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**Chalifoux**

(54) **FOLDABLE SEALING CONTAINER APPARATUS**

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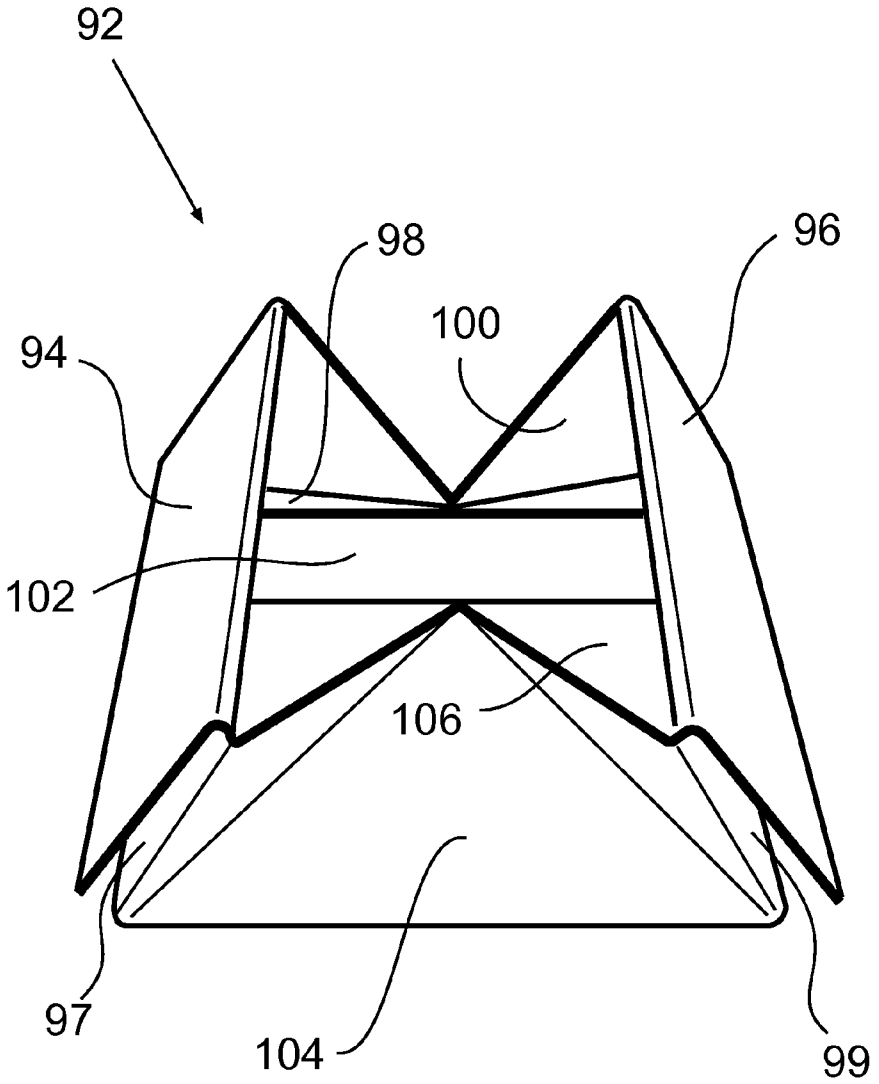
(57) **ABSTRACT**

A container system constructed for general storage of items. The storage container is constructed of the usual materials such as cardboard, plastic, fabric, rubber or the like for office use. The container system is ideal for storage of loose papers, pens, erasers, ink cartridges, referral slips or other items often stored or kept in draws. A separate insert is utilized to hold apparatuses such as file holders.



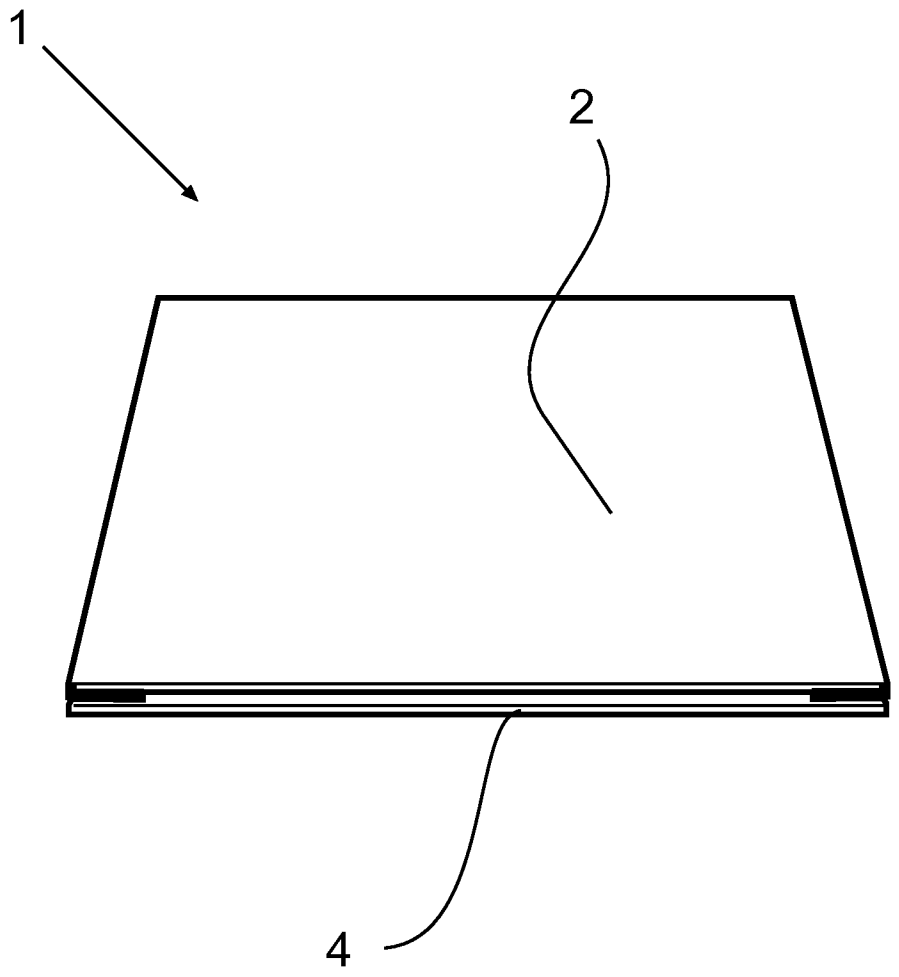



Figure 1

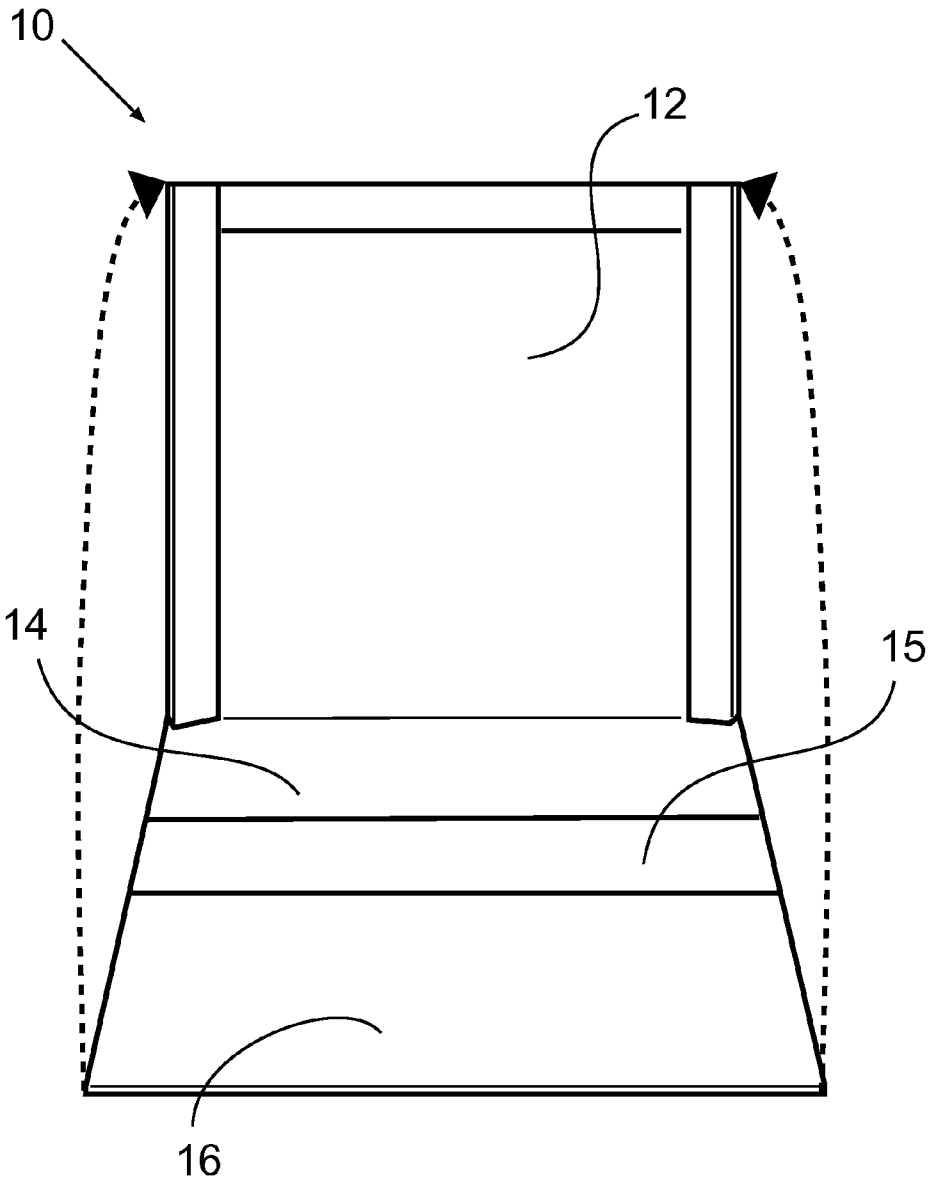



Figure 2

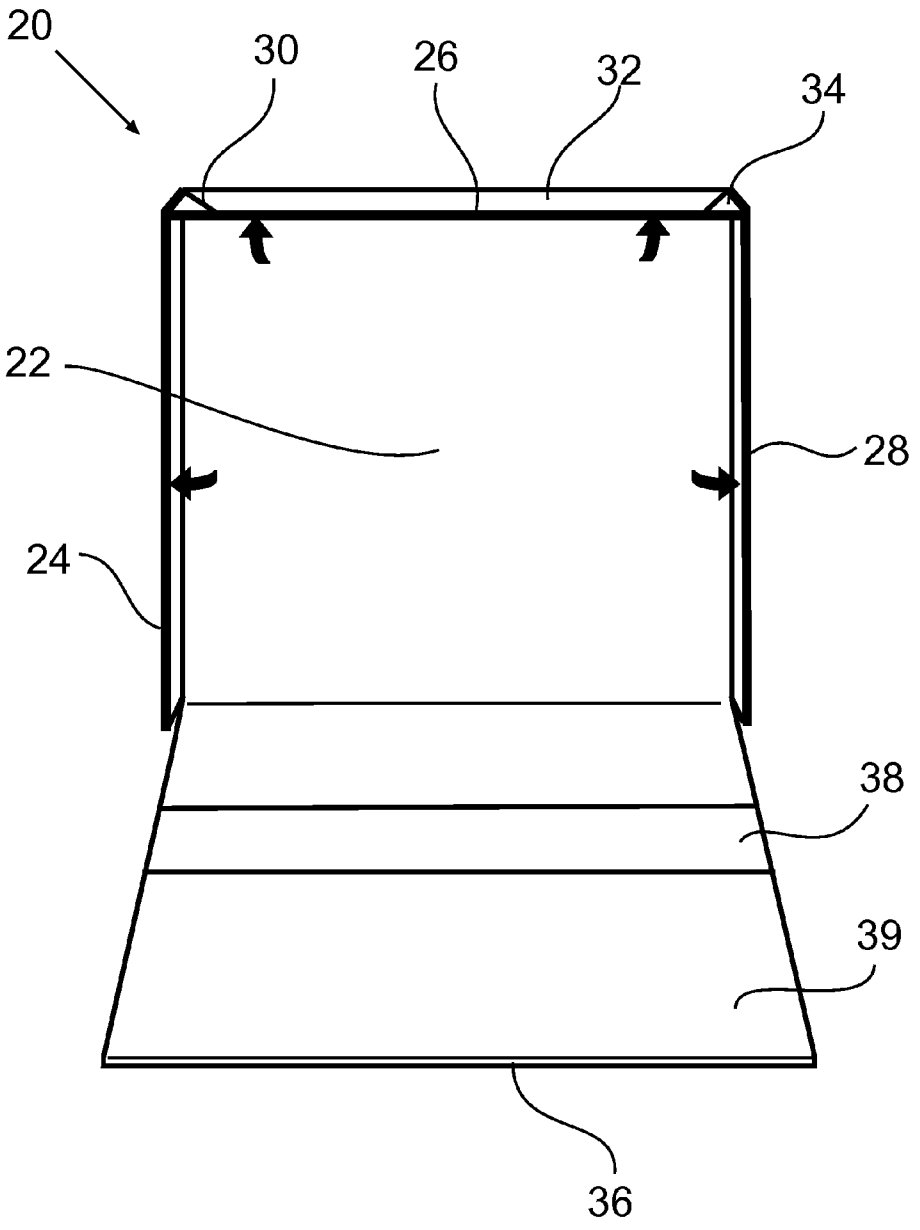
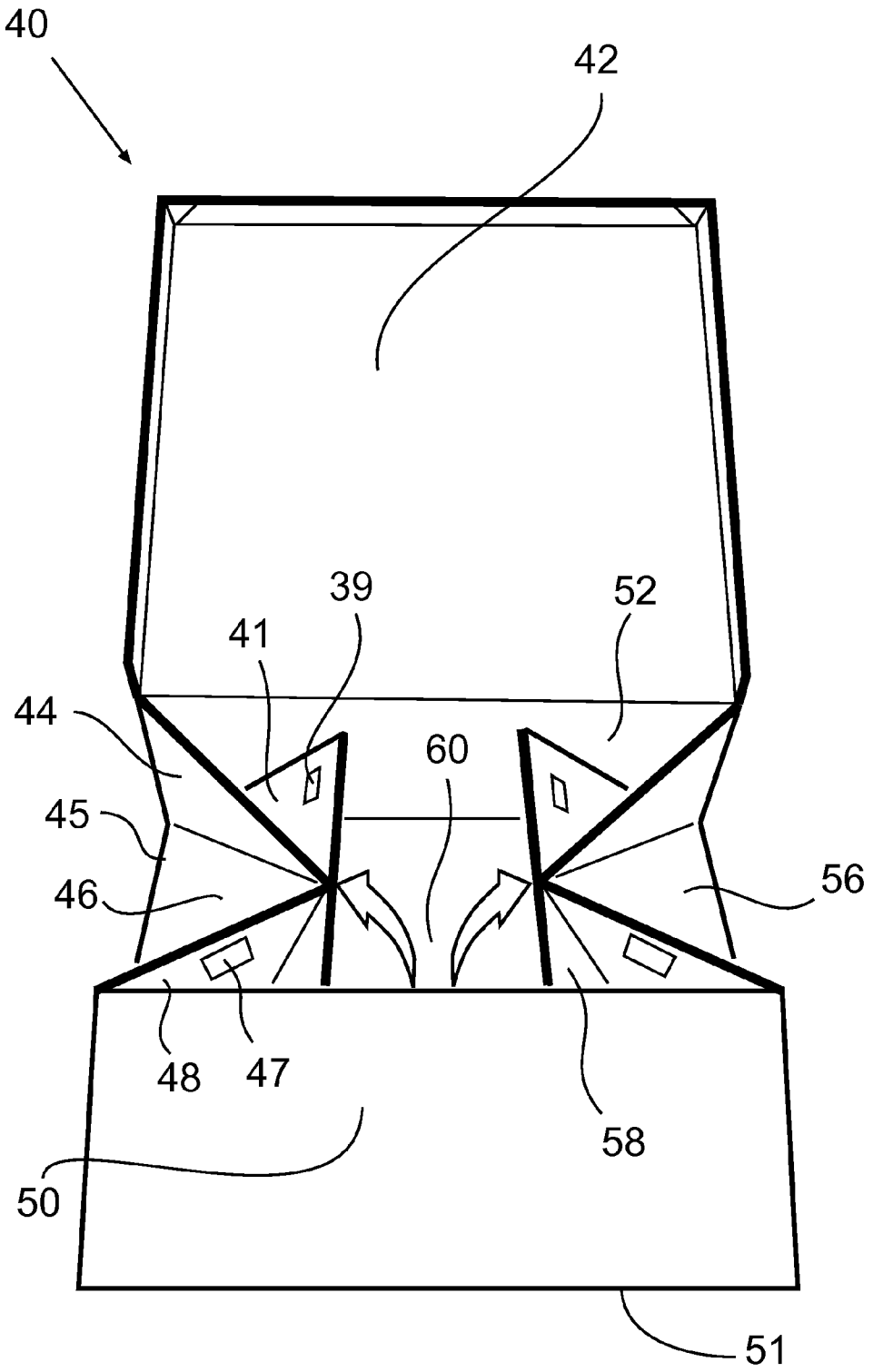



Figure 3

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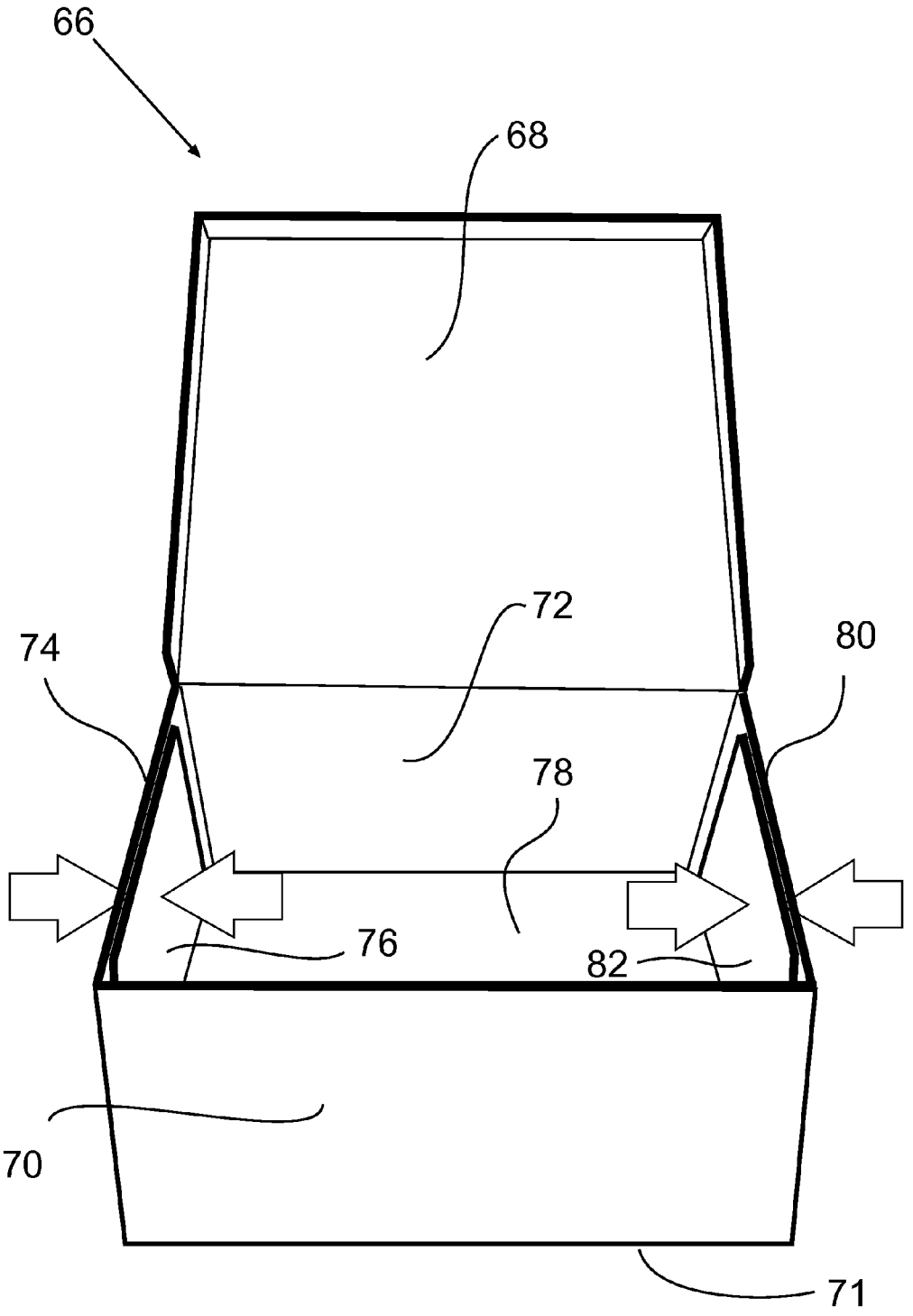


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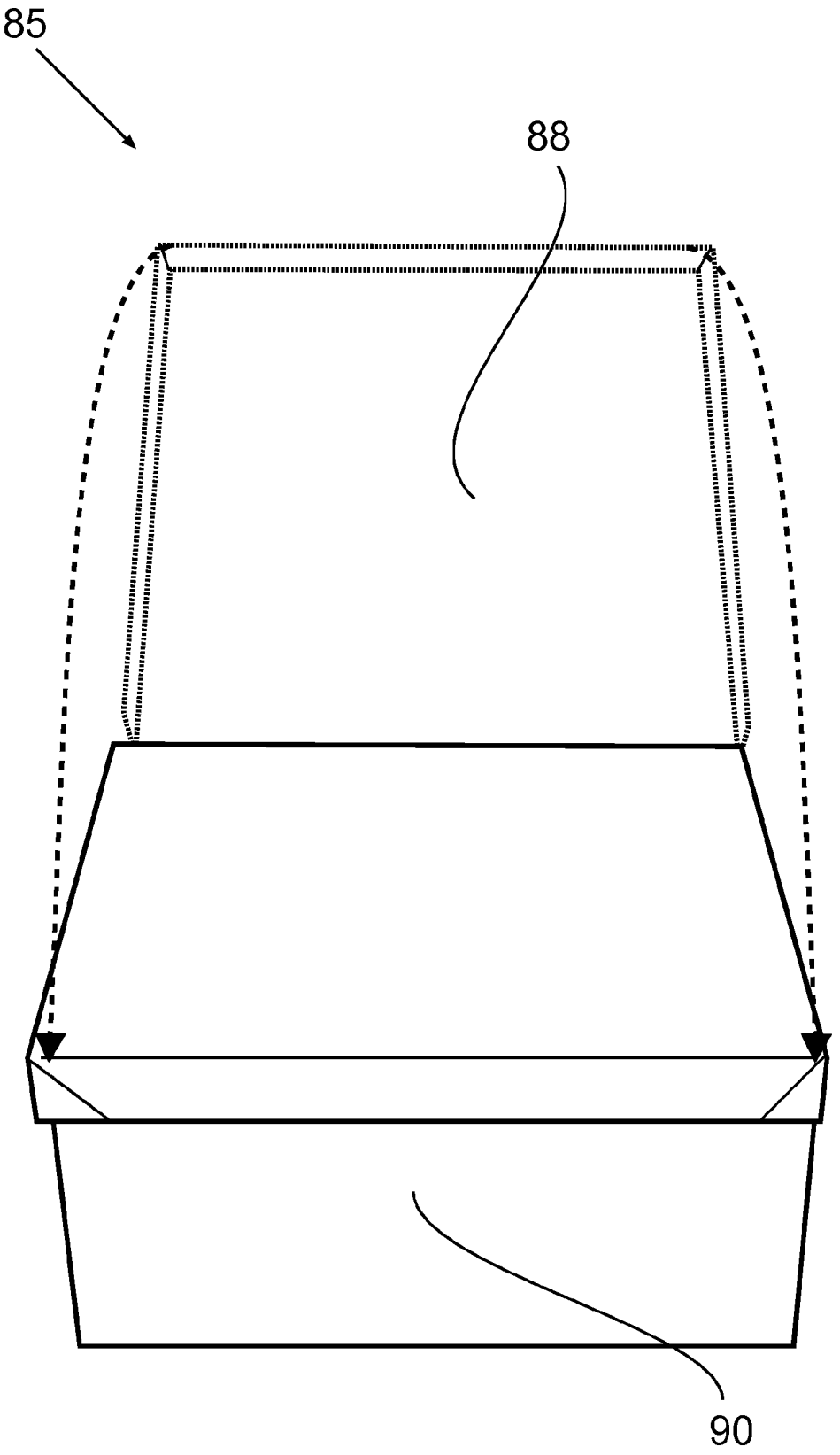


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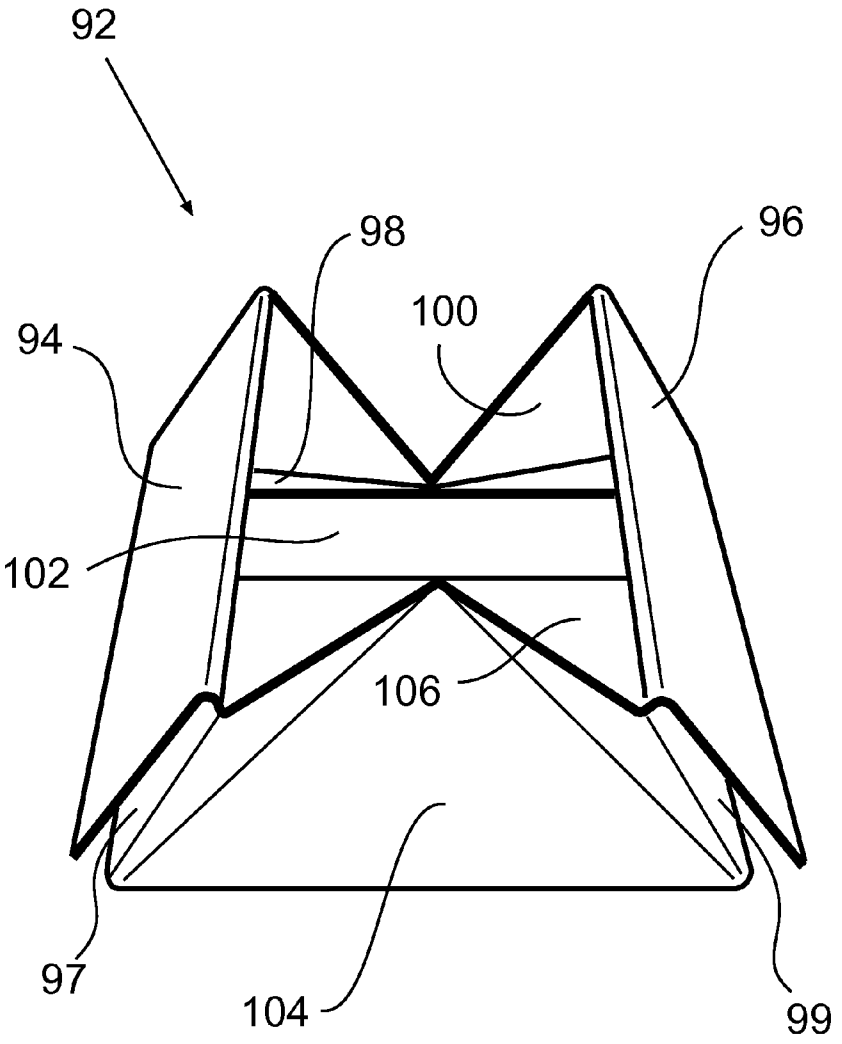


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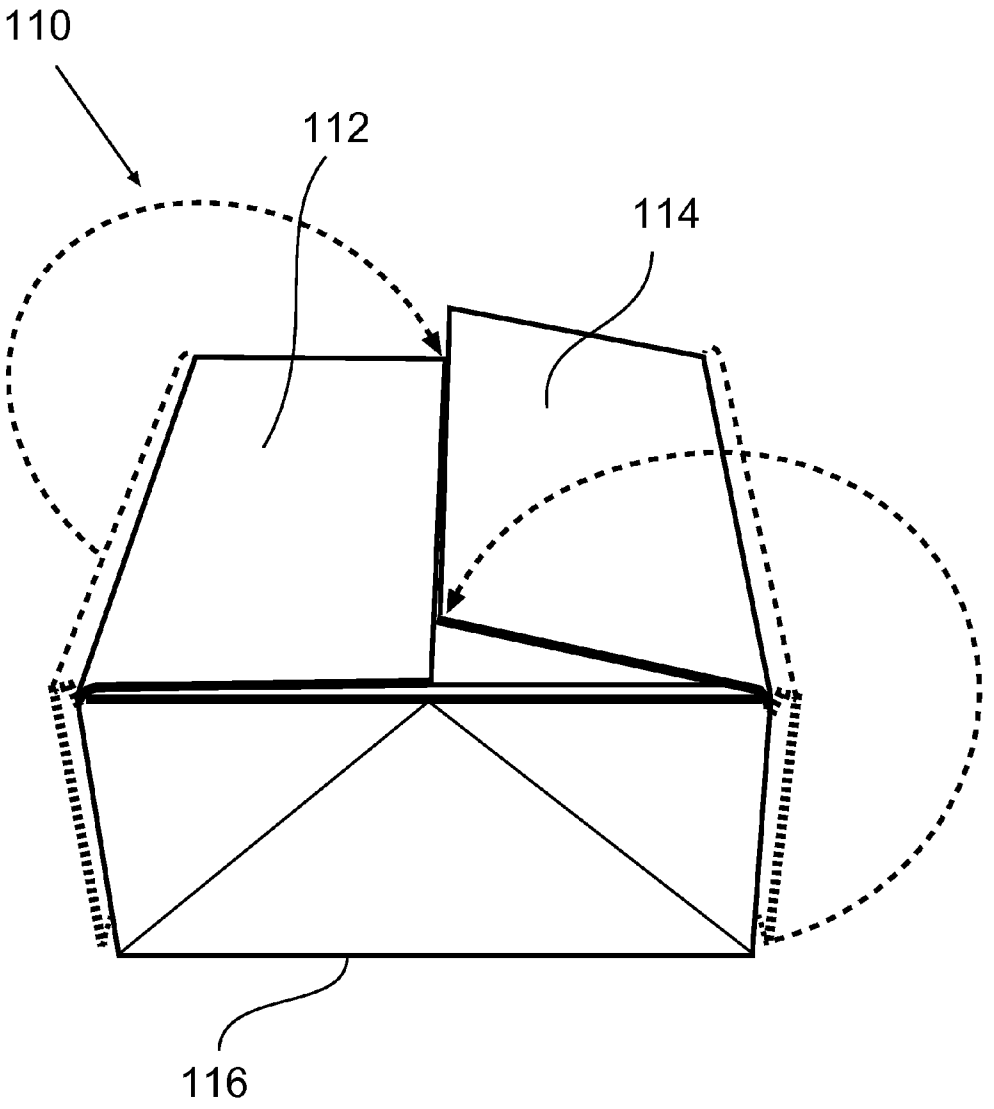


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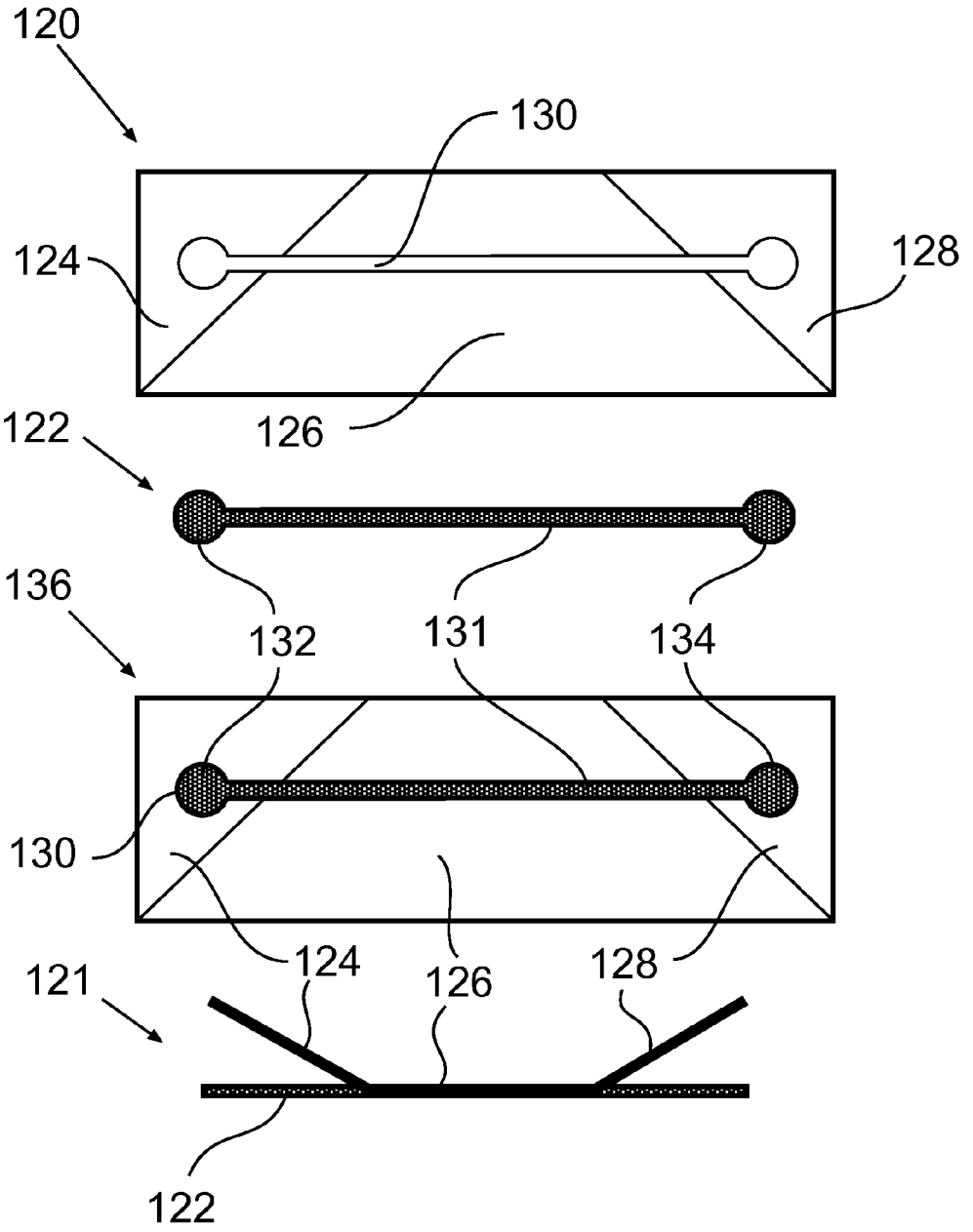


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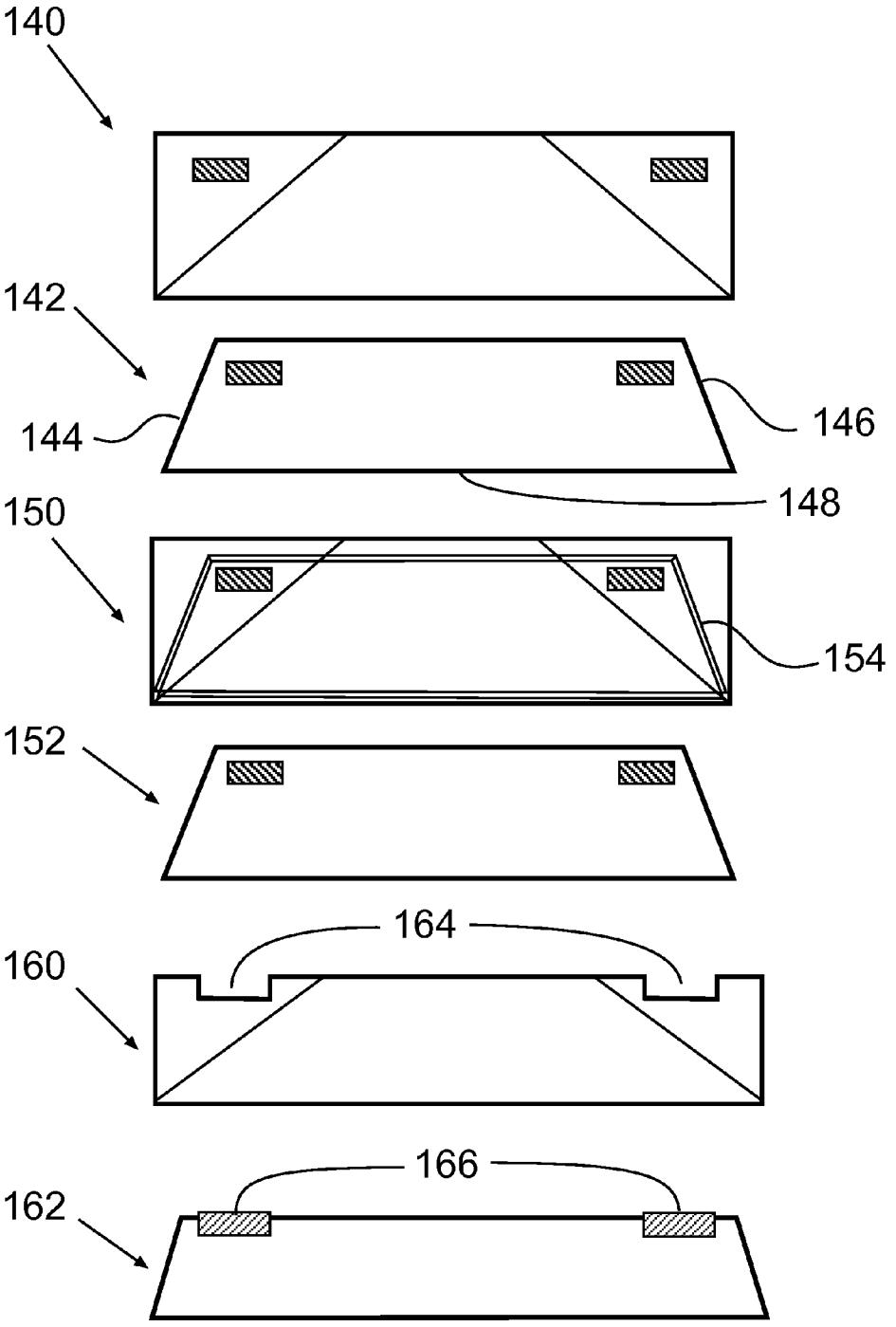


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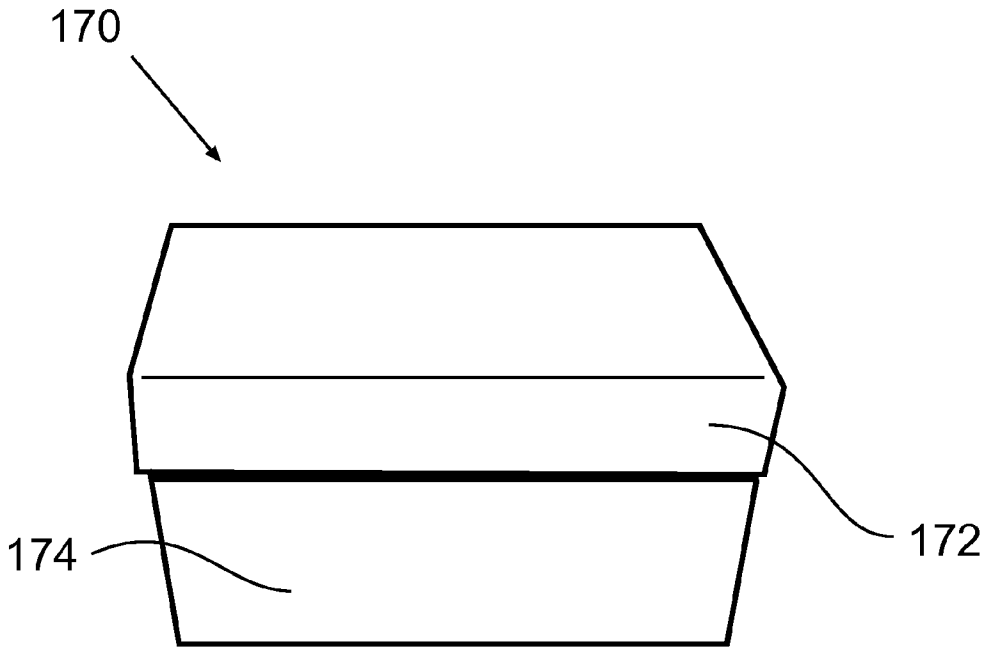


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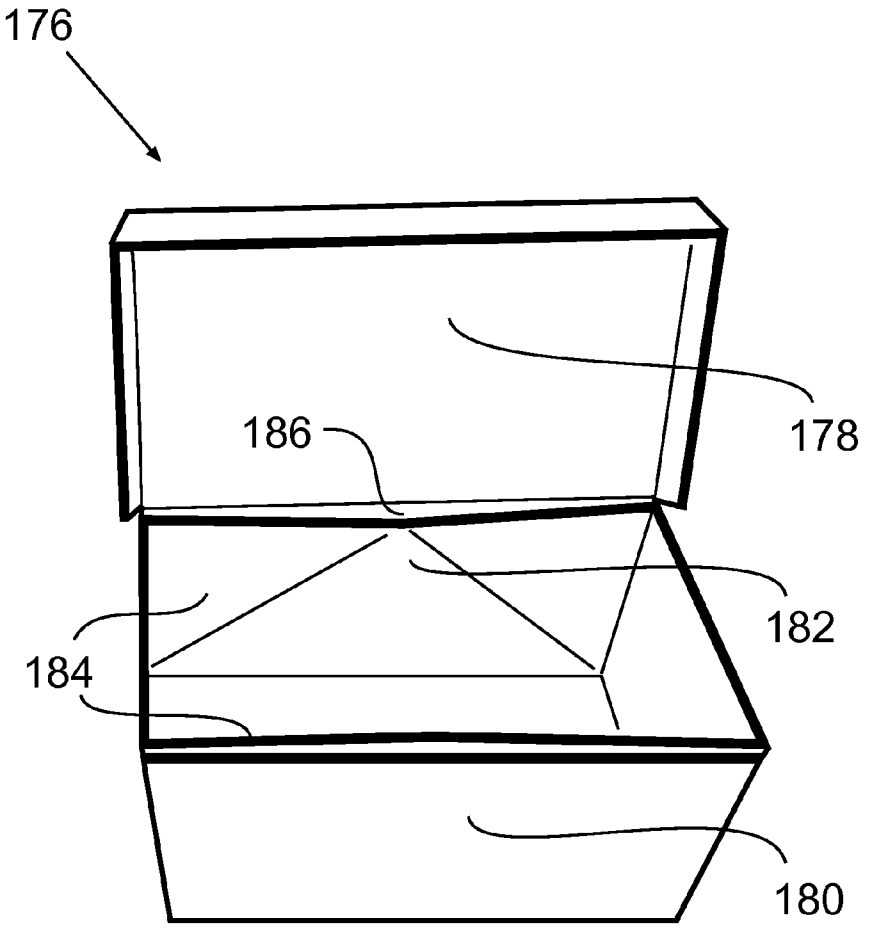


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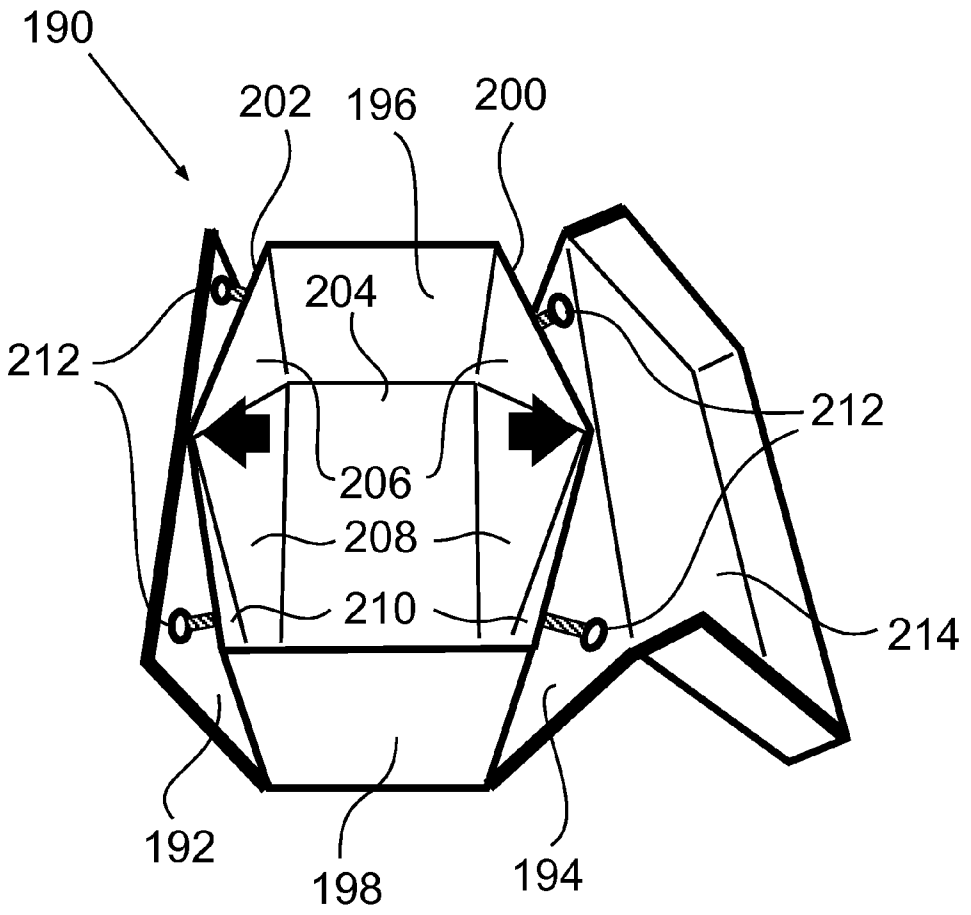


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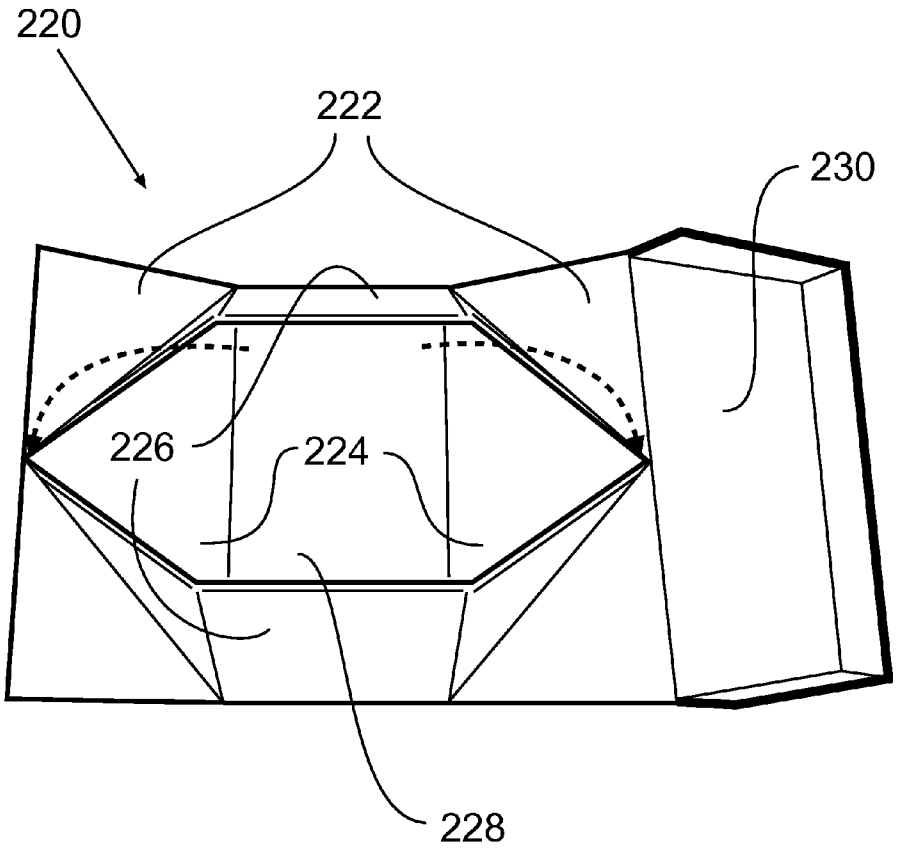


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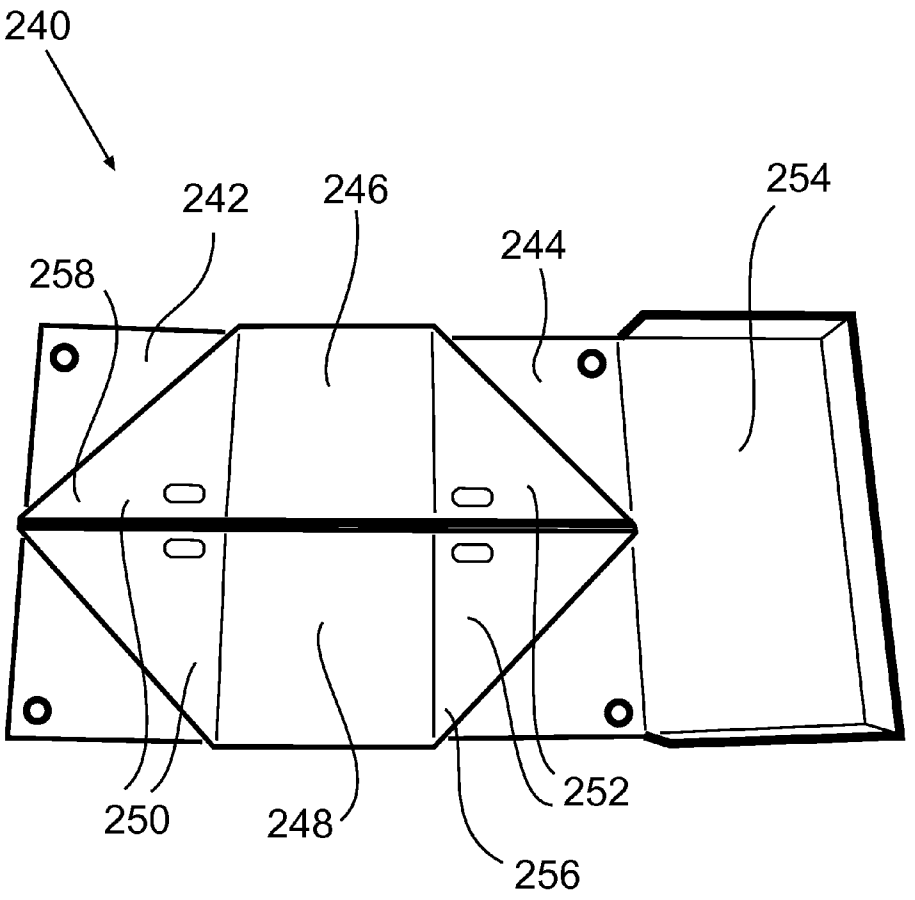


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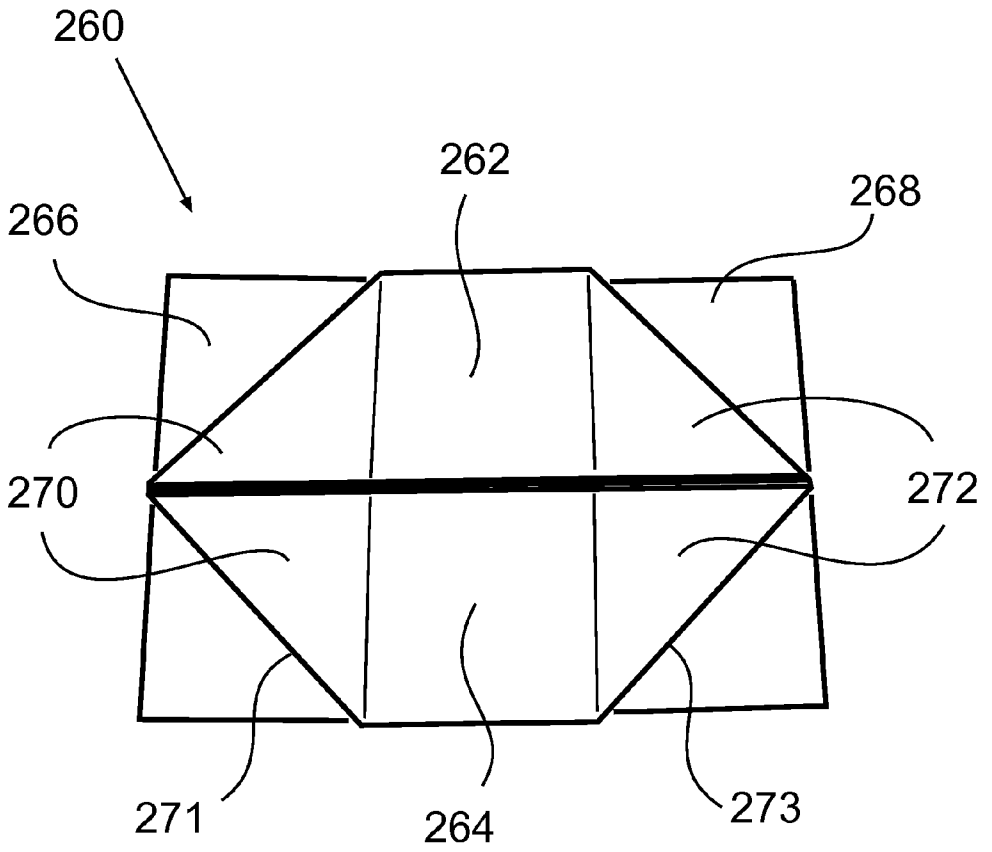


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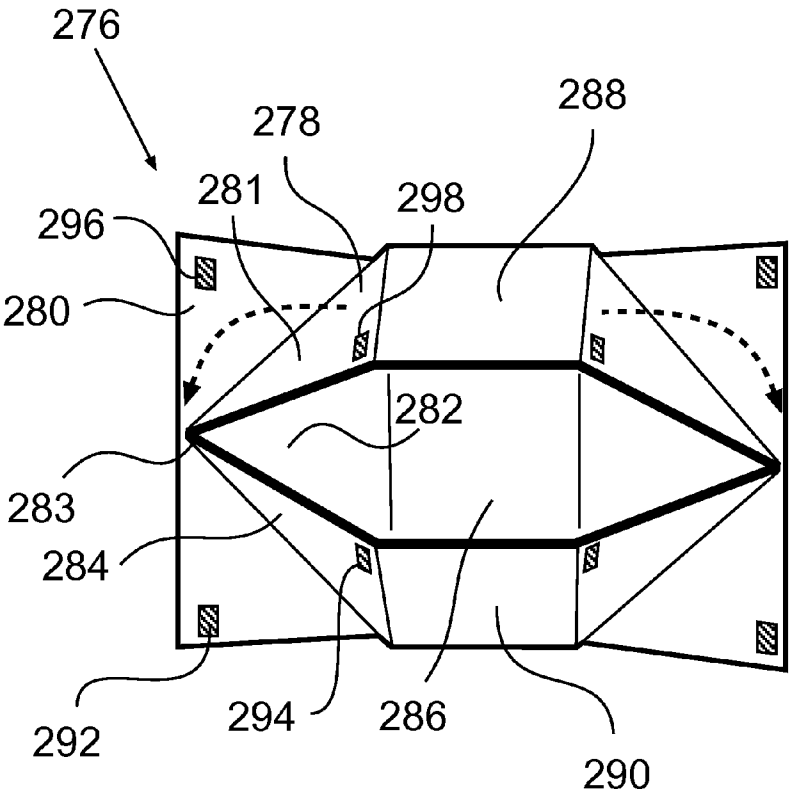


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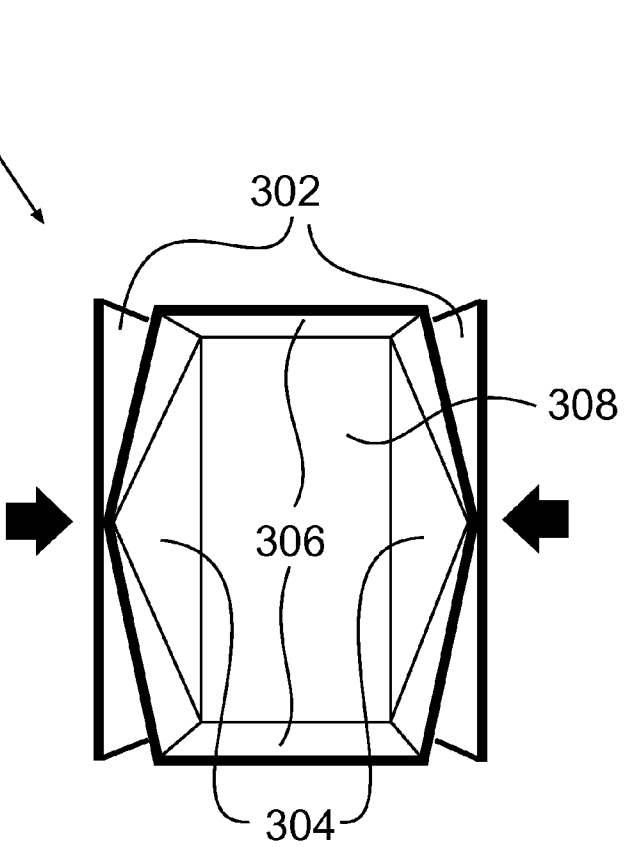


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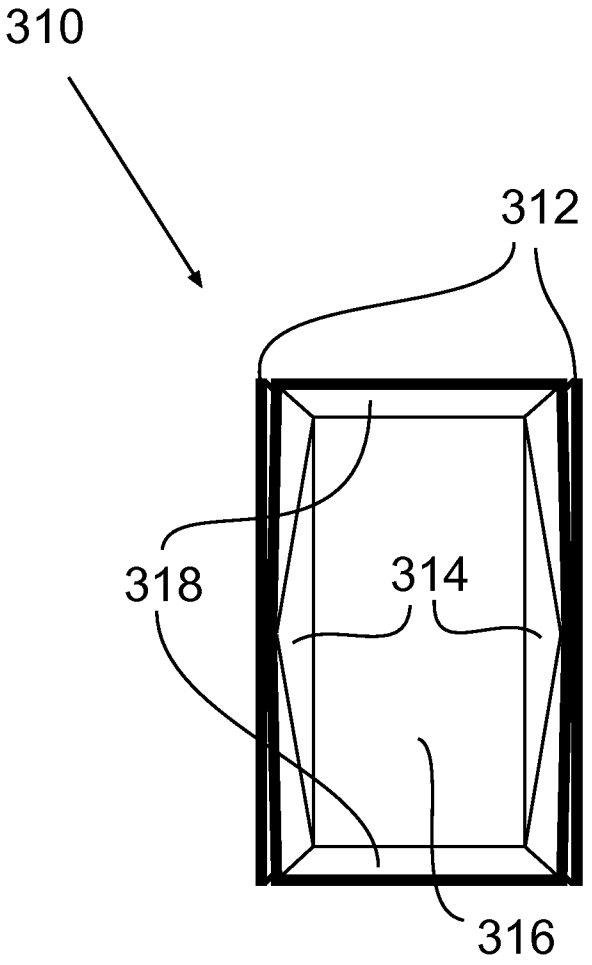


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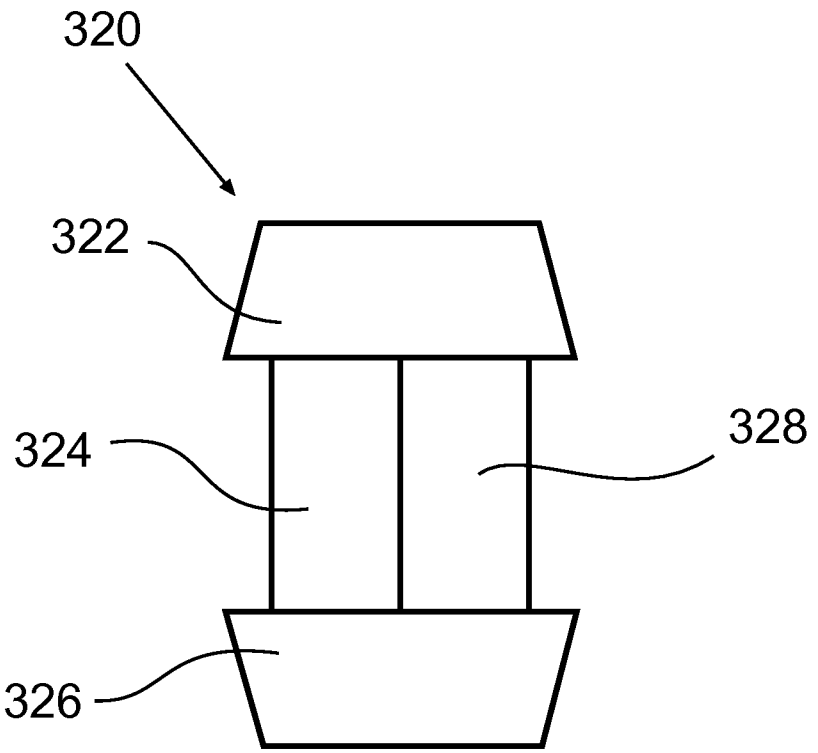


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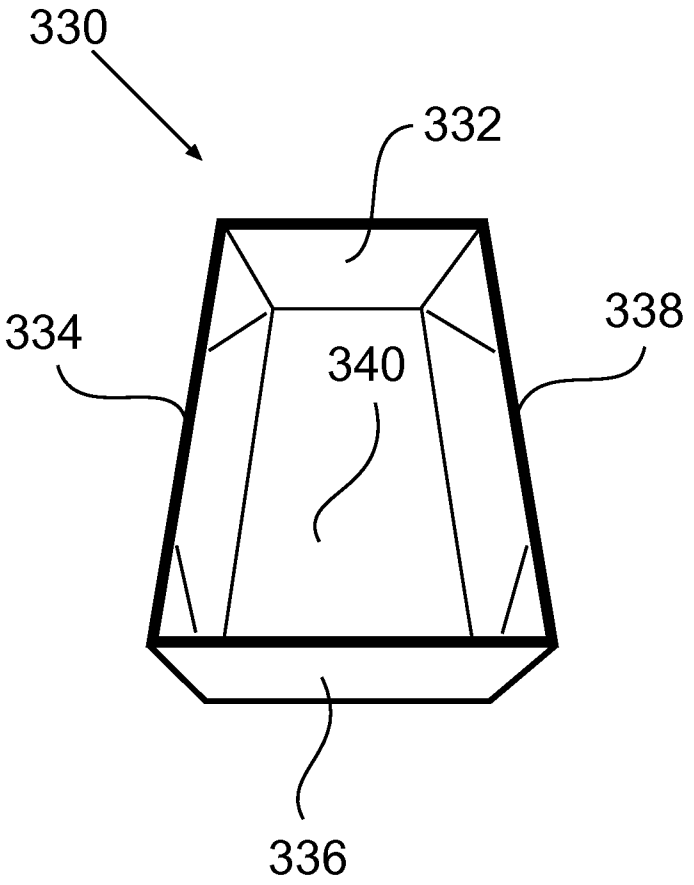


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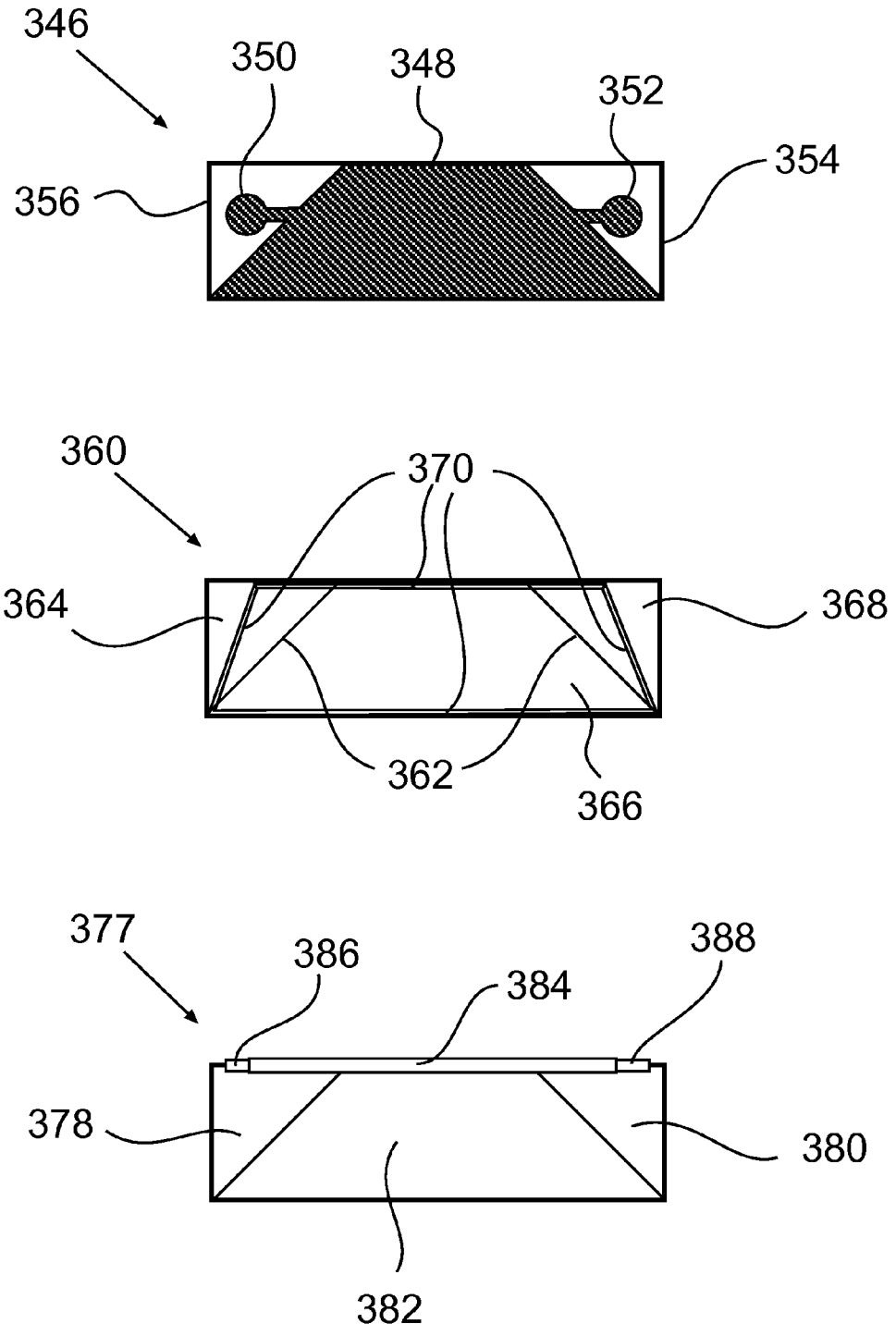
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Figure 22

FIG. 23

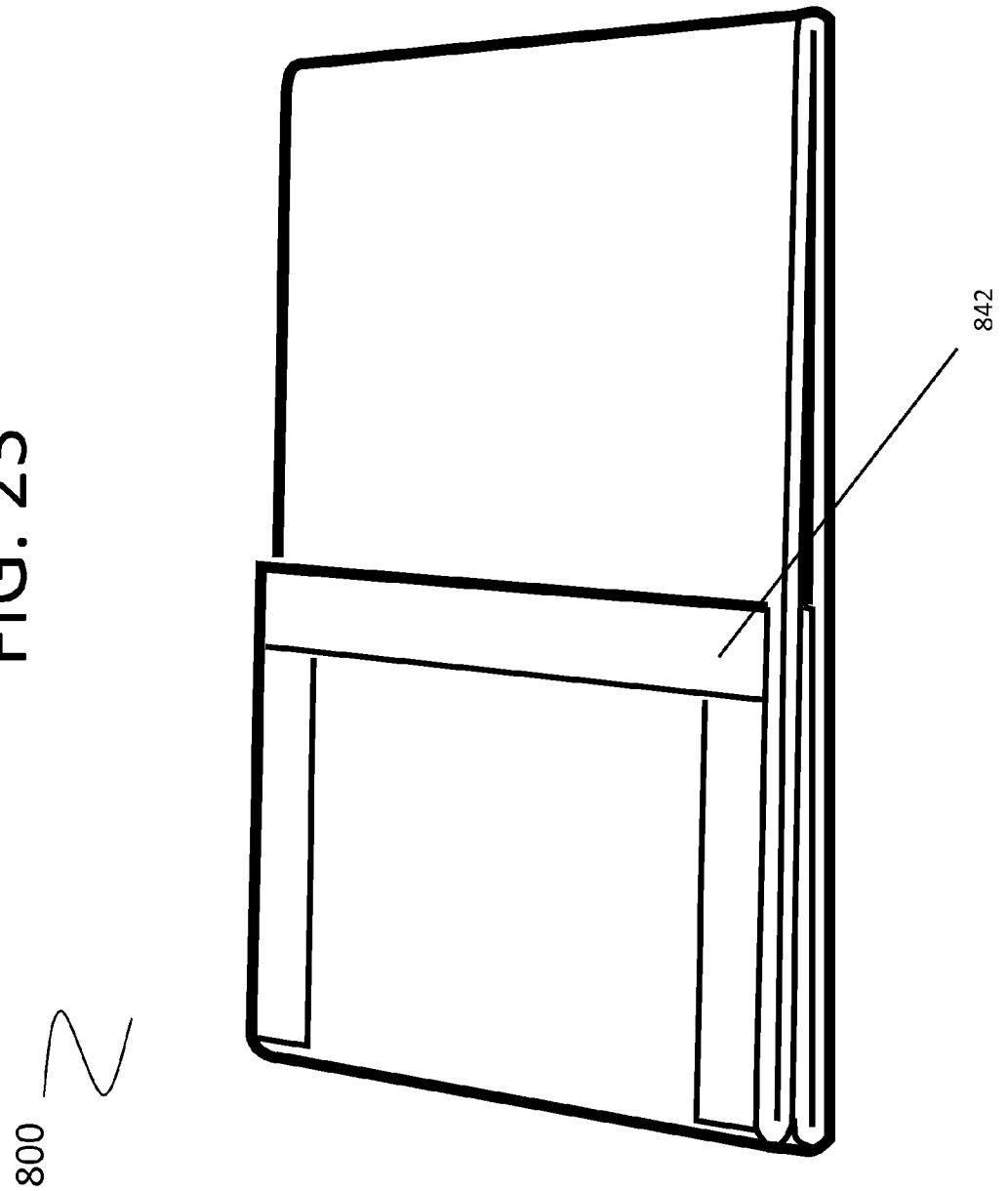


FIG. 24

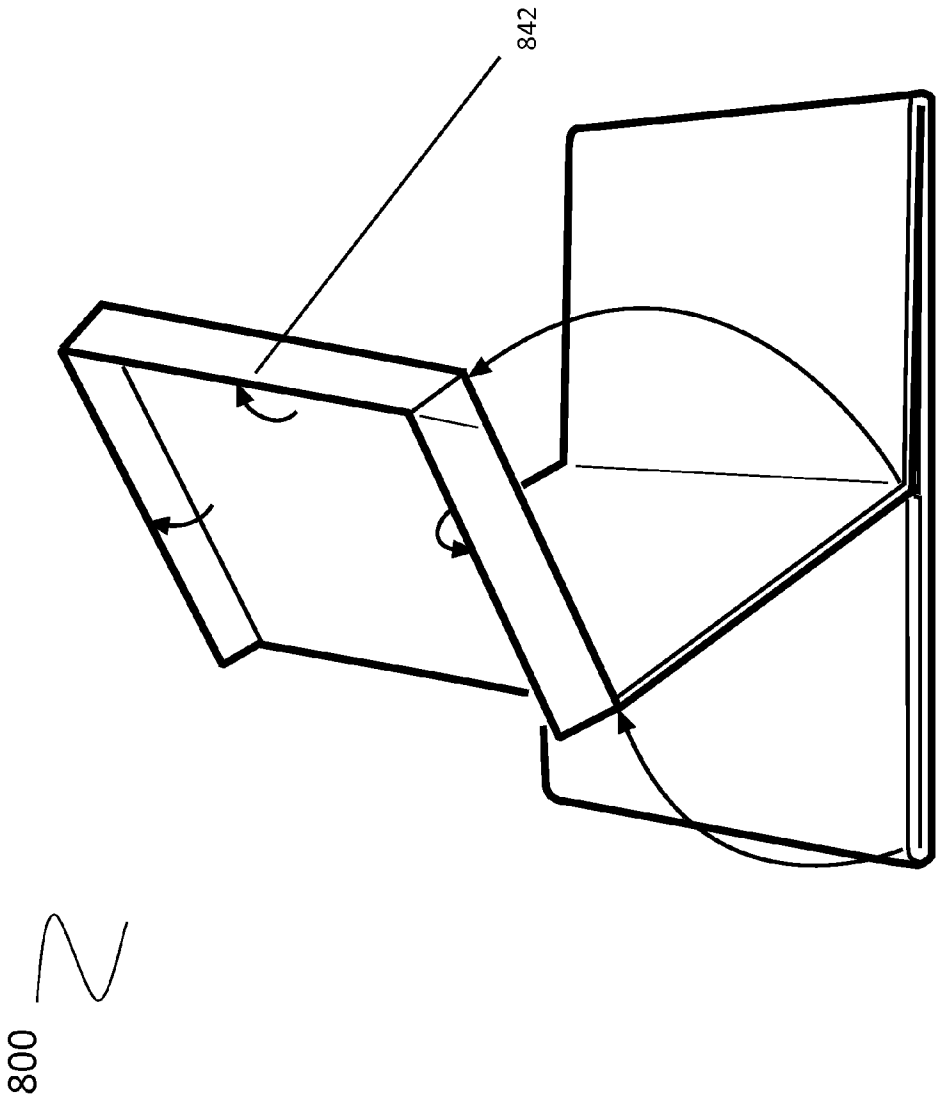


FIG. 25

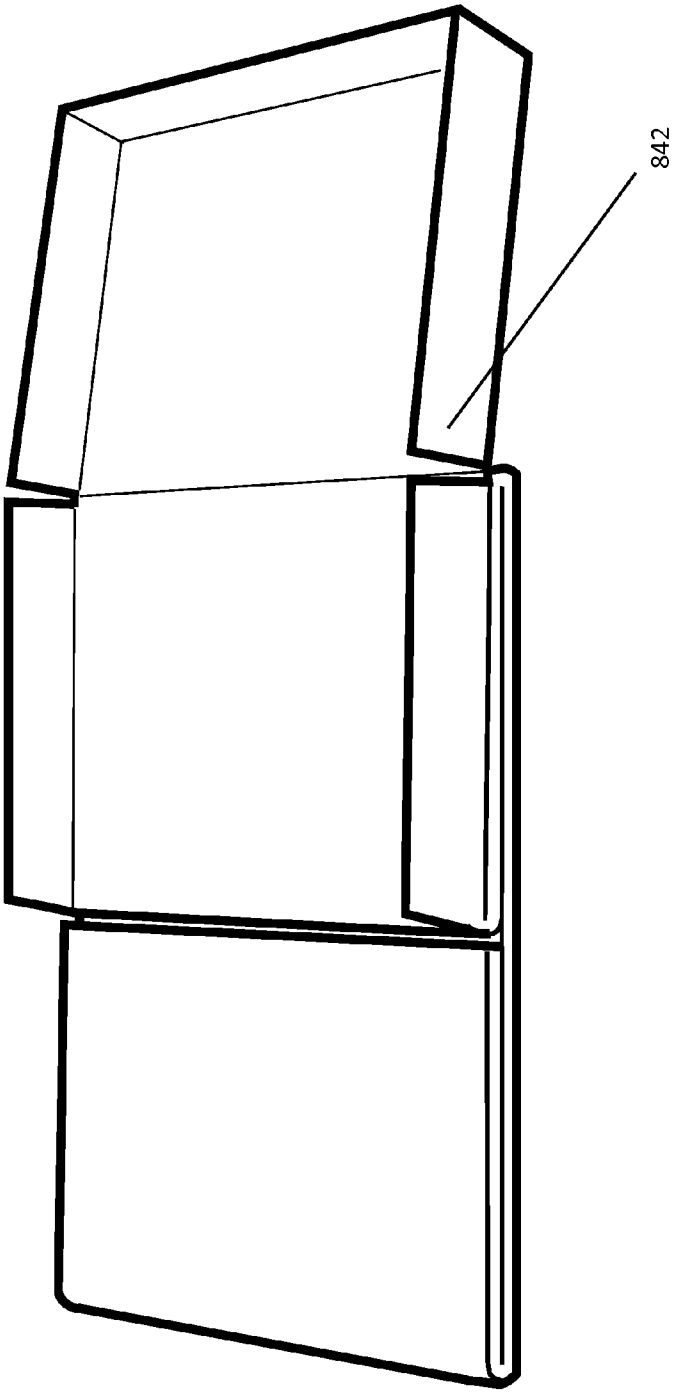


FIG. 26

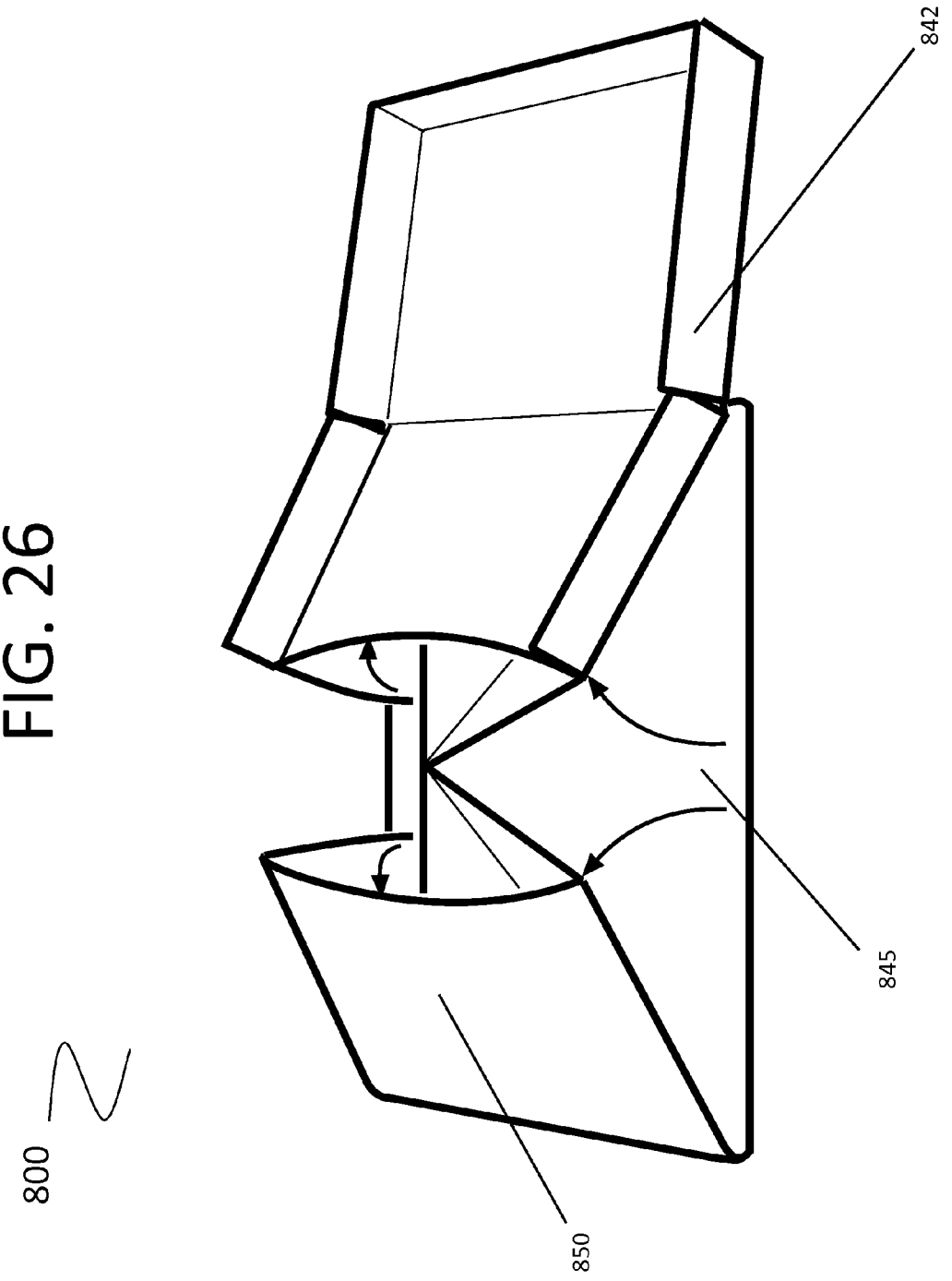


FIG. 27

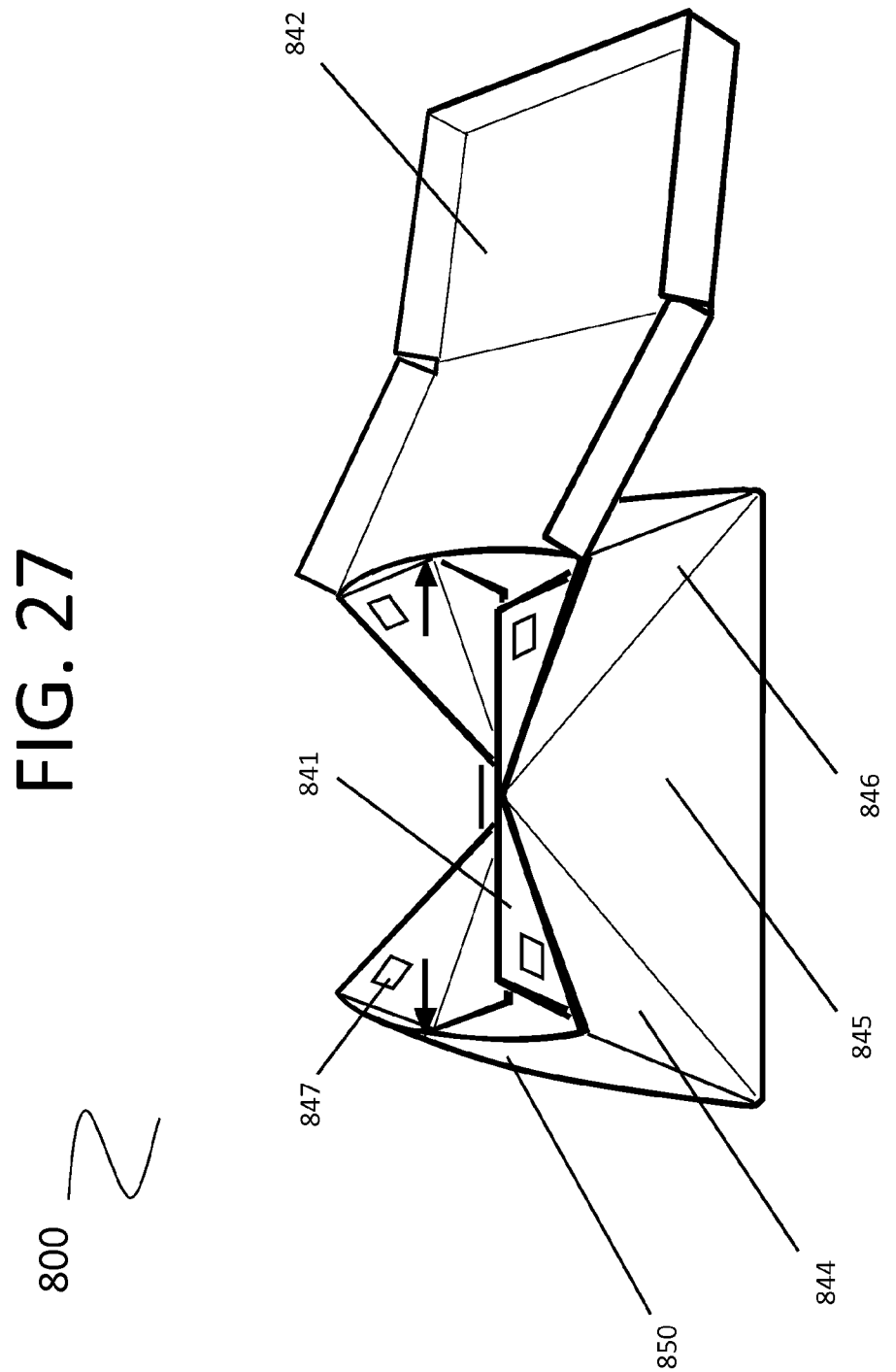


FIG. 28

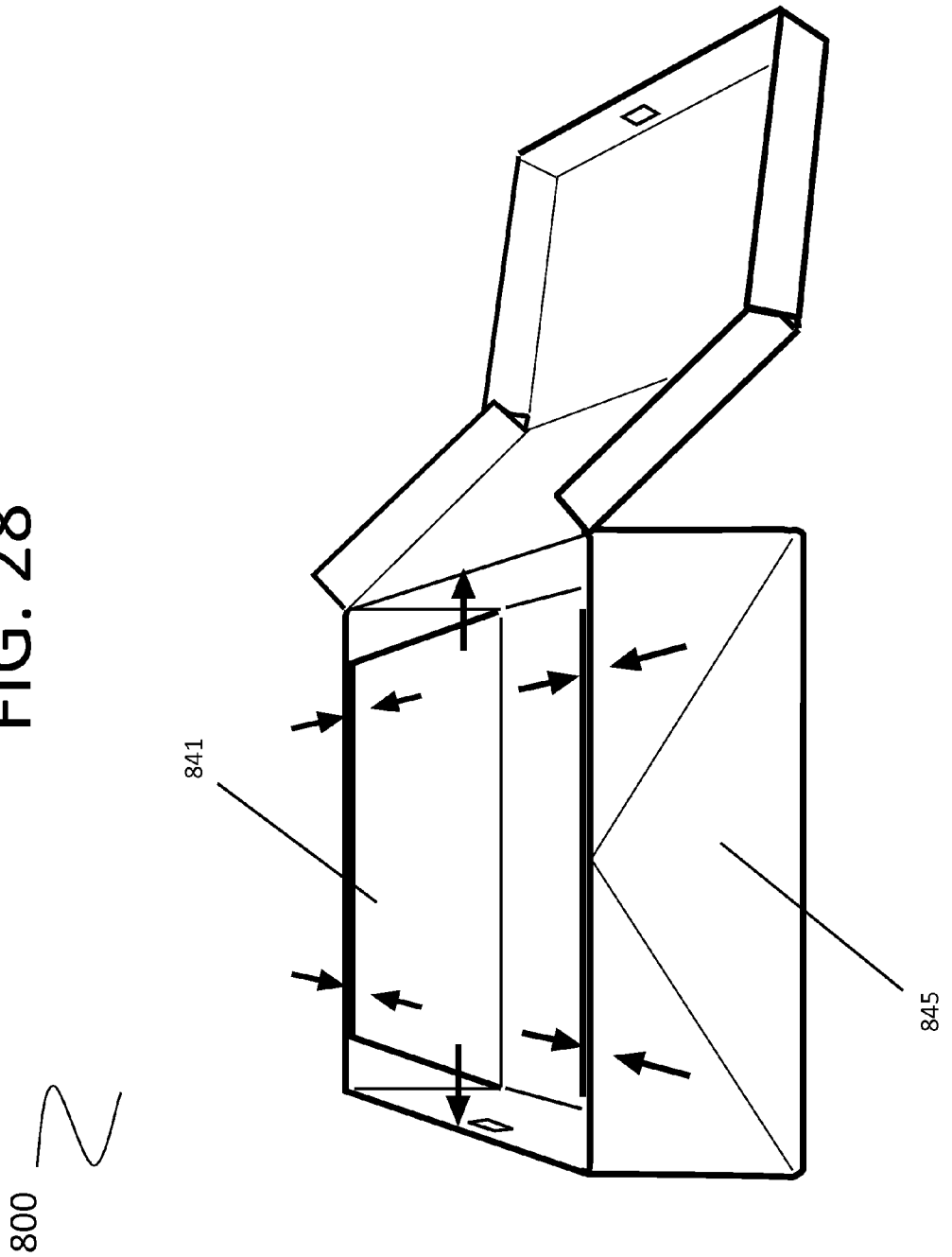
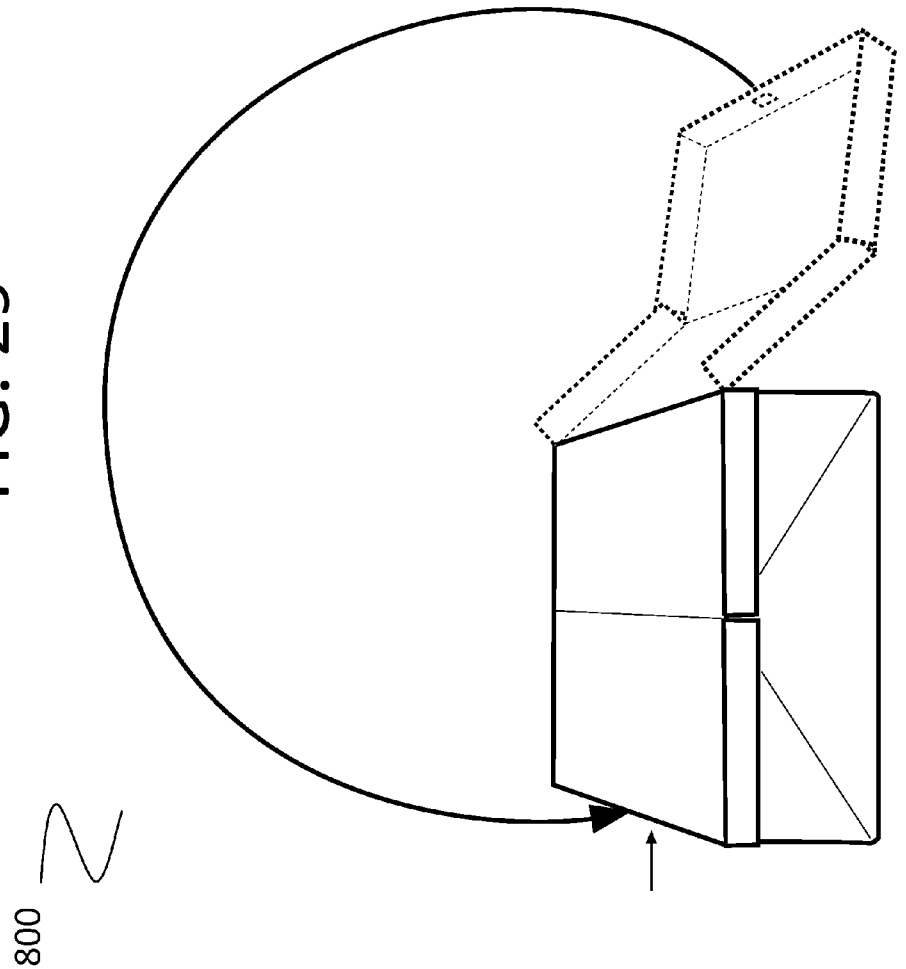


FIG. 29



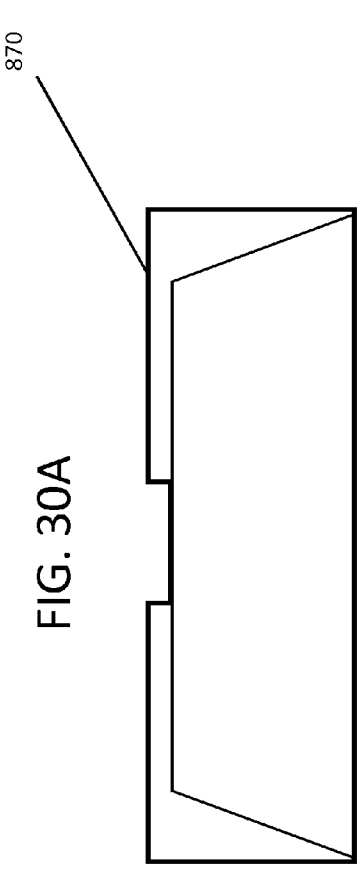



FIG. 30A

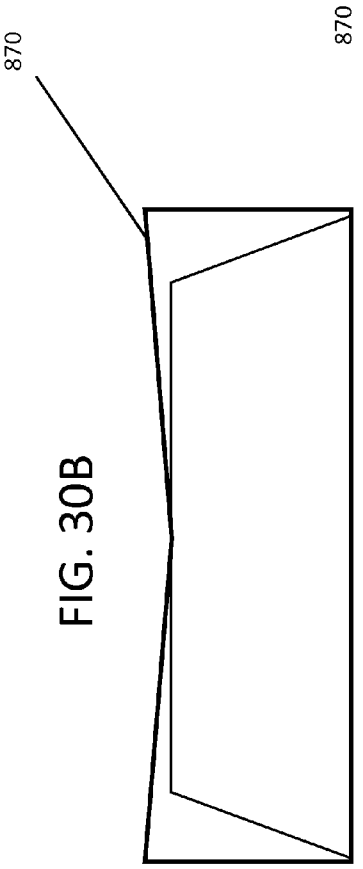



FIG. 30B

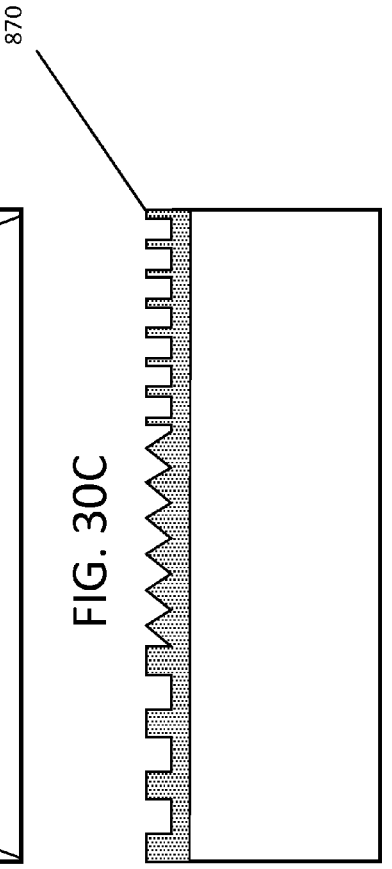



FIG. 30C

FIG. 31

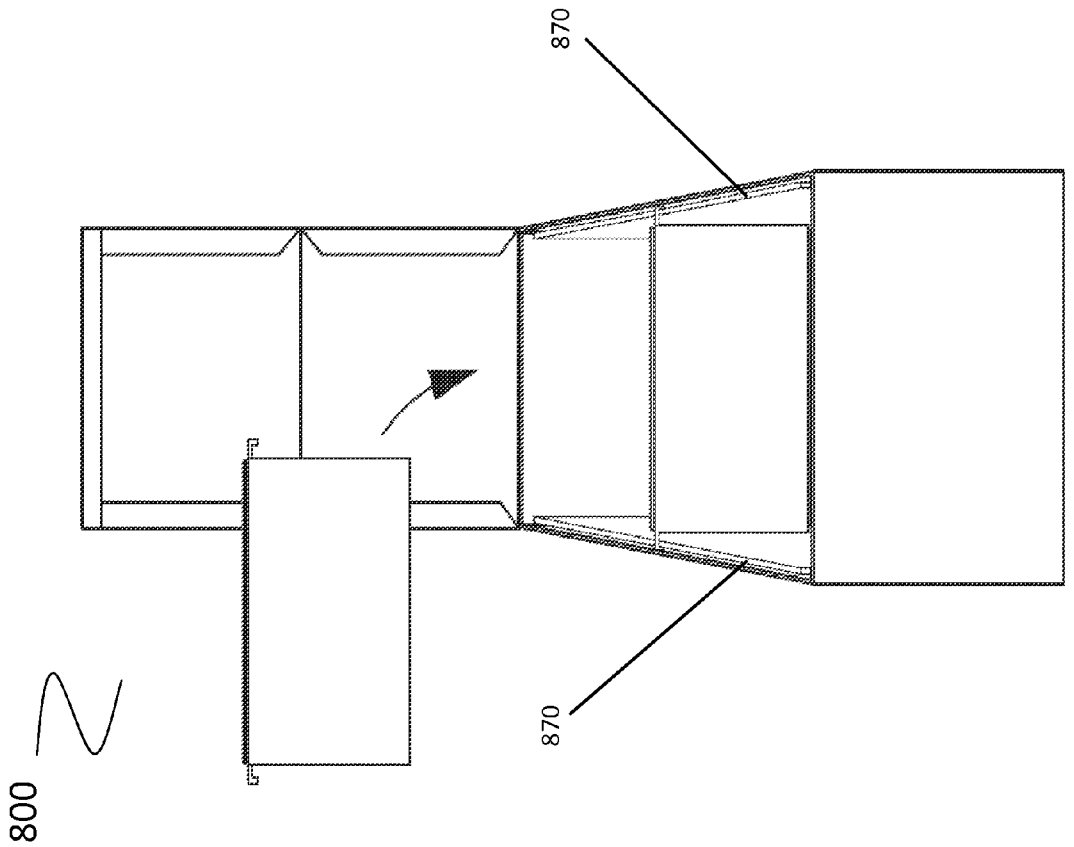


FIG. 32

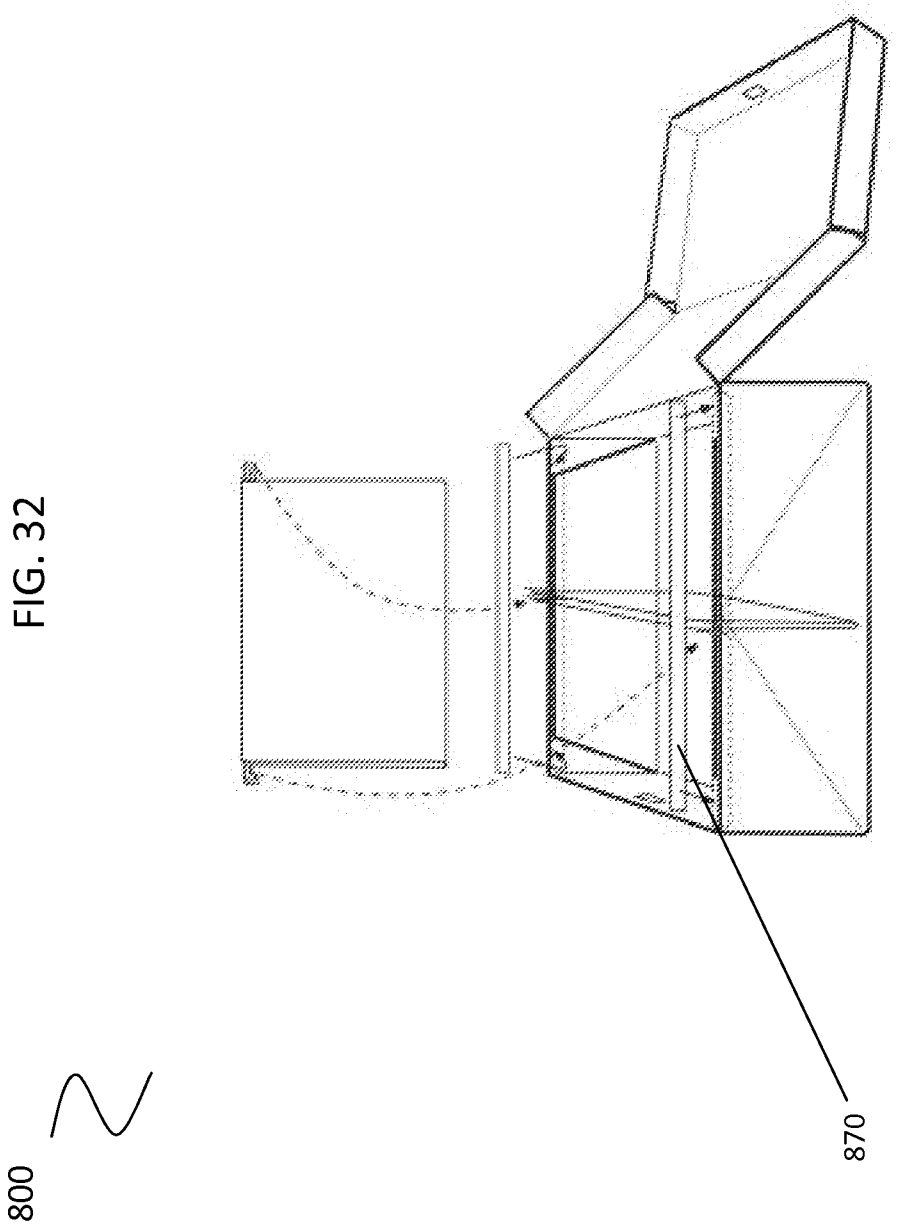


FIG. 33

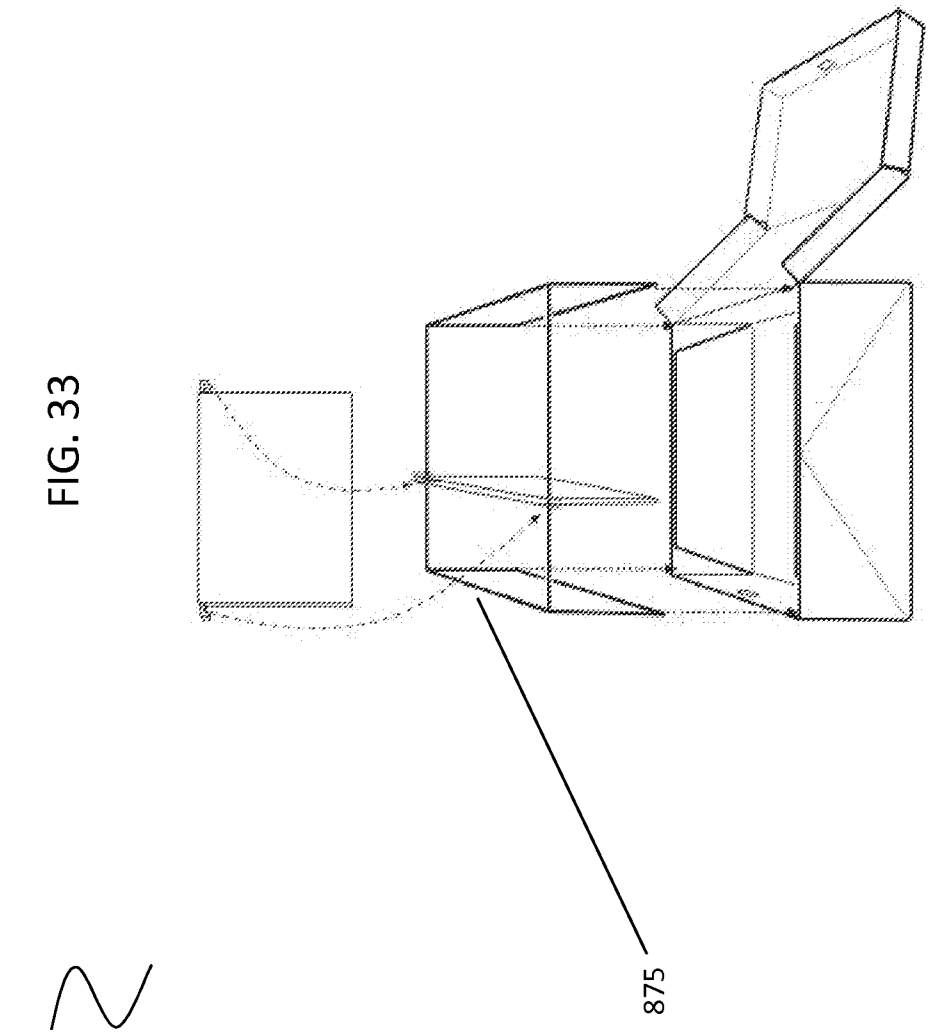
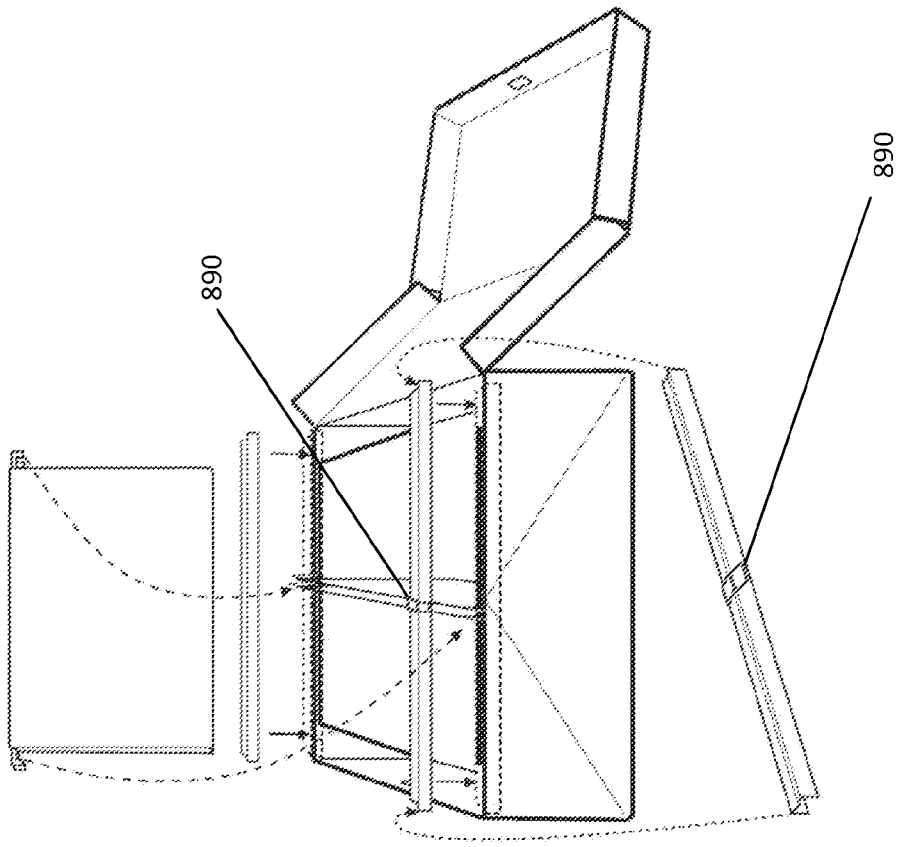


FIG. 34



# FOLDABLE SEALING CONTAINER APPARATUS

## CROSS REFERENCE TO RELATED APPLICATION

**[0001]** This application is a Continuation-in-part application and claims the benefit of and takes priority from U.S. patent application Ser. No. 14/453,881 filed on Aug. 7, 2014, the contents of which are hereby incorporated by reference, and also claims the benefit of and takes priority from U.S. patent application Ser. No. 13/898,009 filed on May 20, 2013, the contents of which are hereby incorporated by reference, and also claims the benefit of and takes priority from U.S. Patent Application Ser. No. 61/919,974 filed on Dec. 23, 2013 the contents of which are hereby incorporated by reference.

## BACKGROUND

**[0002]** 1. Field of the Invention

**[0003]** The present system pertains to storage, consumption and transport systems of for commonly stored items.

**[0004]** 2. Description of Concurrent Art

**[0005]** Presently, storage systems, food containment systems and shipping containment systems are difficult to assemble and require a goodly amount of space for assembly. Many systems also require a goodly amount space for storage on shelves or floors in homes, offices, warehouses and the like. Commonly, containers are used for storage of clothing, shoes, home goods, bathroom items, tools, golf items, construction materials, and food etc. Containers are made of cardboard, plastic, glass, wood, combinations of materials and the like.

**[0006]** Also commonly, containers include a box structure and a cover structure wherein the cover may be connected to the box or separate. A box which folds to become small enough to store easily would clearly be desirable. To create a flat box, several walls of a container may fold out and others fold in. This would be particularly useful for cardboard boxes used for storage and shipping of products.

**[0007]** Presently storage containers are sold individually in stores as different sizes, shapes, brands, colors, etc. People require different sizes and shapes to store different amounts of materials. Stores sell storage containers and boxes as multiple units stacked into each other. Larger units are shaped such that it is difficult to stack them. The amount of volume required is often taxing on store shelves as well as in the home. It would be desirable to possess a container system that can be stored in a flat arrangement to take up minimal space in a store and in a home. It would further be desirable to possess a cover attached to a container for easy storage and to find it easily. It would be further desirable to have a cover and box fold to be flat.

**[0008]** Present technology uses stacking and attaches covers to a container to minimize problems with storage of containers for food but even then, to store small, medium and large sizes is difficult without taking up a lot of space and requiring a lot of work. Often, people get frustrated and simply throw containers into draws hoping to find them later. Companies attempt to coordinate containers so that the containers fit into other containers within a company's own brand. People often have many containers and are not looking to buy extensive sets of containers. They often buy one or two containers if the need arises. The ones they buy rarely are of the same brand, same shape or sizes as their previous ones so storage is difficult. It would be desirable to have a container that can be collapsed flat for easy storage separate from the ones a person presently owns.

**[0009]** Concurrent containers are difficult to store and the inherently differing sizes, various shapes and separate covering apparatuses render storing containers cumbersome, as many containers do not fit together, consequently, storage requires a lot of space.

**[0010]** Presently cardboard boxes are sold in stores to be assembled by the buyer or at point of shipping in stores or warehouses. The cardboard box and cover are sold not connected. Each is folded in a difficult manner which makes assembly difficult for a buyer or shipper. The assembly of cardboard boxes is so difficult that instructions are not much help. The process is time consuming and frustrating for a user.

**[0011]** Additionally, many cardboard boxes used to ship goods through the mail and shipping services currently come in a flat form and to activate, the box is open to form four walls with four panels on the top and four panels on the bottom. The four panels on the bottom are folded inward such that opposite panels are folded and then the adjacent panels folded inward to form a bottom to the box. Tape, or other such retaining mechanism is often applied over the junction of the opposite panels to secure them.

**[0012]** The strength of the box bottom, in such an embodiment, thus plainly depends upon the tensile strength of the tape, as well as the ability of the tape to remain in place on the box securely. Continuing, the contents to be shipped are placed in a box and protective padding, or stuffing, is placed around the goods, in order to minimize movement and damage to contents in the box. The top opposite panels are folded in followed by the adjacent panels. The top panels are then taped for final closure.

**[0013]** Thus with the parameters described above, it is not uncommon for a box to split open during the rigors of shipping and thus it would be desirable to have a box which simply opened by raising its sides and folded by simply collapsing its sides. Presently, systems which collapse the sides result in unstable walls. It would be desirable to use a technique which quickly and automatically stabilizes side walls. It would be further desirable to have the base of a box solid to support its contents and not require taping or folding.

**[0014]** Present folding boxes are limited in strength, ease of use, size and shape, as for example, a box might have to be cube shaped in order for folding to properly occur. The design of the fold of a folded box inherently weakens support or stacking of packages or storage containers. Present folding boxes are not intuitive to the point that a box can be open by simply raising the sides. There is usually a secondary step required.

**[0015]** It would be desirable to have a shipping box which only requires raising its sidewalls for assembly. It would be further desirable to use a box with limited use of tape or no tape. Use of pre applies adhesive could eliminate the need for tape to secure the top and or bottom of a box.

**[0016]** In the case of food storage, presently, food is transported or stored in sealed containers made of glass or plastic. Containers include Ziploc® bags and various shapes of bowl like containers such as Rubbermaid, Tupperware® Etc. Leftover food is stored in sealed containers in a refrigerator, on counter tops or in cabinets. Adults and children bring food to school, the work place, on trips or the like in sealed containers. Often, containers are not returned to the owner as occurs when people bring food to someone else's house for a holi-

day. Children often transport containers to school and dislike the responsibility of, or plainly forget to bring the containers home.

**[0017]** Many food storage containers comprise a box or bowl with four sides. A top covers the container with a friction or snap on fit. It is difficult to store food containers as they vary in size, have separate covers and different shapes. Kitchen drawers are usually not big enough to store containers so cabinets or oversized drawers are used. People buy containers individually and often buy different brands, shapes and materials. The attempt to store these different containers creates a disorganized array of containers that are hard to find and often difficult to match up with their covers. People find it frustrating.

**[0018]** Food containers are sold individually in stores as different sizes, shapes, brands, colors, etc. People require different sizes and shapes to store different amounts of leftovers or to transport food. Food is transported for company events, family get together, to lunch, for children's lunch boxes, and the like which requires different sizes. Stores sell some as multiple units stacked into each other. The amount of volume required is extensive on store shelves as well as in the kitchen. It would be desirable to have a container that can be stored flat to take up minimal space in a store and in a kitchen. It would further be desirable to have a cover reversibly attached to a container for easy storage and to find it easily. It would be further desirable to be able to store a container within its cover.

**[0019]** Present technology uses stacking and attaches covers to a container to minimize these problems but even then, to store small, medium and large sizes is difficult without taking up a lot of space and requiring a lot of work. Often, people get frustrated and simply throw containers into draws hoping to find them later. Companies attempt to coordinate containers so that the containers fit into other containers within a company's own brand. People often have many containers and are not looking to buy extensive sets of containers. They often buy one or two containers if the need arises. The ones they buy rarely are of the same brand, same shape or sizes as their previous ones so storage is difficult. It would be desirable to have a container that can be collapsed flat for easy storage separate from the ones a person presently owns.

**[0020]** Concurrent containers are difficult to store and the inherently differing sizes, various shapes and separate covering apparatuses render storing containers difficult, as many containers do not fit together, consequently, storage in kitchen cabinets, drawers and pantries requires a lot of space. Ziploc® bags provide sealed storage of food however, it's collapsible nature make it difficult to store foods which contain liquid, and soft or gel like material such as mashed potatoes or stew. Ziploc® bags do not provide or maintain a suitable shape to eat food directly from the bags alone, and often require support. They do, however, take little storage space on a store shelf or in a kitchen cabinet as the fold compactly into a box. It would be desirable to have storage containers do the same.

## SUMMARY OF THE INVENTION

**[0021]** The instant apparatus and system, as illustrated herein, is clearly not anticipated, rendered obvious, or even present in any of the prior art mechanisms, either alone or in any combination thereof. The versatile system, method and series of apparatuses for creating and utilizing a folded storage container system are illustrated. Thus the several embodiments of the instant apparatus are illustrated herein.

**[0022]** It is a primary object of the present multifunctional apparatus to reveal an easily storable, flat sheet containment mechanism which folds to become a storage or shipping container.

**[0023]** It would be further desirable to reveal a version of the instant apparatus and system which is inexpensive and disposable in order to meet with the current recycling nature of society. Said disposable container system would be useful for transportation of items sold on the internet or in stores which require mailing or shipping.

**[0024]** It would be further desirable to reveal a version of the instant apparatus and system which allows reuse to eliminate waste.

**[0025]** It would be further desirable to reveal a version of the instant apparatus and system which is easy to assemble and uses no tape. It would be further desirable to have shipping or storage containers with a base which is a solid unit and does not require tape to solidify as is presently required by most present mailing boxes.

**[0026]** It would be further desirable to provide a container which is easily assembled and disassembled and provides a disposable or reusable storage, moving or shipping container which is easily stored when not in use.

**[0027]** It is a primary object of the present system to provide a foldable storage or shipping container which when assembled affords the rigidity and strength. For easy identification of various sizes, containers may be color tinted, labeled or the like.

**[0028]** It is an object of the present system to provide a container that may be used for storage or shipping of items ranging from construction items e.g. screws and nails, to consumer and household goods including clothing, housewares, food, shoes, and numerous products requiring storage including food. It is a further object of the present system to provide containers that are constructed on any common storage container material such as polymer and various plastics, cardboard, composite combinations and any other suitable material.

**[0029]** It would be further desirable to introduce a foldable food container with living hinges that could contain liquids or be air tight when assembled. It would be further desirable to introduce a foldable container with four walls and a base all connected as one solid piece. In one alternative, living hinges are placed with the walls of the container and at the junction of walls. It would be further desirable to introduce a foldable container for food which has no creases or junction of corner panels for easy cleaning.

**[0030]** In an alternative method of manufacture, a uniform sheet of plastic as is commonly done with polypropylene, polyethylene or like materials is molded with living hinges creating an inexpensive container. Living hinges are created by injection molding and enhanced by coining.

**[0031]** It would be desirable to have walls which divided into panels with hinges allowing folding inward or inward and outward. It would further be desirable to have an internal or external panel used to stabilize side folding wall panels.

**[0032]** It would be desirable to have a solid cover or to have a split cover attached to side walls so a cover is not lost and easily placed on to the box. It is desirable to have a cover attached for stability during use, storage or shipping.

**[0033]** The foregoing has outlined the more pertinent and important features of the present invention in order that the

detailed description of the invention that follows may be better understood, and the present contributions to the art may be more fully appreciated. It is of course not possible to describe every conceivable combination of components and/or methodologies, but one of ordinary skill in the art may recognize that many further combinations or permutations are possible. Accordingly, the novel architecture described below is intended to embrace all such alterations, modifications, and variations that fall within the spirit and scope of the appended claims.

**[0034]** There has thus been outlined, rather broadly, the more important features of the versatile integrated foldable container system and series of accompanying systems and apparatuses and embodiments in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

**[0035]** In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

**[0036]** These together with other objects of the invention, along with the various features of novelty, which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

**[0037]** To the accomplishment of the foregoing and related ends, certain illustrative aspects are described herein in connection with the following description and the annexed drawings. These aspects are indicative of the various ways in which the principles disclosed herein can be practice and all aspects and equivalents thereof are intended to be within the scope of the claimed subject matter. Other advantages and novel features will become apparent from the following detailed description when considered in conjunction with the drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

**[0038]** FIG. **1** illustrates a front view of a foldable box and an attached cover in the closed position of this invention.

**[0039]** FIG. **2** illustrates a front view of a foldable box with the attached cover raised up of this invention.

**[0040]** FIG. **3** illustrates a front view of a foldable box with the cover raised and the cover sides open of this invention.

**[0041]** FIG. **4** illustrates a front view of a foldable box half open and the cover raised open.

**[0042]** FIG. **5** illustrates a front view of a foldable box fully open and a cover open.

**[0043]** FIG. **6** illustrates a top and side view of an alternative foldable container of this invention.

**[0044]** FIG. **7** illustrates a side view of an alternative foldable container with a split cover of this invention.

**[0045]** FIG. **8** illustrates a side view of an alternative foldable container with a split cover closing of this invention.

**[0046]** FIG. **9** illustrates a side view of an alternative collapsible wall of a folding box of this invention.

**[0047]** FIG. **10** illustrates a side view of various alternatives of collapsing side walls and associated stabilizing panels of a folding box.

**[0048]** FIG. **11** illustrates a side view of a folding box with a cover on top.

**[0049]** FIG. **12** illustrates a side top view of a folding box with a cover attached and open.

**[0050]** FIG. **13** illustrates a top view of an alternative folding container with snaps.

**[0051]** FIG. **14** illustrates a top view of a folding box partially folded.

**[0052]** FIG. **15** illustrates a top view of a folding box fully collapsed.

**[0053]** FIG. **16** illustrates a top view of an alternative fully folded box with no cover attached.

**[0054]** FIG. **17** illustrates a top view of a folding box partially unfolding.

**[0055]** FIG. **18** illustrates a top view of a folding box almost nearly fully formed.

**[0056]** FIG. **19** illustrates a top view of a folding box fully formed.

**[0057]** FIG. **20** illustrates a top side view of an alternative folding box open.

**[0058]** FIG. **21** illustrates a top side vied of an alternative folding box folded.

**[0059]** FIG. **22** illustrates alternative methods of stabilizing the wall after unfolding.

**[0060]** FIG. **23** illustrates a one piece foldable box and cover system in the folded position.

**[0061]** FIG. **24** illustrates the one piece foldable box and cover system with the cover in the first phase of extraction from the closed position.

**[0062]** FIG. **25** illustrates the one piece foldable box and cover system with the cover in the completion of extraction from the closed position.

**[0063]** FIG. **26** illustrates the one piece foldable box and cover system with the top fully extracted from the closed position and the sides in the first phase of actuation and illustrating the direction of actuation of the side support members.

**[0064]** FIG. **27** illustrates the one piece foldable box and cover system with the top extracted from the closed position and the sides in the second phase of actuation and further illustrating the direction of actuation of the side support members.

**[0065]** FIG. **28** illustrates the one piece foldable box and cover system with the top extracted from the closed position, the sides fully actuated and the side support members fully actuated.

**[0066]** FIG. **29** illustrates the one piece foldable box and cover system with the top fully extracted from the closed position, the sides fully actuated and the side support members fully actuated and further illustrates the direction of motion for closing the cover and the cover closed.

**[0067]** FIGS. **30**A-C illustrates a series of side members and further illustrates different notch mechanisms for facilitating system folding and file folder stabilization.

**[0068]** FIG. **31** illustrates one embodiment of a rail system installed within a container system.

**[0069]** FIG. **32** illustrates one embodiment of a removable rail system with directions of installation within a container system illustrated.

**[0070]** FIG. **33** illustrates one embodiment of a removable rail system including a rail cage system and with directions of installation within a container system illustrated.

**[0071]** FIG. **34** illustrates one embodiment of a rail system installed within a container system wherein the rail system is flexible for folding with the container system.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

**[0072]** The present invention provides a container which when constructed possesses enough rigidity to form a sealed or unsealed container and concurrently serve as a vessel for general storage, shipping and transportation. The container may be constructed of a uniform material with hinges or constructed of multiple various materials. In one embodiment, the instant container may include four walls and a base which are joined together and preferably formed as one piece with hinges at the junction of each wall and the base. Hinges may exist between each adjacent wall to wall. At least two opposing walls may possess hinges disposed within the walls to allow folding of the wall inward toward the center or outward. The base and four walls may thus feature a contiguous construction.

**[0073]** In several embodiments, the instant system may comprise a wall connected to adjacent walls and a base with hinges to the walls, folds inward or outward as a result of at least two hinges within each wall of opposing walls. The two hinges in a wall extend from the edge connected to the base to the top of the wall. Ideally, the hinge within each wall of opposite walls starts at the corner of the box. The inter-wall hinges are at an appropriate angle to the base that when folded, the walls lay flat onto the base or onto the adjacent wall which is on the base. If the opposite walls with hinges within, fold out the adjacent walls lay flat on the base. The adjacent walls collapse onto the folding walls as a result of the folding walls pulling them down. The hinges of the adjacent walls to the base are of such a dimension that the adjacent walls fold onto the hinged walls which are on top of the base.

**[0074]** The side walls and base can be square, rectangular, trapezoidal, oval or any common geometric shape and include four or more walls. The angles of side walls to the plane of the base will determine the angles required for hinges within the side walls.

**[0075]** Referring to FIG. **1**, a folded box and cover **1** consists of a box **4** and an attached cover **2** which is flat when closed. Side walls fold inward and between the base and the cover.

**[0076]** Referring to FIG. **2**, a foldable box and cover **10** as seen in FIG. **1**, consists of cover **12** which is in the raised position. Cover **12** is attached to box **16** by panel **14**. Panel **14** is attached to box **16** on the outer surface of wall **15** half way up the wall. Panel **14** rotates up or down allowing cover **12** to fit onto box **16** in the closed or open position. The cover will lay flat on top when folded and when the box is formed panel **15** rotates up to allow cover **12** to seal and cover box **16**.

**[0077]** Referring to FIG. **3**, a foldable box and cover **20** as seen in FIG. **1**, consists of cover **22** and box **36**. Cover **22** has side walls **24**, **26** and **28** which hinge to cover **22**. Side wall **26** is divided by hinges into three panels **30**, **32**, and **34**. Hinged panels **30**, **32**, and **34** collapses inward or alternatively outward to collapse walls **24**, **26** and **28** flat onto cover **22**. Foldable box **36** has side walls **38** and **39** which are raised to open box **36**.

**[0078]** Referring to FIG. **4**, foldable box and cover **40** as seen in FIG. **1**, consists of cover **42** and foldable box **51**. Foldable box **51** consists of side walls **45**, **50**, **52** and **56** which are hinged to base **60** and internal panels **41** and **58**. Side walls **45** and **56** consist of three hinged panels allowing all walls to collapse and open. Side wall **45** consists of panels **44**, **46** and **48**. Internal panel **41** is attached to center panel **46** such that it moves with wall **45** during opening and closing of box **51**. Internal wall **41** has Velcro **39** which can also be snaps, adhesive, clips, inserts, reversible glue, glue, magnets or the like on its corners and facing the adjacent side wall **45**. The materials are constructed to be reversible or irreversible methods of stabilizing a wall. The outside panels **44** and **48** of side wall **45** has Velcro or other materials mentioned previously placed inside such that when internal panel **41** presses onto them the Velcro matches in position to hold the internal panel **41** against side wall **45** to prevent collapsing. The box is folded by pressing inward on center panel **46** which collapses side wall **45** separating the Velcro allowing box **51** to fold.

**[0079]** The box mechanism may comprise side walls which are divided into three panels separated by hinges while adjacent walls have no hinges within the wall. The two hinges in a wall extend from the edge connected to the base to the top of the wall. Ideally, the hinge within each wall of opposite walls starts at the corner of the box. When the side walls are rectangular, a 45 degree angled internal wall hinge is used. As the center panel is pressed inward, the adjacent panels provide a junction to the adjacent walls and hinge them downward toward the base. When the walls are pulled up to form a box, the center panel is pulled up by the connecting side panels. The side panels do not stay in the same plane as the center panel which allows closure.

**[0080]** An additional internal wall is attached to the center panel of the three panel walls. The internal wall has means to attach and detach from the side panels using methods such as Velcro, snaps, adhesives, or the like. The internal panels **44** and **58** are tapered on the outer edges to allow the adjacent walls of the box to collapse without interference. As the internal panel collapses into the box during folding the side walls collapse simultaneously reducing the space between opposite walls.

**[0081]** Referring to FIG. **5**, foldable box and cover **66** as seen in FIG. **1**, consists of foldable attached cover **68** and foldable box **71**. Foldable box **71** consisted of hinged base **78**, side walls **70**,**72**, **74**, and **80** and internal wall **76** and **82**. Walls **74** and **80** are constructed of three panels with internal walls **76** and **82** attached to the center panel and reversibly attached to the outer adjacent panels to stabilize the walls.

**[0082]** Referring to FIG. **6**, foldable box and cover **85** as seen in FIG. **1**, consists of cover **88** which rotates onto box **90**. In advanced versions, cover **88** seals onto box **90** by having an internal adhesive layer, snaps, clips, Ziplock®, glue, reversible fugitive glue or the like.

**[0083]** Referring to FIG. **7**, foldable box **92** consists of base **102**, split cover **94** and **96**, internal panels **98** and **106**, collapsing three panel side walls **100** and **104**, side walls **97** and **99**. Split cover **94** and **96** are attached and hinged to side walls **97** and **99** and lay flat when closed and then rotate to cover the box.

**[0084]** Referring to FIG. **8**, collapsible box **110** as seen in FIG. **7**, has split cover **112** and **114** which rotate from the side

of box **116** to form a cover. The cover can have pre applied adhesives, snaps, tongue and groove or Ziplock® like seals of the like to self close and provide a sealed container if desired. The covers can may comprise sides to cover the outside areas of a box **116** and can overlap each other on the top for strength and easier sealing. Each split cover can be the entire width of the container if desired by overlapping on closure.

**[0085]** Referring to FIG. **9**, an alternative three panel collapsible side wall **120** has center panel **126** and outer panels **124** and **128**, and slot **130**. Snap bar **122** consists of bar **131** and end snaps **132** and **134**. Snap bar **131** fits securely or is fixed into slot **130** at center panel **126** while snap ends **132** and **134** snap to hold and unsnap to allow rotation of outer panels **124** and **128** of side wall **120** as seen in section **121**. Alternatively, the center panel has extension going out each side as if the bar was present.

**[0086]** Referring to FIG. **10**, three panel side wall **140** and internal panel **142** are shown. Internal panel **142** is connected to side wall **140** at the center panel and rotates up and down as the box is opened and closed. The rotation or all side walls at the same time decreases the width between walls such that the outer edges **144** and **146** must be tapered in relation to base **148**. If inner panel **142** is square or not tapered sufficiently, it would hit adjacent side walls and prevent opening and closing of the box.

**[0087]** In an alternative embodiment, three panel side wall **150** shows recessed area **154** which allows placement of internal panel **152** to exist in parallel or the same plane, and thus flush with the side wall. The internal panel may utilize Velcro, snaps, adhesive or the like or may be snapped into position with just the outer edge engaging the matching recessed wall in the side wall.

**[0088]** Additionally, the three panel wall **160** reveals snaps **164** which may extend the whole length of the top or just partially, such that snaps **166** or inner panel **162** engage and snap.

**[0089]** Referring to FIG. **11**, collapsible box **170** consists of cover **172** and collapsible box **174**. If side walls of the box collapse inward, the height of the box is limited to half the size of the base otherwise, the walls hit each other preventing closure. The alternative box **170** allows more height as two opposite three panel walls fold outward pulling adjacent walls inward.

**[0090]** Referring to FIG. **12**, collapsible box **176** as seen in FIG. **11**, includes cover **178** which is attached to outer panel **186**. Outside panels **186** and **180** are attached to three panel side walls **184** at center panel **182**. When the three panel side walls **184** are pressed outward, outside panel **186** and **180** unsnap allowing the box to fold flat.

**[0091]** Referring to FIG. **13**, as seen in FIG. **11**, folding box **190** has base **204**, side walls **196** and **198**, three panel side walls **200** and **202**, outer walls **192** and **194**, and cover **214**. Side walls **196**, **198**, **202** and **200** hinged to base **204**. Side walls **200** and **202** have three panels with internal hinges including center panels **208** which are attached to outside panel **192** and **194**, and outer panels **206** and **210** which have snaps **212** that snap into snap components in outside panels **192** and **194**. When center panels **208** are pressed outward, snaps **212** unsnap releasing outside panels **192** and **194** from side walls **200** and **202** allowing them to fold outward. Outer panels **206** and **210** are pulled by center panels **208** which in turn pull side walls **196** and **198** inward to lay flat on base **204**. Cover **214** has sides which collapse and lay flat.

**[0092]** Referring to FIG. **14**, foldable box **220** as seen in FIG. **11**, shows hinged side walls **226** and **224**, hinged base **228**, outside panels **222** and cover **230**. When outside panels are pulled outward to lay flat, three panel side walls **224** are pulled outward which in turn pull side walls **226** inward hinging to base **228**.

**[0093]** Referring to FIG. **15**, folding box **240** as seen in FIG. **11**, is showing in the fully flat folded position. Outer panels **242** and **244** are pulled down which are joined to center panels which when folded are below outer panels, hinged to outer panels **250** and **252** of side walls **258** and **256**. Outer panels **250** and **252** hinge to side walls **246** and **248** which pull these walls inward to lie on the base of the box. Cover **253** sides collapse and it can be folded under or on top of the folded flat box.

**[0094]** Referring to FIG. **16**, folded box **260** has side walls **262**, **264**, **271** and **273**. Side walls **271** and **273** have outer panels **270** and **272** which are folded to cover center panels of walls **271** and **273** underneath. Side walls **262** and **264** are hinged to outer panels **270** and **272**. When side walls **262** and **264** are raised, side walls **271** and **273** are raised simultaneously.

**[0095]** Referring to FIG. **17**, folding box **276** has outside panel **280** which is connected to center panel **282** of side wall **283** and moves integrally with it. Outer panels **281** and **284** of side wall **283** are hinged to center panel **282** of side wall **283** and hinged to side walls **288** and **290**. Side walls **283**, **288**, and **290** are hinged to base **286** such that all walls form a solid box. As side walls are raised to form a box, outside panel **280** comes closer to outer panels **281** and **284** such that snaps or Velcro **296** and **292** of outer panel **208** engage snaps of Velcro **294** and **298** of outer panel **281** and **284** side wall **283**. When snaps or Velcro engages, the side wall requires intentional force to collapse. The box becomes stable during use and collapsible on demand. The Velcro can be so secure that each Velcro connection is required to be separated individually and cannot be done by simply pressing outward on a side wall.

**[0096]** Referring to FIG. **18**, folding box **300** is formed by raising side walls **304**, and **306** which hinge to base **308**. Outside panels **302** are connected to the center panel of side walls **304** and are raised with the wall until it is fully formed.

**[0097]** Referring to FIG. **19**, folding box **310** has outside panels **312** which are connected to side walls **314**. When folding box **310** is fully formed outside panels engage side walls **314** with Velcro, snaps, adhesive or any common method of joining to provide reversible or irreversible support. Side walls **314** are connected to side walls **318** all of which hinge on bas **316** and are supported and stable when adjacent walls and panels engage.

**[0098]** Referring to FIG. **20**, folding container **320** has trapezoid side walls **322**, **324**, **326** and **328**. The side walls diverge as they approach the top of the container making access easier especially when eating food.

**[0099]** Referring to FIG. **21**, folding container **330** is open container of FIG. **20**. Side walls **332**, **334**, **336** and **338** hinge to unfold open and form walls beyond ninety degrees to base **340**. The open diverging nature of the side walls allows easy access. A panel, bar or like structure, not shown, but previously described can be used to stabilize the three panel side walls.

**[0100]** Referring to FIG. **22**, three panel side walls **346**, **360** and **377** show alternative methods of stabilizing the wall after unfolding. Three panel side wall **346** has center panel **348** which is hinged to outer panels **354** and **356** which in turn are

hinged to adjacent container walls not shown in these figures. Center panel **348** has extensions **350** and **352** which act as snaps, clips, Velcro, magnets or like structures which stabilizes the hinges between outer panels **356** and **354** and center panel **348**.

**[0101]** Three panel side wall **360** has center panel **366** which are hinged to outer panels **364** and **368** which are in turn hinged to adjacent folding box side walls not shown. Side wall **360** has insert **370** with which accepts a panel not shown to clip or snap into position stabilizing hinges. The panel many be fixed to the center panel or be removable.

**[0102]** Three panel side wall **377** has center panel **382** hinged to outer panels **378** and **380**. Bar **384** is joined to center panel **382** at the top. Sides **386** and **388** of bar **382** snap, clip or the like onto the top of outer panels **378** and **380** and stabilize the hinges to keep the folded box open.

**[0103]** In one embodiment, the instant invention discloses a container system, wherein the container system comprises at least four walls and a base portion. The container system further includes a set of hinges, wherein the at least four walls are joined together and preferably formed as one piece with the set of hinges at the junction of each wall and the base and wherein the base and four walls may thus feature a contiguous construction and wherein the hinges are positioned within at least two opposing walls allow folding of the wall inward toward the center or outward.

**[0104]** Another embodiment discloses a container system, wherein the container system comprises at least two folding wall members with a set of adjacent wall members. It also includes a set of hinge members, including a base member, wherein the set of hinges is in communication with base member and the set of folding wall members, wherein each individual in the set of folding wall members comprises at least two hinge members and wherein the folding wall members are disposed to fold inward or outward as a result of at least two hinge members within each individual wall of the folding wall members.

**[0105]** In the container system each individual of the set of hinge members located in an individual wall in the set of folding walls, extends from the edge connected to the base to the top of the wall. Included in the container system, each of the set of hinge members within each of the folding walls originates at the corner of the box. Also within the container system of claim the container system comprises of a set of inter-wall hinges disposed at an appropriate angle to the base. When folded, the walls lay flat onto the base or onto the adjacent wall, which is on the base, and wherein if the opposite walls with hinges within fold out, the adjacent walls lay flat on the base.

**[0106]** In another embodiment, the instant invention discloses a foldable enclosure system, wherein the foldable enclosure system comprises of a box apparatus. The box apparatus comprises of a base portion which includes at least four wall portions, and a cover mechanism in mechanical communication with the box apparatus, wherein the side walls fold inward and between the base and the cover mechanism.

**[0107]** The foldable enclosure system further comprises of a panel member where the panel member is attached to the box apparatus on an outer surface of an individual wall portion of the at least four wall portions wall at a midpoint in the outer surface of the individual wall portion. The panel member is rotatably disposed, to allow upward or downward movement of the cover mechanism to fit properly onto the box apparatus in the closed or open position.

**[0108]** Also, within the foldable enclosure system, the cover mechanism comprises at least three side walls in hinged communication with the cover mechanism and wherein an at least one individual of the at least three side walls is divided into a set of three individual panels in hinged communication. The set of three individual panels in hinged communication are disposed to collapse, either inwardly or outwardly, to allow the at least four wall portions to collapse flat onto the cover mechanism and wherein the side walls are raised to open the box apparatus.

**[0109]** The foldable enclosure system further comprises at least two internally disposed panels and wherein at least two of the at least three side walls is divided into a set of three individual panels in hinged communication. An individual of the at least two internal panels is attached to a center panel such that the individual of the at least two internally disposed panels moves in conjunction with the at least three side walls during opening and closing of box apparatus. Additionally, the individual of the at least two internal panels and the center panel comprises a retaining system selected from the group consisting of Velcro®, snaps, adhesive, clips, inserts, reversible glue and glue.

**[0110]** The internal panel may comprise sides which are angled inwardly in order to prevent interference with adjacent walls during closure. Thus, the tri-panel walls may be manufactured to close one under the other and will normally occurs when the tri-panel side wall length is greater than half the dimension of the base width. And, the closing of an individual of the internal panels will be delayed such that a greater angle is required to prevent interference. The minimal inwardly disposed angle of the sides of the internal panel is determined by the arch of closure of the internal panel as intersected by the arch of closure or adjacent walls.

**[0111]** Moreover, the instant invention discloses a storage and containment system, wherein the storage and containment system comprises a foldable box. The storage and containment system also includes a foldable cover attached to the foldable box. The foldable box comprises a hinged base, a set of at least four side walls and at least two internal walls, wherein at least two side walls in the set of at least four side walls comprise three panels, a left panel, a center panel and a right panel. The internal walls are attached to the center panel and reversibly attached to the outer adjacent panels to stabilize the set of at least four side walls. The internal wall may be hinged to the base or free standing and may be attached permanently or reversibly to the center panel. The internal wall may also be attached to the center panel by snaps, velcro, reversible glue, glue, sewn together, or manufactured integrally to the center panel during manufacturing.

**[0112]** In the storage and containment system, the foldable cover seals onto the foldable box by the attachment mechanism selected from the group consisting of an internal adhesive layer, snaps, clips, Ziplock®, glue, and reversible fugitive glue.

**[0113]** In the storage and containment system, the foldable cover may comprise a split cover in hinged communication with the set of side walls. The split cover is disposed in a flat manner on an upper edge of the set of side walls in the open position and the split cover is disposed parallel to the uppermost of the set of side walls when the foldable box is in a closed position.

**[0114]** Additionally, within the storage and containment system, the split cover comprises a retaining mechanism selected from the group consisting of pre-applied adhesives, snaps, tongue and groove mechanisms, and seals. The split covers comprise of side members to cover the outsides of the foldable box wherein an individual of the side members is disposed to overlap a subsequent individual of the side members to provide strength and enhanced sealing.

**[0115]** The storage and containment system further comprises a snap bar apparatus comprising of a bar and at least two end snaps. The storage and containment system also includes a receiving slot disposed within the center panel wherein the snap bar apparatus fits securely into the receiving slot and wherein the at least two snap ends removably retain the outer panels and unsnap to allow rotation of outer panels.

**[0116]** In another embodiment, the instant system discloses a storage and containment system, wherein the storage and containment system comprises at least two static wall members; at least two dynamic wall members, each comprising of a three panel construction; and, an internal panel comprising at least two tapered sections. The internal panel is connected to the side wall at the center panel and is disposed to rotate up and down as the storage and containment system is opened and closed. The storage and containment system also comprises a base member.

**[0117]** In the storage and containment system each individual of the at least two dynamic wall members comprises a recessed area disposed to allow for placement of the internal panel to be flush with the side wall. The internal panel comprises a retaining mechanism selected from the group consisting of Velcro®, snaps, adhesive, clips, inserts, reversible glue, and glue, and are disposed to snap into position with just the outer edge engaging the matching recessed wall in the at least two dynamic wall members.

**[0118]** Further, in the storage and containment, the side walls may be disposed to collapse inwardly and wherein the height of the at least two static wall members and the height of the at least two dynamic wall members is limited to half the size of the length dimension of the base member. In one embodiment, the adjacent wall may comprise a height equal to the width of the base and fold one under the other during closing.

**[0119]** The storage and containment system may further comprise a cover mechanism, a first outer panel, a second outer panel and, a set of three panel side walls. In the storage and containment system, the cover mechanism is attached to the first outer panel. The first outer panel and the second outer panel are attached to the set of three panel side walls at a center panel of the set of three panel side walls such that when the three panel side walls are pressed outward, the first outer panel and the second outer panel unsnap allowing the storage and containment system to fold flat.

**[0120]** In another embodiment, the instant system may disclose a folding box system, wherein the folding box system comprises a base, at least two outside panels, a proximal side wall comprised of a center panel and at least two outer panels, a distal side wall comprised of a center panel and at least two outer panels and at least two median side walls. The at least two outside panels are connected to the center panels of the proximal side wall and the distal side walls respectively and move integrally with the center panel of the proximal side wall and the center panel of the distal side wall respectively.

**[0121]** The at least two outer panels of the proximal side wall and the two outer panels of the distal side wall are hinged to the center panel of the proximal side wall and the center panel of the distal side wall respectively and hinged to at least two median side walls. The proximal side wall and distal side wall are hinged to the base such that all walls form a solid box

**[0122]** The folding box system may further comprise a set of retaining mechanisms located on an upper portion of an inner side of the at least two outside panels. It may also comprise a set of retaining mechanisms locate on an upper portion of an outer side of the at least two outer panels of the proximal side wall and an upper portion of an outer side of the at least two outer panels of the distal side wall. As the side walls are raised to form a box, the at least two outside panels are disposed to move closer to the at least two outer panels of the proximal side wall and the at least two outer panels of the distal side wall such that the retaining mechanisms mate. Moreover the force required to separate the retaining mechanisms is greater than an attractive force of the retaining mechanisms.

**[0123]** In another embodiment, the instant system discloses a folding food containment apparatus, wherein the folding food containment apparatus comprises at least four trapezoidal side wall members and a base member. The at least four trapezoidal side wall members diverge as the at least four trapezoidal side wall members approach an upper portion of the folding food containment apparatus. The at least four trapezoidal side wall members comprises hinges to unfold open and form walls at an angle greater that ninety degrees in relation to the base member.

**[0124]** The folding food containment apparatus may further comprise a snap bar apparatus comprising of a bar and at least two end snaps and a receiving slot disposed within at least two of the at least four trapezoidal side wall members. The snap bar apparatus fits securely into the receiving slot and wherein the at least two snap ends.

**[0125]** In another embodiment, the instant system may disclose a method of utilizing a folding box, wherein the method of utilizing a folding box comprises a set of foldable side walls comprising a set of outer panels and a center panel. The set of outer panels are hinged to center panel of side wall and hinged to side walls and are comprised of a set of engaging mechanisms. And, the at least two outside walls comprise a set of engaging mechanisms, at least two static walls and a base.

**[0126]** The method of utilizing the folding box may comprise the following steps: initiating constructing in a fully flat folded position, exerting an upward force on the at least two outside walls and the outer panels of the set of foldable side walls, exerting an inward force on the at least two outside walls and the outer panels of the set of foldable side walls to form a box shape and exerting an additional inward force on the at least two outside walls to actuate the set of engaging mechanisms of the at least two outside walls and the set of engaging mechanisms of the set of foldable side walls.

**[0127]** Additionally, the instant system may comprise a collapsible container, wherein the collapsible container comprises a substantially equilateral base portion and a substantially rectangular front wall in communication with the substantially equilateral base portion via a front hinge. The substantially rectangular front wall comprises a v-shaped hinge wherein the v-shaped hinge allows the substantially rectangular front wall two fold in two degrees of freedom and wherein the substantially rectangular front wall further com-

prises at least two externally disposed affixing mechanisms mounted on an upper portion of the substantially rectangular front wall.

**[0128]** The collapsible container may also include a substantially rectangular rear wall in communication with the substantially equilateral base portion via a rear hinge, wherein the substantially rectangular rear wall comprises an inverse v-shaped hinge and wherein the inverse v-shaped hinge allows the substantially rectangular rear wall two fold in two degrees of freedom. The substantially rectangular front wall may further comprise at least two externally disposed affixing mechanisms mounted on an upper portion of the substantially rectangular rear wall. It also includes a first substantially rectangular non-folding side wall in hinged communication with the substantially equilateral base portion, comprising of a proximal end and a distal end.

**[0129]** In addition, the proximal end may be in hinged communication with the substantially rectangular front wall and wherein the distal end is in hinged communication with the substantially rectangular end wall. It further includes a second substantially rectangular non-folding side wall in hinged communication with the substantially equilateral base portion, comprising of a proximal end and a distal end; wherein the proximal end is in hinged communication with the substantially rectangular front wall and wherein the distal end is in hinged communication with the substantially rectangular end wall.

**[0130]** Furthermore, the system may feature a substantially rectangular front support member in hinged communication with the substantially equilateral base portion, wherein the substantially rectangular front support member comprises a length and a width equal to the length and the width of the substantially rectangular front wall. And the substantially rectangular front support member may comprise at least two internally disposed affixing mechanisms mounted on an upper portion of the substantially rectangular front support member. The at least two internally disposed affixing mechanisms are disposed to removably mate with the at least two externally disposed affixing mechanisms mounted on an upper portion of the substantially rectangular front wall. Further, the collapsible container includes a substantially rectangular rear support member in hinged communication with the substantially equilateral base portion; wherein the substantially rectangular rear support member comprises a length and a width equal to the length and the width of the substantially rectangular rear wall. The substantially rectangular rear support member comprises at least two internally disposed affixing mechanisms mounted on an upper portion of the substantially rectangular rear support member. The at least two internally disposed affixing mechanisms are disposed to removably mate with the at least two externally disposed affixing mechanisms mounted on an upper portion of the substantially rectangular rear wall.

**[0131]** Thus, when the substantially rectangular front support member support and the substantially rectangular rear support member are mated with the substantially rectangular front wall and the substantially rectangular rear wall, respectively, a void is formed on the upper edges of the substantially rectangular front wall, substantially rectangular rear wall; and, a cover apparatus comprising at least four members wherein the cover apparatus is attached to at least one wall selected from the group consisting of the substantially rectangular front wall and the substantially rectangular front wall.

**[0132]** In an additional series of embodiments, referring to FIGS. **23**-**30**C, the Figures illustrate a container and cover system **800**, comprising a cover mechanism **842** and foldable box system **851**. The cover mechanism **842** may be attached, removably attached, or non-attachable. The cover mechanism **842** structure may also comprise a one piece, a two piece and a two piece foldable construction.

**[0133]** Therefore, in one embodiment, the instant system comprises a structure with at least two opposing tri-paneled wall members wherein one of the at least two opposing tri-paneled wall members is disposed to fold underneath the opposing tri-paneled wall member and be completely covered under the opposing tri-paneled wall member.

**[0134]** Moreover, the two opposing tri-paneled wall members may be designed to include an area identical to that of the base and thus, fold in such a manner that each is the size of the base. Thus, the instant embodiment affords the design additional height, while maintaining a minimal foot print in the folded position.

**[0135]** FIG. **23** illustrates an embodiment comprising a one piece foldable box and cover system in the folded position. FIG. **24** illustrates the one piece foldable box and cover system **800** with the top extracted from the closed position.

**[0136]** FIG. **25** illustrates the one piece foldable box and cover system with the cover in the completion of extraction from the closed position. Additionally, FIG. **26** illustrates the one piece foldable box and cover system with the top fully extracted from the closed position and the sides in the first phase of actuation and illustrating the direction of actuation of the side support members.

**[0137]** FIG. **27** illustrates the one piece foldable box and cover system with the top extracted from the closed position and the sides in the second phase of actuation and further illustrating the direction of actuation of the side support members. And, FIG. **28**, illustrates the one piece foldable box and cover system with the top extracted from the closed position, the sides fully actuated and the side support members fully actuated.

**[0138]** FIG. **29** illustrates the one piece foldable box and cover system with the top fully extracted from the closed position, the sides fully actuated and the side support members fully actuated and further illustrates the direction of motion for closing the cover and the cover closed. FIGS. **30**A-C illustrate a series of side members and further illustrate different notch mechanisms for facilitating system folding and varied configurations of rails **870** for control of retaining the storage apparatus.

**[0139]** Additionally, FIG. **31** illustrates one embodiment of a rail system installed within a container system. The rail system may be located externally, internally (and thus on the inner wall, or some portion thereof, of the tri-panel wall), on the upper edge of the support member or on the upper edge of the tri panel wall. Furthermore, when rail system is located on the upper edge of the tri panel wall, in one embodiment, the rail system may comprise a flexible, foldable or hinge, which conforms with the folding technique of the overall system.

**[0140]** Herein, the rail system is illustrated retaining folder containment mechanisms. FIG. **32** further illustrates one embodiment of a removable rail system as a simple clip on to the side of the system with directions of installation within a container system illustrated.

**[0141]** FIG. **33** illustrates one embodiment of a removable rail system including an insert as a cage or skeleton structure **875** (in one of embodiment of wire) of the instant system and

with directions of installation within the container system further illustrated. FIG. **34** illustrates one embodiment of a rail system wherein the rail system comprises flexible areas **890** for folding with the container system.

**[0142]** In one embodiment, the foldable box **800** consists of side walls **845**, **850**, **852** and **856** which are hinged to base **860** and a set of internal stabilizing panels **841** and **858**. Side walls **845** and **856** may comprise three hinged panels allowing all walls to collapse and open. Side wall **845** may comprise a set of panels **844**, **846** and **848**. Internal stabilizing panel **841** may be attached to the center panel **846** such that it moves in unison with the corresponding wall **845** during opening and closing of box **851**.

**[0143]** In an additional embodiment, the internal walls **841** may utilize an affixing system **847** which may comprise be Velcro®, snaps, adhesive, clips, inserts, reversible glue, glue, magnets or the like on its corners and facing the adjacent side wall **845**. The materials are constructed to be reversible or irreversible methods of stabilizing a wall. The outside panels **844** and **848** of side wall **845** may have Velcro® or other materials mentioned previously placed inside such that when internal panel **841** presses onto them the Velcro® matches in position to hold the internal panel **841** against side wall **845** to prevent collapsing. The box is folded by rotating the cover section and pressing inward on the center panel **846** which collapses side wall **845** separating the fold.

**[0144]** In the instant embodiment, each individual of the side members is designed to collapse inwardly and overlap each other individual of the side members as opposed to other embodiments wherein the side each individual side span approximately one half of the width of the base and thus the upper portion of each individual side will about the upper portion of the opposing individual side in the folded position. Collapsing walls fold inward and need to fold one under the opposite wall if the wall height is more than half the width of the base. The collapsing wall height cannot be greater than the width of the base or it will strike an opposing wall and not close completely.

**[0145]** Additionally, within the instant embodiment, per design, one wall may be pressed below the opposing wall as the system is closed and thus one wall will be engineered to close faster by force than the opposing wall. Alternatively, one wall is constructed such that the arch of closure is different than of the opposing wall, thus allowing the walls not to interfere, or meet, upon closure. In an alternative construction, one wall may be designed to be slightly shorter than the opposing wall to eradicate possible interference issues.

**[0146]** Furthermore, in one embodiment, a support mechanism **870** such as a rail or shelf may be integrated in order to provide a mounting area for folders and other such slidably attached mechanisms for storage of files and other such materials. The support mechanism **870** can be removably attached or permanently attached or integrally constructed as part of a panel of external wall.

**[0147]** Moreover, in one embodiment, the system may be configured and designed for office usage in such matters as storage of paper files. Thus, the system **800** represents an upgrade from normal office use cardboard box storage or large heavy and bulky metal/wooden cabinets. In contrast to large heavy and bulky metal/wooden cabinets the instant system is much less expensive and possesses a substantially greater ease of transport. Although well adapted to large office scenarios, the instant embodiment is ideal for small office and home offices applications.

**[0148]** The box mechanism **800** may also comprise side walls which are divided into three panels separated by hinges while adjacent walls have no hinges within the wall. The two hinges in each wall may extend from the edge connected to the base to the top of the wall. Ideally, the hinge within each wall of opposite walls starts at the corner of the box. When the side walls are rectangular, a 45 degree angled internal wall hinge is used. As the center panel is pressed inward, the adjacent panels provide a junction to the adjacent walls and hinge them downward toward the base. When the walls are pulled up to form a box, the center panel is pulled up by the connecting side panels. The side panels do not remain within the same plane as the center panel and this interaction allows for closure.

**[0149]** Alternatively, the storage container system constructed for general storage of items. In an additional embodiment, the storage container is constructed of the usual materials such as cardboard, plastic, fabric, rubber or the like for office use. The container system is ideal for storage of loose papers, pens, erasers, ink cartridges, referral slips or other items often stored or kept in draws. As discussed herein, a separate insert may be utilized to hold file holders. The insert may be a simple skeleton of wire, a solid construction or a simple clip on to the side of the instant system.

**[0150]** In an additional embodiment, the upper edge of the tri-panel side walls may comprise a V-shape, radial, arcuate, round, oval, square, triangular, or the like in the center, or may even be notched or indented to eviscerate any interference upon closing the system. As illustrated and discussed herein, the cover can be solid, split, foldable, attached or detachable. Thus, when the opposing walls are closed downwardly, the center of one wall will be shorter than the opposite wall such that it will consistently fold under the opposite wall. If the box is designed for file folders, an internal rail is placed slightly lower allowing it to be level and even with the opposite rail.

**[0151]** Additionally, the rail system may be incorporated in order to securedly, or slidably, retain fixtures, including, but not limited to, such storage mechanisms as folders. The rail system may be configured to be integral and permanently affixed within the box member. The rail system may also be removably attached or may also be contained within an entirely separate structure that may be inserted into the storage box design for use, among other functions as a general storage or file storage.

**[0152]** Moreover, as illustrated in FIG. **30**C, the notches, or extensions, may be indented in order to stop file holders from coming loose. Moreover, the rail system may be fit to rest on the outside tri-panel wall and extending over the inside wall.

**[0153]** From a manufacturing standpoint, to enhance foldability and structural strength, the walls may be composed of sets of separately disposed, individual panel members. A fabric layer, such as a cloth or derivative of cloth, may be placed over the sets of separately disposed, individual panel members and sewn between each panel to bind the panels together. Alternatively the cloth may be bonded to the panels. Finally the cloth may be bonded to the box mechanism, which may comprise one solid piece as illustrated in many embodiments shown herein. Thus, the separate panels encased in fabric create walls of panels.

**1**. A container system comprising:

at least four walls;

a base portion;

a set of hinges;

wherein the at least four walls are joined together and formed as one piece with the set of hinges at a junction of each wall and the base portion;

wherein the base portion and at least four walls comprise feature a contiguous construction;

wherein the set of hinges are positioned within at least two opposing walls to allow folding of the at least two opposing walls; and,

wherein the at least four walls comprise at least two walls comprising a total area equal to the total area of the base portion.

**2**. The container system of claim **1** wherein the at least four walls comprise at least two opposing tri-paneled wall members.

**3**. The container system of claim **2** wherein one of the tri-paneled wall members folds underneath the opposing tri-paneled wall member to be completely covered under the opposing tri-paneled wall member.

**4**. The container system of claim **3** wherein a cover folds down on to and encapsulates both of the at least two opposing tri-paneled wall members.

**5**. The container system of claim **2** wherein an upper edge of at least one of the at least two opposing tri-paneled wall members comprises a non rectangular upper edge.

**6**. The container system of claim **5** wherein the non-rectangular upper edge comprises a shape selected from the group consisting of v-shape, radial, arcuate, round, oval, square, triangular, notched and indented.

**7**. The container system of claim **1** wherein the container system further comprises a cover, and the cover comprises a configuration selected from the group: consisting of solid, split, foldable, attached and detachable.

**8**. The container system of claim **1** wherein the at least four walls comprise:

a set of separately disposed, individual panel members; and,

a fabric layer in communication with and covering the set of separately disposed, individual panel members;

wherein a seam in the fabric layer is sealed between each panel member and binds the panel members together; and,

wherein the fabric layer is bonded to the container system.

**9**. The container system of claim **1** further comprising a rail system.

**10**. The container system of claim **9** wherein the rail system is removably attached.

**11**. The container system of claim **9** wherein the rail system is externally mounted to the container system.

**12**. The container system of claim **9** wherein the rail system further comprises an insert system.

**13**. The container system of claim **12** wherein the insert system comprises a construction selected from the group consisting of a skeleton of wire, a solid frame construction or a clip on mechanism.

**14**. A container system comprising:

at least four walls, comprising at least two tri-panel folding walls;

a base portion;

a two piece cover portion; and,

a removably attached rail insert system.

**15**. The container system of claim **14** wherein each of the at least two tri-panel folding walls further comprise a matching upper edge comprising a shape selected from the group consisting of v-shaped, radial, arcuate, round, oval, square, triangular, notched and indented.

**16**. A portable folding storage system comprising:

a set of wall mechanisms comprising;

at least two dynamic tri-panel folding walls;

at least two static walls;

a static base portion;

wherein at least two of the set of wall mechanisms comprise a height in a range between half a length of the static base portion and a full length of the static base portion;

wherein at least two of the set of wall mechanisms comprise a height in a range between half the width of the base and the full width of the base;

a cover mechanism;

a set of stabilizing members;

a rail system; and,

wherein the at least two dynamic tri-panel folding walls fit under each other upon folding.

**17**. The portable folding storage system of claim **16** wherein the rail system is integrated within the set of stabilizing members.

**18**. The portable folding storage system of claim **16** wherein the rail system comprises an insert system.

**19**. The portable folding storage system of claim **18** wherein the insert system comprises a construction selected from the group consisting of a skeleton of wire, a solid frame construction or a clip on mechanism.

**20**. The portable folding storage system of claim **16** wherein each of the at least two tri-panel folding walls comprise a matching upper edge, and further comprising a shape selected from the group consisting of v-shaped, radial, arcuate, round, oval, square, triangular, notched and indented.

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