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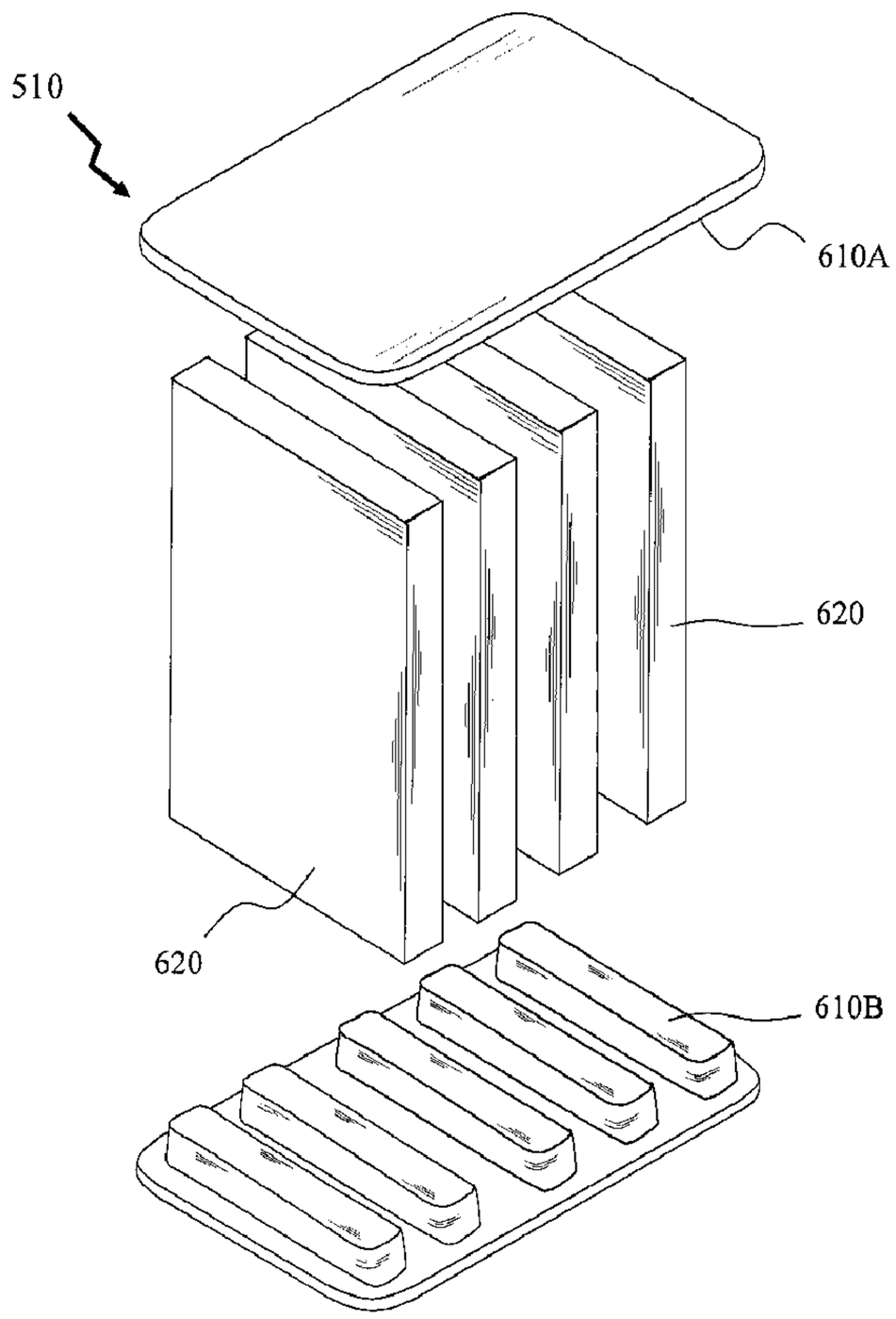

(57) Abrégé/Abstract:
Packaging is an essential element of a product going from a manufacturer to a customer either directly or indirectly through retailers, distributors etc. Whilst a large number of solutions addressing different aspects of product packaging exist within the prior

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art none provide an adequate solution to retailer's evolving demands. Accordingly, there is a need for a packaging solution that allows a common package footprint to handle multiple different products, that provides a container with improved strength characteristics to withstand the collapsing or lateral deflection of vertical container walls which may result when forces are applied to such containers without requiring complex assembly or design, is adapted for pallet- type marketing, namely retail sale of products displayed in bulk in the containers in which they are shipped in bulk, and a container which is easy to manipulate and easy to assemble.

ABSTRACT

Packaging is an essential element of a product going from a manufacturer to a customer either directly or indirectly through retailers, distributors etc. Whilst a large number of solutions addressing different aspects of product packaging exist within the prior art none provide an adequate solution to retailer's evolving demands. Accordingly, there is a need for a packaging solution that allows a common package footprint to handle multiple different products, that provides a container with improved strength characteristics to withstand the collapsing or lateral deflection of vertical container walls which may result when forces are applied to such containers without requiring complex assembly or design, is adapted for pallet-type marketing, namely retail sale of products displayed in bulk in the containers in which they are shipped in bulk, and a container which is easy to manipulate and easy to assemble.

METHODS AND DEVICES RELATING TO PRODUCT PACKAGING AND DISPLAY

FIELD OF THE INVENTION

This invention relates to product packaging and product display, and more particularly to methods and devices for providing low cost product retainment during shipping and enhanced display characteristics at retailer.

BACKGROUND OF THE INVENTION

Retailing or shopping as a concept extends at least as far back as ancient Greece, where the agora served as a marketplace for merchants to sell their goods. In ancient Rome a similar marketplace known as the forum existed. Throughout history fairs and markets have a long history that started when humans felt the desire to exchange goods and services where people would shop. Such markets are frequently weekly whilst fairs were typically less frequent. Subsequently, shops began to be permanently established when market traders stayed in one location and were traditionally specialized, e.g. a bakery, a butchery, a grocer, where the customer would be served by the shopkeeper, who would retrieve all the goods on their shopping list. Shops would often deliver the goods to the customers' homes.

Then in the 1930s supermarkets appeared in the United States during the Great Depression as customers became price sensitive in a manner never seen before. In supermarkets, and their larger cousins the hypermarkets, customers select goods, retrieve them off the shelves using self-service, and may even scan the items to generate their bill and pack their own goods. Customers deliver their own goods. Subsequently, online retailing has been added to the options for customers via the Internet where after selection and purchase the goods are delivered to their homes.

Within each of these different retailing models, be it individual retailers, supermarkets, or online retailing operations, there exists another retailing concept, business-to-business (B2B) retailing wherein one business acts as the customer to another business. For example, a supermarket, such

as Krogers, Safeway, Wal-Mart etc, sources the products it sells either directly from multiple producers such as PepsiCo, Nestlé, Unilever, Kraft, and General Mills or from food distributors such as Sysco Corporation who purchase and manage logistics for the retailer.

Since the Industrial Revolution products have been shipped in bulk from a manufacturer to a retailer in a variety of packaging display vehicles. The package display vehicles need to be attractive, stand up to the rigors of shipment, requiring minimal handling at the retail level and provide easy access to the product. They also need to be cost effective. With the recent drastic changes in the retail environment over the past few years with low cost supermarkets / hypermarkets and big box retailers these retailers no longer want to even cut cases for display or unpack goods onto the shelves. Excess protective packaging such as increase board strength, using double wall versus single wall, dividers, corner boards, slip sheets, layer pads or trays between layers of packages, all add additional material, labor and freight costs to the manufacturer, retailer and the consumer. These cost variables can frequently be overlooked but can add to significant excess costs. The constant competitive pressure to drive costs down on the manufacturing and retail sides, while, at a minimum, maintaining profitability present challenges which the embodiments of the invention address.

At the same time retailers demand packaging that facilitates high sales turnover within the allocated space in the shortest amount of time. They demand that the products be ready to shop once the pallet hits the retail floor and any perimeter protective packaging is removed. The next time they want to touch the packaging display vehicle is to recycle it once empty. To compound matters, many of the large retailers and warehouse clubs, have varying requirements for special promotions, graphics, packages, sizes, and counts etc. which make long production runs less feasible. Adding to these factors, there is constant pressure to reduce the costs to retailers and as the life cycles of a product package size, structure, quantity, graphics, merchandising, etc. become shorter then these reduce the feasibility for long term packaging machinery expenditures by the manufacturer. In many instances, the retailer does not want to do anything more than remove part of the packaging the products are shipped in to yield the product display the customer interacts with.

At the same time retailers and customers alike do not want products that have been damaged in transit, storage or on display as well as ensuring other problems are overcome to avoid deleterious effects on the product that, in turn, might impair its marketability. Likewise, retailers and manufacturers alike do not want the costs associated with returns where the product has been damaged even if the packaging appears unaffected. This has tended to result in increased packaging around the product in order to attain the necessary strength and rigidity. Of the packaging display vehicles used for such packaging, it has heretofore been necessary, in many instances, for them to be formed of heavy gauge costly material and/or to utilize special reinforcing inserts to be positioned within the packaging display vehicle. Numerous multiple 90 and 180 degree folds are required to lock reinforcement features in place adding additional labor costs, production displays and additional opportunities for repetitive stress injuries to occur.

Further, the weight and current designs of the superimposed stacked arrangement of product packaging in storage, display, shipment, etc. certain external packaging is subjected to substantial compressive forces leading to use of thicker cardboard etc. in packaging in order to avoid the collapse or distortion of the lower packaging sometimes nesting inside the container it was supposed to be superimposed and stacked on, resulting in sidewall deflection, tearing of adjoining interlocking supports and panels, accidental exposure of product and in some cases, pallet loads collapsing. To overcome this, some packaging designs use display trays with smaller footprints and a smaller number of products per display in order to minimize twisting, torque and other disfigurement resulting from excessive stress when extra products are added. This results in an increased unit cost per package as the cost of the display and assembly is prorated over fewer pieces.

Most prior art packaging efforts focus on getting the product safely from the plant, to the retailers' distribution center and ultimately to the retail floor. In some cases, minimal effort seems to be placed on designing a package that will withstand the rigors of how it is actually shopped on to the retail floor. At this stage, the removal of product(s) from the packaging should leave the remainder intact and presenting an appealing image to the customer. The retailer does not want to pay employees to individually reposition each product item on display in a manner

that is both appealing to the customer and safe for the product nor do customers want to rummage through a product display to ascertain the product in front of them or find one that appeals to them. Accordingly, many products are packaged in packaging formats that provide a stable base but result in increased packaging volume and therefore reduced product count per package. Embodiments of the invention address these issues.

At the same time, lead times are continuing to shrink such that varying product packaging requires manufacturers can mix-and-match a small number of elements to provide the desired flexibility in packaging options and desired response time of retailers Embodiments of the invention address these issues.

Within the prior art there are a large number of patents that address different aspects of product packaging but none address all of the issues identified above nor do any of these prior art packaging approaches provide an adequate solution to retailers evolving demands! Further, most of these prior art approaches tend to address products that are small, lightweight, and approximately constant in their three dimensions. Solutions for high aspect ratio products are far less common.

Accordingly, there is a need for a packaging solution that allows a common package footprint to handle multiple different products.

There is further a need in the art for a container with improved strength characteristics to withstand the collapsing or lateral deflection of vertical container walls which may result when forces are applied to such containers without requiring complex assembly or design.

There is further a need for a container that is optimally adapted for pallet-type marketing, namely retail sale of products displayed in bulk in the containers in which they are shipped in bulk.

There is a further a need for a container which is easy to manipulate and easy to assemble.

Other aspects and features of the present invention will become apparent to those ordinarily skilled in the art upon review of the following description of specific embodiments of the invention in conjunction with the accompanying figures.

SUMMARY OF THE INVENTION

It is an object of the present invention to mitigate limitations within the prior art relating to product packaging and product display, and more particularly to methods and devices for providing low cost product retainment during shipping and enhanced display characteristics at retailer.

In accordance with an embodiment of the invention there is provided a method comprising;

providing a first packaging support comprising a predetermined first count of first platforms, each first platform being defined by a predetermined width;

providing a second packaging support comprising a predetermined second count of second platforms, each second platform being defined by a predetermined width;

inserting the first and second packaging supports into an outer carton;

inserting a predetermined third count of products into the outer carton, wherein

the first and second packaging supports provide for stable positioning of the predetermined third count of products during shipment to and display at a retailer's establishment.

In accordance with an embodiment of the invention there is provided a method comprising;

receiving a product of a plurality of products at a location for display within a shipment carton, the shipment carton comprising:

a first packaging support comprising a predetermined first count of first platforms, each first platform being defined by a predetermined width;

a second packaging support comprising a predetermined second count of second platforms, each second platform being defined by a predetermined width;

an outer shell;

displaying the product of the plurality of products at the location within a display carton, wherein the product of the plurality of products are inserted within the outer shell and are restrained by the first and second packaging supports and the first and second packaging supports provide for stable positioning of the product of the plurality of products during shipment and display.

According to one aspect of the present invention, there is provided a method for shipping products in an outer carton having at least two facing opposite side walls in which the products are to be displayed following shipping at a reseller's establishment comprising;

providing a first packaging support comprising a plurality of first raised, parallel platforms, each first platform being defined by a predetermined width;

providing a second packaging support comprising a plurality of second raised parallel platforms, each second platform being defined by a predetermined width;

inserting the first and second packaging supports into the outer carton such that the first packaging support rests adjacent to one of the carton's at least two facing opposite side walls and the second packaging support is spaced-apart from the first packaging support and rests adjacent to the other of the carton's at least two facing opposite side walls, wherein the plurality of first platforms of the first packaging support faces the plurality of second platforms of the second packaging support;

inserting a count of products into the outer carton between the spaced apart first and second package supports such that opposite ends of each product of the count of products rest between a pair of the first platforms of the plurality of first platforms on the first packaging support and a pair of the second platforms of the plurality of second platforms on the second packaging support, wherein

the first and second packaging supports provide for stable positioning of the count of products during shipment to and display at the reseller's establishment.

According to another aspect of the present invention, there is provided a method for displaying products in an outer carton having at least two facing opposite side walls in which the products are to be displayed following receipt at a reseller's establishment comprising;

opening an upper surface of the carton, above the at least two facing opposite side walls, exposing the product within the carton, and displaying the product within the carton following receipt at a reseller's establishment, wherein the carton comprises:

a first packaging support comprising a plurality of first raised, parallel platforms, each first platform being defined by a predetermined width;

a second packaging support comprising a plurality of second raised parallel platforms, each second platform being defined by a predetermined width;

wherein the first and second packaging supports are located in the outer carton such that the first packaging support rests adjacent to one of the carton's at least two facing opposite side walls and the second packaging support is spaced-apart from the first packaging support and rests adjacent to the other of the carton's at least two facing opposite side walls, wherein the plurality of first platforms of the first packaging support faces the plurality of second platforms of the second packaging support;

a count of products located in the outer carton between the spaced apart first and second package supports such that opposite ends of each product of the count of products rest between a pair of the first platforms of the plurality of first platforms on the first packaging support and a pair of the second platforms of the plurality of second platforms on the second packaging support, wherein

the first and second packaging supports provide for stable positioning of the count of products during display at the reseller's establishment.

Other aspects and features of the present invention will become apparent to those ordinarily skilled in the art upon review of the following description of specific embodiments of the invention in conjunction with the accompanying figures.

BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments of the present invention will now be described, by way of example only, with reference to the attached Figures, wherein:

Figures 1 and 2 depict a prior art approach to product packaging according to US Patent 6,386,366;

Figure 3 depicts a prior art approach to product packaging according to US Patent 7,004,379;

Figures 4A and 4B depict typical packaging formats within the prior art;

Figure 4C depicts a typical retailer shelf for products with high aspect ratio,

Figure 5 depicts a packaging methodology according to an embodiment of the invention;

Figure 6 depicts a packaging methodology according to an embodiment of the invention;

Figures 7A and 7B depict packaging methodologies according to embodiments of the invention;

Figure 8 depicts packaging methodologies according to embodiments of the invention;

Figure 9 depicts packaging methodologies according to embodiments of the invention;

Figure 10 depicts packaging methodologies according to embodiments of the invention;

Figure 11 depicts packaging methodologies according to embodiments of the invention; and

Figure 12 depicts packaging methodologies according to embodiments of the invention.

DETAILED DESCRIPTION

The present invention is directed to product packaging and product display, and more particularly to methods and devices for providing low cost product retainment during shipping and enhanced display characteristics at retailer.

The ensuing description provides exemplary embodiment(s) only, and is not intended to limit the scope, applicability or configuration of the disclosure. Rather, the ensuing description of the exemplary embodiment(s) will provide those skilled in the art with an enabling description for

exemplary embodiment(s) will provide those skilled in the art with an enabling description for implementing an exemplary embodiment.

A "package," "box," "container," or "carton" as used herein and throughout this disclosure, refers to an outer packaging employed in the packaging, shipment, storage, and display of products which are packaged or unpackaged within.

Referring to Figure 1 there is depicted a prior art packaging approach as disclosed within US Patent 6,386,366. As depicted a container 101 which is currently used to transport and store several individually packaged products P is depicted. The container 101 includes a body 102 having a bottom panel 103 and two side panels 104 extending upward from opposite sides of the bottom panel 103. Openings 105 are provided in opposite sides of the body 102 and permit limited viewing of one face of the packaged products P. The container 101 also includes a removable lid 106. In order to display the packaged products P loaded within the container 101, the lid 106 is removed. Thereafter, each individually packaged product P must be removed from the body 102 and properly positioned in a display location. This, however, is a labor-intensive process, as previously described.

Alternatively, after the lid 106 is removed, the body 102, with the packaged products P loaded therein, can be positioned in a display location. In order to permit access to the packaged products P by a consumer, a bottom flap 107 and side flaps 108 of the body 102 must also be opened. In this state, however, the body 102, appears unkempt and only permits limited viewing of one face of the packaged products P. In addition, when the bottom flap 107 and the side flaps 108 are opened, the body 102 no longer provides adequate support for the packaged products P. For example, if the packaged products P are packaged as individual bags or soft-side packages, the side flaps 108 and, especially, the bottom flap 107 no longer provide vertical or lateral support for the packaged products P. The packaged products P, therefore, can easily fall through one of the openings 105. Consequently, positioning of the body 102 in a display location, with the packaged products P loaded therein, results in a product display which is generally unappealing and unattractive to a consumer.

An embodiment of a prior art shipping and display container 100 according to the prior art packaging approach according to embodiments of the invention as disclosed within US Patent 6,386,366 are depicted in Figure 2. As shown in Figure 2, the tray 100 of the shipping and display container includes a bottom panel 110, a back panel 120 extending upward from the bottom panel 110 along a back edge thereof, a front panel 130 extending upward from the bottom panel 110 along a front edge thereof, and a pair of bottom side flaps 112 extending from opposite sides of the bottom panel 110. The back panel 120 and the front panel 130 are each preferably oriented generally perpendicular to the bottom panel 110. The bottom side flaps 112 extend upward from the bottom panel 110 and are also preferably oriented generally perpendicular to the bottom panel 110. As such, the tray 100 is generally L-shaped.

Further, as shown in Figure 2, an upper edge 114 of the respective bottom side flaps 112 is preferably linear, extending generally parallel with a lower edge 116, such that the bottom side flaps 112 are relatively uniform in height. Alternatively, however, the upper edge 114 can assume other configurations, either linear or non-linear, such that the bottom side flaps 112 can have shapes, either regular or irregular, other than that shown in Figure 2. The tray 100 also includes a pair of back side flaps 122 extending from opposite sides of the back panel 120 and a pair of front side flaps 132 extending from opposite sides of the front panel 130. The back side flaps 122 extend forward from the back panel 120 and are preferably oriented generally perpendicular to the back panel 120. The front side flaps 132 extend rearward from the front panel 130 and are preferably oriented generally perpendicular to the front panel 130. As such, each of the bottom side flaps 112 are secured to an adjacent one of the back side flaps 122 and the front side flaps 132. The bottom side flaps 112 can be secured to the back side flaps 122 and the front side flaps 132 by, for example, adhesive, tape, or staples.

The front panel 130 includes a back face (not shown) facing toward the back panel 120 and a front face 134 facing away from the back panel 120 opposite the back face. As shown in FIG. 5, the front face 134 provides a display area adapted to receive indicia 136 thereon. The indicia 136 generally includes information identifying the packaged products P positioned on the tray 100 and can be, for example, printed directly on the front face 134 or a label affixed to the front face

134. Also as shown in Figure 2, the cover 200 includes a top panel 210 and a front panel 220 extending downward from the top panel 210 along a front edge thereof. The front panel 220 is preferably oriented generally perpendicular to the top panel 210. As such, the cover 200 is also generally L-shaped.

The cover 200 also includes a pair of top side flaps 212 extending from opposite sides of the top panel 210, a back flap 214 extending from a back edge of the top panel 210, and a pair of front side flaps 222 extending from opposite sides of the front panel 220. The top side flaps 212 extend downward from the top panel 210 and are preferably oriented generally perpendicular to the top panel 210. The back flap 214 is configured to extend generally downward from the top panel 210 and is pivotable relative to the top panel 210 about the back edge thereof. The front side flaps 222 extend rearward from the front panel 220 and are preferably oriented generally perpendicular to the front panel 220. As such, each of the top side flaps 212 are secured to an adjacent one of the front side flaps 222 by, for example, adhesive, tape, or staples.

Referring to Figure 3 there is depicted a prior art approach to product packaging according to US Patent 7,004,379 wherein the folded and glued preform after the automatic folding and gluing steps and prior to shipment are depicted by assemblies 310 as well as prior to folding and gluing with preform 320. The preform 320 employs multiple panels that form the corner posts which are folded over each other about fold lines in order to form a corner comprised of two layers of sheet material. The fold line, however, extends from the top of the corner to approximately three-quarters of the way down the corner and is then cut to form a foot. Thus, when the panel is folded over to overlay another panel, the foot remains extending outward. Also when the panel is folded over so as to overlie the other panel, a smaller panel at the free end of the corner panels overlies the edge of the inner surface of the side wall and is glued thereto to form a side corner wall and the main portion of panel overlying the other panel forms a front corner wall. Each of the other corners is formed in the identical manner. Shoulder forming panels and positioning tabs are pre-cut and formed at the uppermost part of the panel forming the side walls and include old lines and die-cut sections. At the manufacturer, the top end of the panel forming the side wall is folded over along a fold line and the inner surface of the panel is glued to the inner surface of the

side wall. Once assembled the assembly 310 allows for robust stacking of assemblies 310 for shipment etc but poor display options to the customer as the assemblies 310 must be displayed transversely for ease of access.

However, both prior art packaging solutions as depicted in Figures 1 through 3 are typical of those within the prior art and address the provisioning of packaging shells within which discrete product packages are presented to the customer, where as depicted in Figure 4A, such prior art packaging options exploit packages for each individual product that are inherently stable due to their exploitation of packaging dimensions that are approximately constant in each axis and have large bases upon which each individual product package sits. Referring to Figure 4B a prior art packaging technique is depicted wherein the outer shell of the packaging incorporates a series of slots within which the cardboard back sheet of the product packaging are inserted. However, as evident, the manufacturer does not exploit this for all of their products and a typical display of products without large product package bases is depicted in area 430 with product packages lying down. Each display package is designed specifically to the product displayed and accordingly first display package 410 for 3 packs of halogen lights is different to second display package 420 for single pack incandescent lights. Similarly, Figure 4C shows a typical display within a big box retailer for decorative floor registers for air conditioning vents wherein each display package simply has the floor registers leaning against the back wall of the display package initially until customers remove one or more wherein they may lean forward, slide down, etc.

Accordingly, referring to Figure 5, there is depicted a packaging methodology according to an embodiment of the invention for products wherein a standard box 520 when assembled has product unit 510 inserted within it which is then sealed to yield shipment box 530. At the retailer, the first to fourth flaps 520A to 520D may be removed leaving carton 520E with product unit 510 visible, allowing the customer to remove each product 510A.Once all product 510A is removed, the carton 520E and Packaging Supports 510B may be disposed off. Optionally, Packaging Supports 510B may be recycled along with carton 520E as they are both based upon similar materials, e.g. paper based or plastic, or they may be recycled separately as they are

formed from different materials, e.g. a cardboard box for carton 520E and plastic Packaging Supports 510B. Alternatively, the manufacturer may work with the retailer to recover the Packaging Supports 510B by collecting these at the next delivery of further products. Now referring to Figure 6 there is depicted a product unit 510 in expanded view with first and second Packaging Supports 610A and 610B at two ends of a set of products 620. Whilst Figures 5 and 6 depict a packaging methodology according to an embodiment of the invention for shipment and retail display it would be evident that the concept may also be used solely for shipment with the retailer removing products from the packaging prior to display or cutting off the front of the box 520 and merely removing the four flaps 520A to 520D and Packaging Support 610A for display.

Referring to Figures 7A and 7B there are depicted packaging methodologies according to embodiments of the invention. As depicted in Figure 7A a perspective view of Packaging Support 700 is shown comprising a base plate 730 with a plurality of platforms 720 which define between them a plurality of zones 710 which are dimensioned to fit one end of a product to be packaged for shipment and retail display. Figure 7B depicts plan and front elevation views of Packaging Support 700. As depicted, the number of platforms 720 may be varied for a given base plate 730 to suit the product being packaged. In this manner, the manufacturer may standardize the carton within which the Packaging Supports 700 and products are assembled such that all aspects of palletization, shipments, display are consistent irrespective of whether the product being shipped is for example a thin vent grill or a deep floor register.

This being evident in Figure 8 wherein first and second Packaging Supports 800A and 800B according to embodiments of the invention are depicted. First Packaging Support 800A comprising M platforms of width $W1$ with zones $G1$ between them. Second Packaging Support 800B comprising N platforms of width $W2$ with zones $G2$ between them. As depicted in Figure 9, first and second Packaging Supports 900A and 900B are depicted in cross-section showing that the platforms may be solid or formed from a sheet so that the platforms are hollow. Beneficially ,the second Packaging Support 900B allows a large number of Packaging Supports to be stacked and shipped to the manufacturer for use from their supplier. As discussed *supra*, a Packaging Support may be formed from a variety of materials including, but not limited to,

stamped cardboard, cut-and-folded cardboard, molded paper pulp, molded fiber, expanded polystyrene, vacuum formed polyethylene terephthalate (PET) and polyvinyl chloride (PVC), polyethylene, polypropylene, as well as molded and / or shaped foams. In some embodiments of the invention the Packaging Supports may be metal should the product warrant it through considerations such as cost, weight, etc. Cardboard and molded pulp variants may be made waterproof through the spray application of a wax, for example. In other embodiments of the invention the Packaging Support may be machined, laser cut etc from a pre-form.

Now referring to Figure 10, there are depicted packaging methodologies according to embodiments of the invention with first to third Packaging Supports 1000A to 1000C. As depicted with first and second Packaging Supports 1000A and 1000B respectively, the platforms may be offset at a predetermined angle to an axis of the first and second Packaging Supports 1000A and 1000B respectively. Accordingly, upon the retailer shelving the first and second Packaging Supports, 1000A and 1000B respectively provide for the products 1110 to sit against the rear of the carton 1120 such as depicted in first retailer cross-section 1100A in Figure 11 or the bottom of the carton 1120 and be sloped slightly such as depicted in second retailer cross-section 1100B in Figure 11. Alternatively, when displaying products vertically no angle may be employed.

Third Packaging Support 1000C in contrast is designed to engage with large products within a carton, e.g. air filters which are large surface area but thin, large area grills, and other products. As depicted in Figure 12 with first and second cross-sections 1200A and 1200B respectively, a Packaging Support 1210 may be employed with thin product 1220 and thick product 1230. If the spacing of the platforms within the Packaging Support 1210 is greater than the thickness of the product then each zone between the platforms may be employed to hold a product. In other embodiments of the invention only a portion of the zones between the platforms may be employed such that for example the same Packaging Support 1210 is employed with a range of products for packaging, shipment and display.

Within the foregoing descriptions of embodiments of the invention in respect of Figures 5 through 12 it may have been assumed by the reader that the Packaging Supports at either end are

identical. However, they may be different in order to accommodate the particular product packaging. It would also be evident that multiple sets of Packaging Supports may be employed within a single container or carton with or without additional flat sheet or shaped dividers. Similarly, a Packaging Support may according to the requirements of the manufacturer or retailer have platforms of different dimensions within a single Packaging Support. For example, a product may require 2 elements, e.g. a floor register and air filter which have different dimensions. Rather than these being disposed in adjacent cartons with, for example 20 registers in a first carton and 80 filters in a second carton the display packaging may comprise 16 registers with 16 filters alternating within the same carton. Accordingly, this may provide for reduced waste and / or eased inventory management at the retailer. In other embodiments a product may exploit two or more zones within a Packaging Support at one side of the product and a different number of zones in a Packaging Support at the other side of the product.

Within embodiments of the invention the Packaging Supports have been described as separate to the box within which the products are shipped and / or displayed. However, it would be evident that within other embodiments of the invention the Packaging Supports may be integral to the box either through attachment prior to insertion of the products, e.g. by glue, tape, staples, etc, or integrally formed within the box at its manufacture.

The foregoing disclosure of the exemplary embodiments of the present invention has been presented for purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many variations and modifications of the embodiments described herein will be apparent to one of ordinary skill in the art in light of the above disclosure. The scope of the invention is to be defined only by the claims appended hereto, and by their equivalents.

Further, in describing representative embodiments of the present invention, the specification may have presented the method and/or process of the present invention as a particular sequence of steps. However, to the extent that the method or process does not rely on the particular order of steps set forth herein, the method or process should not be limited to the particular sequence of steps described. As one of ordinary skill in the art would appreciate, other sequences of steps

may be possible. Therefore, the particular order of the steps set forth in the specification should not be construed as limitations on the claims.

CLAIMS

What is claimed is:

1. A method for shipping products in an outer carton having at least two facing opposite side walls in which the products are to be displayed following shipping at a reseller's establishment comprising;

providing a first packaging support comprising a plurality of first raised, parallel platforms, each first platform being defined by a predetermined width;

providing a second packaging support comprising a plurality of second raised parallel platforms, each second platform being defined by a predetermined width;

inserting the first and second packaging supports into the outer carton such that the first packaging support rests adjacent to one of the carton's at least two facing opposite side walls and the second packaging support is spaced-apart from the first packaging support and rests adjacent to the other of the carton's at least two facing opposite side walls, wherein the plurality of first platforms of the first packaging support faces the plurality of second platforms of the second packaging support;

inserting a count of products into the outer carton between the spaced apart first and second package supports such that opposite ends of each product of the count of products rest between a pair of the first platforms of the plurality of first platforms on the first packaging support and a pair of the second platforms of the plurality of second platforms on the second packaging support, wherein

the first and second packaging supports provide for stable positioning of the count of products during shipment to and display at the reseller's establishment.

2. The method according to claim 1 wherein;

at least one of the first and second packaging supports is at least one of:

formed from a sheet;

formed as a sheet;

attached to the inner surface of the outer carton prior to the insertion of the products; and integrally formed as part of the outer carton during assembly of the carton.

3. The method according to claim 1 wherein;

at least one of the first and second packaging supports is at least partially formed from a material selected from the group consisting of cardboard, paper pulp, fiber, expanded polystyrene, polyethylene terephthalate, polyvinyl chloride (PVC), polyethylene, polypropylene, and a foam.

4. The method according to claim 1 wherein;

at least one of the first and second packaging supports is at least partially formed by a process selected from the group consisting of stamping, cutting-and-folding, molding, vacuum forming, machining, laser cutting, and cutting.

5. The method according to claim 1 wherein;

the plurality of first platforms are angled at a first angle to an axis of the first packaging support;

the plurality of second platforms are angled at a second angle to an axis of the second packaging support; wherein

when displayed the products are tilted within the carton.

6. A method for displaying products in an outer carton having at least two facing opposite side walls in which the products are to be displayed following receipt at a reseller's establishment comprising;

opening an upper surface of the carton, above the at least two facing opposite side walls, exposing the product within the carton, and displaying the product within the carton following receipt at a reseller's establishment, wherein the carton comprises:

a first packaging support comprising a plurality of first raised, parallel platforms, each first platform being defined by a predetermined width;

a second packaging support comprising a plurality of second raised parallel platforms, each second platform being defined by a predetermined width;

wherein the first and second packaging supports are located in the outer carton such that the first packaging support rests adjacent to one of the carton's at least two facing opposite side walls and the second packaging support is spaced-apart from the first packaging support and rests adjacent to the other of the carton's at least two facing opposite side walls, wherein the plurality of first platforms of the first packaging support faces the plurality of second platforms of the second packaging support;

a count of products located in the outer carton between the spaced apart first and second package supports such that opposite ends of each product of the count of products rest between a pair of the first platforms of the plurality of first platforms on the first packaging support and a pair of the second platforms of the plurality of second platforms on the second packaging support, wherein

the first and second packaging supports provide for stable positioning of the count of products during display at the reseller's establishment.

7. The method according to claim 6 wherein;

at least one of the first and second packaging supports is at least one of:

formed from a sheet;

formed as a sheet;

attached to the inner surface of the outer carton prior to the insertion of the products; and

integrally formed as part of the outer carton during assembly of the carton.

8. The method according to claim 6 wherein;

at least one of the first and second packaging supports is at least partially formed from a material selected from the group consisting of cardboard, paper pulp, fiber, expanded polystyrene, polyethylene terephthalate, polyvinyl chloride (PVC), polyethylene, polypropylene, and a foam.

9. The method according to claim 6 wherein;

at least one of the first and second packaging supports is at least partially formed by a process selected from the group consisting of stamping, cutting-and-folding, molding, vacuum forming, machining, laser cutting, and cutting.

10. The method according to claim 6 wherein;

each of the plurality of first platforms are angled at a first angle to an axis of the first packaging support;

each of the plurality of second platforms are angled at a second angle to an axis of the second packaging support; wherein

when displayed the products are tilted within the carton.

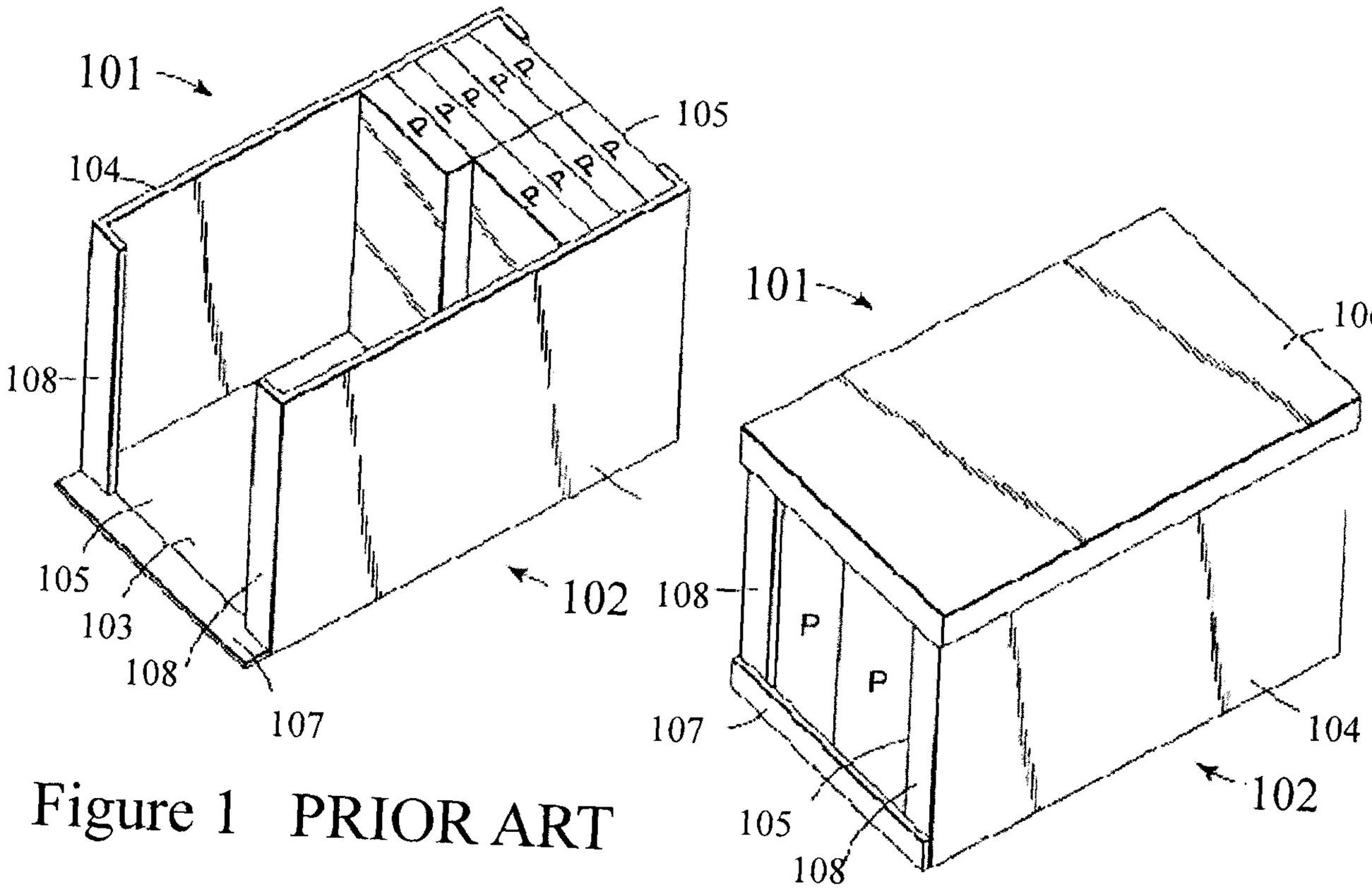
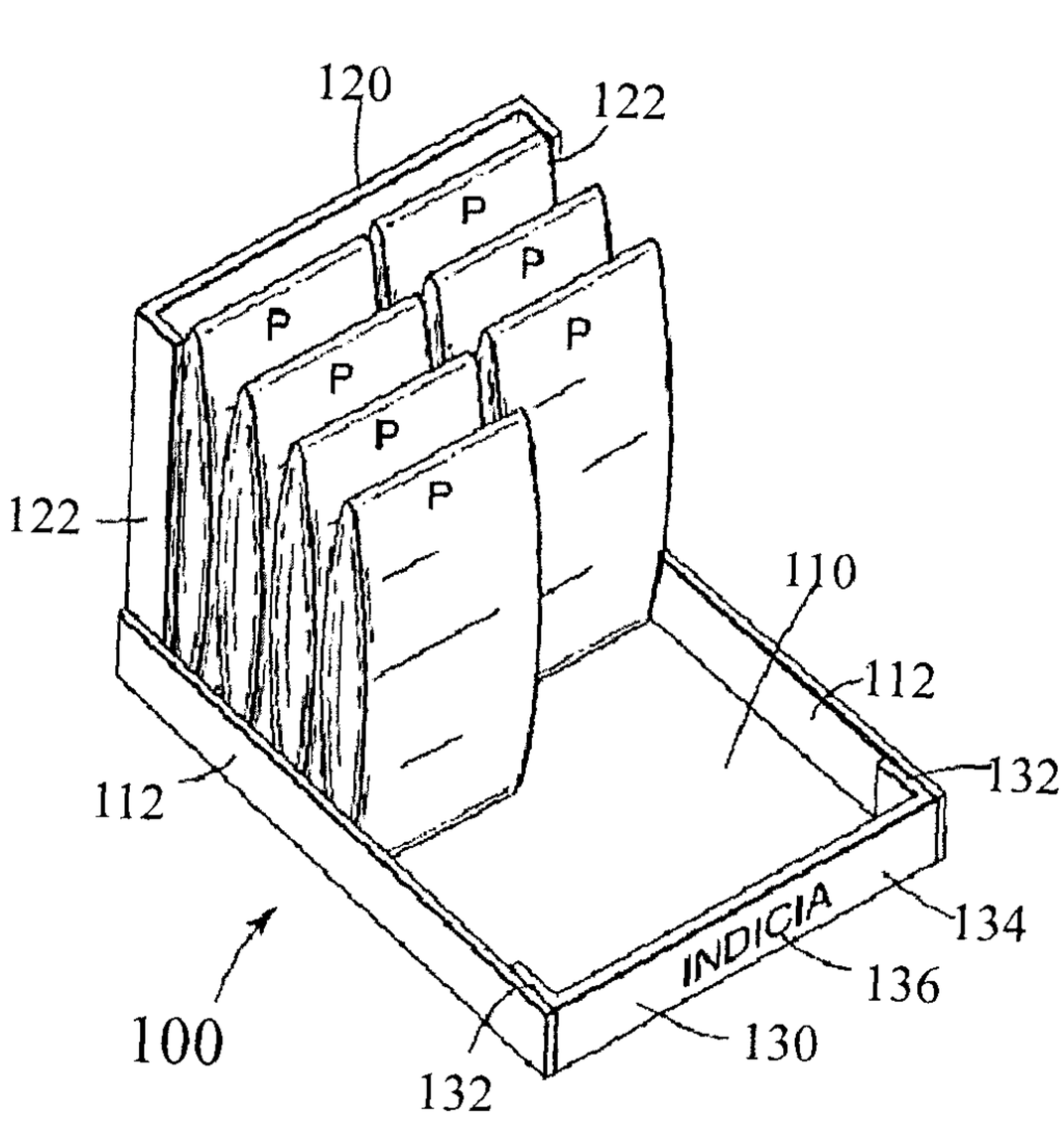


Figure 1 PRIOR ART



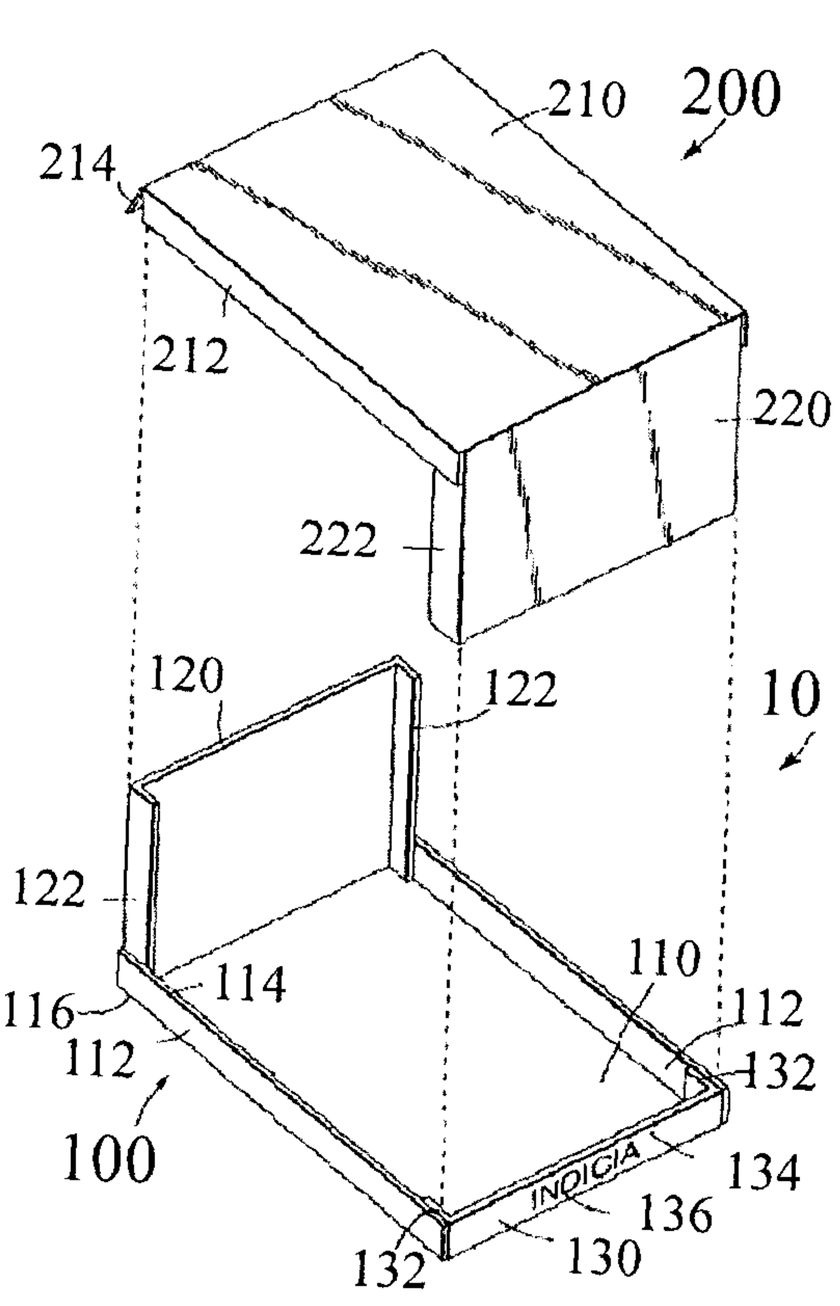
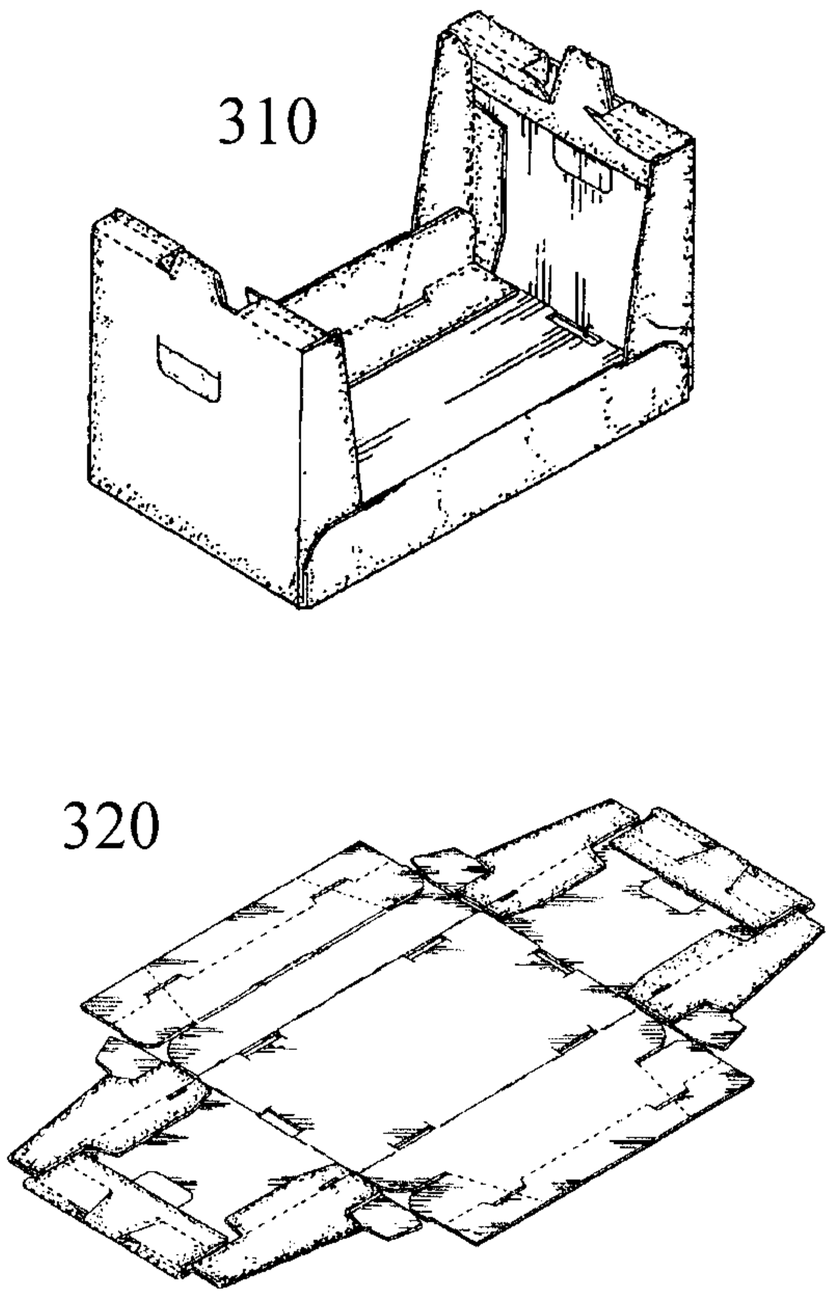


Figure 2 PRIOR ART



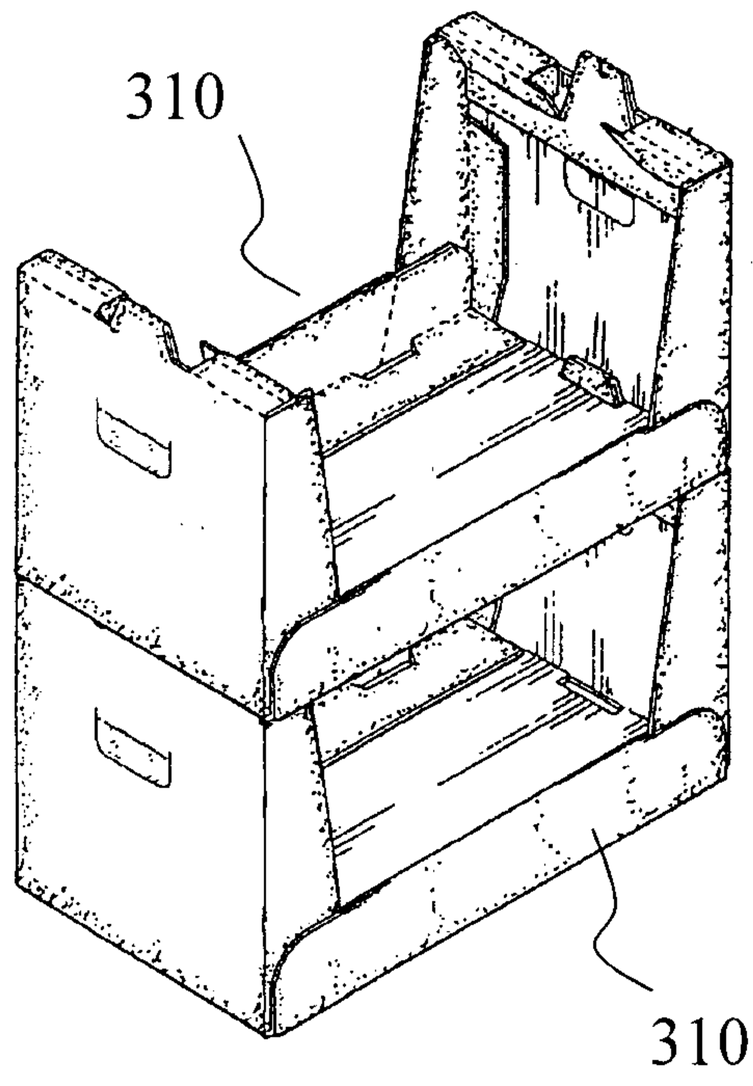


Figure 3 PRIOR ART

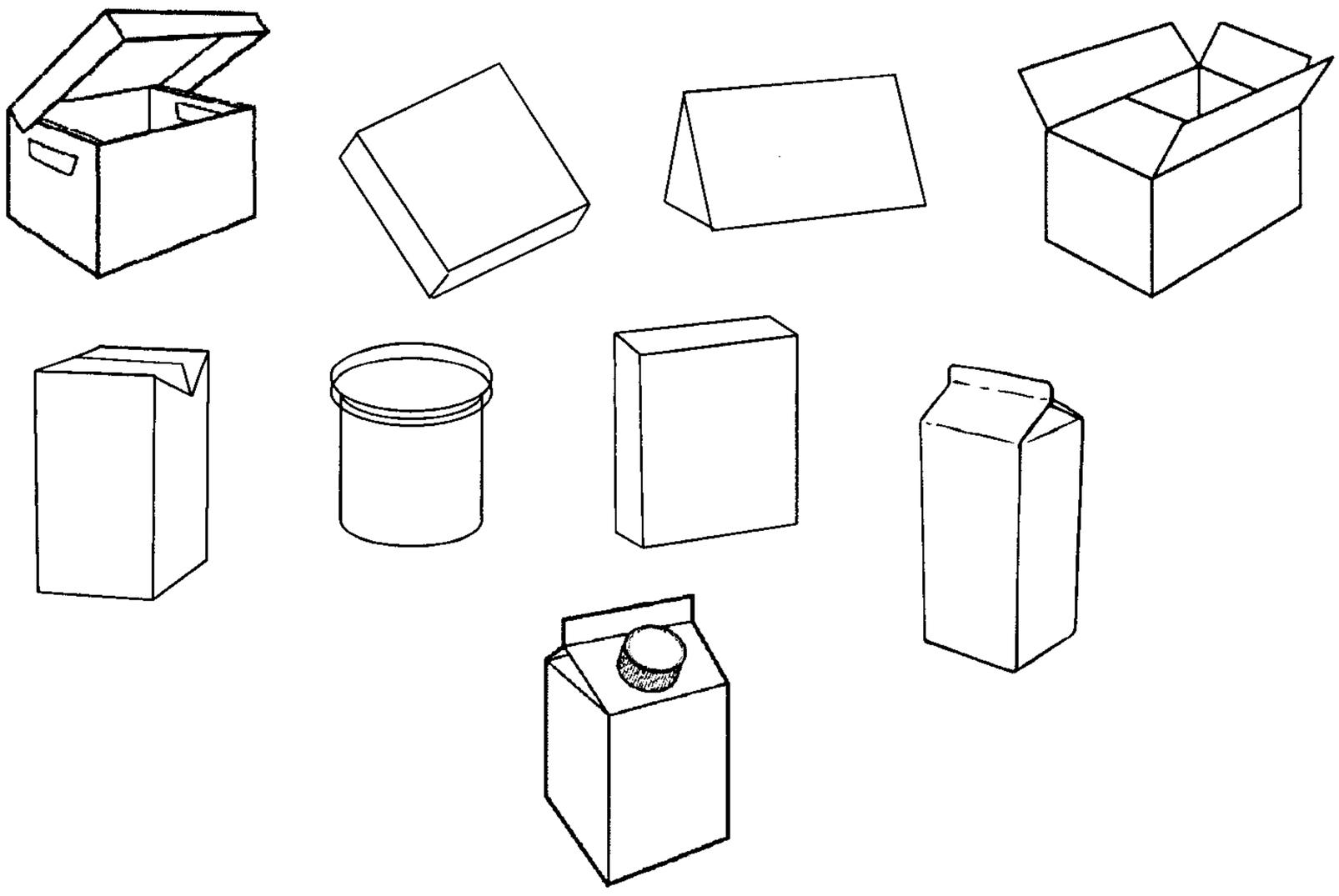


Figure 4A PRIOR ART

Figure 4B
PRIOR ART

Figure 4C
PRIOR ART

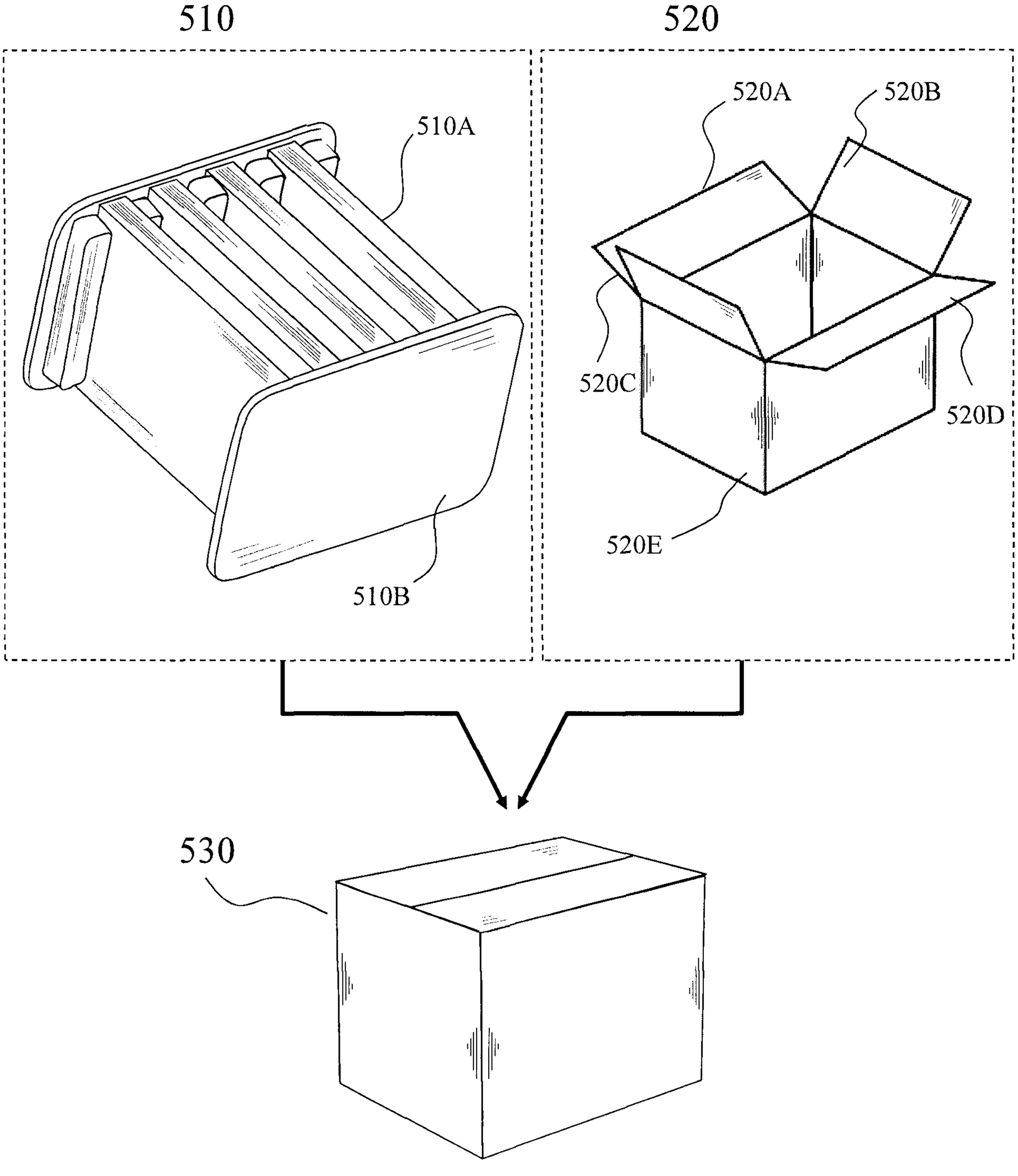


Figure 5

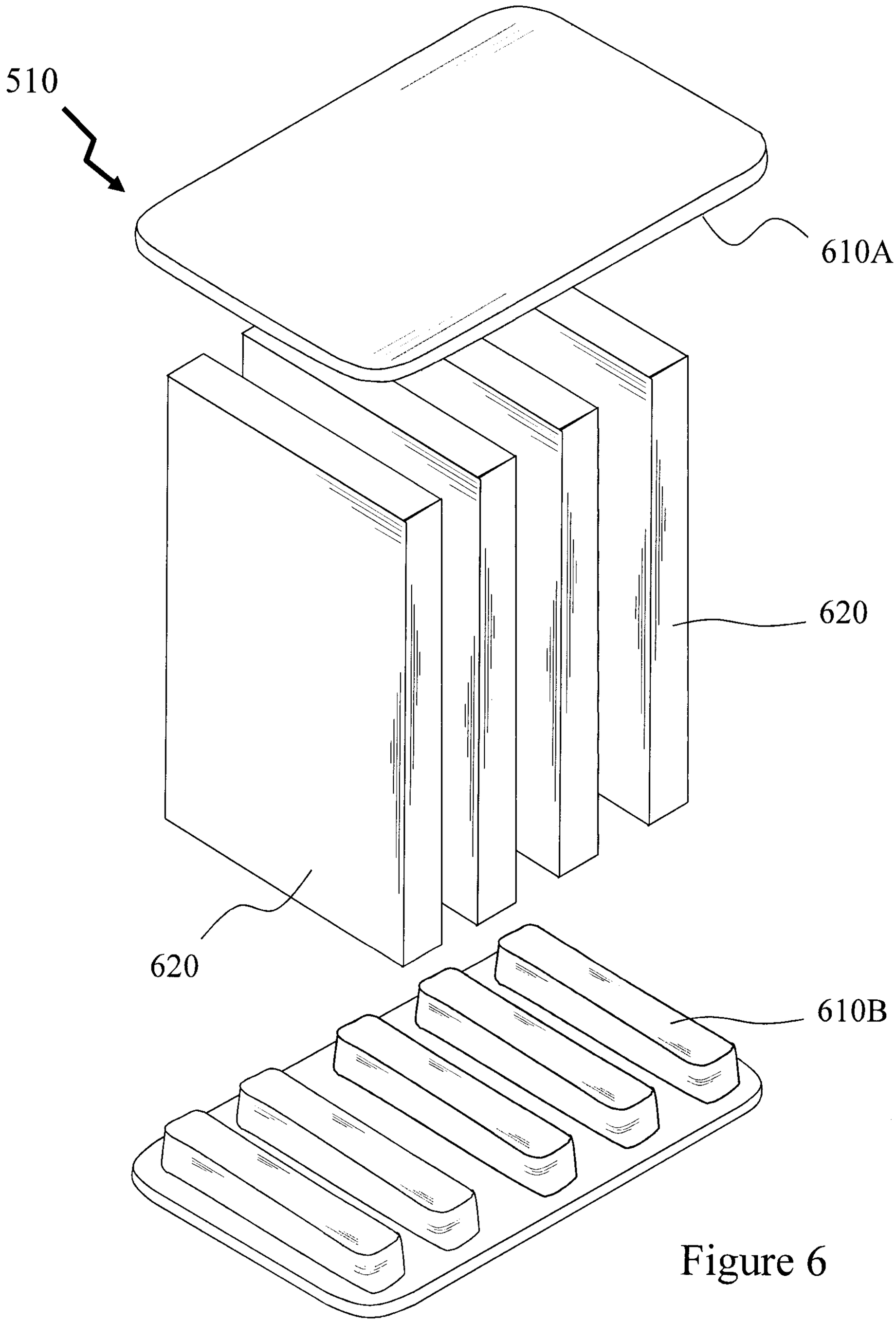


Figure 6

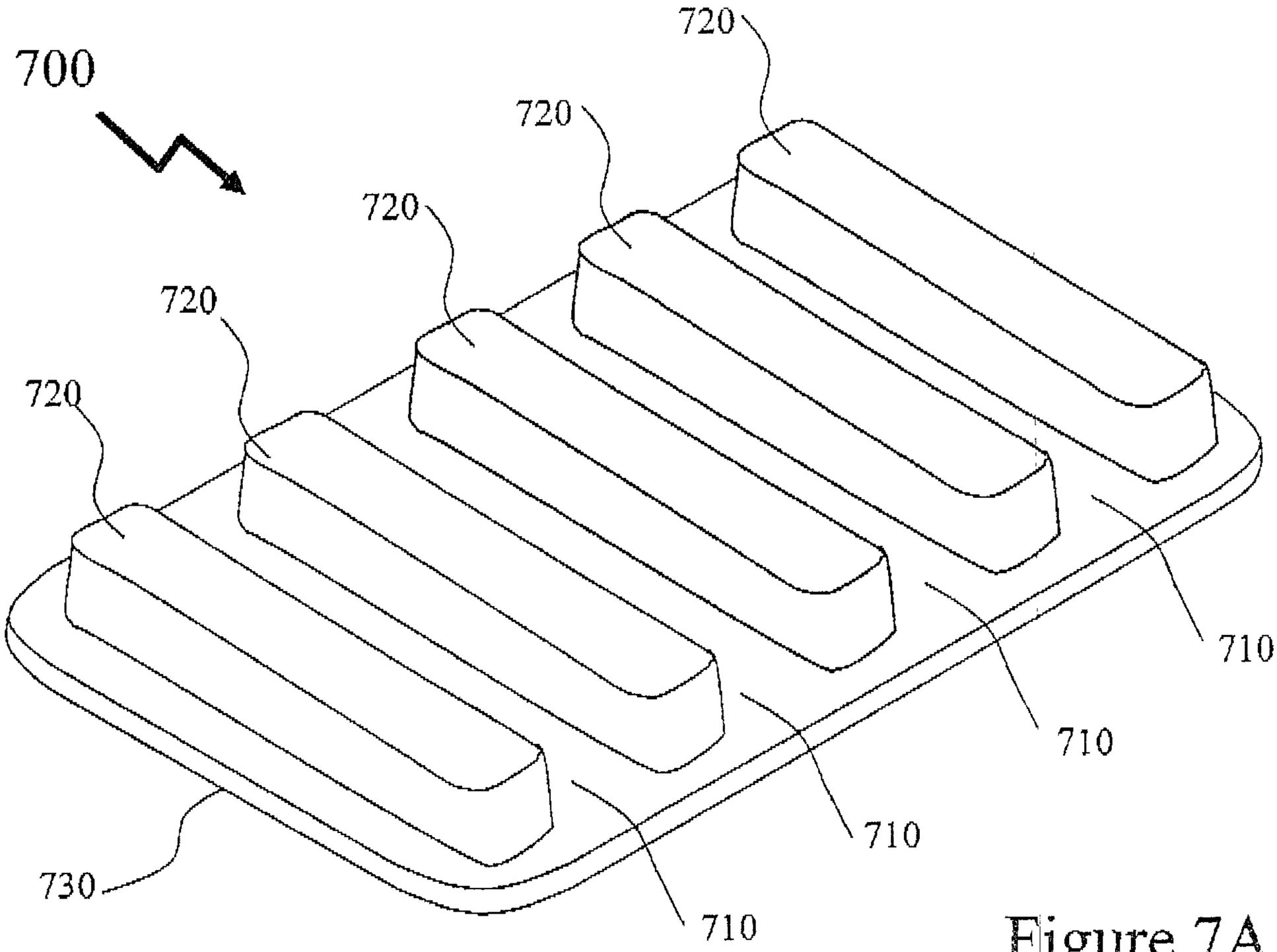


Figure 7A

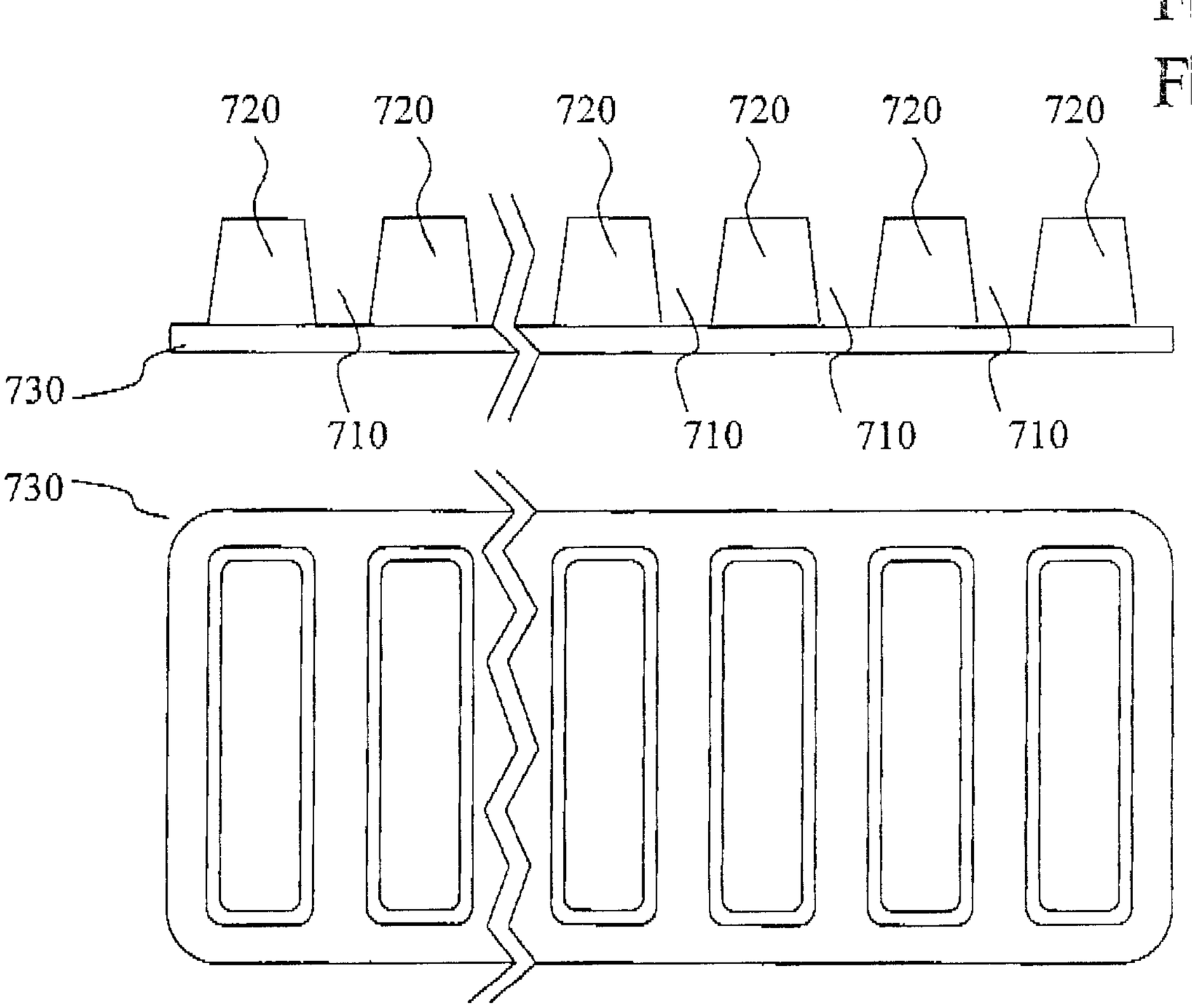


Figure 7B

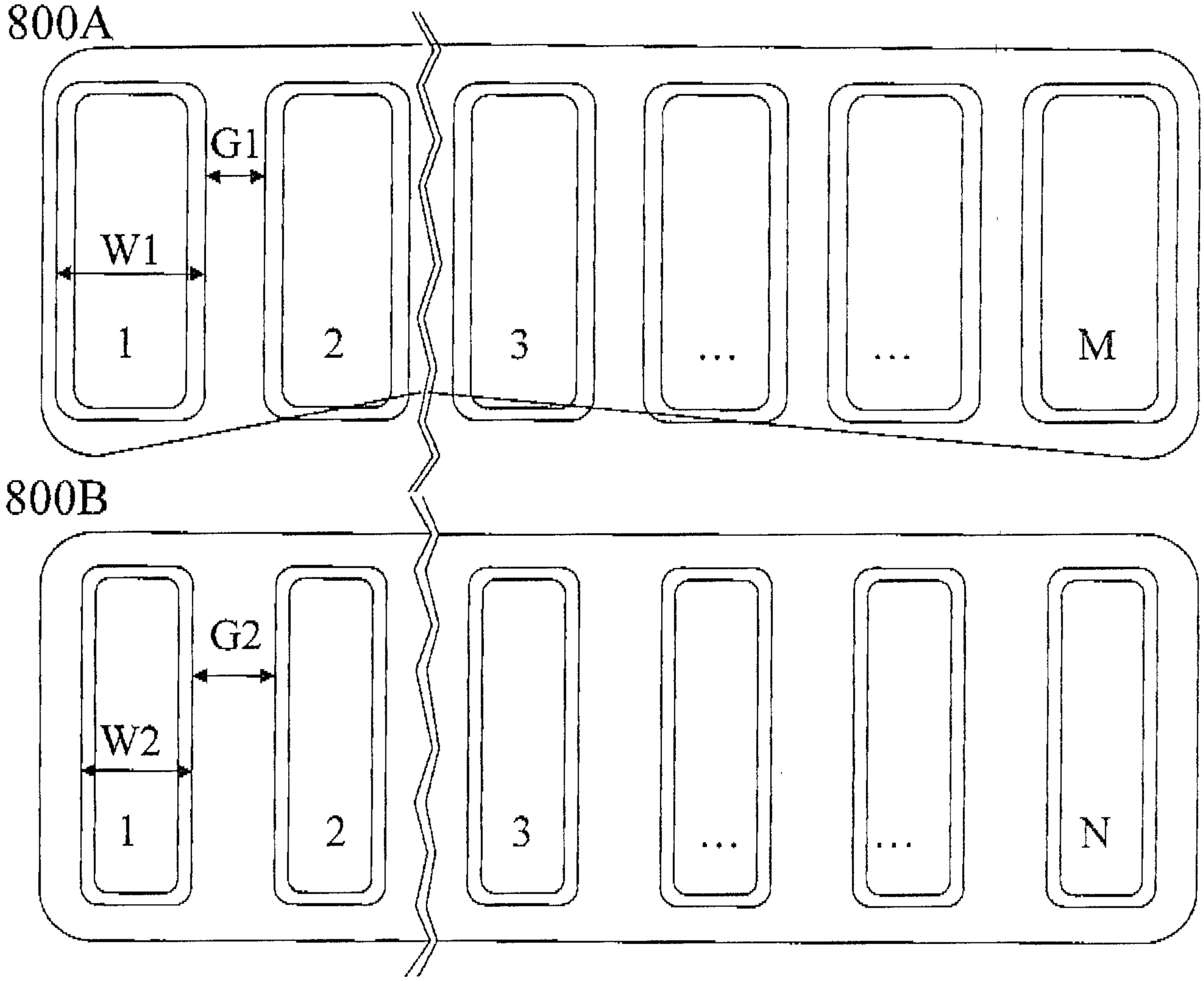


Figure 8

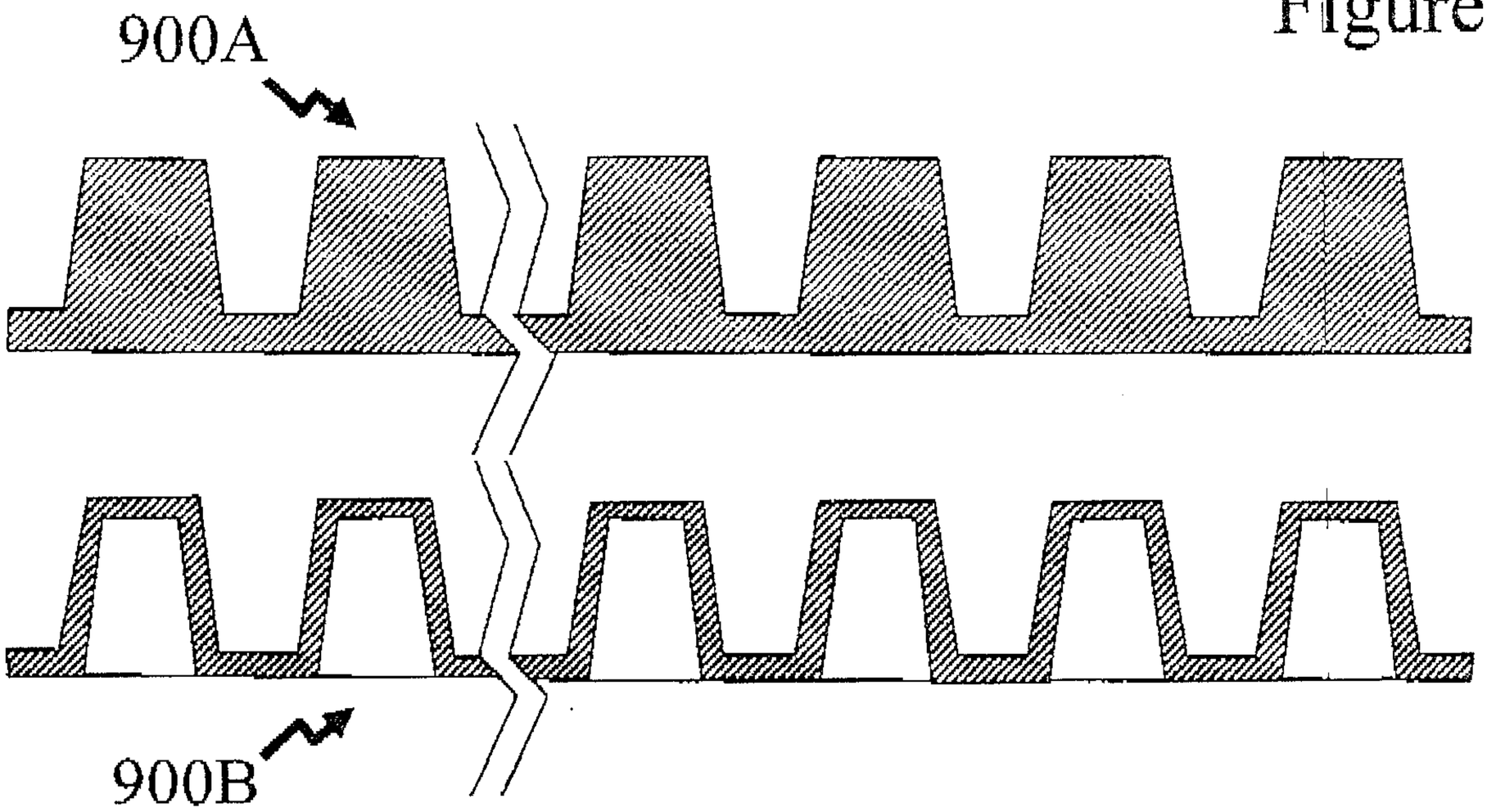
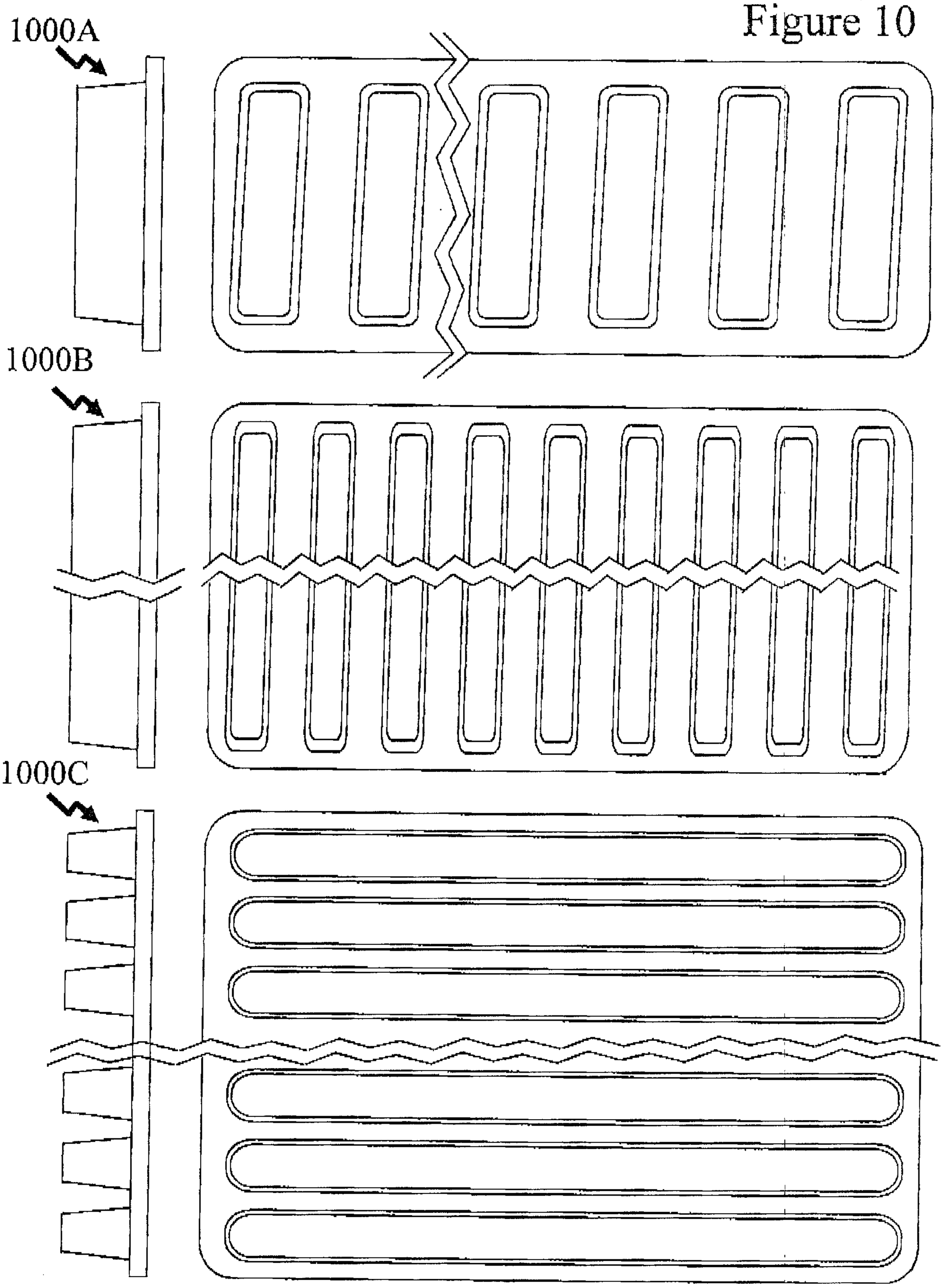
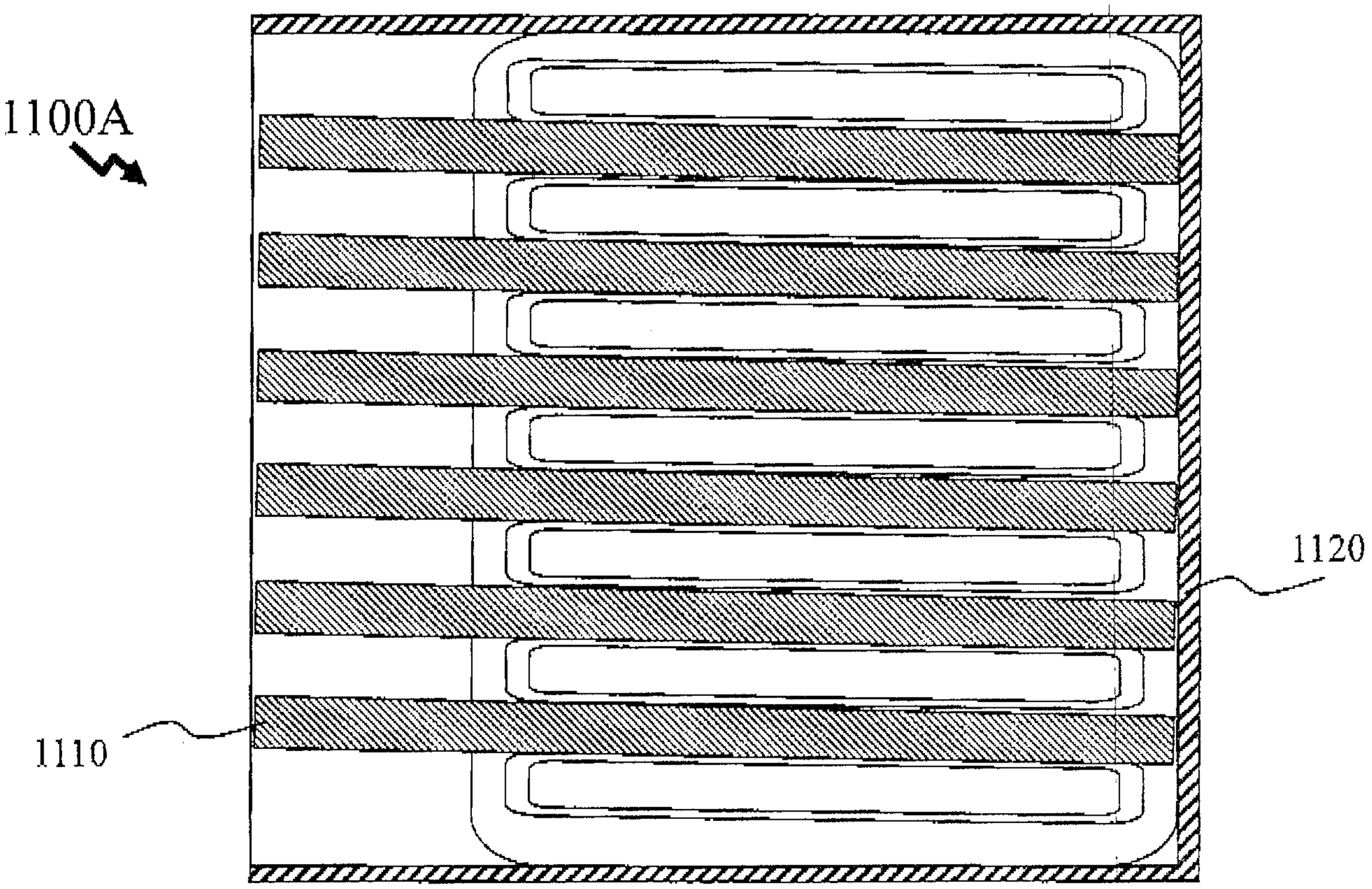


Figure 9

Figure 10





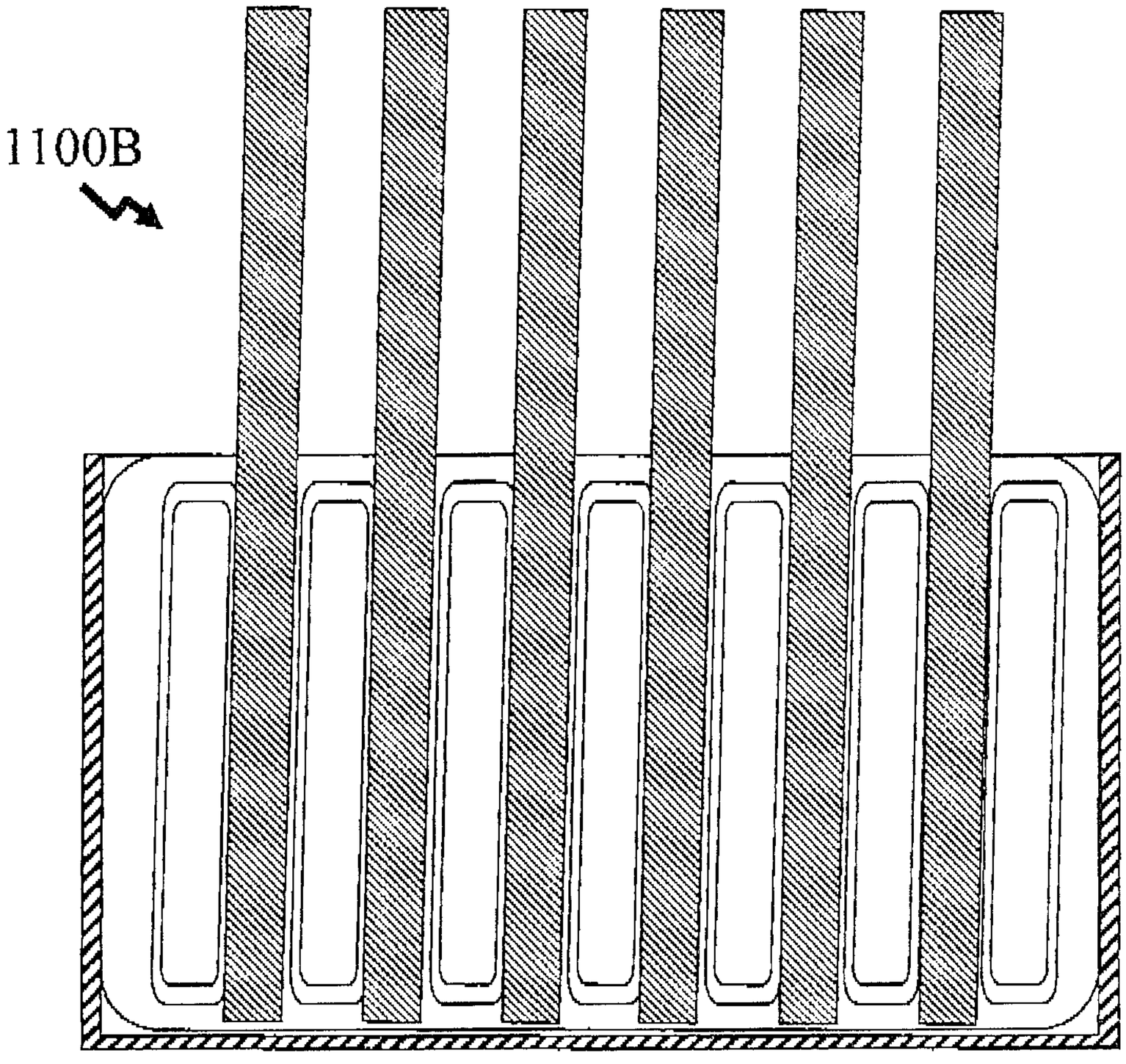
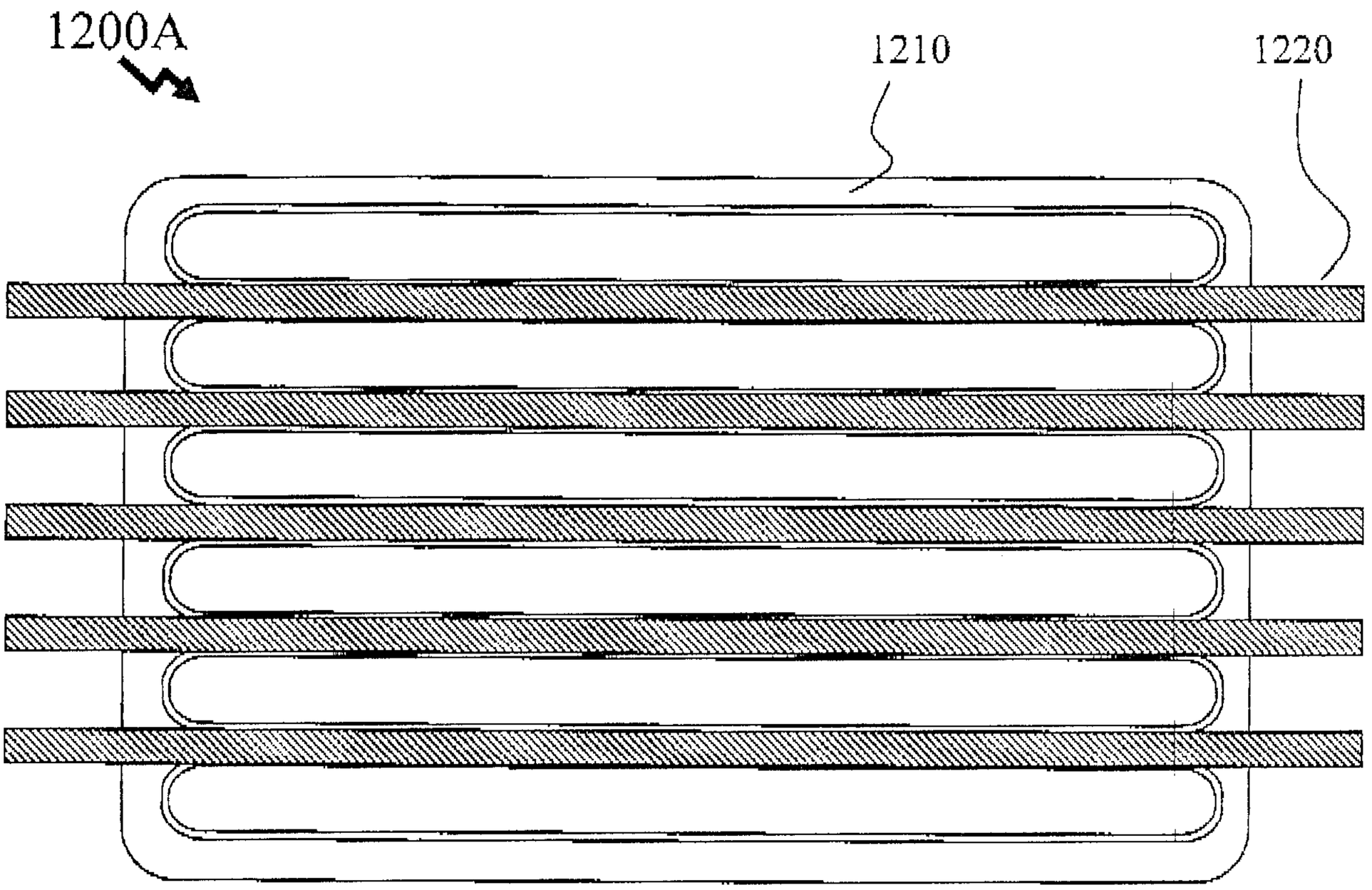


Figure 11



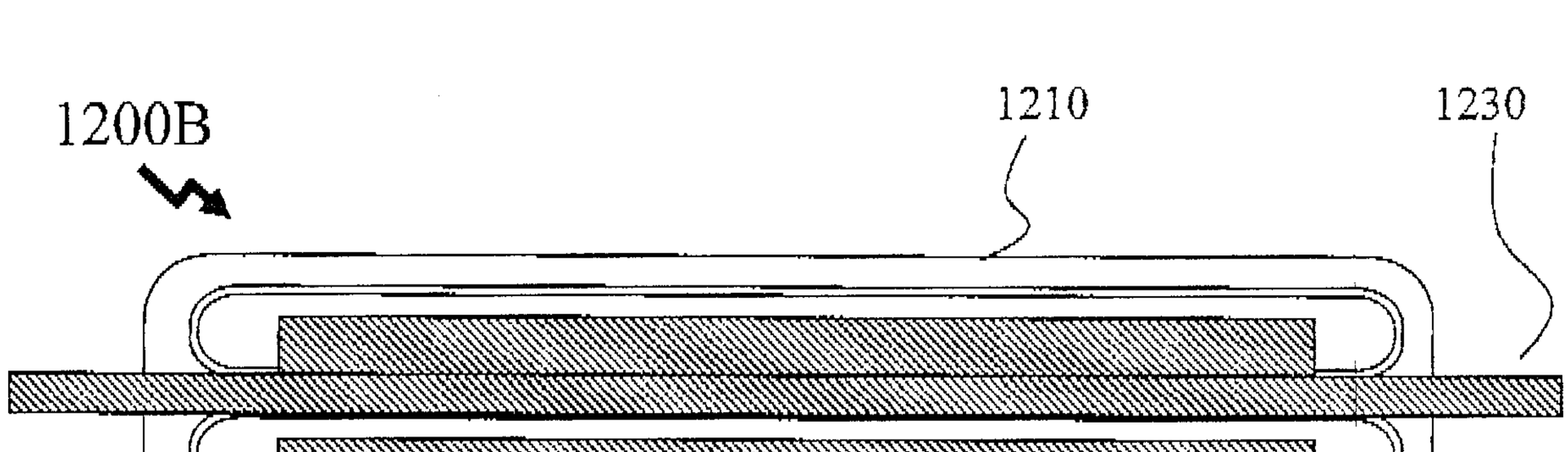
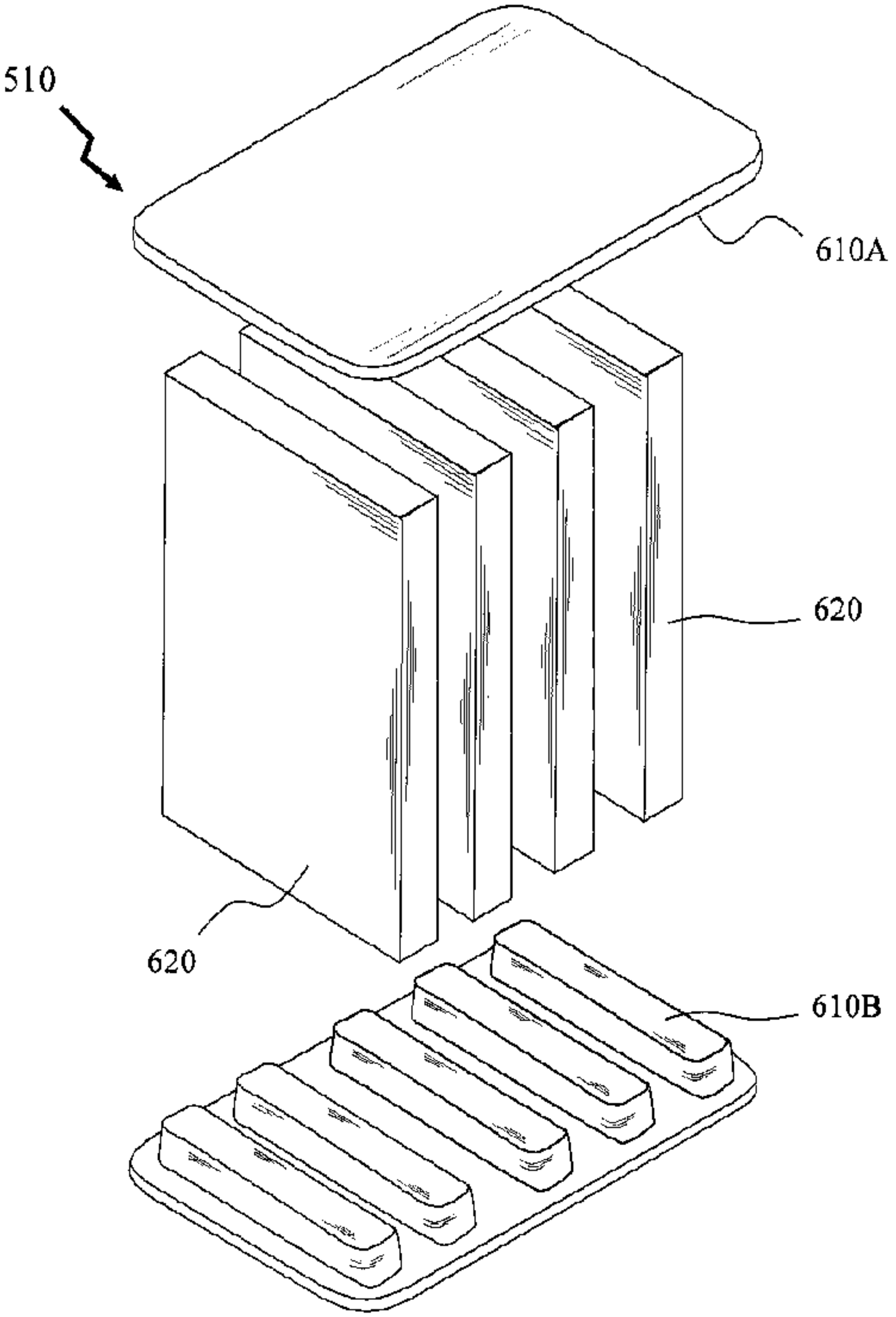


Figure 12


510
610A
620
620
610B