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(72) Inventor; and

(71) Applicant : MILLER, Katherine [US/US]; 322 Iona St.,
Apt D, New Orleans, Louisiana 70005 (US).

(74) Agent: CHRISTENSEN, Zachary; The Bowling Law
Firm, 1615 Poydras St., Suite 1050, New Orleans, Louisi-
ana 70112 (US).

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(54) Title: PROTECTIVE PADDED INSERT

(57) Abstract: The present invention relates to apparatuses and methods for reducing pressure and discomfort on the female external genitalia. More particularly, the present invention relates to apparatuses and methods for reducing pressure on external female genitalia comprising a pad with a center opening wherein the opening of the pad is placed over the genitalia and the pad is positioned to surround the genitalia in order to evenly distribute pressure from the pad. The apparatus comprises a pad with an opening configured to surround the genitalia, wherein the opening of the pad is placed over the genitalia.



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PROTECTIVE PADDED INSERT

UNITED STATES PATENT AND TRADEMARK OFFICE NONPROVISIONAL PATENT
APPLICATION

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to US provisional 62/019,655 filed on 7/1/2014

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not applicable

REFERENCE TO A "MICROFICHE APPENDIX"

[0003] Not applicable

BACKGROUND

FIELD OF THE INVENTION

[0004] The present invention relates to apparatuses and methods for reducing pressure and discomfort on genitalia by means of a protective insert or padding.

GENERAL BACKGROUND

[0005] Vulvodynia is a frequently used medical term that literally means "vulvar pain". Therefore, vulvodynia is a symptom, not a disease, for which there is no identifiable cause. The condition can go on for months or years and is indicated by a variety of unpleasant, chronic vulvar sensations including: burning, rawness, soreness, irritation, sensitivity, and formication.

[0006] Prolonged sitting may exacerbate these symptoms, and as such the protective design of a garment or padded insert of the present invention may be designed to alleviate these symptoms. Surgeons, Obstetrics and American Society of Plastic Surgeons (ASPS) reports that female cosmetic surgery is one of the commonly performed procedures. This plastic surgery reduces or balances the size of the labia minora, inner lips of the vulva, or external female genitals. And for clothing being worn for these patients, according to the ASPS, the majority are looking for "a combination of aesthetics and comfort" to alleviate discomfort, after intercourse, during wearing tight clothes or participating in cycling, horseback riding or other sports.

[0007] The current state of the art has mainly focused on methods and apparatuses of incorporating padded material. Into undergarments and has failed to address ways of reducing pain resulting from friction on the female external genitalia. The following references are incorporated herein by reference: U. S. Patent Nos. 4,229,835; 5,483,705; 5,930,838; 6,029,281; 6,704,942; 6,964,065; 7,032,249; 7,430,766; 8,108,950; U. S. Publication Document Nos. 2010/0198177; 2013/0042394; and 2013/0104294; and Foreign Publication No. EP0643929.

BRIEF SUMMARY OF THE INVENTION

[0008] The present invention relates to apparatuses and methods for reducing pressure and discomfort on the female external genitalia. More particularly, the present invention relates to apparatuses and methods for reducing pressure on external female genitalia comprising a pad with a center opening wherein the opening of the pad is placed over the genitalia and the pad is positioned to surround the genitalia in order to evenly distribute pressure from the pad. The apparatus comprises a pad with an opening configured to surround the genitalia, wherein the opening of the pad is placed over the genitalia.

[0009] The methods include evenly distributing pressure, originating from an activity, on an external female genitalia by placing a pad with an opening over the genitalia. Preferably, the opening is placed over the genitalia and the pad is positioned to surround the genitalia. The even distribution of pressure preferably reduces friction that preferably ameliorates discomfort on the female external genitalia.

[0010] The unique cut out design of the present invention preferably allows for perpetually applied pressure increased by the padding and/or seats to be evenly distributed. Reducing friction and discomfort on tire female external genitalia. The design preferably remains functional, dynamic and comfortable while supporting and protecting the active, chronic, or postoperative individual.

[0011] In one embodiment, the pad can be made up of a foam material. In one embodiment, the foam material can be a memory foam. In one embodiment, the foam material can be a viscoelastic polyurethane foam. In one embodiment, the foam material can have a soft density. In one embodiment,

the foam material can have a medium density. In one embodiment, the foam material can have a firm density. In one embodiment, the present invention further comprises a perforating sheet. In one embodiment, the apparatus can be an insert. In one embodiment, the apparatus can be a garment. In one embodiment, the garment can be an athletic garment. In one embodiment, the garment can be an undergarment. In one embodiment, the pad can have a thickness ranging from 1/8" to 1/2", though more preferably 1/8" to 1".

[0012] The present invention can include a method for reducing pain associated with vulvodynia comprising distributing pressure evenly on an external female genitalia by placing a pad with an opening over the genitalia, wherein the opening can be placed over the genitalia and the pad can be positioned to surround the genitalia.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0013] Figure 1 is a diagram that shows a simple overview for use of the invention.

[0014] Figure 2 is a perspective view that shows the overall design of the invention.

[0015] Figure 3 is a perspective view that shows an embodiment of the invention that includes a perforating sheet.

[0016] Figure 4 is a perspective view that shows the attachment means on the ventral side of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0017] Overall, the invention has several general steps for using it which are as follows: first, a person 4 decides to perform a strenuous activity 3 that involves friction between the genitals and an object that otherwise impacts the genitalia (herein termed the Method (1) - Step(1) 501. Then, a person 4 inserts the pad 1 into the clothing adjacent to the genitalia that is being worn during the strenuous activity 3, (herein termed the Method (1) - Step(2) 502). Finally, the person 4 performs the strenuous activity 3 while the pad reduces friction between the genitalia and the clothing, (herein termed the Method (1) - Step(3) 503).The aforementioned method is herein termed Method (1) 500. While the steps in Method (1) 500 are depicted in a particular order, the principles of the present disclosure are not limited to the order depicted immediately above. Additionally, embodiments of the Method (1) 500 process can include more or less steps than those depicted.

[0018] In the preferred embodiment as show in Figures 2 and 3, the pad 1 or cut out design can be manufactured for athletic wear, undergarments, training gear, uniforms, and/or recreational swim wear. Alternatively, a separate pad 1 that is thinner may be worn beneath clothing to smooth the divide for cosmetic and daily comfort,

[0019] In one embodiment, the concept for this design can be manufactured as garment such as an athletic garment. For example, this protective design may be a patterned in the re-designing of currently manufactured cycling shorts. In this embodiment, the apparatus is preferably designed with a heavily padded insert to be placed around the crotch area and a unique cut-out design allowing for perpetually applied pressure increased by the padding and/or seats to be evenly distributed, reducing

friction and discomfort on the female external genitalia.

[0020] As a stand-alone insert, the design of the present invention can be inserted into undergarments for protection during a variety of activities. The reusable precut oval foam design with a cut-out center can be layered to an individuals desired thickness 1. Using the adhesive backed foam.

[0021] In one embodiment, the concept for this design can be manufactured as an undergarment. In this embodiment for example, the undergarment of the present invention could assist with up to, but not limited to, a 4-6 week post-surgical recovery period eliminating any lateral tension and is far more discreet than sitting on a "donut pillow".

[0022] For post-surgical medical uses, the same cut out design may be used in a disposable, adhesive backed, absorbent padding. The apparatus may be used for postpartum care, The apparatus may also be used as a traditional maxi pad that is preferably smaller in size.

[0023] In one embodiment as show in Figure 1, the concept for this design can be manufactured or as external padding 10 placed directly against the skin into a pair of under garments. As an external pad 10 for example, the design of the present invention could be inserted into undergarments for protection during a variety of activities. The reusable precut oval foam design 11 with a cut-out center 12 could be layered to an individual's desired thickness using the adhesive backed Memory Foam in a soft, medium, or firm density.

[0024] Overall the invention comprises a pad 1 and an attachment means used when a person 4 performs strenuous activity 3. In one embodiment, the pad is shaped like a tear-drop as in Figure 2.

Figure 2 is a perspective view of a preferred embodiment of the apparatus of the present invention. As shown in Figure 1, the pad has a center opening wherein the opening of the pad 1 is placed over the genitalia and the pad is positioned to surround the genitalia in order to evenly distribute pressure from the pad.

[0025] The term attachment means 2 may include a mechanism to attach the pad 1 to the clothing so that it does not slide around during strenuous activity 3. The term strenuous activity 3 is broadly thought to include an activity performed by a person 4 that involves friction between an object and the persons 4 genitalia.

[0026] Some embodiments may use a velcro 15, adhesive 16, or a double-sided adhesive 17 as the attachment means 2. Figure 4 is a perspective view of a preferred embodiment of the apparatus of the present invention, where there is attachment means on the ventral side of the pad 1.

[0027] It is reasonable to contemplate that if the attachment means 2 is missing in some embodiments, the pad may be used without adhesive, because the pad 1 may be more easily adjusted during strenuous activity 3 in some situations, or the pad 1 may be more easily removed from the clothing.

[0028] The ventral surface 8 of the pad is found adjacent to the surface of the clothes. The ventral surface 8 is connected with the attachment means 2 to the pad on one side. In contrast, the dorsal surface 9 may be found adjacent to the skin of the wearer.

[0029] The pad 1 preferably comprises 5 components, referred to as the anterior region 5, the

posterior region 6, the mid region 7, the ventral surface 8, and the dorsal surface 9. In the main embodiment, the pad 1 is chiefly thought to be composed of foam, but in some cases it may also may be made of memory foam, viscoelastic polyurethane foam, neoprene, synthetic rubber, polyurethane, or sorbothane. The pad 1 is positionally situated, to surround the genitalia, wherein the opening of the pad can be placed over the genitalia. Some purposes of the pad 1 are to both 1) reduce pressure on external female genitalia and 2) distribute pressure evenly on an external female genitalia.

[0030] The preferred material for the cut out comfort design can be 1/4" to 1", more preferably 1/2" or 1" made of memory Foam, a viscoelastic polyurethane foam. Higher density memory foam preferably softens in reaction to body heat, allowing it to preferably mold to a warm body in a few minutes. Alternatively, the use of other materials in compression gear for specific sports gear may be considered surrounding the design.

[0031] In an alternative embodiment, the apparatus may be made with 1/8", 1/4", 1/2" or 1" adhesive backed Memory Foam with medium density. In this embodiment, the dimensions may be altered slightly according to the size of the garment and perforating sheets of memory foam could allow for a custom fit.

[0032] The apparatus of the present invention can be preferably 2 to 3 inches wide, more preferably 1-1/2 to 2-1/2 inches wide, and most preferably 1 to 2 inches wide, for example 2 inches wide. For length, the apparatus of the present invention can be preferably 3 to 5 1/2 inches long, more preferably 3 to 4 inches long, and most preferably 3 to 3-1/2 inches long, for example 3-1/2 inches long.

[0033] The cut out portion of the present invention can be preferably 1/2 to 1- 1/2 inches wide, more preferably 1 to 1-1/2 inches wide, and most preferably 1/2 to 1 inch wide, for example 1 inch wide. The cut out of the present invention can be preferably 1 to 2 inches long, more preferably 1 1/2 to 1 3/4 inches long, and most preferably 1 1/4 to 1 1/2 inches long, for example 1/2 inches long. In one embodiment, the apparatus may be used for either cosmetic purposes or comfort while participating in any saddle sport, seated, or riding activity where prolonged pressure occurs, in active wear that has a tendency to shift, or post surgically where pressure should be avoided.

[0034] The anterior region 5 of the pad is found distal from the perineum, towards the front of human body or mons pubis, and near the mons pubis. A functional purpose of the anterior region 5 is to provide a cushioned region outside the mid region 7 that also may adhere via friction or adhesive.

[0036] In contrast, the posterior region 6 is found adjacent or near to the perineum, towards the posterior of the human body, and near the posterior fourchet. One aim of the posterior region 6 is to provide a larger cushioned region than the anterior region 5 that lies outside the mid region 7 that also may adhere via friction or adhesive.

[0037] In one embodiment, the mid region 7 is positionally situated, around one or more of the external protruding parts of the labia majora, and/or around around one or more of the external protruding parts of the labia minora, and/or around around one or more of the external protruding parts of the clitoral hood, and/or around the prepuce of the clitoris, and/or around the vestibule, and and/or around the urethral opening. Any one of these components may be missing and the pad may be shifted due to comfort reasons or variability in anatomy. Further, the mid region 7 is designed to capture any external parts of the external anatomy that are susceptible to becoming chafed or injured during

strenuous activity 3.

[0038] In some embodiments, the mid region 7 may comprise a perforating sheet region 10. The perforating sheet region 10 may surround the opening 11. If the perforating sheet region 10 is absent, one may reason that then the opening 11 dimensions may be fixed. The perforating sheet region 10 aims to have a means by which can remove portions of the pad 1 opening 11 in order to accomodate anatomy variability.

[0039] The opening 11 is to surround the external genitalia and prevent friction associated with strenuous activity 3. In some instances of the invention, it is reasonable to contemplate that if the opening 11 is not required than there may be no opening, but an indentation that performs the same function. For example, some embodiments may use an indentation 12, a curved divot 13, or a groove 14, instead of the opening 11.

[0040] The application of the apparatus may include following, but are not limited to: cycling; mountain biking; spinning; recumbent bike; bicycle taxi/courier; unicycling or circus performers; acrobatics; cheerleading (shoulder sitting); horseback riding; jumping; rodeo; kayaking; rowing/crew; truck driving; motorcyclist; motor cross; gymnasts (beginner/training pants); volleyball; and any tight fitting pant or short that the wearer prefers a smoother look and feel.

[0041] For Medical Post-Surgical procedures and surgeries where the apparatus may be utilized include, but are not limited to : episeotmy; vaginoplasty; vaginal rejuvenation; labiaplasty; hemmorhoidectomy; post labor and delivery; post trauma victim; and increased sexual activity (soreness).

[0042] All measurements disclosed herein are at standard temperature and pressure, at sea level on Earth, unless indicated otherwise. All materials used or intended to be used in a human being are biocompatible, unless indicated otherwise. The foregoing embodiments are presented by way of example only; the scope of the present invention is to be limited only by the following claims.

CLAIMS

- 1 (Original) I claim an apparatus for reducing pressure on genitalia comprising;
a pad with a mid region configured to surround said genitalia.
- 2 (Original) The apparatus of claim 1, wherein said pad comprises an anterior region and a posterior region, wherein said anterior region has a smaller width than said posterior region.
- 3 (Original) The apparatus of claim 2 wherein said pad has a thickness between 1/8" and 1".
- 4 (Original) The apparatus of claim 3, where in said mid region comprises an opening configured to surround genitalia.
- 5 (Original) The apparatus of claim 4, where in said pad comprises a ventral surface wherein said ventral surface has an attachment means.
- 6 (Original) The apparatus of claim 5, where in said pad is made of synthetic rubber.
- 7 (Original) The apparatus of claim 6, where in said synthetic rubber is selected from one or the following types of synthetic rubber; memory foam, viscoelastic polyurethane foam, neoprene, polyurethane, or sorbothane.
- 8 (Original) The apparatus of claim 6, where in said synthetic rubber is memory foam.

9 (Original) The apparatus of claim 8, where in said memory foam is medium density or low density memory foam.

10 (Original) I claim a method for reducing pressure on genitalia comprising the steps of:
placing a pad within the clothing of a person, wherein said pad comprises a mid region configured to surround genitalia wherein the mid region is placed over the genitalia.

11 (Original) The method of claim 10 wherein said genitalia is male genitalia, additionally comprising the step of a said person positioning the pad posterior to the testes and within a garment.

12 (Original) The method of claim 11 additionally comprising the step of said person performing an activity that involves physical contact that affects their genitalia.

13 (Original) The method of claim 12 wherein said pad comprises an anterior region and a posterior region, wherein said anterior region has a smaller width than said posterior region.

14 (Original) The method of claim 13 wherein said pad has a thickness between 1/8" and 1".

15 (Original) The method of claim 10 wherein said genitalia is female genitalia, additionally comprising the step of said person positioning the pad posterior to the mons pubis.

16 (Original) The method of claim 15 additionally comprising the step of said person performing an activity that involves physical contact that affects their genitalia.

17 (Original) The method of claim 16 wherein said pad comprises an anterior region and a posterior region, wherein said anterior region has a smaller width than said posterior region.

18 (Original) The method of claim 17 wherein said pad has a thickness between 1/8" and 1".

19 (Original) The method of claim 18, where in said mid region comprises an opening configured to surround genitalia.

20 (Original) The method of claim 19, where in said pad comprises a ventral surface wherein said ventral surface has an attachment means.

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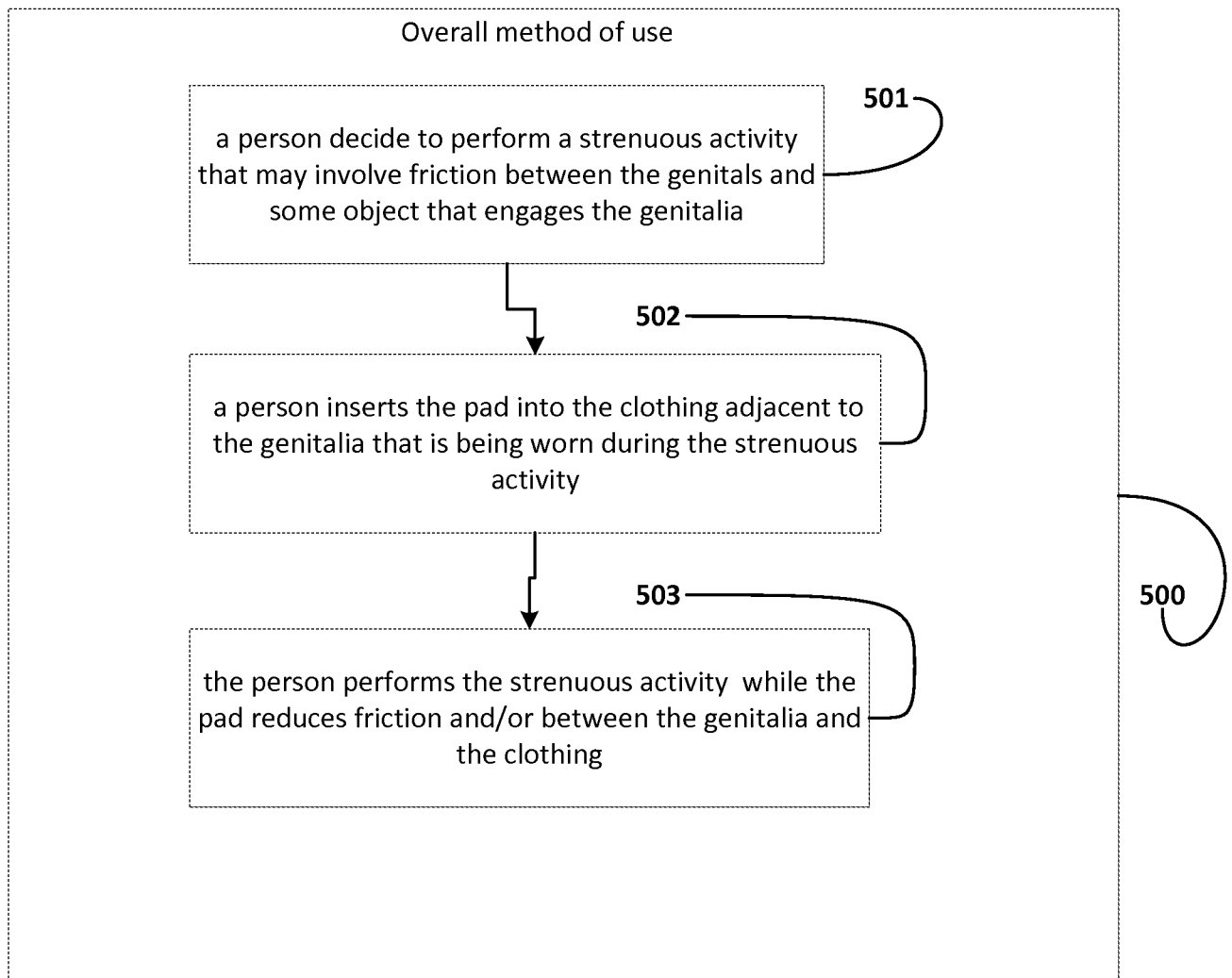


FIG 1

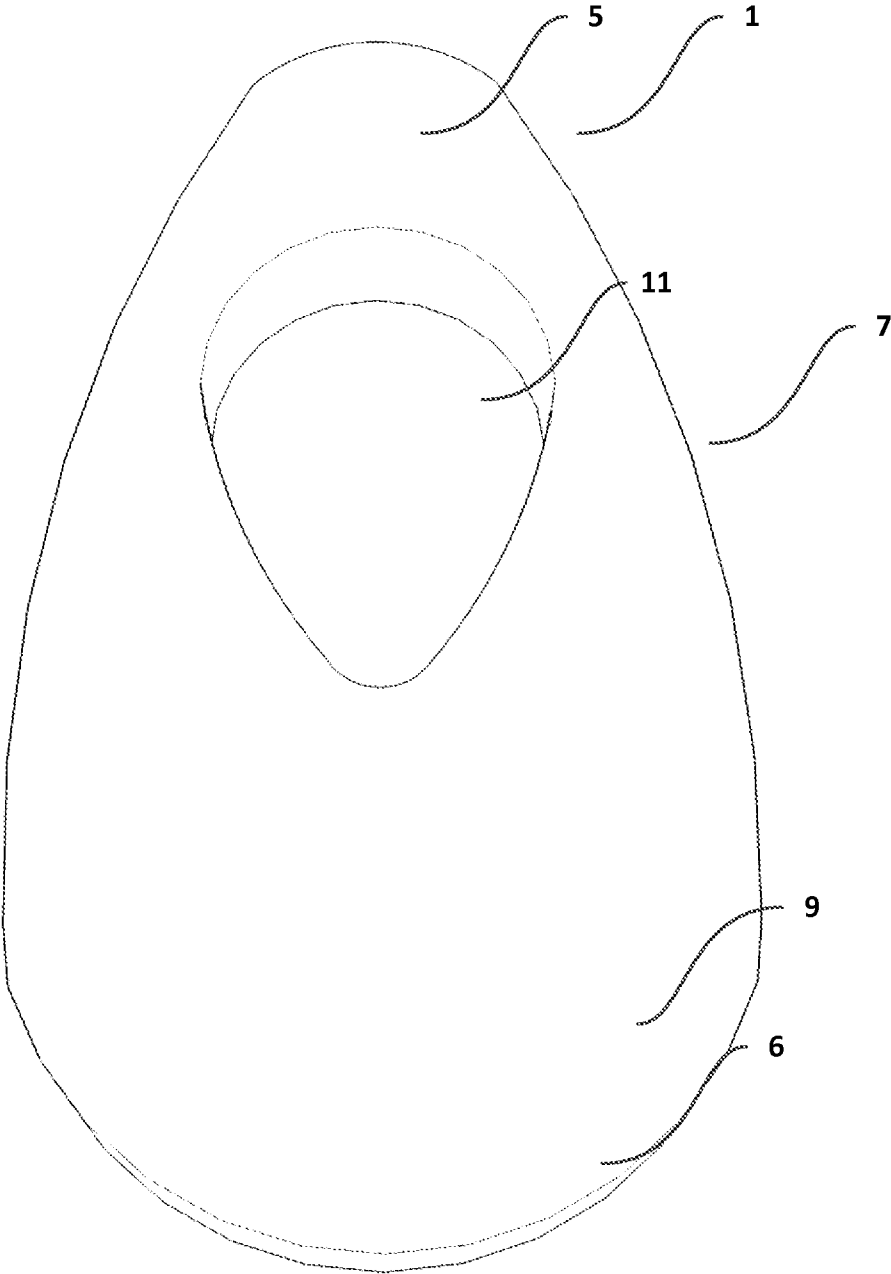


FIG 2

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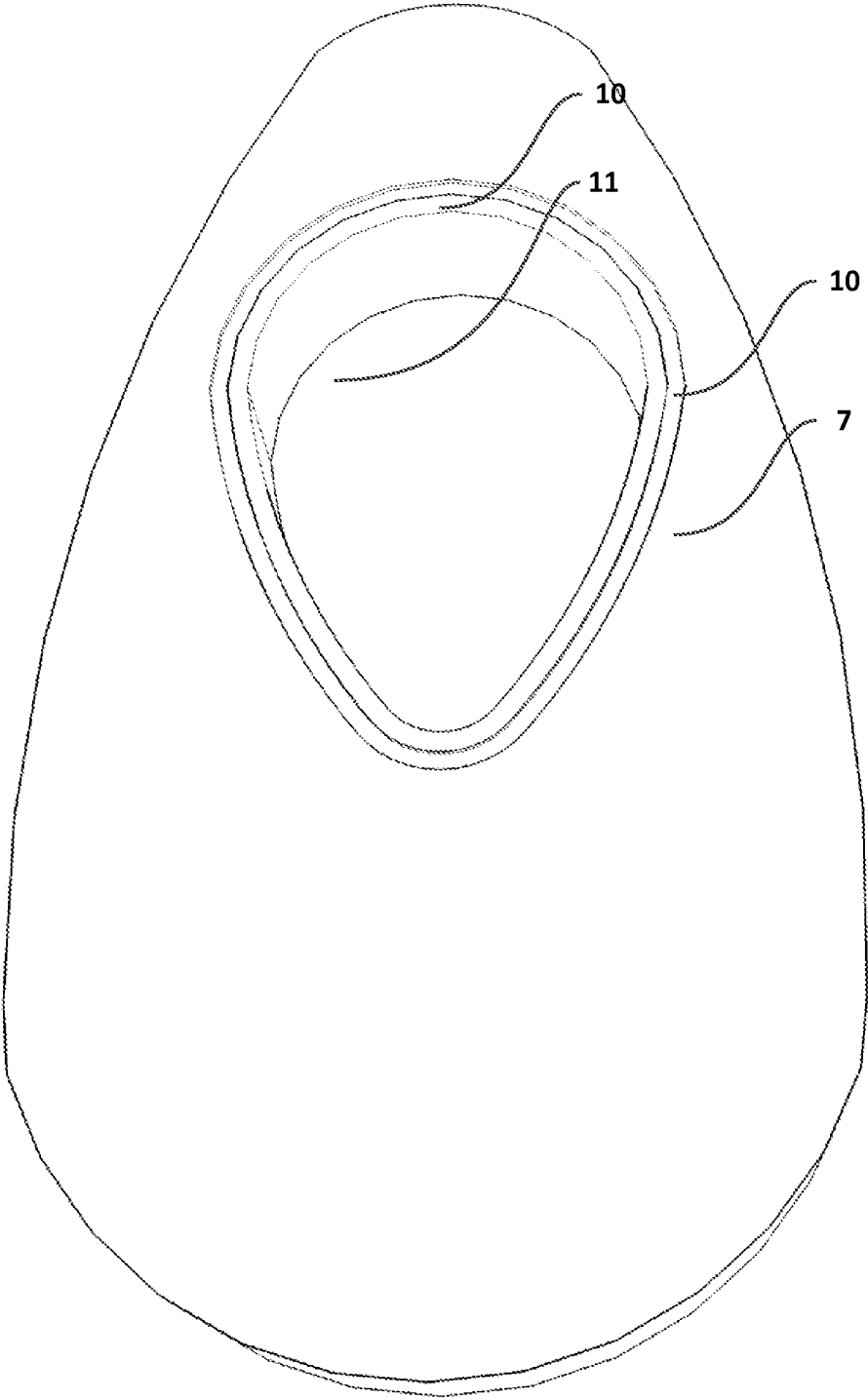


FIG 3

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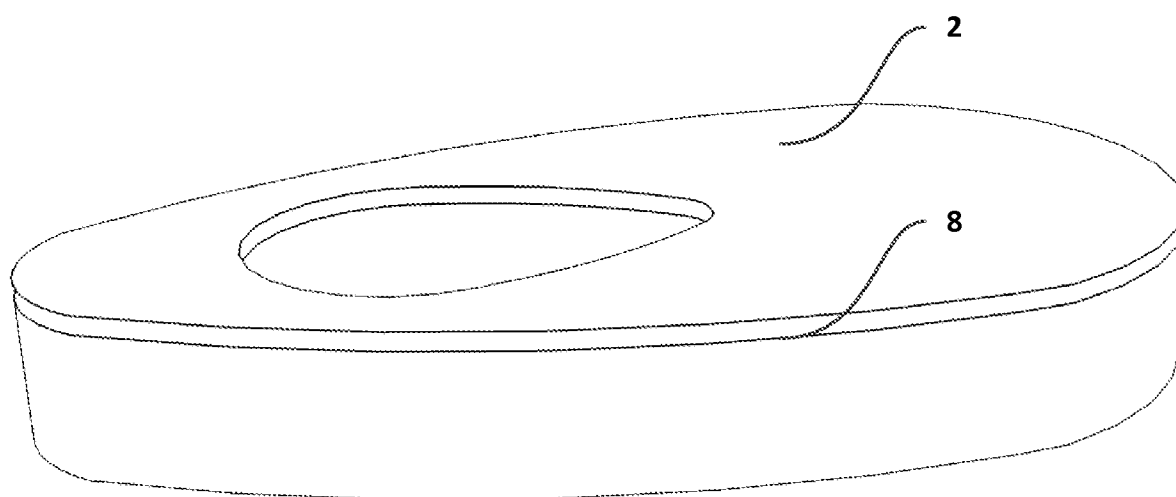


FIG 4

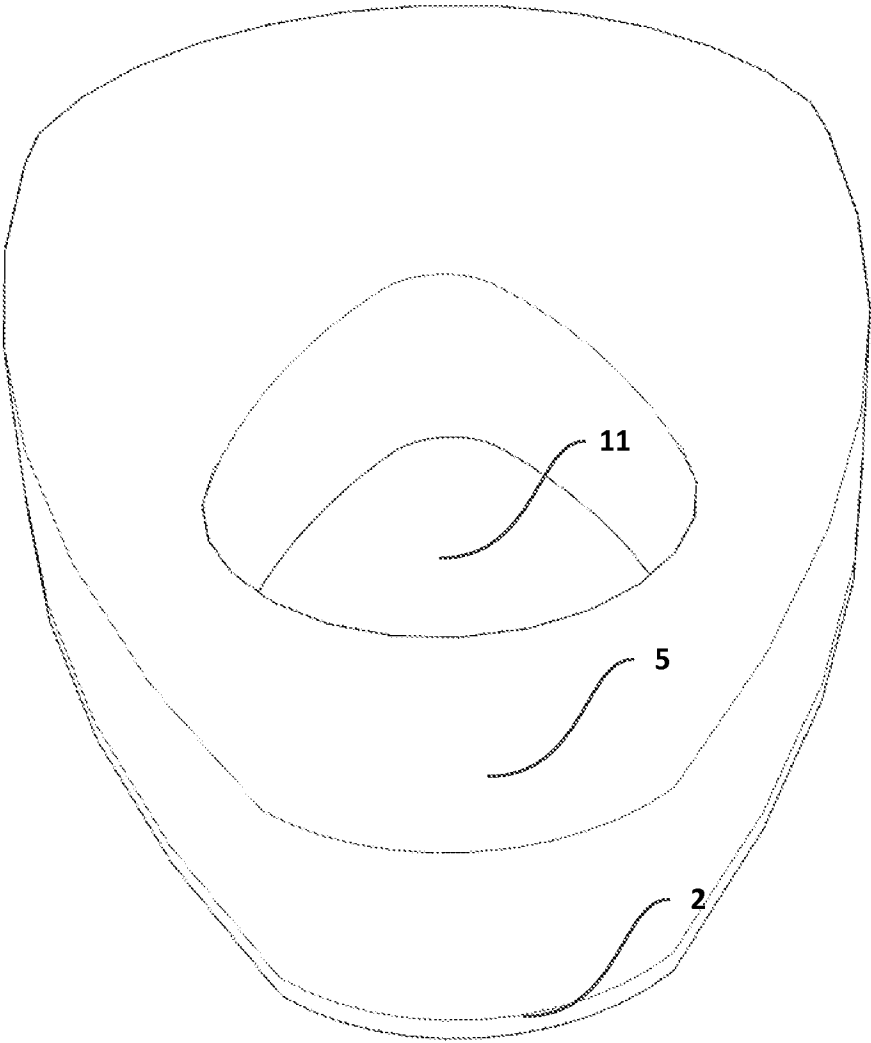


FIG 5