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(71) Applicant: **CooperVision International Limited**
Fareham PO15 5RL (GB)

(72) Inventors:
- **RIVERA VÉLEZ, Jesús Javier**
  00795 Juana Diaz (PR)
- **ALAYÓN RIVERA, Javier E**
  00795 Juana Diaz (PR)
- **BURGOS CRUZ, José A**
  00795 Juana Diaz (PR)
- **SIEVENS FIGUEROA, Lucas**
  00795 Juana Diaz (PR)

(74) Representative: **Abel & Imray LLP**
Westpoint Building
James Street West
Bath BA1 2DA (GB)

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(54) A PACKAGED CONTACT LENS

(57) A method of recycling a contact lens blister package. The blister package includes a base member (100), made of a thermoplastic material, and a sealing member (103) joined to the base member to form a blister cavity arranged to hold an unworn contact lens and contact lens packaging solution. The base member (100) has an upper surface (130) and a lower surface (132) and includes a blister well (104) and a handle (106). The blister well (104) has a rim (101). The blister well (104) is enclosed on the upper surface (130) of the base member (100) by a sealing region (102). The handle (106) and the sealing region (102) are provided by a flange that extends out from the blister well (104). The base member (100) has a weight of 0.72g or less. The handle (106) of the base member (100) comprises a hole (110) extending through the flange. The method comprises coupling together two base members (100) of two contact lens blister packages by inserting the handle (106) of one base member into the hole (110) of another base member (100) to form a base member assembly.

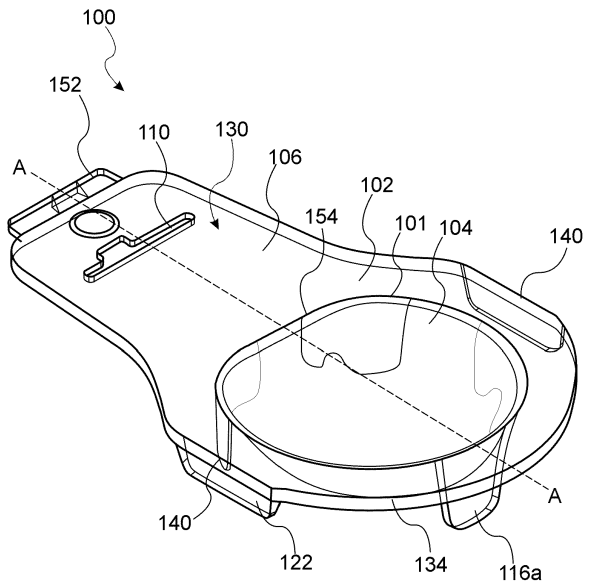

FIG. 1A

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Description

Field of the Invention

[0001] The present invention concerns a packaged contact lens. More particularly, but not exclusively, this invention concerns a sealed blister package including a base member and a sealing member joined to the base member to form a blister cavity arranged to hold an unworn contact lens and an aqueous solution. The invention also concerns a blister package including a base member, which has a weight of 0.72g or less.

Background of the Invention

[0002] Soft contact lenses, for example hydrogel and silicone hydrogel contact lenses, are stored in an aqueous solution in order to keep them hydrated and in a useable condition. Contact lenses are typically individually packaged in sealed blister packaging. Blister packages provide a sterile and secure environment for unused contact lenses, allowing them to be transported and stored safely until such time as they are required by an end user. A conventional blister package comprises a base member made of a plastics material and a sealing member that is sealed to that base member to form a blister cavity. A typical blister package of the prior art has a blister cavity in which the unused contact lens is stored and a handle that can be held between the finger and thumb of the user. The blister cavity is often configured as a well in the base member, the well being capable of holding a volume of contact lens packaging solution and the contact lens itself. Contact lenses are typically packaged in the blister package in a manufacturing process that includes the steps of: placing the contact lens in the well of the base member, filling the well with a volume of contact lens packaging solution, sealing the well with a sealing member to seal the contact lens and the solution into the packaging, and then autoclaving the sealed blister package in order to sterilize the contact lens and solution within the blister cavity.

[0003] Martinez US 4,691,820 discloses a molded blister package for storing and dispensing a hydrophilic contact lens which comprises a base portion which includes a cavity surrounded by an outstanding flange, and a cover sheet sealed to the flange to enclose the cavity.

[0004] EP1752058 discloses a blister package housing a contact lens including a base member that includes a grip region including a curved top surface shaped to accommodate a thumb and a curved bottom surface shaped to accommodate an inner curve of a forefinger.

[0005] WO2021260353 discloses a blister package for a contact lens that includes a base sheet and sealing sheet where one includes a bowl and the other includes a dome.

[0006] A blister package is disclosed in US10390593 which includes a thermoplastic base member with a grip portion, a distal end region, a first side region extending from the proximal end region to the distal end region, a second side region opposing the first side region, and a cavity configured to contain a packaging solution and a contact lens.

[0007] JP2006016049 discloses a blister pack for a contact lens including a container body comprising a semi-spherical depressed section, a flange section which is extended to the external periphery of the depressed section, and supporting sections.

[0008] WO03/039969 discloses a package for contact lenses in which the overall volume of the package and the internal volumes of the lens-holding cavities in the package are minimised.

[0009] The disclosure of US10390593 is taken to be the closest prior art. The distinguishing feature of claim 1 of the present invention over the disclosure of US10390593 are that the base member has a weight of less than 0.75g.

[0010] Many people use daily, weekly, fortnightly or monthly disposable contact lenses packaged in blister packages. This means that a large number of blister packages are transported to customers across the world on a daily basis. The cost and fossil fuel emissions associated with transporting contact lenses is significantly increased due to the additional weight of the blister packaging and contact lens packaging solution. Furthermore, although the plastics material of the blister pack may be recyclable, it is preferable to recycle less rather than more plastics material.

[0011] The technical effect of the reduced weight of the blister package of the present invention is to allow the base member to be manufactured using less material than is required for US10390593, which reduces the fossil fuel emissions associated with the use of the blister package as well as reducing the amount of material that must be recycled after the blister package has been used. The objective technical problem is how to reduce the environmental impact of the base member disclosed in US10390593.

Summary of the Invention

[0012] The present invention provides according to a first aspect, a hermetically sealed blister package for a contact lens, wherein the blister package includes a base member, made of a plastics material, and a sealing member joined to the base member to form a blister cavity arranged to hold an unworn contact lens and contact lens packaging solution; the base member having an upper surface and a lower surface and including a blister well and a handle, the blister well having

a rim, the rim of the blister well being enclosed on the upper surface of the base member by a sealing region; the handle and the sealing region being provided by a flange that extends out from the blister well; wherein the base member has a weight from 0.4g to 0.72g.

[0013] A reduction in the weight of the blister package allows the environmental impact of the blister pack to be reduced by reducing the amount of fossil fuels required to transport the blister package and reducing the amount of material that needs to be recycled once the blister package has been used.

[0014] The blister well may have a concave interior surface on the upper surface of the base member and a convex exterior surface on the lower surface of the base member. The blister well may have a sidewall.

[0015] The sealing member is hermetically sealed to the base member at the sealing region. The sealing region may be substantially annular. The flange may be planar. The flange may have a thickness of 0.3mm to 1.0mm. The flange may have a thickness of 0.4mm to 0.7mm. The flange may have a thickness of 0.5mm. The flange may have a thickness of 0.55mm.

[0016] The base member may have an outer edge that is, in plan view, symmetric about a line running through the centre of the handle and the centre of the blister well.

[0017] The sealing member may be a laminated structure including foil and one or more layers of a plastics material. The sealing member may be made of a plastics material. The sealing member may be made of foil. The thickness of the sealing member can be from about 50 micrometers to about 100 micrometers. The sealing member may be printed with words or numbers. The sealing member may have a thickness of 60 micrometers to 70 micrometers. Suitable materials for the sealing member can be obtained from AMCOR (Switzerland). The sealing member may have an area equal to the area of the top surface of the base member. The sealing member may have an area greater than the area of the top surface of the base member. The sealing member may have an area less than the area of the top surface of the base member. The sealing member may be joined to the base member at a sealing region.

[0018] The blister well may be hemispherical or substantially hemispherical in shape. The blister well may be an irregular shape. The blister well may be cylindrical in shape. The blister well has a wall, referred to herein as a sidewall. The sidewall may include a flat portion, which may be adjacent to the handle. The blister well has a rim.

[0019] The base member may include two or more stabilising legs. The base member may include three or more stabilising legs. The stabilising legs may extend down from the lower surface of the base member. The stabilising legs may be vertically aligned with the rim of the blister well. The stabilising legs may extend down from the lower surface of the base member such that they extend out as far as the furthest extent of the blister well. The stabilising legs may extend down from the lower surface of the base member such that they extend out further than the furthest extent of the blister well. The stabilising legs may extend out far enough to provide stability to the base member when it is placed upright on a flat surface. The stabilising legs may allow a reduction in the weight of the blister package to be achieved while still providing a blister package that is stable when placed upright on a flat surface without the handle formed by the flange having to serve as a stability support and whilst maintaining enough structural integrity to avoid problematic deformation and enough structural integrity to adequately protect a contact lens during transportation and storage.

[0020] The base member may include at least two side tabs. The side tabs may be positioned on either side of the blister well, wherein the side tabs extend down from the upper surface of the base member. The side tabs may have a height from 2.0mm to 4.0mm. The side tabs may have a height from 3.0mm to 4.0mm. The side tabs may have a height of 3.0mm. The side tabs may have a height of 4.0mm. The side tabs may have a length along the upper surface of the flange of 6.0mm to 10.0mm. The side tabs may have a length along the upper surface of the flange of 7.0mm to 9.00mm. The side tabs may have a length along the upper surface of the flange of 8.0mm. The side tabs may increase the structural integrity of the base member. The side tabs may reduce the likelihood of problematic deformation of the base member. The side tabs may increase the stability of the base member when it is placed upright on a flat surface. The side tabs may provide a gripping region.

[0021] The handle may include a hole extending through the flange, wherein the hole is located closer to an outer edge of the handle than to the centre of the blister well. The hole may be located at a distance of 10.0mm to 30.0mm from the centre of the blister well. The hole may be located at a distance of 20.0mm from the centre of the blister well. The hole may be a slot having a width of 0.5mm to 1.5mm. The hole may be a slot having a width of 1.1mm. The hole may be a slot having a width of 1.0mm. The hole may be a slot having a width of 0.9mm. The width of the hole may be the shorter dimension of the slot. The hole may be a slot with a length of 8.0mm to 12.0mm. The hole may be a slot with a length of 9.0mm to 11.0mm. The hole may be a slot with a length of 9.0mm. The hole may be a slot with a length of 10.0mm. The side or the length of the hole may be parallel to the end of the handle. The hole may include a notch in a side of the hole. The hole may include a notch in the longest side of the hole. The notch may be central along the length of the hole. The notch may be off centre along the length of the hole. The hole may include a notch in the edge of the hole. The notch in the edge of the hole may protrude from the hole by 0.5mm to 1.5mm. The notch in the edge of the hole may protrude from the hole by 1.1mm. The notch in the edge of the hole may have a length of 2.0mm to 3.0mm. The notch in the edge of the hole may have a length of 2.7mm. The handle of the sealed blister package may include only one hole. The handle of the sealed blister package may include more than one hole. One or more holes in the handle may reduce the weight of the base member.

[0022] The blister package may include a contact lens. The contact lens may be a hydrogel contact lens. The contact lens may be a silicone hydrogel contact lens. The base member may be made from a recyclable plastics material. The base member may be made from a plastics material. The base member may be made from a thermoplastic material, which may be recyclable. This means that the base members may be recycled rather than being sent to landfill. It may be that the sealing region is not annular when viewed from a top plan view (i.e. from above). The sealing region may have a vertex adjacent to the handle of the base member. As used herein, a vertex is understood to be a portion of a geometric shape having the sharpest turn relative to the rest of the shape. For example, the vertex can be a point where two or more line segments meet. However, if the line segments are curved it can be appreciated that the intersection may be blended in such a way that there is a region having a smaller radius than a portion of the line segments located away from the vertex. A sealing region with a vertex reduces the separation force required to separate the sealing member from the sealing region. If a lower separation force is required to separate the sealing member from the sealing region, the base member can have a reduced structural integrity, i.e. be less robust (and can therefore be made lighter) without reducing the protection that the blister package provides to a contact lens.

[0023] The sealing region may be annular when viewed from a top plan view. The sealing region may be annular. The sealing region may have a width from 1.0mm to 4.0mm. The sealing region may have a width from 1.0mm to 2.5mm. The sealing region may have a width of 2.0mm. The sealing region may have a width of 1.0mm. The sealing region may have a width of 1.7mm. A reduced width of the sealing region may improve the ease of opening the blister pack whilst maintaining a hermetic seal.

[0024] The blister well may hold a volume of contact lens packaging solution of 0.4mL to 1.6mL. It may be that the blister well holds a volume of contact lens packaging solution of 0.6mL to 1.4mL. The blister well may hold a volume of contact lens packaging solution of 0.8mL to 1.2mL. The blister well may hold a volume of contact lens packaging solution of 0.6mL. The blister well may hold a volume of contact lens packaging solution of 0.7mL. The blister well may hold a volume of contact lens packaging solution of 0.8mL.The base member may have a length from 40.0mm to 50.0mm and a width from 25.0mm to 35.0mm. The base member may have a length from 40.0mm to 50.0mm. The base member may have a length from 43.0mm to 47.0mm. The base member may have a length of 46.0mm. The base member may have a length of 46.31mm. The base member may have a width of 25.0mm to 35.0mm. The base member may have a width of 27.0mm to 33.0mm. The base member may have a width of 28.0mm to 30.0mm. The base member may have a width of 29.0mm. The base member has a weight of 0.72g or less. The base member may have a weight of less than 0.72g. The base member may have a weight from 0.40g to 0.72g. In an example, the base member has a weight of 0.70g. The base member may have a weight of 0.72g. The base member may have a weight of less than 0.70g. The base member may have a weight of less than 0.65g.

[0025] The blister well may have a depth at its centre of 5.0mm to 8.0mm. The blister well may have a depth at its centre of 6.0mm to 7.0mm. The blister well may have a depth at its centre of 6.0mm. The blister well may have a depth at its centre of 6.7mm.

[0026] The flange of the base member has a thickness that is no greater than the thickness of the sidewall of the blister well. The flange of the base member may have a thickness that is no greater than 95% of the thickness of the sidewall of the blister well. The flange of the base member may have a thickness that is no greater than 90% of the sidewall of the blister well. The flange of the base member may have a thickness that is no greater than 85% of the thickness of the sidewall of the blister well.

[0027] The sidewall of the blister well may have a thickness of 0.3mm to 1.0mm. The sidewall of the blister well may have a thickness of 0.5mm to 0.7mm. The sidewall of the blister well may have a thickness of 0.6mm. If the sidewall of the blister well were too thin, evaporation might occur through the plastic resulting in changes in the packaging solution, potentially resulting in the contact lens drying out and becoming unusable. The blister well sidewall thickness may allow a reduction in weight of the blister package whilst still being thick enough to avoid any evaporation of the contact lens packaging solution. That enables the lens to remain hydrated prior to use by a contact lens wearer.

[0028] The blister well sidewalls may facilitate retention of the base member in a base member carrier of a heat sealing system or machine. It can be understood that slots may be provided in the base member carrier to receive one or more sidewalls to provide a physical fit between the base member and the base member carrier to ensure that the upper surface of the base member remains stable and parallel to a surface of a heat sealing die that is pressed against the sealing member on top of the upper surface of the base member to seal the sealing member to the base member.

[0029] The flange of the base member may have a stiffness from 50,000psi.mm^2 to 150,000psi.mm^2. The flange of the base member may have a stiffness from 60,000 psi.mm^2 to 90,000 psi.mm^2. The flexural modulus of the base member material may be from 230,000psi to 276,000psi. The stiffness of the present base members is calculated by multiplying the flexural modulus of the base member material by the square of the thickness of the flange in mm. The flexural modulus can be measured using conventional equipment, such as equipment provided by Instron (Norwood, MA, USA) or it can be provided by the plastics manufacturer as part of the plastics technical data. The flexural modulus can be used as determined by the ISO 178 testing method.

[0030] The outer edge of the handle may include a protrusion. The protrusion may have a length along the flange of

9.0mm to 11.0mm. The protrusion may have a length along the flange of 9.8mm. The protrusion may extend out 2.0mm to 3.0mm from the edge of the base member. The protrusion may extend out 2.3mm from the edge of the base member. On the outer edge of the handle that is furthest from the blister well, there may be a tab extending downwards from the upper surface of the flange. The tab may have a length of 2.0mm to 3.0mm along the flange. The tab may have a length of 2.2mm to 2.4mm along the flange. The tab may have a length of 2.3mm along the flange. The tab may have a height of 1.0mm to 6.0mm. The tab may have a height of 1.75mm. The tab may be part of a larger protrusion that extends down from the lower surface of the base member. The larger protrusion may extend down along the entire width of the end of the handle. The tab may be sized and configured to fit into the notch of the hole in the flange of a second base member. The tab and the larger protrusion may be sized and configured to fit into the hole in the flange of a second base member. This means that a plurality of base members may be attached together, for example to form a base member assembly or a base member recycling unit, which means the base members may be accepted for recycling in a recycling centre.

[0031] The base member may include three stabilising legs. The base member may include four stabilising legs. The base member may include five stabilising legs. The base member may include three stabilising legs that are positioned approximately 120 degrees apart from each other about a vertical axis extending through the centre of the blister well. The base member may include four stabilising legs that are positioned approximately 90 degrees apart from each other about a vertical axis extending through the centre of the blister well. The stabilising legs may include a planar lower edge. The stabilising legs may include a rounded lower edge. The stabilising legs may include a curved lower edge.

[0032] When the base member is placed upright on a flat surface it may have more than one point of contact with the surface. When the base member is placed upright on a flat surface it may have more than two points of contact with the surface.

[0033] When the base member is placed upright on a flat surface it may have more than three points of contact with the surface. When the base member is placed upright on a flat surface it may have more than four points of contact with the surface. Multiple points of contact between the base member and the flat surface may allow a force exerted on the base member by the surface to be distributed across the base member. This may reduce the stiffness required in any individual region of the base member, for example the blister well, which may allow the weight of material used to make the base member to be reduced. The weight of material used to make the base member may be reduced without compromising the ability of the blister package to provide adequate protection to a contact lens.

[0034] When the lower surface of a first base member, according to an embodiment of the invention, is placed up against the lower surface of a second base member, according to the same embodiment, there may be more than one point of contact between the base members. There may be more than two points of contact between the base members. There may be more than three points of contact between the base members. There may be more than four points of contact between the base members. Multiple points of contact between the base members may allow a force exerted on the first base member by the second base member to be distributed across the first base member and vice versa. This may reduce the stiffness required by any individual region of a base member, for example the blister well. A reduction in the stiffness required may allow the weight of material used to make the base member to be reduced. The weight of material used to make the base member may be reduced without compromising on the ability of the blister package to provide adequate protection to a contact lens during storage and transportation.

[0035] The blister well may be reinforced by supporting ribs. The blister well may be reinforced by two or more supports. The blister well may be reinforced by three or more supports. The blister well may be reinforced by supports so that the thickness of the sidewall of the blister well may be reduced without compromising on the ability of the blister package to provide adequate protection to a contact lens.

[0036] The present invention provides, according to a second aspect, a method of manufacturing a packaged contact lens, comprising: providing a base member of a blister package, according to the first aspect of the invention; placing a contact lens into the blister well of the base member; placing a volume of liquid contact lens packaging solution into the blister well of the base member; sealing a sealing member to the sealing region of the base member; and autoclaving the sealed contact lens blister package to sterilize the contact lens and the packaging solution.

[0037] The step of sealing a sealing member to the sealing region of the base member may be carried out by pressing a foil laminate sealing member against a plastic base member under heat, to melt the layer of plastic of the foil laminate and the sealing region of the base member together. The step of sealing a sealing member to the sealing region may be done at a temperature of 210 degrees to 240 degrees Celsius. The step of sealing a sealing member to the sealing region may be done using a heated die pressing the sealing member against the flange of the base member at a pressure of 25 PSI to 60 PSI. The heated die may press the sealing member against the flange for a time of 100ms to 1100ms.

[0038] Desirably, the sealing region provides a sufficient seal between the base member and the sealing member to withstand separation forces that occur during a contact lens autoclave sterilization process, and also is relatively easy for a person to peel open using the person's fingers. If a lower separation force is required to separate the sealing member from the sealing region, the base member can be made lighter without reducing the protection that the blister package provides to a contact lens.

[0039] For example, the sealing region may be configured to provide an average separation force of less than 15

Newtons (N). In some embodiments, the sealing region is configured to provide a separation force from about 4 N to about 14 N. In further embodiments, the sealing region is configured to provide a separation force from about 6 N to about 11 N. In yet further embodiments, the sealing region is configured to provide a separation force from about 8 N to about 10 N.

[0040] The peel strength can be measured using an INSTRON Model 5943 machine. For purposes of these measurements, the angle of pull is set at 45 degrees. The load cell of the machine is calibrated prior to testing the peel strength. Generally, the operating instructions are set by the manufacturer.

[0041] The sealing configuration can be adjusted by controlling the temperature of a heat sealing head surface that is pressed against the sealing member on the top surface of the base member, controlling the pressure with which the sealing head is applied to the sealing member, or controlling the time for which the sealing head is applied to the sealing member, or combinations thereof, as described above.

[0042] The present invention provides, according to a third aspect, a method of recycling a sealed blister package, comprising: removing the sealing member from the base member; removing the contact lens from the blister well; removing the liquid contact lens packaging solution from the blister well; coupling two of the base members of two contact lens blister packages by inserting the handle end of one base member into the hole of the second base member to form a base member assembly. The method may also include the step of coupling additional base members to the base member assembly to form an assembly comprising at least 30 base members coupled together to form a base member recycling unit. The method may also include the step of placing the base member recycling unit in a recycling receptacle. This may allow the base members to be recycled as the base member recycling unit has a large enough volume to be recycled.

[0043] It will of course be appreciated that features described in relation to one aspect of the present invention may be incorporated into other aspects of the present invention. For example, the method of the invention may incorporate any of the features described with reference to the apparatus of the invention and *vice versa.*

Description of the Drawings

[0044] Embodiments of the present invention will now be described by way of example only with reference to the accompanying schematic drawings of which:

FIG. 1A shows a perspective view of a contact lens package base member according to a first embodiment of the invention;

FIG. 1B shows a perspective view of a contact lens package including a base member and a sealing member according to a first embodiment of the invention;

FIG. 2A shows a top view of the base member of FIG. 1A;

FIG. 2B shows a top view of a hole in a handle of the base member of FIG. 1A;

FIG. 3 shows a cross-sectional view of the base member taken along line A-A of FIG. 1A;

FIG. 4 is an end view of the base member of FIG. 1A;

FIG. 5 is a top view of a part of the base member of FIG. 1A;

FIG. 6 shows the steps of a method of manufacturing a packaged contact lens according to a second embodiment of the invention;

FIG. 7 shows the steps of a method of recycling a contact lens blister package according to a third embodiment of the invention;

FIG. 8A shows a top perspective view of a contact lens package base member according to a fourth embodiment of the invention;

FIG. 8B shows a bottom perspective view of the base member of FIG. 8A;

FIG. 8C shows a perspective view of a pair of the base members of FIG. 8A;

FIG. 8D shows a side view of a pair of the base members of FIG. 8A;

FIG. 9A shows a top perspective view of a contact lens package base member according to fifth embodiment of the invention;

FIG. 9B shows a bottom perspective view of the base member of Figure 9B;

FIG. 9C shows a perspective view of an assembly of the base members of FIG. 9A;

FIG. 10A shows a top perspective view of a contact lens package base member according to sixth embodiment of the invention;

FIG. 10B shows a bottom perspective view of the base member of Figure 10A;

FIG. 10C shows a side view of a pair of the base members of Figure 10A;

FIG. 11A shows a top perspective view of a contact lens package base member according to another embodiment of the invention;

FIG. 11B shows a bottom perspective view of the base member of FIG. 11A;

FIG. 11C shows a side view of a pair of the base members of FIG. 11A;

FIG. 12A shows a top perspective view of a contact lens package base member according to another embodiment of the invention;

FIG. 12B shows a bottom perspective view of the base member of FIG. 12A;

FIG. 12C shows a side view of a pair of the base members of FIG. 12A; and

FIG. 13 shows a top view of a contact lens package base member according to another embodiment of the invention.

Detailed Description

[0045] In example embodiments of the invention, the base member is a recyclable plastic material. The base member is dimensioned in such a way that allows it to be lightweight while maintaining its structural integrity. The base member may include a blister well, a handle, stabilising legs and side tabs. The base member includes a lower surface designed to face downwards during use and an upper surface designed to face upwards during use, such as when using the blister pack to present a hydrated contact lens to a person to remove from the blister pack. The blister well extends downwards from the upper surface of the base member with a concave interior surface and protrudes downwards from the lower surface of the base member with an opposing convex exterior surface. Where the concave interior surface of the blister well meets the planar upper surface of the base member, the blister well has a rim. The rim of the blister well is enclosed on the upper surface of the base member by a sealing region. This sealing region in use is the region at which the base member of the blister pack is hermetically sealed to a sealing member of the blister pack. A flange extends from a perimeter of the blister well to an edge of the base member. At a first end of the base member the flange may extend out to a curved edge at a constant distance from the perimeter of the blister well. At a second end of the base member the flange may extend out further than at the first end and form a handle suitable to be held between the thumb and finger of a user when in use. The blister well is dimensioned to hold a contact lens and contact lens packaging solution. A plurality of stabilising legs may extend down from a lower surface of the flange around the convex exterior surface of the blister well. When in use the stabilising legs may allow the base member to be placed with the lower surface of the base member contacting a surface without tipping. A side tab may extend down from the edge of the flange on either side of the blister well, thus there may be a side tab extending symmetrically either side of the line running centrally from the first end of the base member to the second end of the base member, where the line passes through the central point of the blister well. There may be a hole extending right through the thickness of the handle of the base member. At the end of the handle, the lower surface of the base member may protrude down below the lower surface to form a tab.

[0046] It is believed that the present contact lens blister packages have the lightest weight thermoplastic base member of which the inventors are aware. Several commercially available blister pack plastic base members were dried and weighed, as presented in Table 1 below:

For each commercial product, five blister pack base members were weighed using a conventional scale, and the average weight in grams is provided in Table 1 (the weights have been rounded to two significant digits). The range for the base

member weights is provided in the right column. The Acuvue 2 and Oasys contact lens blister packs had the lightest weight base member of 0.732 grams. Examples of blister packs are disclosed in the following patent publications: EP1092645 A1, US7213382, EP1092645 A1, US7213382, US5609246, US5609246, US5609246, US5609246, US10390593, US7426993, US10390593, US7426993, US7477366, US6398018, and US7477366. Blister pack base members in these patents are visually similar to the actual weighed blister packs of the commercial products identified in Table 1.

[0047] The present blister packages include a base member that has a weight of 0.72g or less. For example, the base member of the blister packages have a weight from 0.40g to 0.72g.

Table 1:

Manufacturer	Product	Average Weight (g)	Standard Deviation	Range (g)
JJVC	OASYS	0.75	0.013	0.732 - 0.766
JJVC	OASYS 1-DAY	1.23	0.003	1.231 - 1.238
JJVC	ACUVUE 2	0.74	0.005	0.732 - 0.743
JJVC	TRUEYE	1.23	0.010	1.226 - 1.247
Alcon	AIROPTIX	1.02	0.007	1.014 - 1.030
Alcon	PRECISION 1	1.04	0.011	1.021 - 1.052
Alcon	TOTAL 1	1.07	0.011	1.051 - 1.081
Alcon	DAILIES AQUA COMFORT PLUS	1.04	0.008	1.031 - 1.053
Alcon	TOTAL30	1.05	0.008	1.045 - 1.063
B&L	ULTRA	0.87	0.016	0.859 - 0.896
B&L	BIOTRUE 1-DAY	1.59	0.007	1.581 - 1.599
B&L	PUREVISION2	2.74	0.005	2.730 - 2.741
B&L	INFUSE	0.84	0.011	0.829 - 0.854
CooperVision	MYDAY	1.11	0.012	1.088 - 1.122
CooperVision	BIOFINITY	2.05	0.020	2.035 - 2.085
CooperVision	AVAIRA VATALITY	1.07	0.005	1.064 - 1.077
CooperVision	CLARITI 1 DAY	0.96	0.006	0.950 - 0.965
CooperVision	PROCLEAR 6 PACK	2.07	0.005	2.066 - 2.080
CooperVision	PROCLEAR 1 DAY	0.99	0.021	0.960 - 1.016
CooperVision	BIOMEDICS 55 6 PACK	2.08	0.011	2.071 - 2.093
CooperVision	MISIGHT	0.97	0.019	0.954 - 0.992

[0048] The contact lens contained in the blister package is preferably a soft contact lens. A soft contact lens can be a hydrogel contact lens in that it has an equilibrium water content (EWC) from 10-90%. Preferably, the soft contact lens is a silicone hydrogel contact lens (that is, a hydrogel contact lens that comprises polymeric units derived from at least one silicone-containing chemical).

[0049] A first example embodiment of the invention will now be described with reference to FIGS. 1A to 5. FIG. 1A shows a base member 100 formed from a thermoplastic layer. The base member 100 has a weight of 0.72g. The base member 100 is made of a recyclable plastics material. The base member 100 has a length of 46.31mm at its longest point and a width of 29mm at its widest point. The base member 100 includes a blister well 104 and a handle 106. The blister well 104 is dimensioned to accommodate a contact lens. The blister well 104 has a sidewall 105 (FIG. 3). The blister well 104 has a rim 101. The rim 101 is substantially circular apart from a linear portion 154. The handle 106 provides a gripping portion configured to be held between a thumb and finger of a user. FIG. 3 shows a cross sectional view of the base member 100.

[0050] The base member 100 has a lower surface 132 and an upper surface 130. The lower surface 132 and the upper surface 130 meet at an edge 134, which runs around the boundary of the base member 100.

[0051] The blister well 104 is formed as a well in the upper surface 130 of the thermoplastic layer, which extends down to form a concave interior surface. The thickness of the blister well 104 sidewall 105 is 0.6mm, i.e. the distance between the upper surface 130 of the base member 100 and the lower surface 132 of the base member in the region of the blister well

104 is 0.6mm. The depth of the blister well 104 is 6mm at its maximum point. The blister well 104 is sized to hold a maximum of 1.6mL of contact lens packaging solution.

[0052] FIG. 1B shows a base member 100 and a sealing member 103. Where the sealing member 103 is joined to the base member 100 at a sealing region 102 which is shown in dotted lines to indicate that it is located between the sealing member 103 and the base member 100 and is not directly visible from above. The sealing region 102 is used to hermetically seal the base member 100 to the sealing member 103 to form a blister cavity. The sealing region 102 has a width of 1.5mm. FIG. 2A shows a top view of the base member 100. A flange extends out from the perimeter of the blister well 104 to the boundary of the base member 100. At a first end 138 of the base member 100 the flange extends out to form a curved edge at a distance of 5mm from a perimeter of the blister well 104. At a second end 136 of the base member 100 the flange extends out further to form a substantially planar handle 106 which can be used as a gripping portion. Along the width of the base member 100 the flange extends out from the perimeter of the blister well 104 to form two flat edges 140 at the boundary of the base member 100. The flat edges 140 have a length of 8mm. The distance between the flat edges 140 is 29mm.

[0053] Two side tabs 122 (one of which is visible in FIG. 1) extend downwards from the lower surface 132 (FIG. 3) of the base member 100 from the area adjacent to the flat edges 140. The side tabs 122 have a height of 4mm and a length of 8mm. These side tabs increase the structural integrity of the base member 100 and act to provide a grip-able portion for the user to pinch between their finger and thumb when lifting the base member 100. The side tabs 122 also act to stabilise the base member 100 when it is placed upright on a flat surface.

[0054] The thickness of the handle is 0.55mm. At a distance of 8.0mm from the second end 136 of the base member 100 there is a hole 110 extending through the thickness of the flange. FIG. 2B shows the shape of the hole 110 in isolation. The hole 110 is a slot, which is essentially rectangular in shape, with a length 142 of 10.5mm and a width 143 of 1mm. The hole 110 has a notch 146 on one side that extends a portion of the long side of the slot facing the second end 136 (FIG. 3) of the base member 100. The notch 146 has a length of 2.7mm and protrudes 1.1mm from the slot. At the far end of the handle 106 (at the second end 136 of the base member 100) the handle 106 includes a protrusion 150 that extends out 2.3mm from the edge of the base member 100. The protrusion has a linear outer edge 152 when viewed from above (as in FIG. 2A). The linear outer edge 152 has a length of 9.8mm. There is a tab 124 which extends down from the flat outer edge 152 of the protrusion 150 (FIG. 4).

[0055] As shown in FIGS. 3 and 4, the tab 124 has a length of 2.3mm and extends down 1.75mm away from the upper surface of the base member 100. Three stabilising legs 116a-c extend down from the lower surface 132 of the base member and are vertically aligned with the rim 101 of the blister well 104 on the upper surface 130 of the base member 100. The three legs 116a-c are arranged around the convex exterior surface of the blister well 104. At the first end 138 of the base member 100 one of the stabilising legs 116a is positioned so that it is in the middle of the width of the base member. The second leg 116b and third leg 116c are shown in FIG. 4 and are arranged either side of the central line running along the length of the base member from the first end 138 to the second end 136. The centre points of the three legs 116a-c are positioned approximately 120 degrees apart around an axis that runs vertically down through the centre of the blister well 104.

[0056] In a method 200 of manufacturing a packaged contact lens according to a second embodiment, shown in FIG. 6, a contact lens blister package according to the first aspect of the invention is provided 202. A contact lens is placed into the blister well of the thermoplastic base member of the blister package 204. A volume of liquid contact lens packaging solution is placed into the blister well of the thermoplastic base member 206. A sealing member is sealed to the sealing region of the thermoplastic base member 208. The method optionally includes the step 210 of autoclaving the sealed contact lens blister package to sterilize the contact lens and the packaging solution. FIG. 7 shows the steps of a method 300 of recycling the contact lens blister package of the present invention according to a third embodiment. The steps of the method are as follows. The sealing member is removed from the thermoplastic base member 312. The contact lens is removed from the blister well 314. The liquid contact lens packaging solution is removed from the blister well in the thermoplastic base member 316. In step 318, two of the thermoplastic base members are coupled together by inserting the second end of one of the thermoplastic base members into the hole of the second thermoplastic base member so that the tab lines up with the notch in the hole. The two base members together form a base member assembly 320. The method optionally includes the step 322 of coupling additional thermoplastic base members to the thermoplastic base member assembly to form an assembly including at least 30 thermoplastic base members coupled together to form a thermoplastic base member recycling unit. The method optionally includes the step 324 of placing the thermoplastic base member recycling unit in a recycling receptacle.

[0057] Another example embodiment of the invention (FIGS. 8A to 8D) is similar to the first example embodiment of the invention but has some alternative features. A base member 400 includes a blister well 404 and a handle 406. The blister well 404 has a rim 401. The rim 401 is enclosed by a sealing region 402. A flange extends out from the perimeter of the blister well 404 to the boundary of the base member 400. At one end of the base member 400 the flange extends out to form a handle 406. The base member 400 has a hole 410 extending through the thickness of the handle 406. The hole 410 is a slot, which is essentially rectangular in shape. The hole 410 has a length 442 of 10.5mm and a width 440 of 1.0mm. The

long side of the hole 410 is parallel to a central line running down the length of the base member 400. The hole 410 has a notch 446 on one side that extends a portion of one of the long sides of the slot. The notch has a length of 2.7mm and protrudes 1.1mm from the slot. The base member 400 has two larger holes 456a and 456b on either side of the hole 410. The holes 456a and 456b reduce the amount of material needed to make the base member 400 and therefore reduce its weight. At the end of the handle 406 furthest from the blister well 404, the handle includes a protrusion 425. FIG. 8B shows this protrusion 425 from a lower surface of the base member 400. The protrusion 425 is shaped such that it can be slotted through the hole 410 of another base member 400 according to this embodiment. FIG. 8C shows how this protrusion 425 can be aligned with the hole 410 in a second base member 400. The protrusion 425 is shaped such that a first base member 400a can be placed perpendicular to a second base member 400b with the protrusion 425 sitting in hole 410. The protrusion 425 includes a tab 424 (FIG. 8B) which aligns with the notch 446 (FIG. 8A) in the hole 410. Once the protrusion 425 of a first base member 400a is aligned with hole 410 in a second base member 400b, the first base member 400a can be rotated 90 degrees so that the flange of the first base member 400a is parallel to the flange of the second base member and the tab 424 is aligned with notch 446 such that the two base members are locked together. FIG. 8D shows how two base members 400a, 400b can be joined together once the protrusion 425 of one base member 400a has been inserted into the hole 410 of another base member 400a and the first base member 400a has been rotated 90 degrees to lock the base members 400a, 400b together.

[0058] Another example embodiment of the invention (FIG. 9A to 9C) is similar to the first example embodiment of the invention but has some alternative features. A base member 500 includes a blister well 504 and a handle 506. Where a concave interior surface of the well 504 meets an upper surface of the base member, the blister well 504 has a rim 501. The rim 501 of the blister well 504 is enclosed by a sealing region 502. A flange extends out from the perimeter of the blister well 504 to the boundary of the base member 500. At one end of the base member 500 the flange extends out to form a handle 506. The base member 500 has a hole 510 extending through the thickness of the handle 506. The hole 510 is a slot, which is rectangular in shape. The hole 510 has a length 542 of 10.5mm and a width 540 of 1.0mm. The long side of the hole 510 is perpendicular to a central line running down the length of the base member 500. At the end of the handle 506 furthest from the well 504, the handle includes a protrusion 550 which extends out in the plane of the flange. The protrusion 550 is shaped so as to flare out and then curve inwards to form a hook 551 on either side of the protrusion within the plane of the flange. FIG. 9B shows the lower surface of the base member 500. There is a tab 524 that extends downwards from the lower surface at the end of the protrusion furthest from the well 504. The protrusion 550 and the tab 524 are shaped to be able to be slotted through a hole 510 of another base member 500 according to this embodiment. Once the protrusion 550 has been slotted through the hole 510 of another base member the tab 524 and the hooks 551 acts to stop the protrusion 550 from coming out of hole 510. Once the protrusion 550 of one base member 500 has been slotted through the hole 510 of a second base member 500, the protrusion 550 of the second base member 500 can be slotted through the hole of a third base member 500. This can be done repeatedly to form an assembly of base members 500. FIG. 9C shows how 8 base members 500 according to this embodiment can be joined together by inserting the protrusion 550 of one base member 500 into the hole 510 of another base member 500, with the tab 524 and hooks 551 acting to hold each protrusion inside the hole 510 of each base member.

[0059] Another example embodiment of the invention (FIGS. 10A to 10C) is similar to the first example embodiment of the invention but has some alternative features. A base member 600 includes a blister well 604 and a handle 606. Where a concave interior surface of the well 604 meets an upper surface of the base member the blister well 604 has a rim 601. The rim 601 of the blister well 604 is enclosed by a sealing region 602.A flange extends out from the perimeter of the blister well 604 to the boundary of the base member 600. At one end of the base member 600 the flange extends out to form a handle 606. The base member 600 has a second well 611 which extends down from an upper surface of the handle 606 to form a concave upper surface and extends down from the lower surface of the handle 606 to form a convex lower surface, FIG. 10A shows the concave upper surface of the second well 611. FIG. 10B shows a lower surface of the base member 600. A protrusion 612 extends down from the convex lower surface of the second well 611. The protrusion 612 is shaped to be able to be pushed into the second well 611 of another base member 600 according to this embodiment and then be held there by an interference fit. FIG. 10C shows how the protrusion 612 of a first base member 600 slots into the second well 611 of a second base member 600. The interference fit between the protrusion 612 and the second well 611 holds the two base members 600 together. This can be done repeatedly to form an assembly of base members 600.

[0060] Another example embodiment of the invention (FIG. 11A to 11C) is similar to the first example embodiment of the invention but has some alternative features. A base member 700 includes a blister well 704 and a handle 706. Where a concave interior surface of the well 704 meets an upper surface of the base member the blister well 704 has a rim 701.. The rim 701 of the blister well 704 is enclosed by a sealing region 702. A flange extends out from the perimeter of the blister well 704 to the boundary of the base member 700. At one end of the base member 700 the flange extends out to form a handle 706. The handle 706 has a curved portion 707 that curves downwards away from a planar portion of the handle 706. At one end of the base member 700 the flange extends out from the perimeter of the blister well 704 to a curved edge 721. At the curved edge 721 a protrusion 723 extends downwards from the upper surface of the flange. The protrusion 723 has a semi-circular shape that wraps around the well 704. FIG. 11B shows the protrusion 723 extending downwards from the upper

surface of the flange to a distance that is less than the depth of the well 704. The blister well 704 has a perimeter that is substantially square with curved edges where it meets the sealing region 702. The well 704 has a flat bottom surface 703 that has the same shape as the perimeter of the well 704. The sidewall 705 of the blister well 704 is shaped such that when the exterior surface of a blister well 704 of one base member is inserted into the interior surface of the blister well 704 of another base member 700 according to this embodiment, the two slot together to provide an interference fit. The sidewall 705 of the blister well 704 has a waist 709 at a midway point along the depth of the blister well 704. FIG. 11C shows how a blister well 704 of one base member 700 can be inserted into the blister well 704 of another base member 700 so that the two can be joined together. This can be done repeatedly to form an assembly of base members 700.

[0061] Another example embodiment of the invention (FIGS. 12A to 12C) is similar to the first example embodiment of the invention but has some alternative features. A base member 800 includes a blister well 804 and a handle 806. Where a concave interior surface of the well 804 meets an upper surface of the base member the blister well has a rim 801. The rim 801 of the blister well 804 is enclosed by a sealing region 802. A flange extends out from the perimeter of the blister well 804 to the boundary of the base member 800. The flange extends out from the perimeter of the blister well 804 to a curved edge 821 which is at a substantially equal distance from the perimeter of the blister well 804 all the way around the well 804. The flange extends out from the curved edge 821 to form a handle 806 on one side of the base member. The handle 806 is planar with the sealing region 802. Four protrusions 860 extend downwards from the upper surface of the flange at approximately 90 degree intervals around an axis that runs vertically through the centre of the blister well 804. FIG. 12B shows the protrusions 860 extending downwards from the upper surface of the base member 800. The end of the protrusions 860 that is furthest from the upper surface of the base member 800 is hooked. FIG. 12C shows that when the well 804 of one base member 800 is slotted into the well of a second base member 800 according to this example embodiment, the protrusions 860 fit over the curved edge 821 of the second base member in regions 861 that are slightly indented. The hook of the protrusions 860 acts to hold the protrusion in place and keep the two base members 800 joined together. This can be done repeatedly to form an assembly of base members.

[0062] Another example embodiment of the invention (FIG. 13) similar to the first example embodiment of the invention but has some alternative features. A base member 900 includes a blister well 904 and a handle 906. The base member 900 has a hole 910 extending through the thickness of the handle 906. The hole is a slot, which is essentially rectangular in shape. The hole has a length 942 of 10.5mm and a width 940 of 1.0mm. The long side of the hole 910 is perpendicular to a central line running down the length of the base member. The hole 910 has a notch 946 positioned centrally along the width of the base member that extends a portion of one of the long sides of the slot. The notch has a length of 2.7mm and protrudes 1.1mm from the slot.

[0063] Whilst the present invention has been described and illustrated with reference to particular embodiments, it will be appreciated by those of ordinary skill in the art that the invention lends itself to many different variations not specifically illustrated herein.

[0064] Where in the foregoing description, integers or elements are mentioned which have known, obvious or foreseeable equivalents, then such equivalents are herein incorporated as if individually set forth. Reference should be made to the claims for determining the true scope of the present invention, which should be construed so as to encompass any such equivalents. It will also be appreciated by the reader that integers or features of the invention that are described as preferable, advantageous, convenient or the like are optional and do not limit the scope of the independent claims. Moreover, it is to be understood that such optional integers or features, whilst of possible benefit in some embodiments of the invention, may not be desirable, and may therefore be absent, in other embodiments.

[0065] Further aspects of the invention are set out in the following clauses:

Clause 1. A hermetically sealed blister package for a contact lens, wherein the blister package includes a base member, made of a plastics material, and a sealing member joined to the base member to form a blister cavity arranged to hold an unworn contact lens and contact lens packaging solution; the base member having an upper surface and a lower surface and including a blister well and a handle, the blister well having a rim, the rim of the blister well being enclosed on the upper surface of the base member by a sealing region; the handle and the sealing region being provided by a flange that extends out from the blister well; characterised in that the base member has a weight from 0.4g to 0.72g.

Clause 2. A sealed blister package for a contact lens according to clause 1, wherein the base member additionally includes three or more stabilising legs, the stabilising legs extending down from the lower surface of the base member and vertically aligned with the rim of the blister well.

Clause 3. A sealed blister package for a contact lens according to any preceding clause, wherein the base member includes at least two side tabs positioned on either side of the blister well, wherein the side tabs extend down from the upper surface of the base member.

Clause 4. A sealed blister package for a contact lens according to clause 3, wherein the side tabs have a height of 2.0mm to 4.0mm and a length along the upper surface of the flange of 6.0mm to 10.0mm.

Clause 5. A sealed blister package for a contact lens according to any preceding clause, wherein the handle includes a

hole extending through the flange, wherein the hole is located closer to an outer edge of the handle than to the centre of the blister well.

Clause 6. A sealed blister package for a contact lens according to clause 5, wherein the hole is a slot having a width from 0.5mm to 1.5mm.

Clause 7. A sealed blister package for a contact lens according to clauses 5 or 6, wherein the hole includes a notch in the edge of the hole.

Clause 8. A sealed blister package for a contact lens according to any preceding clause, wherein the sealing region is annular when viewed from above.

Clause 9. A sealed blister package for a contact lens according to clauses 1 to 7, wherein the sealing region has a vertex adjacent to the handle of the base member.

Clause 10. A sealed blister package for a contact lens according to any preceding clause, wherein the sealing region has a width from 1.0mm to 4.0mm.

Clause 11. A sealed blister package for a contact lens according to any preceding clause, wherein the blister well holds a volume of contact lens packaging solution in an amount from 0.4mL to 1.6mL.

Clause 12. A sealed blister package for a contact lens according to any preceding clause, wherein the base member has a length from 40.0mm to 50.0mm and a width from 25mm to 35mm.

Clause 13. A sealed blister package for a contact lens according to any preceding clause, wherein the blister well has a depth at its centre of 5.0mm to 8.0mm.

Clause 14. A sealed blister package for a contact lens according to any preceding clause, wherein on the outer edge of the handle that is furthest from the blister well, there is a tab extending downwards from the upper surface of the flange.

Clause 15. A sealed blister package for a contact lens according to clause 2, wherein three stabilising legs are positioned approximately 120 degrees apart from each other about a vertical axis extending through the centre of the blister well.

Clause 16. A sealed blister package for a contact lens according to any preceding clause, wherein the flange of the base member has a stiffness from 50,000psi.mm^2 to 150,000psi.mm^2.

Claims

1. A method of recycling a contact lens blister package,
wherein the contact lens blister package includes:

a base member, made of a thermoplastic material, having a weight from 0.4g to 0.72g;
contact lens packaging solution;
an unworn contact lens; and
a sealing member hermetically sealed to the base member to form a blister cavity arranged to hold the unworn contact lens and the contact lens packaging solution;
wherein the base member has an upper surface and a lower surface and includes a blister well and a handle, the blister well having a rim, the rim of the blister well being enclosed on the upper surface of the base member by a sealing region; the handle and the sealing region being provided by a flange that extends out from the blister well; and
wherein the handle of the base member comprises a hole extending through the flange, the hole being configured to receive a handle of a second base member of a second contact lens blister package such that the two base members can be coupled together;
the method comprising the steps of:

removing the sealing member from the base member;
removing the contact lens from the blister well;
removing the liquid contact lens packaging solution from the blister well; and
coupling two base members of two contact lens blister packages by inserting the handle of the second base member into the hole of the base member to form a base member assembly.

2. A method according to claim 1, comprising coupling additional base members to the base member assembly to form an assembly comprising at least 30 base members coupled together to form a base member recycling unit.

3. A method according to claims 1 or 2, comprising placing the base member recycling unit in a recycling receptacle.

4. A method according to any preceding claim, wherein the base member has a weight of less than 0.70g.

5. A method according to any preceding claim, wherein the handle is planar.

6. A method according to any preceding claim, wherein the hole is located closer to an outer edge of the handle than to the centre of the blister well.

7. A method according to any preceding claim, wherein the hole is a slot having a width from 0.5mm to 1.5mm.

8. A method according to any preceding claim, wherein the hole includes a notch in the edge of the hole, optionally wherein the notch is in the longest side of the hole, optionally wherein the notch is off centre along the length of the hole.

9. A method according to any preceding claim, wherein the outer edge of the handle of the base member comprises a protrusion configured to fit into a hole in a flange of another base member, optionally wherein the protrusion extends out in the plane of the flange or extends down from the lower surface of the base member.

10. A method according to claim 9, wherein the protrusion forms a hook configured to stop the protrusion from coming out of the hole in the flange of the second base member.

11. A method according to any preceding claim, wherein on the outer edge of the handle of the base member that is furthest from the blister well, there is a tab extending downwards from the upper surface of the flange, the tab being configured to fit into a notch in the edge of a hole in a flange of another base member.

12. A method according to any preceding claim, wherein the base member has a length from 40.0mm to 50.0mm and a width from 25mm to 35mm.

13. A method according to any preceding claim, wherein the base member additionally includes three or more stabilising legs, the stabilising legs extending down from the lower surface of the base member and vertically aligned with the rim of the blister well, optionally wherein three stabilising legs are positioned approximately 120 degrees apart from each other about a vertical axis extending through the centre of the blister well.

14. A method according to any preceding claim, wherein the base member includes at least two side tabs positioned on either side of the blister well, wherein the side tabs extend down from the upper surface of the base member, optionally wherein the side tabs have a height of 2.0mm to 4.0mm and a length along the upper surface of the flange of 6.0mm to 10.0mm.

15. A base member assembly comprising a plurality of base members coupled together,

wherein each of the base members is made of a thermoplastic material, has a weight from 0.4g to 0.72g, and has an upper surface and a lower surface and includes a blister well and a handle, the blister well having a rim, the rim of the blister well being enclosed on the upper surface of the base member by a sealing region, the handle and the sealing region being provided by a flange that extends out from the blister well, the handle comprising a hole extending through the flange; and
wherein each of the base members is coupled to one or more other of the base members of the base member assembly by a handle end of one of the base members being inserted into the hole of another of the base members.

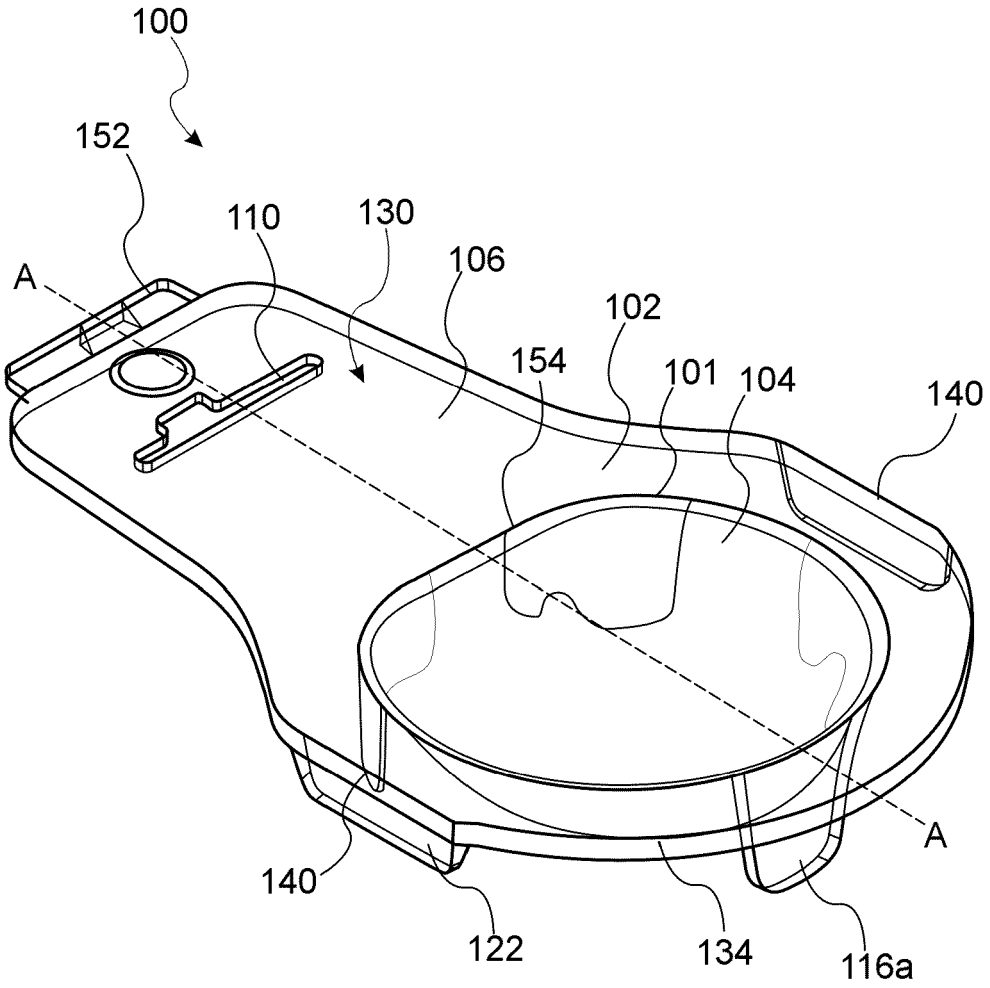

FIG. 1A

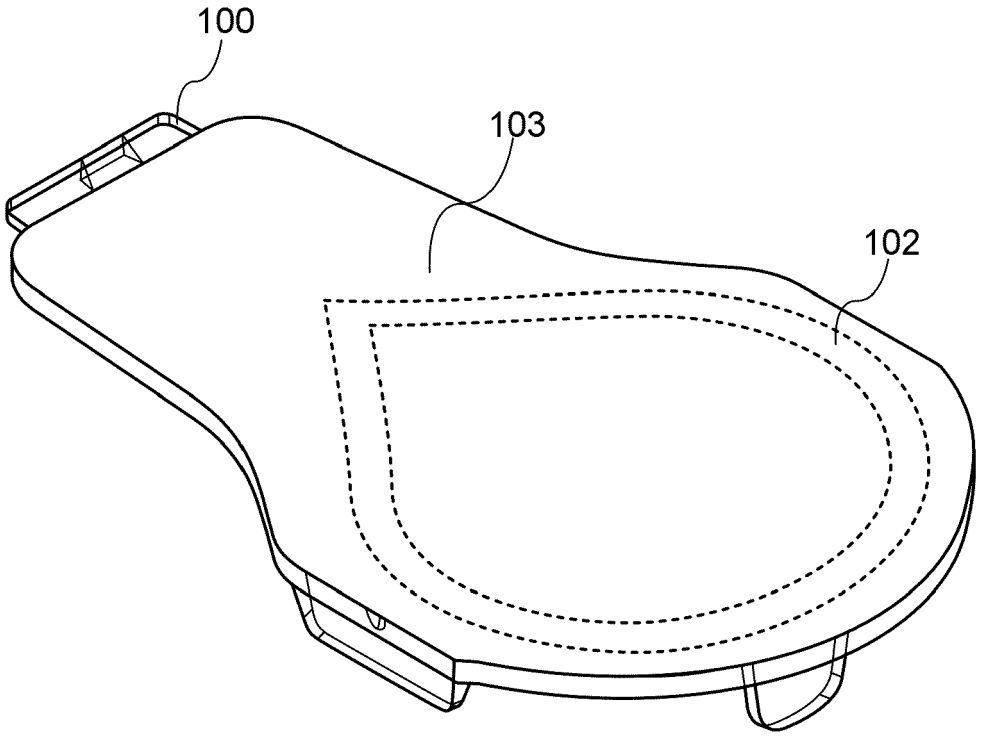

FIG. 1B

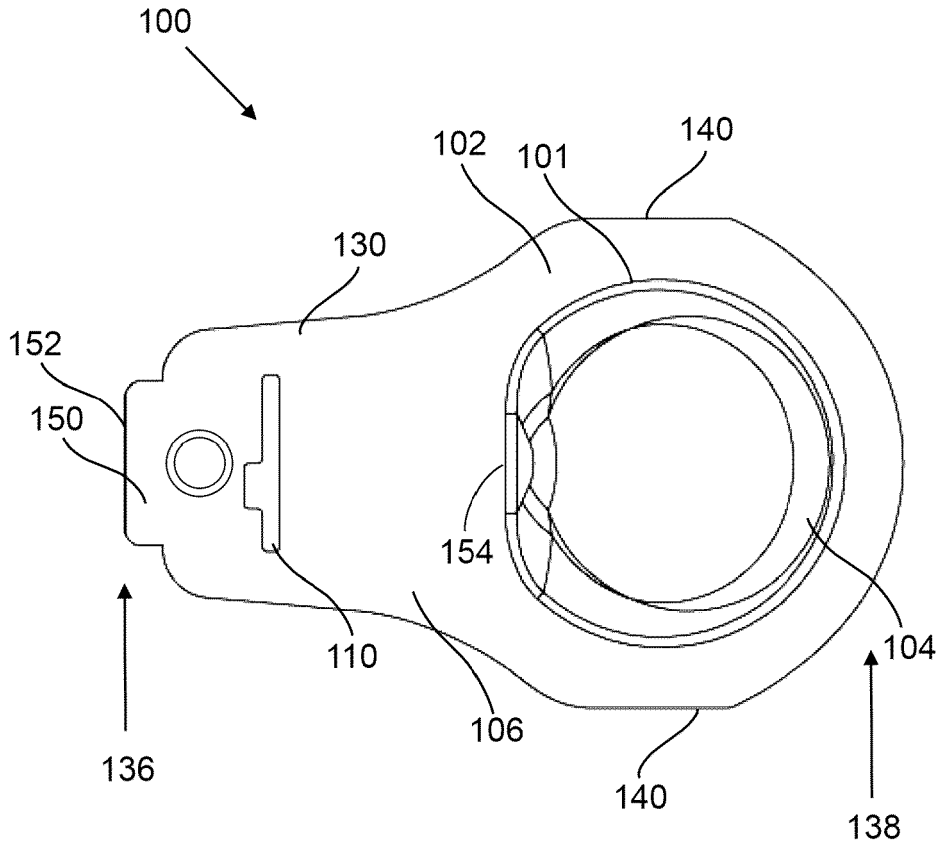

FIG. 2A

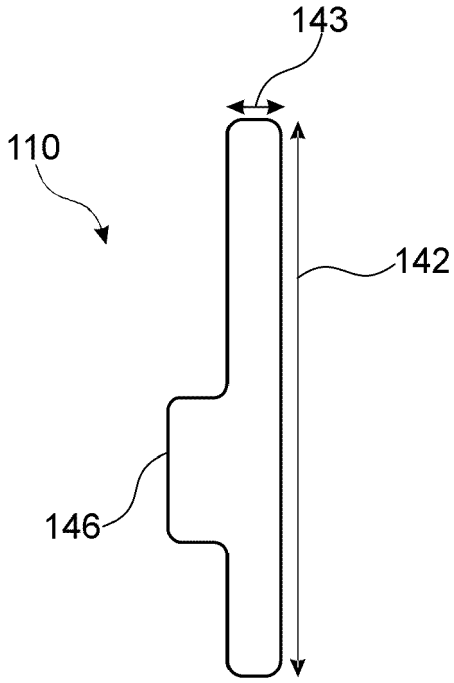

FIG. 2B

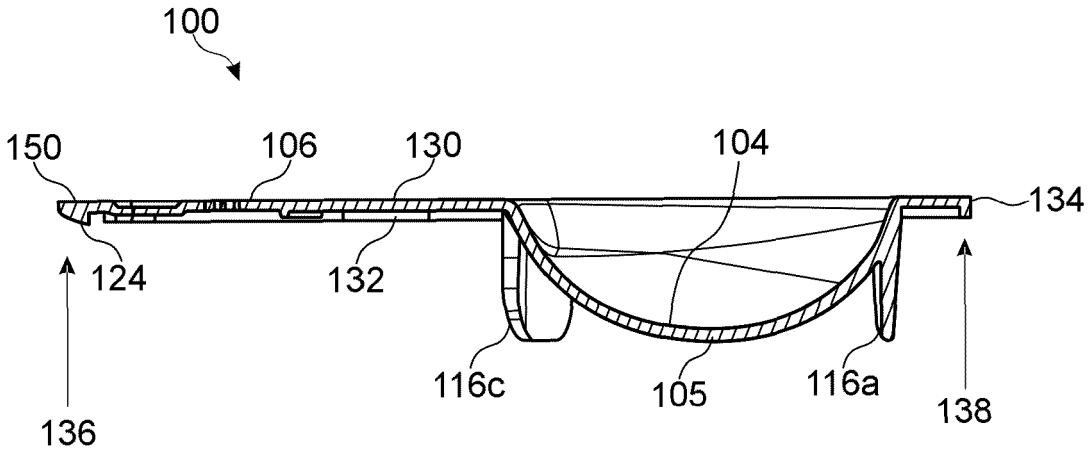

FIG. 3

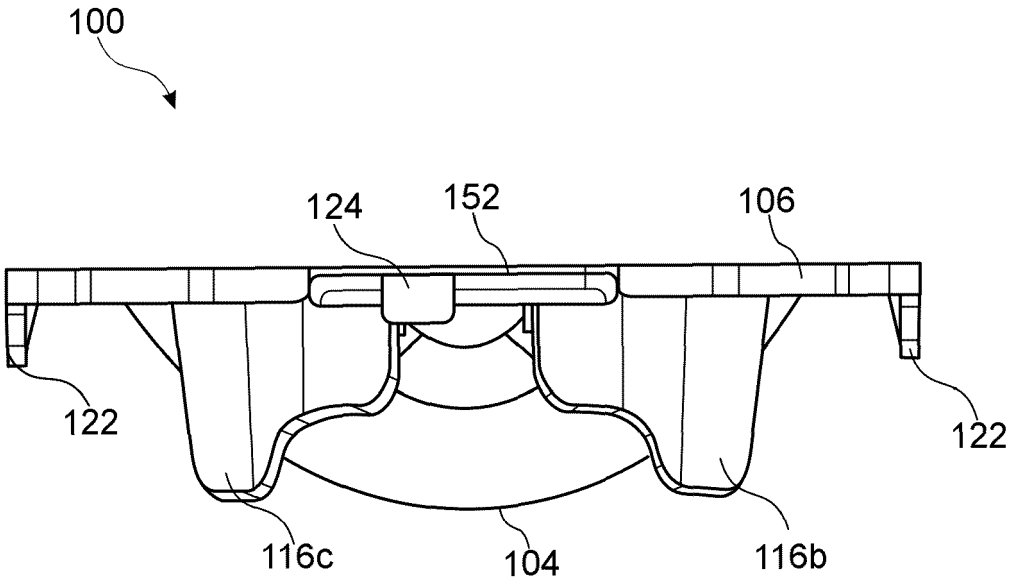

FIG. 4

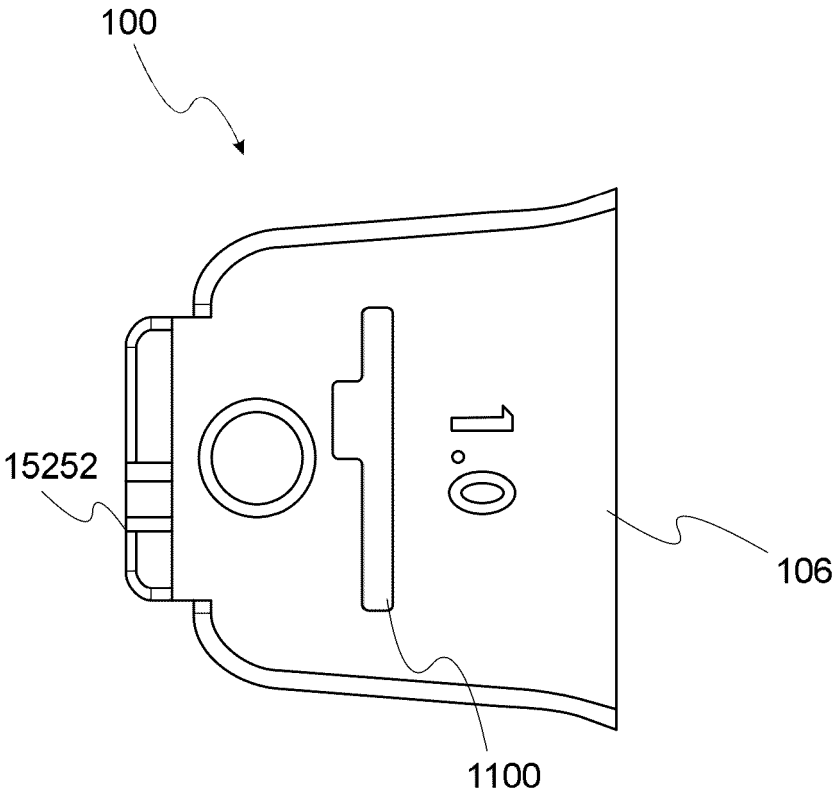

FIG. 5

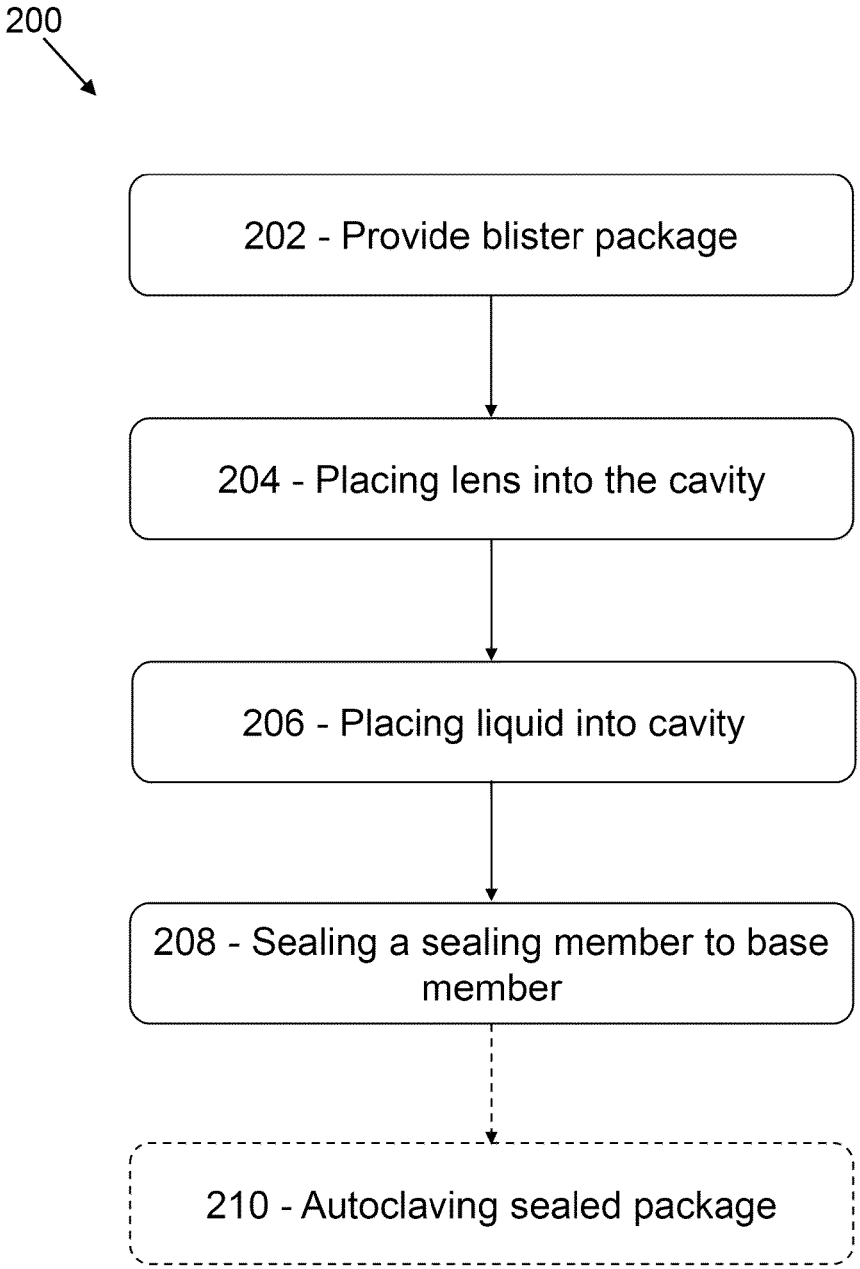
200
202 - Provide blister package
204 - Placing lens into the cavity
206 - Placing liquid into cavity
208 - Sealing a sealing member to base member
210 - Autoclaving sealed package

FIG. 6

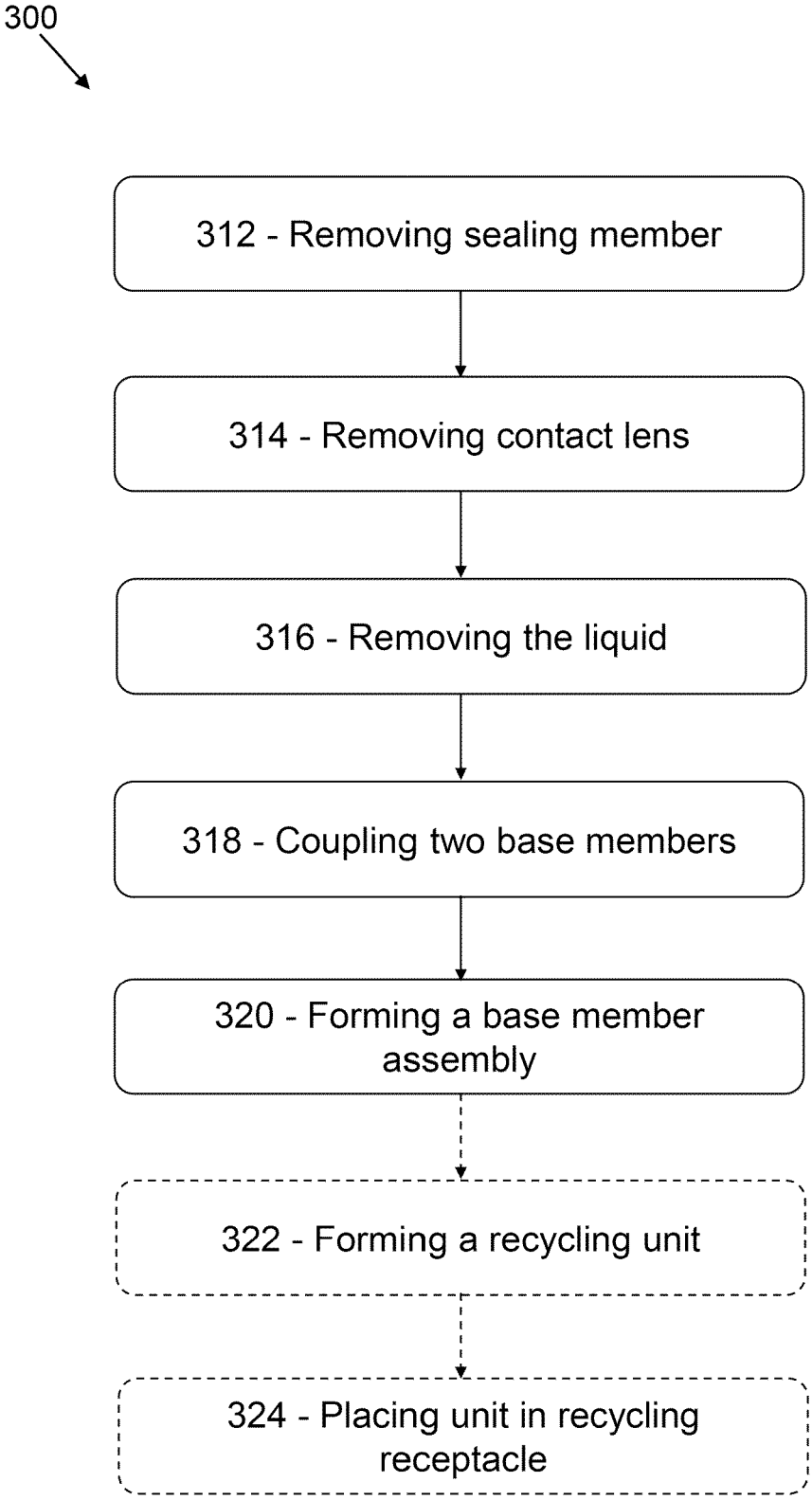
300
312 - Removing sealing member
314 - Removing contact lens
316 - Removing the liquid
318 - Coupling two base members
320 - Forming a base member assembly
322 - Forming a recycling unit
324 - Placing unit in recycling receptacle

FIG. 7

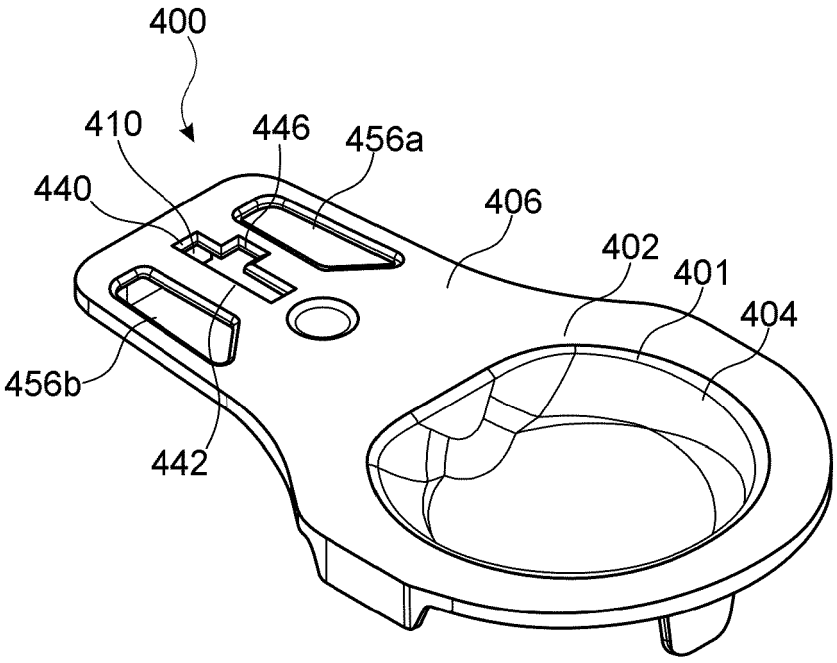

FIG. 8A

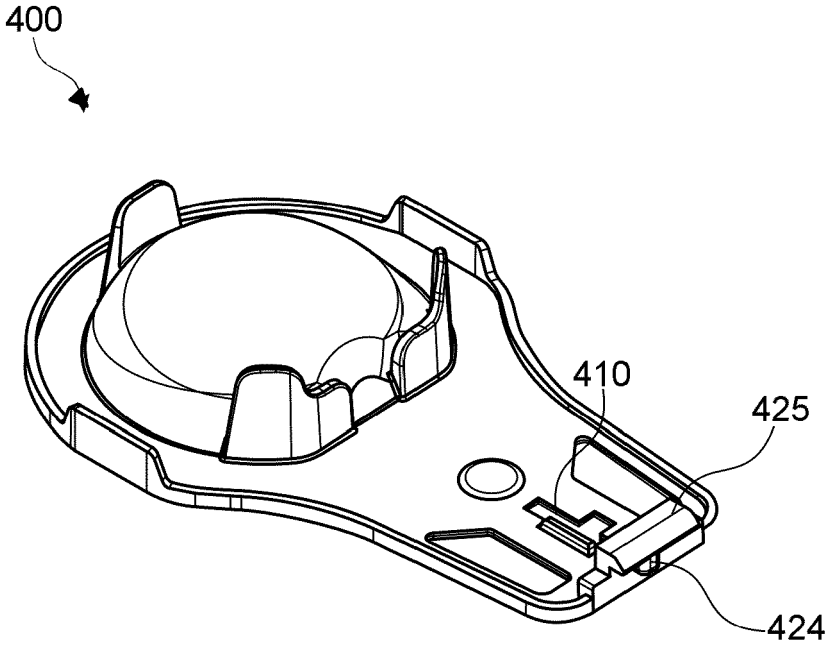

FIG. 8B

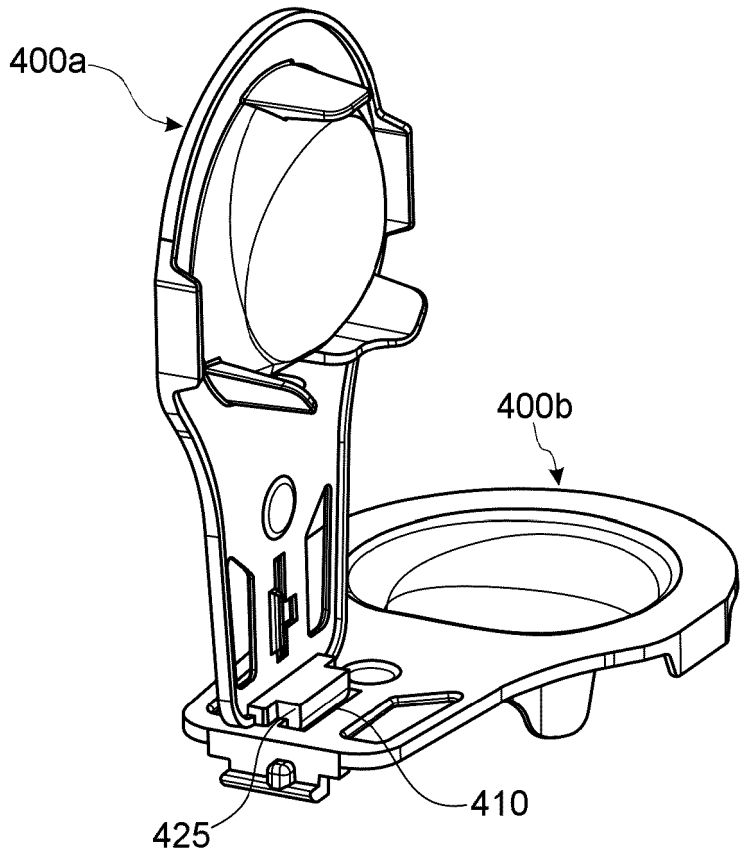

FIG. 8C

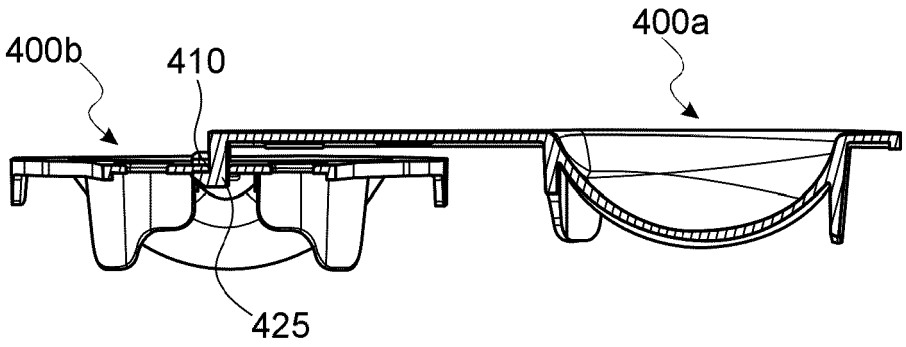

FIG. 8D

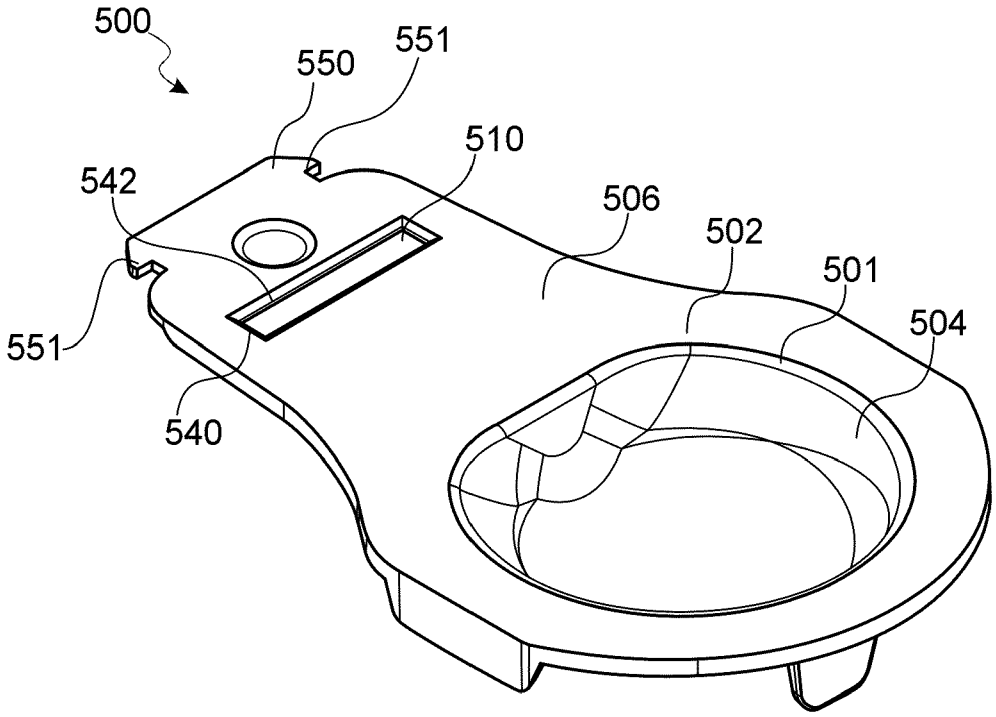

FIG. 9A

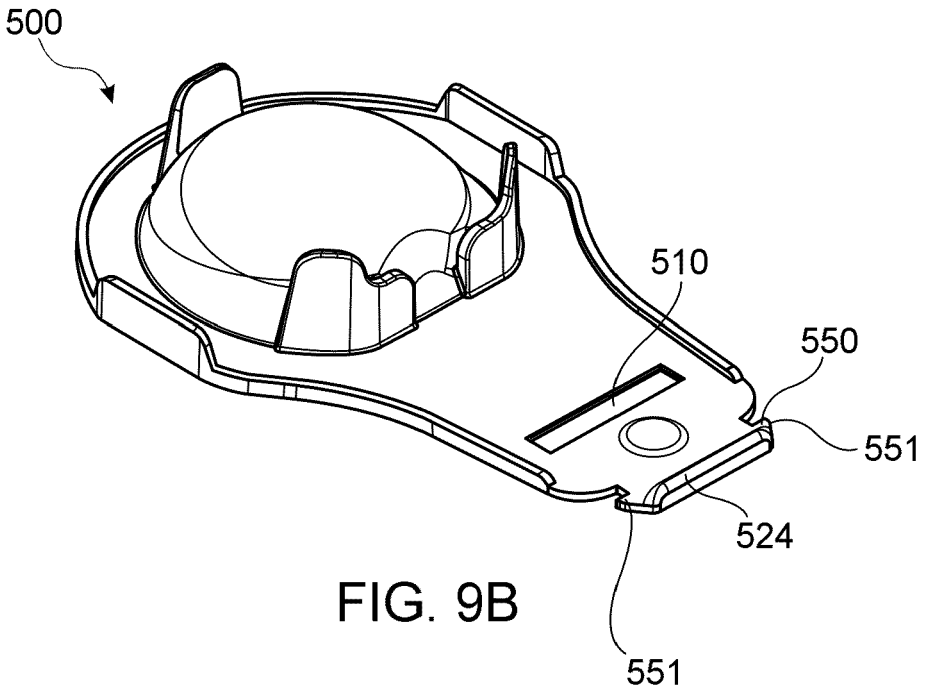

FIG. 9B

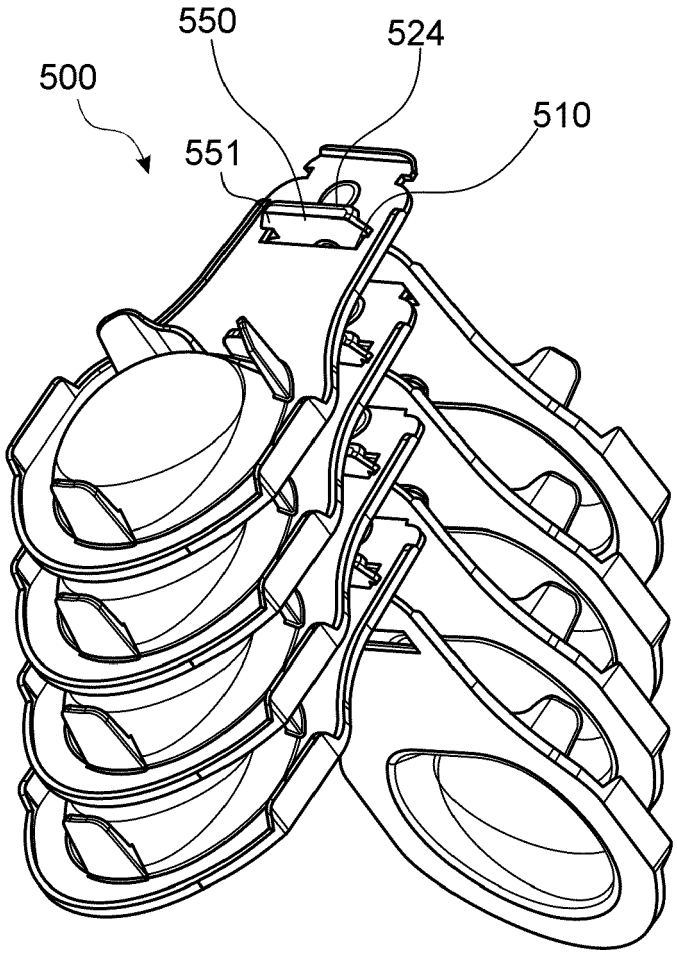

FIG. 9C

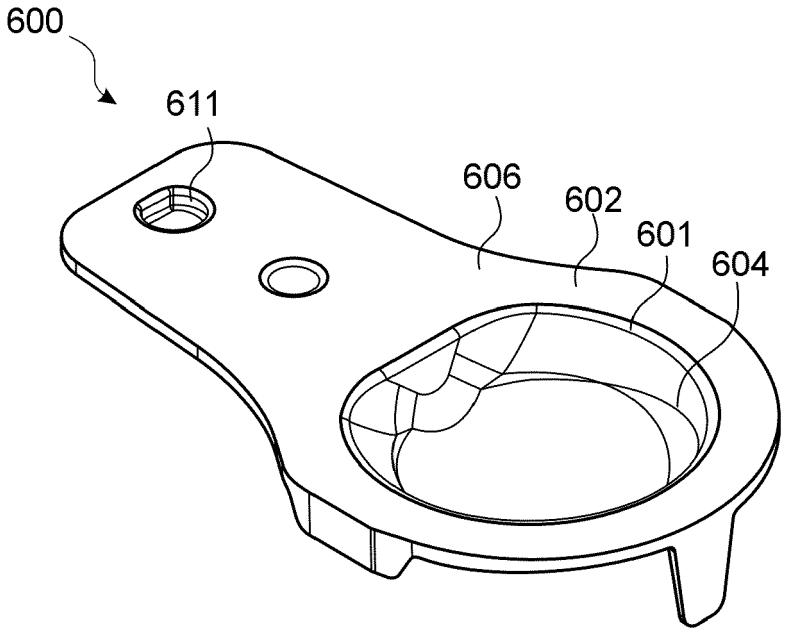

FIG. 10A

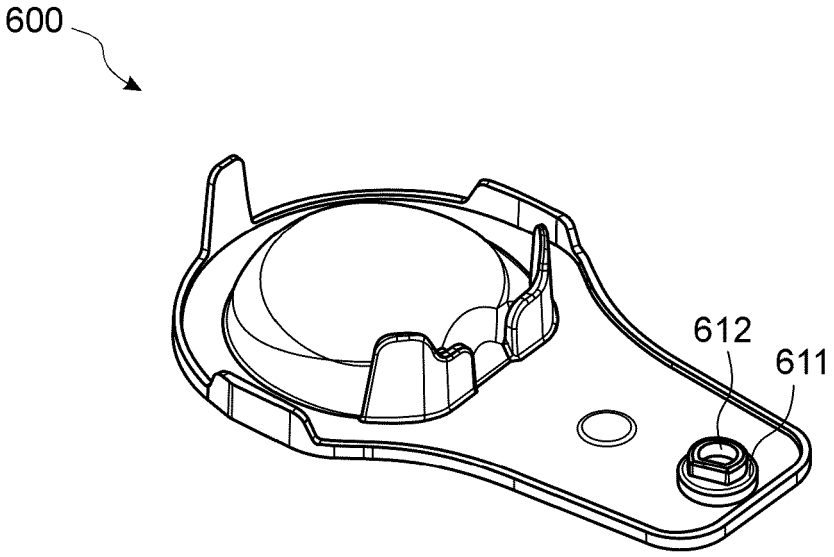

FIG. 10B

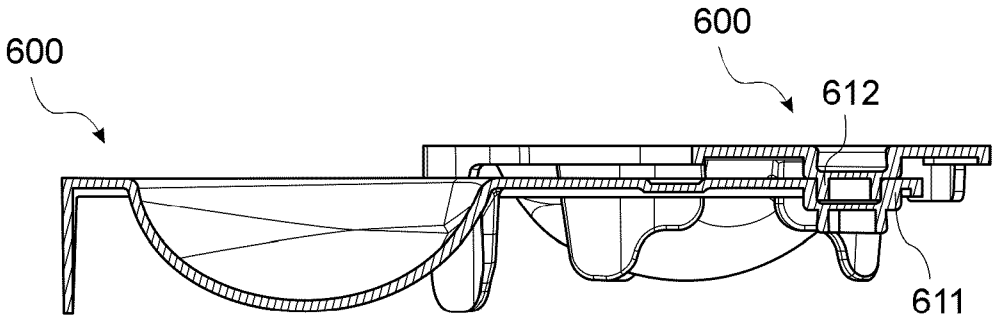

FIG. 10C

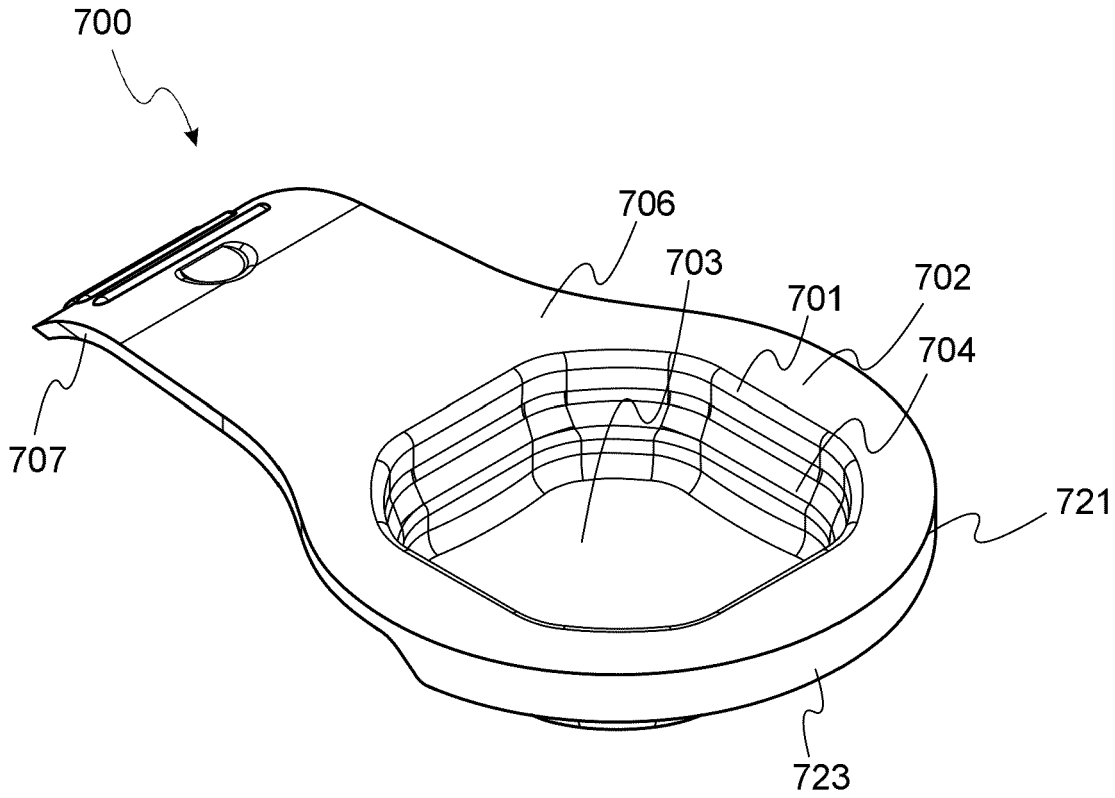

FIG. 11A

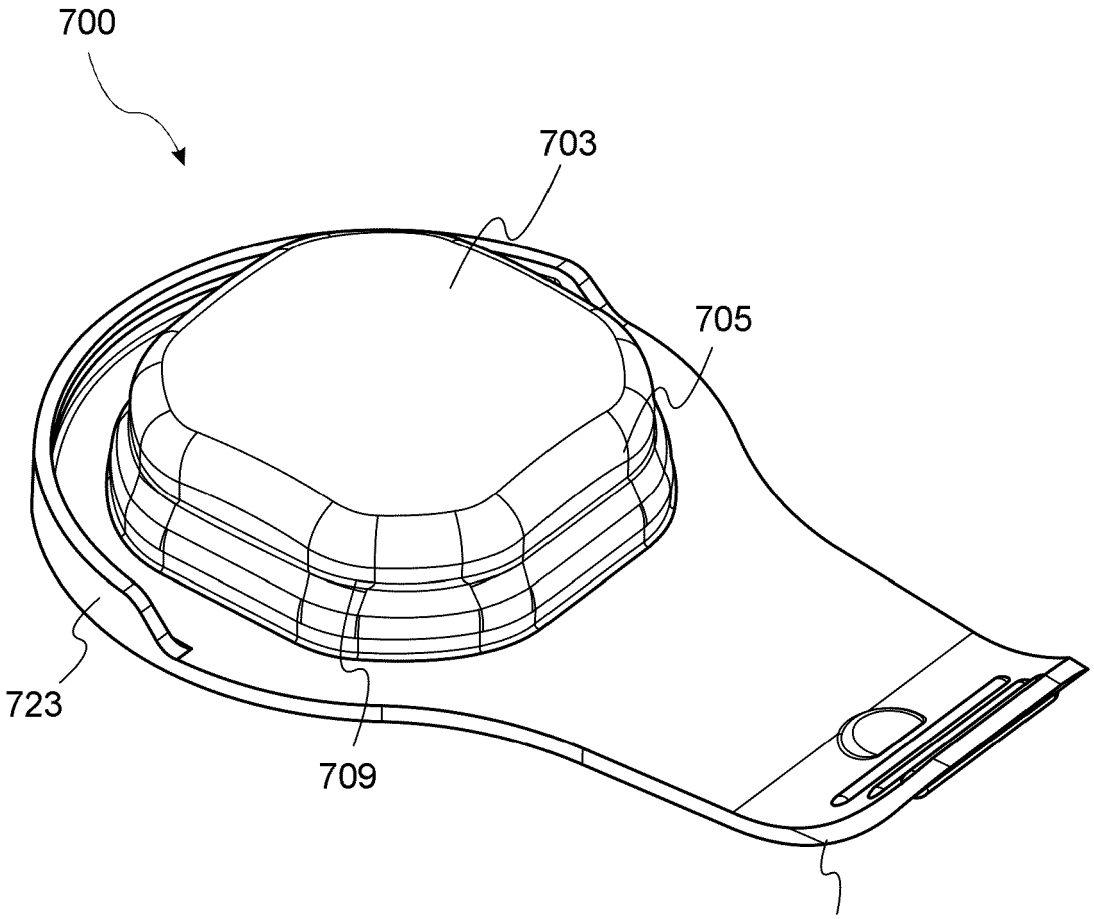

FIG. 11B

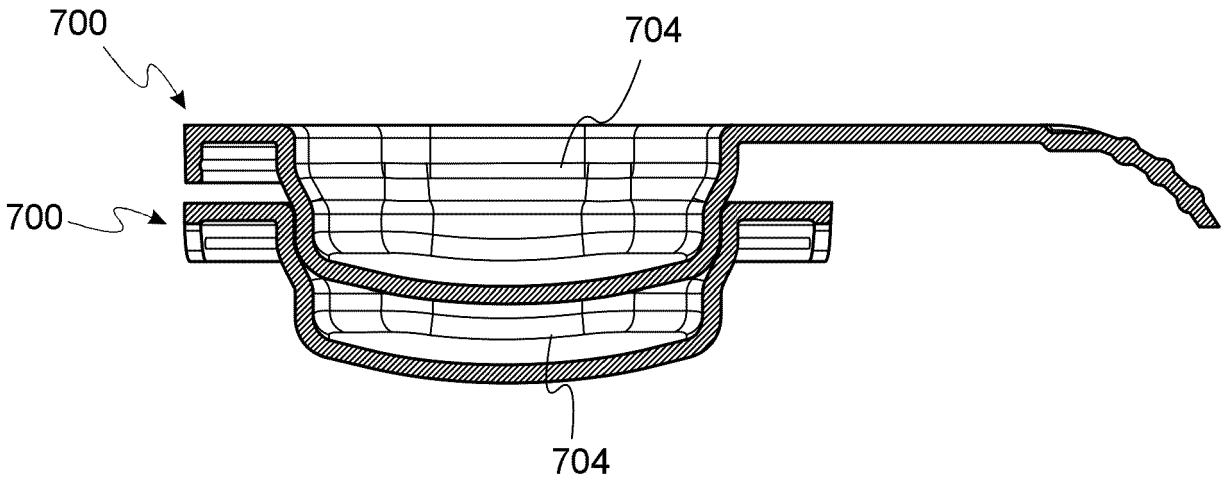

FIG. 11C

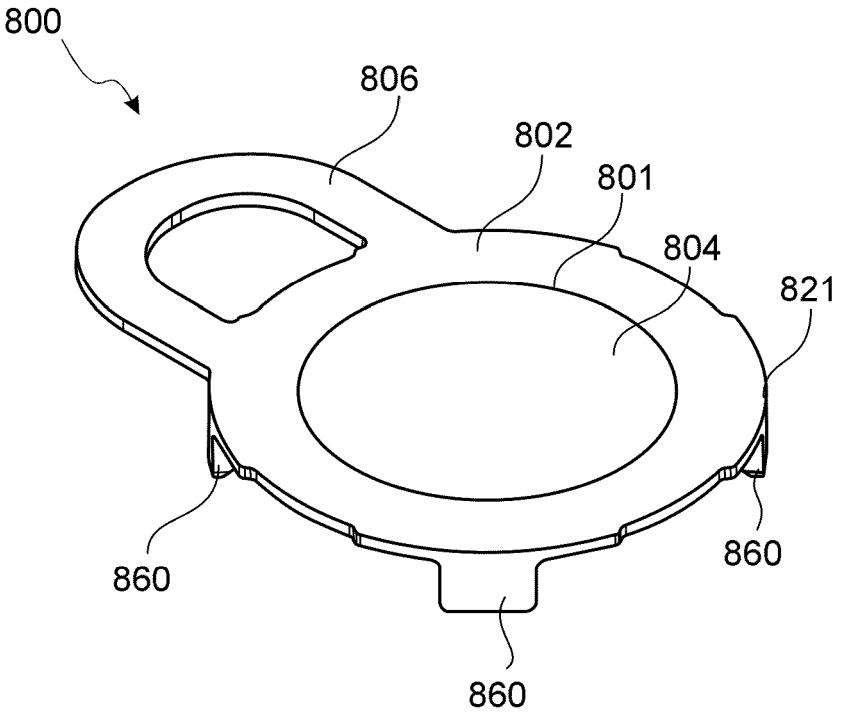

FIG. 12A

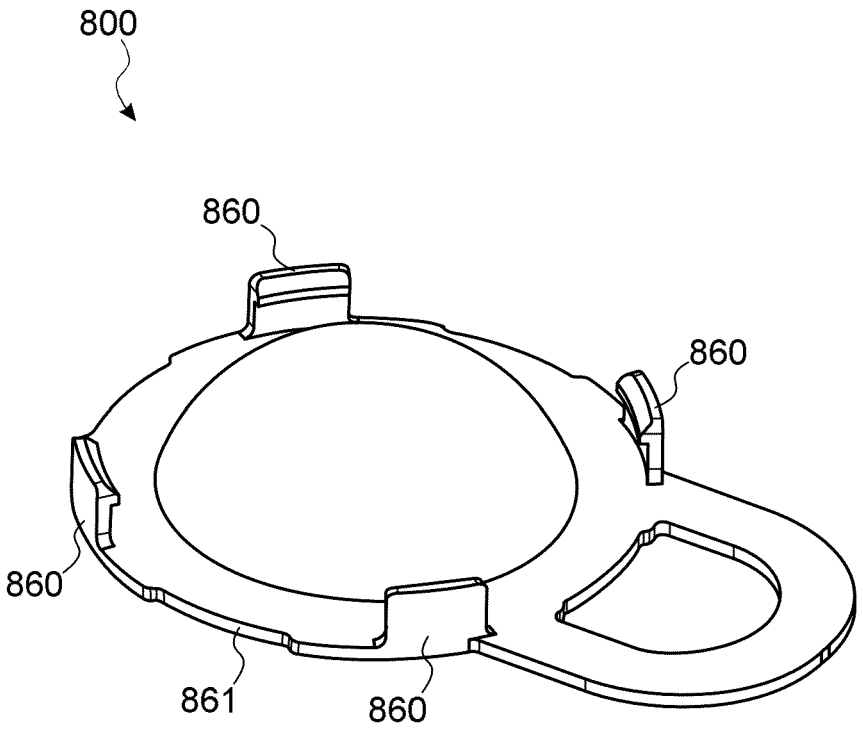

FIG. 12B

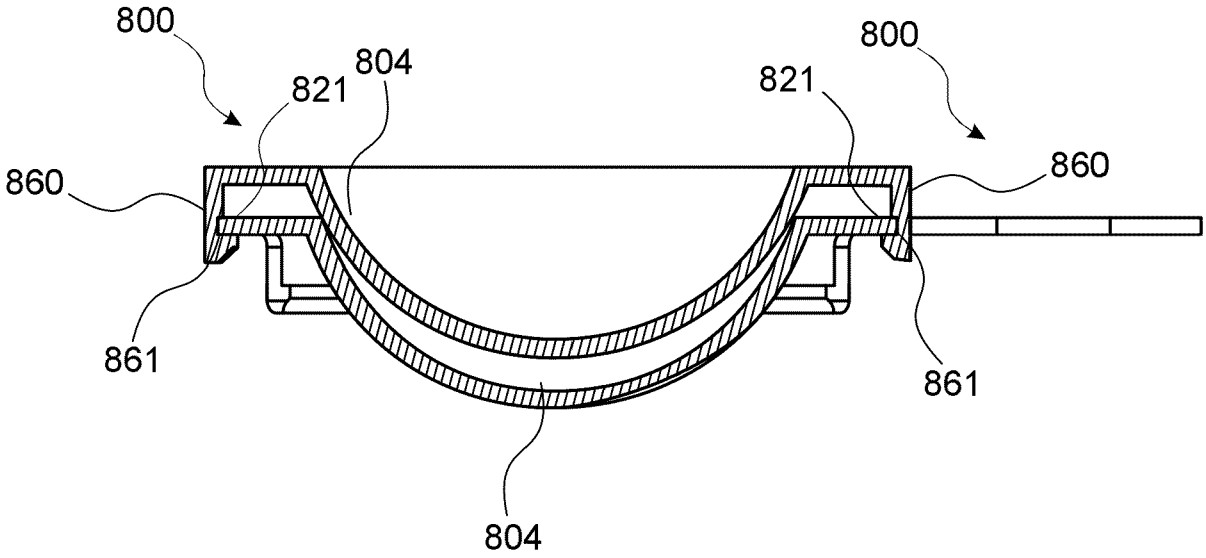

FIG. 12C

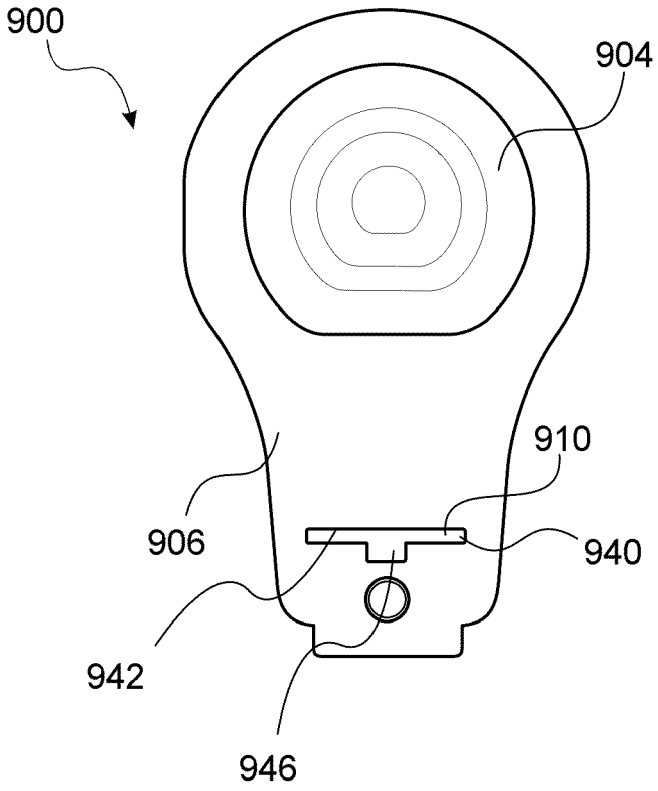

FIG. 13

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 4691820 A **[0003]**
- EP 1752058 A **[0004]**
- WO 2021260353 A **[0005]**
- US 10390593 B **[0006] [0009] [0011] [0046]**
- JP 2006016049 B **[0007]**
- WO 03039969 A **[0008]**
- EP 1092645 A1 **[0046]**
- US 7213382 B **[0046]**
- US 5609246 A **[0046]**
- US 7426993 B **[0046]**
- US 7477366 B **[0046]**
- US 6398018 B **[0046]**