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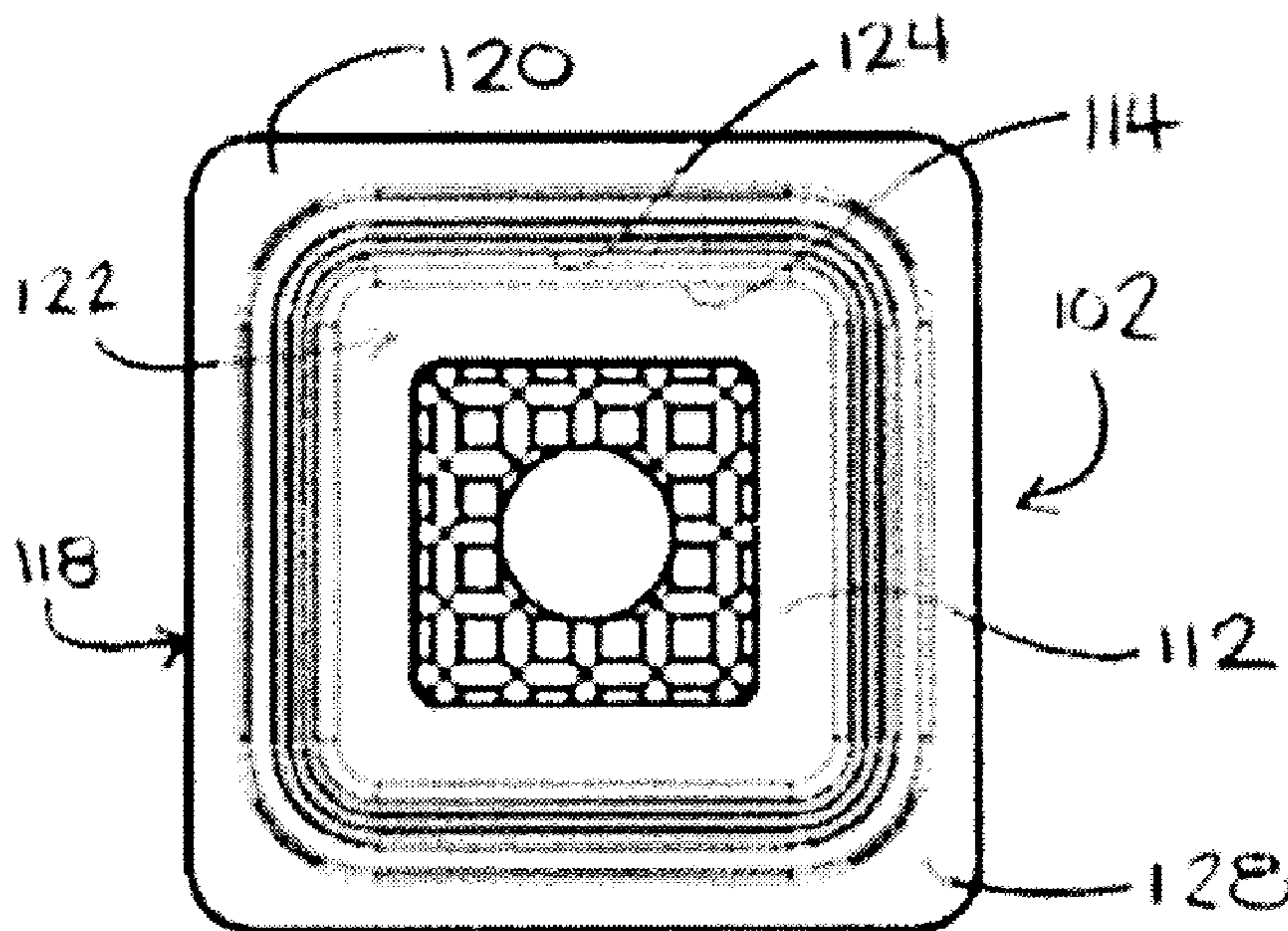
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(54) **Titre :** CONTENANT OFFRANT PLUSIEURS CONFIGURATIONS

(54) **Title:** CONTAINER OFFERING MULTIPLE CONFIGURATIONS



A

(57) **Abrégé/Abstract:**

A container includes a receptacle having a sidewall with inner and outer surfaces and a rim. The container lid has inner and outer surfaces, a central portion, and a periphery divided into a first periphery portion and a second periphery portion extending outward



(57) Abrégé(suite)/Abstract(continued):

and downward from the first periphery portion. In a first mounting configuration, the central and first periphery portions of the lid are nested below the receptacle rim with the lid outer surface contacting the receptacle sidewall inner surface. In a second mounting configuration, the lid is inverted and the second periphery portion extends over the rim of the receptacle, while the first periphery and central portions of the lid extend above the receptacle rim, and the inner surface of the lid contacts the outer surface of the receptacle wall. A second, identical receptacle can be included, with both receptacles mounted to opposing sides of the lid.

ABSTRACT OF THE DISCLOSURE

[0075] A container includes a receptacle having a sidewall with inner and outer surfaces and a rim. The container lid has inner and outer surfaces, a central portion, and a periphery divided into a first periphery portion and a second periphery portion extending outward and downward from the first periphery portion. In a first mounting configuration, the central and first periphery portions of the lid are nested below the receptacle rim with the lid outer surface contacting the receptacle sidewall inner surface. In a second mounting configuration, the lid is inverted and the second periphery portion extends over the rim of the receptacle, while the first periphery and central portions of the lid extend above the receptacle rim, and the inner surface of the lid contacts the outer surface of the receptacle wall. A second, identical receptacle can be included, with both receptacles mounted to opposing sides of the lid.

CONTAINER OFFERING MULTIPLE CONFIGURATIONS

FIELD OF THE INVENTION

[0002] The invention relates to containers, such as containers for food service and/or food storage, and more particularly, to containers that include a receptacle and a lid that may be mounted to the receptacle in a plurality of configurations.

BACKGROUND OF THE INVENTION

[0003] Disposable plastic containers comprising receptacles and removable lids are widely used in the food service industry, including food establishments such as restaurants and cafeterias. Often, it is necessary for such establishments to enclose food contents of widely differing types and amounts in such containers. For example, a salad may consume considerable space, but may require only a rudimentary seal, whereas a beverage or soup may be compact, but may require a highly reliable, liquid-tight seal. Due to these varying requirements, it can be necessary for food service establishments to maintain a large variety of different types and sizes of disposable container in inventory, leading to increased overhead costs.

[0004] Accordingly, there has been a long felt and largely unmet need for container designs that can be assembled in a plurality of configurations having different capacities and sealing properties, so that a smaller inventory of

receptacles and lids can be used to accommodate a wider range of quantities and types of content. Generally, the cost of manufacturing such disposable containers must be minimized, for example by using thermoforming as the method of manufacture.

[0005] U.S. Patent Application Publication No. 2006/0261065 (to Claypool et al.) purports to disclose a storage container that has a base with a bottom panel, and an upstanding side wall extending generally upward from a perimeter of the bottom panel. The side wall has a top end and a top opening is generally circumscribed by the top end. A reversible lid has a lid perimeter and a cover panel generally within the lid perimeter. The cover panel has a first side and a second side. The reversible lid can be installed on the base in two different selectable orientations including a first orientation with the second cover panel side facing the base and a second orientation with the first cover panel side facing the base. A first seal is created between the reversible lid and the base in the first orientation and a second seal is created between the reversible lid and the base in the second orientation. A first sealed storage space is formed between the base and the reversible lid when in the first orientation and a second sealed storage space is formed between the base and the reversible lid when in the second orientation. The first sealed storage space has a larger volume than a volume of the second sealed storage space.

[0006] However, it is the experience of those skilled in the art that the container construction described by Claypool et al. cannot be readily implemented by thermoforming, and is therefore impractically expensive to manufacture. In particular, thermoforming involves manipulating a sheet of a certain thickness for achieving a formed shape. Therefore, rib constructions such as those taught by Claypool that require varying thicknesses are difficult to achieve by thermoforming.

[0007] In addition, even when the lid of Claypool is used in the orientation that provides the greatest volume (see Figs. 1, 2 and 4 of Claypool), the full capacity

of the receptacle cannot be fully utilized because, as shown in FIG. 6, rib 44a projects into the receptacle below the receptacle flange 60. For this reason, the contents in the receptacle must be restricted to a level below rib 44a, so that the rib is not immersed in the contents, and the contents do not interfere with the seal formed between rib 44a and the receptacle.

[0008] PCT Publication No. WO1990/008710 (ro Timm) purports to disclose a package for a sundae-type frozen dessert that includes an open-top container and a dished cap for the container. The cap has a skirt portion that extends from one side of an annular shoulder and a pilot portion that extends from the opposite side of the shoulder portion to an annular crown that surrounds an open cup portion. The skirt portion snaps over the rim of the container when the cap is in a normal position, with the one side of the shoulder resting on the container rim. The pilot portion makes a loose telescopic fit within the top of the container when the cap is in an inverted position, with the opposite side of the shoulder resting on the container rim. After the container is partially filled with a dessert mix, the cap is fitted onto the container in the normal position, and the cup portion is filled with a topping and covered with a seal. The completed package is then frozen. To prepare for eating, the cap is inverted on the container after removal of the sealing cover, and the package is placed in a microwave oven until the topping melts and pours down onto the frozen dessert mix. The cap is then removed, and the hot sundae is ready for eating directly from the container.

[0009] However, according to the disclosure of Timm, the lid makes only a “loose telescopic fit” with the top of the container when the cap is in an inverted position (see e.g. abstract). Accordingly, the lid of the Timm design can only be sealed to the container in its upright configuration, and merely rests on the container in the inverted configuration.

[0010] What is needed therefore is a container having a lid that is sealable to a receptacle in at least two configurations that differ in volume and/or type of seal, wherein at least one of the configurations allows the full capacity of the container

to be utilized, and wherein the lid and receptacle can be manufactured using thermoforming.

SUMMARY OF THE INVENTION

[0011] A container is disclosed having a lid that is sealable to a receptacle in two configurations that differ in container capacity and, in embodiments, also in type of seal (i.e. liquid-tight or not liquid-tight). The lid has a central portion surrounded by a periphery that is divided into first and second periphery portions, whereby the first periphery portion is proximal to and surrounds the central region of the lid, while the second periphery portion extends outward and downward from the first periphery portion. In embodiments, the two periphery portions are joined by a generally horizontal shelf.

[0012] In a first configuration, the central area and first periphery portion of the lid nest within the receptacle, so that a seal is formed between the outer surface of the first periphery portion and the inner walls of the receptacle, while the second periphery portion of the lid extends above the rim of the receptacle. In a second configuration, the lid is inverted as compared to the first configuration, so that the second periphery portion extends over the rim of the receptacle and forms a seal therewith, while the first periphery portion and the central region of the lid extend above the rim of the receptacle. In various embodiments, the shelf of the lid rests in both configurations on a flange that surrounds the rim of the receptacle, whereby the outer surface of the shelf is against the flange in the first configuration, and the inner surface of the shelf is against the flange in the second configuration.

[0013] Various embodiments of the lid and receptacle include projections and indentations that enhance the removable attachment of the lid to the receptacle in either or both configurations.

[0014] In embodiments, two receptacles can be provided, and a two-compartment container can be formed by attaching the lid to the first container in

the first configuration while inverting the second container and attaching it to the same lid in the second configuration. In some embodiments, the two receptacles are identical to each other.

[0015] One general aspect of the present invention is a container that includes a receptacle having a receptacle base wall and a receptacle sidewall extending upward from the receptacle base wall to a receptacle rim, the receptacle sidewall having a sidewall inner surface and an opposed sidewall outer surface, and a lid having an outer surface and an inner surface, the lid having a lid central portion and a lid periphery divided into a first periphery portion proximal to the central portion and a second periphery portion positioned outwardly and downwardly of the first periphery portion, the lid being mountable to the receptacle in a first configuration and in a second configuration. According to this general aspect, in said first configuration the lid central portion and first periphery portion are nested below the receptacle upper rim, and a portion of the lid outer surface is engaged with the receptacle sidewall inner surface, and in said second configuration the lid is inverted with respect to the first configuration, the lid central portion and first periphery portion being above the receptacle rim, and a portion of the lid inner surface being engaged with the receptacle sidewall outer surface.

[0016] In embodiments, the receptacle sidewall inner surface comprises at least one indentation and the first periphery portion of the lid comprises at least one projection that is receivable in the indentation when the lid is mounted to the receptacle in the first configuration. In various embodiments, in the first configuration the second periphery portion is positioned above the rim of the receptacle.

[0017] In certain embodiments, the lid comprises a shoulder between the first periphery portion and the second periphery portion. In some of these embodiments the receptacle rim comprises an outwardly extending receptacle flange, so that in the first configuration, an outer surface of the horizontal

shoulder is seated on the receptacle flange. In some of these embodiments, in the second configuration an inner surface of the shoulder is seated on the receptacle flange. And in some of these embodiments the lid periphery comprises at least one inwardly extending projection, and in the second configuration the receptacle flange is secured between said inwardly extending projection and the shoulder of the lid.

[0018] In embodiments, when in the first configuration the container is liquid tight.

[0019] In various embodiments, the receptacle is a first receptacle, and the container further comprises a second receptacle that is mountable to the lid in an inverted position when the lid is mounted to the first receptacle in the first configuration. In some of these embodiments, the second receptacle is generally identical to the first receptacle. In some of these embodiments, the first periphery portion is nested in the first receptacle when the lid is mounted to the first receptacle in the first configuration and the second receptacle is mounted to the lid in the inverted second configuration. In some of these embodiments, the second periphery portion is positioned above the first periphery portion and above the first receptacle when the lid is mounted to the first receptacle in the first configuration and the second receptacle is mounted to the lid in the inverted second configuration.

[0020] In some of these embodiments, the lid comprises a shoulder between the first periphery portion and the second periphery portion. In some of these embodiments, the rim of the first receptacle comprises an outwardly extending first receptacle flange, and an outer surface of the shoulder is seated on the first receptacle flange when the lid is mounted to the first receptacle in the first configuration and the second receptacle is mounted to the lid in the inverted second configuration. In some of these embodiments, the rim of the second receptacle comprises an outwardly extending second receptacle flange, and the second receptacle flange is seated on an inner surface of shoulder when the lid is

mounted to the first receptacle in the first configuration and the second receptacle is mounted to the lid in the inverted second configuration. And in some of these embodiments, the second periphery portion comprises at least one inwardly extending projection, and the second receptacle flange is removably secured between the projection and the shoulder when the lid is mounted to the first receptacle in the first configuration and the second receptacle is mounted to the lid in the inverted second configuration.

[0021] In various embodiments where the second receptacle is generally identical to the first receptacle, the first receptacle and the lid are liquid tight when the lid is mounted to the first receptacle in the first configuration and the second receptacle is mounted to the lid in the inverted second configuration.

[0022] Another general aspect of the present invention is a container that includes a first receptacle having a first receptacle base wall and a first receptacle sidewall extending upward from the first receptacle base wall to a first receptacle rim, the first receptacle sidewall having a first sidewall inner surface and an opposed first sidewall outer surface, a lid mounted to the first receptacle and comprising a lid central portion, a lid inner surface facing away from the first receptacle, an opposed lid outer surface, and a lid periphery divided into a first periphery portion proximal to the central portion and a second periphery portion positioned outwardly and downwardly of the first periphery portion, wherein at least the first periphery portion is nested below the first receptacle rim, and a second receptacle having a second receptacle base wall and a second receptacle sidewall extending upward from the first receptacle base wall to a second receptacle rim, the second receptacle sidewall having a second sidewall inner surface and an opposed second sidewall outer surface, the second receptacle being inverted with respect to the first receptacle and being mounted to the lid, the lid inner surface facing the second receptacle, and the second receptacle rim being nested within the second periphery portion.

[0023] In embodiments, the lid outer surface engages the first sidewall inner surface to secure the lid to the first receptacle. In some of these embodiments, the first sidewall inner surface comprises at least one indentation, the lid outer surface comprises at least one projection, and the projection is received in the indentation to secure the lid to the first receptacle.

[0024] In various embodiments, the second receptacle sidewall engages the lid inner surface to secure the lid to the second receptacle. And in some embodiments, the second periphery portion is positioned above the first periphery portion and above the first receptacle rim.

[0025] In certain embodiments, the lid comprises a shoulder between the first periphery portion and the second periphery portion. In some of these embodiments, the first receptacle sidewall comprises an outwardly extending first receptacle flange at the first receptacle rim, and the shoulder is seated on the first receptacle flange. In some of these embodiments, the second receptacle sidewall comprises an outwardly extending second receptacle flange at the second receptacle rim, and the second receptacle flange is seated on the shoulder. And in some of these embodiments, the second periphery portion comprises at least one inwardly extending projection, and the second receptacle flange is secured between the inwardly extending projection and the shoulder.

[0026] In embodiments, the first receptacle and the lid are generally liquid tight. And in various embodiments, the first receptacle and the second receptacle are identical.

[0027] The features and advantages described herein are not all-inclusive and, in particular, many additional features and advantages will be apparent to one of ordinary skill in the art in view of the drawings, specification, and claims. Moreover, it should be noted that the language used in the specification has been principally selected for readability and instructional purposes, and not to limit the scope of the inventive subject matter.

BRIEF DESCRIPTION OF THE DRAWINGS

[0028] The drawings included herewith are for illustrating various examples of articles, methods, and apparatuses of the present specification and are not intended to limit the scope of what is taught in any way.

[0029] Figure 1A is a top plan view of a receptacle in an embodiment of the present invention;

[0030] Figure 1B is a side elevation view of the receptacle of Figure 1A;

[0031] Figure 2A is a top plan view of a lid in an embodiment of the present invention;

[0032] Figure 2B is a side elevation view of the lid of Figure 2A;

[0033] Figure 3A is perspective view of the lid of Figures 2A and 2B mounted to the receptacle of Figures 1A and 1B in a first configuration;

[0034] Figure 3B is a side elevation view of the container of Figure 3A;

[0035] Figure 3C is an exploded perspective view of the container of Figure 3A;

[0036] Figure 3D is a cross-sectional view taken along line 3D-3D in Figure 3B;

[0037] Figure 4A is perspective view of the lid of Figures 2A and 2B mounted to the receptacle of Figures 1A and 1B in a second configuration in order to form a second container;

[0038] Figure 4B is a side elevation view of the container of Figure 4A;

[0039] Figure 4C is an exploded perspective view of the container of Figure 4A;

[0040] Figure 4D is a cross-sectional view taken along line 4D-4D in Figure 3B;

[0041] Figure 5A is perspective view of the lid of Figures 2A and 2B mounted to two of the receptacles of Figures 1A and 1B;

[0042] Figure 5B is a side elevation view of the container of Figure 5A;

[0043] Figure 5C is an exploded perspective view of the container of Figure 5A;

[0044] Figure 5D is a cross-sectional view taken along line 5D-5D in Figure 3B;

[0045] Figure 6A is perspective view of the lid of Figures 2A and 2B mounted to two of the receptacles of Figures 1A and 1B, in an inverted configuration;

[0046] Figure 6B is a side elevation view of the container of Figure 6A; and

[0047] Figure 6C is an exploded perspective view of the container of Figure 6A.

DETAILED DESCRIPTION

[0048] Referring to Figures 1A to 2B, a receptacle 102 and a lid 104 are shown according to an embodiment of the present invention. When oriented as shown in Figures 1B, the receptacle 102 includes a base 112 and sidewalls 102 that extend generally upward from the base 112 to a rim 120. When oriented as shown in Figure 2B, the lid 104 includes a central portion 138 and a generally downward extending periphery 140 divided into a first periphery portion 142 proximal to the central portion 138, and a second periphery section 144, where the second periphery portion 144 is located below and displaced horizontally outward from the first periphery portion 142.

[0049] The lid 104 may be mounted to the receptacle 102 in a plurality of configurations, in order to form various container configurations. Such configurations may, for example, be used for food service and/or food storage applications. For example, referring to Figures 3A to 3D, the lid 104 may be mounted to the receptacle 102 in a first configuration to form container 106a. In this first configuration, the central portion 138 and first periphery portion 142 of the lid 104 are nested within the receptacle 102, so that the central portion 132 and first periphery portion 142 located below the rim 120 of the receptacle 102. Accordingly, the outer surface of the first periphery portion 142 is pressed against the inner surface 124 of the sidewall of the receptacle 102.

[0050] Alternatively, referring to Figures 4A to 4D, the lid 104 may also be mounted to the receptacle 102 in a second configuration, in which it is inverted with respect to the first configuration, to form container 106b. In this second configuration, the second periphery portion 144 extends over the rim 120 of the receptacle 102, so that the inner surface of the lid 104 is pressed against the outer surface 126 of the receptacle 102.

[0051] Alternatively, referring to Figures 5A to 5D, a pair of receptacles 102a, 102b may be assembled to a single lid 104, on opposed sides of the lid 104, in order to form another container 106c. The container 106c has a bottom portion 108 that is generally equivalent to container 106a, and a top portion 110 that is generally equivalent to container 106b.

[0052] Alternatively, referring to Figures 6A to 6C, a pair of receptacles 102a, 102b may be assembled to a single lid 104 which is inverted with respect to the configuration shown in Figures 4A to 4D, on opposed sides of the lid 104, in order to form another container 106d. The container 106d has a bottom portion 108 that is generally equivalent to container 106b, and a top portion 110 that is generally equivalent to container 106a. It will be noted that while Figures 5C and 6C show relative arrangement of two receptacles and a lid for containers 106c and 106d respectively, this is only intended for demonstration purposes and is not intended

as a functional method for assembling or stacking the receptacle-lid combinations during use. In an exemplary use situation, container 106c (Figure 5A) can be derived by inverting container 106b (Figure 4A) and engaging it with the receptacle 102a. Similarly, container 106d (Figure 6A) can be created by inverting container 106a (Figure 3A) and engaging it with the receptacle 102a. It will also be appreciated by those of ordinary skill that the terms lid and receptacle can be used interchangeably and the exemplary designation used herein is not intended to limit the functionality of a receptacle to be utilized as a lid or for the lid to be utilized as a receptacle.

[0053] Thus, the receptacles and lids described herein enable a food establishment such as a restaurant or cafeteria to create a variety of different container configurations by utilizing the same basic components depending on the type of foods to be served or stored therein. Various container configurations may be adapted to have varying engagement characteristics between the lid and the receptacle. In some embodiments, when the lid 104 is mounted to the receptacle 102 in the first configuration to form container 106a, it may provide a generally or relatively liquid tight or liquid resistant seal. When the lid 104 is mounted to the receptacle 102 in the second configuration to form container 106b, the container 106b may be generally non-liquid tight or non-liquid resistant, or less liquid tight or less liquid resistant than the container 106a.

[0054] Accordingly, if the receptacle 102 is to be used to store liquids or less viscous foods, the lid 104 may optionally be mounted to the receptacle 102 in the first configuration. If the receptacle 102 is to be used to store dry goods or solid or relatively viscous foods, the lid 104 may optionally be mounted to the receptacle 104 in the second configuration. Furthermore, if it is desired to store liquid goods and dry goods separately, two receptacles 102 may be mounted to a single lid 102 in order to form container 106c or container 106d. When using container 106c, the receptacle 102a at the bottom portion 108 of the container 106c may optionally be used to store liquid goods, and the receptacle 102b at the top portion 110 may optionally be used to store dry goods. When using container

106d, the receptacle 102a at the bottom portion 108 of the container 106c may optionally be used to store dry goods, and the receptacle 102b at the top portion 110 may optionally be used to store liquid goods.

[0055] Furthermore, the receptacles and lids described herein may allow for simplification of inventory, as the same receptacle and lid may provide containers with different capacities. For example, a container of the first configuration may have a fill capacity of 1.5 oz. and a container of the second configuration may have a fill capacity of 2 oz.

[0056] The receptacle 102 and the lid 104 will presently be described in further detail. Referring to Figures 1A and 1B, in the embodiment shown, the receptacle 102 extends along an axis 103, and includes a receptacle base wall 112, and a receptacle sidewall 114 extending from the receptacle base wall 112. When the receptacle 102 is in the position shown in Figure 1B, the receptacle sidewall 114 may be said to extend upwardly from the receptacle base wall 112. The receptacle base wall 112 and receptacle sidewall 114 form an interior volume 116 (shown in Figures 3C and 4C) of the receptacle 102. In the embodiment shown, the receptacle 102 is generally square in transverse section, and the receptacle sidewall 114 includes four sidewall portions. In alternative embodiments, the receptacle may be another shape in transverse section, for example circular, and the receptacle sidewall may include another number of sidewall portions, for example a single circular sidewall portion.

[0057] Referring still to Figures 1A and 1B, in the embodiment shown, the receptacle sidewall 114 has a sidewall distal portion 118 defining a sidewall distal end 120. A receptacle opening 122 (shown in Figures 3C and 4C) is at the distal end 120. The sidewall distal portion 118 and sidewall distal end 120 may also be respectively referred to as a sidewall upper portion 118 and sidewall upper end 120, when the receptacle is in the position shown in Figure 1B. The receptacle sidewall 114 also has a sidewall inner surface 124 that faces the interior volume 116, and an opposed sidewall outer surface 126.

[0058] Referring still to Figures 1A and 1B, the receptacle sidewall 114 includes an outwardly extending receptacle flange 128 at the sidewall upper end 120. As will be described in further detail below, when the container is in the first configuration or the second configuration, the receptacle flange 128 provides a seating surface for the lid 104. Furthermore, when the container is assembled in the first configuration, the receptacle flange 128 engages the lid 104 to removably secure the lid 104 to the receptacle 102.

[0059] The sidewall inner surface 124 may include at least one indentation for engaging the lid 104 when the lid 104 is assembled to the receptacle 102 in the first configuration, as will be described in further detail below. Referring to Figure 3C, in the embodiment shown, the sidewall inner surface 124 includes four indentations 130 (only one of which is labelled in the drawings), each of which is provided at a corner of the receptacle sidewall 114, and each of which is in the sidewall distal portion 118.

[0060] Referring now to Figures 2A, 2B, and 3C, in the embodiment shown, the lid 104 extends along an axis 105, and includes a lid first surface 132 (shown in Figure 3C), and an opposed lid second surface 134 (shown in Figures 2A, 2B and 3C). The lid 104 is shaped so that the lid first surface 132 defines a recess 136, which may be used for storage when the lid 104 is positioned so that the first surface 132 is upwardly facing.

[0061] Referring still to Figures 2A and 2B, the lid 104 includes a central portion 138, and a lid periphery 140. In the embodiment shown, the central portion 138 includes a generally square and flat panel. However, in alternative embodiments, the central portion may be of any other shape or be oriented in a non-planar manner, for example it may be circular, triangular, elliptical, or domed or curved.

[0062] Referring still to Figures 2A and 2B, in the embodiment shown, the lid periphery 140 includes a first periphery portion 142 and a second periphery portion 144 positioned radially outwardly of the first periphery portion 142. The

first periphery portion 142 is axially spaced from the central portion 138 in a first direction (indicated by arrow A1 in Figure 2B), and the second periphery portion 144 is spaced from the first periphery portion in the first direction.

[0063] When the lid 104 is in the position shown in Figure 2B, the first periphery portion 142 is above the second periphery portion 144. The first periphery portion 142 includes a first lid sidewall 146 extending generally orthogonally to the central portion 138. The second periphery portion 144 includes a second lid sidewall 148 that also extends generally orthogonally to the central portion 138, and a lid lip 150 extending outwardly from the second lid sidewall 148. The lid periphery 140 further includes a shoulder 152 extending between the first lid sidewall 146 and the second lid sidewall 148. As will be described in further detail below, when the lid 104 is assembled to the receptacle 102 in the first configuration or the second configuration, the shoulder 152 is seated on the receptacle flange 128 of the receptacle 102.

[0064] The lid second surface 134 may include a portion for engaging the sidewall inner surface 124, to removably secure the lid 104 to the receptacle 102 when the lid 104 is assembled to the receptacle 102 in the first configuration. Referring to Figures 2A and 2B, in the embodiment shown, the lid second surface 134 includes four radially outwardly extending projections 154 (only two of which are labelled in the drawings). The projections 154 are positioned at the corners of the first lid sidewall 146, and are shaped to be received in the indentations 130 of the sidewall inner surface 124 of the receptacle 102. In alternative embodiments, the lid second surface may include another number of projections, for example at least one projection.

[0065] The lid first surface 132 may include a portion for engaging the receptacle sidewall 114 to removably secure the lid 104 to the receptacle 102 when the lid 102 is assembled to the receptacle 102 in the second configuration. Referring to Figure 3C, in the embodiment shown, the lid first surface 132 includes four radially inwardly extending projections 156. The projections 156

extend inwardly from the second lid sidewall 148, and are spaced from the shoulder 152. As will be described below, when the container is assembled in the second configuration, the receptacle flange 128 is removably secured between the projections 156 and the shoulder 152. In alternative embodiments, the lid second surface may include another number of projections, for example at least one projection. Furthermore, the length or width of the projections as well as the height of the projections relative to the sidewall may vary to allow for customizing the fit between the receptacle and the lid and the lidding force needed during engagement.

[0066] Referring now to Figures 3A to 3D, when the lid 104 is assembled to the receptacle 102 in the first configuration, the lid central portion 138 and first periphery portion 142 are nested in the sidewall upper portion 118, so that the portion of the lid second surface 134 along first lid sidewall 146 faces the sidewall inner surface 124 of the receptacle 102. The second periphery portion 144 is positioned above the first periphery portion 142 and above the receptacle 102. A portion of the lid second surface 134 engages the sidewall inner surface 124 at the sidewall upper portion 118 to removably secure the lid 104 to the receptacle 102. More specifically, the projections 154 of the lid 104 are received in the indentations 130 of the receptacle 102, and removably secure the lid 104 to the receptacle 102. The projections 154 may generally be snapped into and out of the indentations 130 in order to mount the lid 104 to the receptacle and remove the lid from the receptacle, respectively. Furthermore, the shoulder 152 of the lid 104 is seated on the receptacle flange 128. This configuration provides a generally or relatively liquid tight or liquid resistant seal.

[0067] Referring to Figures 4A to 4D, when the lid 104 is assembled to the receptacle 102 in the second configuration, the lid is inverted with respect to the first configuration: The sidewall upper portion 118 is nested within the second periphery portion 144 of the lid, and the lid central portion 138 and first periphery portion 142 are above the receptacle 102. A portion of the lid first surface 132 engages the sidewall upper portion 118 to removably secure the lid 104 to the

receptacle 102. More specifically, the receptacle flange 128 engages the lid first surface 132 and is removably secured between the projections 156 and the shoulder 152. The receptacle flange 128 may generally be snapped past the projections 156, in order to mount the lid 104 to the receptacle and remove the lid 104 from the receptacle 102.

[0068] In both the first configuration and the second configuration, the lid lip 150 provides grasping portion, which may be grasped by a user in order to remove the lid 104 from the receptacle 102.

[0069] Referring to Figures 5A to 6C, a first receptacle 102a and a second receptacle 102b may be assembled to a single lid 104, on opposed surfaces 132, 134 of the lid 104, in order to form the container 106c. In the embodiment shown, the first receptacle 102a and second receptacle 102b are generally identical. As used herein, the term ‘identical’ indicates that the receptacles 102a, 102b are made from the same mold, and/or are indistinguishable to the naked eye. Throughout this document, features of the first receptacle 102a may be referred to with the prefix ‘first’, and similar features of the second receptacle 102b may be referred to with the prefix ‘second’. In alternative embodiments, the receptacles 102a and 102b may be of differing sizes, depths or shapes from each other, while still being adapted to engage with lid 104.

[0070] In the configuration of Figures 5A to 5C, the lid first surface 132 faces away from the first receptacle 102a and towards the second receptacle 102b, and the lid 104 covers both the opening of the first receptacle 102a and the opening of the second receptacle 102b. The lid 104 is mounted to the first receptacle 102a in the same fashion as shown in Figures 3A to 3D, and to the second receptacle 102b in the same fashion as shown in Figures 4A to 4D.

[0071] Referring to Figures 6A to 6C, as mentioned above, this configuration is similar to the configuration of Figures 5A to 5C, but is inverted with respect to the configuration shown in Figures 5A to 5C.

[0072] In any of the above embodiments, the receptacle 102 and/or the lid 104 may be sealed with a membrane. For example, the receptacle 102 may include a membrane sealed to flange 128. Providing a membrane can help to contain liquids or viscous materials, particularly when inverted (e.g. as per receptacle 102b in Figures 5A to 5D). For further embodiments, the lid 104 may include a membrane sealed to shoulder 152 and/or lip 150, when in either the first configuration or the second configuration.

[0073] The foregoing description of the embodiments of the invention has been presented for the purposes of illustration and description. Each and every page of this submission, and all contents thereon, however characterized, identified, or numbered, is considered a substantive part of this application for all purposes, irrespective of form or placement within the application.

[0074] While the principles of the invention have been shown and described in connection with specific embodiments, it is to be understood that such embodiments are by way of example and are not limiting. As is evident from the foregoing description, certain aspects of the present invention are not limited by the particular details illustrated in the drawings. Other modifications and applications, or equivalents, will occur to those skilled in the art. Many changes, modifications, variations and other uses and applications of the present construction will, however, become apparent to those skilled in the art after considering the specification and attached drawings. All such changes, modifications, variations and other uses and applications which do not depart from the scope of the invention are deemed to be covered by the invention which is limited only by the claims that follow. The scope of the disclosure is not intended to be limited to the embodiments shown herein, but is to be accorded the full scope consistent with the claims, wherein reference to an element in the singular is not intended to mean "one and only one" unless specifically so stated, but rather one or more.

CLAIMS

I claim:

- 1 1. A container comprising:
 - 2 a receptacle having a receptacle base wall and a receptacle sidewall
 - 3 extending upward from the receptacle base wall to a receptacle rim, the receptacle
 - 4 sidewall having a sidewall inner surface and an opposed sidewall outer surface;
 - 5 and
 - 6 a lid having an outer surface and an inner surface, the lid having a lid
 - 7 central portion and a lid periphery divided into a first periphery portion proximal
 - 8 to the central portion and a second periphery portion positioned outwardly and
 - 9 downwardly of the first periphery portion, the lid being mountable to the
 - 10 receptacle in a first configuration and in a second configuration;
 - 11 wherein in said first configuration the lid central portion and first periphery
 - 12 portion are nested below the receptacle upper rim, and a portion of the lid outer
 - 13 surface is engaged with the receptacle sidewall inner surface, and
 - 14 in said second configuration the lid is inverted with respect to the first
 - 15 configuration, the lid central portion and first periphery portion being above the
 - 16 receptacle rim, and a portion of the lid inner surface being engaged with the
 - 17 receptacle sidewall outer surface.
- 1 2. The container of claim 1, wherein the receptacle sidewall inner surface
 - 2 comprises at least one indentation and the first periphery portion of the lid
 - 3 comprises at least one projection that is receivable in the indentation when the lid
 - 4 is mounted to the receptacle in the first configuration.
- 1 3. The container of claim 1, wherein in the first configuration the second
 - 2 periphery portion is positioned above the rim of the receptacle.
- 1 4. The container of claim 1, wherein the lid comprises a shoulder between the
 - 2 first periphery portion and the second periphery portion.

- 1 5. The container of claim 4, wherein the receptacle rim comprises an
2 outwardly extending receptacle flange, so that in the first configuration, an outer
3 surface of the horizontal shoulder is seated on the receptacle flange.
- 1 6. The container of claim 5, wherein in the second configuration an inner
2 surface of the shoulder is seated on the receptacle flange.
- 1 7. The container of claim 5, wherein the lid periphery comprises at least one
2 inwardly extending projection, and in the second configuration the receptacle
3 flange is secured between said inwardly extending projection and the shoulder of
4 the lid.
- 1 8. The container of claim 1, wherein when in the first configuration the
2 container is liquid tight.
- 1 9. The container of claim 1, wherein the receptacle is a first receptacle, and
2 the container further comprises a second receptacle that is mountable to the lid in
3 an inverted position when the lid is mounted to the first receptacle in the first
4 configuration.
- 1 10. The container of claim 9, wherein the second receptacle is generally
2 identical to the first receptacle.
- 1 11. The container of claim 10, wherein the first periphery portion is nested in
2 the first receptacle when the lid is mounted to the first receptacle in the first
3 configuration and the second receptacle is mounted to the lid in the inverted
4 second configuration.
- 5 12. The container of claim 11, wherein the second periphery portion is
6 positioned above the first periphery portion and above the first receptacle when
7 the lid is mounted to the first receptacle in the first configuration and the second
8 receptacle is mounted to the lid in the inverted second configuration.

1 13. The container of claim 12, wherein the lid comprises a shoulder between
2 the first periphery portion and the second periphery portion.

1 14. The container of claim 13, wherein the rim of the first receptacle comprises
2 an outwardly extending first receptacle flange, and an outer surface of the
3 shoulder is seated on the first receptacle flange when the lid is mounted to the first
4 receptacle in the first configuration and the second receptacle is mounted to the lid
5 in the inverted second configuration.

1 15. The container of claim 14, wherein the rim of the second receptacle
2 comprises an outwardly extending second receptacle flange, and the second
3 receptacle flange is seated on an inner surface of shoulder when the lid is mounted
4 to the first receptacle in the first configuration and the second receptacle is
5 mounted to the lid in the inverted second configuration.

1 16. The container of claim 15, wherein the second periphery portion comprises
2 at least one inwardly extending projection, and the second receptacle flange is
3 removably secured between the projection and the shoulder when the lid is
4 mounted to the first receptacle in the first configuration and the second receptacle
5 is mounted to the lid in the inverted second configuration.

1 17. The container of claim 10, wherein the first receptacle and the lid are liquid
2 tight when the lid is mounted to the first receptacle in the first configuration and
3 the second receptacle is mounted to the lid in the inverted second configuration.

1 18. A container comprising:
2 a first receptacle having a first receptacle base wall and a first receptacle
3 sidewall extending upward from the first receptacle base wall to a first receptacle
4 rim, the first receptacle sidewall having a first sidewall inner surface and an
5 opposed first sidewall outer surface;
6 a lid mounted to the first receptacle and comprising a lid central portion, a
7 lid inner surface facing away from the first receptacle, an opposed lid outer

8 surface, and a lid periphery divided into a first periphery portion proximal to the
9 central portion and a second periphery portion positioned outwardly and
10 downwardly of the first periphery portion, wherein at least the first periphery
11 portion is nested below the first receptacle rim; and

12 a second receptacle having a second receptacle base wall and a second
13 receptacle sidewall extending upward from the first receptacle base wall to a
14 second receptacle rim, the second receptacle sidewall having a second sidewall
15 inner surface and an opposed second sidewall outer surface, the second receptacle
16 being inverted with respect to the first receptacle and being mounted to the lid, the
17 lid inner surface facing the second receptacle, and the second receptacle rim being
18 nested within the second periphery portion.

1 19. The container of claim 18, wherein the lid outer surface engages the first
2 sidewall inner surface to secure the lid to the first receptacle.

1 20. The container of claim 19, wherein the first sidewall inner surface
2 comprises at least one indentation, the lid outer surface comprises at least one
3 projection, and the projection is received in the indentation to secure the lid to the
4 first receptacle.

1 21. The container of claim 18, wherein the second receptacle sidewall engages
2 the lid inner surface to secure the lid to the second receptacle.

1 22. The container of claim 18, wherein the second periphery portion is
2 positioned above the first periphery portion and above the first receptacle rim.

1 23. The container of claim 18 wherein the lid comprises a shoulder between the
2 first periphery portion and the second periphery portion.

1 24. The container of claim 23, wherein the first receptacle sidewall comprises
2 an outwardly extending first receptacle flange at the first receptacle rim, and the
3 shoulder is seated on the first receptacle flange.

1 25. The container of claim 24, wherein the second receptacle sidewall
2 comprises an outwardly extending second receptacle flange at the second
3 receptacle rim, and the second receptacle flange is seated on the shoulder.

1 26. The container of claim 25, wherein the second periphery portion comprises
2 at least one inwardly extending projection, and the second receptacle flange is
3 secured between the inwardly extending projection and the shoulder.

1 27. The container of claim 18, wherein the first receptacle and the lid are
2 generally liquid tight.

1 28. The container of claim 18, wherein the first receptacle and the second
2 receptacle are identical.

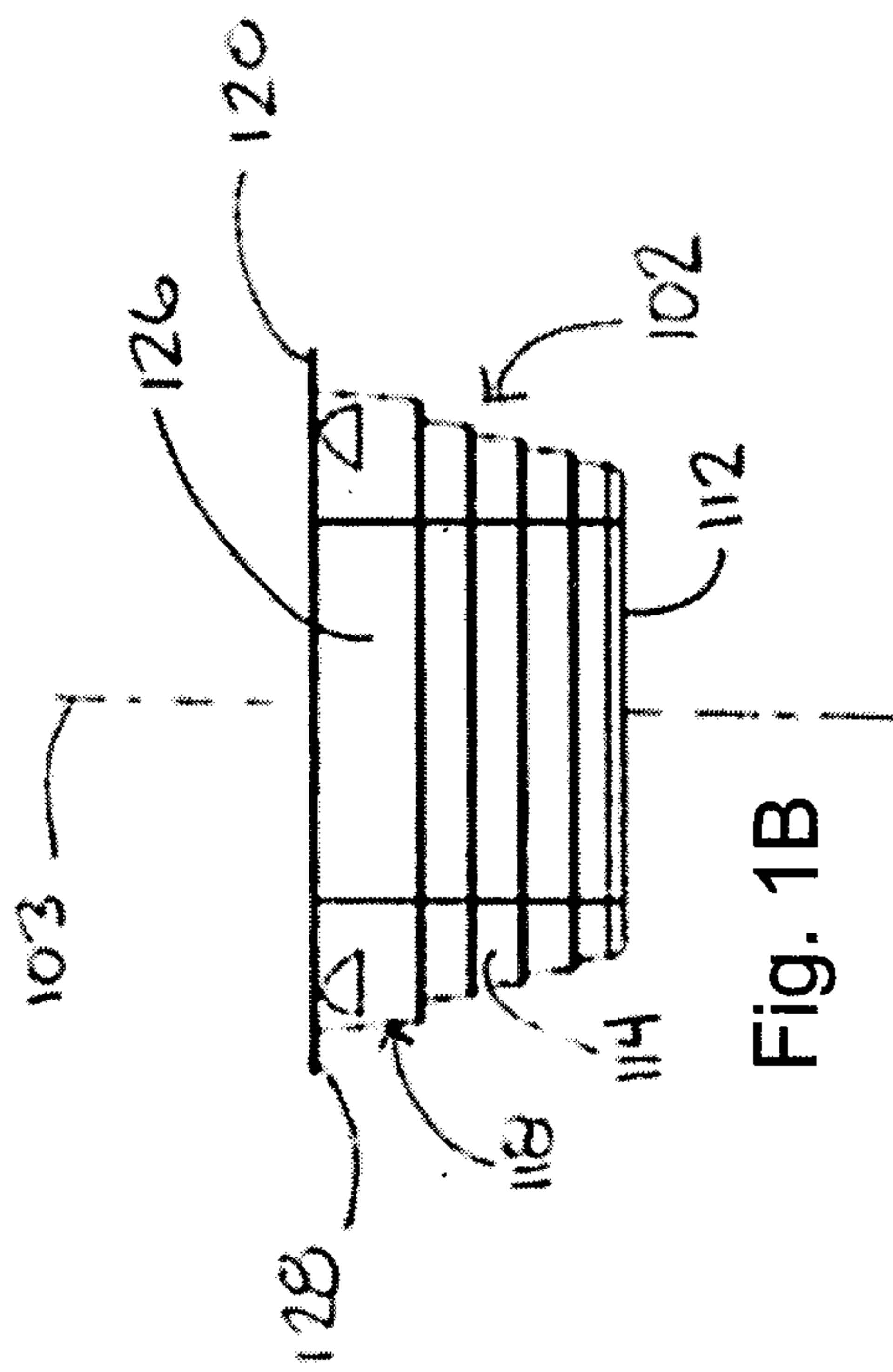


Fig. 1B

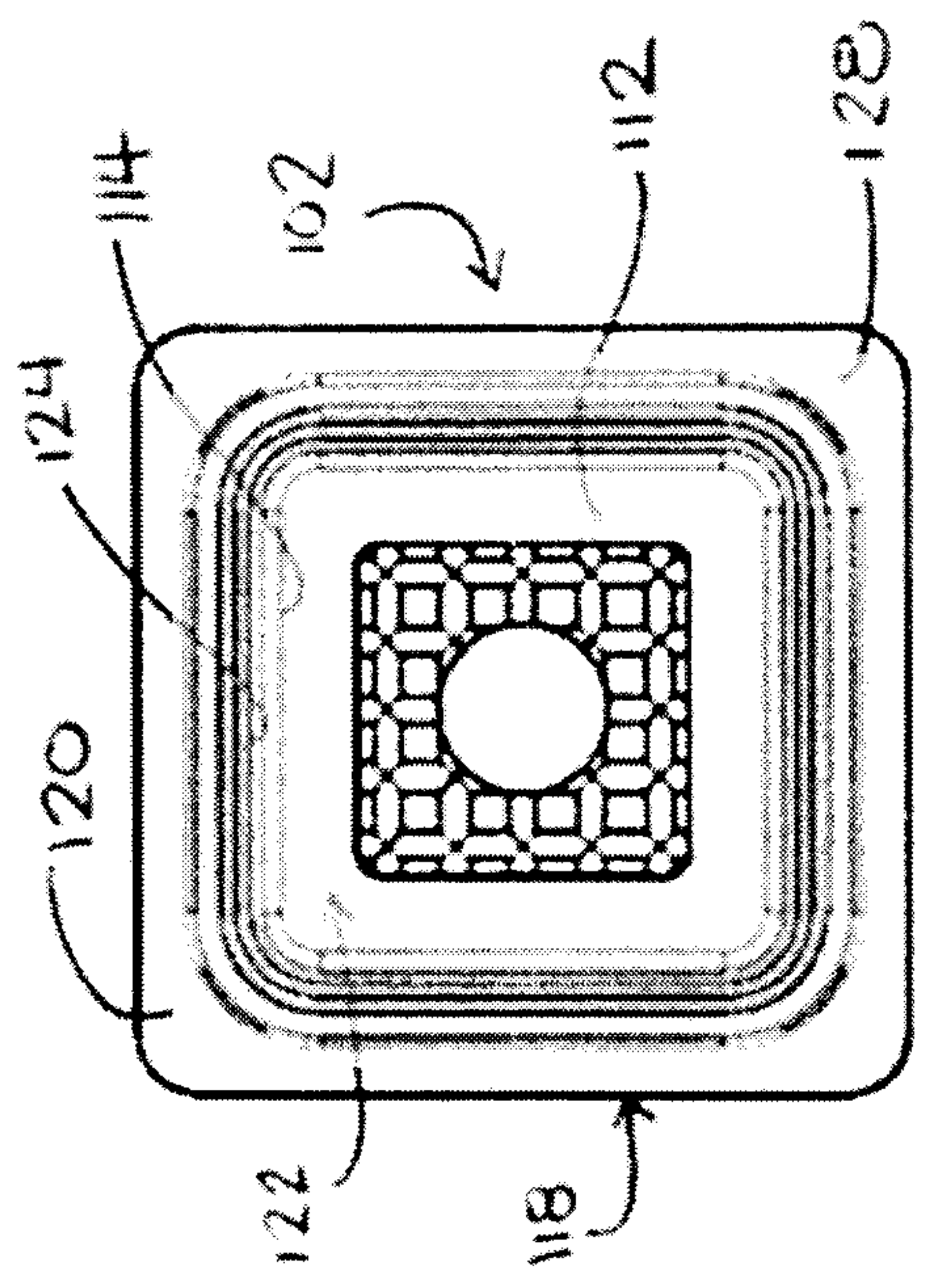


Fig. 1A

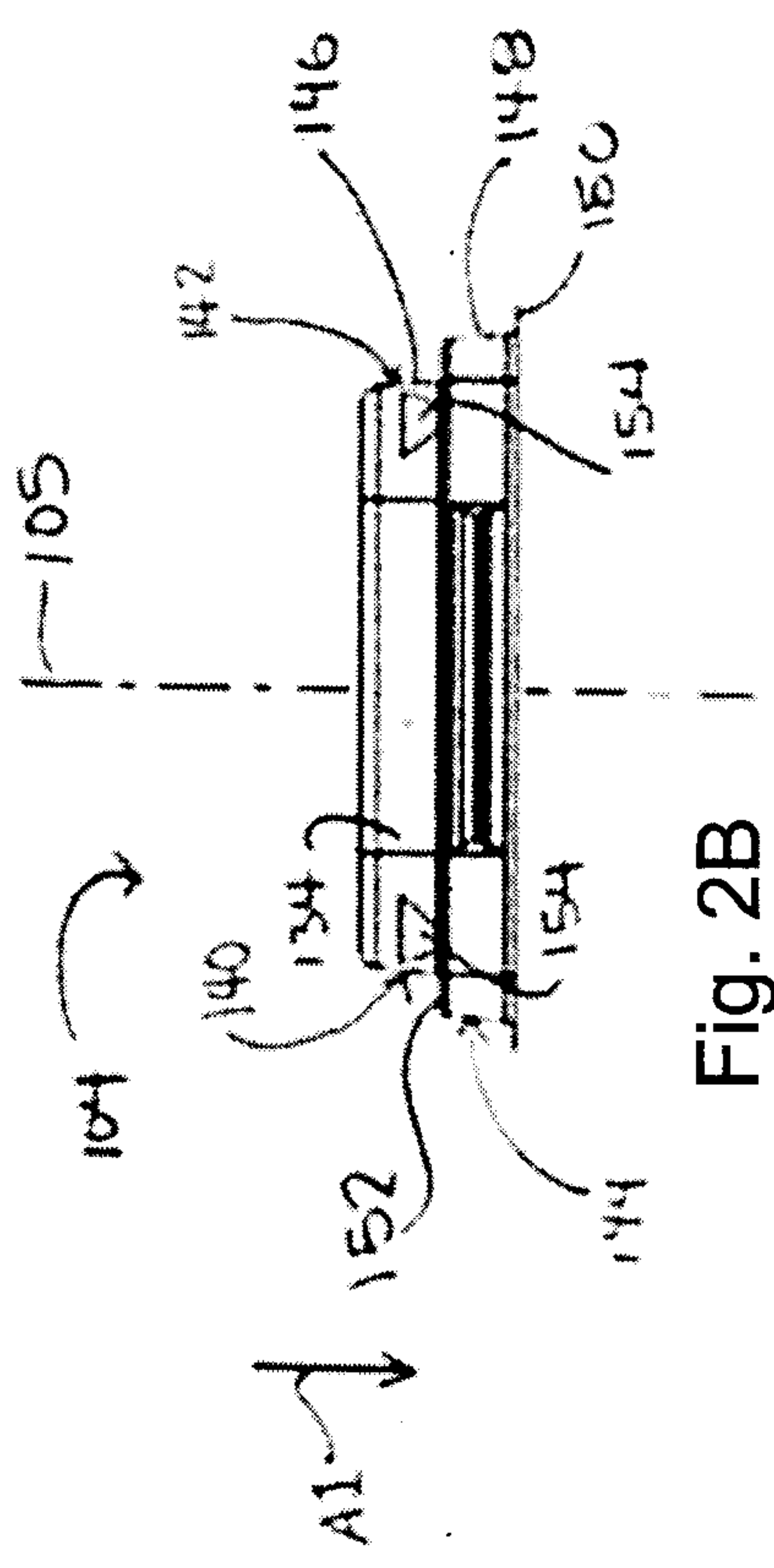


Fig. 2B

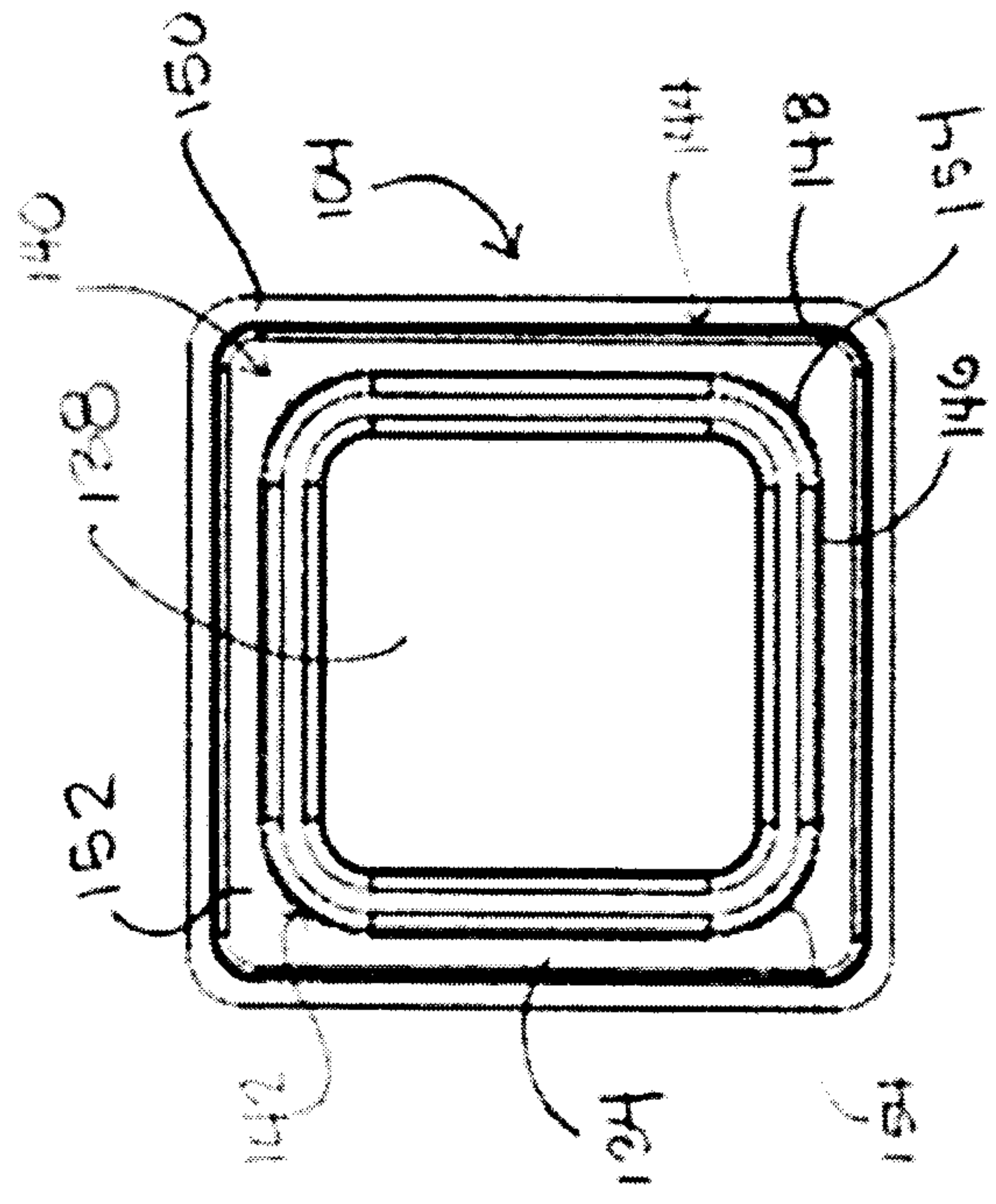


Fig. 2A

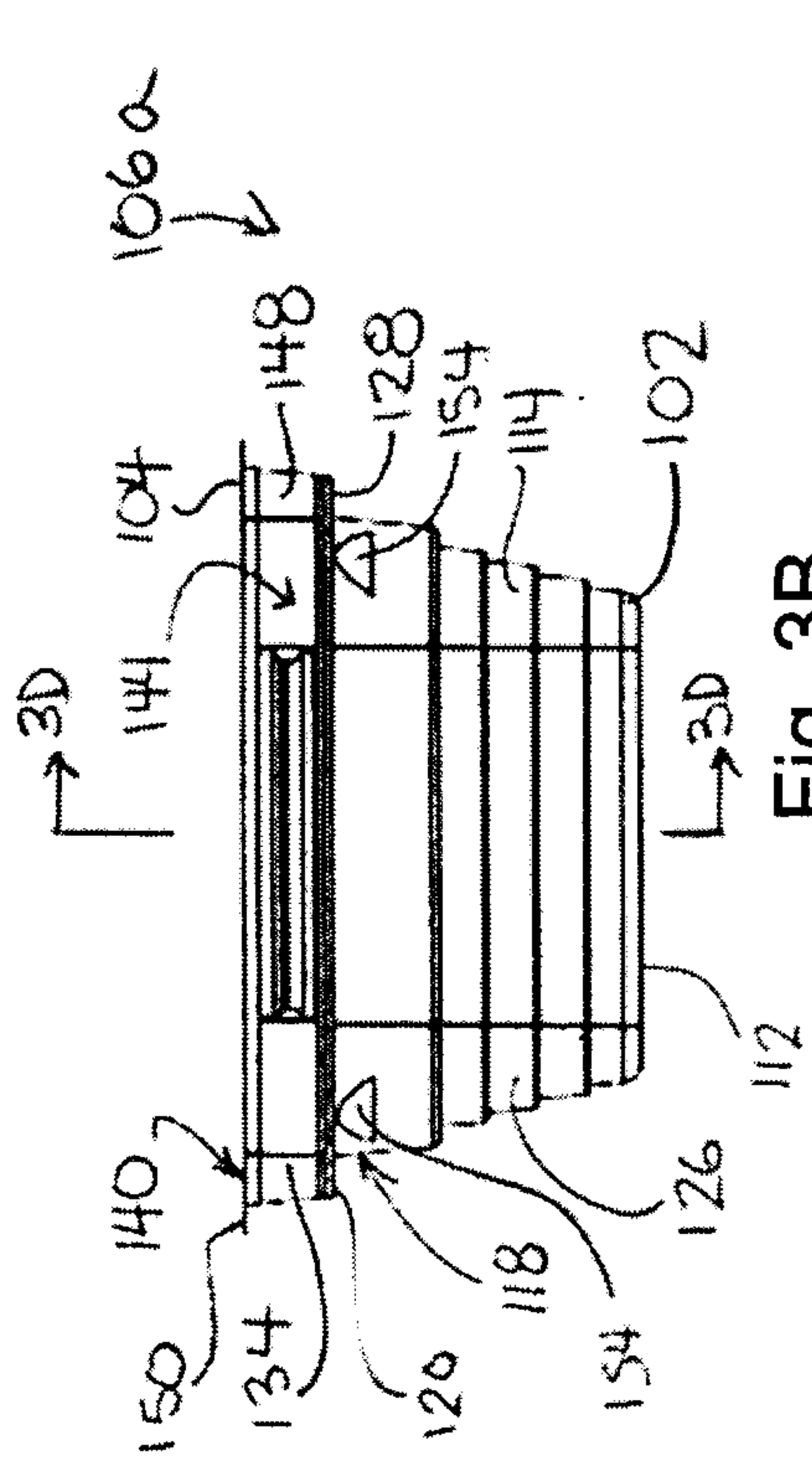


Fig. 3B

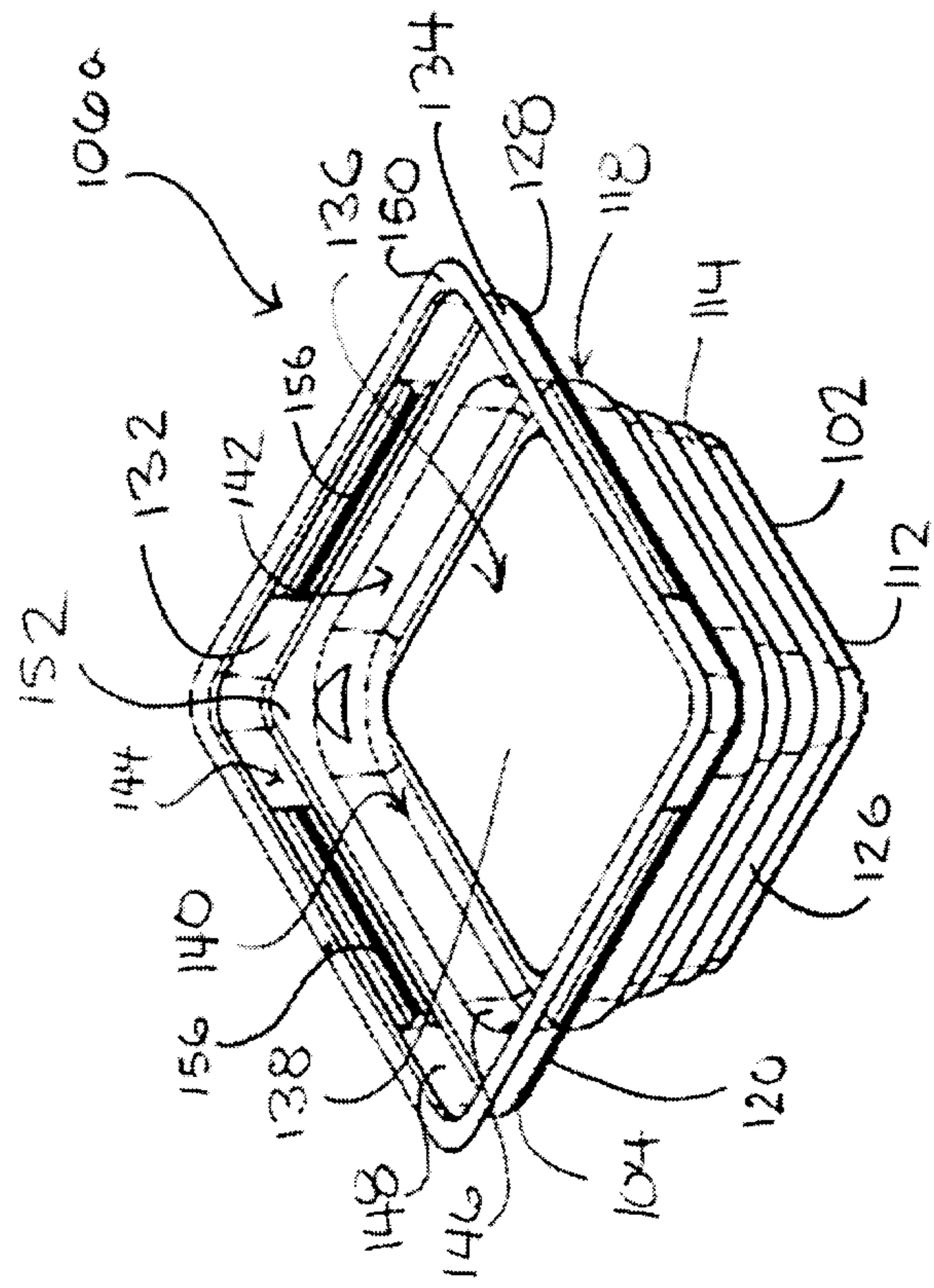


Fig. 3A

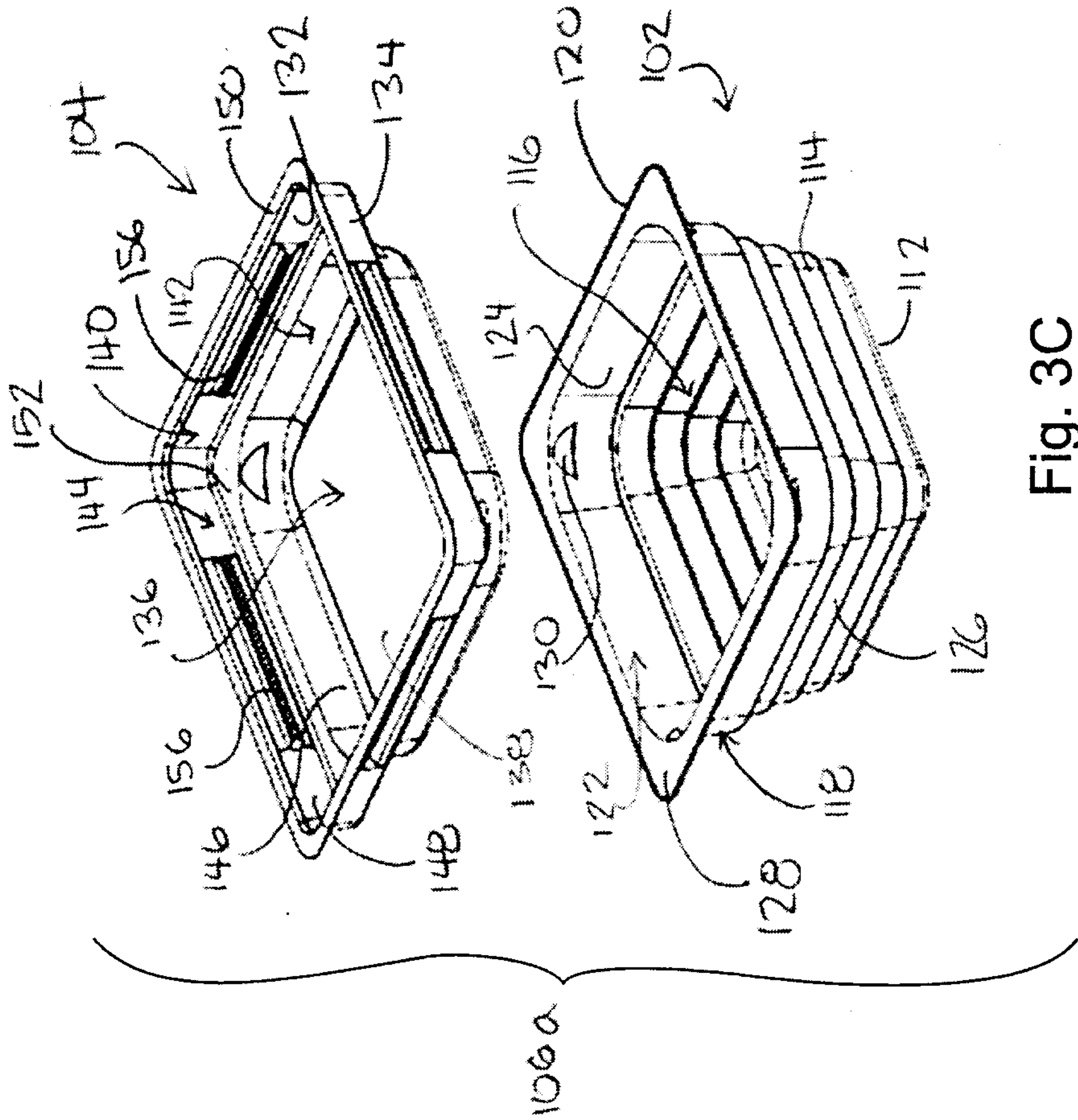


Fig. 3C

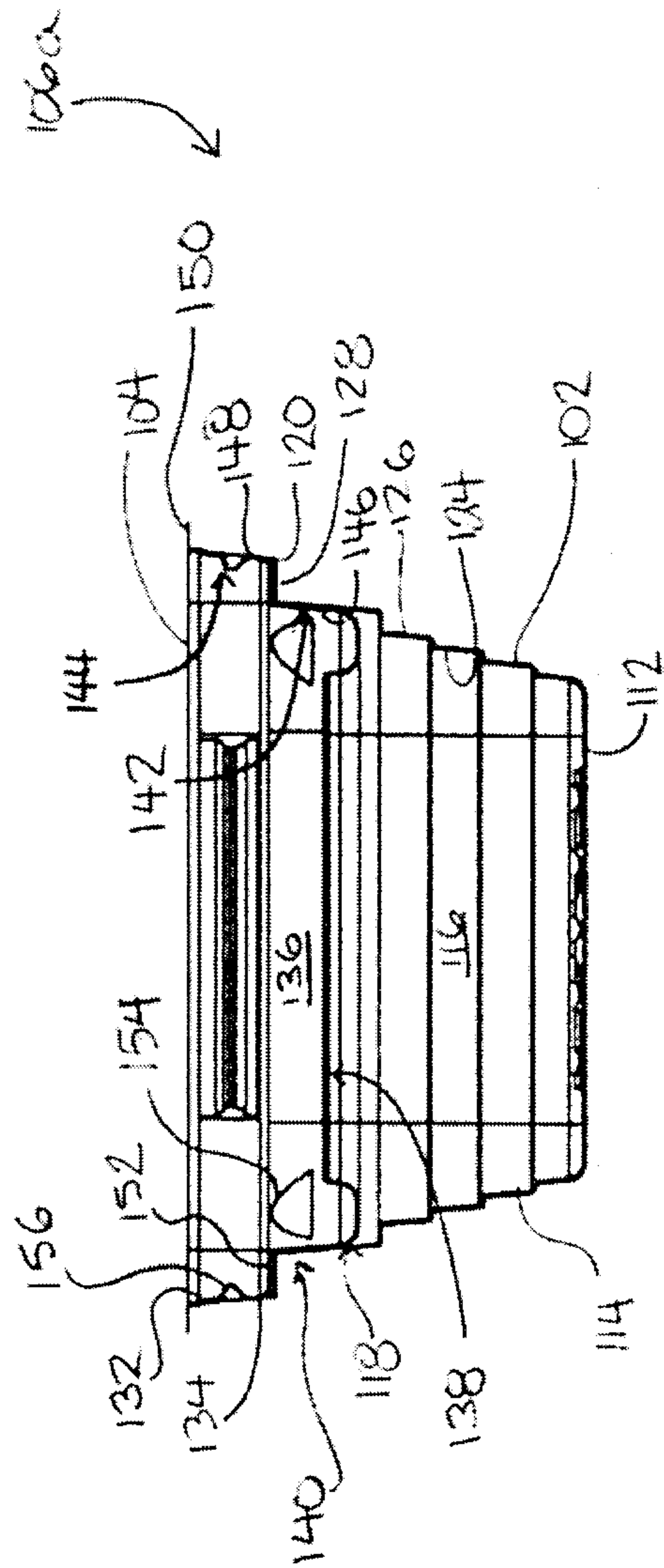


Fig. 3D

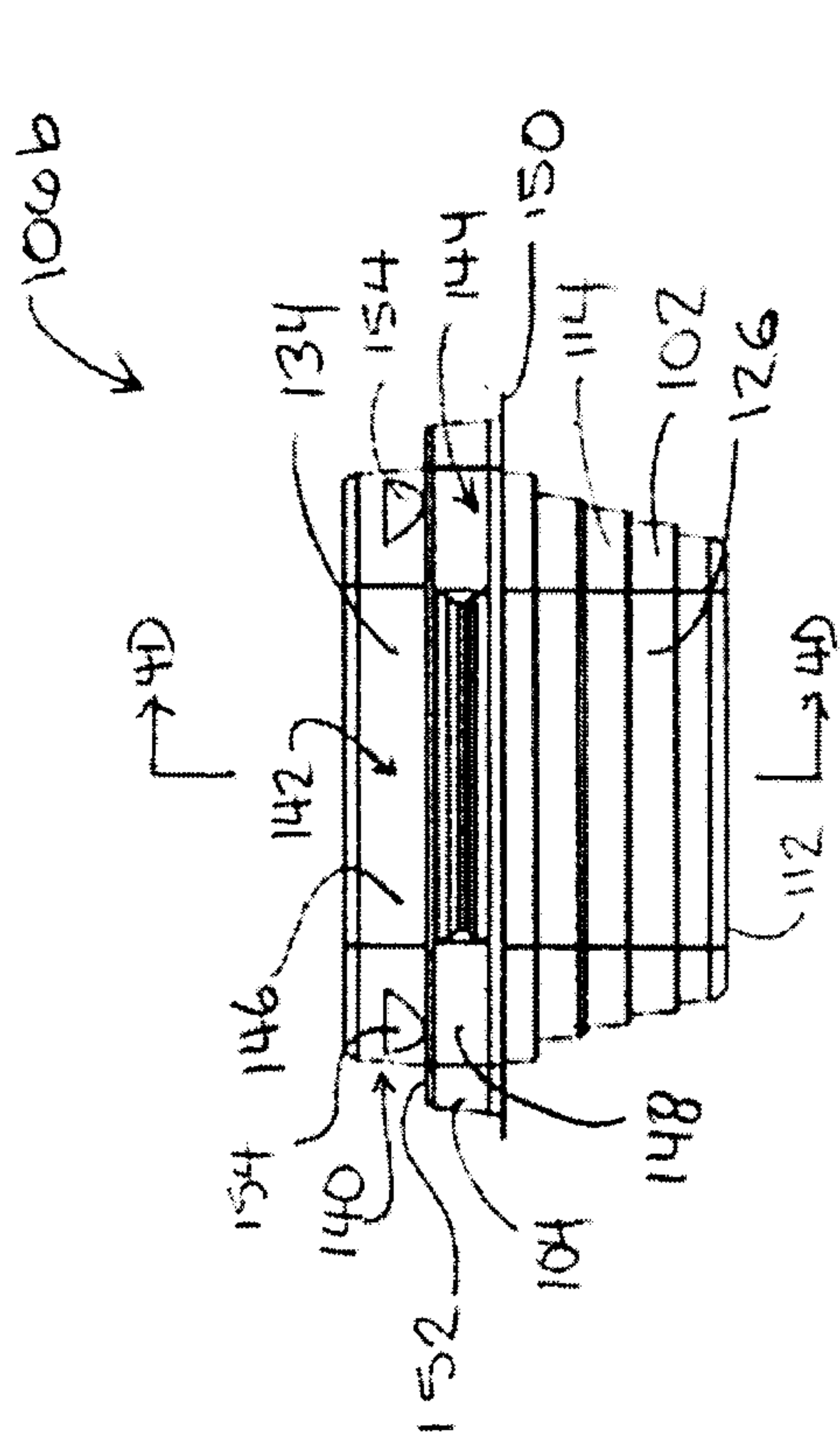


Fig. 4B

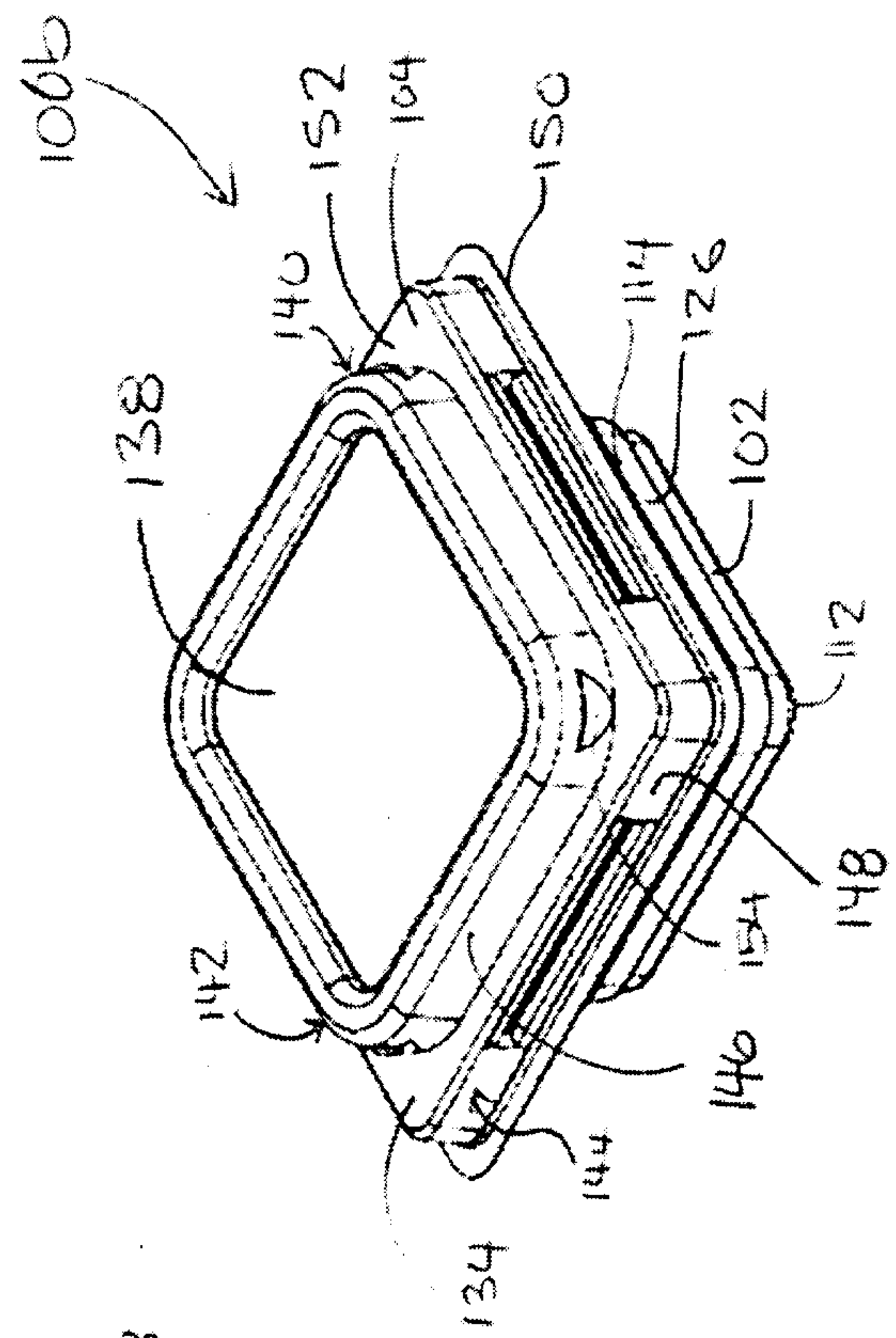


Fig. 4A

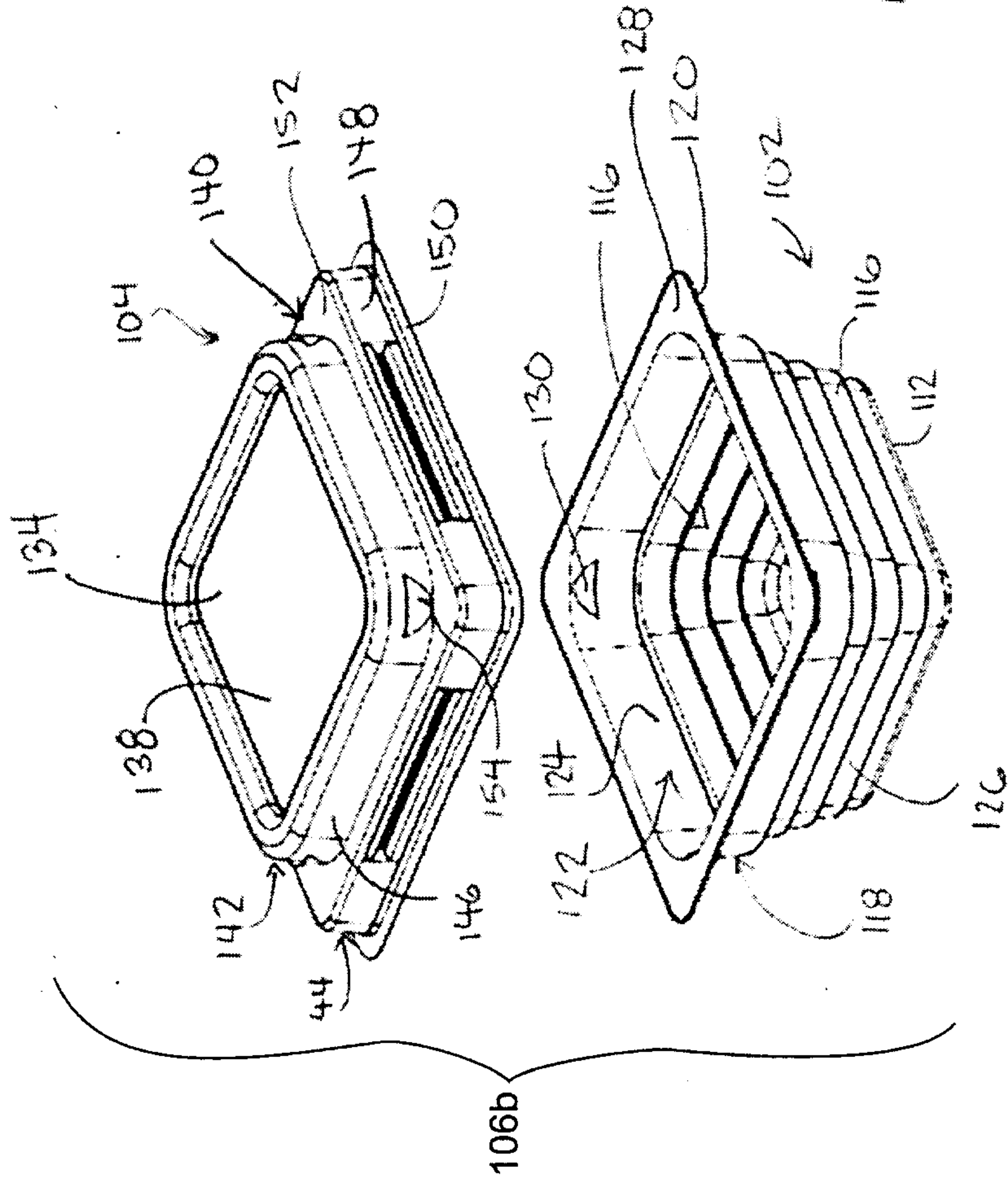


Fig. 4C

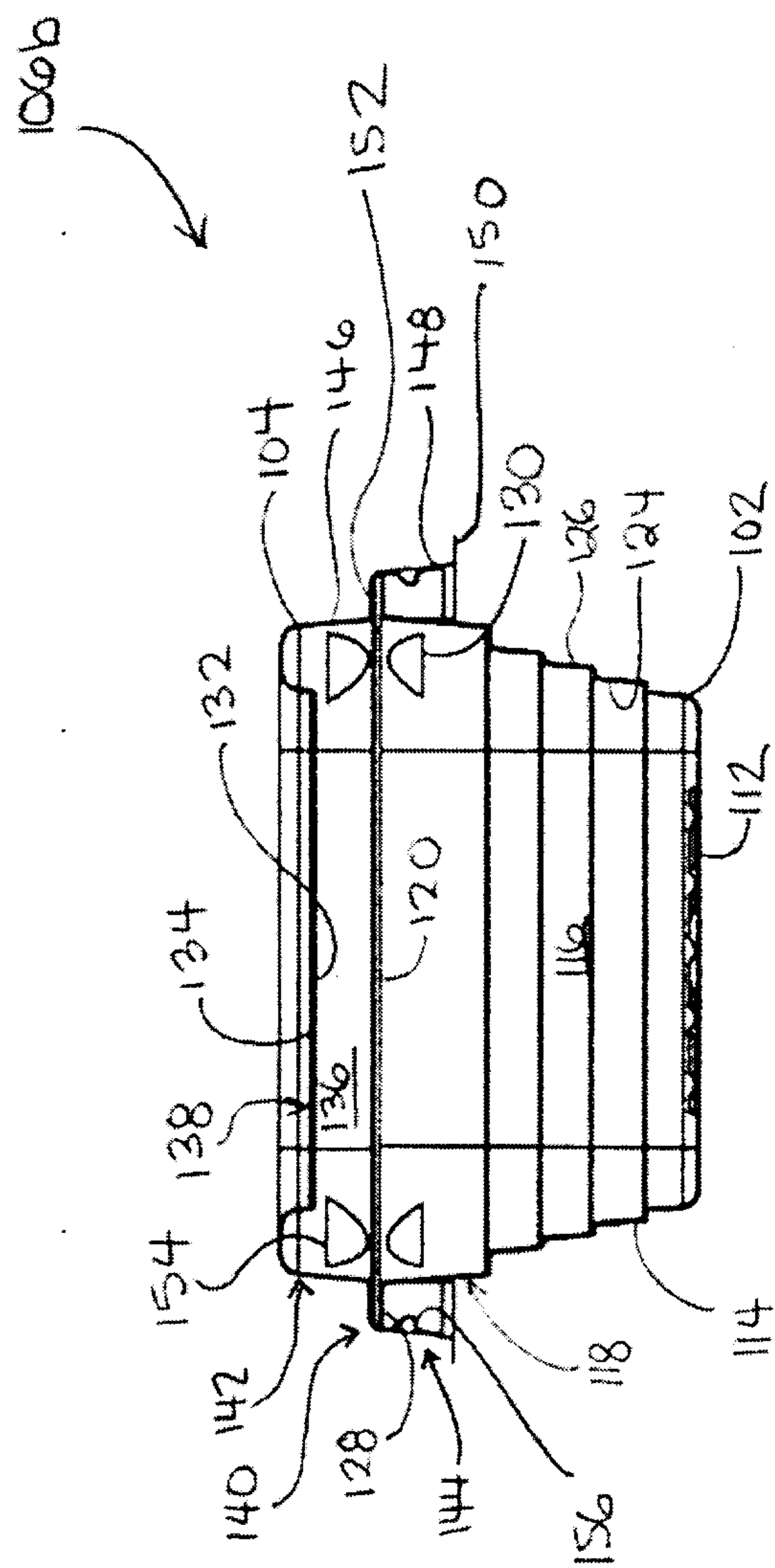


Fig. 4D

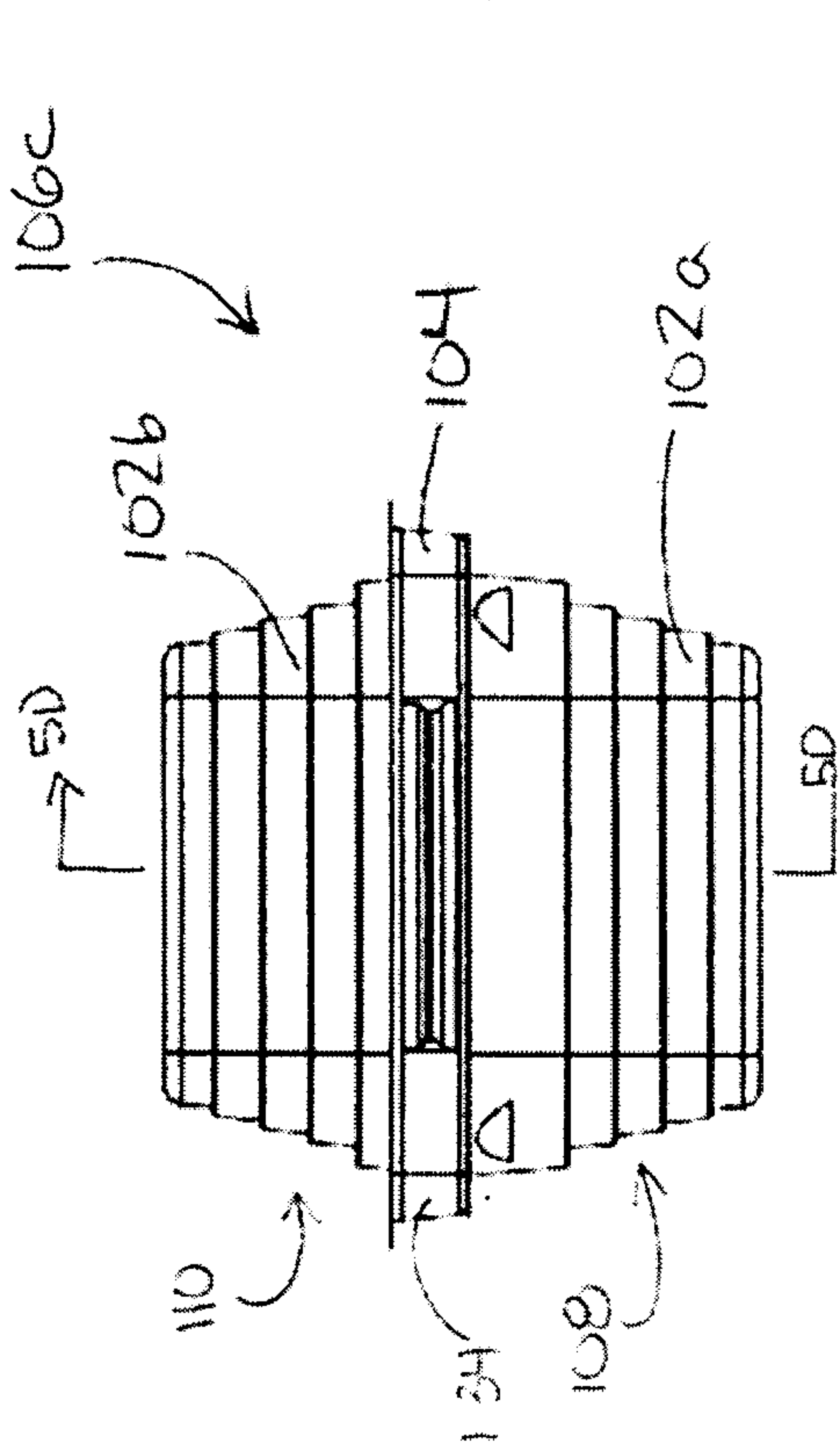


Fig. 5B

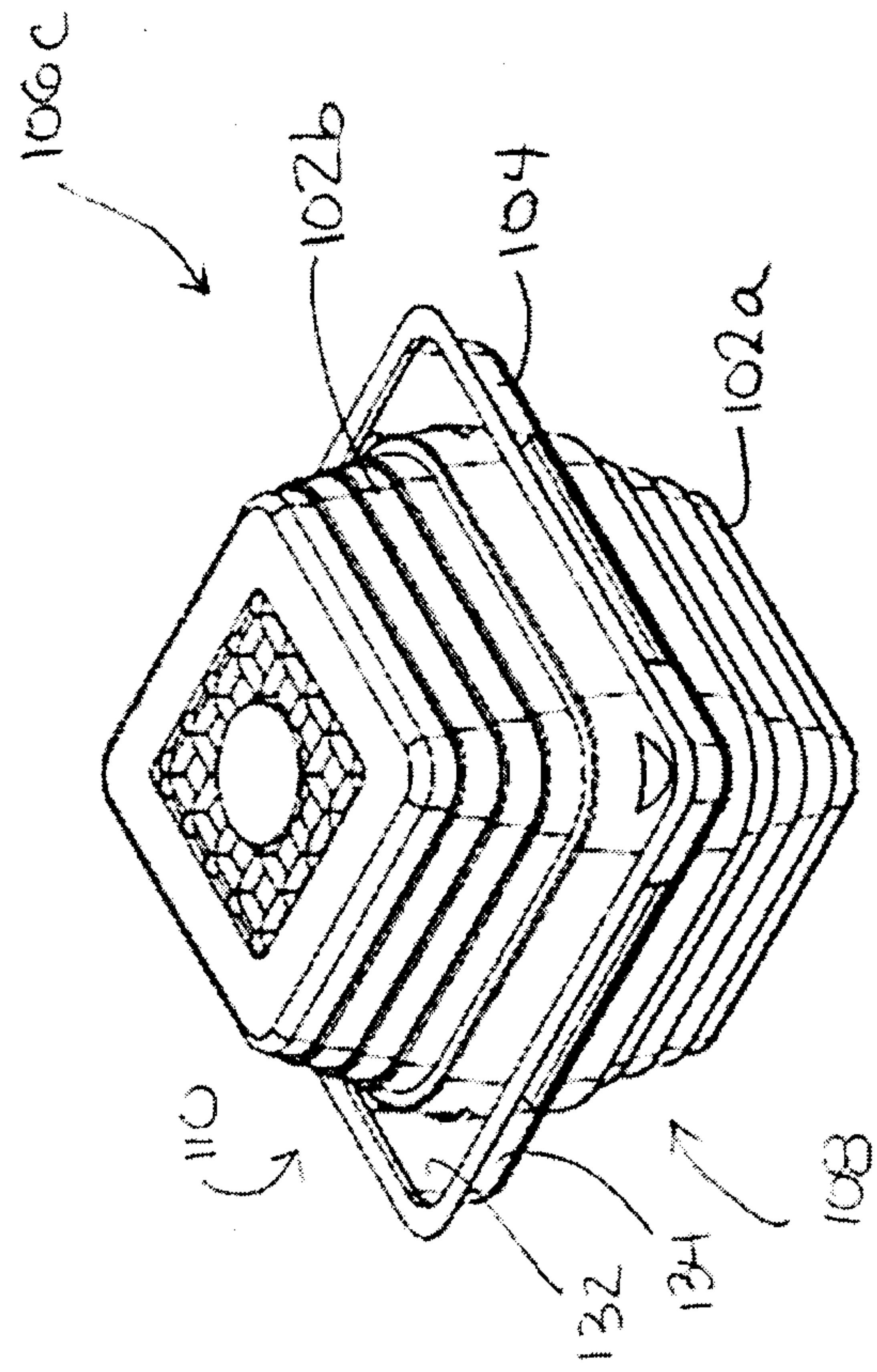


Fig. 5A

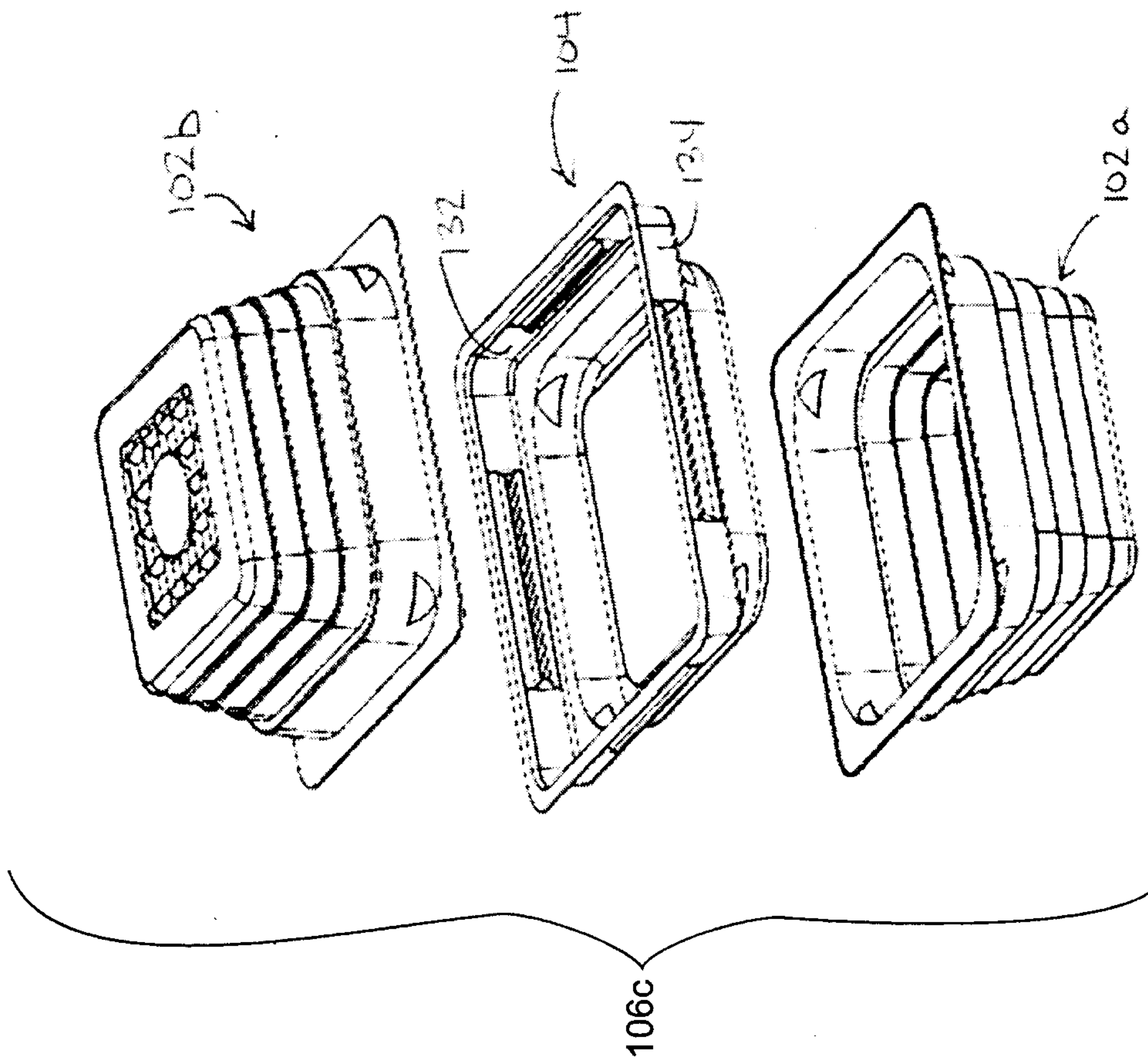


Fig. 5C

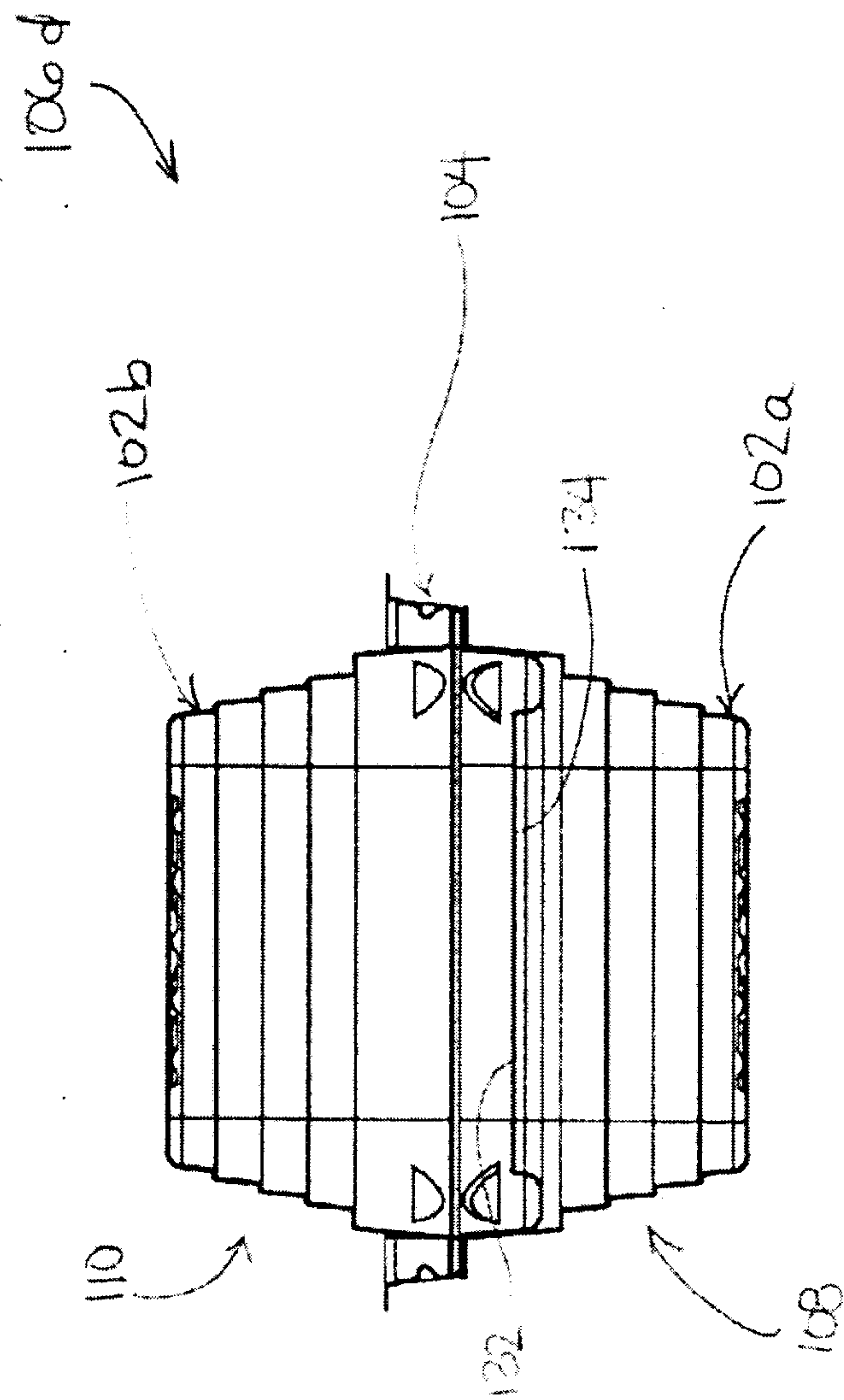


Fig. 5D

