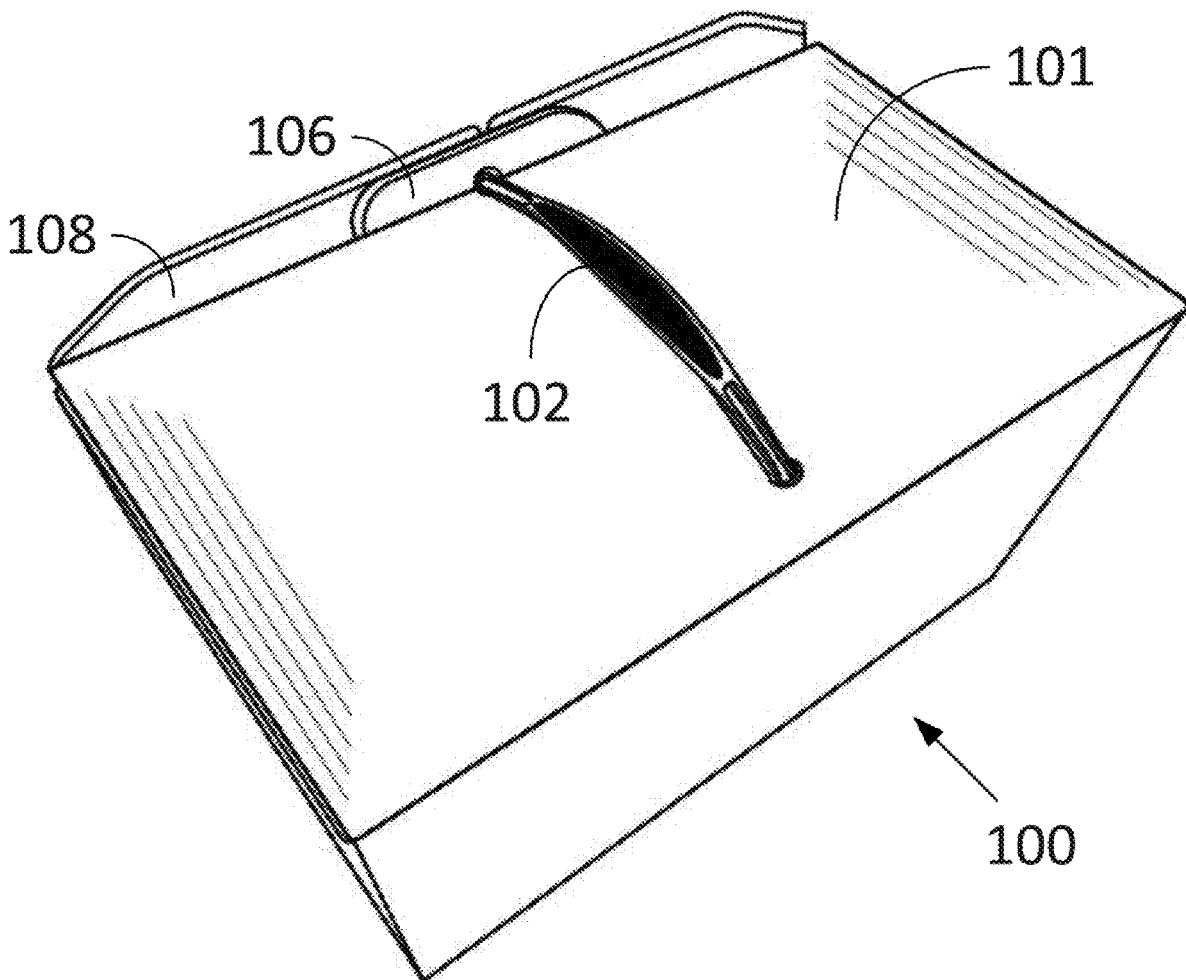




US 20200270013A1

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Costanzo, JR.(10) **Pub. No.: US 2020/0270013 A1**(43) **Pub. Date: Aug. 27, 2020**(54) **BOX DESIGNS, BLANKS, AND METHODS
RELATING TO BOX WITH LOCKING
HANDLE**(71) Applicant: **THATBOX DESIGN, LLC**, FORT
MILL, SC (US)(72) Inventor: **Donn J. Costanzo, JR.**, Fort Mill, SC
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27, 2019, provisional application No. 62/931,794,
filed on Nov. 6, 2019, provisional application No.
62/972,547, filed on Feb. 10, 2020.**Publication Classification**(51) **Int. Cl.**
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B65D 81/18 (2006.01)
B65D 5/64 (2006.01)
(52) **U.S. Cl.**
CPC *B65D 5/46024* (2013.01); *B65D 5/643*
(2013.01); *B65D 81/18* (2013.01)(57) **ABSTRACT**

A box includes a lid having a handle, wherein the handle comprises at one end thereof a toggle, and wherein a wall of the box comprises an opening through which the toggle of the handle is received for securing the lid in a closed position. Also disclosed is the combination of a box, a handle, and a clip, wherein the clip is secured onto a front wall of the box and a toggle of the handle is latched onto the clip for securing the lid of the box in a closed position.



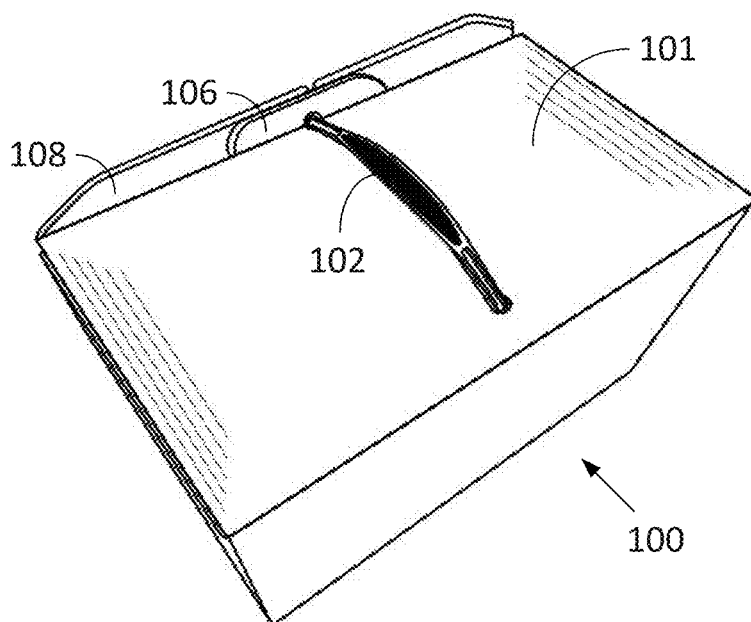


FIG. 1

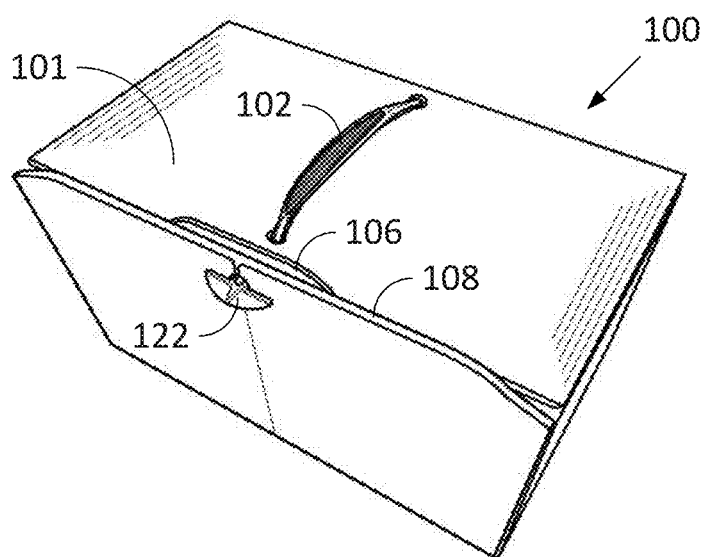


FIG. 2

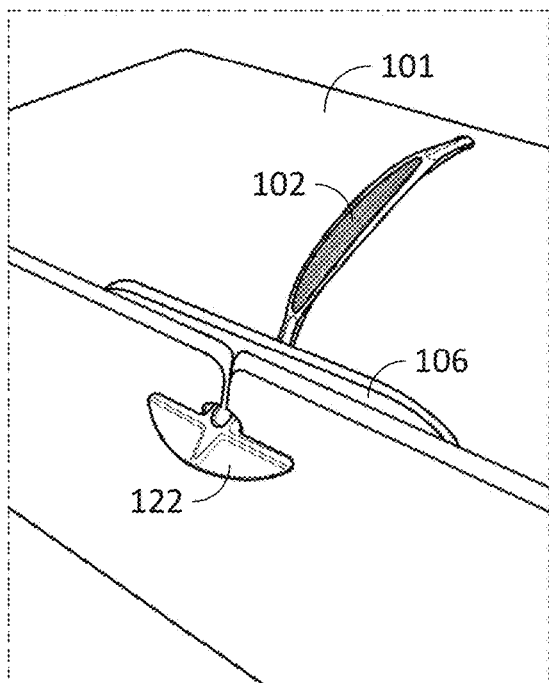


FIG. 3

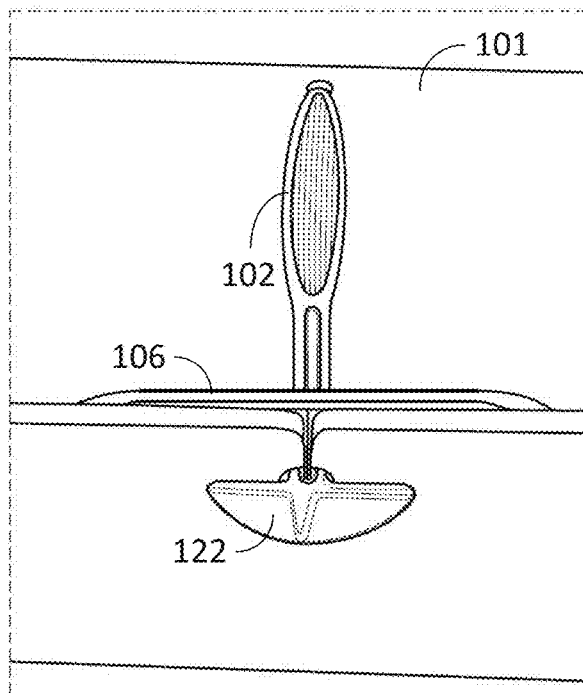


FIG. 4

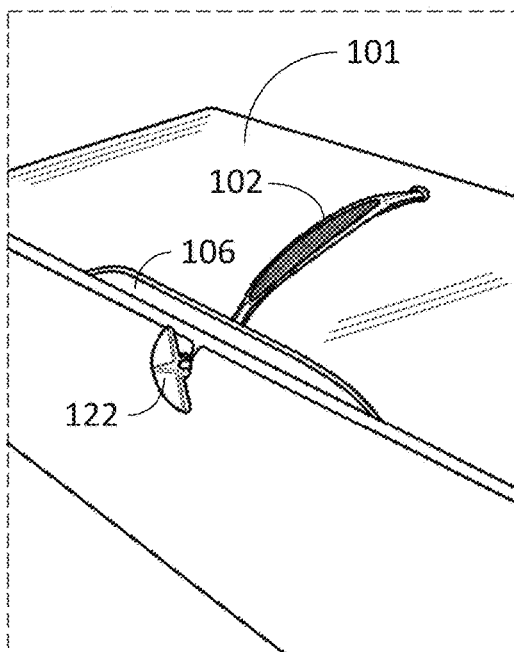


FIG. 5

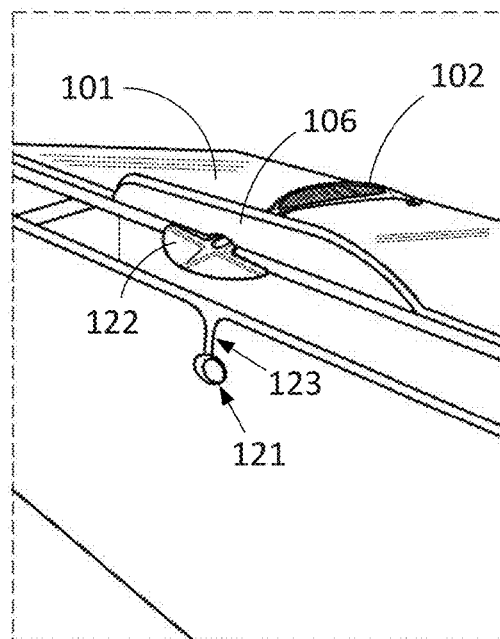


FIG. 6

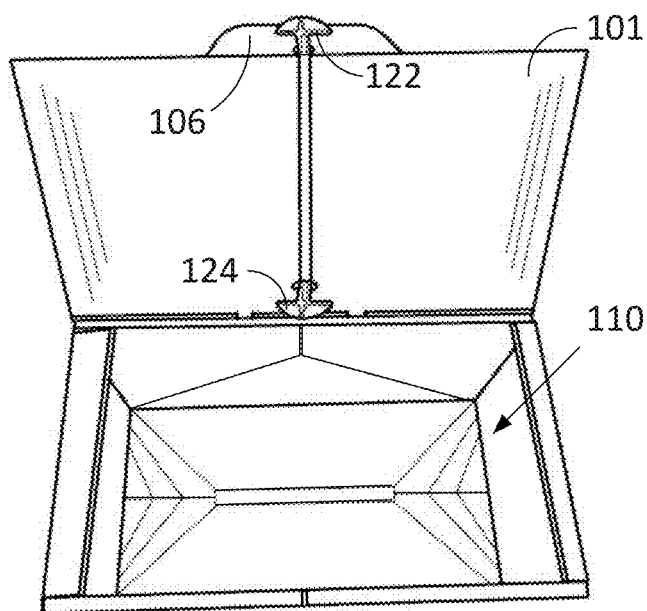


FIG. 7

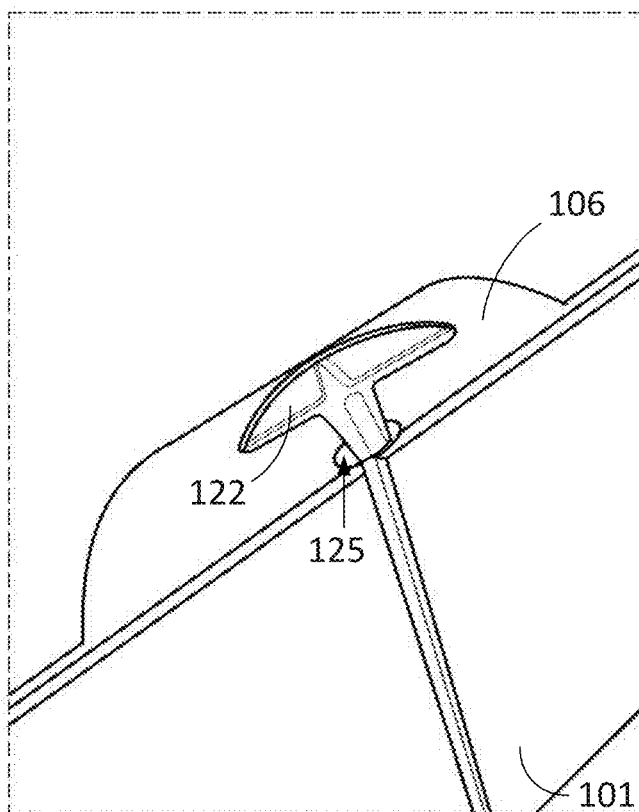


FIG. 8

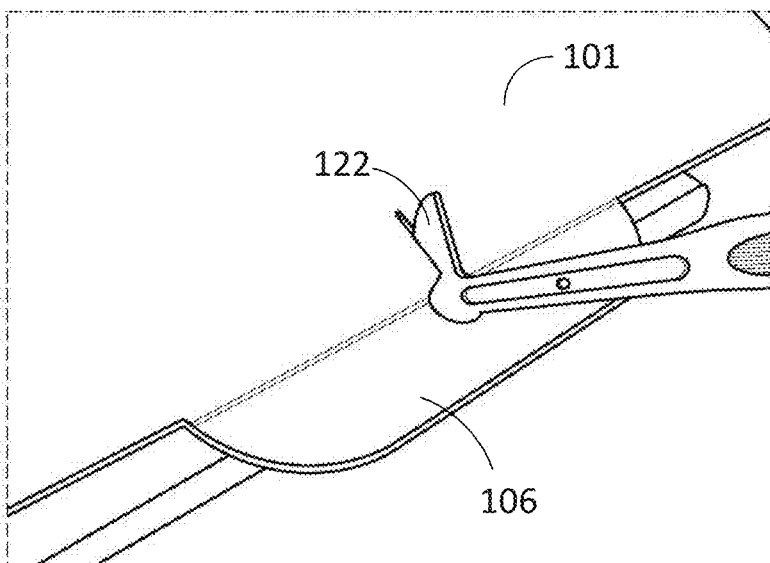


FIG. 9

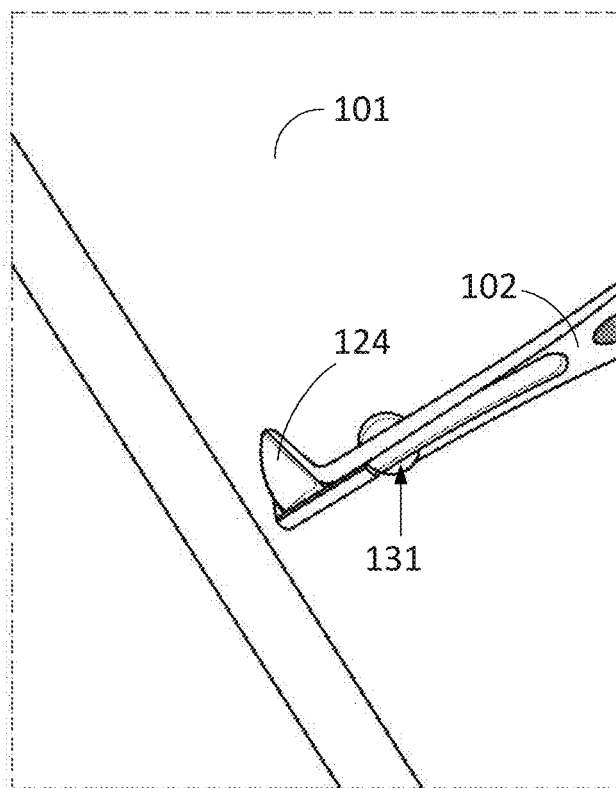


FIG. 10

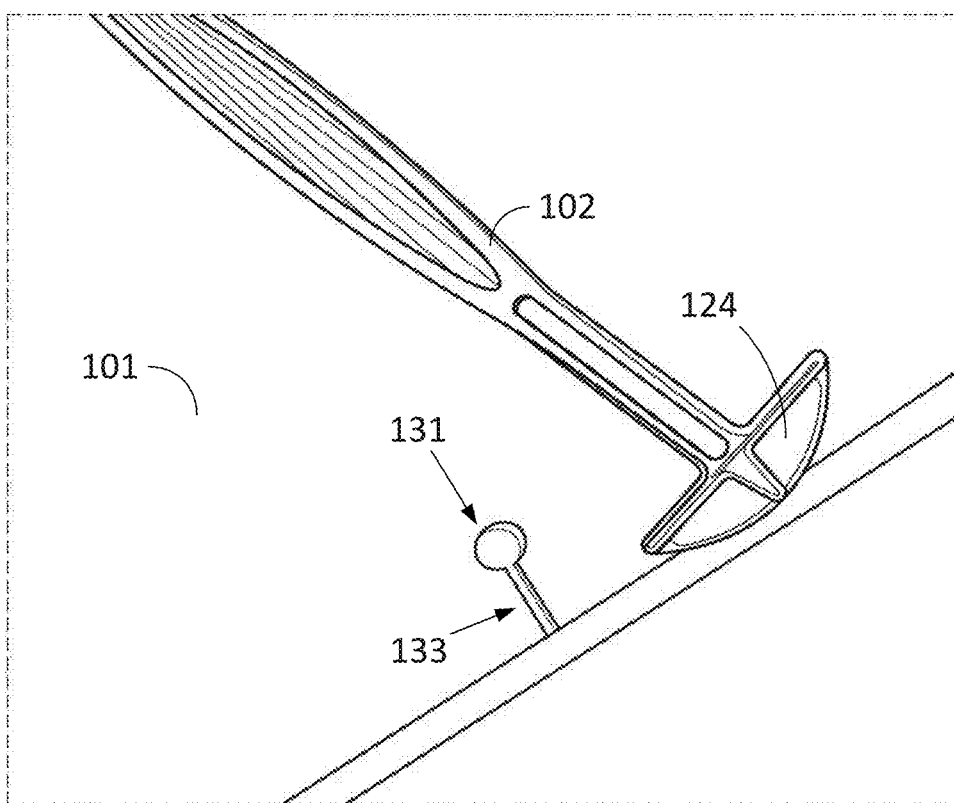


FIG. 11

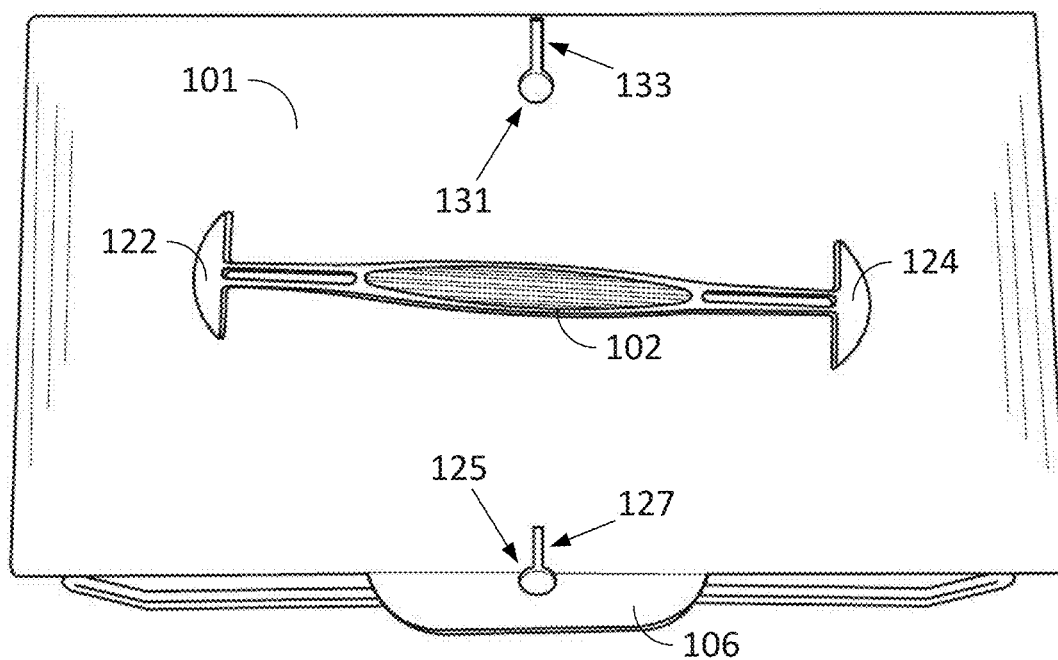


FIG. 12

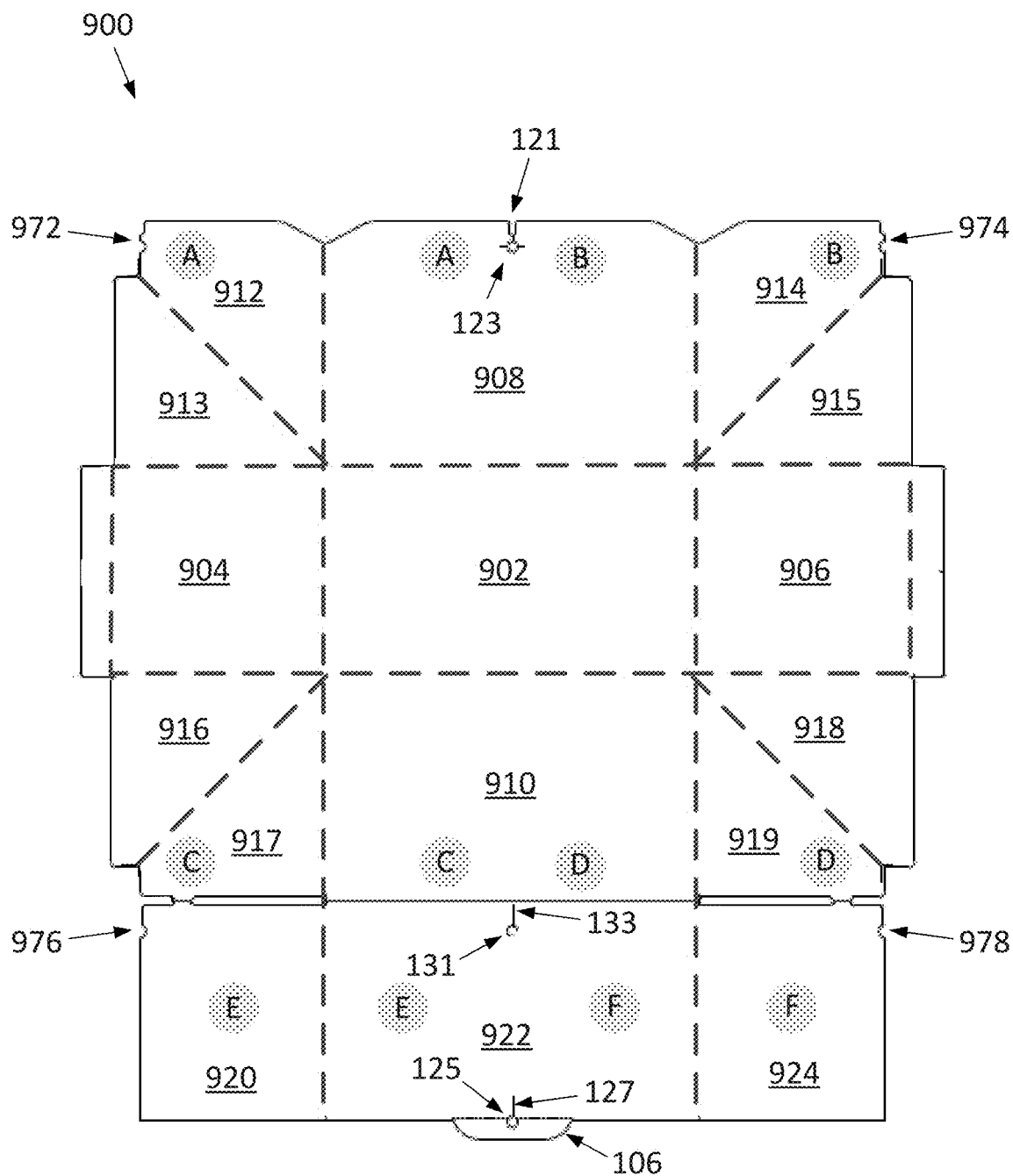


FIG. 13

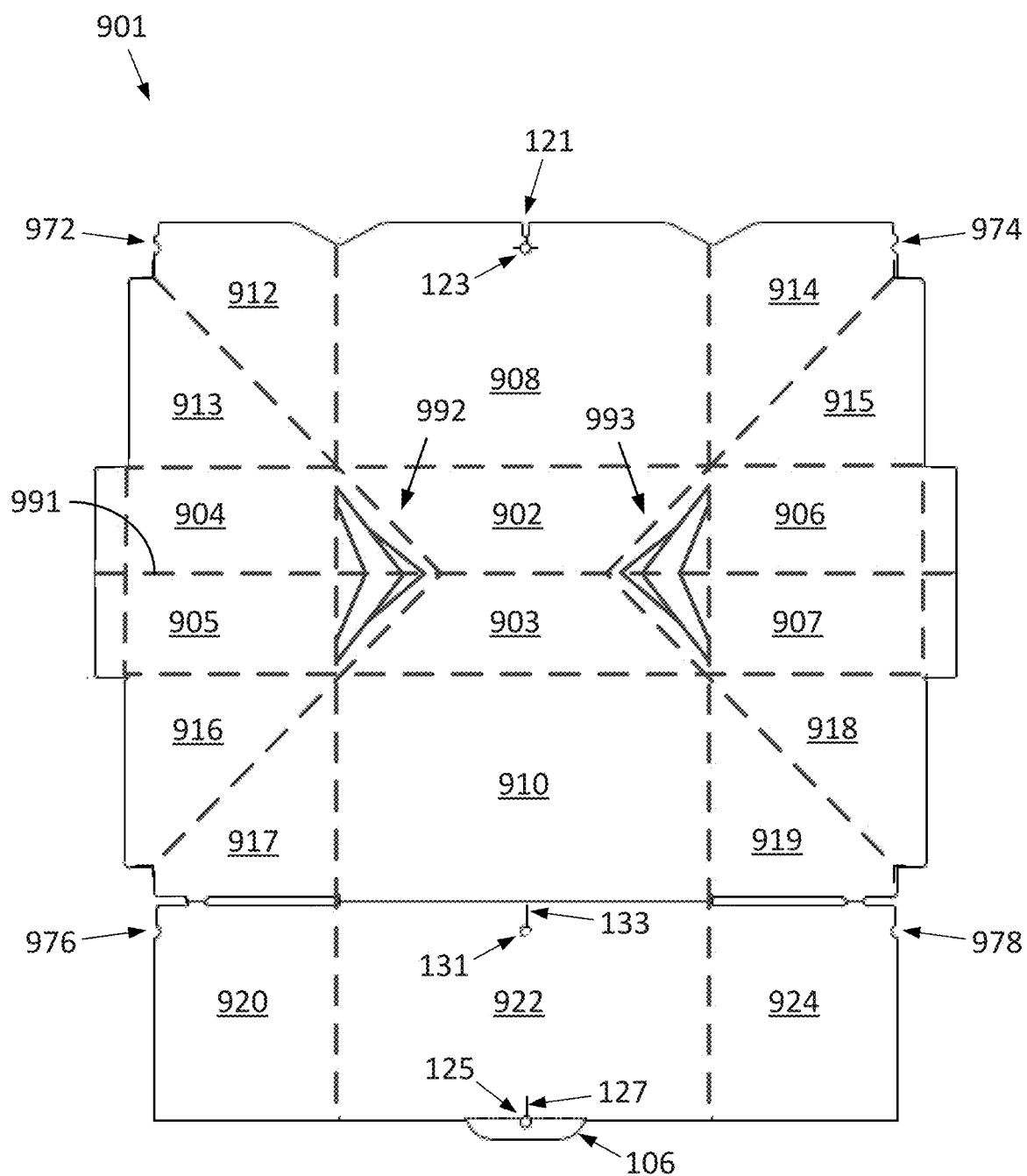


FIG. 14

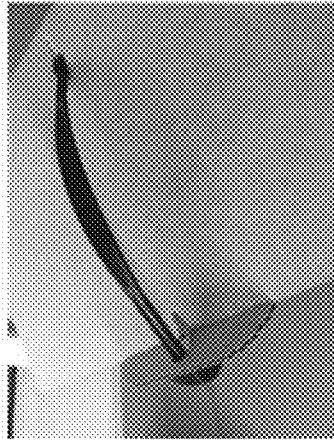


FIG. 15
Handle inserted into lid
Back of handle is locked,
front of handle is just to keep
the handle in position

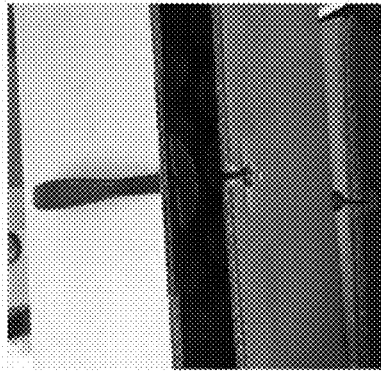


FIG. 16
Lid closing and
positioning handle in
position to be locked

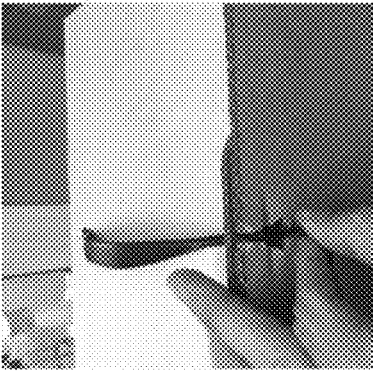


FIG. 17
Twist handle vertically to
insert.

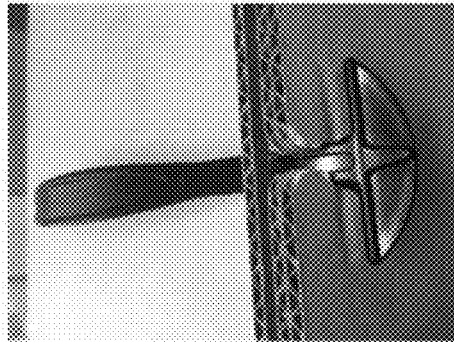


FIG. 18
Release handle and it
turns to lock into slot

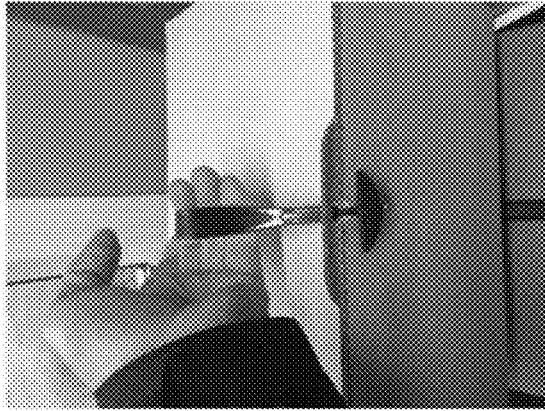


FIG. 19
Handle now ready to lift
box

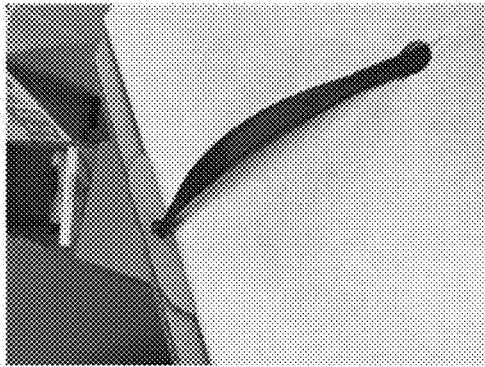


FIG. 20
View from back side

dimensions shown are inches

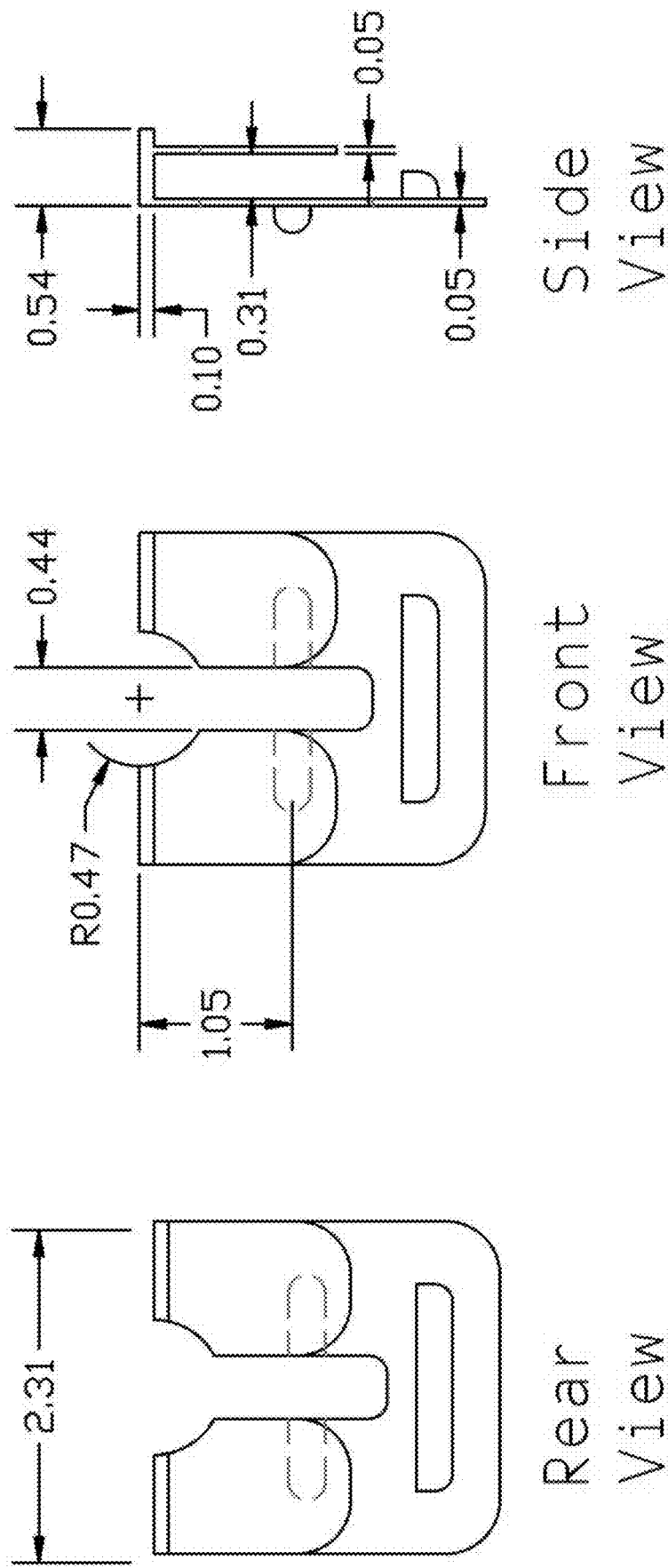


FIG. 23

FIG. 22

FIG. 21

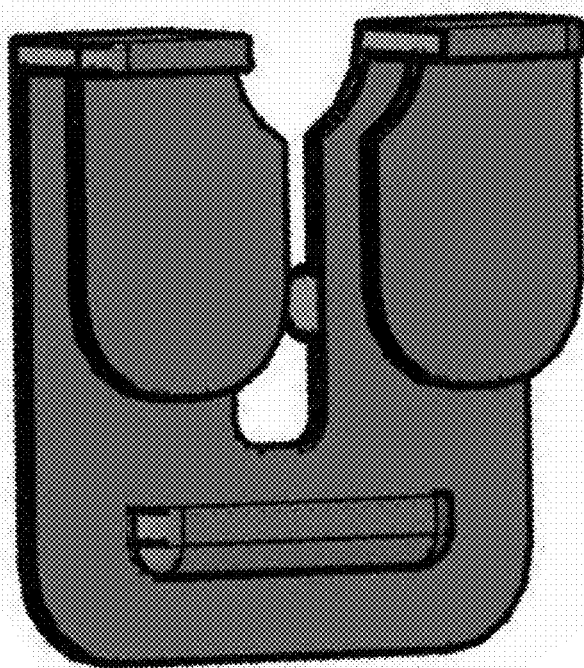


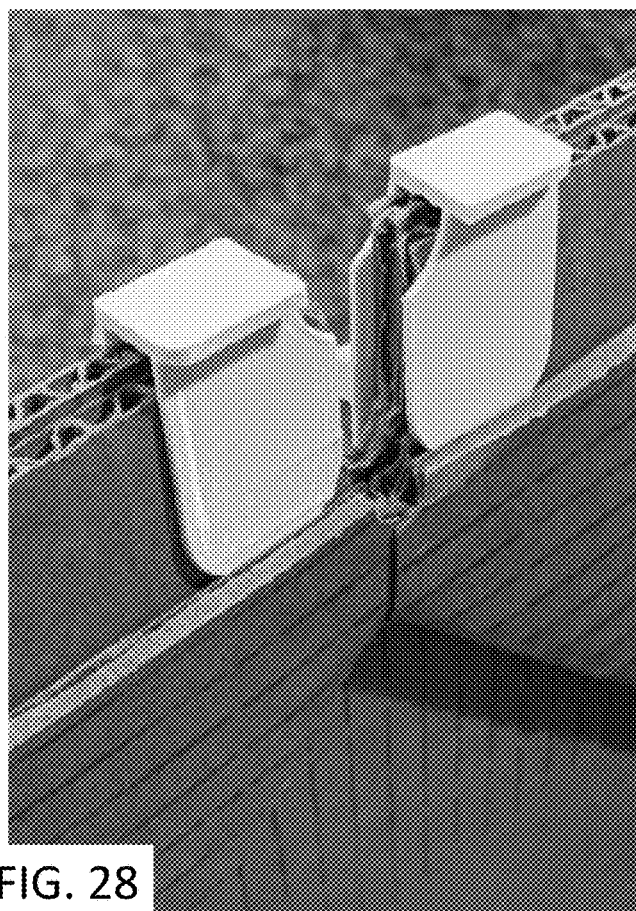
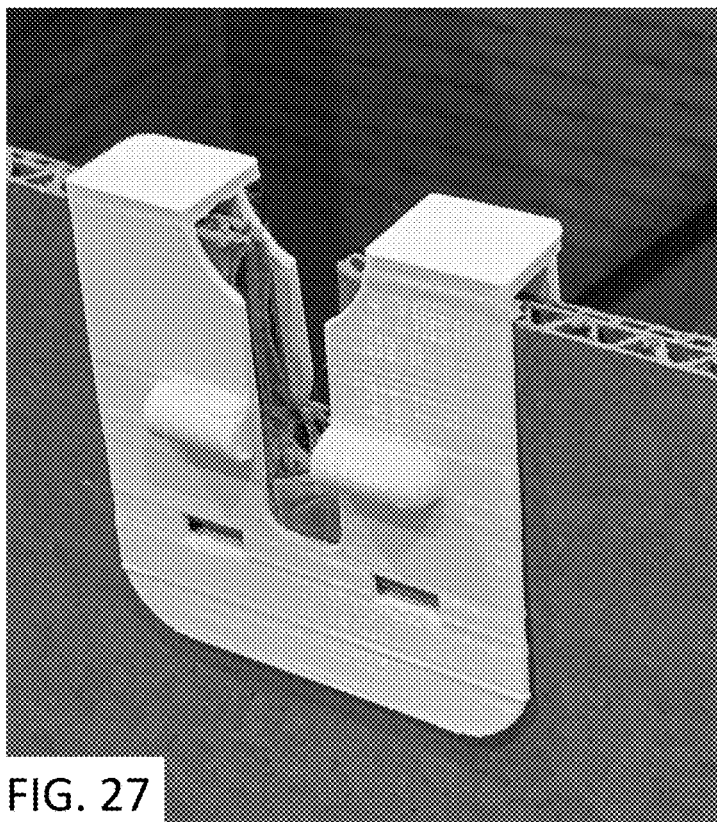
FIG. 24



FIG. 25



FIG. 26



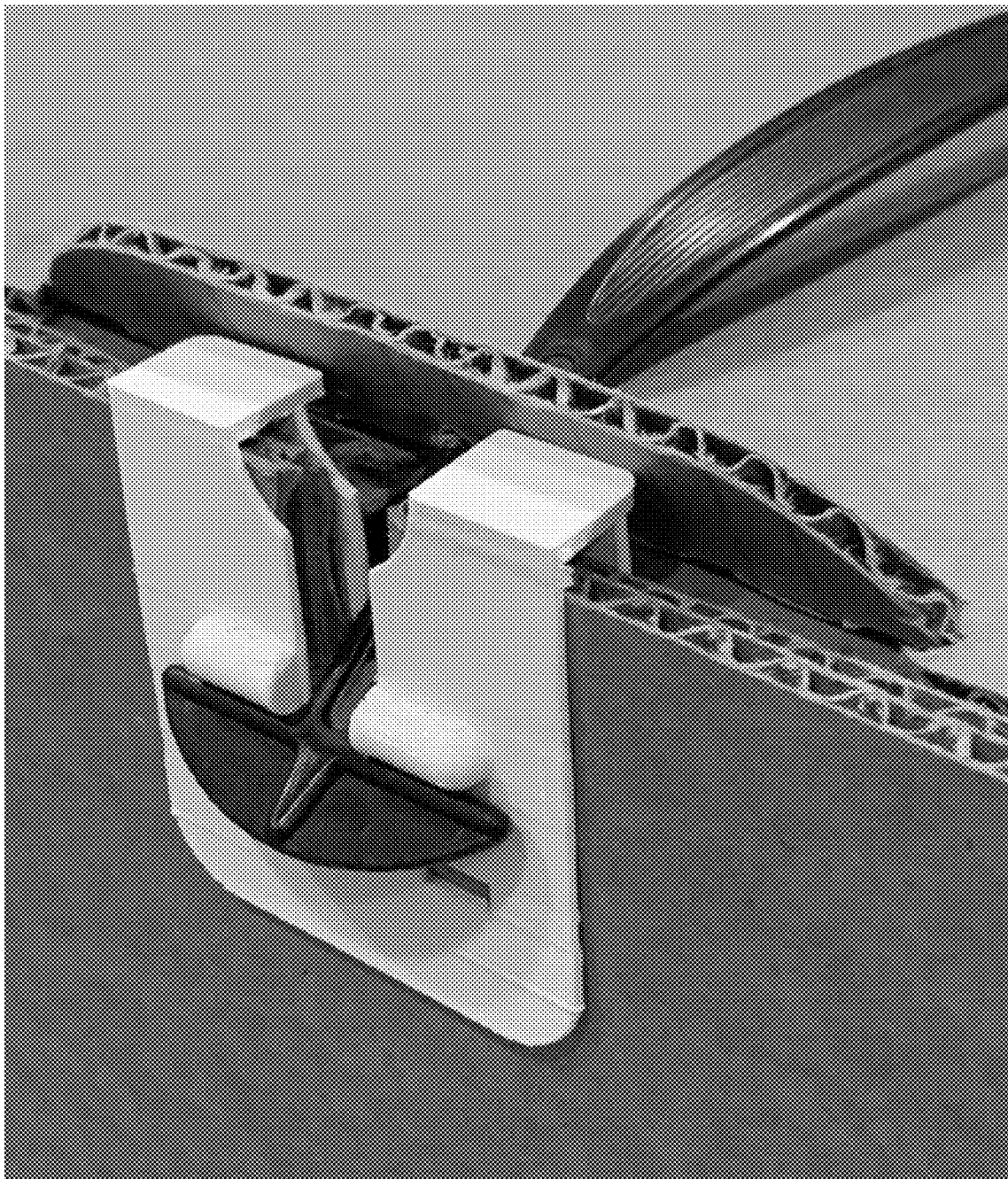


FIG. 29

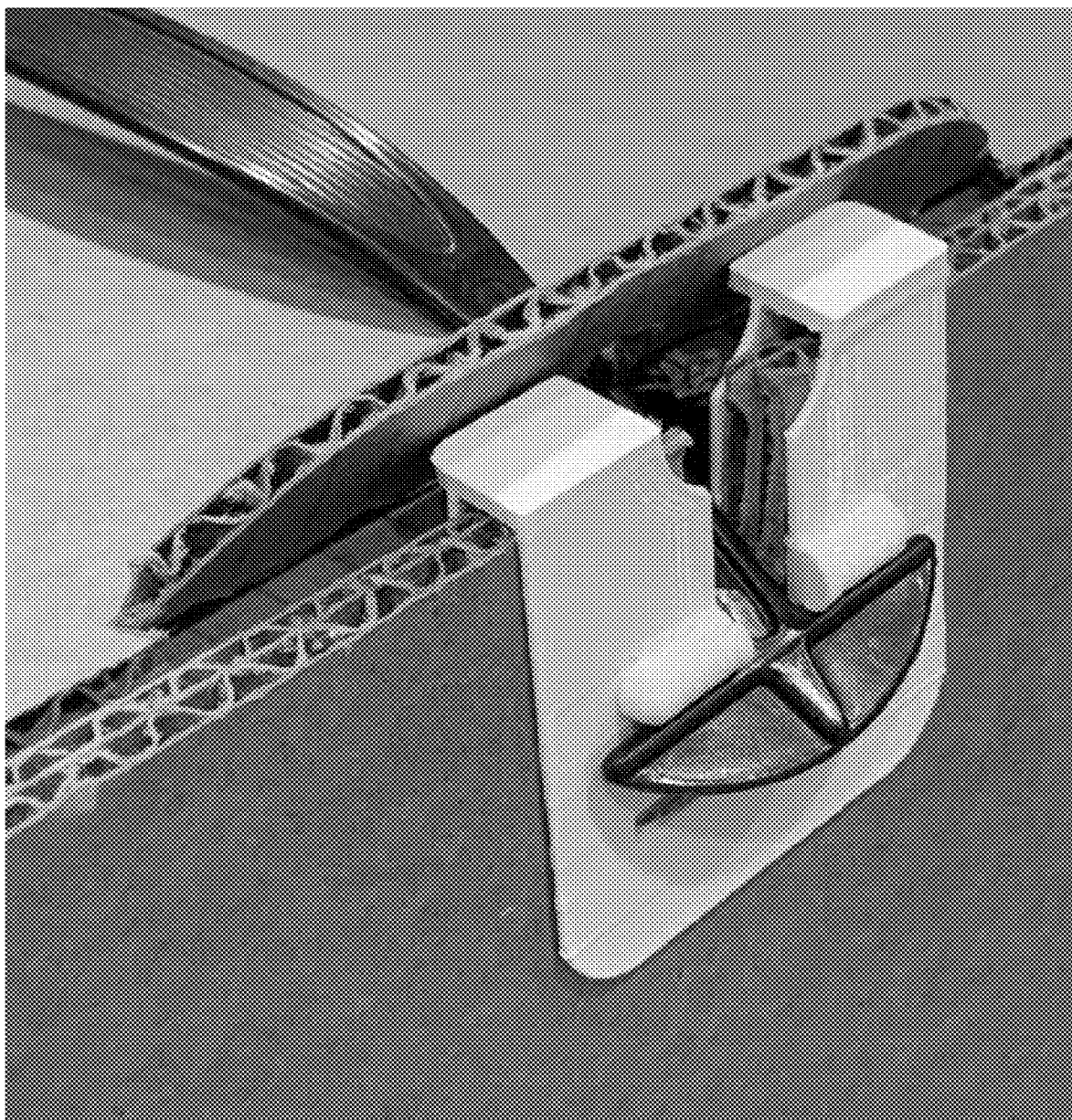


FIG. 30

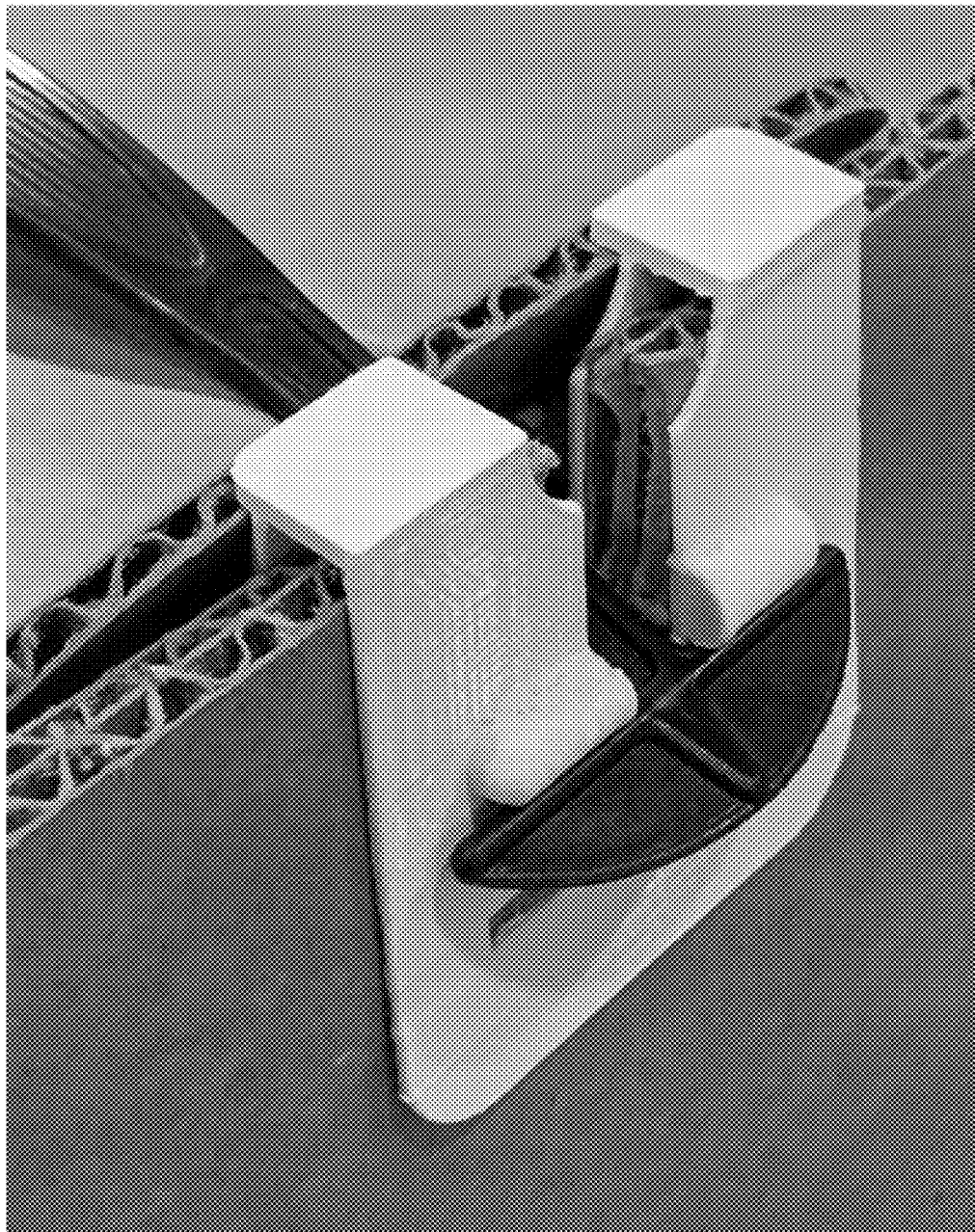


FIG. 31

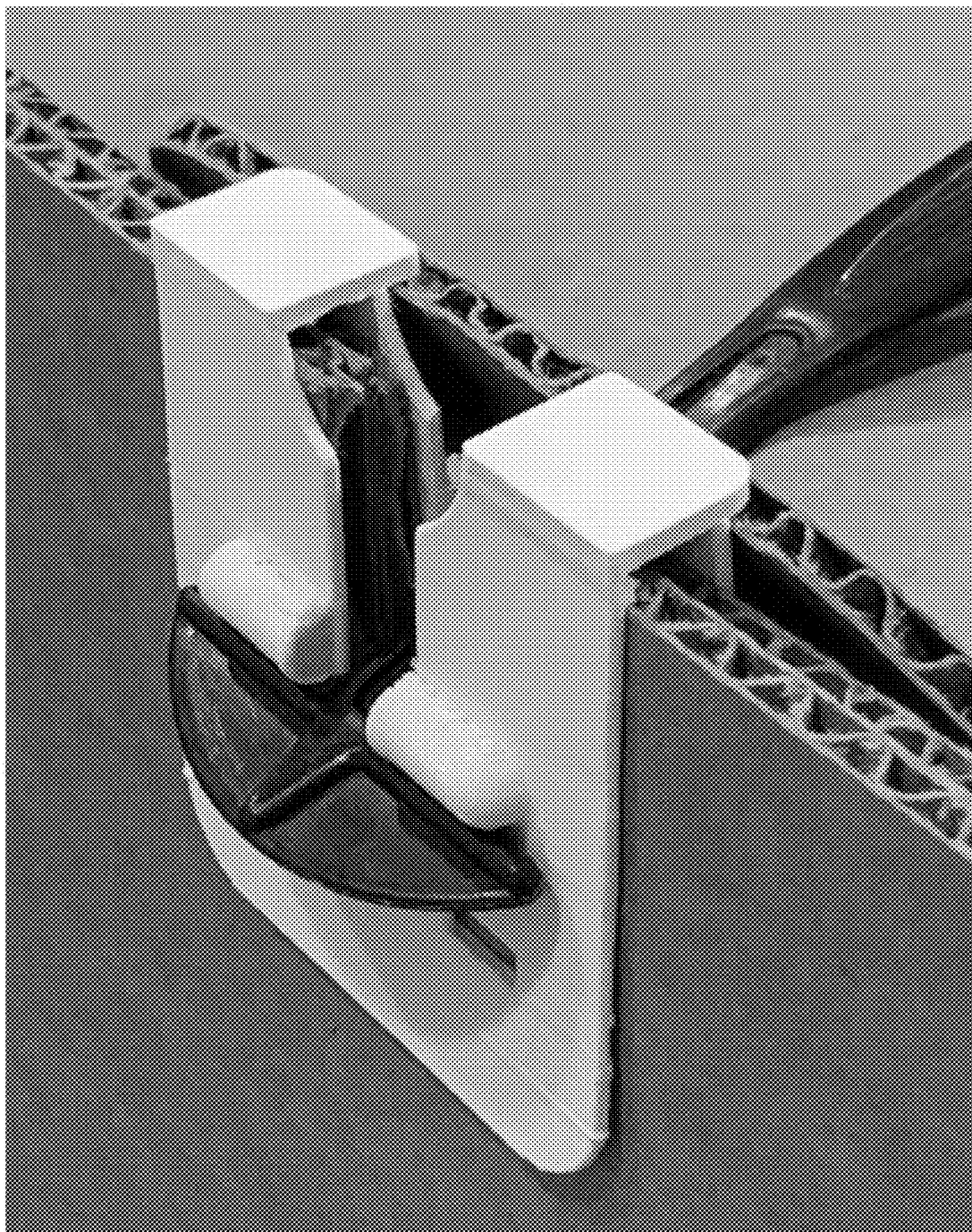


FIG. 32

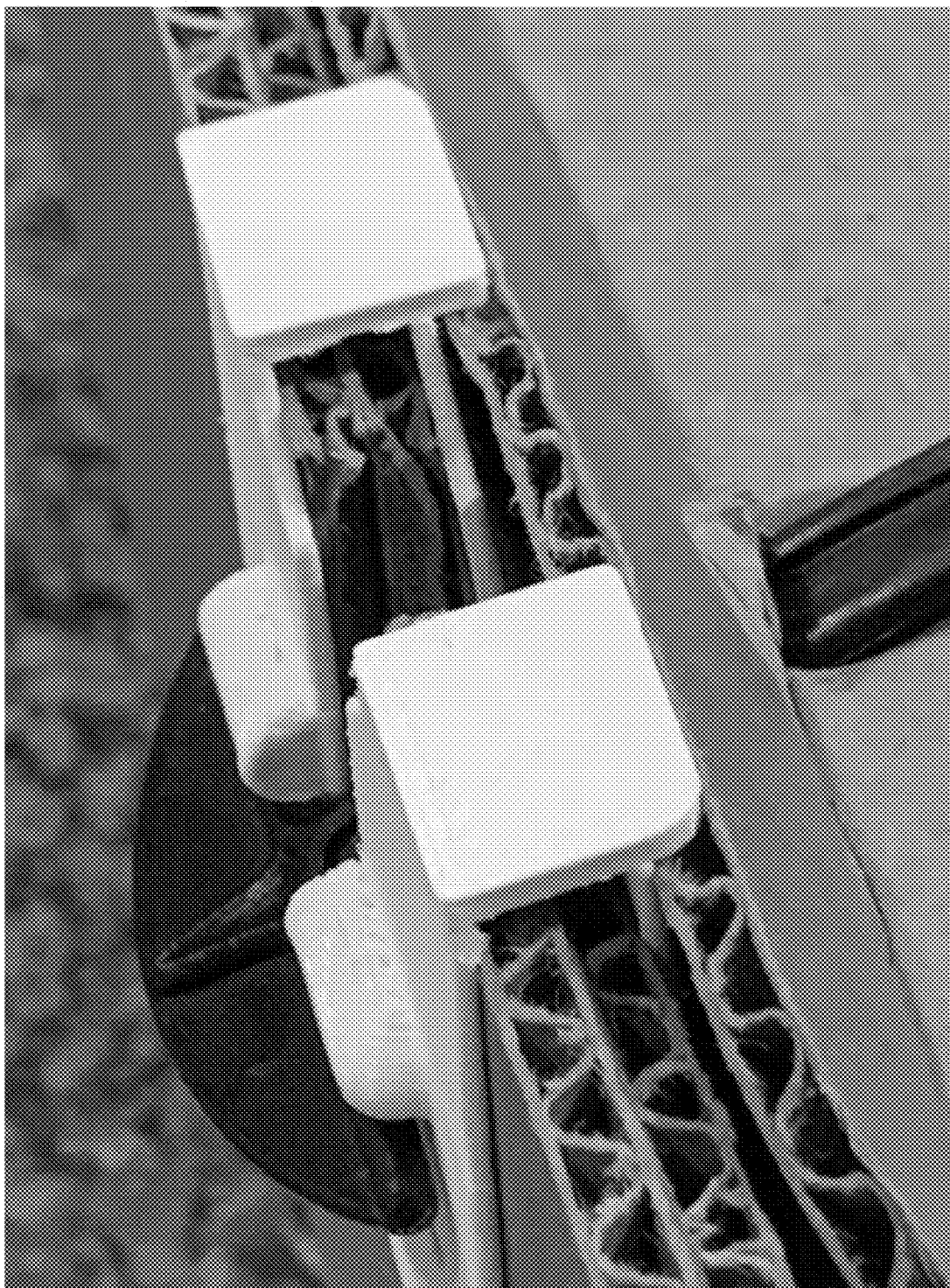


FIG. 33

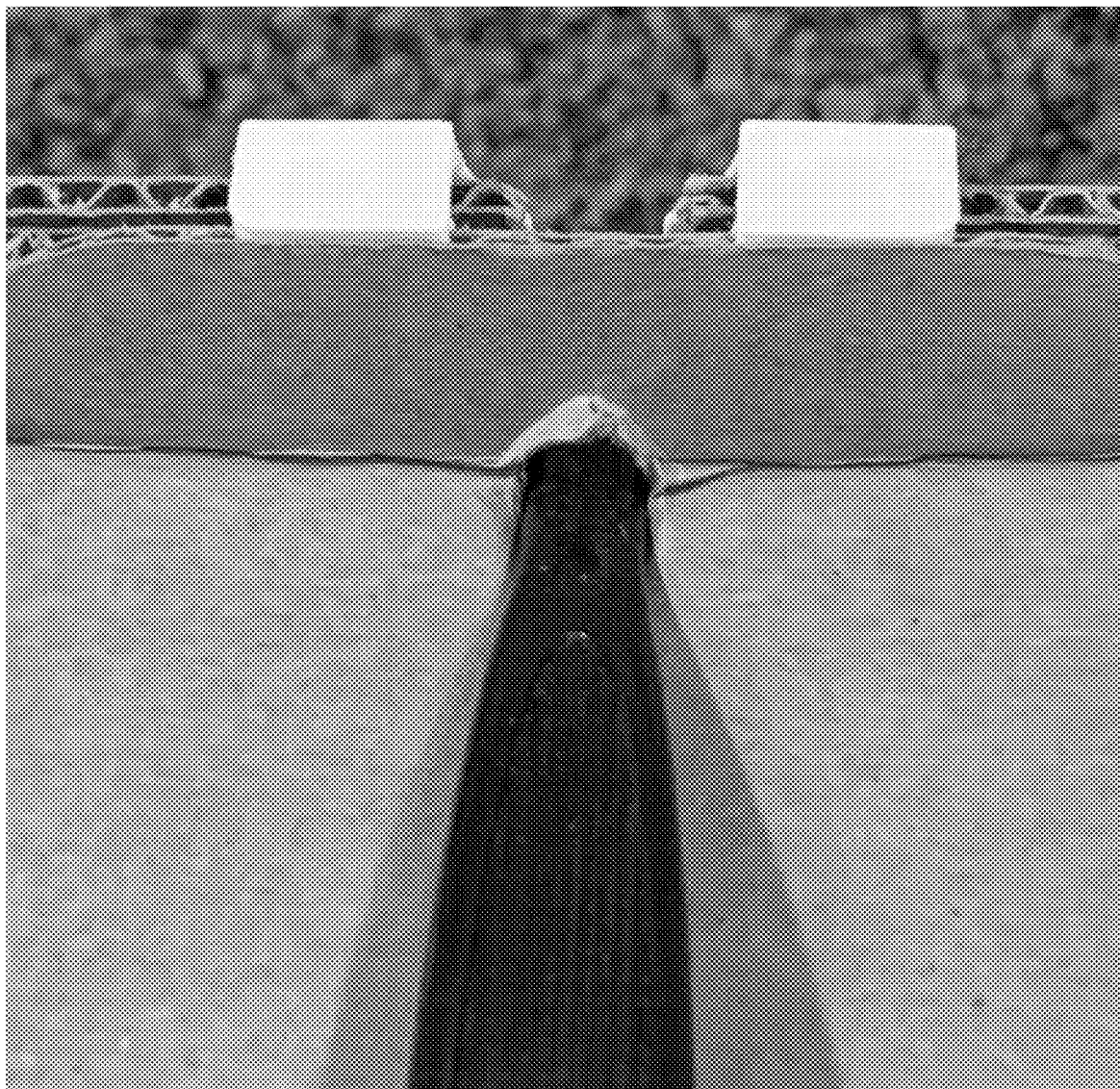


FIG. 34



FIG. 35

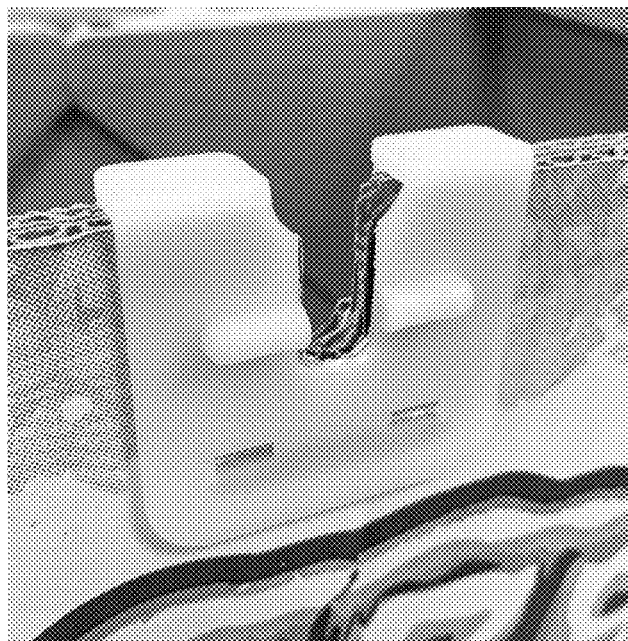


FIG. 36

FIG. 38

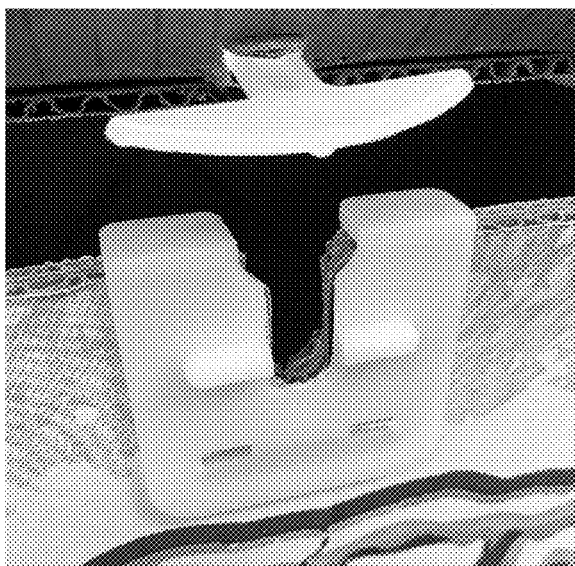


FIG. 37

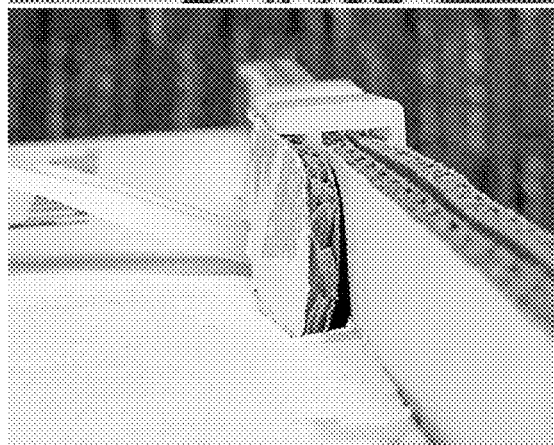
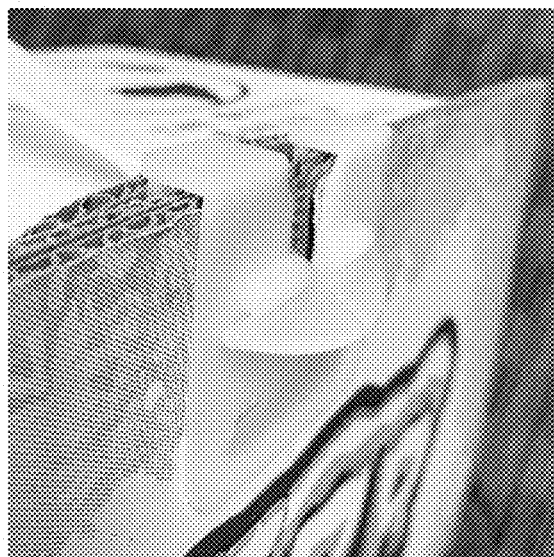


FIG. 39

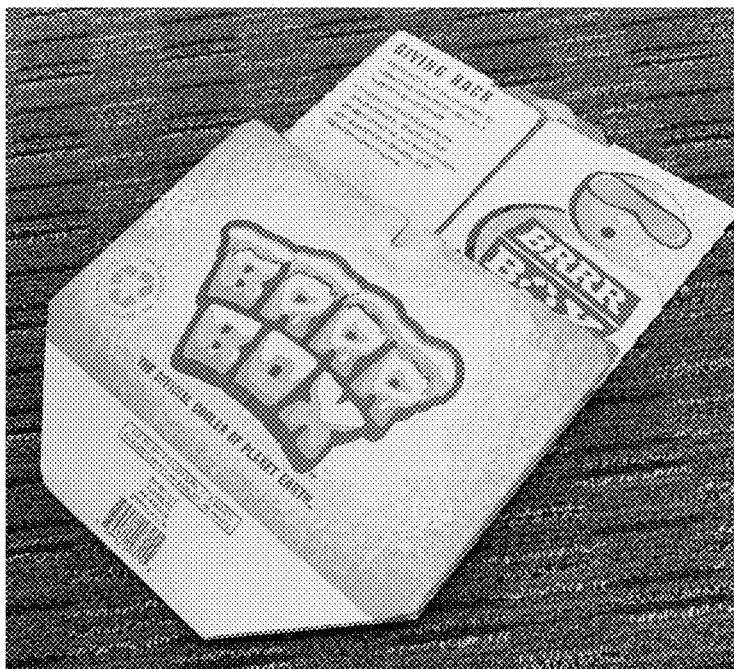


FIG. 40

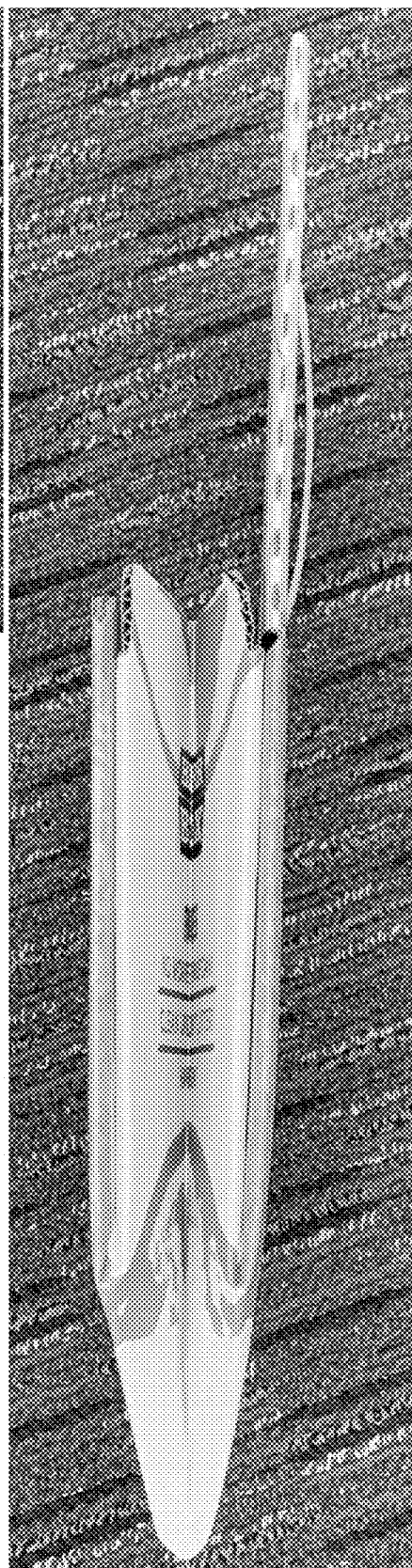


FIG. 41

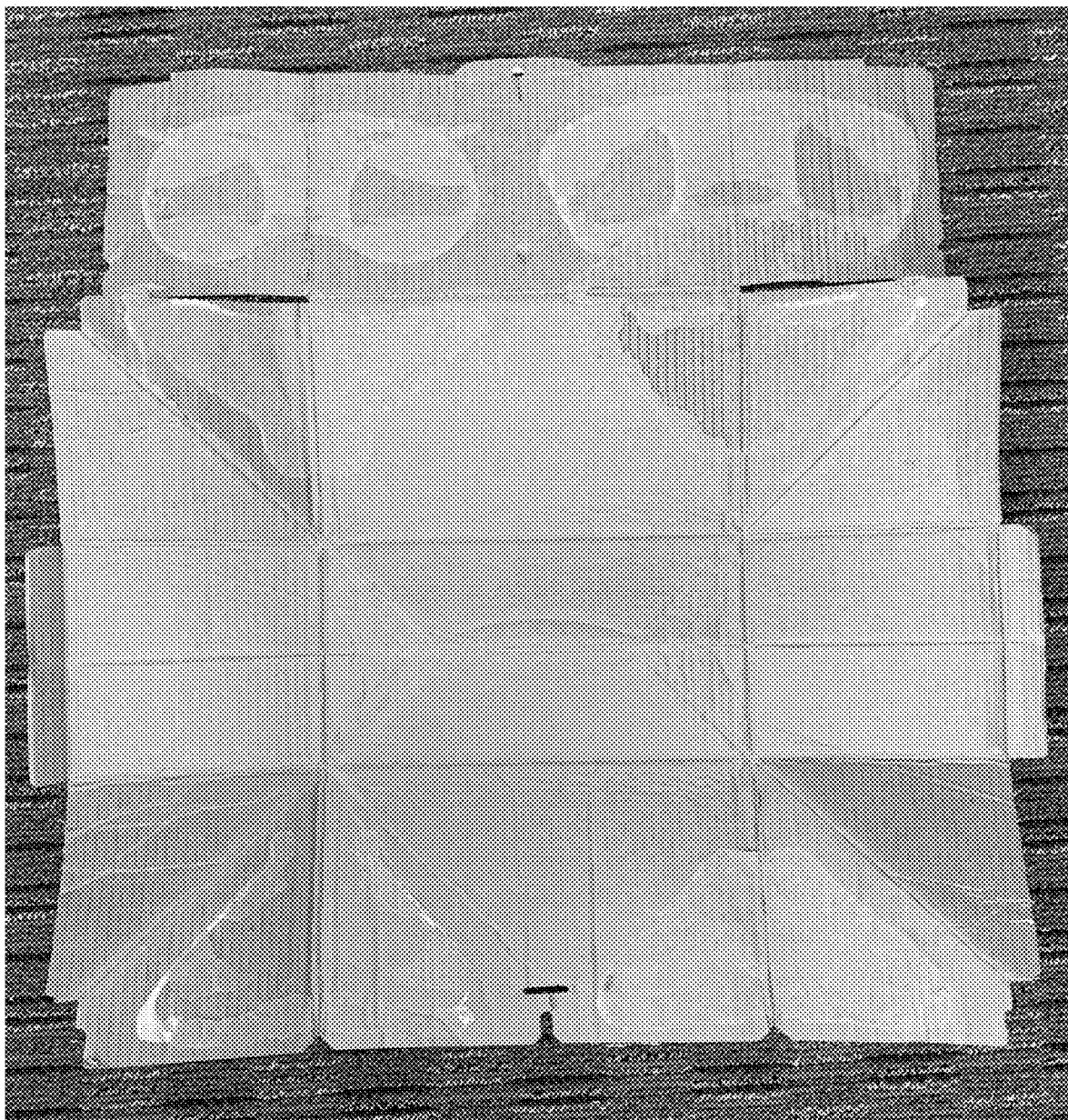


FIG. 42

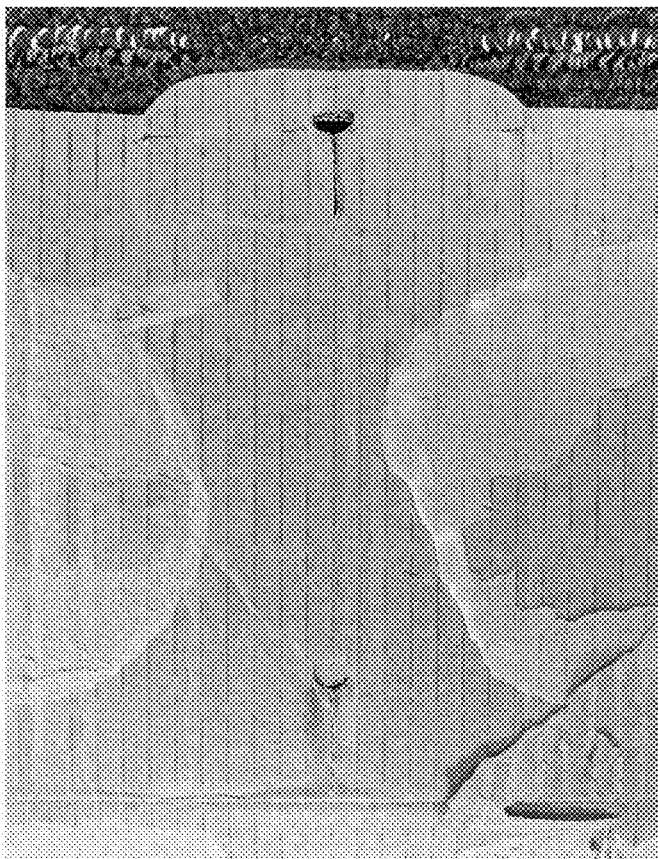


FIG. 43

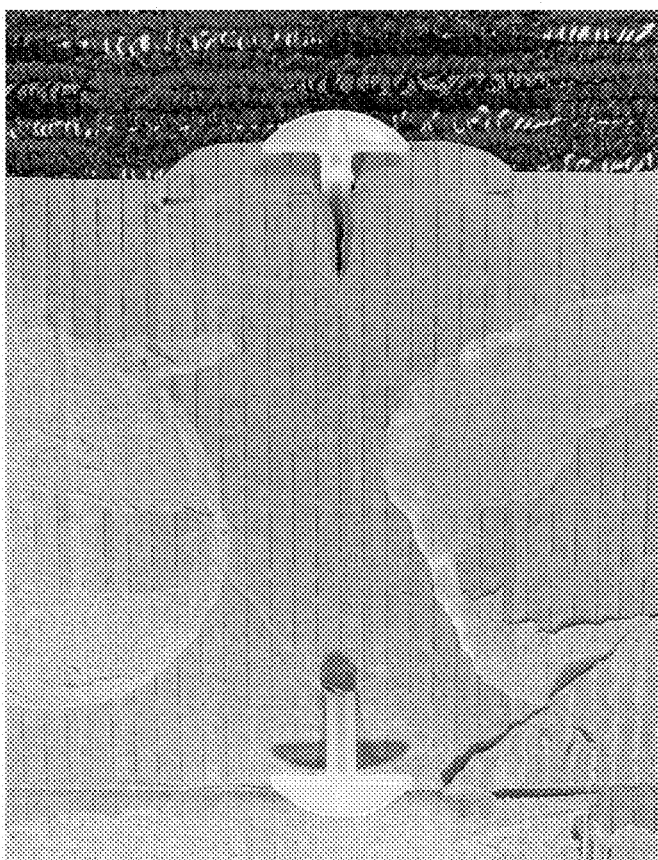


FIG. 44

**BOX DESIGNS, BLANKS, AND METHODS
RELATING TO BOX WITH LOCKING
HANDLE**

**CROSS-REFERENCE TO RELATED
APPLICATION**

[0001] The present application is a nonprovisional of, and claims priority under 35 U.S.C. 119(e) to, each of: 62/811, 535, filed Feb. 27, 2019, which is incorporated herein by reference; 62/931,794, filed Nov. 6, 2019, which is incorporated herein by reference; and, 62/972,547, filed Feb. 10, 2020, which is incorporated herein by reference. The present application also hereby incorporates herein by reference each of U.S. Patent Application Publication Nos. 2012/0234715 and 2019/0047743. An appendix to the specification is included herewith, the disclosure of which appendix is incorporated herein by reference.

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BACKGROUND OF THE INVENTION

[0003] The present invention generally relates to boxes and, in particular, boxes formed from a single sheet of material such as corrugated cardboard. In at least some preferred embodiments, the boxes have a waterproof or water-resistant coating that enables the boxes to be utilized as coolers; in at least some preferred embodiments, the boxes are configured to be collapsed even when in an assembled configuration; and in at least some preferred embodiments, the boxes have lids or tops that are able to be secured in a closed position.

[0004] Boxes having a waterproof or water-resistant coating that enable them to be utilized as coolers are known, as are boxes including such coolers that are configurable to be collapsed even when in an assembled configuration. Such boxes are disclosed, for example, in the incorporated patent application publications. Moreover, in at least some of these boxes, the lids or tops thereof are able to be secured in a closed position. While suitable for their intended purposes, it is believed that one or more needs exist for improvements in such boxes, wherein the lids or tops thereof are able to be secured in a closed position. One or more aspects and features of the present invention are believed to represent such an improvement, which aspects and features are disclosed in the incorporated provisional application and further are restated herein.

[0005] Additionally, it is now believed that a needs further exists to reinforce or strengthen the securement of the lid over that disclosed and taught in such aspects and features. Accordingly, additional aspects and features of the present invention relate to a clip for providing such reinforcement and strength in the securement of the lid.

SUMMARY OF THE INVENTION

[0006] The present invention includes many aspects and features. Moreover, while many aspects and features relate to, and are described in, the context of boxes having a

waterproof or water-resistant coating that enables the boxes to be utilized as coolers, the invention is equally applicable to boxes utilized in other contexts, as will become apparent from the following summaries and detailed descriptions of aspects, features, and one or more embodiments of the present invention.

[0007] Accordingly, in an aspect of the present invention, a box comprises a bottom, side walls, and a lid which collectively define an interior space inside of the box for holding one or more items.

[0008] In a feature, the box comprises a handle that enables the lid of the box to be secured in a closed position. The handle further enables the box to be carried by the handle when the box is secured in the closed position. The handle itself preferably is manipulated to secure the box in the closed position as well as to unsecure the box for opening of the lid.

[0009] In a feature, the box comprises a handle that is attached to the lid and that has a toggle at one end thereof that is insertable through an opening in a side wall of the box, by which the handle secures the lid of the box in a closed position. The opening may be in a portion of the side wall that extends above a top of the lid when the lid is in the closed position. Additionally, the lid preferably comprises an opening through which the handle extends for positioning the toggle close to the opening for ease of securing the lid in the closed position.

[0010] In a feature, the box is configured to be collapsed when in an assembled configuration.

[0011] In a feature, the box comprises a waterproof or water-resistant coating such that the box is usable as a cooler for keeping beverages or other food items on ice.

[0012] Another aspect comprises a blank for forming a box, which box is in accordance with an aspect or feature of the present invention.

[0013] Another aspect of the invention comprises a method of making a box from a blank by folding the blank into the box, which box is in accordance with an aspect or feature of the present invention. The method preferably comprises providing a handle that is configured to secure a lid of the box in a closed position as well as enabling the box to be carried using the handle when the lid is in the closed position.

[0014] Another aspect of the invention comprises the combination of a box, a handle, and a clip. The clip is secured onto a front wall of the box and a toggle of the handle is secured to the clip for securing a lid of the box in the closed position.

[0015] In a feature, the lid of the box comprises one or more panels folded over on one or more other panels to form a two-ply lid for strengthening the lid. The clip preferably is secured onto a top edge of the front wall of the box and the toggle of the handle latches to the clip in the vicinity of the top edge of the front wall, and pulling upward on the handle exerts a force with a component acting on the top of the front wall that is opposed by the two-ply lid. The top of the front wall also preferably comprises one or more panels folded over on one or more other panels to form at least a two-ply portion of the front wall along the top portion of the front wall to strengthen the top portion of the front wall.

[0016] In a feature, the top of the lid is received and retained under a lip of a top of the clip.

[0017] In a feature, the lid is tensioned in its engagement with the front wall of the box and is manually removable for recycling of the box. The clip preferably removably attaches to the front wall of the box.

[0018] In a feature, the box contains ice and is used as cooler.

[0019] In a feature, the box with clip secured onto the front wall is collapsible and stackable in a generally flattened state ready for expansion and use.

[0020] Additional aspects and features are disclosed in the appendix to the specification that is incorporated herein by reference.

[0021] In addition to the aforementioned aspects and features of the present invention, it should be noted that the present invention further encompasses the various logical combinations and subcombinations of such aspects and features. Thus, for example, claims in this or a divisional or continuing patent application or applications may be separately directed to any aspect, feature, or embodiment disclosed herein, or combination thereof, without requiring any other aspect, feature, or embodiment.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] One or more preferred embodiments of the present invention now will be described in detail with reference to the accompanying drawings, wherein the same elements are referred to with the same reference numerals.

[0023] FIG. 1 is a perspective view of a rear of a preferred embodiment of a box in accordance with one or more aspects and features of the invention.

[0024] FIG. 2 is a perspective view of a front of the box of FIG. 1.

[0025] FIG. 3 is a partial perspective view of the front of the box of FIG. 1.

[0026] FIG. 4 is another perspective view of the front of the box of FIG. 1.

[0027] FIG. 5 is another perspective view of the front of the box of FIG. 1 wherein a toggle of the handle is twisted for passing of the front end of the handle through a slit for unlocking of the lid.

[0028] FIG. 6 is another perspective view of the front of the box of FIG. 1, wherein the front end of the handle has passed through the slit and the lid is no longer in the closed position (the lid is seen slightly opened).

[0029] FIG. 7 is a perspective view looking down into the box of FIG. 1 wherein the lid is in a fully open position.

[0030] FIG. 8 is a partial perspective view of a toggle of the handle and positioning member of the lid of the box of FIG. 1.

[0031] FIG. 9 is a partial perspective view of the toggle of the handle passing through an opening and slit of the positioning member of the lid of the box of FIG. 1. The toggle is passed therethrough when attaching or detaching the front end of the handle to the positioning member of the lid.

[0032] FIG. 10 is a partial perspective view of another toggle of the handle passing through another opening and slit of the lid of the box of FIG. 1. This second toggle is passed therethrough when attaching or detaching the back end of the handle to the lid.

[0033] FIG. 11 is a partial perspective view of the other toggle after passing through the other opening and slit of the lid of the box when being disconnected from the lid.

[0034] FIG. 12 is a perspective view of the top of the box of FIG. 1 with the disconnected handle having been laid on the top surface of the lid of the box, wherein the toggles at opposite ends of the handle are perhaps best seen and wherein the two opening and slit pairs of the lid are perhaps best seen.

[0035] FIG. 13 is a top plan view of a blank used to make a preferred embodiment of a box in accordance with one or more aspects and features of the invention.

[0036] FIG. 14 is a top plan view of another blank used to make a preferred embodiment of a box in accordance with one or more aspects and features of the invention, which box is collapsible when in an assembled configuration.

[0037] FIG. 15 is a partial perspective view of a prototype of a box in accordance with one or more aspects and features of the invention.

[0038] FIG. 16 is another partial perspective view of the prototype of FIG. 15.

[0039] FIG. 17 is another partial perspective view of the prototype of FIG. 15 showing a manual manipulation of the front end of the handle for inserting through the slit and into the slot of a front wall of the box for securing the lid in a closed or locked position.

[0040] FIG. 18 is another partial perspective view of the prototype of FIG. 15, wherein the lid is secured by the handle in the closed position.

[0041] FIG. 19 is another partial perspective view of the prototype of FIG. 15 demonstrating the lifting of the box by the handle while the handle secures the lid in the closed position.

[0042] FIG. 20 is another partial perspective view from a rear of the box of the prototype of FIG. 15.

[0043] FIG. 21 is a rear plan view of a preferred embodiment of a clip in accordance with one or more aspects and features of the invention.

[0044] FIG. 22 is a front plan view of the clip of FIG. 21.

[0045] FIG. 23 is a side plan view of the clip of FIG. 21.

[0046] FIG. 24 is a perspective view of the clip of FIG. 21.

[0047] FIG. 25 is a perspective view of a preferred embodiment of a cooler including a box, handle, and clip, wherein the box is in an open position revealing beverages on ice contained therein.

[0048] FIG. 26 is a perspective view of the cooler of FIG. 25 in the closed position with the lid secured by latching an end of the handle to the clip.

[0049] FIG. 27 is a close-up perspective view of a front of a prototype clip attached onto a top edge of a front wall of a box.

[0050] FIG. 28 is another close-up perspective view of a rear of the clip and box of FIG. 27.

[0051] FIG. 29 is a close-up perspective view of the front of the clip and box of FIG. 27, wherein an end of the handle has been secured to the clip for locking of the lid of the box in a closed position.

[0052] FIG. 30 is another view similar to that of FIG. 29.

[0053] FIG. 31 is a close-up perspective view similar to that of FIG. 30, wherein the lid of the box has been depressed such that extensions of the clip catch the edge of the lid of the box and further retain the lid securely in the closed position.

[0054] FIG. 32 is another view of the box, clip, and handle as seen in FIG. 31.

[0055] FIG. 33 is still another view of the box, clip, and handle as seen in FIG. 31.

[0056] FIG. 34 is another view of the box, clip, and handle as seen in FIG. 31.

[0057] FIG. 35 is a close up perspective view of an area of a top portion of a front wall of another box in accordance with one or more aspects and features of the invention, prior to removable securing a clip onto the top portion of the front wall.

[0058] FIG. 36 is generally the view of FIG. 35 wherein a clip has been removably secured onto the top portion of the front wall.

[0059] FIG. 37 is another perspective view of the clip secured onto the top portion of the front of the front wall with the lid moving toward the closed position with the a toggle end of the handle approaching the clip.

[0060] FIG. 38 is a perspective view similar to that of FIG. 37 when the toggle end of the handle has been latched to the two protuberances (nipple or ridges) of the clip and is retained in engagement therewith and the handle is tensioned by lifting or carrying the cooler.

[0061] FIG. 39 is another view of the handle and clip when the toggle end of the handle has been latched to the two protuberances (nipple or ridges) of the clip and is retained in engagement therewith and the handle is tensioned by lifting or carrying the cooler.

[0062] FIG. 40 is a perspective view of a preferred cooler that includes a box, handle, and clip in accordance with one or more aspects and features of the invention, wherein the cooler is assembled but in a collapsed condition for storage while awaiting use.

[0063] FIG. 41 is a side perspective view of the assembled, collapsed cooler of FIG. 40.

[0064] FIG. 42 is the box of FIG. 40 deconstructed to show the blank, wherein areas that were glued when the blank was folded to form the box are evident.

[0065] FIG. 43 is a close up of the blank of FIG. 42 showing the openings formed in the blank for receiving the toggle ends of the handle.

[0066] FIG. 44 is a close up of the blank of FIG. 42 showing a handle that has been installed on the blank by inserting the toggle ends through the openings in the blank.

DETAILED DESCRIPTION

[0067] As a preliminary matter, it will readily be understood by one having ordinary skill in the relevant art (“Ordinary Artisan”) that the invention has broad utility and application. Furthermore, any embodiment discussed and identified as being “preferred” is considered to be part of a best mode contemplated for carrying out the invention. Other embodiments also may be discussed for additional illustrative purposes in providing a full and enabling disclosure of the invention. Furthermore, an embodiment of the invention may incorporate only one or a plurality of the aspects of the invention disclosed herein; only one or a plurality of the features disclosed herein; or combination thereof. As such, many embodiments are implicitly disclosed herein and fall within the scope of what is regarded as the invention.

[0068] Accordingly, while the invention is described herein in detail in relation to one or more embodiments, it is to be understood that this disclosure is illustrative and exemplary of the invention and is made merely for the purposes of providing a full and enabling disclosure of the invention. The detailed disclosure herein of one or more embodiments is not intended, nor is to be construed, to limit

the scope of patent protection afforded the invention in any claim of a patent issuing here from, which scope is to be defined by the claims and the equivalents thereof. It is not intended that the scope of patent protection afforded the invention be defined by reading into any claim a limitation found herein that does not explicitly appear in the claim itself.

[0069] Thus, for example, any sequence(s) and/or temporal order of steps of various processes or methods that are described herein are illustrative and not restrictive. Accordingly, it should be understood that, although steps of various processes or methods may be shown and described as being in a sequence or temporal order, the steps of any such processes or methods are not limited to being carried out in any particular sequence or order, absent an indication otherwise. Indeed, the steps in such processes or methods generally may be carried out in various different sequences and orders while still falling within the scope of the invention. Accordingly, it is intended that the scope of patent protection afforded the invention be defined by the issued claim(s) rather than the description set forth herein.

[0070] Additionally, it is important to note that each term used herein refers to that which the Ordinary Artisan would understand such term to mean based on the contextual use of such term herein. To the extent that the meaning of a term used herein—as understood by the Ordinary Artisan based on the contextual use of such term—differs in any way from any particular dictionary definition of such term, it is intended that the meaning of the term as understood by the Ordinary Artisan should prevail.

[0071] With regard solely to construction of any claim with respect to the United States, no claim element is to be interpreted under 35 U.S.C. 112(f) unless the explicit phrase “means for” or “step for” is actually used in such claim element, whereupon this statutory provision is intended to and should apply in the interpretation of such claim element. With regard to any method claim including a condition precedent step, such method requires the condition precedent to be met and the step to be performed at least once but not necessarily every time during performance of the claimed method.

[0072] Furthermore, it is important to note that, as used herein, “comprising” is open-ended insofar as that which follows such term is not exclusive. Additionally, “a” and “an” each generally denotes “at least one” but does not exclude a plurality unless the contextual use dictates otherwise. Thus, reference to “a picnic basket having an apple” is the same as “a picnic basket comprising an apple” and “a picnic basket including an apple”, each of which identically describes “a picnic basket having at least one apple” as well as “a picnic basket having apples”; the picnic basket further may contain one or more other items beside an apple. In contrast, reference to “a picnic basket having a single apple” describes “a picnic basket having only one apple”; the picnic basket further may contain one or more other items beside an apple. In contrast, “a picnic basket consisting of an apple” has only a single item contained therein, i.e., one apple; the picnic basket contains no other item.

[0073] When used herein to join a list of items, “or” denotes “at least one of the items” but does not exclude a plurality of items of the list. Thus, reference to “a picnic basket having cheese or crackers” describes “a picnic basket having cheese without crackers”, “a picnic basket having crackers without cheese”, and “a picnic basket having both

cheese and crackers”; the picnic basket further may contain one or more other items beside cheese and crackers.

[0074] When used herein to join a list of items, “and” denotes “all of the items of the list”. Thus, reference to “a picnic basket having cheese and crackers” describes “a picnic basket having cheese, wherein the picnic basket further has crackers”, as well as describes “a picnic basket having crackers, wherein the picnic basket further has cheese”; the picnic basket further may contain one or more other items beside cheese and crackers.

[0075] The phrase “at least one” followed by a list of items joined by “and” denotes an item of the list but does not require every item of the list. Thus, “at least one of an apple and an orange” encompasses the following mutually exclusive scenarios: there is an apple but no orange; there is an orange but no apple; and there is both an apple and an orange. In these scenarios if there is an apple, there may be more than one apple, and if there is an orange, there may be more than one orange. Moreover, the phrase “one or more” followed by a list of items joined by “and” is the equivalent of “at least one” followed by the list of items joined by “and”.

[0076] Referring now to the drawings, one or more preferred embodiments of the invention are next described. The following description of one or more preferred embodiments is merely exemplary in nature and is in no way intended to limit the invention, its implementations, or uses.

[0077] As seen in the drawings, a general description for which is set forth above and incorporated here, a preferred box **100** in accordance with one or more aspects and features of the invention comprises a bottom; side walls—including a front and rear wall and two end walls; and a lid **101**, all of which collectively define an interior space **110** (see FIG. 7) inside of the box for holding one or more items.

[0078] The box **100** further comprises a handle **102**. The handle **102** enables the lid **101** of the box **100** to be secured in a closed position as seen, for example, in FIGS. 1-4. The handle **102** further enables the box **100** to be carried by the handle **102** when the lid **101** of the box **100** is secured in the closed position. The handle **102** itself preferably is manipulated to secure the box **100** in the closed position as well as to unsecure the box **100** for opening of the lid **101**, as perhaps best seen from FIGS. 5-6 and FIGS. 16-19.

[0079] The handle **102** preferably is attached to the lid **101** and has a toggle **122** at a front end of the handle **102** that is insertable through an opening **121** in the front wall of the box **100**, by which the handle **102** secures the lid **101** of the box **100** in a closed position. The opening **121** preferably is located in a portion of the front wall that extends above a top of the lid **101** of the box **100** when the lid **101** is in the closed position, as perhaps best seen in FIGS. 1 and 2.

[0080] Additionally, the lid **101** preferably comprises a flap portion **106** having an opening **125** through which the handle **102** extends for positioning the toggle **122** close to the opening **121** for ease of use in securing the lid **101** in the closed position.

[0081] The handle **102** further comprises a second toggle **124** located at a rear thereof by which the handle **102** is attached to the lid **101**. This is done by inserting the second toggle **124** through a rear opening **131** located in a rear, top portion of the lid **101**.

[0082] A slit **133** connected to and extending from the opening **131** is provided for facilitating the passing of the second toggle member **124** when attaching the handle **102** to

the lid **101** during the forming of the box **100**. Similarly, a slit **127** connected to and extending from the opening **125** is provided for facilitating the passing of the front toggle member **122** when attaching the handle **102** to the lid **101** during the forming of the box **100**. A slit **123** similarly extends from and is connected to the opening **121** for facilitating the passing of the toggle **122** therethrough when locking and unlocking the lid **101** during use of the box **100**.

[0083] A blank **900** is illustrated in FIG. 13. The blank **900** preferably comprises a single sheet of material, such as a corrugated material like cardboard. The blank further preferably comprises a waterproof or water-resistant coating that is applied to one or more surfaces thereof when the blank is to be used to form a cooler. Another blank **901** is illustrated in FIG. 14 and differs from blank **900** only in the additional fold lines or score lines **991,992,993** which enable the box when assembled from blank **901** to be collapsed.

[0084] The blanks **900,901** comprise: bottom panels **902** or **902/903**; end panel **904** or end subpanels **904/905**; end panel **906** or end subpanels **906/907**; front wall **908**; rear wall **922**; corner panels **912,913,914,915,916,917,918,919**; top panel **922** forming the lid and including flange or flap **106**; and reinforcing lid subpanels **920,924**. Preferred areas for adhering via glue also are shown in FIG. 13 and include areas A-A, B-B, C-C, D-D, E-E, and F-F.

[0085] The appendix which is incorporated herein by reference includes FIGS. 1-12 comprising photographs a prototype box in accordance with one or more aspects and features of the invention, of which FIGS. 1-12 of the drawings of the specification are directly representative. FIGS. 13-15 of the appendix comprise photographs of another prototype box in accordance with one or more aspects and features of the invention; FIGS. 16-21 of the appendix correspond to FIGS. 15-20 of the drawings of the specification; and, FIG. 22 of the appendix corresponds to FIG. 13 of the drawings of the specification and further sets forth preferred dimensions of a prototype box of the invention for use as a cooler.

[0086] Additionally, further details regarding a preferred handle in accordance with aspects and features of the invention are set forth on page 12 of the appendix.

[0087] Another aspect of the invention comprises the combination of a box, a handle, and a clip. The clip is secured onto a front wall of the box and a toggle of the handle is secured to the clip for securing a lid of the box in the closed position. The toggle preferably latches onto opposed protuberances of the clip on opposite sides of a gap, which protuberances the toggle of the handle engages. Each protuberance preferably defines a raised bump of nipple against which the toggle is engaged and retained when the handle is used to lift and carry the box. Such an embodiment is now described with reference to FIGS. 21-34, with additional aspects and features relating thereto being disclosed on pages 13-30 of the appendix.

[0088] In particular, FIG. 21 is a rear plan view of a preferred embodiment of a clip in accordance with one or more aspects and features of the invention; FIG. 22 is a front plan view of the clip of FIG. 21; FIG. 23 is a side plan view of the clip of FIG. 21; FIG. 24 is a perspective view of the clip of FIG. 21; FIG. 25 is a perspective view of a preferred embodiment of a cooler including a box, handle, and clip, wherein the box is in an open position revealing beverages on ice contained therein; FIG. 26 is a perspective view of the cooler of FIG. 25 in the closed position with the lid secured

by latching an end of the handle to the clip; FIG. 27 is a close-up perspective view of a front of a prototype clip attached onto a top edge of a front wall of a box; and FIG. 28 is another close-up perspective view of a rear of the clip and box of FIG. 27. Furthermore, FIG. 29 is a close-up perspective view of the front of the clip and box of FIG. 27, wherein an end of the handle has been secured to the clip for locking of the lid of the box in a closed position; FIG. 30 is another view similar to that of FIG. 29; FIG. 31 is a close-up perspective view similar to that of FIG. 30, wherein the lid of the box has been depressed such that extensions of the clip catch the edge of the lid of the box and further retain the lid securely in the closed position; FIG. 32 is another view of the box, clip, and handle as seen in FIG. 31; FIG. 33 is still another view of the box, clip, and handle as seen in FIG. 31; and FIG. 34 is another view of the box, clip, and handle as seen in FIG. 31.

[0089] Additionally, pages 13-21 of the appendix show a prototype clip in accordance with one or more aspects and features of the invention, and pages 22 and 24-26 show boxes having the clip secured to a front wall thereof. A blank for one of these boxes including screen printing is shown on page 23 of the appendix, and another blank for one of these boxes including screen printing is shown on page 27 of the appendix. A retail display including a plurality of collapsed boxes is shown on page 28 of the appendix, a header card of which is also shown on page 29 of the appendix. A blank for a box for use with a clip that does not include screen printing is shown on page 30 of the appendix. A comparison of the blank shown on page 30 of the appendix with the blank shown on page 11 of the appendix reveals the high degree of similarity between these embodiments, with the primary distinction being the slot formed in the front wall for receiving in biased, frictional fit a portion of the clip for retaining the clip on the front wall of the cooler, and the wider gap through which the end of the handle passes when secured to the clip, which wider gaps does not require the handle to be twisted for passing of the handle through the gap.

[0090] Additional views related to a box in accordance with one or more aspects and features of the invention that is used as a cooler are seen in FIGS. 35-44. In particular, FIG. 35 is a close up perspective view of an area of a top portion of a front wall of another box in accordance with one or more aspects and features of the invention, prior to removable securing a clip onto the top portion of the front wall; FIG. 36 is generally the view of FIG. 35 wherein a clip has been removable secured onto the top portion of the front wall; FIG. 37 is another perspective view of the clip secured onto the top portion of the front of the front wall with the lid moving toward the closed position with the a toggle end of the handle approaching the clip; FIG. 38 is a perspective view similar to that of FIG. 37 when the toggle end of the handle has been latched to the two protuberances (nipple or ridges) of the clip and is retained in engagement therewith and the handle is tensioned by lifting or carrying the cooler; and FIG. 39 is another view of the handle and clip when the toggle end of the handle has been latched to the two protuberances (nipple or ridges) of the clip and is retained in engagement therewith and the handle is tensioned by lifting or carrying the cooler.

[0091] FIG. 40 is a perspective view of a preferred cooler that includes a box, handle, and clip in accordance with one or more aspects and features of the invention, wherein the

cooler is assembled but in a collapsed condition for storage while awaiting use; FIG. 41 is a side perspective view of the assembled, collapsed cooler of FIG. 40; FIG. 42 is the box of FIG. 40 deconstructed to show the blank, wherein areas that were glued when the blank was folded to form the box are evident; FIG. 43 is a close up of the blank of FIG. 42 showing the openings formed in the blank for receiving the toggle ends of the handle; and FIG. 44 is a close up of the blank of FIG. 42 showing a handle that has been installed on the blank by inserting the toggle ends through the openings in the blank.

[0092] Based on the foregoing description, it will be readily understood by those persons skilled in the art that the invention has broad utility and application. Many embodiments and adaptations of the invention other than those specifically described herein, as well as many variations, modifications, and equivalent arrangements, will be apparent from or reasonably suggested by the invention and the foregoing descriptions thereof, without departing from the substance or scope of the invention. Accordingly, while the invention has been described herein in detail in relation to one or more preferred embodiments, it is to be understood that this disclosure is only illustrative and exemplary of the invention and is made merely for the purpose of providing a full and enabling disclosure of the invention. The foregoing disclosure is not intended to be construed to limit the invention or otherwise exclude any such other embodiments, adaptations, variations, modifications or equivalent arrangements, the invention being limited only by the claims appended hereto and the equivalents thereof.

1. A box comprising a lid having a handle, wherein the handle comprises at one end thereof a toggle, and wherein a front wall of the box defines a passage through which the toggle of the handle passes for securing the lid in a closed position, wherein lifting of the box by the handle tensions the handle and secures the front wall to the lid in the closed position.

2. The box of claim 1, wherein a second end of the handle comprises a second toggle, and wherein the lid comprises an opening through which the second toggle is passed for attaching the handle to the lid.

3. The box of claim 1, wherein the lid further comprises a flap portion having an opening through which the handle extends for positioning the first toggle proximate the passage defined in the front wall of the box when the lid is transitioned toward the closed position.

4-16. (canceled)

17. The box of claim 3, wherein the front wall of the box extends above the lid when the lid is in the closed position.

18. The box of claim 17, wherein the passage extends to a top edge of the front wall of the box.

19. The box of claim 18, wherein the passage extends below the lid when the lid is in the closed position.

20. The box of claim 19, wherein the handle when tensioned during lifting of the box latches to the front wall of the box and secures the front wall to the lid in the closed position.

21. The box of claim 20, wherein the handle is dimensioned such that, when the toggle is in a first orientation, the handle has a width that is small enough to pass through the passage defined in the front wall of the box, and when the toggle is in a second orientation that is orthogonal to the first orientation, the handle has a width that is too large to pass through the passage defined in the front wall of the box.

22. The box of claim **21**, wherein the toggle extends beyond and on opposite lateral sides of the passage when the toggle is in the second orientation when the handle secures the lid in the closed position.

23. A box comprising a lid, a front wall, and means for lifting the box while effecting securing the lid of the box in a closed position.

24. The box of claim **23**, wherein the means comprises a handle that is latched at a first end to the front wall; that is latched at a second, opposite end to the lid; and that is tensioned when the box is lifted using the handle.

25. The box of claim **24**, wherein the handle proximate the first end extends through both an opening in the lid and an opening in the front wall.

26. The box of claim **25**, wherein the handle proximate the second end extends through another opening in the lid.

27. The box of claim **25**, wherein lid comprises a flap portion that defines the opening in the lid through which extends the handle proximate the first end.

28. The box of claim **27**, wherein the front wall of the box extends above the lid when the lid is in the closed position.

29. A box (a) comprising a single sheet of corrugated material folded and glued to define a lid, a front wall, a back wall, a first side wall, a second side wall, and a bottom wall, and (b) further comprising a handle having at one end thereof a toggle, (c) wherein the front wall of the box defines a passage through which the toggle of the handle passes for securing the lid in a closed position, and (d) wherein lifting of the box by the handle tensions the handle and secures the front wall to the lid in the closed position.

30. The box of claim **29**, wherein a second end of the handle comprises a second toggle, and wherein the lid comprises an opening through which the second toggle is passed for attaching the handle to the lid.

31. The box of claim **29**, wherein the lid further comprises a flap portion having an opening through which the handle extends for positioning the first toggle proximate the passage defined in the front wall of the box when the lid is transitioned toward the closed position.

32. The box of claim **31**, wherein the front wall of the box extends above the lid when the lid is in the closed position; wherein the passage extends to a top edge of the front wall of the box; and wherein the passage extends below the lid when the lid is in the closed position.

33. The box of claim **32**, wherein the handle when tensioned during lifting of the box latches to the front wall of the box and secures the front wall to the lid in the closed position; wherein the handle is dimensioned such that, when the toggle is in a first orientation, the handle has a width that is small enough to pass through the passage defined in the front wall of the box, and when the toggle is in a second orientation that is orthogonal to the first orientation, the handle has a width that is too large to pass through the passage defined in the front wall of the box; and wherein the toggle extends beyond and on opposite lateral sides of the passage when the toggle is in the second orientation when the handle secures the lid in the closed position.

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