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(54) **A COLLAPSIBLE SWIMSUIT**

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MAILLOT DE BAIN PLIABLE

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[retrieved on 2006-04-26]

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Description

[0001] This invention relates to a collapsible garment and a method for using the same. More particularly, the invention relates to a swimsuit that can be folded into its belt or a pouch attached to the belt without the necessity of taking the garment off and a method for manufacturing such a swimsuit.

[0002] In recent years, there has been an increased interest in the "back to nature" movement and in enjoying life unencumbered by clothes. Most jurisdictions have regulations against public nudity and this acts as a restraint on those who would like to enjoy life in pretty much the state in which they were born. People will be people and those who would like to swim "in the raw", so to speak, have two choices if they wish to act unfettered: (a) wear no clothing, or, (b) wear a swimsuit on the beach and take it all off when at a safe distance from any Peeping Toms.

[0003] As noted above, option (a) is usually illegal and, in many instances, people are not disposed to so appear in public. There is also the problem of finding a deserted location at which to take off the swimsuit. Facilities for discrete donning and removal of clothing may not exist at beaches and swimming pools. Removing clothing also presents problems in cold and/or windy weather.

[0004] Option (b), while aesthetically more appealing to the public at large, presents dangers to the swimmer. Taking the swimsuit off under water requires either bending down or stepping out of the swimsuit and can be dangerous and has the problem of collecting sand and grit inside the swimsuit. There is the additional problem of holding on to the garment once it has been taken off: if both hands are not devoted to the task, there is the risk of losing the swimsuit and the swimmer is back to the situation presented in option (a). Prior art swimsuits also present problems in putting the swimsuit back on. There is difficulty in identifying the proper holes into which legs must go, particularly in active surf. Once back on, any accumulated sand and grit can be very uncomfortable.

[0005] United States patent 5,991,920 to Holland, teaches a swimsuit that includes a body and a belt, a portion of the body encircling a portion of the belt to form at least one pouch. The other end of the body has fastening devices that attach them to the belt opposite the pouch to form a conventional-looking swimsuit. Detaching the clips, folding up the body and inserting it into the pouch(es) gives a compact arrangement of a belt with a small pouch attached to it.

[0006] One embodiment of the invention of *Holland* is illustrated in **Fig. 1** (Prior Art). As shown, the swimsuit **1** includes a belt **3** adapted to encircle a human waist. The belt defines an inside and an outside. The belt is preferably made of a fabric with some ability to stretch so as to maintain a snug fit with the waist of the person wearing the garment. The swimsuit also includes a body part **4**, one end **4a** of which defines a pair of pouches (storage compartments) **2** that enclose a portion of the belt. The

sides of pouches arc maintained in sliding contact with the portion of the belt that they encircle and are provided with openings purpose of which will be discussed below. As shown in **Fig. 1**, the pouches are separated by a seam **12** in the middle, the seam coupling the body part **4** to the belt **3**. An alternate embodiment of the invention has a single pouch extending all the way across the back.

[0007] The invention of *Holland*, while being fully adapted for the function for which it was designed, was found to have some drawbacks. Drawbacks are purely aesthetic. When the swimsuit is fully folded into the pouch surrounding the belt may, it may have a bulky appearance. In addition, when the swimsuit is in the configuration for wear on the beach, it may be difficult to configure the top rear of the suit for a perfect fit.

[0008] There is a need for a swimsuit that enables the law abiding swimmer to comply with applicable rules and regulations. Such a swimsuit should allow the swimmer to enter the water discretely clothed. Such a swimsuit should preferably be safe and easy to disengage from the human body. Such a swimsuit should remain attached to the human body without the use of hands. Such a swimsuit should be easy to put back on. In addition, it should preferably be aesthetically appealing in both the engaged and disengaged positions. The swimsuit should also be easy to manufacture. The present invention satisfies this need.

[0009] According to the present invention there is provided a swimsuit as claimed in claim 1, a method of removing a swimsuit as claimed in claim 5 and a method of making a swimsuit as claimed in claim 8.

[0010] One aspect of the preferred embodiment is a modification of a conventional swimsuit that has a pair of detachable fasteners. When the fasteners are decoupled, the portion of the swimsuit encircling human legs is "opened up" and may be rolled into a compact size that can be stowed inside a pouch on the swimsuit. Support for the swimsuit is provided by a loop that at least partially encircles a human waist.

[0011] Another aspect of the preferred embodiment is a method of using the swimsuit so as to appear covered up in the closed configuration of the swimsuit and to be able to open up the swimsuit while the swimsuit is supported by a loop around the human waist.

[0012] Yet another aspect of the preferred embodiment is a method of making a novel collapsible swimsuit by attaching a loop and a plurality of fastening devices to a prior art swimsuit that has been altered.

[0013] Various embodiments of the present invention will now be described, by way of example only, and with reference to the accompanying drawings in which:

FIG. 1 is a view of a prior art collapsible swimsuit;
FIG. 2 illustrates a swimsuit according to the preferred embodiment of the present invention;
FIG. 3 illustrates the swimsuit according to the preferred embodiment of the present invention in the detached configuration;

FIG. 4 illustrates the swimsuit according to the preferred embodiment of the present invention in the collapsed configuration;

FIG. 5 illustrates a conventional swimsuit;

FIG. 6 illustrates a conventional swimsuit at an intermediate step in its modification to being collapsible;

FIG. 7 shows the garment of FIG. 1 with the body rolled or folded up;

FIG. 8 shows the garment of FIG. 1 with the body stowed into the storage compartment in the body; and

FIG. 9 shows a swimsuit not forming part of the present invention.

[0014] A preferred embodiment of the present invention is best understood with reference to **Figs. 2-5** that illustrate the arrangement of the various parts of the swimsuit. Referring to **Fig. 2**, a swimsuit **101** is shown. The swimsuit includes a loop **105** attached to the swimsuit to at least partially enclose a human waist: the exact manner in which it encircles the human waist is discussed below. The loop may be made of any suitable material but in a preferred embodiment of the invention as shown in **Fig. 2** preferably comprises a decorative chain that is made of material resistant to corrosion by seawater. In an alternate embodiment of the invention, the loop comprises a tubular member such as a cord or "piping". Two fasteners **103a**, **103b** on the swimsuit **101** are shown in the engaged position so that the swimsuit appears at first sight to be a conventional swimsuit with a decorative loop.

[0015] Turning now to **Fig. 3**, the swimsuit is shown in the disengaged configuration with the fastener **103a** now showing its components **103a'** disengaged into its components and fastener **103b** disengaged into its components **103b'**. In the configuration shown in **Fig. 3**, another feature of the swimsuit becomes apparent: the rear of the swimsuit is seen to have an additional piece of fabric **112** (with a seam **111**) that defines a pouch between the member **112** and the rear of the swimsuit. The pouch as shown in **Fig. 3** has two openings **113a**, **113b**.

[0016] Also seen in **Fig. 3**, the loop member is preferably inserted into the pouch (storage compartment). In one embodiment of the invention, the loop member may pass completely through the pouch and thus be capable of fully encircling the human waist. In an alternate embodiment of the invention, the loop member may be fastened at two places (not shown) to the rear of the swimsuit and thus only partially encircle the human waist. Other configurations of the swimsuit may include two pouches as taught in *Holland*.

[0017] As taught in *Holland*, the body of the swimsuit may be rolled up and inserted for storage into the pouch or storage compartment. As discussed in *Holland*, this is accomplished by rolling up the portion of the swimsuit disengaged from the portion of the swimsuit proximate to the loop and inserting the rolled up portion into the pouch. This is shown in after rolling up and storing in the

pouch in **Fig. 4**. Details of the method of rolling up and storing are discussed below with reference to **Figs. 7** and **8**.

[0018] Turning now to **Figs. 5** and **6**, a method of making the swimsuit discussed above is shown. **Fig. 5** shows a conventional swimsuit **201**. By separating the swimsuit, e.g. by cutting, at locations indicated by **211a**, **211b**, the configuration shown in **Fig. 6** results. Manufacture of the swimsuit according to a preferred embodiment of the present invention then requires the addition of a piece of fabric **221** to the swimsuit by a seam such as **231** to define a storage compartment with ends **213** shown, the addition of fastening devices at or near the locations of the separation points **211a**, **211b** of **Fig. 5**, and the incorporation of the loop **205** to give a result that would appear to be substantially the same as in **Fig. 3**. The advantages of this method of making the swimsuit would be clear since this modification could be done to "off the rack" items that are widely available.

[0019] The method in which the swimsuit is stored within itself is shown using the teachings of *Holland* as an example. **Fig. 7** illustrates the invention of *Holland* when the fasteners are disengaged and the body is rolled up tightly to abut the pouches **302** encircling the belt **303**. The body in the rolled up position is depicted by **304'**. Also shown are the openings **315** in the pouches **302**. Because the pouches of *Holland* are made of the same material as the body and are flexible, the rolled up body can be inserted into the openings and at the same time, the edges of the opening **315** folded back to the position **315'** shown in **Fig. 8**. As shown in **Fig. 8**, the ends of the opening have been folded back from both sides. As can be seen in **Fig. 8**, when the clips are disengaged, the body rolled up, and the ends of the opening folded back, the entire garment collapses to a compact shape defined by the belt and the small enclosure around it. The same method is used in the present invention for rolling up and storing the swimsuit within itself using the openings **113a**, **113b**.

[0020] **Fig. 9** is an illustration of a swimsuit not forming part of the present invention in what is commonly known as a "thong" swimsuit. Shown is a swimsuit **501** with a "thong" portion **511** extending to the back of the swimsuit, the front of the swimsuit having a width greater than the width of the thong at the back of the swimsuit. The swimsuit is provided with a pouch **507** defined by the seam **505** of a piece of fabric attached to the body of the swimsuit. To simplify the illustration, the openings of the pouch are not shown. A chain **503** (or piping or other tubular member) defines a loop that can encircle the human waist. Alternatively, element **503** may be an integral part of the body of the swimsuit. As with the embodiment discussed above, the chain or tubular member may circle the human waist partially or entirely. The end of the thong is provided with a fastener **509** for attaching to the chain **503**. One important difference between this swimsuit and the one discussed above (and in *Holland*) is that the pouch is now in the front rather than in the back. The

method of folding and stowing remain the same.

[0021] The foregoing description has been limited to specific embodiments of this invention. It will be apparent, however, that variations and modifications may be made to the disclosed embodiments, with the attainment of some or all of the advantages of the invention. Therefore, it is the object of the appended claims to cover all such variations and modifications as come within the true scope of the invention as defined by the claims.

Claims

1. A swimsuit (101) comprising:

- (a) a loop (105) adapted to at least partially encircle a human waist;
- (b) a swimsuit body;
- (c) a storage compartment (112) for compactly stowing the body, wherein said storage compartment is on the swimsuit body;

characterised in that said swimsuit body is separable from itself at two locations by decoupling two fastening devices (103a;103b) thereat, and wherein the loop (105) is positioned relative to the swimsuit body so that when said fastening devices (103a; 103b) are engaged the swimsuit (101) may be worn by a human.

2. A swimsuit as claimed in claim 1, wherein said loop (105) is adapted to completely encircle said human waist.

3. A swimsuit as claimed in claim 1 or 2, wherein said loop (105) is selected from the group consisting of: (i) a decorative chain; and (ii) a tubular member.

4. A swimsuit as claimed in claim 3, wherein said chain comprises a material resistant to corrosion.

5. A method of removing a swimsuit (101) as claimed in any preceding claim while leaving the swimsuit attached to a human body, said method comprising:

- (a) decoupling two fastening devices (103a; 103b) on the body of the swimsuit (101) to separate the swimsuit body at two locations;
- (b) compacting the body of the swimsuit into a small space;
- (c) storing the compacted body of the swimsuit using at least one storage compartment (112) on the body of the swimsuit (101); and
- (d) using said loop (105) at least partially encircling the human body for supporting the swimsuit on the human body.

6. A method as claimed in claim 5, wherein the storing

of the compacted body of the swimsuit using the at least one storage compartment (112) is performed through an opening (113a;113b) at an end of the at least one storage compartment (112).

7. A method as claimed in claim 5 or 6, wherein the at least one storage compartment (112) comprises two storage compartments.

8. A method of making a swimsuit as claimed in any of claims 1 to 4, said method comprising:

- (a) separating a swimsuit body at two positions (211a;211b);
- (b) attaching a piece of material (221) to said body of the swimsuit and defining a storage compartment therebetween;
- (c) attaching two fastening devices to the swimsuit at the two separation positions (211a;211b); and
- (d) attaching a loop (205) capable of at least partially encircling a human waist, wherein the loop (105) is positioned relative to the swimsuit body so that when said fastening devices (103a; 103b) are engaged, the swimsuit (101) may be worn by a human.

9. A method as claimed in claim 8, wherein said loop is capable of completely encircling a human waist.

10. A method as claimed in claim 8 or 9, wherein said loop is selected from the group consisting of: (i) a decorative chain; 1 and (ii) a tubular element.

Patentansprüche

1. Ein Schwimmanzug (101) mit einer Schlaufe (105), die geeignet ist, um zumindest teilweise eine menschliche Taille zu umschließen, einem Schwimmanzugkörper, einem Aufbewahrungsfach (112) zur kompakten Verstauung des Körpers, wobei das Aufbewahrungsfach auf dem Schwimmanzugkörper angeordnet ist,

dadurch gekennzeichnet, dass der Schwimmanzugkörper an zwei Stellen durch Entkopplung zweier Befestigungseinrichtungen (103a, 103b) von sich selbst trennbar ist, wobei die Schlaufe (105) derart relativ zu dem Schwimmanzugkörper angeordnet ist, dass der Schwimmanzug (101) von einem Menschen getragen werden kann, wenn die Befestigungseinrichtungen (103a, 103b) in Eingriff stehen.

2. Schwimmanzug nach Anspruch 1, wobei die Schlaufe (105) geeignet ist, die menschliche Taille vollständig zu umschließen.

3. Schwimmanzug nach Anspruch 1 oder 2, wobei die Schlaufe (105) aus einer Gruppe bestehend aus (i) einer dekorativen Kette und (ii) einem rohrförmigen Element ausgewählt ist.

4. Schwimmanzug nach Anspruch 3, wobei die Kette ein gegen Korrosion resistentes Material umfasst.

5. Ein Verfahren zum Ausziehen eines Schwimmanzugs (101) nach einem der voranstehenden Ansprüche durch Verlassen des an einem menschlichen Körper anliegenden Schwimmanzugs, wobei das Verfahren umfasst:

- (a) ein Entkoppeln zweier Befestigungseinrichtungen (103a, 103b) auf dem Körper des Schwimmanzugs (101), um den Schwimmanzugkörper an zwei Stellen zu trennen,
- (b) ein Verdichten des Körpers des Schwimmanzugs auf einen kleinen Raum,
- (c) ein Aufbewahren des verdichteten Körpers des Schwimmanzugs unter Verwendung mindestens eines Aufbewahrungsfaches (112) auf dem Körper des Schwimmanzugs (101), und
- (d) ein Verwenden der Schlaufe (105), die zumindest teilweise den menschlichen Körper zum Abstützen des Schwimmanzugs auf dem menschlichen Körper umfasst.

6. Verfahren nach Anspruch 5, wobei das Verstauen des verdichteten Körpers des Schwimmanzugs unter Verwendung des mindestens einen Aufbewahrungsfaches (112) durch eine Öffnung (113a, 113b) an einem Ende des mindestens einen Aufbewahrungsfaches (112) ausgeführt wird.

7. Verfahren nach Anspruch 5 oder 6, wobei das mindestens eine Aufbewahrungsfach (112) zwei Aufbewahrungsfächer umfasst.

8. Ein Verfahren zur Herstellung eines Schwimmanzugs nach einem der Ansprüche 1 bis 4, wobei das Verfahren umfasst:

- (a) ein Trennen eines Schwimmanzugkörpers an zwei Stellen (211a, 211b),
- (b) ein Anbringen eines Materialstücks (221) an den Körper des Schwimmanzugs und ein Definieren eines Aufbewahrungsfaches zwischen diesen,
- (c) ein Anbringen von zwei Befestigungseinrichtungen an dem Schwimmanzug an zwei Trennstellen (211a, 211b) und
- (d) ein Anbringen einer Schlaufe (205), die geeignet ist, um zumindest teilweise eine menschliche Taille zu umschließen, wobei die Schlaufe (105) derart relativ zu dem Schwimmanzugkörper angeordnet ist, dass der Schwimmanzug

(101) von einem Menschen getragen werden kann, wenn die Befestigungseinrichtungen (103a, 103b) in Eingriff stehen.

9. Verfahren nach Anspruch 8, wobei die Schlaufe geeignet ist, eine menschliche Taille vollständig zu umschließen.

10. Verfahren nach Anspruch 8 oder 9, wobei die Schlaufe aus einer Gruppe bestehend aus (i) einer dekorativen Kette und (ii) einem rohrförmigen Element ausgewählt wird.

15 Revendications

1. Maillot de bain (101) comprenant :

- (a) une boucle (105) adaptée pour encercler au moins en partie la taille d'une personne ;
- (b) un corps de maillot de bain ;
- (c) un compartiment de stockage (112) destiné à plier le corps de manière compacte, dans lequel ledit compartiment de stockage se situe sur le corps du maillot de bain ;

caractérisé en ce que ledit corps de maillot de bain peut être séparé de lui-même en deux emplacements en découplant deux dispositifs de fixation (103a ; 103b) au niveau de celui-ci, et dans lequel la boucle (105) est positionnée par rapport au corps de maillot de bain de sorte que lorsque lesdits dispositifs de fixation (103a ; 103b) sont mis en prise, le maillot de bain (101) peut être porté par une personne.

2. Maillot de bain selon la revendication 1, dans lequel ladite boucle (105) est adaptée pour encercler complètement ladite taille de la personne.

3. Maillot de bain selon la revendication 1 ou 2, dans lequel ladite boucle (105) est sélectionnée à partir du groupe constitué de : (i) une chaîne décorative ; et (ii) un élément tubulaire.

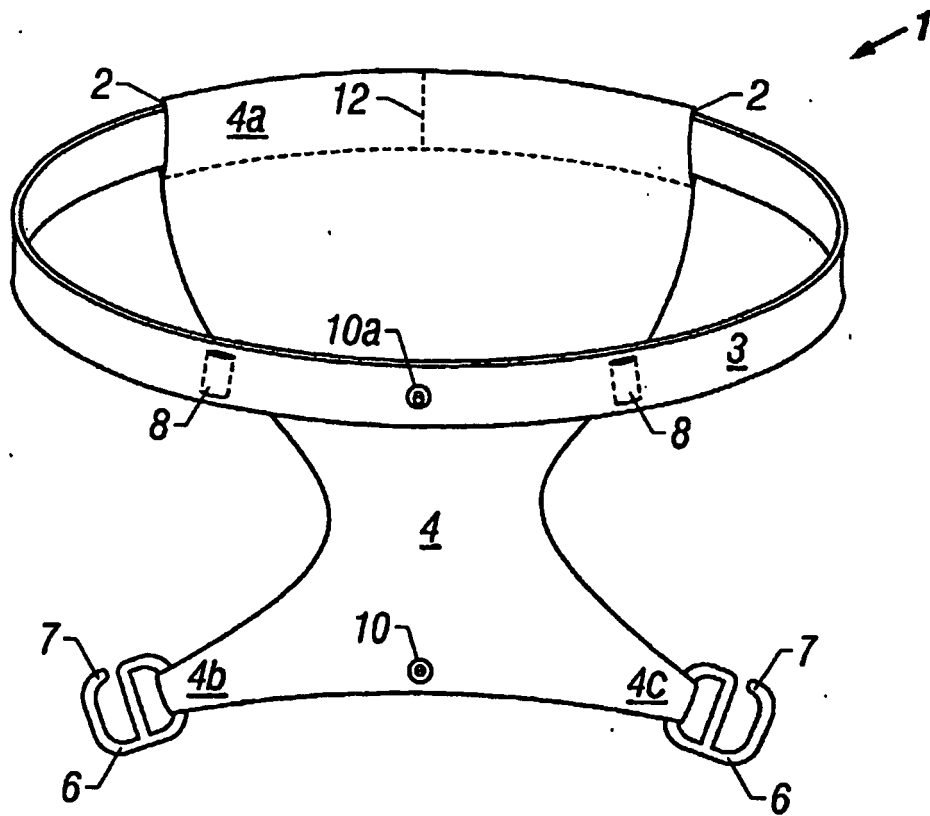
4. Maillot de bain selon la revendication 3, dans lequel ladite chaîne comprend un matériau résistant à la corrosion.

5. Procédé d'enlèvement d'un maillot de bain (101) selon l'une quelconque des revendications précédentes tout en laissant le maillot de bain fixé au corps d'une personne, ledit procédé comprenant :

- (a) le découplage des deux dispositifs de fixation (103a ; 103b) sur le corps du maillot de bain (101) pour séparer le corps de maillot de bain en deux emplacements ;

- (b) le compactage du corps du maillot de bain à l'intérieur d'un espace plus petit ;
 (c) le stockage du corps compacté du maillot de bain en utilisant au moins un compartiment de stockage (112) sur le corps du maillot de bain (101) ; et
 (d) l'utilisation de ladite boucle (105) encerclant au moins en partie le corps de la personne pour supporter le maillot de bain sur le corps de la personne. 5 10
6. Procédé selon la revendication 5, dans lequel le stockage du corps compacté du maillot de bain en utilisant le au moins un compartiment de stockage (112) est exécuté à travers une ouverture (113a ; 113b) à une extrémité de le au moins un compartiment de stockage (112). 15
7. Procédé selon la revendication 5 ou 6, dans lequel le au moins un compartiment de stockage (112) comprend deux compartiments de stockage. 20
8. Procédé de fabrication d'un maillot de bain selon l'une quelconque des revendications 1 à 4, ledit procédé comprenant : 25
- (a) la séparation d'un corps de maillot de bain aux deux positions (211a ; 211b) ;
 (b) l'attachement d'un morceau de matériau (221) audit corps du maillot de bain et la définition d'un compartiment de stockage entre ceux-ci ;
 (c) l'attachement des deux dispositifs de fixation au maillot de bain aux deux positions de séparation (211a ; 211b) ; et
 (d) l'attachement d'une boucle (205) capable d'encercler au moins en partie la taille d'une personne, dans lequel la boucle (105) est positionnée par rapport au maillot de bain de sorte que lorsque lesdits dispositifs de fixation (103a ; 103b) sont mis en prise, le maillot de bain (101) peut être porté par une personne. 30 35 40
9. Procédé selon la revendication 8, dans lequel ladite boucle est capable d'entièrement encercler la taille d'une personne. 45
10. Procédé selon la revendication 8 ou 9, dans lequel ladite boucle est sélectionnée parmi le groupe constitué de : (i) une chaîne décorative ; et (ii) un élément tubulaire. 50

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(PRIOR ART)
FIG. 1

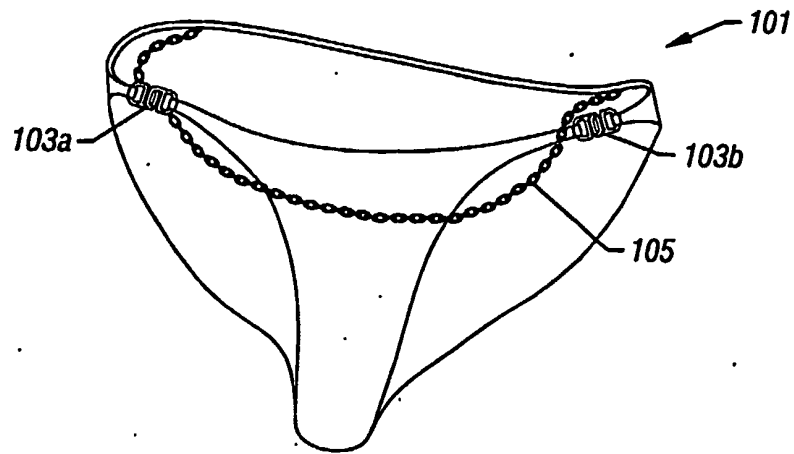


FIG. 2

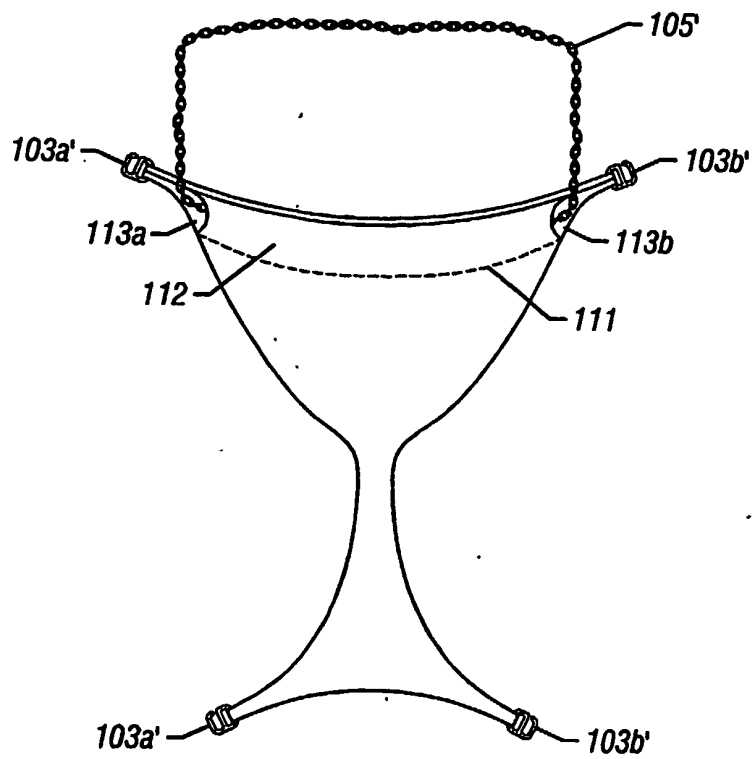


FIG. 3

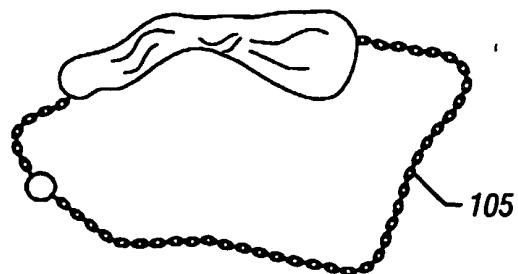


FIG. 4

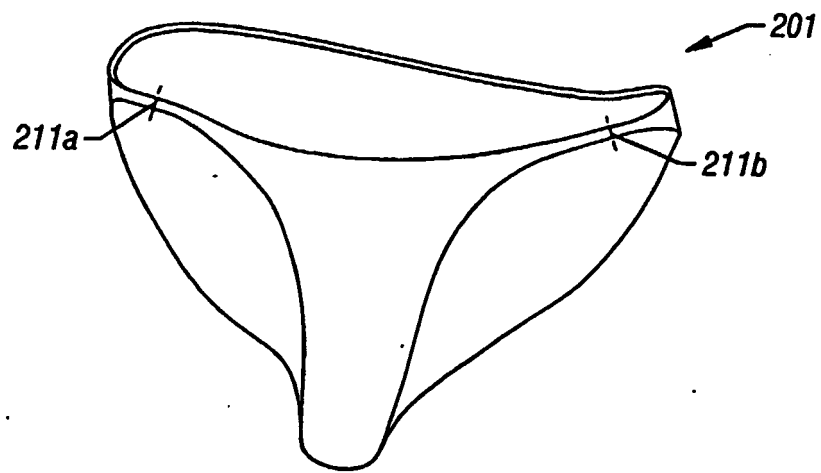


FIG. 5

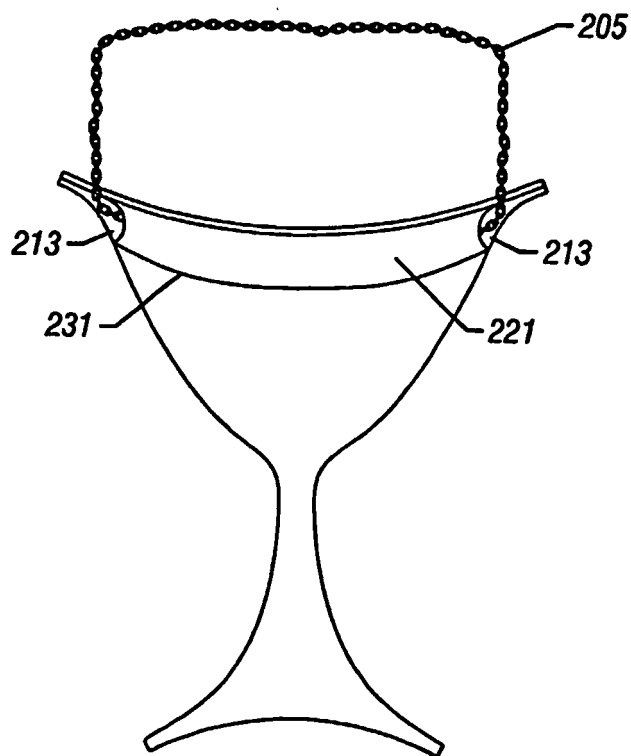
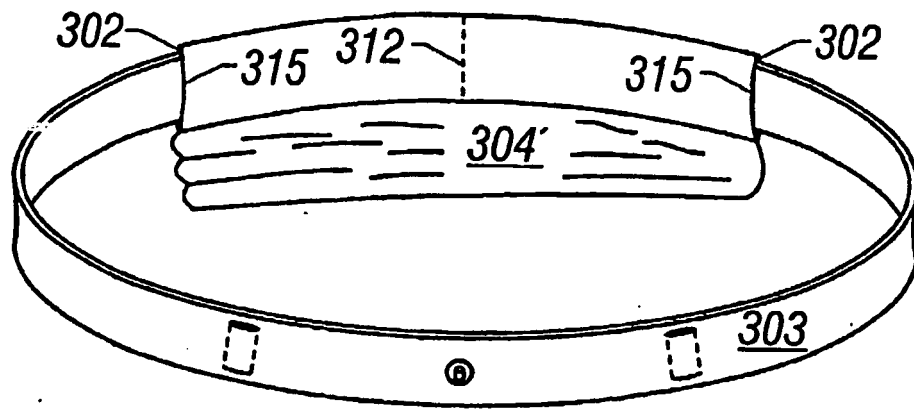
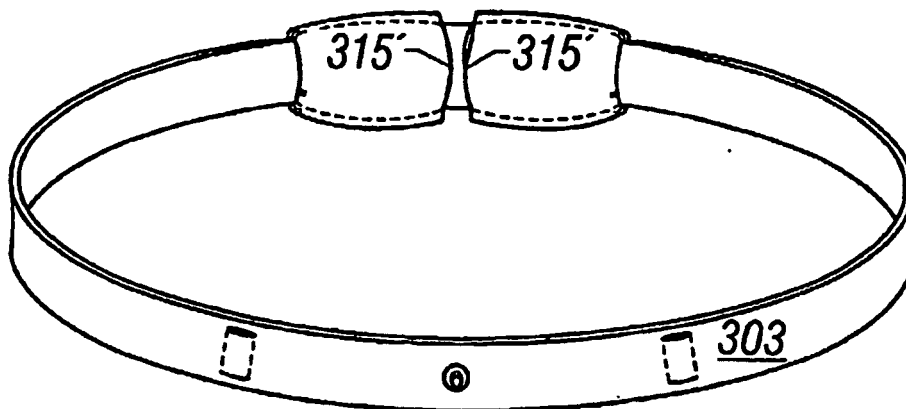


FIG. 6



(PRIOR ART)
FIG. 7



(PRIOR ART)
FIG. 8

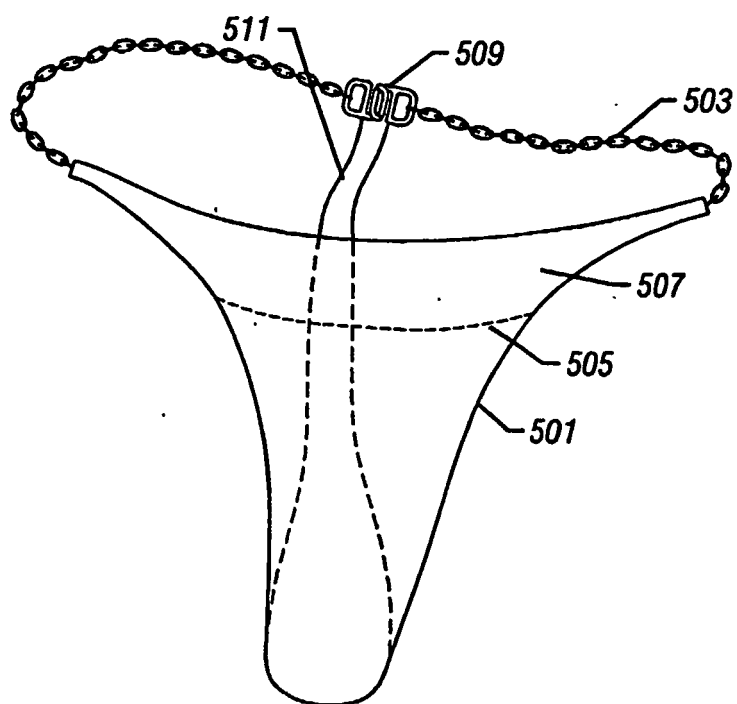


FIG. 9

REFERENCES CITED IN THE DESCRIPTION

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