in the mounting feature (136);
characterized in that
the dispenser flap (155) further comprises at least one fold line (132) extending substantially laterally across the exiting end panel (120).

7. The carton (190) of claim 6, wherein the dispenser flap (155) further comprises a base (166) that extends substantially perpendicularly to the mounting projection (162).

8. The carton (190) of claim 6, wherein the mounting feature (136) comprises a breachable line of disruption proximate to the end panel (130).

9. The carton (190) of claim 6, wherein the dispenser pattern (100) further defines the dispenser flap (155) in the first (10) and second (30) side panels.

10. The carton (190) of claim 6, wherein the exiting end panel (120) comprises a plurality of overlapping exiting end flaps (12, 22, 32, 42).

11. The carton (190) of claim 6, wherein the carton (190)

has the shape of a parallelepiped, the carton (190) further comprising at least one of generally cylindrical beverage containers (C) and petaloid beverage containers disposed within the carton (190).

Patentansprüche

1. Verfahren zum Anordnen eines Kartons (190) in einer Kippkonfiguration, umfassend:

   Bereitstellen eines Kartons (190) mit einer ersten Seitenwand (10), einer oberen Wand (20), einer zweiten Seitenwand (30), einer unteren Wand (40), einer Endwand (130), einer Ausgangsendwand (120) und einem Abgabemuster (100), das mindestens in der Ausgangsendwand (120) und in der oberen Wand (20) eine Abgabeklappe (155) definiert;
   Abtrennen der Abgabeklappe (155) von einem Rest des Kartons (190), wobei das Abtrennen der Abgabeklappe (155) eine Abgabeöffnung (152) mindestens in der Ausgangsendwand (120) und in der oberen Wand (20) bildet;
   Umbiegen der Abgabeklappe (155) an einem Befestigungsvorsprung (162) der Abgabeklappe (155); und
   Einsetzen des Befestigungsvorsprung (162) in ein Befestigungsmerkmal (136) nahe der Endwand (130), wobei die Abgabeklappe (155) einen Ausrichtungswinkel (α) ungleich null des Kartons (190) in Bezug auf die Horizontale bereitstellt;
   dadurch gekennzeichnet, dass
   die Abgabeklappe (155) mindestens eine Faltlinie (132) umfasst, die im Wesentlichen seitwärts über die Ausgangsendwand (120) verläuft, wobei das Umbiegen der Abgabeklappe (155) an ihrem Befestigungsvorsprung (162) das Umbiegen des Befestigungsvorsprungs (162) entlang der mindestens einen Faltlinie (132) umfasst.

2. Verfahren nach Anspruch 1, wobei das Befestigungsmerkmal (136) eine durchbrechbare Risslinie an oder benachbart der Endwand (130) umfasst.

3. Verfahren nach Anspruch 1, wobei die Abgabeklappe (155) ferner eine Basis (166) umfasst, die im Wesentlichen senkrecht zu dem Befestigungsvorsprung (162) verläuft, wobei die Basis (166) an eine untere Wand (40) des Kartons (190) grenzt, wenn sich der Karton (190) in der Kippkonfiguration befindet.

4. Verfahren nach Anspruch 1, wobei das Abtrennen der Abgabeklappe (155) ferner die Abgabeöffnung (152) in der ersten und dem zweiten Seitenwand (10, 30) bildet.

5. Verfahren nach Anspruch 1, wobei das Bereitstellen eines Kartons (190) ferner das Bereitstellen mindestens eines von im Allgemeinen zylindrischen Getränkebehältern (C) und petaloiden Getränkebehältern innerhalb des Kartons (190) umfasst.

6. Karton (190), umfassend:

   eine erste Seitenwand (10);
   eine zweite Seitenwand (30);
   eine obere Wand (20);
   eine untere Wand (40);
   eine Endwand (130);
   eine Ausgangsendwand (120), die der Endwand (130) gegenüberliegt;
   ein Abgabemuster (100), das eine Abgabeklappe (155) mindestens in der Ausgangsendwand (120) und in der oberen Wand (20) definiert; und
   ein Befestigungsmerkmal (136) an oder benachbart der Endwand (130), das in Bezug auf seine Größe so bemessen ist, dass es mindestens einen Abschnitt der Abgabeklappe (155) aufnimmt, wenn die Abgabeklappe (155) von einem Rest des Kartons (190) abgetrennt wird, wobei
   die Abgabeklappe (155) einen Befestigungsvorsprung (162) umfasst, der in Bezug auf seine Größe so bemessen ist, dass er in dem Befestigungsmerkmal (136) aufgenommen werden kann;
   dadurch gekennzeichnet, dass
   die Abgabeklappe (155) ferner mindestens eine Faltlinie (132) umfasst, die im Wesentlichen seitwärts über die Ausgangsendwand (120) verläuft.

7. Karton (190) nach Anspruch 6, wobei die Abgabeklappe (155) ferner eine Basis (166) umfasst, die im Wesentlichen senkrecht zu dem Befestigungsvorsprung (162) verläuft.

8. Karton (190) nach Anspruch 6, wobei das Befestigungsmerkmal (136) eine durchbrechbare Risslinie an oder benachbart der Endwand (130) umfasst.

9. Karton (190) nach Anspruch 6, wobei das Abgabemuster (100) ferner die Abgabeklappe (155) in der ersten (10) und der zweiten (30) Seitenwand definiert.

10. Karton (190) nach Anspruch 6, wobei die Ausgangsendwand (120) mehrere überlappende Ausgangsendklappen (12, 22, 32, 42) umfasst.

11. Karton (190) nach Anspruch 6, wobei der Karton (190) die Form eines Spats aufweist und der Karton

(190) ferner mindestens einen von im Allgemeinen zylindrischen Getränkebehältern (C) und petaloiden Getränkebehältern umfasst, die innerhalb des Kartons (190) angeordnet sind.

Revendications

1. Méthode pour le placement d'un carton (190) dans une configuration rabattable comprenant :

mise à disposition d'un carton (190) possédant un premier panneau latéral (10), un panneau supérieur (20), un deuxième panneau latéral (30), un panneau inférieur (40), un panneau terminal (130), un panneau terminal de sortie (120) et un patron de distribution (100) définissant un rabat de distribution (155) au moins dans le panneau terminal de sortie (120) et dans le panneau supérieur (20) ;
séparation du rabat de distribution (155) à partir d'un reste de carton (190), la séparation du rabat de distribution (155) formant une ouverture de distribution (152) au moins dans le panneau terminal de sortie (120) et dans le panneau supérieur (20) ;
pliage du rabat de distribution (155) au niveau d'une projection de montage (162) du rabat de distribution (155) du rabat de distribution (155) ; et
insertion de la projection de montage (162) dans un élément de montage (136) à proximité du panneau terminal (130), le rabat de distribution (155) formant un angle non nul d'orientation (α) du carton (190) par rapport à l'horizontale ;
caractérisée en ce que
le rabat de distribution (155) comprend au moins une ligne de pliage (132) s'étendant substantiellement latéralement en travers du panneau terminal de sortie (120), le pliage du rabat de distribution (155) au niveau de sa projection de montage (162) comprenant le pliage de la projection de montage (162) le long d'au moins une ligne de pliage (132).

2. Méthode selon la revendication 1, dans laquelle l'élément de montage (136) comprend une ligne de rupture, sur le panneau terminal (130) ou adjacente à celui-ci.

3. Méthode selon la revendication 1, dans laquelle le rabat de distribution (155) comprend en outre une base (166) s'étendant substantiellement perpendiculairement à la projection de montage (162), la base (166) étant disposée contre un panneau inférieur (40) du carton (190) lorsque le carton se trouve dans la configuration rabattue.

4. Méthode selon la revendication 1, dans laquelle la séparation du rabat de distribution (155) forme en outre l'ouverture de distribution (152) dans les premier et deuxième panneaux latéraux (10, 30).

5. Méthode selon la revendication 1, dans laquelle la mise à disposition d'un carton (190) comprend en outre la mise à disposition d'au moins un conteneur à boisson généralement cylindrique (C) et de conteneurs à boisson pétaloïdes à l'intérieur du carton (190).

6. Carton (190) comprenant :

un premier panneau latéral (10) ;
un deuxième panneau latéral (30) ;
un panneau supérieur (20) ;
un panneau inférieur (40) ;
un panneau terminal (20) ;
un panneau terminal de sortie (120) situé à l'opposé du panneau terminal (130) ;
un patron de distribution (100) définissant un rabat de distribution (155) au moins dans le panneau terminal de sortie (120) et dans le panneau supérieur (20) ; et
un élément de montage (136) sur le panneau terminal (130) ou adjacent à celui-ci, dimensionné pour recevoir au moins une portion du rabat de distribution (155) lorsque le rabat de distribution (155) est séparé d'un reste de carton (190), dans lequel
le rabat de distribution (155) comprend une projection de montage (162) dimensionnée pour être admise dans l'élément de montage (136);
caractérisé en ce que
le rabat de distribution (155) comprend en outre au moins une ligne de pliage (132) s'étendant substantiellement latéralement en travers du panneau terminal de sortie (120).

7. Carton (190) selon la revendication 6, dans lequel le rabat de distribution (155) comprend en outre une base (166) s'étendant substantiellement perpendiculairement à la projection de montage (162).

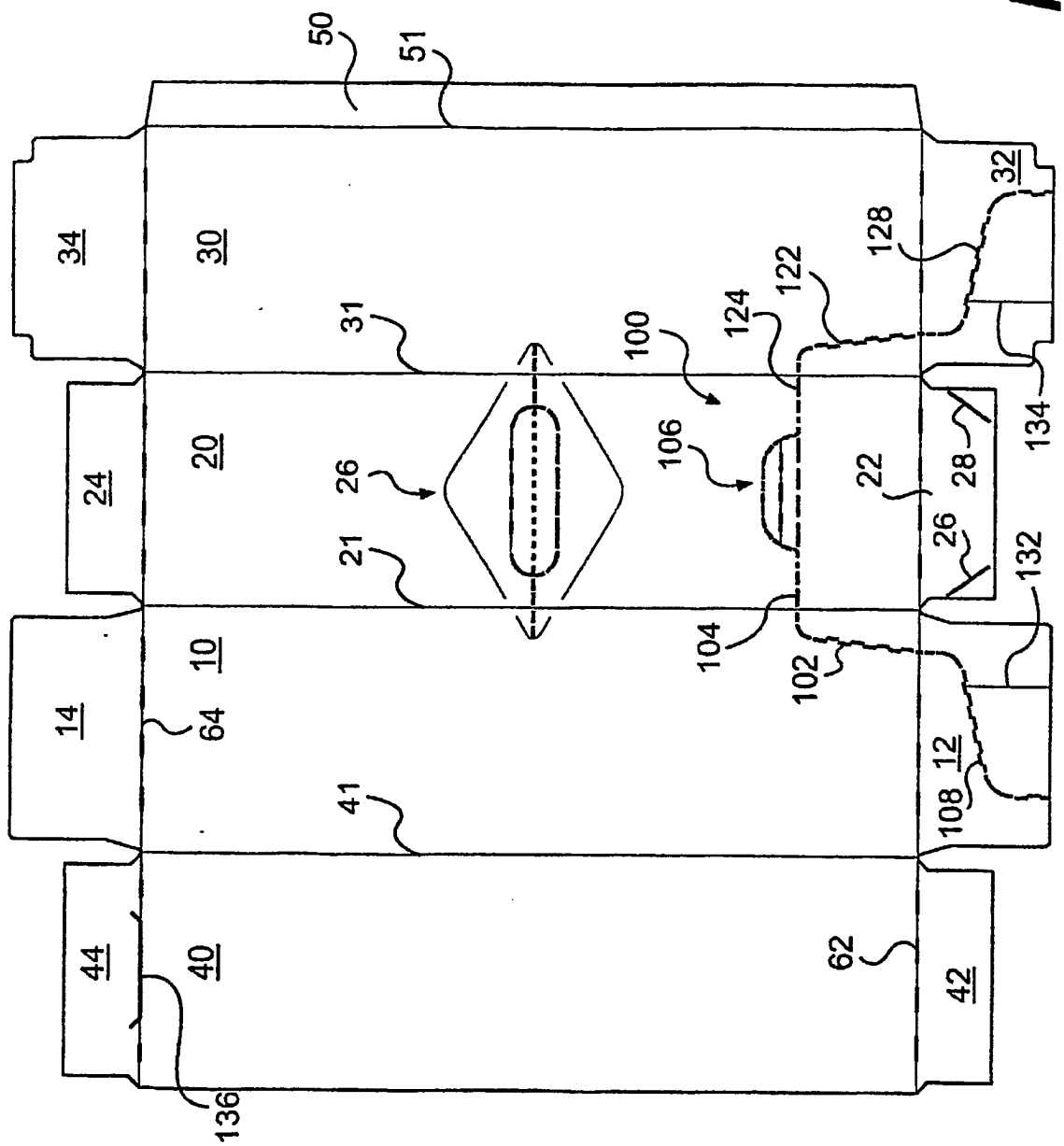
8. Carton (190) selon la revendication 6, dans lequel l'élément de montage (136) comprend une ligne de rupture située à proximité du panneau terminal (130).

9. Carton (190) selon la revendication 6, dans lequel le patron de distribution (100) définit en outre le rabat de distribution (155) dans le premier (10) et le deuxième (30) panneau latéral.

10. Carton (190) selon la revendication 6, dans lequel le panneau terminal de sortie (120) comprend une pluralité de rabats terminaux de sortie chevauchants

(12, 22, 32, 42).

11. Carton (190) selon la revendication 6, dans lequel le carton (190) a la forme d'un parallélépipède, le carton (190) comprenant en outre au moins un conteneur à boisson généralement cylindrique (C) et des conteneurs à boisson pétaloïdes, disposés à l'intérieur du carton (190).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14
10
64
12
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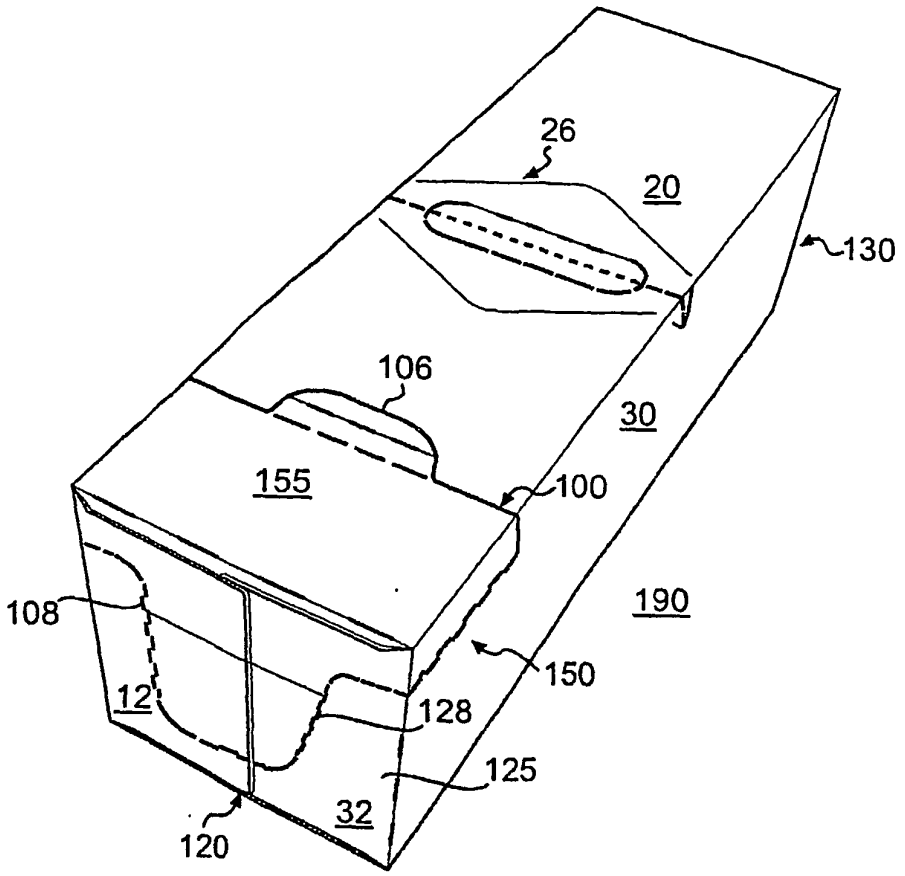
108
44
40
62
42
136

FIG. 1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155
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150
12
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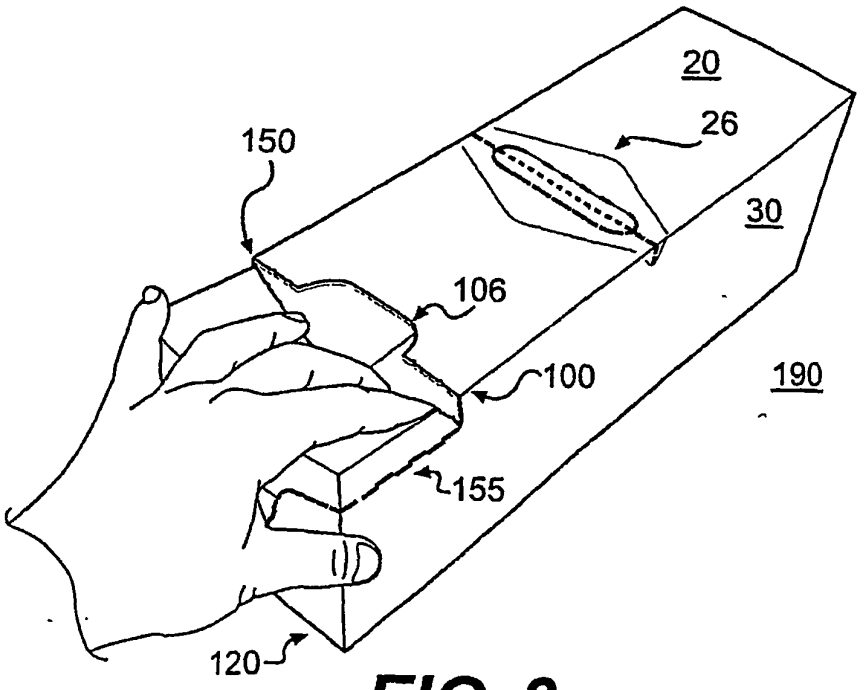
125
32
120

FIG. 2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106
100
190
155
120

FIG. 3

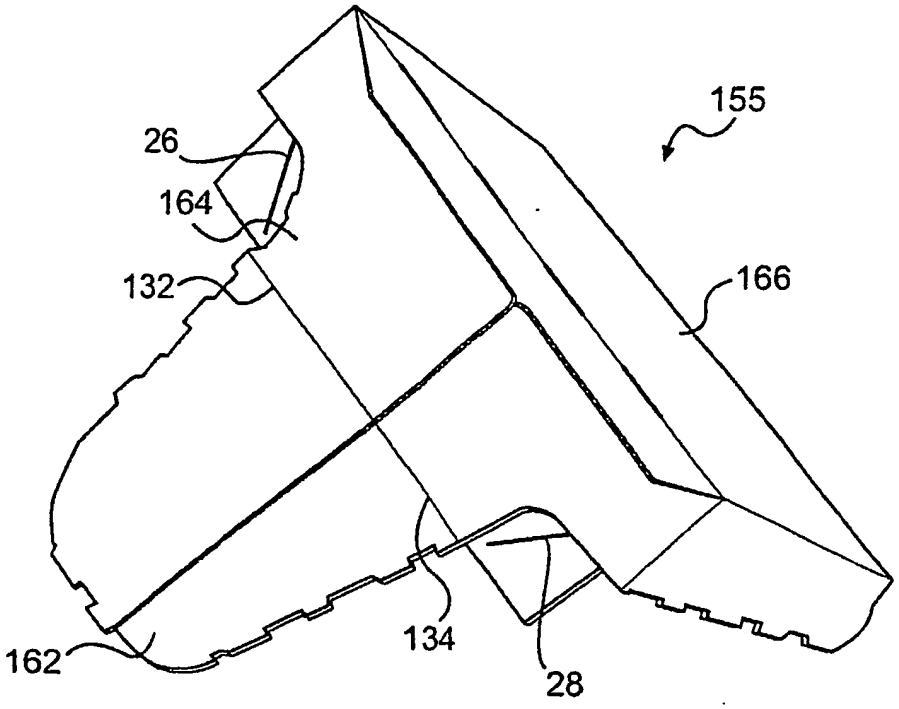


FIG. 4

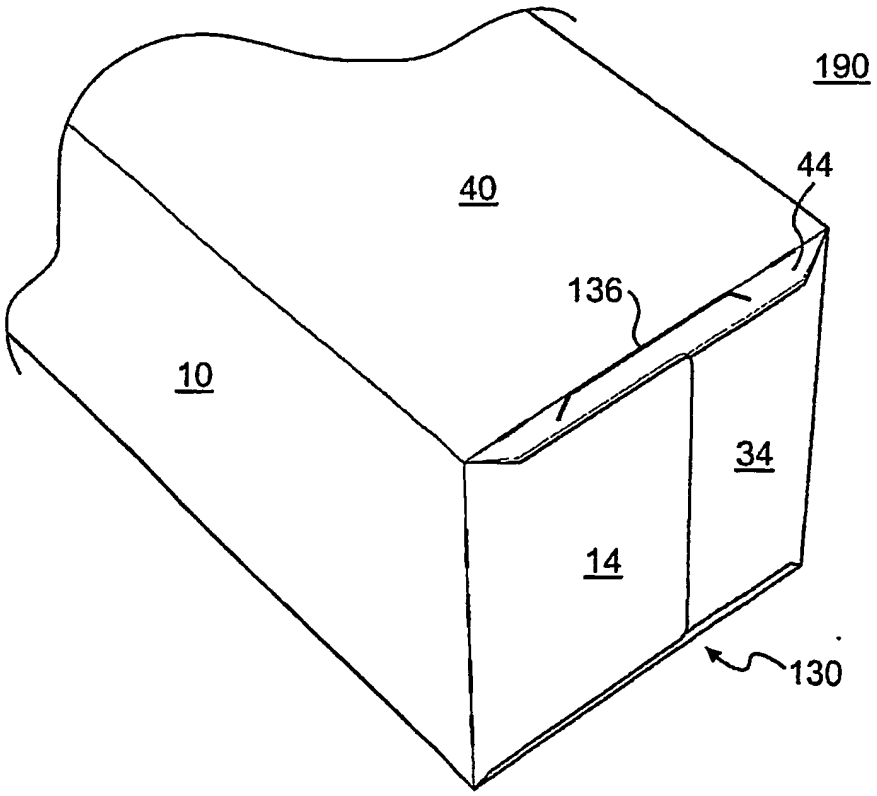


FIG. 5

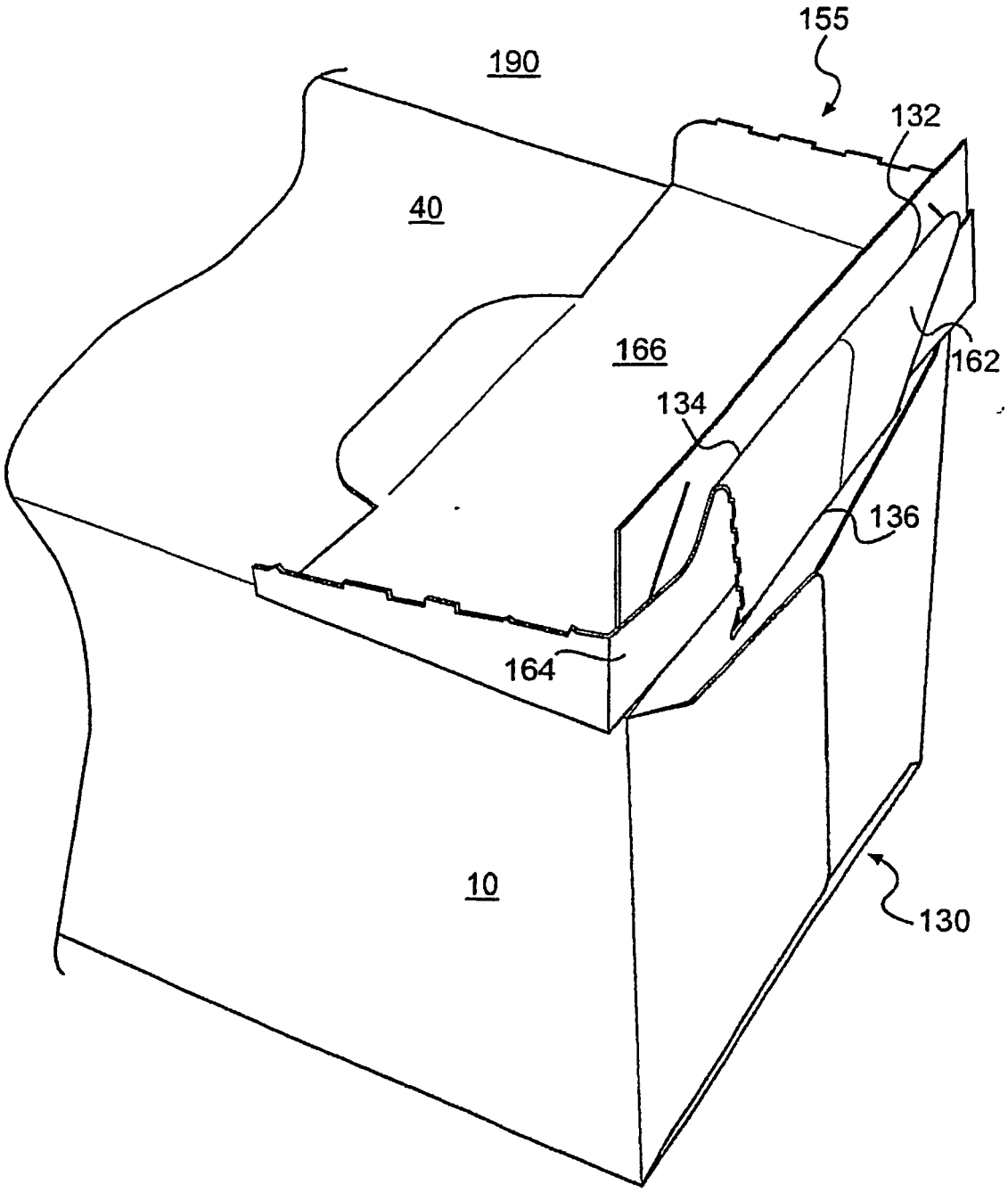


FIG. 6

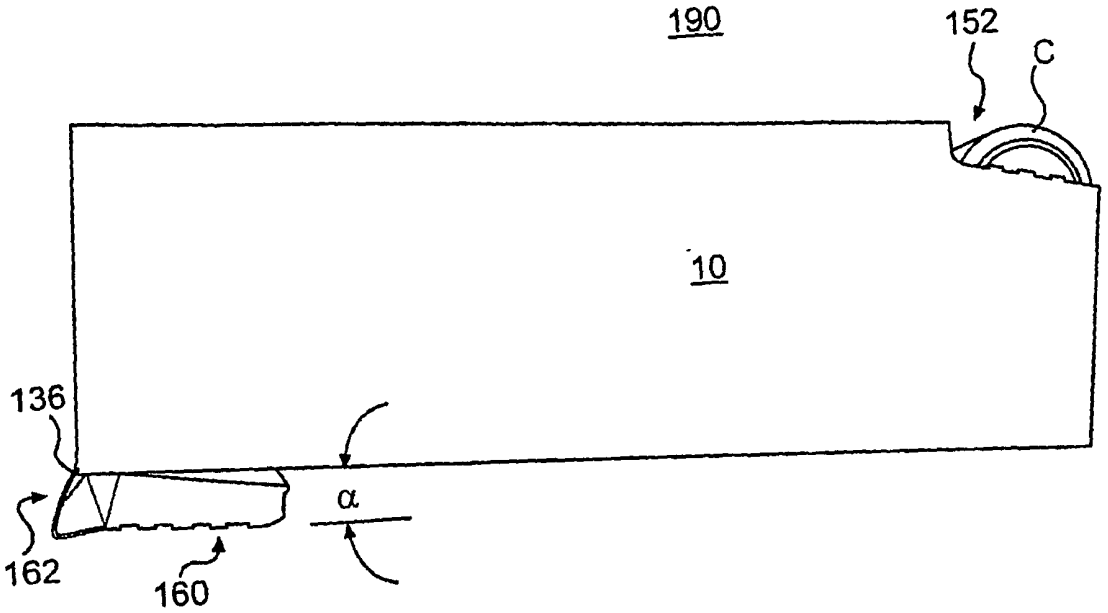


FIG. 7

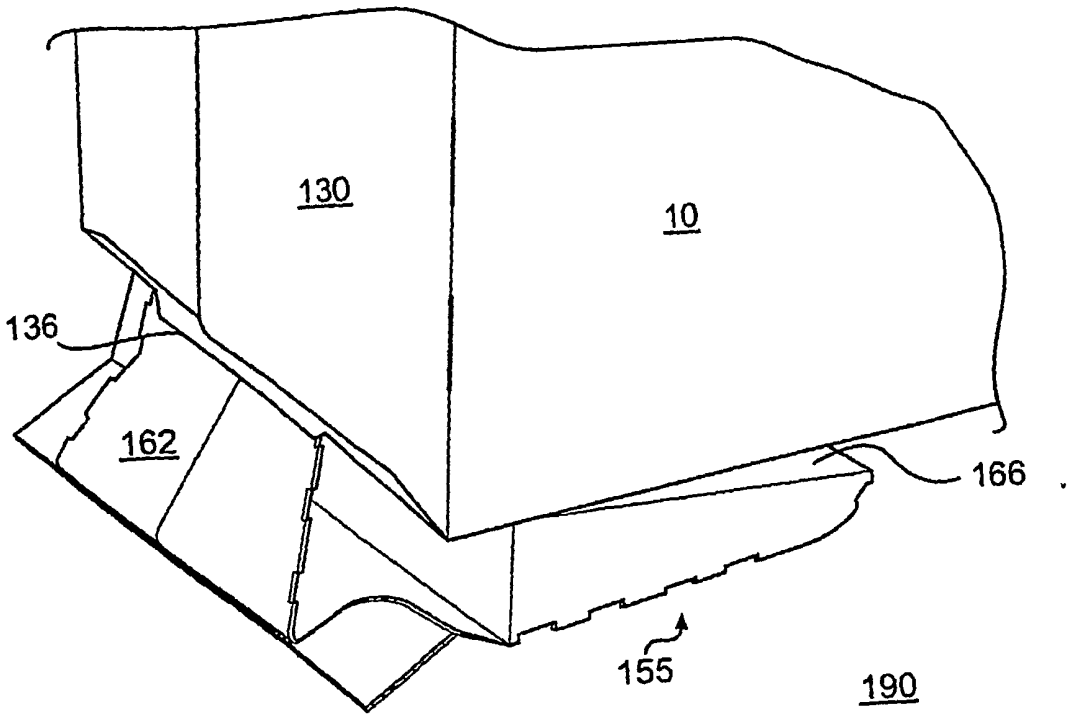
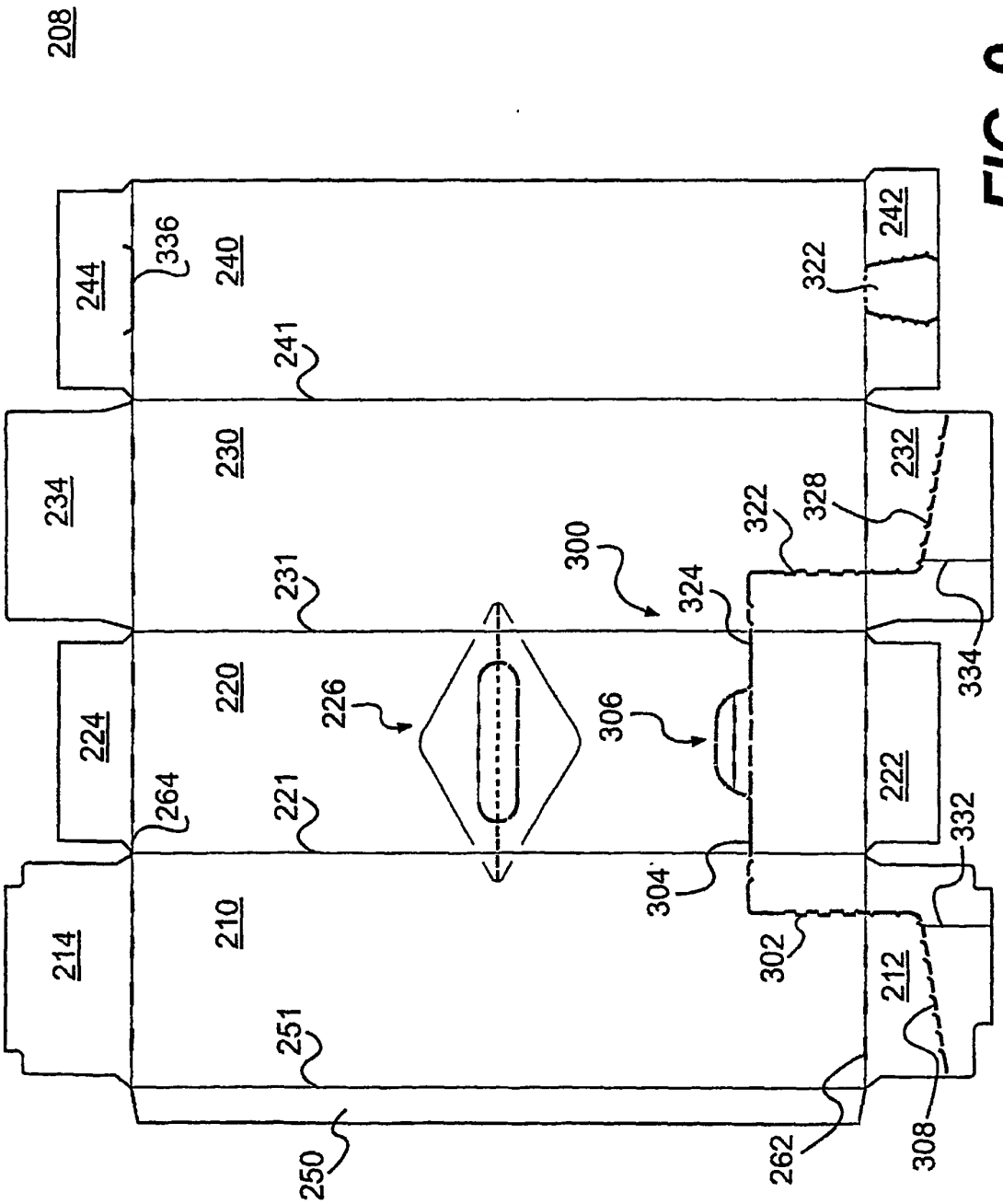


FIG. 8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308

FIG. 9

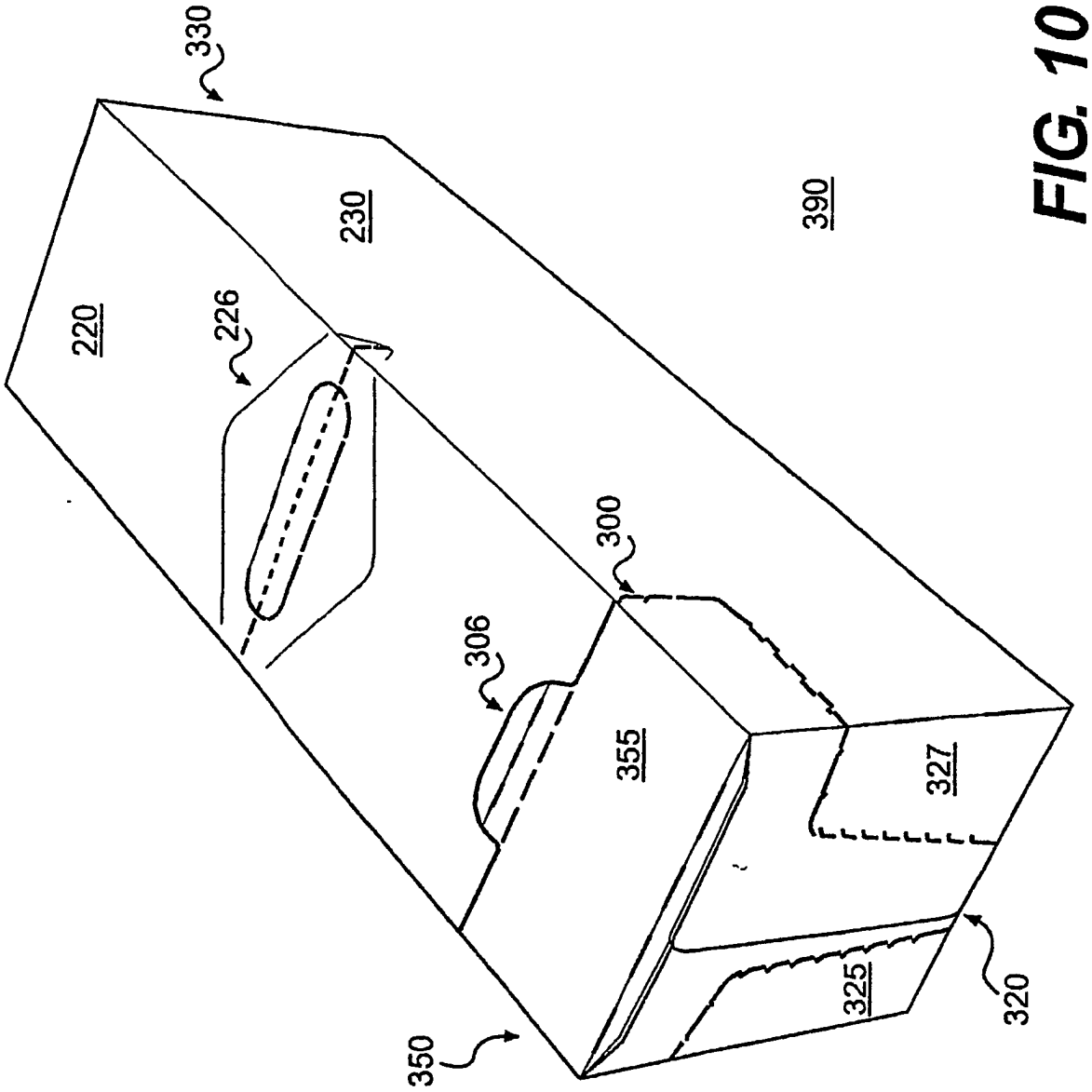

FIG. 10

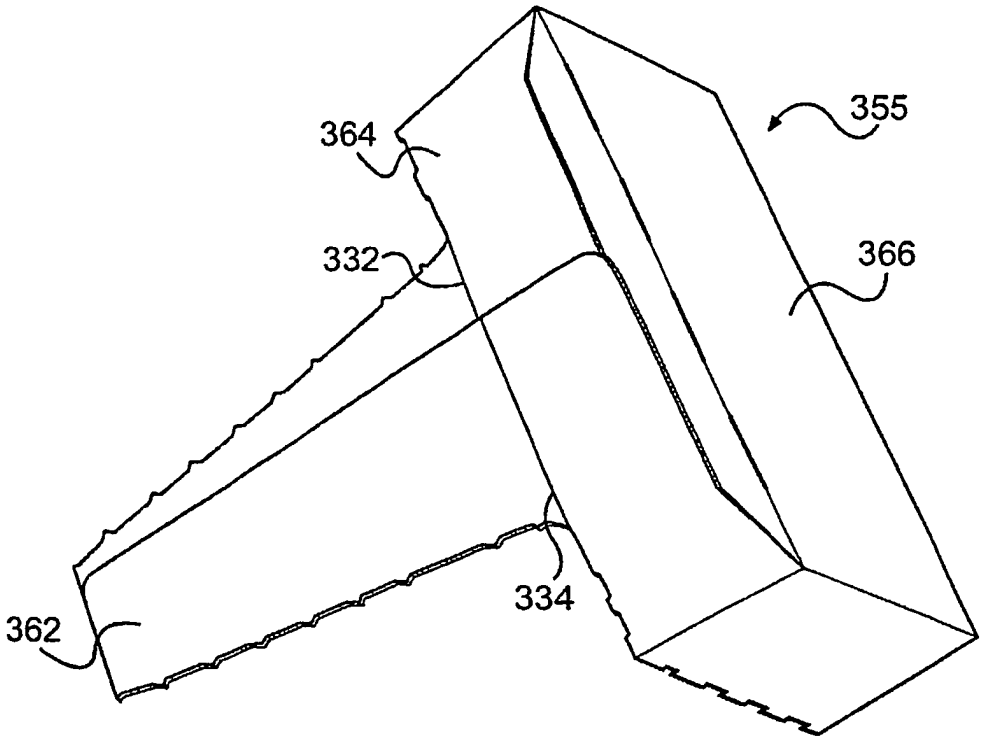

FIG. 11

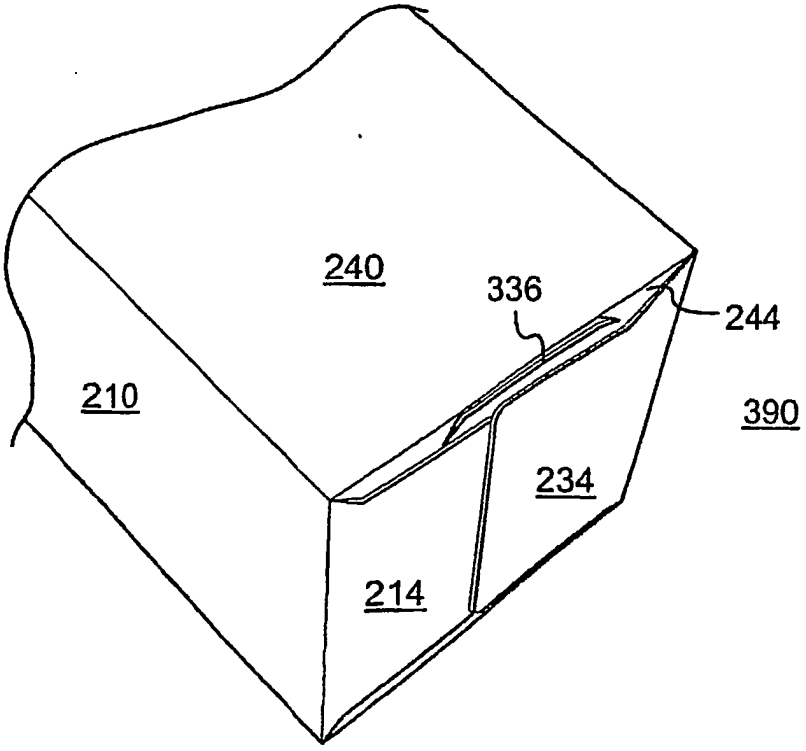

FIG. 12

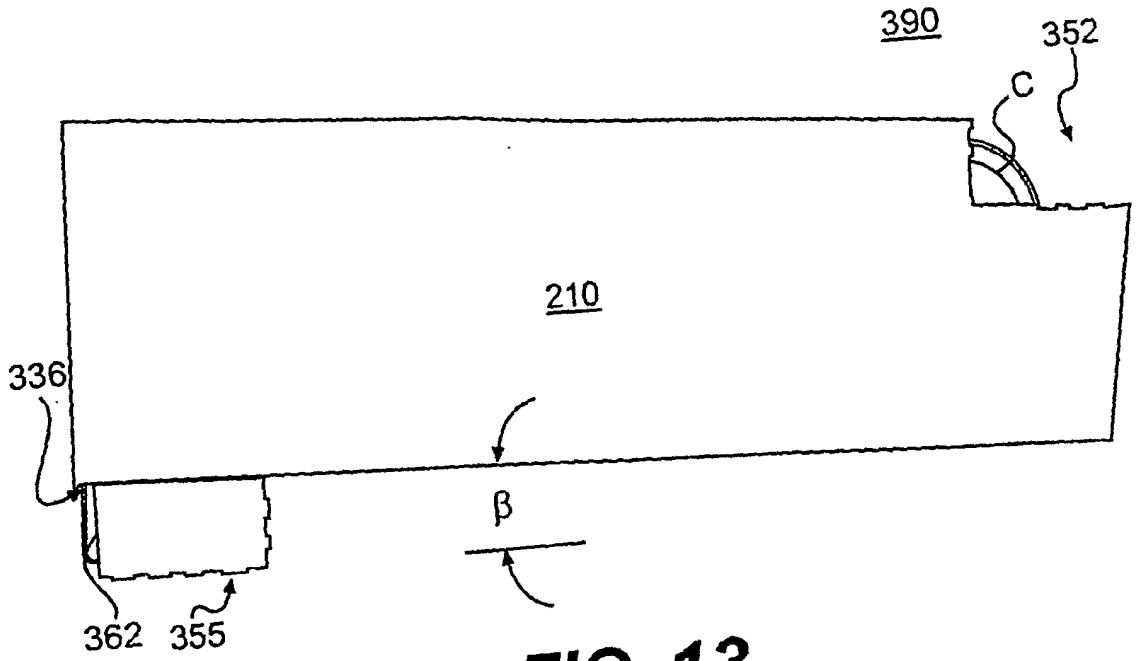

FIG. 13

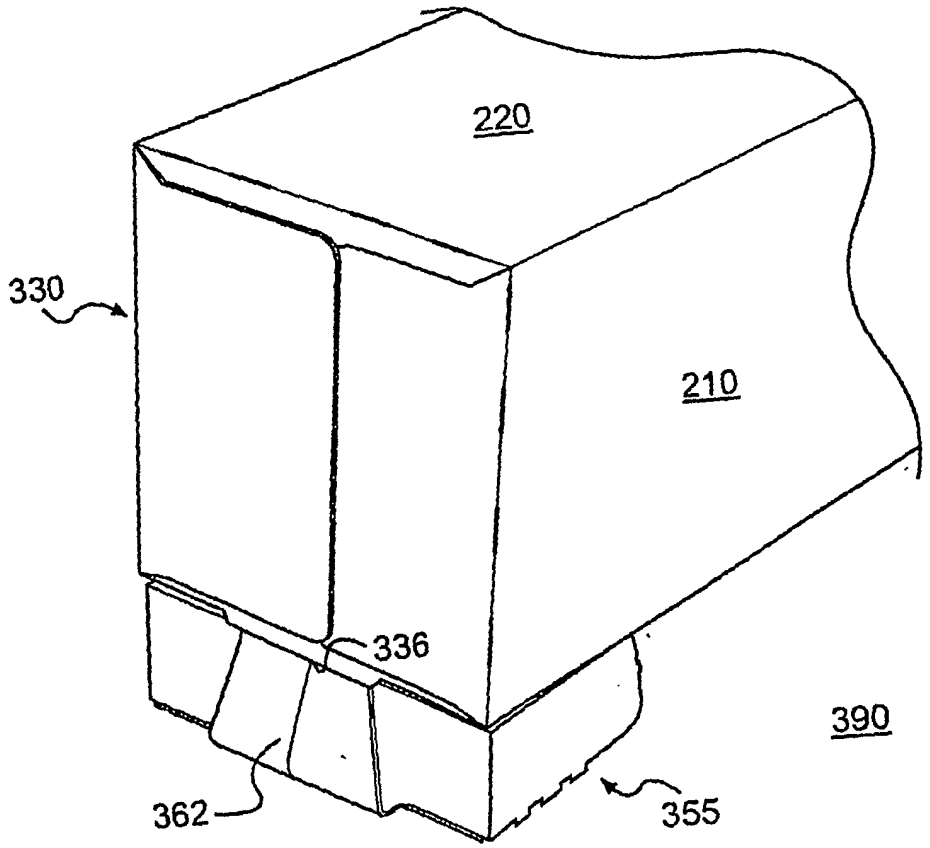

FIG. 14

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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