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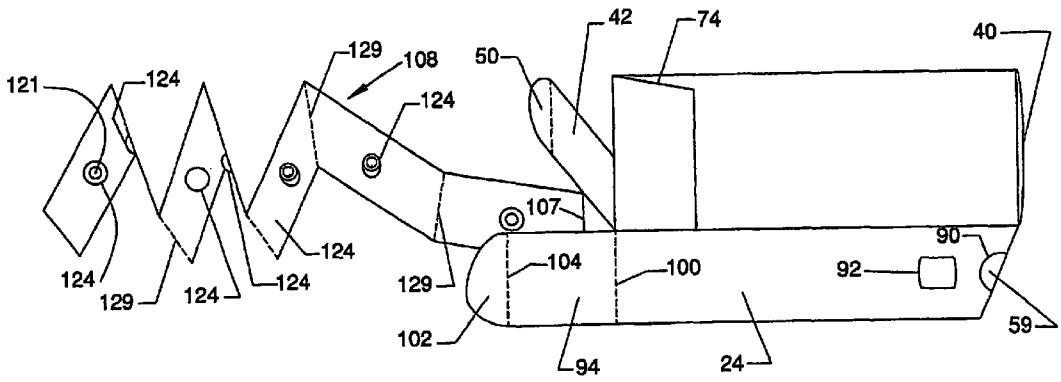
(54) Title: PACKET DISPENSER



(57) Abstract: A dispensing container (12, 212) for housing and sequentially dispensing packets (124) is taught. Also taught are the carton blanks (10, 210) for erecting the respective containers. A length of packets created by severably attaching sequential packets (124) along respective tear lines (129) is rolled or folded then positioned within the container for later dispensing. Child-resistance features that impede removal of each packet (124) include routing the length of packets between opposing panels (16, 24) or between opposing panels and an edge of folded panels (224, 239) that exert a lateral pressure on the packets (124). In some embodiments the panels (16, 24) include apertures (64, 92) that catch or otherwise engage a feature of a packet, such as a blister, to further impede removal of each packet (124). To further impede removal of a packet (124), access notches (56, 256, 290) that allow the user to grasp the packet are narrowly constructed.

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PACKET DISPENSER

FIELD OF INVENTION

The present invention relates generally to apparatus and methods of dispensing items or products, and more specifically, to an apparatus and method for dispensing severably attached packets such as blisters, pouches, and the like.

BACKGROUND OF THE INVENTION

In the personal care industry, many types of containers have been developed for packaging a variety of items or products such as, unit dose medicants, pills, tablets, capsules, condoms, contact lenses, and the like. One typical type of packaging or packet is the conventional blister pack and another is the pouch. In a typical blister pack, a thermoforming technique is used to fabricate a plastic shell containing individual blisters or a tray of blisters for holding small consumable items. A backing sheet, generally comprising a foil material, is affixed to the back of the shell, thereby enclosing at least one item in a corresponding blister. To release an item from a blister, a user applies pressure to a blister forcing the item to rupture the backing sheet. The blister pack or a tray including items is often inserted within an outer sleeve for safely storing and protecting the items therein. The outer sleeve often includes child-resistant features, such as, locking mechanisms that are configured to releasably remove the blister pack or tray from the sleeve. A drawback of the conventional blister package is that when the blister pack or tray is lockably removed from the outer sleeve, the entire contents of the package is exposed, making all of the items available at once. Similar drawbacks exist with other types of packets.

Alternative dispensing containers have been designed for dispensing one or more packets. These conventional dispensing containers generally comprise a container including a chamber, a release

slot, and a plurality of releasably attached packets that are folded or rolled and housed within the dispensing container. A packet is accessed by slideably removing the blister from the release slot. Generally, these dispensing containers are relatively expensive to manufacture because the containers generally include a plurality of complex parts that require additional time to manufacture and assemble. A further disadvantage of some dispensing containers is that they do not include child-resistant safety features. The packets can be continuously removed from the dispensing container and as a result, a child may continuously pull on the length of attached packets to gain access to all the packets at once.

It is desirable that packages holding consumable goods, such as pills or medicines packaged in packets, include child-resistant features that limit the amount of items being dispensed at one time. It is further desirable that the package be senior friendly to permit easy withdrawal of the package contents.

Accordingly, there remains in the art a need for a dispensing container that is inexpensive, light-weight, simple and easy to manufacture and assemble, and includes child-resistant safety features that require multiple coordinated motions for dispensing in a regulated manner. There is also a need for an apparatus that is senior friendly to permit easy withdrawal of the package contents with little manipulation, even if the user's manual dexterity or strength is reduced.

SUMMARY OF THE INVENTION

The present invention overcomes the deficiencies of the known art and the problems that remain unsolved by providing a dispensing container including a thumb notch that engages one edge of a blister for preventing one or more blisters from being withdrawn from the container. The thumb notch is detachably removed from the top of the dispensing container to expose one edge of a blister.

In another aspect, there is provided a dispensing container that meets the needs for child-resistance and senior friendliness by providing a dispensing container including a resilient panel and a blister aperture for receiving at least one blister of a blister strip. The resilient panel correspondingly aligns underneath the blister aperture to bias a blister through the blister aperture. An attempt to remove a blister from the dispensing container directs a blister to engage with an edge of the blister aperture, thereby frustrating the removal of the blister from the dispensing container. The blister strip includes a plurality of blisters including at least one item, each blister being connected to each other along a tear line for easily severing a blister from the blister strip. The blister strip is folded into an accordion and inserted within the dispensing container allowing a greater amount of blisters to be stored within the dispensing container, thereby utilizing less space. Pressure is applied to side panels of the dispensing container and a user simultaneously grasps and pulls the blister strip to sequentially dispense at least one blister at a time. The dispensing container includes security features which mandate the necessary coordination and combination of simultaneous actions by a user for removing at least one blister at a time.

In accordance with one embodiment of the present invention, there is provided a dispensing container comprising: a plurality of tabs and a plurality of panels operatively connected to each other to form a dispensing container, where a first panel includes a blister aperture, and where a second panel includes a thumb notch, a resilient panel and a third panel. The panels are foldably oriented so that the first panel is folded over the second panel so that the resilient panel correspondingly aligns with the blister aperture.

The dispensing container further includes a blister strip comprising a plurality of serially attached blisters where at least one blister contains at

least one item, and where the blister strip is inserted between the first panel and the second panel so that one edge of a blister releasably engages with the thumb notch. The resilient panel biases the at least one blister through the blister aperture.

Advantageously, the blister strip is folded into an accordion and housed within the dispensing container. At least one panel includes an access notch for easily grasping and pulling a blister from the dispensing container.

Regarding the embodiments described herein, as well as those covered by the claims, the dispensing container may or may not be at least partially laminated to provide tear resistance and may be constructed of a cardboard, paperboard, plastic, or tear-resistant paperboard material. In addition, the dispensing container may be configured to include a variety of shapes and sizes and may or may not be reusable. Further, alternative package embodiments may or may not include information that is printed on any surface of the dispensing container or the blister strip, or both. Alternatively, the dispensing container may include an external panel with a pocket for housing or accommodating an insert comprising information. An example of the information may include dosage or product information, compliance instructions, coupons, promotional material, date, time, or any other information.

The invention includes a method of packaging items. In one embodiment the first step is cutting a blank from a substrate material, the blank comprising a plurality of tabs, and a plurality of panels operatively connected to each other; and wherein a first panel includes a blister aperture; and further wherein a second panel includes a thumb notch, a resilient panel and a third panel. The blank is then folded to form a dispensing container. A first panel is folded over the second panel so that the resilient panel correspondingly aligns with the blister aperture. The

next step is forming a blister strip including a plurality of serially attached blisters and loading at least one item into at least one blister.

The method of packaging also includes inserting the blister strip between the first panel and the second panel where at least one blister extends through the blister aperture and one edge of the blister releasably engages with the thumb notch for preventing access to the at least one blister. A further step includes folding the blister strip into an accordion and housing the accordion folded blister strip within the dispensing container.

Another embodiment, of the present invention, includes a method of dispensing at least one item from a dispensing container. The first step is folding a blister strip including a plurality of serially attached blisters into an accordion where at least one blister holds at least one item. A further step includes sealing the accordion folded blister strip into the dispensing container where one edge of a blister releasably engages with a thumb notch. The next step is removing the thumb notch from the dispensing container, along perforated scores, for exposing one edge of a blister. A first access step includes applying pressure on a plurality of panels of the dispensing container so that a first panel bows upwardly for allowing a blister to clear an edge of a blister aperture formed within the first panel. A next access step includes simultaneously grasping and pulling at least one blister from the dispensing container and tearing the at least first blister along a tear line. The access steps are repeated for sequentially dispensing at least one blister at a time.

Optionally, the dispensing container may include indicators or indicia which may be printed on or formed within one or more of a plurality of panels for indicating to a user the location and/or direction a user should apply pressure on the dispensing container for withdrawing at least one blister from the dispensing container. Further, the dispensing container or

blister strip may or may not include an indicator for indicating to a user when its time to consider replacing the container with additional blisters.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view of an exemplary embodiment of a dispensing container blank, according to the present invention.

FIG. 2 is a perspective view of the partially erected blank of FIG. 1.

FIG. 3 is a plan view of an exemplary embodiment of a packet blank, according to the present invention.

FIG. 4 is a plan view of a folded packet strip being inserted within the dispensing container, according to the present invention.

FIG. 5 is a perspective view of the dispensing container of FIG. 3 including a thumb notch for releasably securing the packet strip therein, according to the present invention.

FIG. 6 is a perspective view of the dispensing container of FIG. 5 including the partially removed thumb notch, according to the present invention.

FIGS. 7 and 8 show perspective views of the dispensing container of FIG. 6, according to the present invention, showing a sequence of steps for dispensing one packet at a time.

FIG. 9 is a plan view of an exemplary embodiment of an alternative dispensing container blank, according to the present invention.

FIG. 10 is a perspective view of the partially erected blank of FIG. 9.

FIG. 11 is a perspective view of the further erected blank of FIG. 10.

FIG. 12 is a perspective view of the further erected blank of FIG. 11.

FIG. 13 is a perspective view of the exemplary dispenser erected from the blank of FIG. 9, according to the present invention.

DETAILED DESCRIPTION

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

Further, it will be understood that the present invention is applicable to the packaging, storing, and dispensing of various items or products. Accordingly, the terms, "item" or "product" as used herein includes all manner of small and portable items or products that are prepackaged or otherwise releasably attached that a user may wish to keep secure and dispense in a regulated manner.

Referring now to the drawings, wherein like numbers represent like elements throughout, FIG. 1 is a plan view of an exemplary blank **10** for

forming an embodiment of a dispensing container **12**, best shown in FIGs. 5 and 6. Here, the illustrated blank **10** comprises an extension or glue panel **14**, an inner panel **16**, an inner side panel **18**, a bottom panel **20**, a first side panel **22**, a top panel **24** and a second side panel **26**. The panels **14**, **16**, **18**, **20**, **22**, **24**, and **26** are hingedly connected along fold lines **28**, **30**, **32**, **34**, **36**, and **38**, respectively.

The inner panel **16** is also hingedly connected to a first inner extension panel **40** and a second inner extension panel **42** along fold lines **44** and **46**, respectively. The second inner extension panel **42** is severed from the inner side panel **18** along cut line **43**. A first inner tab **48** and a second inner tab **50** are hingedly connected to the first inner extension panel **40** and the second inner extension panel **42** along fold lines **52** and **54**, respectively. The inner panel **16** further includes a thumb notch **56** comprising a stop tab **59** that is defined by a full depth cut **60** and fold line **62**. Thumb notch **56** is further defined by a frangible or severance line **58** for detachably removing the thumb notch **56**. The inner panel **16** includes a feed aperture **64** that is defined by a full depth cut **66**. Extending laterally from both sides of the feed aperture **64** are fold lines **69**.

Each side panel **22**, **26** includes a dust cover tab or top end tabs **70**, **72** and a bottom end panel **74**, **76** that are hingedly connected along fold lines **78**, **80**, **82** and **84**, respectively. Each dust cover tab **70**, **72** in the illustrated embodiment includes a recess **86** and **88**, respectively.

Top panel **24** includes an access notch **90** that, here, correspondingly aligns with a blister aperture **92**. As illustrated, blister aperture **92** extends completely through top panel **24**. In alternative embodiments there is no blister aperture **92**. The top panel **24** further includes a bottom extension panel **94**. The bottom extension panel **94** is hingedly connected to the top panel **24** along fold line **100** and includes a bottom tab **102** that is hingedly connected along fold line **104**.

The blank **10** may comprise paperboard, cardboard, plastic, tear-resistant paperboard or any combination thereof. The selection of this material may be made according to the packaging needs. At least a part of one or both side of the blank **10** may be laminated with a stiffing agent, such as a polymer film. In this manner, the exterior surface of the dispensing container is made more resistant to tearing. Optionally, this lamination may not extend over the entire surface of the blank **10** since only tear prone regions may require lamination. In certain embodiments, the material may be selected from biaxially oriented or cross-laminated polymetric films such as a high density polyethylene, polyolefins, polyesters or any combination thereof. In other embodiments, the lamination may be provided at stress points such as the package corners and exposed edges by applying one or more strips of the polymeric film, e.g. as a tape, over these areas.

Turning now to the erection of the blank **10**, FIG. 2 represents a substantially erected dispensing container **12** as described immediately below. It will be understood by those skilled in the art that the particular sequence of folds discussed below are neither limiting nor the only sequence of folds possible to erect the dispensing container **12** from the blank **10**. With reference to both FIGs. 1 and 2, extension panel **14** is folded inwardly, that is, toward the reader along fold line **28**. The inner panel **16**, inner side panel **18**, and bottom panel **20** are also folded inwardly along fold lines **30**, **32**, and **34**, respectively. The back of extension panel **14** is then attached to the face of the first side panel **22** along the fold line **36**, such that the fold lines **28**, **36** are adjacent and parallel. The top panel **24** and the second side panel **26** are then folded inwardly along the remaining fold lines **36**, **38** so that the faces of the top panel **24** and second side panel **26** can be attached to the backs of inner panel **16** and inner side panel **18**. The panels may be attached using any

suitable means for attaching including adhesive, interlocking panels, and mechanical fasteners, as understood by those skilled in the art.

Continuing the folding sequence of the illustrated dispensing container **12**, the top dust covers **70**, **72** are folded downwardly along fold lines **78**, **80** and oriented in a general horizontal position thereby closing the void and partially forming the top end wall of dispensing container **12**. The first inner extension panel **40** and the first inner tab **48** are likewise folded downwardly along fold lines **44** and **52**, respectively. The first inner tab **48** is inserted within a recess defined by the edges of dust covers **70**, **72** and a lateral top edge of bottom panel **20**. Here, recesses **86** and **88** combine to form a semi-circular arch that correspondingly aligns with the semi-circular arch of thumb notch **56**. The first inner extension panel **40**, or the first inner tab **48**, or both, may be adhesively attached to tabs **70**, **72** or to the inner surface of bottom panel **20**.

When erected, the back of the inner panel **16** rests against the face of the top panel **24** so that the feed aperture **64** is under the blister aperture **92**. The inner panel **16** and the top panel **24** combine to form a channel **55** for slideably receiving a blister strip **108**, as shown in FIGs. 5 and 6. Before continuing with a description of the erecting of the dispenser **12**, we turn to a description of the exemplary packet strip **108**.

Referring now to FIG. 3 there is illustrated an embodiment of severably attached packets in the form of a blister strip blank **110**, for forming an embodiment of a blister strip **108**. The blister strip blank **110** comprises a back panel **112** that is hingedly connected to a front panel **114** along a longitudinal fold line **116**. The front panel **114** includes a plurality of front sections **118** that are severably connected to each other along tear lines **120**. Each front section **118** includes at least one aperture **122** for receiving an item-containing blister **124**, best shown in FIG.4.

Continuing with FIG. 3, the back panel **112** includes a plurality of back sections **126** that are severably connected to each other along tear lines **128**. As shown, each back section **126** correspondingly aligns with the aperture **122** of the adjacent front section **118** along the fold line **116**. Each back section **126** includes at least one dispensing aperture **130** that is defined by a plurality of perforated scores **132** formed within the substrate of back panel **112**. Tear lines **120** and **128** combine to form a frangible line **129**, best illustrated in FIG. 4. The width of the blister strip **108** is slightly smaller than the width of the feed aperture **64** so that the blister strips **108** can removably slide within dispensing container **12** and through the channel **55**, as shown in FIGs. 7 and 8.

Turning now to the configuration of the blister strip **108**, one or more blisters **124** are disposed between a corresponding front section **118** and a corresponding back section **126**. The one or more blisters **124** hold at least one or more items **121**. Each blister **124** extends through a corresponding aperture **122**. The back panel **112** is folded along fold line **116** and securely attached to the front panel **118**. At least one blister **124** is securely sandwiched between a corresponding back section **126** and front section **118**. The blister strip blank **110** may be fabricated from paperboard, cardboard, plastic, tear-resistant paperboard or any combination thereof, and the like. Each blister **124** may be transparent for allowing a viewer to easily identify the item disposed within the blister **124** or opaque for preventing a viewer from seeing the contents therein.

In some embodiments the severably attached packets are folded and inserted within the dispenser **12**, while in other embodiments the packets are rolled and inserted within the dispenser **12**.

Turning now to FIGs. 4 and 5, in loading the illustrated rolled or folded severably detached packets into the dispenser **12**, the packets are inserted through the open end and the first packet or a leader of some kind

is threaded through the back of the feed aperture **64** and placed so that the leading edge of the first packet or leader rests immediately below the thumb notch **56**. The inner extension panel **42** and the bottom extension panel **94** can now be folded to form the bottom end wall and line the container **12**.

Regarding those embodiments that are loaded with a blister strip and include a blister aperture **92**, the blister strip may be loaded outwardly such that a blister **124** is captured by the aperture **92**, as best shown in FIGs. 5 and 6. Regarding those embodiments without a blister aperture, the blister strip may be loaded inwardly such that a blister **124** is captured by the feed aperture **64**. Capturing a blister **124** with either the blister aperture **92** or feed aperture **64** creates a child resistant feature as explained below. In all embodiments, it is recommended that in loading the packets the leading portion or first edge **107**, after being threaded through the aperture **64** and between the inner panel **16** and top panel **24**, be positioned so that it is accessible after removing the thumb notch **56**, as also explained immediately below.

Turning now to FIGs. 5 and 6, thumb notch **56** is detached along the severance lines **58**, **60** thereby exposing an edge **107** of a blister **124**, as illustrated in FIG. 6. Thumb notch **56** may comprise any shape or size and is aligned in combination with recesses **86**, **88**, and access notch **90** to form an access area for grasping and pulling a blister **124** from the dispensing container **12**. In some embodiments where the blisters are loaded to face outwardly, an attempt to pull a blister **124** from the dispensing container **12** is frustrated by the blister **124** engaging with the edge of the blister aperture **92**. Therefore, even if thumb notch **56** is torn open, removed or compromised, engagement of a blister **124** with the edge of the blister aperture **92** provides a child-resistant feature that prevents a child from gaining immediate access to the items **121**. Thus, thumb notch **56** and blister aperture **92** cooperate to provide a child-

resistant feature. In other embodiments where the blisters are loaded to face inwardly an attempt to pull a blister **124** from the dispensing container **12** is frustrated by the blister **124** engaging the edge of the feed aperture **64**. Thus, thumb notch **56** and feed aperture **64** cooperate to provide a child-resistant feature.

Referring now to FIGs. 7 and 8 there is illustrated of a dispensing container **12**, according to the present invention, showing a sequence of one method for dispensing at least one blister **124**. To remove a blister **124** from the dispensing container **12**, a user, using a finger and thumb of one hand, applies pressure along the first and second side panels **22**, **26**, near top edges **23**, **25** of top panel **24**. The applied pressure forces the top panel **24** to bow upwardly so that the blister **124** disengages with or clears the circumferential edge of the blister aperture **92**. As pressure is being applied, the user simultaneously grasps a blister **124**, using a finger and thumb of the other hand, via, access notch **90**, and pulls the blister **124** outwards from dispensing container **12**. As one blister **124** slides out of the dispensing container **12**, a second, severably attached blister **124** moves forward. Another method for disengaging the blister **124** is to push inwardly on the face of the blister **124** until it is below the edge of the blister aperture **92**. In those embodiments where the blisters **124** engage the feed aperture **64**, the user inserts a finger through the thumb notch **56** to press the face of the blister **124** inwardly toward the top panel **24** while grasping the edge **107** or blister **124** and lifting or pulling the blister through the thumb notch **56**.

The exposed blister **124** may then be severed or detached along a tear line **129**. To remove an item **121** from the separated blister **124**, pressure is applied to the blister **124** forcing the item **121** to tear the protective backing, as is well understood. The dispensing container **12** may or may not include a tear guide or blade that is connected to one of the panels **16** or **24** to help tear the blister **124** along the tear line **129**.

Further, the dispensing container may or may not be transparent and may be reusable or disposable.

Next, and with reference to FIGs. 9 – 13, there is illustrated a second embodiment of the present invention. Because the first illustrated embodiment shares many common elements with the second illustrated embodiment, the common elements that appear in the second embodiment have been labeled with the same element numbers as the first illustrated embodiment except that the prefix "2" or "3" has been inserted. For example, the bottom panel **20** first shown in FIG. 1 is substantially the same element as bottom panel **220** first shown in FIG. 9 so both panels have in common the initial element designation of "**20**". Use of this numbering convention should allow a quick and ready understanding of the second embodiment without unnecessary repetition of the teaching above.

Turning now to FIG. 9, there is shown a plan view of an exemplary blank **210** for forming an embodiment of a dispensing container **212**, best shown in FIG. 13. Here the illustrated blank **210** comprises an extension or glue panel **214**, an inner panel **216** including an inner wall section **217** and top wall section **219**, a bottom panel **220**, a first side panel **222**, a top panel **224**, and a second side panel **226**. The panels **214**, **220**, **222**, **224**, **226** and **216** are hingedly connected along fold lines **228**, **230**, **232**, **234** and **236**, respectively. The inner wall section **217** is hingedly connected to the inner panel **216** along a first fold line **237** and along a second fold line **239** to the top wall section **219** that also includes a receiving notch **221**.

The bottom panel **220** is hingedly attached to an outer end wall panel **240** along a receiving notch **241** and a fold line **244**, which in turn is hingedly connected to an inner end wall panel **248** along a fold line **246**. An engaging tab **249** is located at the distal edge of the inner end wall panel **248**. The top panel **224** is hingedly attached to a removable top wall

225 along a severance line **262** and includes a removable thumb notch **256**. Adjacent to the top wall **225** and top panel **224** are removed sections **223**. An engaging tab **250** is positioned along the top wall **225**. At the opposite end of the top panel **224** is foldably attached a bottom wall tab **294** along a fold line **300**, and to the bottom wall tab **294** is foldably attached a bottom tab **302**. The side panels **222**, **226** are each hingedly connected to top dust cover tabs **270**, **272** and bottom dust cover tabs **274**, **276**, along respective fold lines **278**, **280**, **282**, **284**. The inner panel **216** further includes an access notch **290**, positioned to span both the inner wall section **217** and top wall section **219**.

Turning now to an exemplary sequence for erecting the illustrated dispenser **212** from the illustrated blank **210**, the inner panel **216** is folded and positioned substantially parallel to the top panel **224**, as best illustrated in FIG. 10. Note that in FIG. 11 the inner wall section **217** has been folded inwardly such that the fold line **239** contacts the top panel **224** and forms an angled inner wall. Subsequently, the bottom panel **220** is folded and positioned to overlap the inner panel **216** and the glue panel **214** is attached to the side panel **226** to form a tubular carton. At this time or later, the severably attached packets **108** can be loaded into the cavity created by the opposing side walls **222**, **226** and opposing inner panel **216** and top panel **224**, and the leading edge **107** of the first packet can be threaded between the fold line **239** and top panel **224**. Thereafter, the end can be closed by folding the bottom dust cover tabs **274**, **276** and bottom wall tab **294** and bottom tab **302**.

Turning now to FIG. 12, there is shown the top wall section **219** folded such that the respective receiving notches **221**, **241** are immediately adjacent and positioned to collectively receive the respective engaging tabs **249**, **259**. This configuration of an angled inner wall section **217** and angled top wall section **219** urges the common edge, identified by the fold line **239**, against the inside of the top panel **224** to hamper or

otherwise restrict the withdrawal of a packet from the dispenser **212**. The removable top wall **225** is then folded over the top wall section **219** and the engaging tab **259** is inserted in the receiving notch **241** so as to also matingly engage the receiving notch **221**.

With reference now to FIGs. 12 and 13, the top end wall is completed and the dispenser **212** completely erected by folding the top dust tabs **270**, **272** inwardly and then the outer end wall panel **240** downwardly to cover the dust tabs **270**, **272**. Thereafter, the inner end wall panel **248** is folded under the dust tabs **270**, **272** and the engaging tab **249** inserted into the receiving notch **241** together with the removable top wall engaging tab **259**.

In practice, a user accesses the contents of the dispenser **212** by severing the thumb notch **256** and pulling off the removable top wall **225** to expose the leading edge **107** of a packet **124** captured between the folded edge **239** and top panel **224**. In some embodiments the top wall **225** can be configured to remain as an additional impediment to access. The amount of lateral force exerted by the folded edge **239** against the packet **124** is largely determined by the pressure exerted by the folded inner wall section **217** and top wall section **219**. Removing a packet **124** requires the user to insert a finger or tool through the narrow access notch **290**, grasp the small amount of exposed packet **124** – typically, but not necessarily, between a finger positioned through the access notch **290** and a thumb position over the thumb notch **256**, and pull the packet **124** with sufficient force to overcome the lateral pressure exerted by the folded edge **239** without allowing the packet **124** to slip. This combination of lateral pressure against the packet **124** and narrow access cooperate to provide a child-resistant feature

As taught by the illustrated embodiments, the child-resistant features include coordinated motions to overcome the restricted

dispensing of packets. Some embodiments include restricting access by capturing packets between adjacent panels and engaging a blister packet from a feed aperture **64** or blister aperture **92** while simultaneously pulling a blister **124** from the dispensing container **12** for sequentially dispensing one blister **124** at a time, while other embodiments include restricting access by capturing packets between adjacent panels that apply an external force – without fully engaging an adjacent packet – which frustrates removal of the packet from the dispenser **12**. Other embodiments include combinations of these features.

The law does not require and it is economically prohibitive to illustrate and teach every possible embodiment of the present claims. Hence, the above-described embodiments are merely exemplary illustrations of implementations set forth for a clear understanding of the principles of the invention. Variations, modifications, and combinations may be made to the above-described embodiments without departing from the scope of the claims. All such variations, modifications, and combinations are included herein by the scope of this disclosure and the following claims.

What is claimed:

1. A packet dispenser, comprising:

a plurality of panels and tabs operatively connected to each other to form a packet dispenser (12, 212), wherein a first panel (16, 216) and at least a second panel (24, 224) are positioned to form a channel (55) that restrictively receives a length of attached packets (108); and

a length of attached packets (108), at least one packet (124) containing at least one item (121), wherein said packets (108) are housed within said dispenser.

2. The packet dispenser of claim 1, wherein said first panel (16, 216) further includes an aperture feed (64).

3. The packet dispenser of claim 1, wherein said second panel (24, 224) further includes a blister aperture (92).

4. The packet dispenser of claim 1, wherein at least one of said first and second panels (16, 224) further includes a removable thumb notch (56, 256).

5. The packet dispenser of claim 1, wherein at least one of said first and second panels (24, 216) further includes an access notch (90, 290).

6. A method of restrictively dispensing packets, comprising:

acquiring at least one blank (10, 110) comprising a plurality of panels and tabs operatively connected to each other, including a first panel (16, 224) having a removable thumb notch (56, 256) and a second panel (24, 216); and,

folding said at least one blank (10, 110) to form a packet dispenser (12, 212) wherein said first panel (16, 224) and said second panel (24, 216) are positioned to form a restrictive channel (55).

7. The method of claim 6, further comprising placing a length of attached packets (108) into said dispenser (12, 212) and threading at least a portion (107) of said packets (108) through said restrictive channel (55).

8. The method of claim 7, further comprising removing said thumb notch (56, 256) and withdrawing at least one packet (124) through said restrictive channel (55).

9. The method of claim 6, further comprising acquiring at least one blank (12, 212) that includes a feed aperture (64).

10. The method of claim 7, further comprising threading said packets (108) through said feed aperture (64).

11. The method of claim 7, further comprising acquiring at least one blank (12, 212) that includes a blister aperture (92).

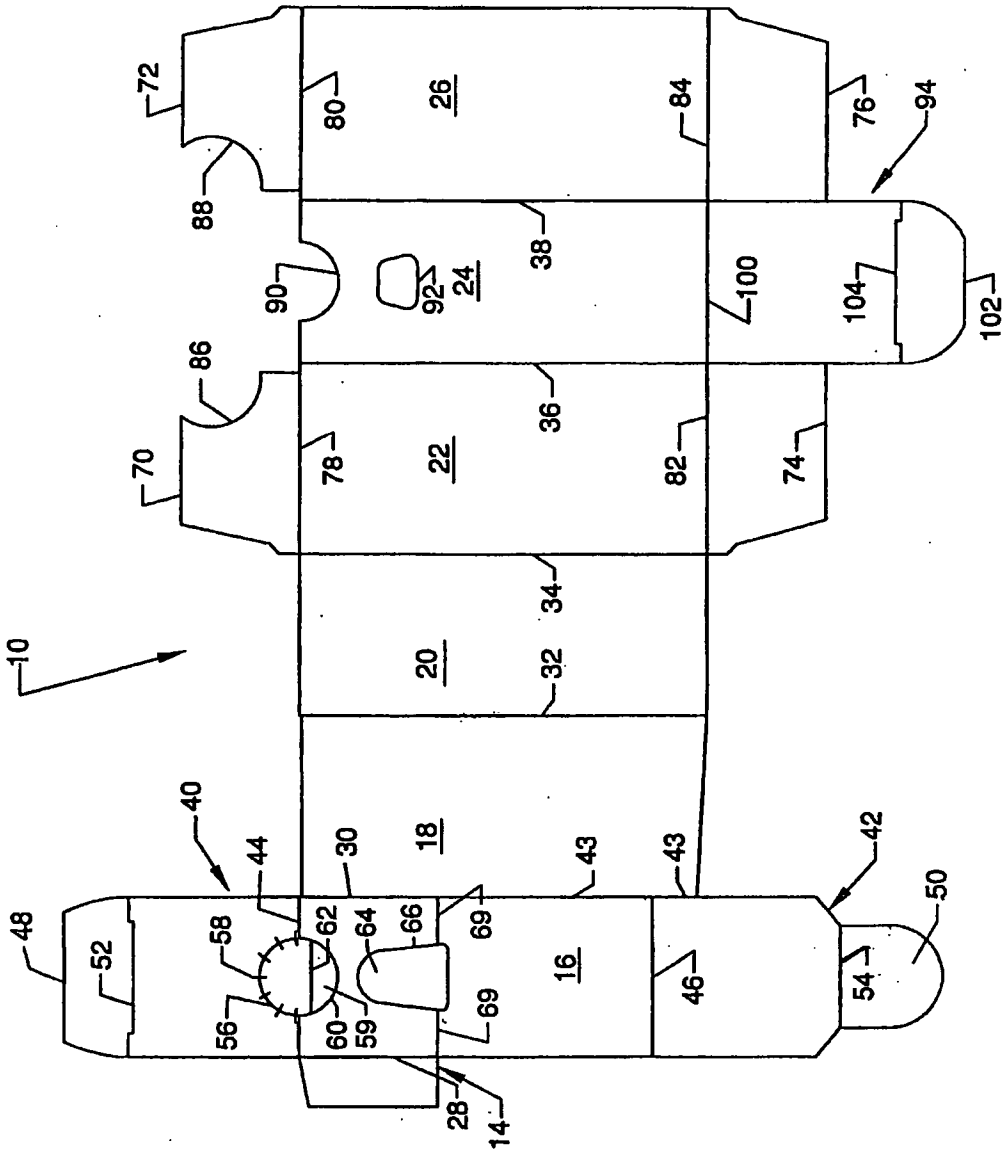
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FIG.1

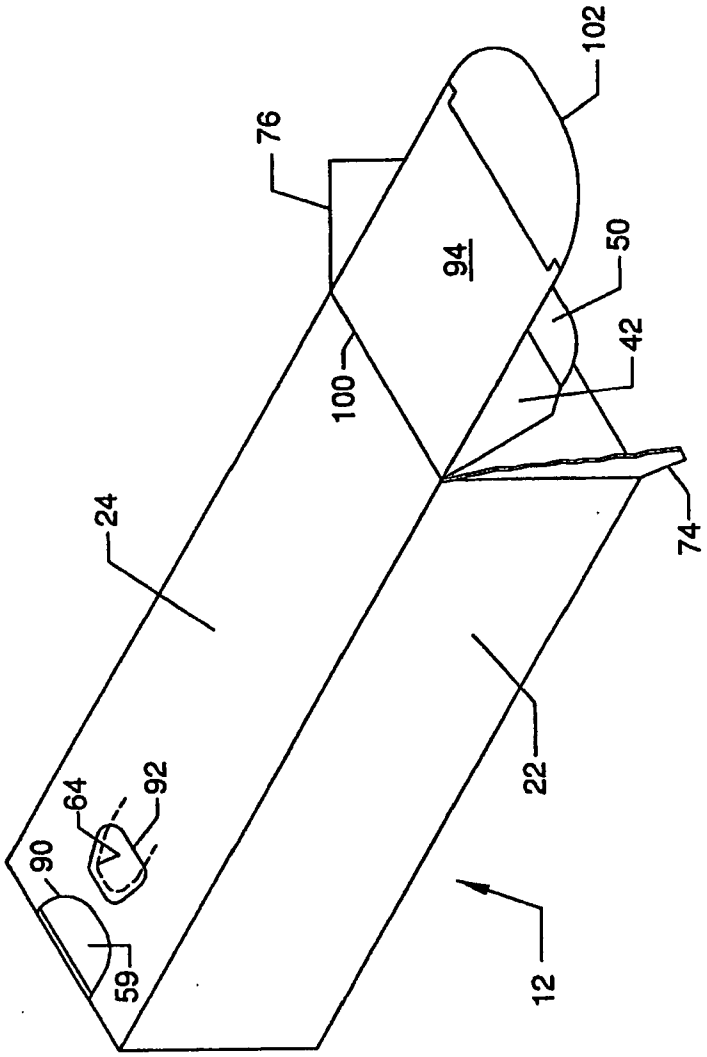

FIG. 2

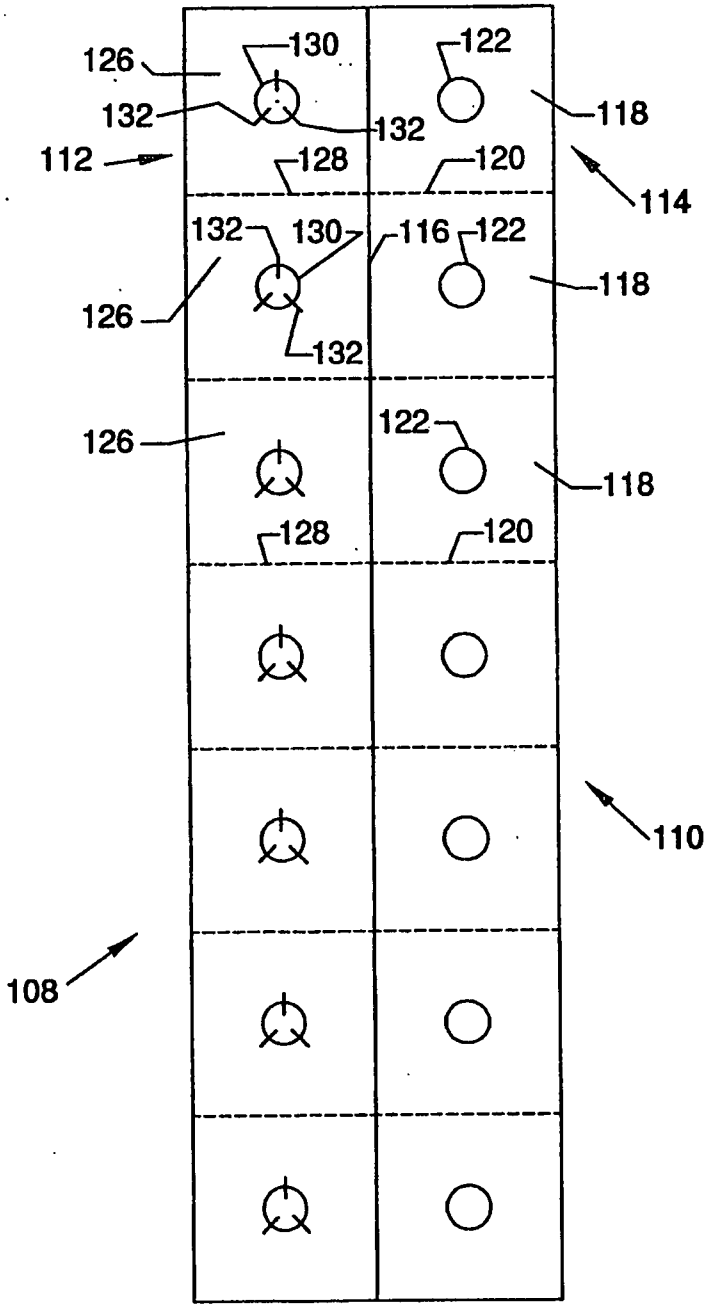
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FIG. 3

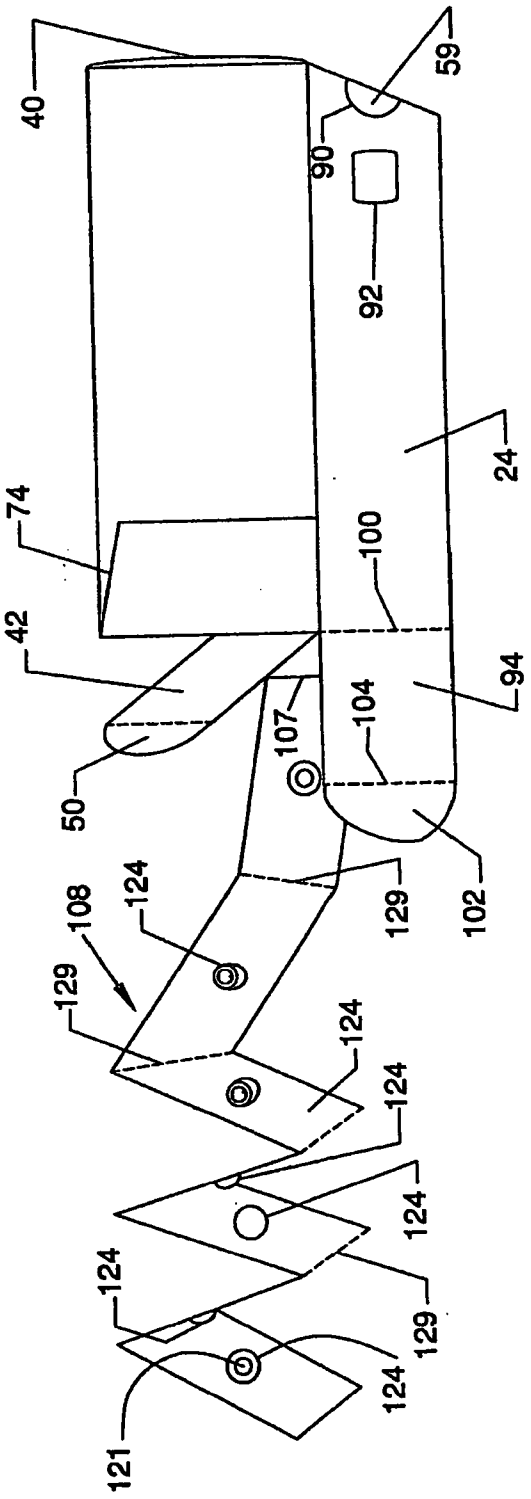

FIG.4

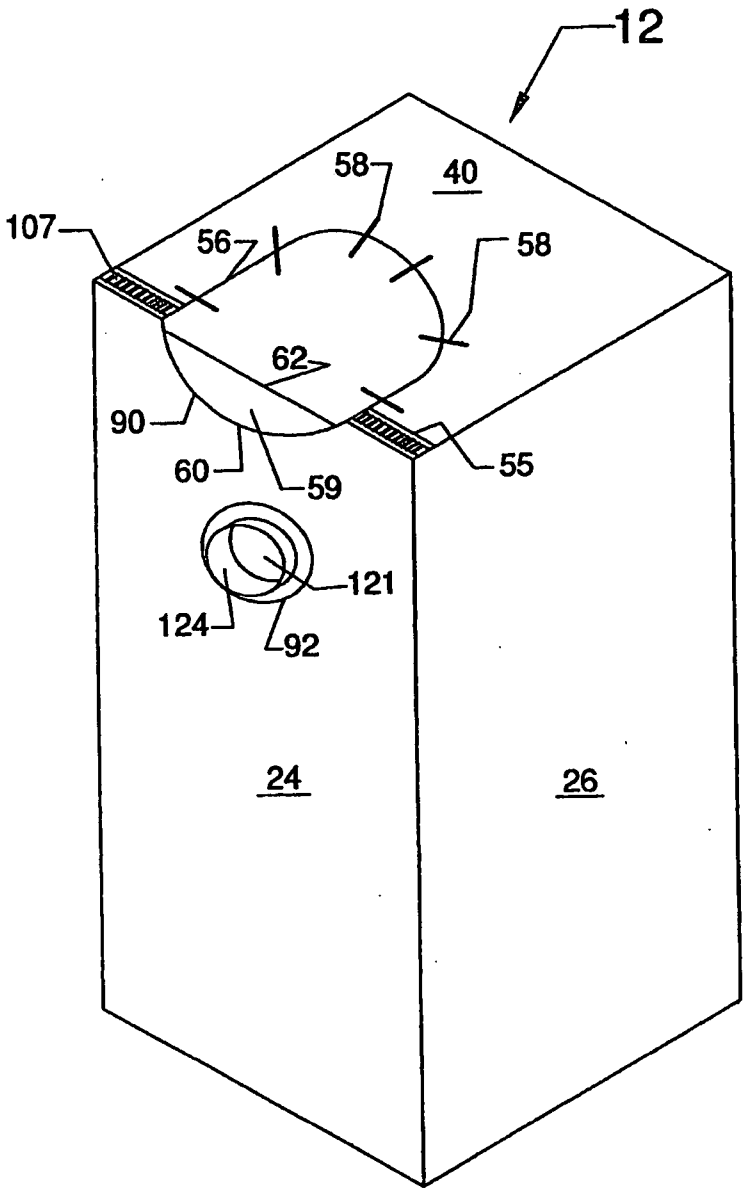

FIG. 5

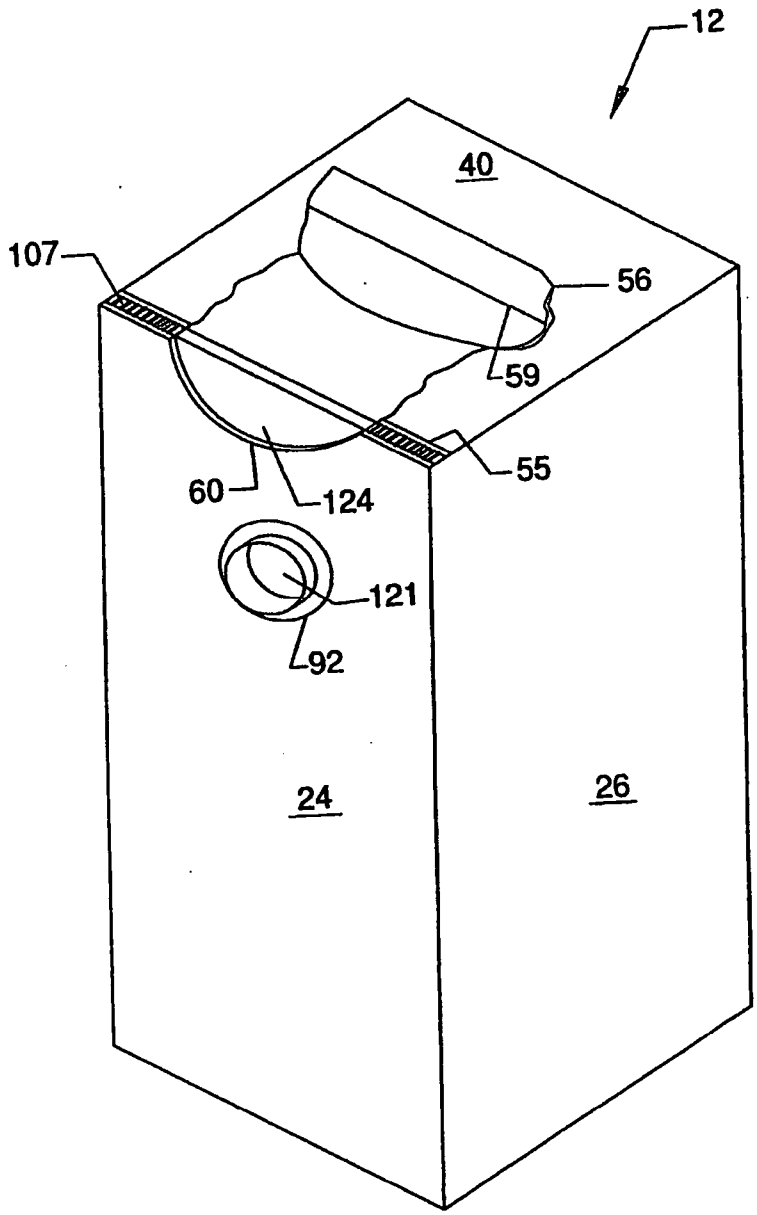

FIG. 6

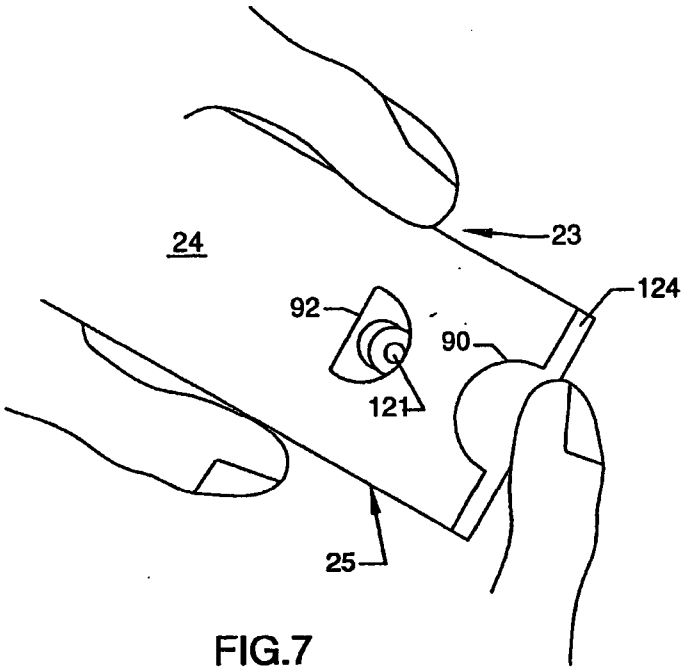

FIG.7

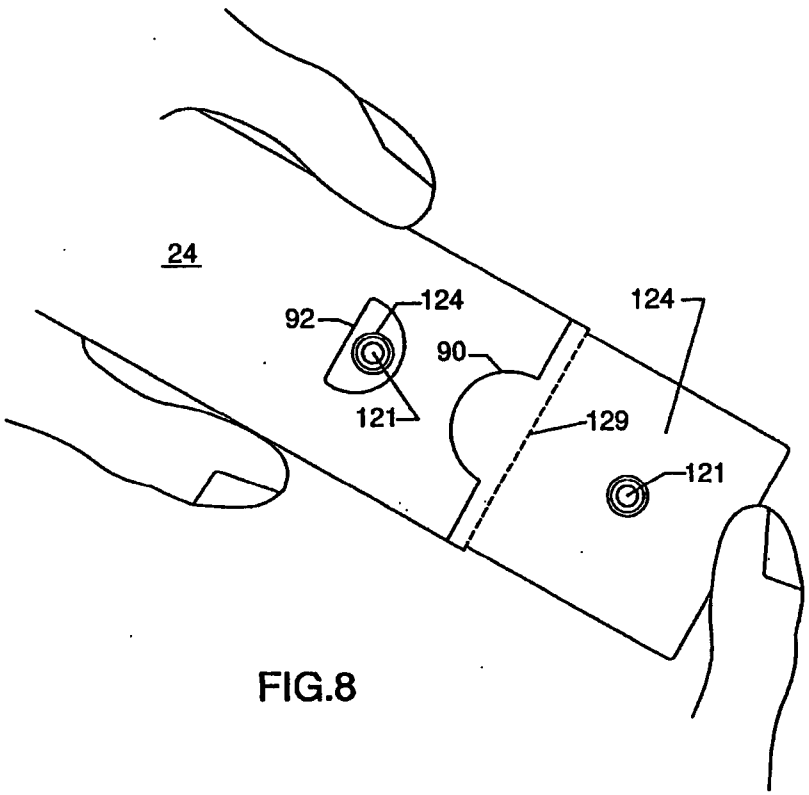

FIG.8

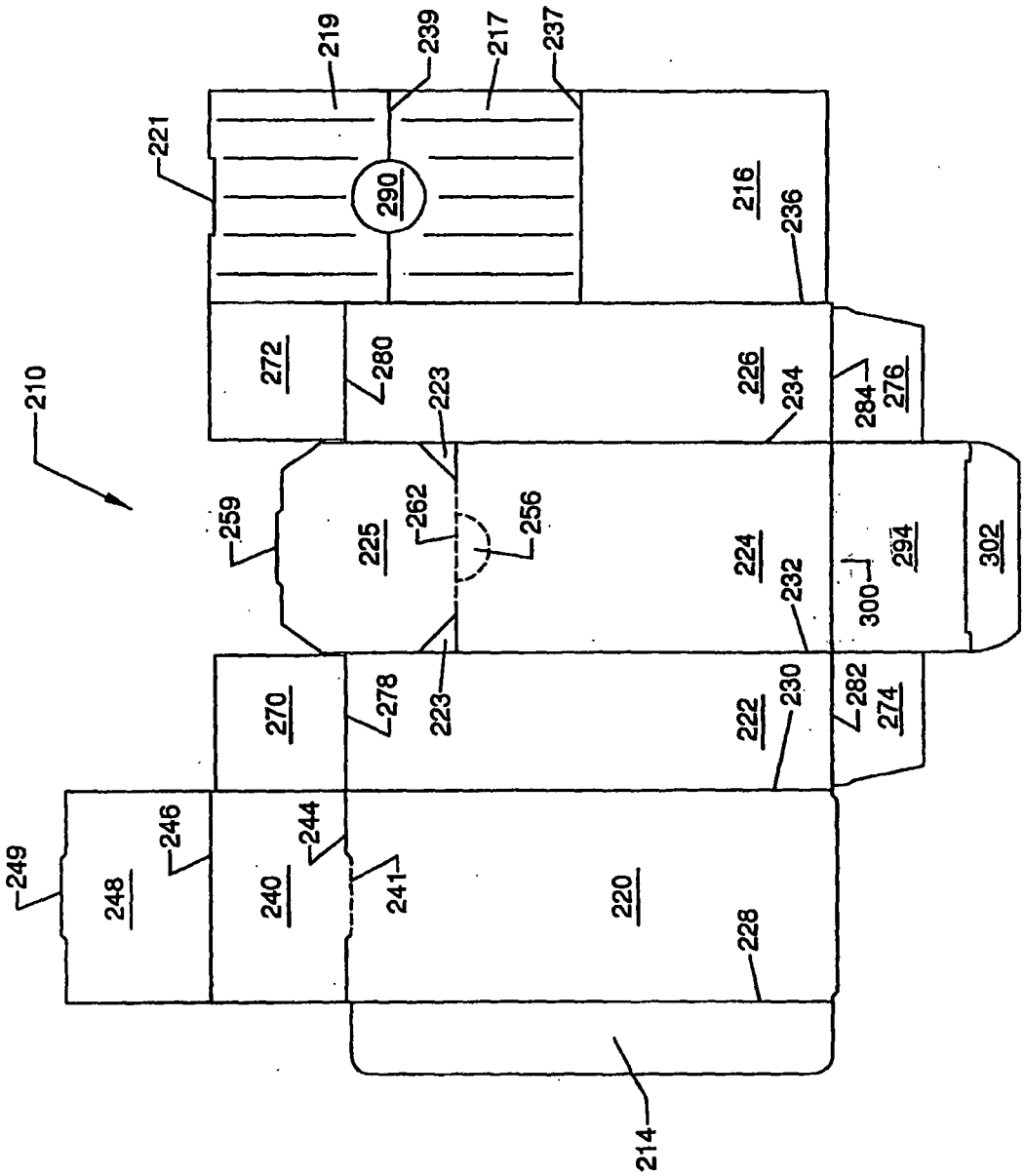
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FIG. 9

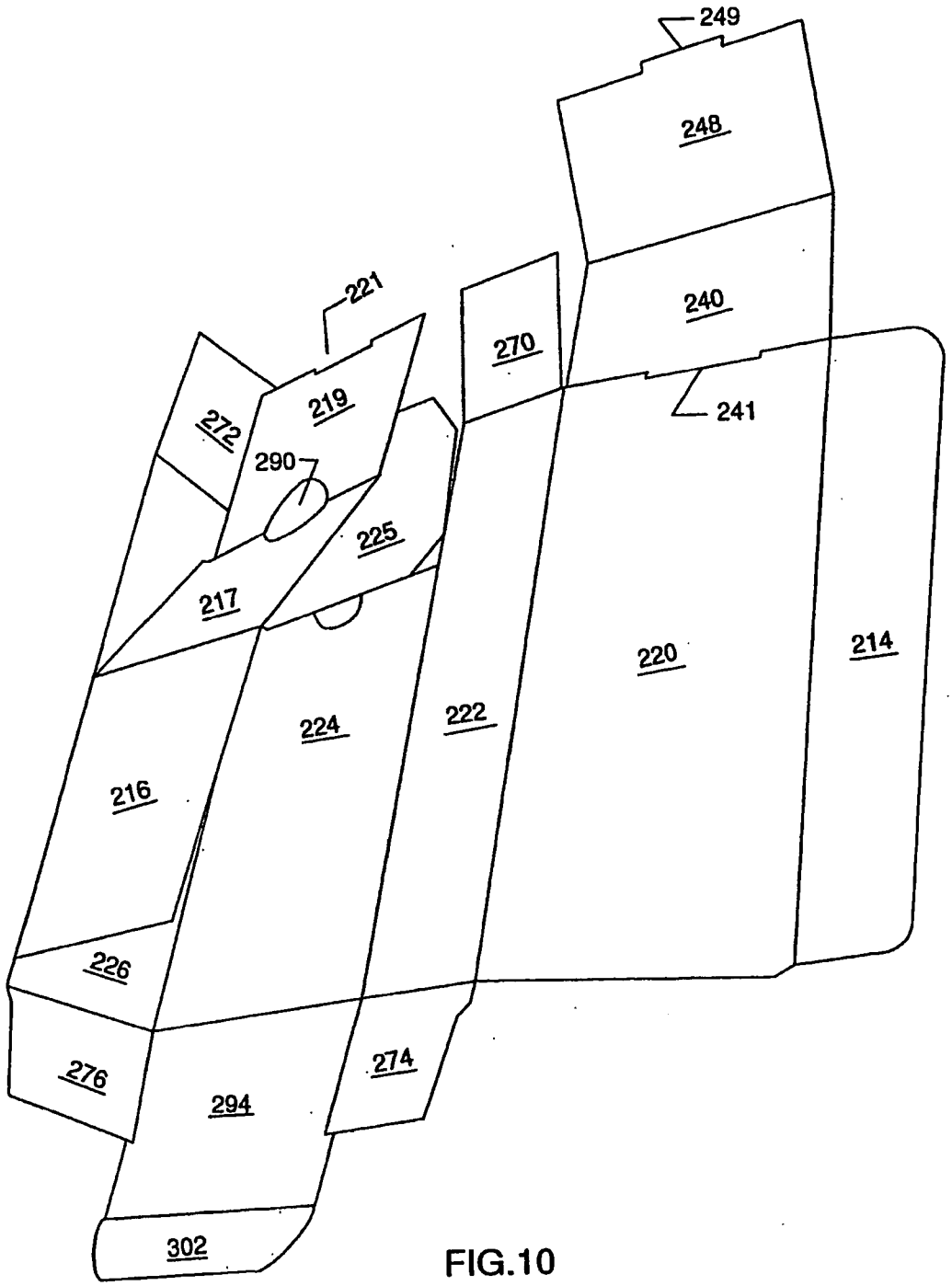
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FIG.10

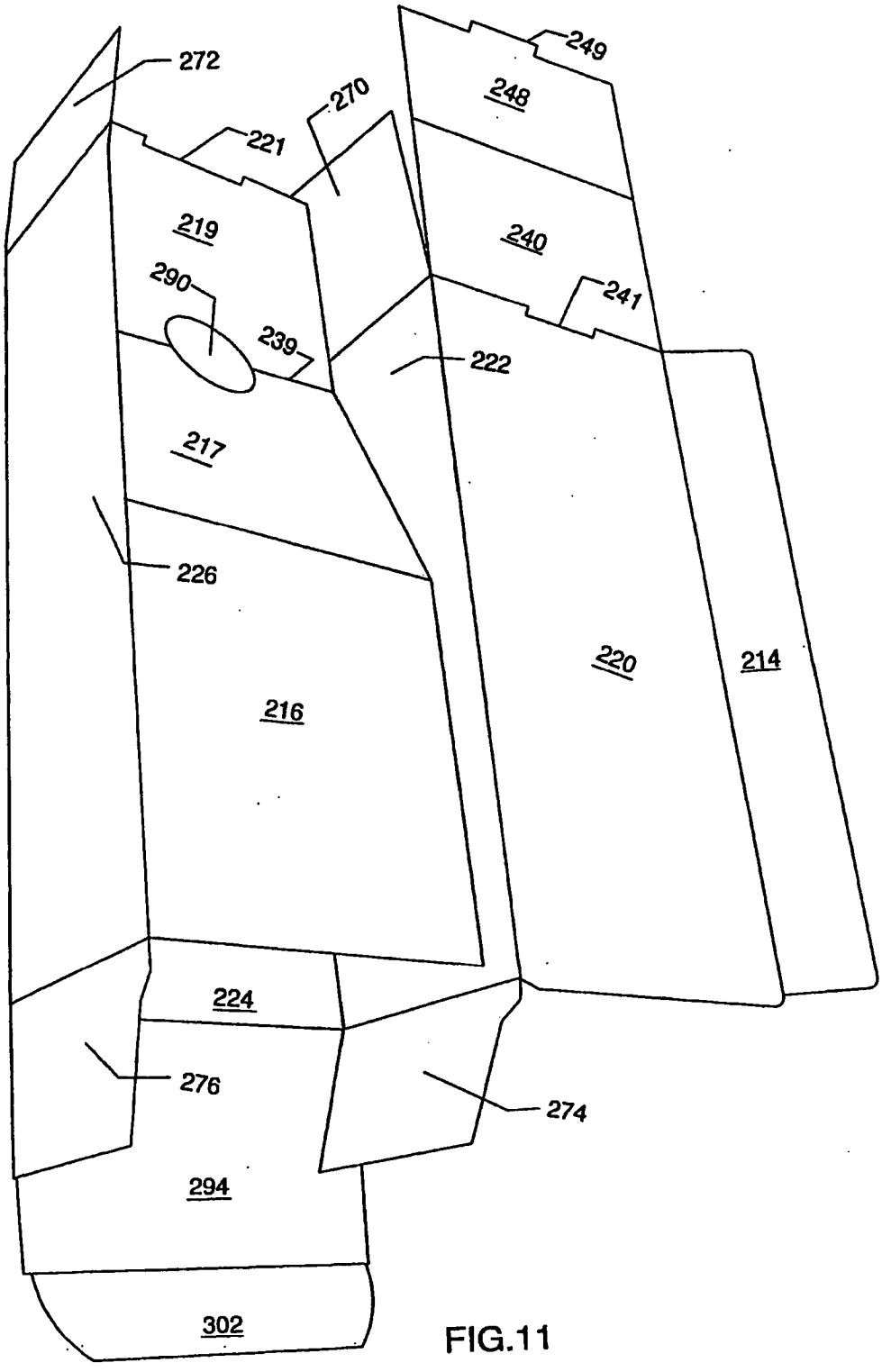
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FIG.11

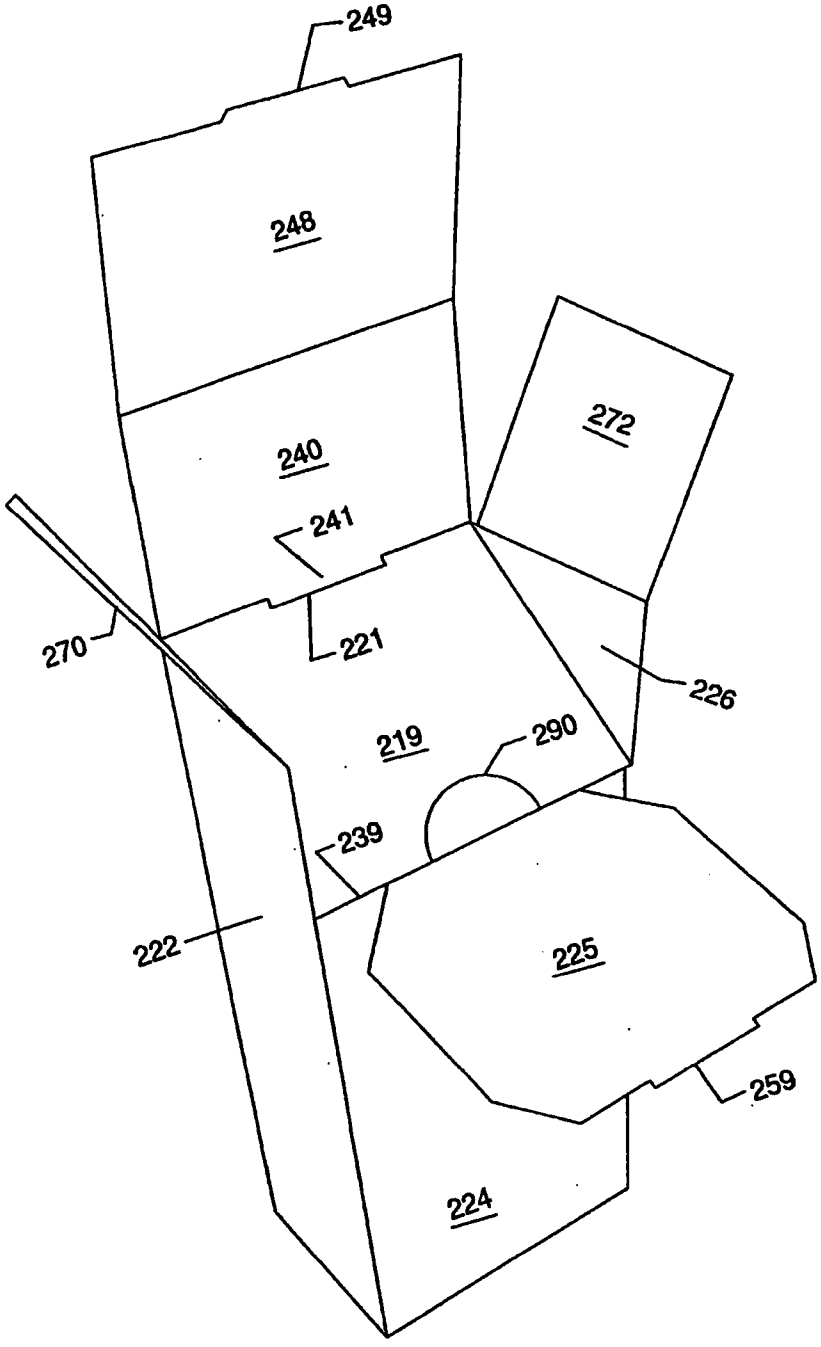

FIG.12

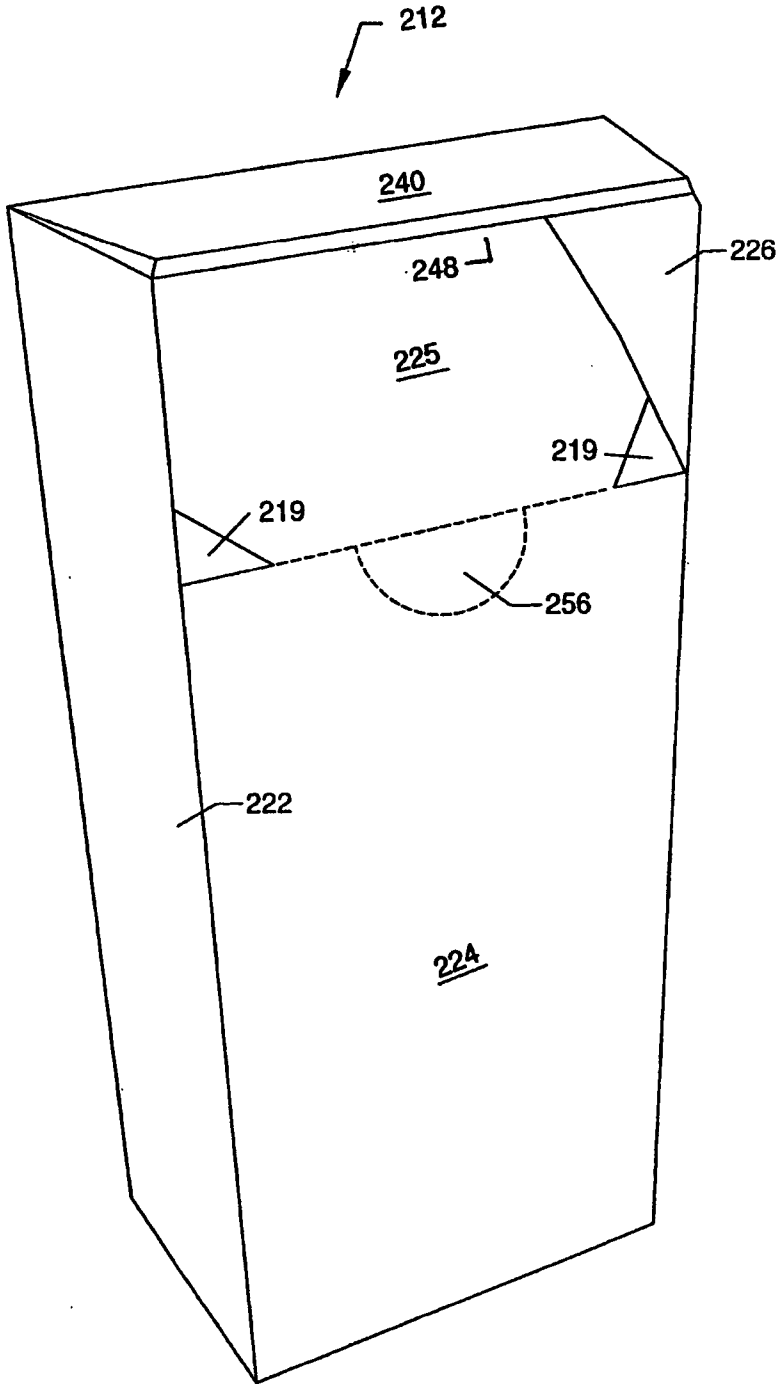

FIG.13

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/007979

A. CLASSIFICATION OF SUBJECT MATTER
INV. B65D83/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 115 989 A (STRANG JOHN R) 31 December 1963 (1963-12-31) the whole document	1-11
X	US 2 984 397 A (GILLAM EDWARD D) 16 May 1961 (1961-05-16)	1-3,5
A	the whole document	6,7,9-11
X	US 3 127 054 A (MEYERS HAROLD S) 31 March 1964 (1964-03-31)	1,2
A	the whole document	6,9

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
19 September 2007	01/10/2007

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Alff, Robert

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2007/007979

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3115989 A	31-12-1963	NONE	
US 2984397 A	16-05-1961	NONE	
US 3127054 A	31-03-1964	NONE	