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(54) **CHILD-RESISTANT PACKAGING AND RELATED METHODS**

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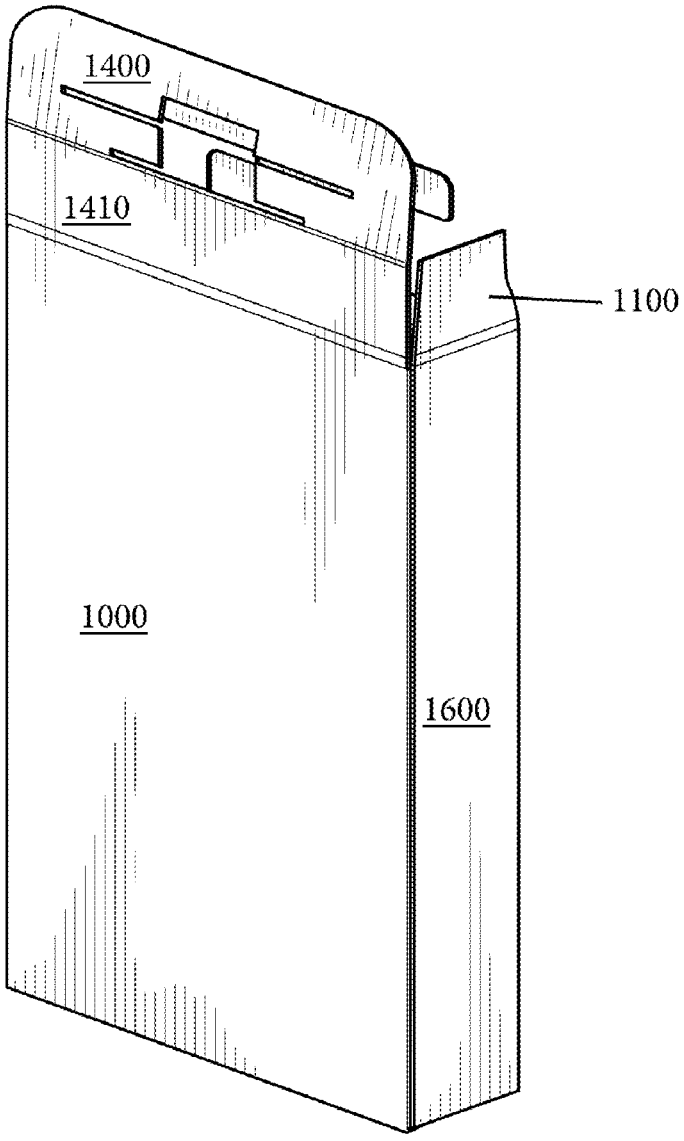
(52) **U.S. Cl.**
CPC ..... ***B65D 5/106*** (2013.01); *B65D 2215/04* (2013.01)

(57) **ABSTRACT**

Disclosed is a child-resistant packaging. The child-resistant packaging consists of a lid featuring an "I" shaped slot and an "I" shaped tab that is inserted into and withdrawn from the slot to create an enclosure for a box that requires specific manipulation to open and close.



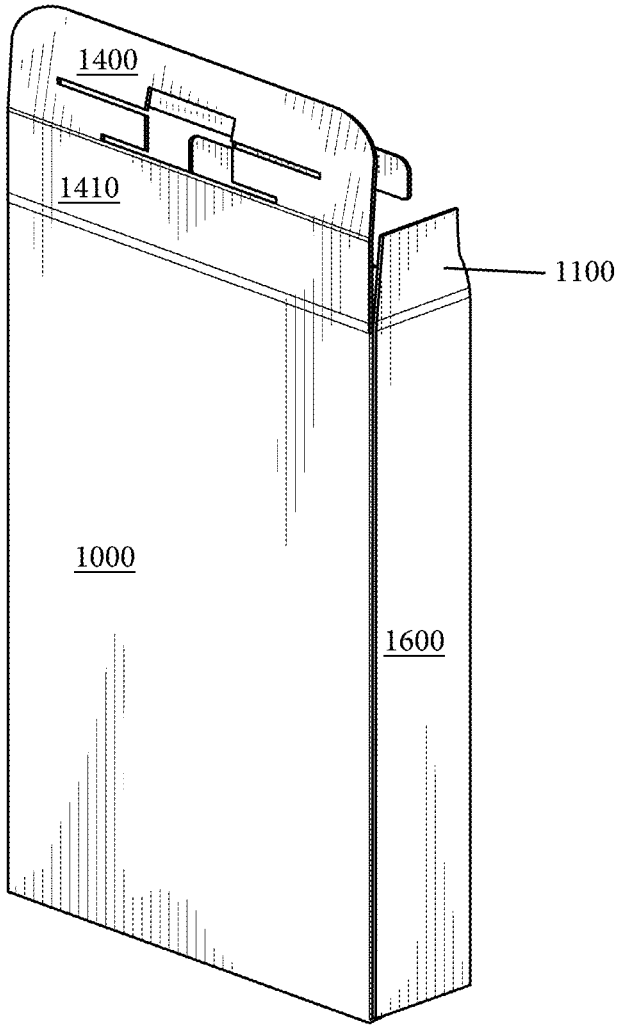



FIG. 1

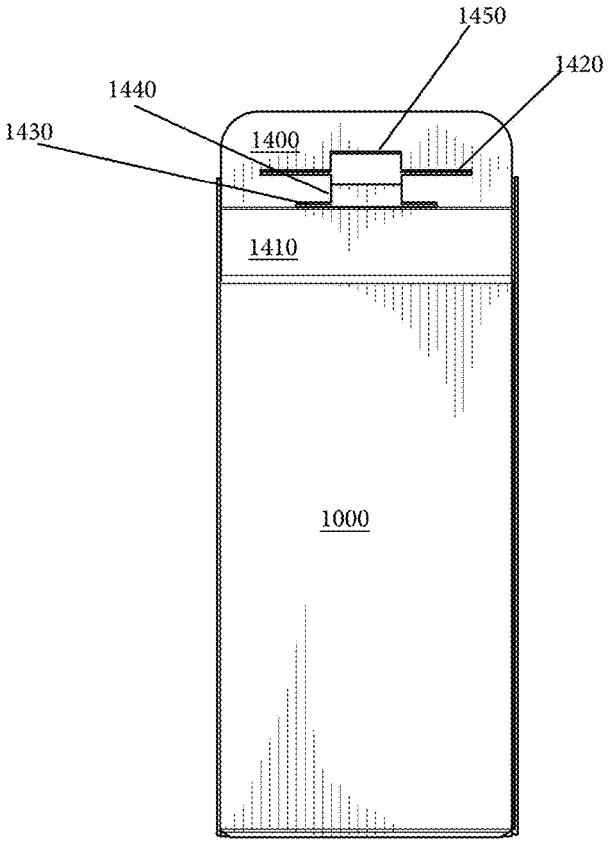

1450
1420
1440
1430
1400
1410
1000

FIG. 2

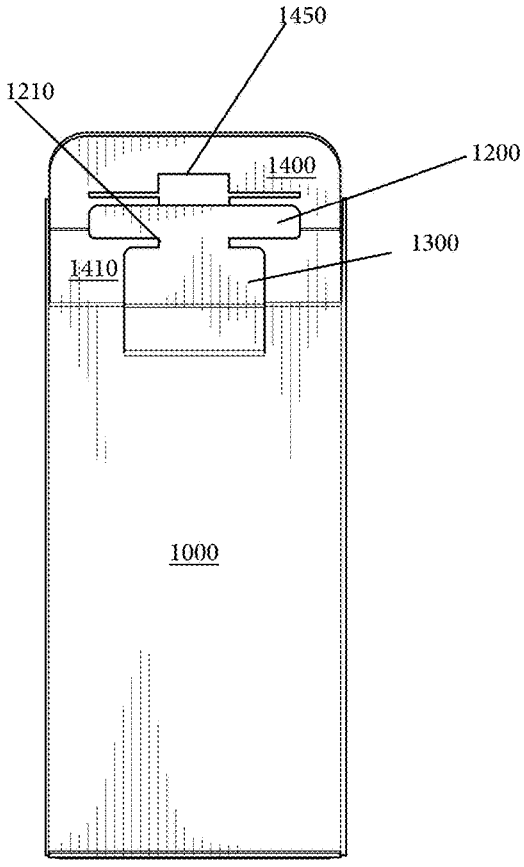

1450
1210
1200
1400
1300
1410
1000

FIG. 3

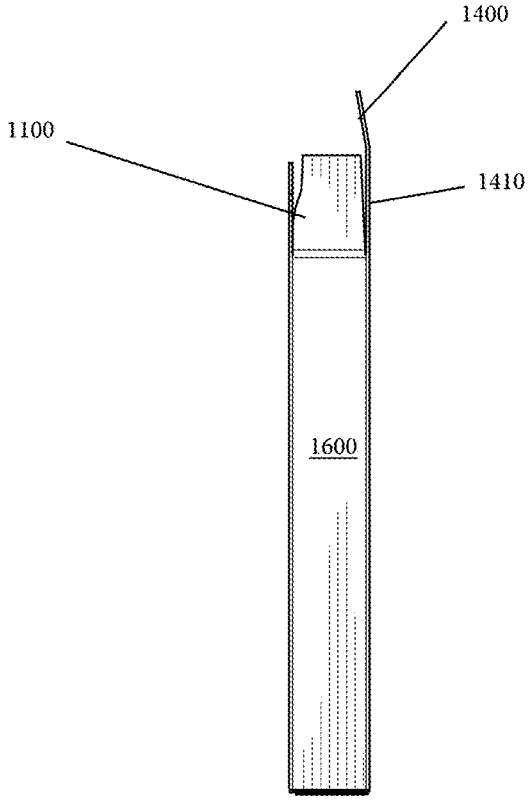



FIG. 4

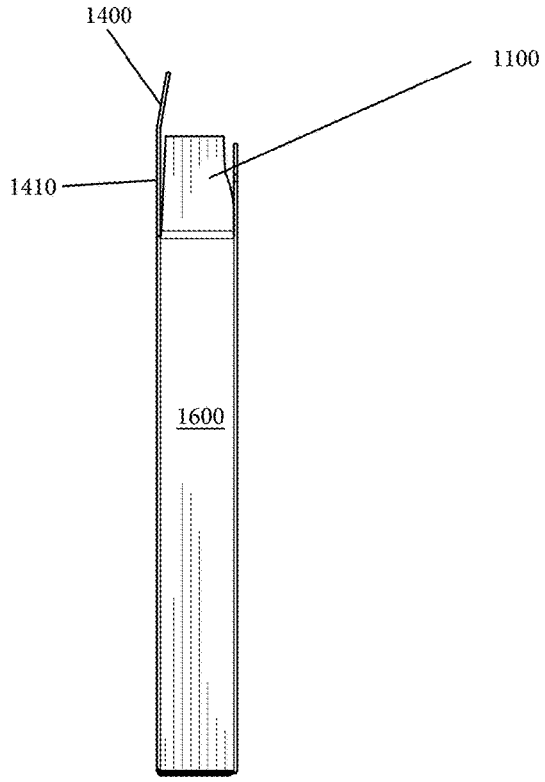



FIG. 5


FIG. 6

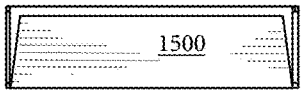



FIG. 7

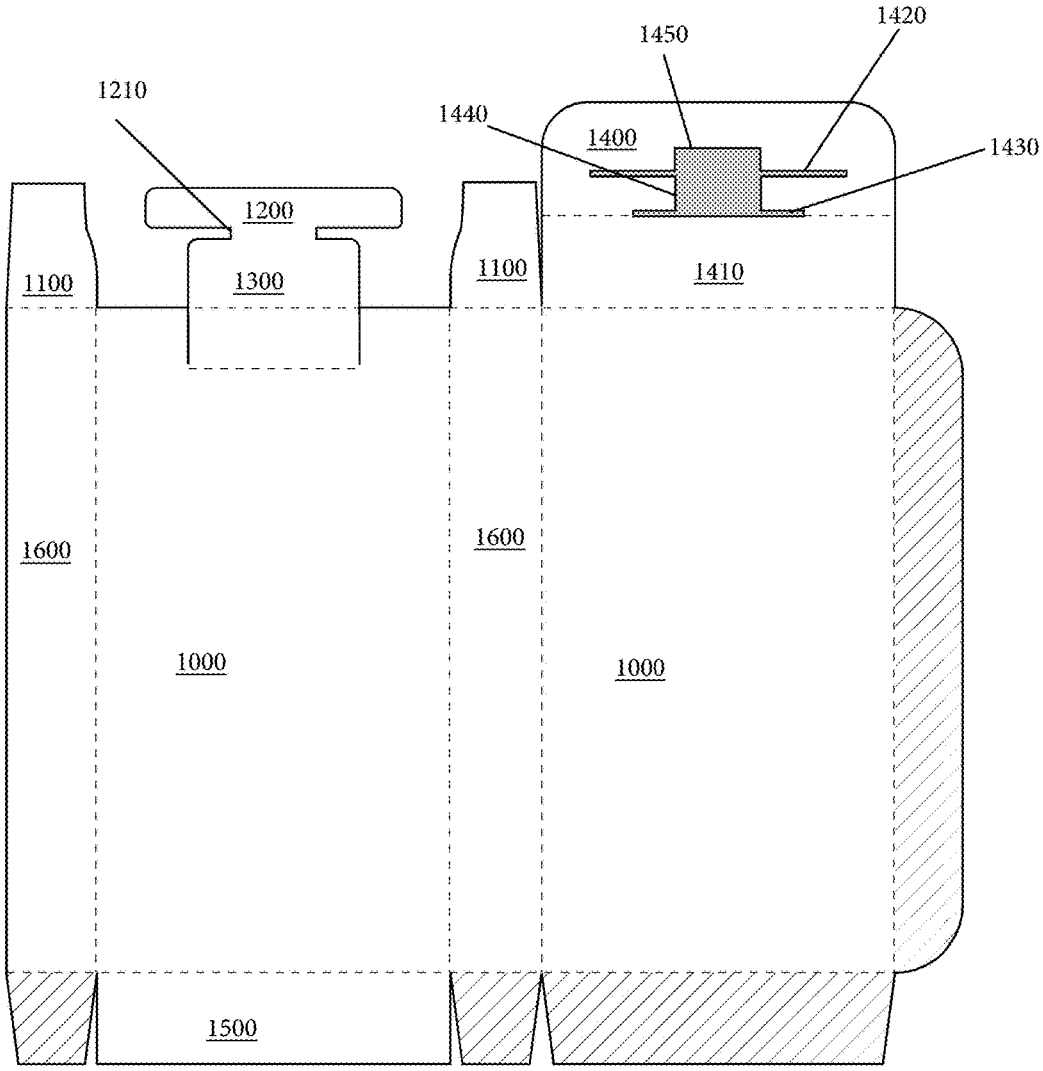

1450
1420
1210
1440
1400
1430
1200
1100
1300
1100
1410
1600
1600
1000
1000
1500

FIG. 8

# CHILD-RESISTANT PACKAGING AND RELATED METHODS

## CROSS-REFERENCE TO RELATED APPLICATIONS

**[0001]** This application is a continuation-in-part of U.S. application Ser. No. 29/637,907, filed on Feb. 22, 2018, entitled "Child-Resistant Package."

## STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

**[0002]** Not applicable.

## THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT

**[0003]** Not applicable.

## REFERENCE TO AN APPENDIX SUBMITTED ON A COMPACT DISC AND INCORPORATED BY REFERENCE OF THE MATERIAL ON THE COMPACT DISC

**[0004]** Not applicable.

## STATEMENT REGARDING PRIOR DISCLOSURES BY THE INVENTOR OR A JOINT INVENTOR

**[0005]** Reserved for a later date, if necessary.

## BACKGROUND OF THE INVENTION

### Field of Invention

**[0006]** The disclosed subject matter is in the field of child resistant packaging.

### Background of the Invention

**[0007]** Frequently, packages contain goods that may not be suitable for young children because they may be a choking hazard or they may cause adverse effects if ingested. Young children comprise a disproportionately large percentage of poisoning cases with the National Capital Poison Center reporting children younger than 6 years comprising nearly half of all poison exposures. Accordingly, there are dozens of child-proof boxes and packages in the market that help prevent children from accessing the contents of a box or package.

**[0008]** Previous child-proof packages require expensive manufacturing and exhibit complex locking mechanisms that require the use of both hands, an obstacle for senior adults and those suffering from conditions affecting their dexterity.

**[0009]** Thus, there exists a need for a box that can be manufactured inexpensively and operate with ease. Accordingly, the present invention is a child-proof package that can be manufactured efficiently and inexpensively, but still provides effective child-proof elements that requires sequenced and specific manipulation.

## SUMMARY OF THE INVENTION

**[0010]** In view of the foregoing, an object of this specification is to disclose a child-resistant packaging. In a typical embodiment, the packaging comprises a single-piece rigid boxing material exhibiting a size-varying double-tabbed locking mechanism.

## BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

**[0011]** Other objectives of the disclosure will become apparent to those skilled in the art once the invention has been shown and described. The manner in which these objectives and other desirable characteristics can be obtained is explained in the following description and attached figures in which:

**[0012]** FIG. **1** is an environmental view of the child-resistant packaging in an open configuration;

**[0013]** FIG. **2** is a perspective view of the child-resistant packaging from the back;

**[0014]** FIG. **3** is an orthogonal view of the child-resistant packaging from the front;

**[0015]** FIG. **4** is an orthogonal view of the child-resistant packaging from the left;

**[0016]** FIG. **5** is an orthogonal view of the child-resistant packaging from the right;

**[0017]** FIG. **6** is an orthogonal view of the child-resistant packaging from the top;

**[0018]** FIG. **7** is an orthogonal view of the child-resistant packaging from the top; and

**[0019]** FIG. **8** is a perspective view of a blank template of the child-resistant packaging.

**[0020]** In the figures, the following reference numerals represent the associated components of the disclosed device:

**[0021]** Child-resistant packaging—**1000**;

**[0022]** Side flaps—**1100**;

**[0023]** Elongated tab—**1200**;

**[0024]** Tab connector—**1210**;

**[0025]** Truncated tab—**1300**;

**[0026]** Lid—**1400**;

**[0027]** Lid Flap—**1410**;

**[0028]** Elongated tab slot—**1420**;

**[0029]** Truncated tab slot—**1430**;

**[0030]** Connecting tab slot—**1440**;

**[0031]** Superior slot—**1450**;

**[0032]** Bottom flap—**1500**; and

**[0033]** Side walls—**1600**.

**[0034]** It is to be noted, however, that the appended figures illustrate only typical embodiments of this invention and are therefore not to be considered limiting of its scope, for the invention may admit to other equally effective embodiments that will be appreciated by those reasonably skilled in the relevant arts. Also, figures are not necessarily made to scale but are representative.

## DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

**[0035]** Disclosed is a child-resistant packaging. In use, the device may be used to protectively package and seal materials to prevent child access to enclosed items. FIG. **1** is an environmental view of the child-resistant packaging **1000** in an open configuration. FIG. **2** is a perspective view of the child-resistant packaging **1000** from the back. FIG. **3** is an orthogonal view of the child-resistant packaging **1000** from the front. FIG. **4** is an orthogonal view of the child-resistant packaging **1000** from the left. FIG. **5** is an orthogonal view of the child-resistant packaging **1000** from the right. FIG. **6**

is an orthogonal view of the child-resistant packaging **1000** from the top. FIG. **7** is an orthogonal view of the child-resistant packaging **1000** from the top. FIG. **8** is a perspective view of a blank template of the child-resistant packaging **1000**.

**[0036]** FIGS. **1** through **3** show the lid **1400**. Referring to those figures, the lid **1400** may be defined as a foldable flap superiorly extended from the child-resistant packaging **1000** exhibiting an elongated tab slot **1420**, a truncated tab slot **1430**, a connecting tab slot **1440**, a superior slot **1450**, and a lid flap **1410**.

**[0037]** FIGS. **1** and **3** show the elongated tab **1200**, tab connector **1210**, and truncated tab **1300**. Referring to FIG. **3**, the elongated tab **1200** is superiorly fixated to the truncated tab **1300** via the tab connector **1210**. The truncated tab **1300** is hingeably fixed to the child-resistant packaging **1000** permitting the truncated tab **1300**, and subsequently the elongated tab **1200**, conjoined to the truncated tab **1300** via the tab connector **1210**, to fold along the hinge and be inserted through or withdrawn from the elongated tab slot **1420**, the connecting tab slot **1440**, and truncated tab slot **1430** of the lid **1400**. In use, to close child-resistant packaging **1000**, the elongated tab **1200** is inserted through the elongated tab slot **1420**, transversing the lid **1400**. Once the elongated tab **1200** is inserted into the elongated tab slot **1420**, the elongated tab **1200** and truncated tab **1300** may move inferiorly along the connecting tab slot **1440** as the tab connector **1210** mates with the connecting tab slot **1440**. In a preferred embodiment, when the tab connector **1210** is in line with the lid **1400**, the tab connector **1210** can slide vertically along the connecting tab slot, from the truncated tab slot **1430** and up to the superior slot **1450**. Once the tab connector **1210** meets the truncated tab slot **1430** of the lid **1400**, the truncated tab **1300** may be inserted through the truncated tab slot **1430** creating a tabbed seal of the child-resistant packaging **1000**.

**[0038]** In a preferred embodiment, the child-resistant packaging **1000** may be opened through: (1) extraction of the truncated tab **1300** from the truncated tab slot **1430** until the tab connector **1210** can travel along the connector tab slot **1440**; (2) superior movement of the connector tab **1210** upwards along the connecting tab slot **1440** until the elongated tab **1200** is in proximity to the elongated tab slot **1420**; (3) subsequent extraction/withdrawal of the elongated tab **1200** from the elongated tab slot **1420**; and (4) lifting of the lid **1400** to create an opening at the top of the child-resistant packaging **1000**. As shown in FIGS. **2** and **4**, the lid **1400** also exhibits a superior slot **1450**. The superior slot **1450** prevents extraction of the elongated tab **1200** when the elongated tab has travelled superiorly past the elongated tab slot **1420**, requiring coaxial alignment of the elongated tab **1200** and elongated tab slot **1420** to permit an opening of the child-resistant packaging **1000**. This configuration requires a mature amount of dexterity and manipulation of the tabs and lid, so that a child cannot easily open the child-resistant packaging.

**[0039]** As shown in FIGS. **4** and **5**, the lid **1400** and conjoined elongated tab **1200** and truncated tab **1300** are positioned on opposite sides from each other, permitting insertion of the elongated tab **1200**, tab connector **1210**, and truncated tab **1300** through hinged movement of the lid **1400** and conjoined tabs.

**[0040]** FIGS. **6** and **7** show the side flaps **1100** and bottom flap **1500** overlap to create a sealed enclosure. In one embodiment, a seal is created through application of glue to the surfaces of the side flaps **1100** and bottom flap **1500**.

**[0041]** FIG. **8** shows the unfurled blank template of the child-resistant packaging **1000**. The child-resistant packaging may be folded to oppositionally align the elongated tab **1200**, tab connector **1210**, and truncated tab **1300** to the lid **1400**. The side flaps **1100** are likewise oppositionally aligned and hingeably conjoined to the side walls **1600** to permit an inward folding at the superior end of the side walls **1600**.

**[0042]** Although the method and apparatus is described above in terms of various exemplary embodiments and implementations, it should be understood that the various features, aspects and functionality described in one or more of the individual embodiments are not limited in their applicability to the particular embodiment with which they are described, but instead might be applied, alone or in various combinations, to one or more of the other embodiments of the disclosed method and apparatus, whether or not such embodiments are described and whether or not such features are presented as being a part of a described embodiment. Thus the breadth and scope of the claimed invention should not be limited by any of the above-described embodiments.

**[0043]** Terms and phrases used in this document, and variations thereof, unless otherwise expressly stated, should be construed as open-ended as opposed to limiting. As examples of the foregoing: the term "including" should be read as meaning "including, without limitation" or the like, the term "example" is used to provide exemplary instances of the item in discussion, not an exhaustive or limiting list thereof, the terms "a" or "an" should be read as meaning "at least one," "one or more," or the like, and adjectives such as "conventional," "traditional," "normal," "standard," "known" and terms of similar meaning should not be construed as limiting the item described to a given time period or to an item available as of a given time, but instead should be read to encompass conventional, traditional, normal, or standard technologies that might be available or known now or at any time in the future. Likewise, where this document refers to technologies that would be apparent or known to one of ordinary skill in the art, such technologies encompass those apparent or known to the skilled artisan now or at any time in the future.

**[0044]** The presence of broadening words and phrases such as "one or more," "at least," "but not limited to" or other like phrases in some instances shall not be read to mean that the narrower case is intended or required in instances where such broadening phrases might be absent. The use of the term "assembly" does not imply that the components or functionality described or claimed as part of the module are all configured in a common package. Indeed, any or all of the various components of a module, whether control logic or other components, might be combined in a single package or separately maintained and might further be distributed across multiple locations.

**[0045]** Additionally, the various embodiments set forth herein are described in terms of exemplary block diagrams, flow charts and other illustrations. As will become apparent to one of ordinary skill in the art after reading this document, the illustrated embodiments and their various alternatives might be implemented without confinement to the illustrated examples. For example, block diagrams and their accompa-

nying description should not be construed as mandating a particular architecture or configuration.

**[0046]** All original claims submitted with this specification are incorporated by reference in their entirety as if fully set forth herein.

I claim:

**1**. A child-resistant package comprising:

a pair of opposing wall panels;

a plurality of sealing closure flaps extending inferiorly from each wall panel;

a hingeably attached double tab extending superiorly from at least one wall panel; and,

a hingeably attached closure flap exhibiting at least two slots differing in width superiorly extending from at least one wall panel.

**2**. The child-resistant package of claim **1**, wherein the hingeably attached double tab features a rectangular truncated tab inferiorly coupled to a T-shaped elongated tab via a connector tab.

**3**. The child resistant package of claim **2**, wherein the connector tab is narrower than the truncated tab.

**4**. The child-resistant package of claim **2**, wherein the slots are further defined by an elongated slot and a truncated slot that is connected by a connector slot.

**5**. The child-resistant package of claim **2**, wherein the slots are arranged to oppositionally match and mate with the hingeably attached tab on an opposing wall panel; whereby the T-shaped elongated tab is inserted into the corresponding elongated slot and the rectangular truncated tab is inserted into the corresponding truncated slot on the closure flap extending superiorly from the oppositional wall panel.

**6**. The child-resistant package of claim **4**, wherein the flap is further defined by a superior slot that extends past the elongated slot.

**7**. The child resistant package of claim **6**, wherein the superior slot is narrower than the elongated slot.

**8**. The child-resistant package of claim **1**, wherein the closure flap exhibits an additional superior slot of decreased length, whereby extraction of at least one inserted tab is disabled.

**9**. The child-resistant package of claim **1**, wherein the package consists of a rigid cardboard.

**10**. The child-resistant package of claim **1**, wherein the package consists of a plastic.

**11**. A method of sealing a package comprising:

obtaining a child-resistant package comprising a pair of opposing wall panels; a plurality of sealing closure flaps extending inferiorly from each wall panel; a hingeably attached double tab extending superiorly from at least one wall panel, wherein the double tab features a rectangular truncated tab inferiorly coupled to a T-shaped elongated tab by a tab connector that is narrower than the truncated tab; and, a hingeably attached closure flap exhibiting at least two slots differing in width superiorly extending from at least one wall panel, wherein the closure flap features an elongated slot and a truncated slot connected by a connector slot that is narrower than the truncated slot, wherein the flap is further defined by a superior slot that extends past the elongated slot and is narrower than the elongated slot;

folding the hingeably attached closure flap toward the hingeably attached double tab;

inserting the elongated tab through the elongated slot until the connector tab is mating with the connector slot;

sliding the double tab down the enclosure flap until the truncated tab is in proximity to the truncated slot;

inserting the truncated tab through the truncated slot;

folding the closure flap down, into, and against the wall panel, whereby the package is closed.

**12**. Method of opening a packaging consisting:

obtaining a closed child-resistant package comprising a pair of opposing wall panels; a plurality of sealing closure flaps extending inferiorly from each wall panel; a hingeably attached double tab extending superiorly from at least one wall panel, wherein the double tab features a rectangular truncated tab inferiorly coupled to a T-shaped elongated tab by a tab connector that is narrower than the truncated tab; and, a hingeably attached closure flap exhibiting at least two slots differing in width superiorly extending from at least one wall panel, wherein the closure flap features an elongated slot and a truncated slot connected by a connector slot that is narrower than the truncated slot, wherein the flap is further defined by a superior slot that extends past the elongated slot and is narrower than the elongated slot;

pulling up on the enclosure flap until the truncated slot is in proximity to the truncated tab;

withdrawing the truncated tab through the truncated slot until the connector tab mates with the connector slot;

sliding the double tab up the enclosure flap until the elongated tab is in proximity to the elongated slot;

withdrawing the elongated tab from the elongated slot, whereby there is an opening to the package.

* * * * *