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(54) **PACKAGING FOR OPTICAL LENS DEVICES**

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(57) **ABSTRACT**

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Paper packaging may include a first panel formed from paper and including a first recess configured to receive a first portion of a product (e.g., optical lens, such as for an electronic headset such as a virtual reality (VR) or augmented reality (AR), eyeglasses, microscopes, etc.). The paper packaging may include a second panel formed from paper and including a second recess configured to receive a second portion of the product. A hinge panel formed from paper may coupling the first and second panels together at first and second folds, such that the product is retained within and between the first and second panels when the packaging is closed, and the recesses together retain the product when the packaging is closed.

Related U.S. Application Data

(60) Provisional application No. 63/384,516, filed on Nov. 21, 2022.

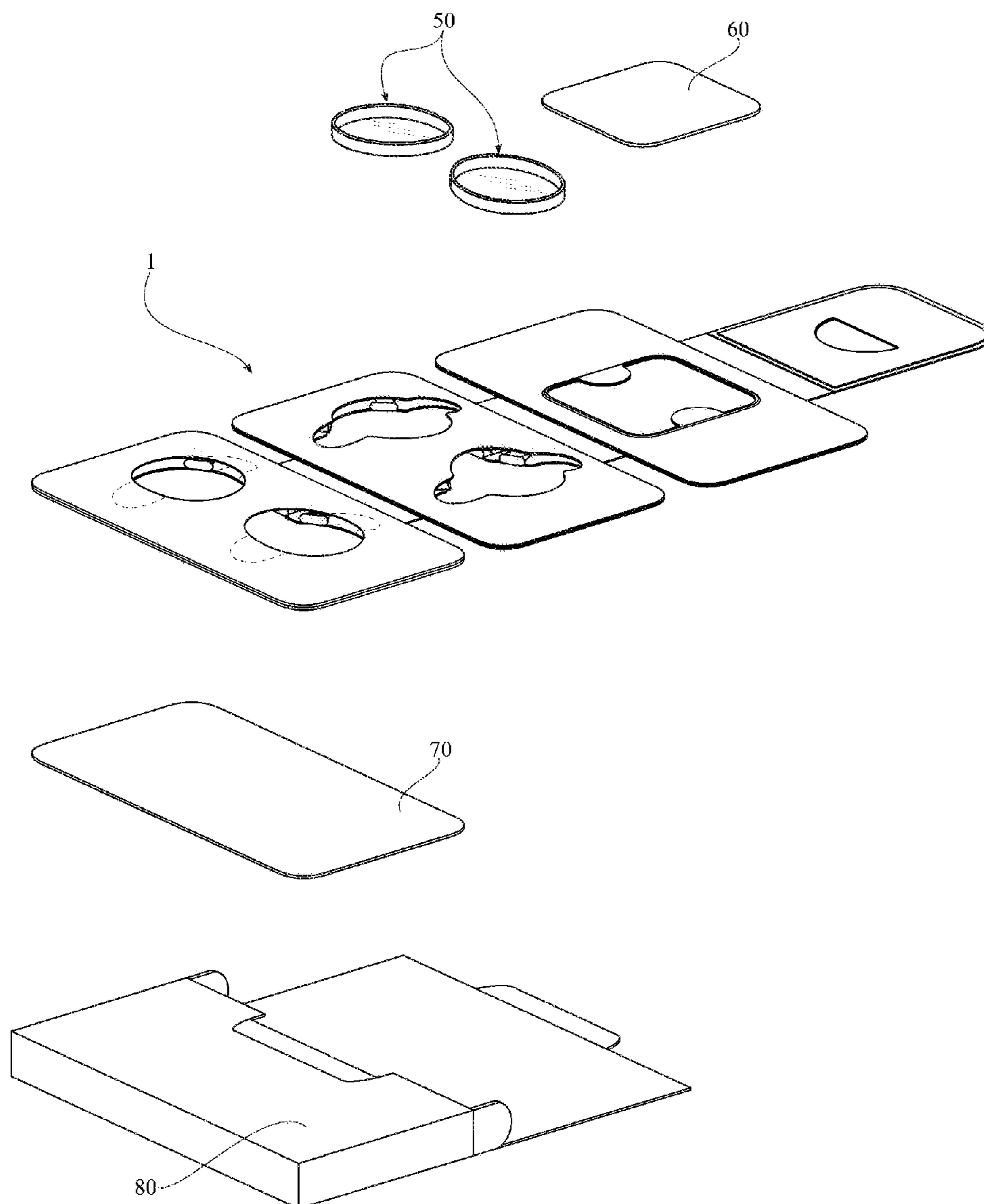
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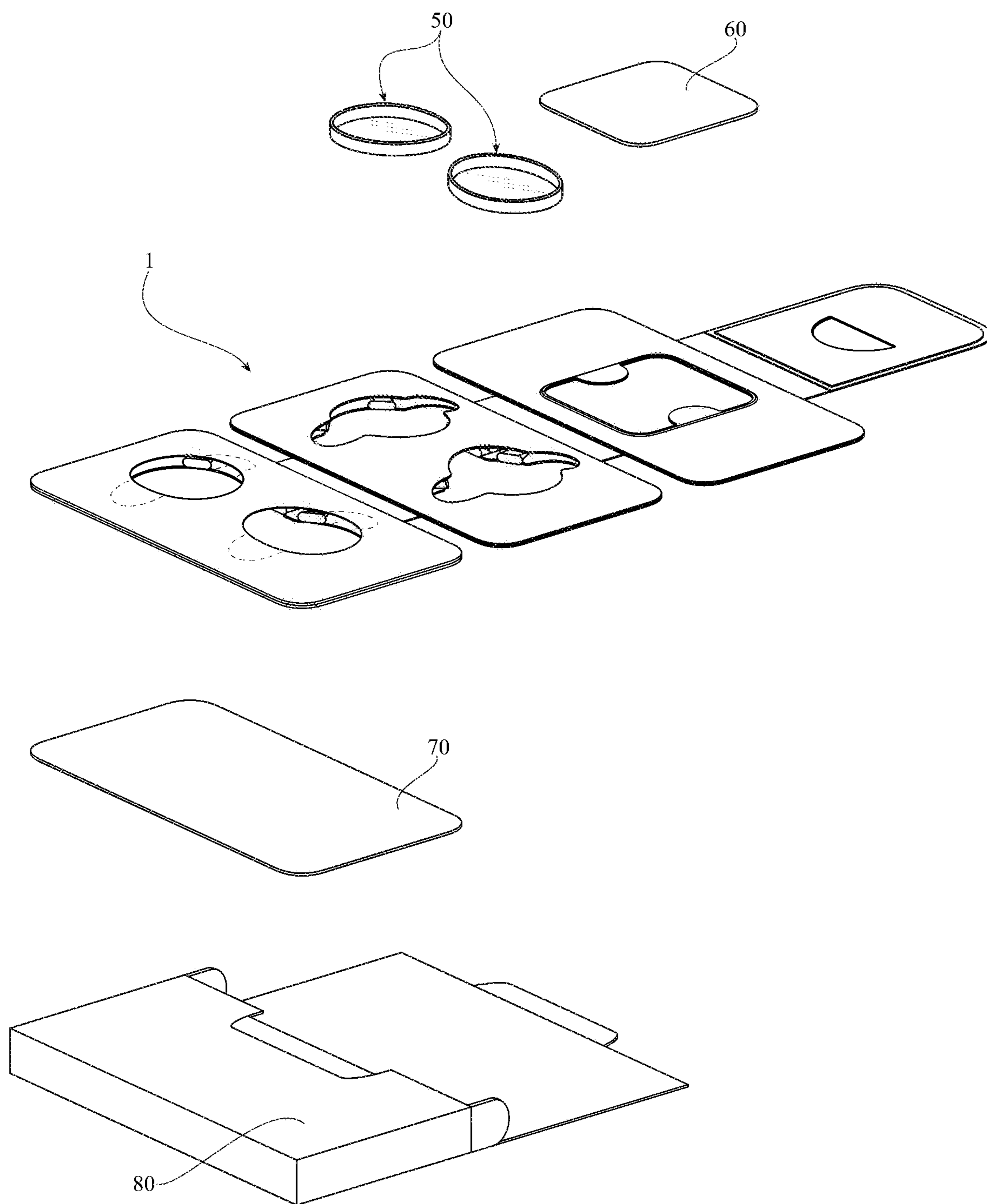


FIG. 1

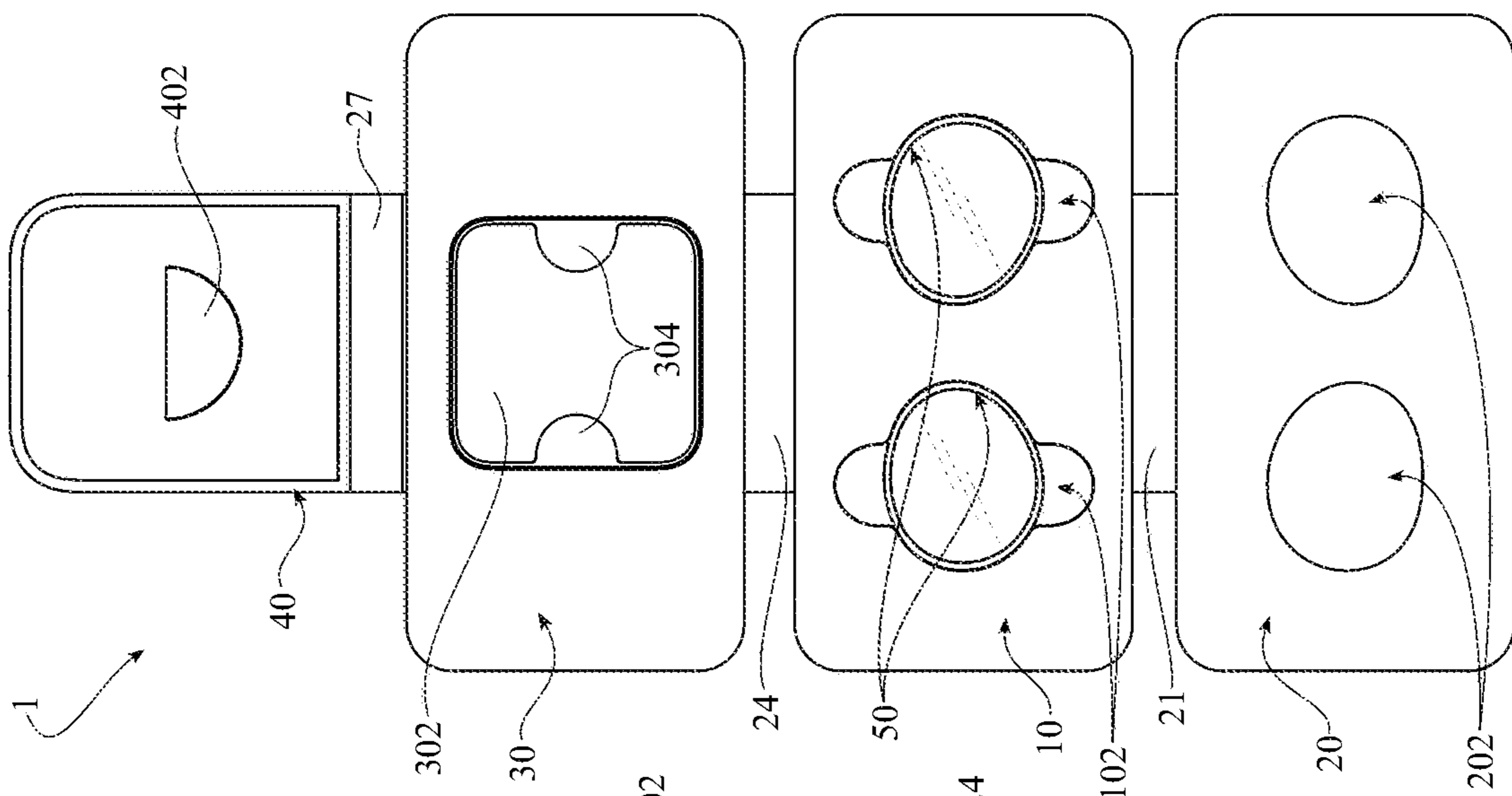


FIG. 5

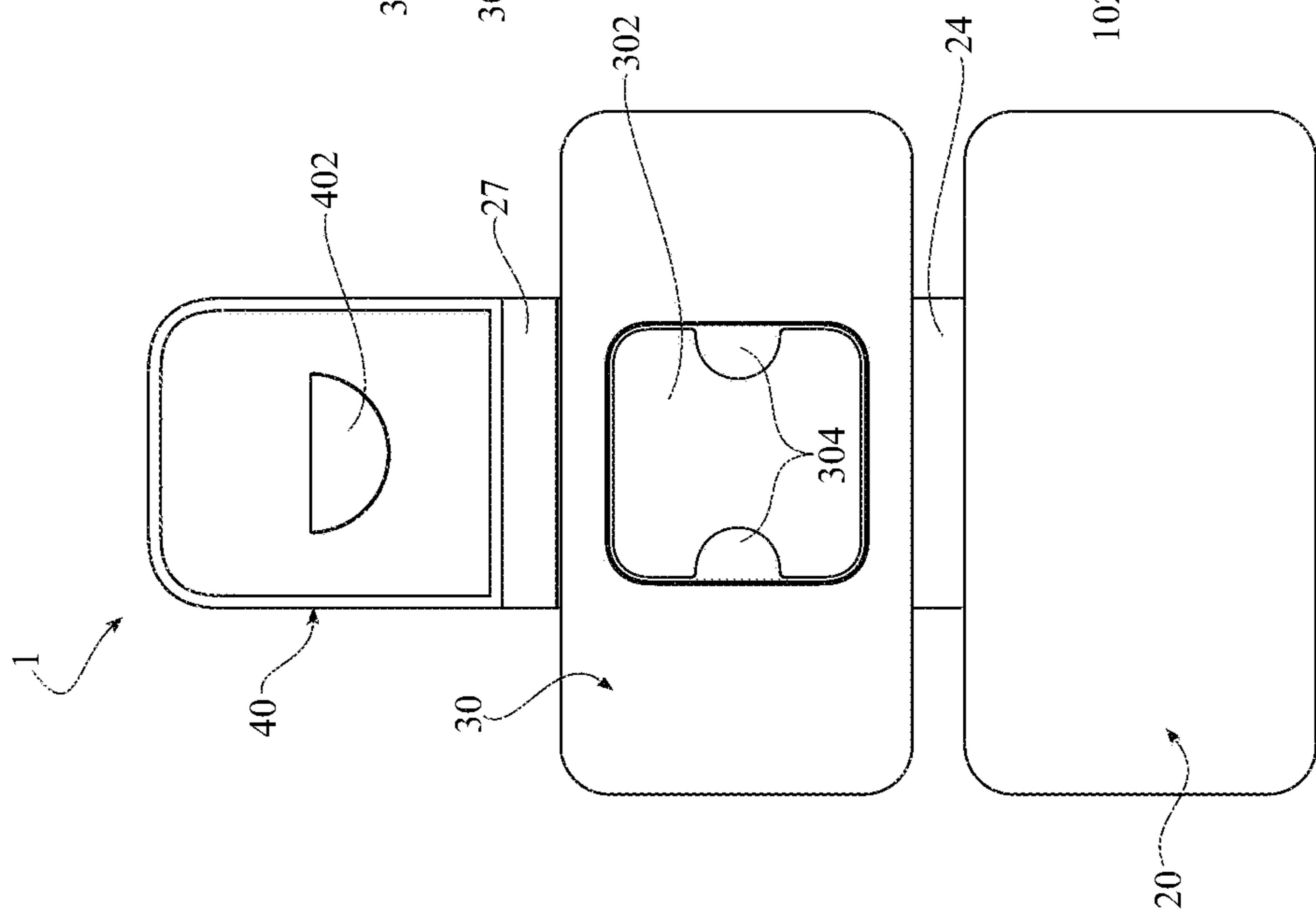


FIG. 4

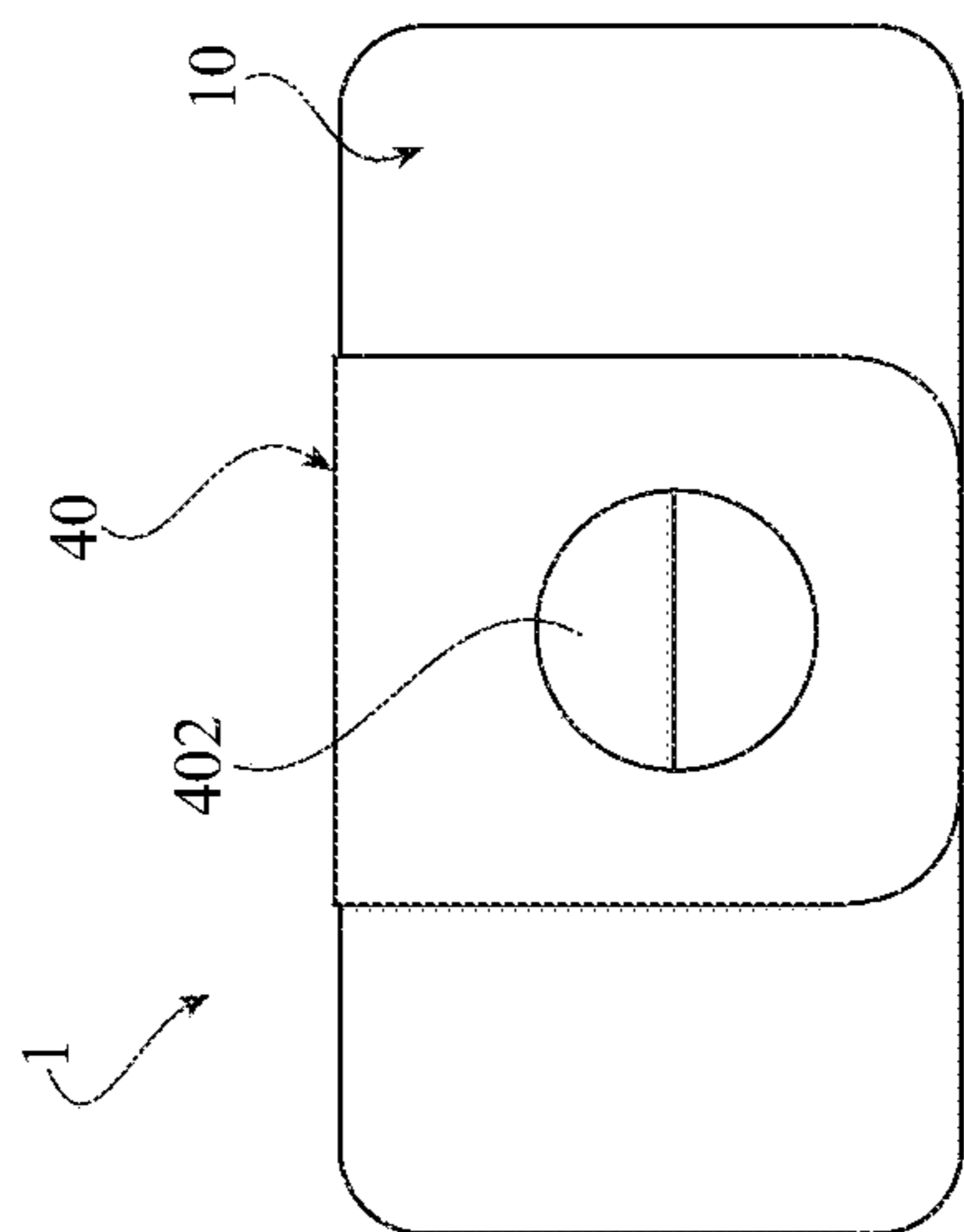


FIG. 3

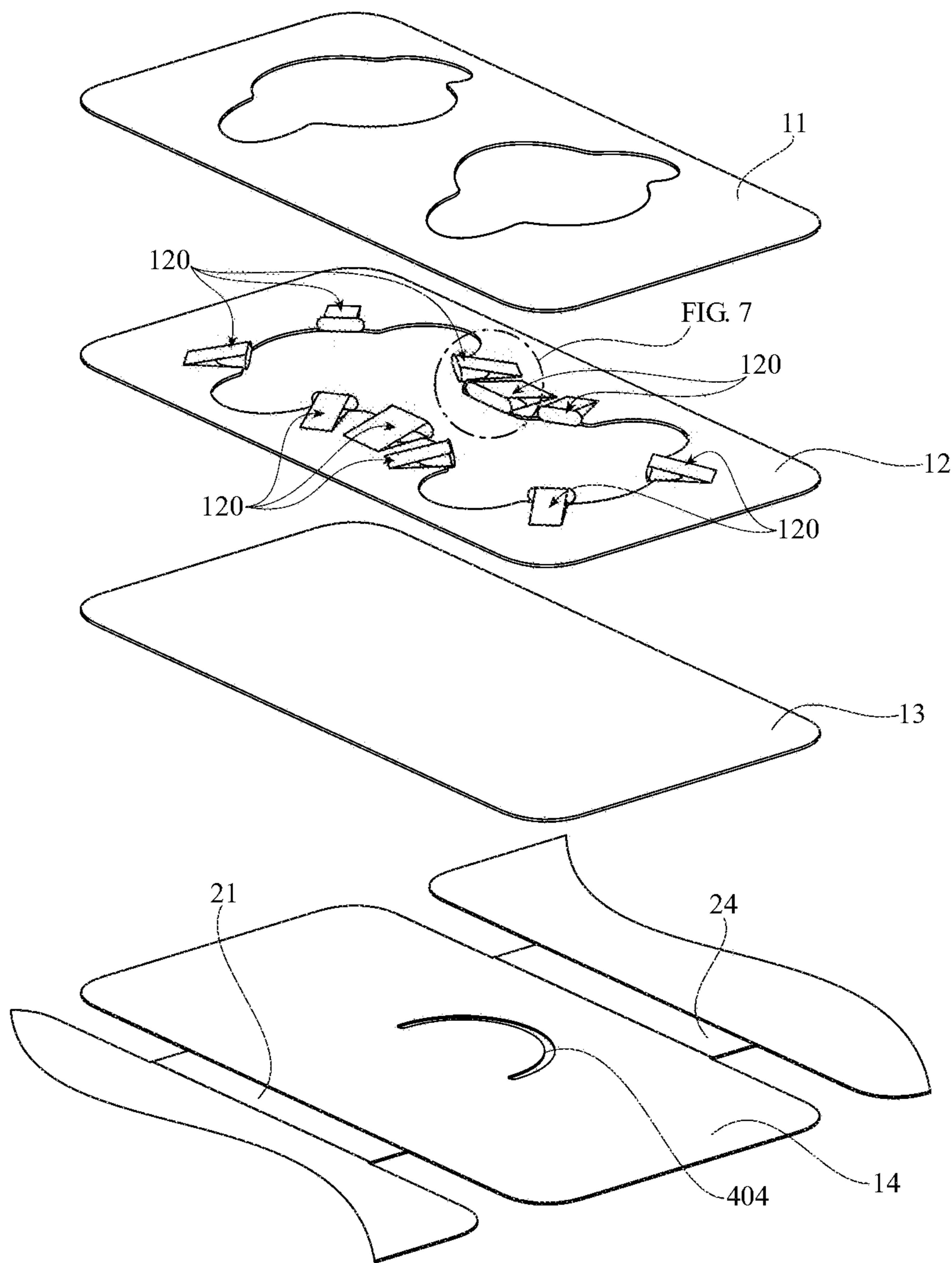


FIG. 6

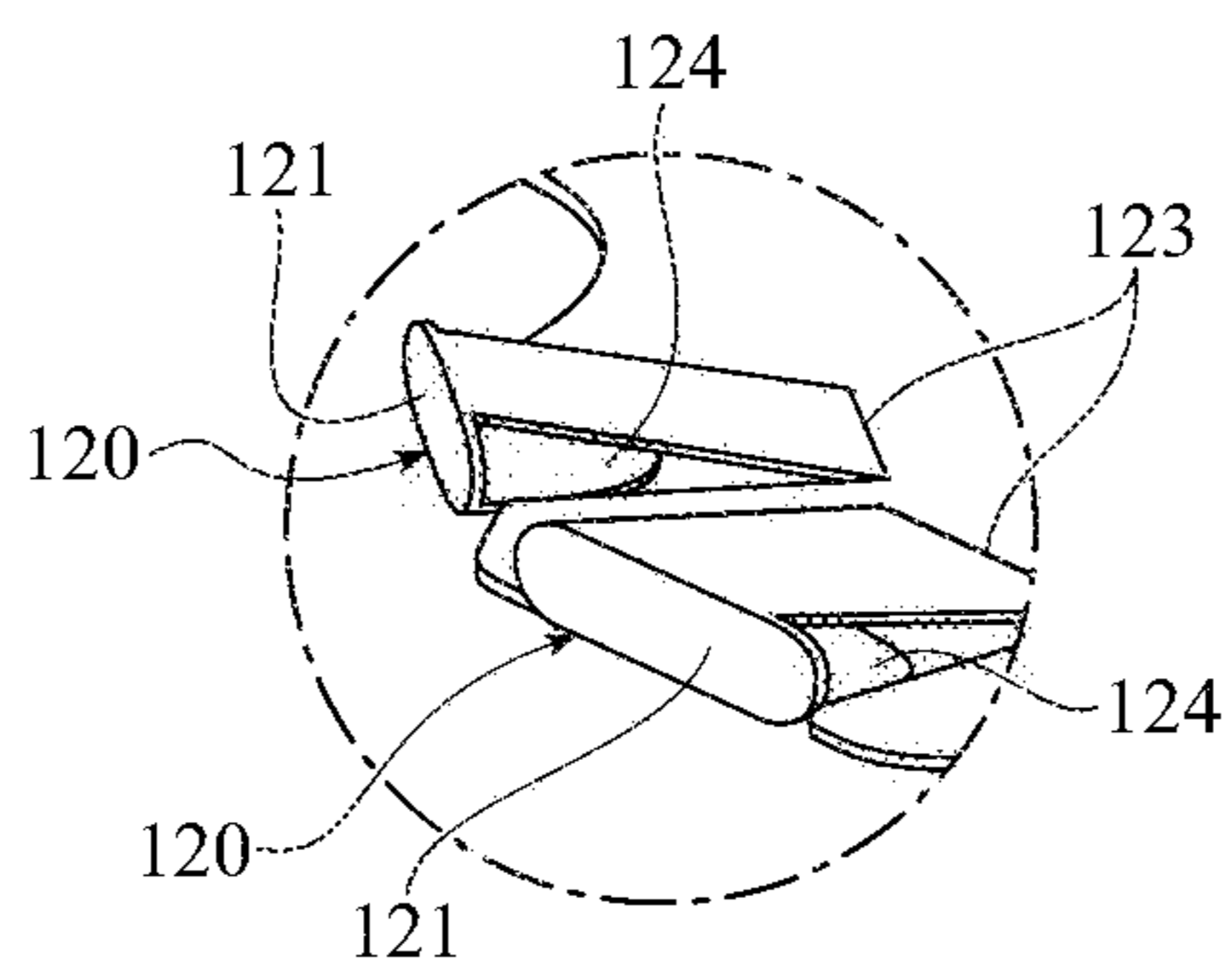


FIG. 7

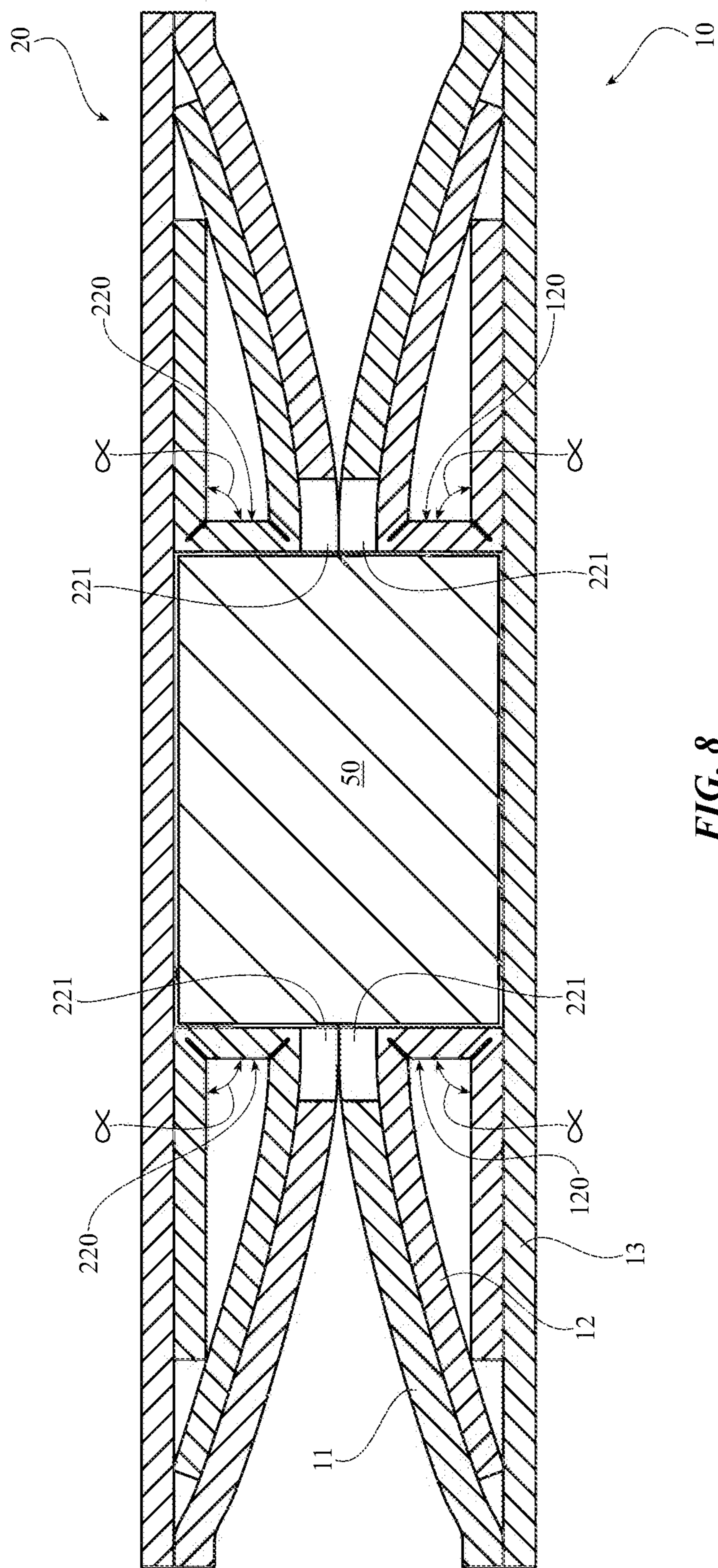


FIG. 8

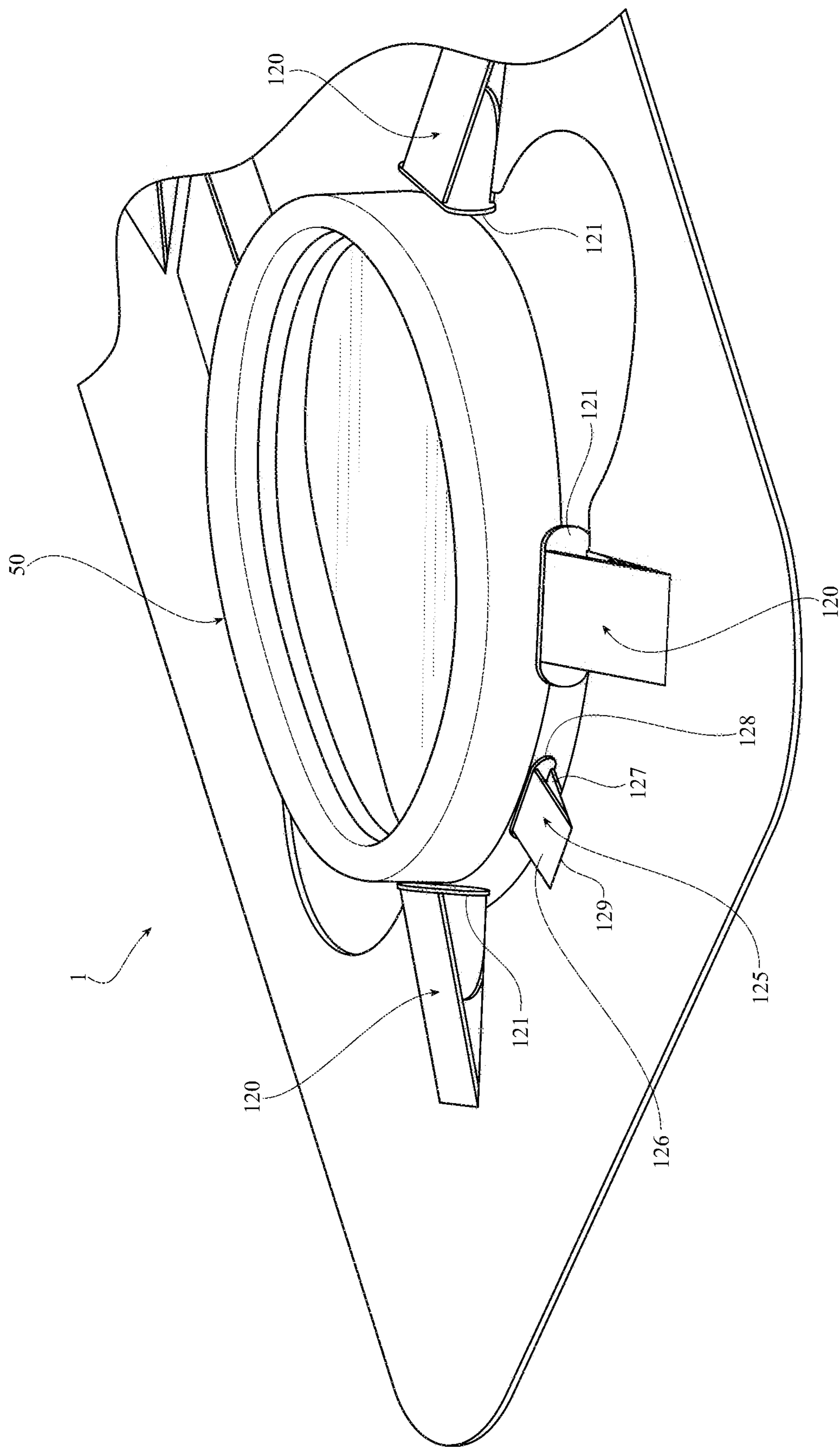


FIG. 9

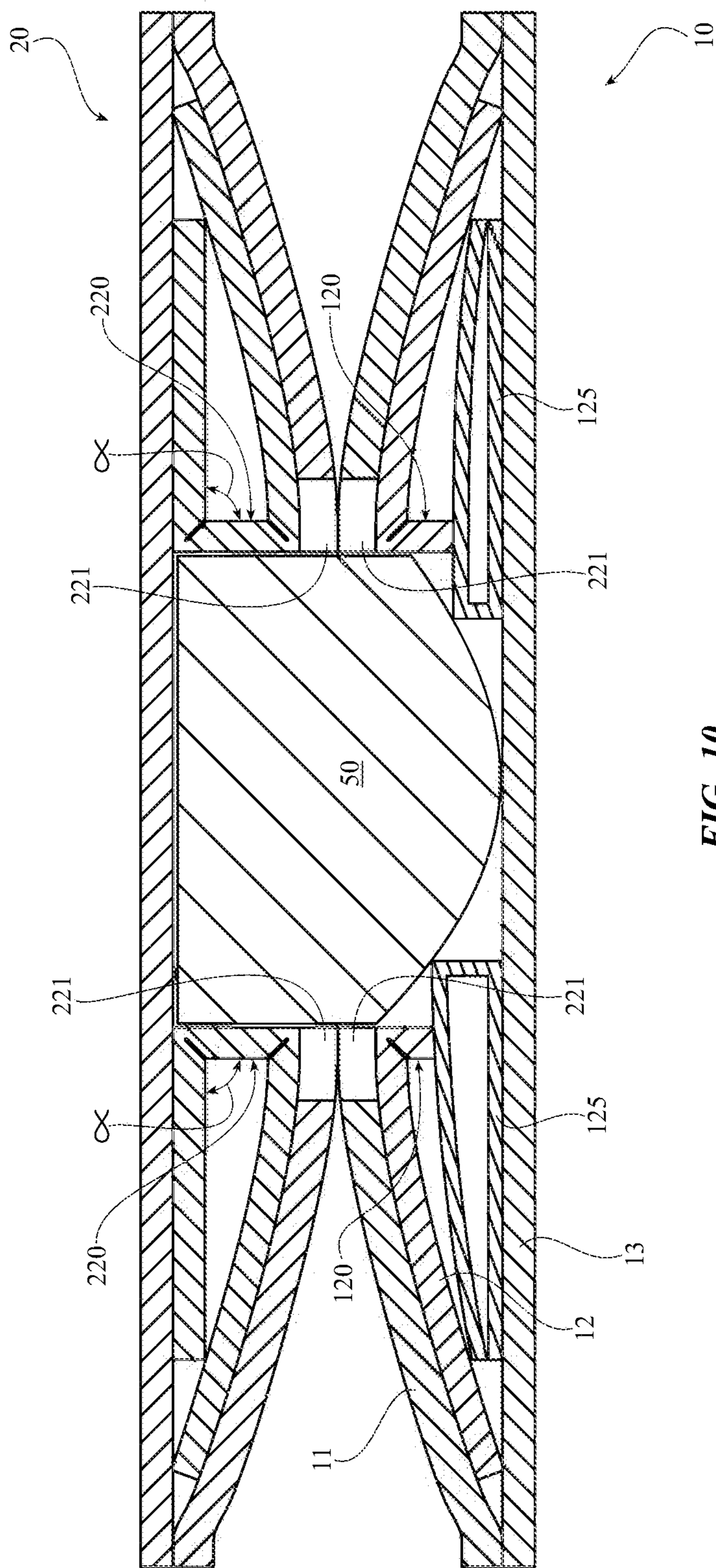


FIG. 10

PACKAGING FOR OPTICAL LENS DEVICES

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 63/384,516, filed Nov. 21, 2022, which is incorporated herein in its entirety by reference thereto.

FIELD

[0002] The described embodiments relate generally to packaging such as retail packaging. More particularly, the present embodiments relate to folded panel packaging to receive a product therein. In some embodiments, the product is an optical lens.

BACKGROUND

[0003] Product packaging is an integral part of a customer's experience. It introduces the customer to their product, and can affect the customer's feelings toward the product and the company that created it. Packaging that is simple, clean, and secure may help influence the customer's impression of the product packaged within. At the same time, intuitive elements strike a balance between retaining a product in a closed state prior to purchase, for example, with the ease with which a customer may access their product within the packaging once a sale is complete.

[0004] Structural and environmental considerations may also play a role in designing packaging. For example, packaging may be designed to be environmentally friendly—while retaining sufficient structure to ensure retention and protection for the products contained within it. In the context of optical lenses and related peripheral products, other packaging may rely on bags, pouches, foam, protective film coverings or wraps, or plastic trays. For such products like optical lenses, packaging described in this document improves upon such prior examples, balancing eco-friendly materials and stable product protection with intuitive user experiences, easy removal of the product, and aesthetic elements.

SUMMARY

[0005] Some embodiments include paper packaging, including a first panel formed from paper and including a first recess configured to receive a first portion of a product, a second panel formed from paper and including a second recess configured to receive a second portion of the product, and a hinge panel formed from paper and coupling the first and second panels together at first and second folds, such that the product is retained within and between the first and second panels when the packaging is closed. In some embodiments the recesses together retain the product when the packaging is closed.

[0006] In some embodiments, the first panel further includes a top layer, a bottom layer, and an intermediate layer configured to space the top and bottom layer within their periphery such that an apex of a planar curve of the top layer is disposed proximate the first recess.

[0007] In some embodiments, the first panel further includes a top layer defining an opening configured to receive the first portion of the product, a bottom layer comprising a product support surface, and an intermediate layer. In some embodiments, the intermediate layer includes

segmented sidewalls closely conforming to an outer periphery of the product as part of the first recess. In some embodiments, the segmented sidewalls are further configured as spacing segments configured to space the top layer and the bottom layer within their periphery.

[0008] In some embodiments, the intermediate layer is formed from a single blank. In some embodiments, the second panel further includes a top layer defining an opening configured to receive the second portion of the product, a bottom layer comprising a product support surface, and an intermediate layer. In some embodiments, the intermediate layer includes segmented sidewalls closely conforming to an outer periphery of the product as part of the second recess.

[0009] In some embodiments, the paper packaging includes a first substrate panel coupled to a bottom surface of the first panel, and a second substrate panel coupled to a bottom surface of the second panel, and the hinge panel defining the first and second folds. In some embodiments, the first substrate panel, the second substrate panel, and the hinge panel are formed from a single blank. In some embodiments, the paper packaging includes a third panel foldably connected to the first or second panel such that when the first and second panel are closed, the third panel folds around the opposite panel about a second hinge panel. In some embodiments, the third panel further includes a retention element configured to retain a product accessory.

[0010] Some embodiments include paper packaging, including a paper panel. In some embodiments, the paper panel includes a top layer defining an opening configured to receive a portion of a product, a bottom layer comprising a product support surface, and an intermediate layer. In some embodiments, the intermediate layer includes segmented sidewalls closely conforming to an outer periphery of the product.

[0011] In some embodiments, the top layer and the bottom layer are coupled at their peripheries and spaced from each other within their periphery via spacing segments. In some embodiments, the spacing segments comprise the segmented sidewalls, and the intermediate layer is formed from a single blank.

[0012] In some embodiments, the peripheral edge of the opening is aligned with each of the segmented sidewalls such that the opening and segmented sidewalls define the recess. In some embodiments, the segmented sidewalls provide a bulge in the top surface of the paper panel.

[0013] In some embodiments, the segmented sidewalls contact the outer periphery of the product, but do not provide a retention force to the product. In some embodiments, the intermediate layer further includes spacing segments. In some embodiments, the spacing segments include flaps extending from a portion of the intermediate layer proximate the opening and folding over into the segmented sidewalls and further folding onto themselves such that each of the distal flaps may be coupled to the bottom layer.

[0014] Some embodiments relate to a system including packaging (as described herein) and a lens (wherein the lens is the product).

[0015] In some embodiments, the packaging includes a third panel foldably connected to the first or second panel such that when the first and second panels are closed, the third panel folds around the opposite panel about a second hinge panel, and the third panel comprises a retention element configured to retain a product accessory. In some

embodiments, the product accessory includes a calibration unit associated with the product.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The disclosure will be readily understood by the following detailed description in conjunction with the accompanying drawings, wherein like reference numerals designate like structural elements, and in which:

[0017] FIG. 1 shows an exploded view of a packaging assembly with optical lenses, according to an embodiment.

[0018] FIG. 2 shows an assembled view of the packaging shown in FIG. 1, in an open configuration.

[0019] FIG. 3 shows the packaging shown in FIGS. 1 and 2, in a closed configuration.

[0020] FIG. 4 shows the packaging shown in FIGS. 1-3, in a partially open configuration.

[0021] FIG. 5 shows the packaging shown in FIGS. 1-4, in an open configuration.

[0022] FIG. 6 shows an exploded view of a panel of the packaging shown in FIGS. 1-5, in an embodiment.

[0023] FIG. 7 shows an enlarged view of a portion of FIG. 6.

[0024] FIG. 8 shows a schematic cross section illustration of a portion of packaging with optical lens, in an embodiment.

[0025] FIG. 9 shows a partial perspective view of a packaging assembly with optical lenses according to an embodiment.

[0026] FIG. 10 shows a schematic cross section illustration of a portion of packaging with optical lens, in an embodiment.

DETAILED DESCRIPTION

[0027] Reference will now be made in detail to representative embodiments illustrated in the accompanying drawings. It should be understood that the following descriptions are not intended to limit the embodiments to one preferred embodiment. To the contrary, it is intended to cover alternatives, modifications, and equivalents as can be included within the spirit and scope of the described embodiments as defined by the appended claims.

[0028] As described above, many examples of optical lens packaging include the use of bags, films, plastic trays, etc. As described herein, packaging (particularly paper packaging with opposing recesses to hold the lens within and between the foldable panels when closed) provides an intuitive and secure alternative to such elements as plastic trays, plastic films/wraps, foam trays or coverings, or bags/pouches (such as made from microfiber). A re-closeable retention element is also provided in some embodiments, such as for finished goods packaging, such that a user may use the packaging as a case for the product, e.g., optical lens(es), once the purchase is complete.

[0029] The packaging may be retail packaging (i.e., finished packaging for containing and conveying a product to a user such as may be used in a retail setting, not shipping packaging providing outer packaging for containing a packaged product during shipment) that one may expect to find on the shelf in a retail store, and which one may open after purchase to directly access their product. In some embodiments, the packaging may be a component in a packaging

system, including an outer box that may include additional products or product accessories as well as the packaging for the optical lens.

[0030] The packaging may be made out of recyclable and/or biodegradable materials, such as cellulose-based products such as paper (including, for example, paperboard such as solid bleached sulfate “SBS”, cardboard, greyboard, cardboard corrugate (e.g., E-flute or F-flute), that can reduce environmental impact, especially when it is intuitive for a customer to properly recycle the packaging and it may be recycled in a single-stream system. Each of the panels described herein—along with their constituent layers—may be formed from paper, cardboard, greyboard, cardboard corrugate (e.g., E-flute or F-flute), or other cellulose-based products.

[0031] As explained above, packaging designed to be environmentally friendly—while retaining sufficient structure to ensure retention for the products contained within it is advantageous. And in the context of optical lenses and related peripheral products, other packaging may rely on bags, protective film coverings, or plastic trays. Such materials were typically used for their softness to avoid scratching or otherwise marring of the surface of the lenses (which can be finely-tuned lenses where such damage would impair their optimal functionality). For such products like optical lenses, environmentally friendly packaging such as that formed from paper that can also serve as a case if a user wishes to not dispose of the packaging and instead keep the lens separate from a product gives users additional options while improving environmental care taken into account in product packaging design.

[0032] A product contained by the packaging may be, for example, an electronic device such as, for example, headphones, a laptop, tablet computer, headset, or smartphone, or it may be a non-electronic device, such as, for example, an optical lens.

[0033] These and other embodiments are discussed below with reference to the accompanying figures. However, those skilled in the art will readily appreciate that the detailed description given herein with respect to these figures is for explanatory purposes only and should not be construed as limiting.

[0034] FIG. 1 shows an exploded view of a packaging assembly including packaging 1 to receive a product, e.g., optical lens(es) 50 and product accessory 60 (e.g., a calibration unit). In some embodiments, packaging 1 may be bundled with product documentation 70 (e.g., instructions for use, warranty and other legal information, etc.), and placed within outer box 80 that may receive packaging 1. Outer box 80 may include other products or product accessories, for example, products that may use lens 50 (e.g., a clip-on or removable lens) such as with a headset (electronic or otherwise), eyeglasses, microscopes, etc. In some embodiments lens 50 may be a prescription or non-prescription lens that a user may select based on their requirements. In some embodiments, product accessory 60 may be a calibration unit that is associated with the prescription/non-prescription lens that may be used to calibrate a display of, for example, an electronic headset such as a virtual reality (VR) or augmented reality (AR) headset.

[0035] Turning to FIG. 2, an assembled view of the packaging shown in FIG. 1, in an open configuration is shown. In some embodiments, packaging 1 is paper packaging, and includes first panel 10 formed from paper and

including a first recess 102 configured to receive a first portion of lens 50. Packaging 1 includes second panel 20, also formed from paper and including a second recess 202 configured to receive a second portion of lens 50. In some embodiments, hinge panel 21 is formed from paper and couples first panel 10 and second panel 20 together at first and second folds 22/23, such that lens 50 is retained within and between the first and second panels 10/20 when packaging 1 is closed. In some embodiments, recesses 102/202 together retain lens 50 when packaging 1 is closed.

[0036] In some embodiments, packaging 1 includes third panel 30 foldably connected to the first or second panel (shown connected to first panel 10 in the illustrated embodiment) such that when the first and second panels are closed, third panel 30 folds around the opposite panel about a second hinge panel 24 (with folds 25 and 26). Third panel 30 includes a retention element configured to retain product accessory 60 in accessory recess 302, in some embodiments. In some embodiments, product accessory 60 includes a calibration unit associated with the product. For example, the product accessory 60 includes a printed code or chip calibration card usable with a user's electronic device that may calibrate a display of the electronic device in accordance with the user's lens 50's prescription value—either an electronic device of the user or of a third party, for example.

[0037] In some embodiments, packaging 1 includes a fourth panel 40 foldably connected to third panel 30 via third hinge panel 27 (with folds 28 and 29). Fourth panel 40 further includes flap 402 that may be folded and inserted through a corresponding slot on one of the other panels, thereby securing and retaining packaging 1 in a closed configuration. In some embodiments, third panel 30 is omitted, and panel 40 is coupled directly to first panel 10 or second panel 20.

[0038] In some embodiments, the segmented sidewalls 121 support a bulge in the top surface 100 of the paper panel (e.g., first layer 11) to create the depth of recess 102. In some embodiments, the peripheral edge of the opening defining first recess 102 (on first panel 10) is aligned with each of segmented sidewalls 121 of spacing segments 120, such that the opening and segmented sidewalls 121 of spacing elements 120 define the recess.

[0039] As shown in FIG. 2 for example, in some embodiments first recess 102 (or second recess 202) may include a cutout portion (shown in broken lines as element 203, for example) that allows for a user to grasp a portion of the periphery of the product (e.g., lens 50) while the product is within the first or second recess 102/202 to be able to easily remove the product from packaging 1. In some embodiments, first and second recesses 102/202 do not include any retention element (e.g., an undercut, rim, snap fit, pocket feature, or the like, for example) that fixes a vertical position of the product within the recess—that is the product may be easily lifted from the recess without vertical resistance.

[0040] In some embodiments, the segmented sidewalls 121 contact the outer periphery of the product (e.g., lens 50), but do not provide a retention force to the product. In some embodiments, intermediate layer 12 of first panel 10 includes spacing segments that include flaps extending from a portion of the intermediate layer proximate the opening defining recess 102 and folding over into the segmented sidewalls 121 and further folding onto themselves such that each of the distal flaps may be coupled to the bottom layer 13 of first panel 10. By configuring the segmented sidewalls

121 to contact and hold the lenses in place, packaging described herein allows for the use of paper in lens packaging by fitting the lenses in place securely, not allowing for relative motion of the lens against the paper, thereby minimizing the potential for scratches. In this way, packaging described herein retains benefits of softer materials (e.g., foam, fiber bags, etc.), while providing an environmentally friendly and recyclable solution.

[0041] FIGS. 3, 4, and 5 show packaging 1 in various stages of opening. FIG. 3 shows packaging 1 in a closed configuration, whereby lens 50 is retained within and between the first and second panels 10/20. As shown, flap 402 may be folded and inserted through a corresponding slot disposed on the first panel 10, thereby securing and retaining packaging 1 in a closed configuration. In some embodiments, flap 402 may be disposed on first panel 10, and the corresponding slot may be disposed on fourth panel 40, for example. In the closed configuration, the mirrored openings together of the recesses of first and second panels 10/20 are positioned on either side of lens 50, such that lens 50 is held in packaging 1, extending partway into each of recess 102 and recess 202. The mirrored openings make it possible that both recesses will end up conforming to the outside periphery of the portion of lens(es) 50 that are received in each recess, respectively.

[0042] FIG. 8 shows a schematic conceptual illustration of this concept, where lens 50 is held within and between first panel 10 and second panel 20 when packaging 1 is in a closed state (hinge panels have been omitted for illustration simplicity). As shown, lens 50 may be closely held within the cavity formed by first and second recesses 102/202, and closely contacted by spacing segments 120 and 220, respectively. But as described above and shown in the figures, in some embodiments, there are no retention elements that fix a vertical position of the product within the recess—that is the product may be easily lifted from the recess without vertical resistance, once the first or second panel is lifted off of the portion of the lens that it receives within its recess. As shown in FIG. 8, first panel 10 and second panel 20 may be shaped such that recesses 102/202 have a small gap 221 such that the edge of the panel, for example top panel 11 does not contact lens 50. This avoids a potentially sharp edge of the panel from contacting lens 50. In some embodiments, gap 221 is imperceptible to a user. And as shown in FIG. 8, spacing segments 120/220 may be formed as folded elements—in some embodiments when lens 50 is not within recesses 102/202, angle α (alpha) is less than 90° . This allows for the opening in which lens 50 is placed to receive lens 50, and when lens 50 is placed within recesses 102/202, for example, angle α may increase to, for example, around 90° such that the walls of spacing segments 120/202 contact the outer periphery of lens 50, e.g., flatly without contacting an edge.

[0043] Turning back to FIG. 4, when a user wishes to open packaging 1, they may pull fourth panel 40 upward, freeing flap 402 from a corresponding slot (e.g., slot 404 shown in FIG. 6, formed in substrate panel 14, described further with reference to FIG. 6). Once fourth panel 40 rotates out it can be used to lift third panel 30 off of second panel 20, as shown in FIG. 4. As shown, by doing so, user may access accessory recess 302 and remove accessory 60. A user may then lift second panel 20, rotating it away from first panel 10 to access lens 50, as shown in FIG. 5.

[0044] Once a user is finished using lens 50 (or product accessory 60, for example), they can use a reverse process to close packaging 1 once lens 50 (or product accessory 60) is replaced within its recess, for example to use packaging 1 as a case to keep lens 50 stored for later use. This allows a user to continue using packaging 1 as a case, unless or until they wish to dispose of it (e.g., through a recycling stream). By balancing environmentally friendly materials and structurally sound (and aesthetic) design elements, a user may be more likely to simply use the packaging the product arrives in as a case, rather than acquiring a separate alternative case.

[0045] Turning to FIG. 6, it shows an exploded view of a panel of the packaging shown in FIGS. 1-5, in an embodiment. FIG. 7 shows an enlarged view of a portion of FIG. 6. While the panel shown in FIG. 6 is an enlarged exploded view of first panel 10, second panel 20 may be formed substantially similar as shown in FIGS. 6 and 7. As shown in the figures, first panel 10 further includes a top layer 11, a bottom layer 13, and an intermediate layer 12. These layers are configured to space the top layer 11 and bottom layer 12 within their periphery such that the layers are spaced from each other to form first recess 102. In some embodiments, an apex of a planar curve of top layer 11 is disposed proximate the first recess 102.

[0046] By segmenting the sidewalls and disposing them around the opening and between bottom layer 13 and top layer 11 as spacing segments 120, a particular curved shape is formed with top layer 11 as spacing segments 120 support portions of top layer 11 above bottom layer 13. That is, bottom layer 13 remains flat, and is joined to top layer 11 at their respective peripheries. This results in a curved shape to top layer 11—the final shape being influenced by the positioning, dimensions, and placement of spacing segments 120 (the inner periphery of the openings in top layer 11 being not fixed to intermediate layer 12 or bottom layer 13). In some embodiments, the segmented sidewalls of spacing segments may be wider than the portion of the spacing segment that it extends from. In some embodiments, the segmented sidewalls of spacing segments may be narrower than the portion of the spacing segment that it extends from. In some embodiments, the segmented sidewalls of spacing segments and the portion of the spacing segment that it extends from may be equally wide. In some embodiments, segmented sidewalls 121 may be placed at different positions within intermediate layer 12, for example to provide sidewalls in first or second panel 10/20 for a differently sized or shaped product.

[0047] In some embodiments, intermediate layer 12 is formed from a single blank. In some embodiments, the segmented sidewalls 121 contact the outer periphery of the product (e.g., lens 50), but do not provide a retention force to the product. In some embodiments spacing segments 120 fold upward at folds 123 and include flaps extending from a portion of intermediate layer 12 proximate the opening defining recess 102, folding over into the segmented sidewalls 121. The flaps further fold onto themselves such that each of the distal flaps 124 may be coupled to bottom layer 14, as shown in FIGS. 6 and 7. By forming intermediate layer 12 from a single blank, different configurations of spacing segments 120 are achievable simply by cutting them at different positions, or in different shapes or dimensions. By segmenting the elements as sidewalls and spacing seg-

ments, rather than having a continuous spacing element, additional control of the shape of first and second recesses 102/202 is possible.

[0048] As shown in the figures, in some embodiments, first panel 10's top layer 11 defines an opening configured to receive the first portion of lens 50. Bottom layer 13 includes a product support surface configured to support a portion of lens 50. Intermediate layer 12 includes segmented sidewalls 121 (as part of the spacing segments 120) closely conforming to an outer periphery of the lens 50 (or other product) as part of the first recess 102. In some embodiments, segmented sidewalls 121 of intermediate panel 12 are further configured as spacing segments 120 configured to space top layer 11 and bottom layer 13 within their periphery. The segmented sidewalls configured as spacing segments are considered as part of the first recess 102.

[0049] In some embodiments, top layer 11 and bottom layer 13 are coupled at their peripheries (e.g., via adhesive, high-frequency welding, tape, mechanical connections, etc.) and spaced from each other within their periphery via spacing segments 120. Adhesive (e.g., adhesive strips) may be applied before or after die-cutting. Adhesive may be, for example, tape (e.g., double-sided tape), and may have a release liner on one side that can remain in place to minimize unintended adhesion until the tape is ready to be used, at which point the release liner can be removed. To facilitate welding, one or more of the layers or panels described herein may be coated, for example, with a BOPP (biaxially oriented polypropylene) film, or a water-based coating, at least in the areas to be welded together.

[0050] By coupling top layer 11 and bottom layer 13 at their peripheries, the shape of top layer 11 can be formed via the shape, position, dimensions, etc., of spacing segments 120. In some embodiments, the peripheral edge of the opening formed in top layer 11 is aligned with each of segmented sidewalls 121 (formed with spacing segments 120) such that the opening and segmented sidewalls 121 the recess (first or second recess 102/202, for example). In some embodiments, segmented sidewalls 121 provide a bulge in the top surface 11 of the paper panel.

[0051] As shown in FIG. 6, for example, in some embodiments, packaging 1 includes a first substrate panel 14 coupled to a bottom surface of first panel 10, and a second substrate panel (shown cut off on the left hand side of the figure) coupled to a bottom surface of second panel 10. In this way, hinge panel 21 defining the first and second folds 22/23 is a part of the lower substrate coupling first and second panels 10/20, for example. In some embodiments, first substrate panel 14, the second substrate panel, and hinge panel 21 are formed from a single blank. In some embodiments, bottom layer 13 is omitted, such that substrate panel 14 serves its functions as described herein.

[0052] As explained above, while the panel shown in FIG. 6 is an enlarged exploded view of first panel 10, second panel 20 may be formed substantially similar as shown in FIGS. 6 and 7 including corresponding spacing segments 120, layer construction, etc.

[0053] Turning to FIG. 9 and FIG. 10, FIG. 9 shows a partial perspective view of a packaging assembly with optical lenses according to an embodiment. The packaging and packaging assembly shown in FIG. 9 may include all features shown and/or described in the other views, without limitation, and vice versa. FIGS. 9 and 10 show the inclusion of an auxiliary spacing element 125. Auxiliary spacing

element **125** is shown to support a lower surface of lens **50**, e.g., when lens **50** includes a shape that is not flat (see, e.g., FIG. **10**). Auxiliary spacing element **125** is formed substantially similarly to spacing segments **120** in that they are folded elements that include sidewalls **128** (that support lower surface of lens **50**) extending from element **126** extending from fold **129** formed at first panel **10**, whereby a second panel **127** folds inward at a lower portion of sidewalls **128** forming a generally triangular shape.

[0054] FIG. **10** shows a schematic cross section illustration of a portion of packaging with optical lens, e.g., as shown in FIG. **9**. The packaging and packaging assembly shown in FIG. **10** may include all features shown and/or described in the other views, without limitation, and vice versa. In some embodiments, auxiliary spacing elements **125** may be provided at different locations along a periphery of lens **50**. While auxiliary spacing elements **125** in FIG. **10** are shown to contact lens **50** at a corner/edge, in some embodiments auxiliary spacing elements **125** may be dimensioned such that a flat portion of auxiliary spacing elements contacts lens **50**. In some embodiments, auxiliary spacing elements **125** may include features such as angle α described in FIG. **8**, or be folded such that a flat surface contacts lens **50** rather than a potentially sharp corner or edge. Auxiliary spacing elements **125** support lens **50** along its bottom surface, for example, when that surface is curved as shown in FIG. **10**. In this way, auxiliary spacing elements **125** prevent lens **50** from rocking within packaging **1**. In some embodiments the height of auxiliary spacing elements **125** may be controlled around the periphery of lens **50**, such that the height may vary, e.g., to accommodate different curved geometry of lens **50**.

[0055] Tabs, flaps, and regions without adhesive of the blank are folded such that no adhesive is visible in finished packaging. In some embodiments, adhesive may be omitted and the various flaps and tabs attached in another suitable manner (e.g., by mechanical interlock or press fit).

[0056] Each of the components and their constituent parts, and other variations described herein may include corresponding features described with reference to each of the other components and features described without limitation. For example, the recesses of each panel have the same characteristics accounting for any asymmetry of the product (e.g., optical lens(es)). In some embodiments there may be more or fewer than two of each recess (e.g., a single lens embodiment is contemplated).

[0057] In some embodiments, any surface finishing may take place after the components are cut from the blank, or alternatively prior to the blank being cut into separate sheets for assembling to a final product. Additionally, some operations may be performed concurrently. All or some of the surfaces of the packaging may be coated, or laminated, which may increase structural strength properties such as rigidity and which may protect a product within the packaging, or avoid scratching.

[0058] The foregoing description, for purposes of explanation, used specific nomenclature to provide a thorough understanding of the described embodiments. However, it will be apparent to one skilled in the art that the specific details are not required in order to practice the described embodiments. Thus, the foregoing descriptions of the specific embodiments described herein are presented for purposes of illustration and description. They are not target to be exhaustive or to limit the embodiments to the precise

forms disclosed. It will be apparent to one of ordinary skill in the art that many modifications and variations are possible in view of the above teachings.

What is claimed is:

1. Paper packaging, comprising:
 - a first panel formed from paper and comprising a first recess configured to receive a first portion of a product;
 - a second panel formed from paper and comprising a second recess configured to receive a second portion of the product; and
 - a hinge panel formed from paper and coupling the first and second panels together at first and second folds, such that the product is retained within and between the first and second panels when the packaging is closed, wherein the recesses together retain the product when the packaging is closed.
2. The paper packaging of claim 1, wherein the first panel further comprises:
 - a top layer;
 - a bottom layer; and
 - an intermediate layer configured to space the top and bottom layer within their periphery such that an apex of a planar curve of the top layer is disposed proximate the first recess.
3. The paper packaging of claim 1, wherein the first panel further comprises:
 - a top layer defining an opening configured to receive the first portion of the product;
 - a bottom layer comprising a product support surface; and
 - an intermediate layer, comprising:
 - segmented sidewalls closely conforming to an outer periphery of the product as part of the first recess.
4. The paper packaging of claim 3, wherein the segmented sidewalls are further configured as spacing segments configured to space the top layer and the bottom layer within their periphery.
5. The paper packaging of claim 3, wherein the intermediate layer is formed from a single blank.
6. The paper packaging of claim 3, wherein the second panel further comprises:
 - a top layer defining an opening configured to receive the second portion of the product;
 - a bottom layer comprising a product support surface; and
 - an intermediate layer, comprising:
 - segmented sidewalls closely conforming to an outer periphery of the product as part of the second recess.
7. The paper packaging of claim 1, further comprising:
 - a first substrate panel coupled to a bottom surface of the first panel; and
 - a second substrate panel coupled to a bottom surface of the second panel; and
 - the hinge panel defining the first and second folds, wherein the first substrate panel, the second substrate panel, and the hinge panel are formed from a single blank.
8. The paper packaging of claim 1, further comprising:
 - a third panel foldably connected to the first or second panel such that when the first and second panel are closed, the third panel folds around the opposite panel about a second hinge panel, wherein the third panel further comprises a retention element configured to retain a product accessory.

- 9.** Paper packaging, comprising:
a paper panel, comprising:
a top layer defining an opening configured to receive a portion of a product;
a bottom layer comprising a product support surface;
and
an intermediate layer, comprising:
segmented sidewalls closely conforming to an outer periphery of the product.
- 10.** The paper packaging of claim **9**, wherein the top layer and the bottom layer are coupled at their peripheries and spaced from each other within their periphery via spacing segments.
- 11.** The paper packaging of claim **10**, wherein the spacing segments comprise the segmented sidewalls, and wherein the intermediate layer is formed from a single blank.
- 12.** The paper packaging of claim **9**, wherein the peripheral edge of the opening is aligned with each of the segmented sidewalls such that the opening and segmented sidewalls define the recess.
- 13.** The paper packaging of claim **9**, wherein the segmented sidewalls provide a bulge in the top surface of the paper panel.
- 14.** The paper packaging of claim **9**, wherein the segmented sidewalls contact the outer periphery of the product, but do not provide a retention force to the product.
- 15.** The paper packaging of claim **9**, wherein intermediate layer further comprises:
spacing segments comprising flaps extending from a portion of the intermediate layer proximate the opening and folding over into the segmented sidewalls and further folding onto themselves such that each of the distal flaps may be coupled to the bottom layer.
- 16.** A system, comprising:
the paper packaging of claim **1**; and
a lens, wherein the lens is the product.
- 17.** The system of claim **16**, further comprising a third panel foldably connected to the first or second panel such that when the first and second panels are closed, the third panel folds around the opposite panel about a second hinge panel, wherein the third panel comprises a retention element configured to retain a product accessory.
- 18.** The system of claim **17**, wherein the product accessory comprises a calibration unit associated with the product.
- 19.** A system, comprising:
the packaging of claim **6**; and
a lens, wherein the lens is the product.
- 20.** A system, comprising:
the packaging of claim **9**; and
a lens, wherein the lens is the product.

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