

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
17 March 2011 (17.03.2011)

(10) International Publication Number
WO 2011/030147 AI

- (51) **International Patent Classification:**
A41D 27/12 (2006.01) *A41B 9/04* (2006.01)
- (21) **International Application Number:**
PCT/GB20 10/05 1499
- (22) **International Filing Date:**
8 September 2010 (08.09.2010)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
0915873.4 10 September 2009 (10.09.2009) GB
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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))



WO 2011/030147 A1

(54) **Title:** CLOTHING INSERT

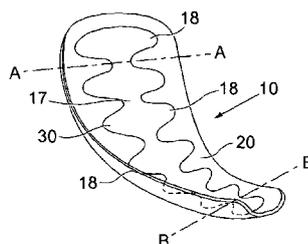


Fig. 5

(57) **Abstract:** The present invention relates to a clothing insert and in particular to an insert for use by women to prevent their clothes riding up and to prevent the external appearance of their pubic region or external genitalia from showing through their clothing.

CLOTHING INSERT

The present invention relates to a clothing insert and in particular to an insert for use by women to prevent their clothes riding up and to
5 camouflage the external appearance of their pubic region or external genitalia.

When women wear tight clothing or underwear it can be a problem that the clothing "rides up" in the pubic region creating an unsightly profile, clinging
10 to the contours of their body. This is a particular problem for tight fitting sportswear and swimwear and for fashionable clothing which is specifically cut to be tight fitting or to fit in a particular manner around the lower body region. In these cases, even when the clothing is correctly fitted, women
15 may still be faced with the problem of the clothing clinging to the pudendal cleft resulting in embarrassment for the wearer, as well as discomfort in some cases.

To try and avoid this, women may select looser fitting clothing or wear clothing that is too large. However, this is not ideal as, particularly for
20 clothing such as swimwear and sportswear, the functionality of the garment can be affected if the clothing is ill-fitting. Furthermore, fashion conscious individuals will often wish to purchase and wear tightly fitting clothing to project a particular image, which would be spoiled if the clothing was incorrectly sized.

25

Attempts have been made to address this problem, particularly for underwear, by providing various arrangements of elastic loops or straps on the articles which act to tauten the clothing in the pubic area to prevent
30 it from "riding up", however these arrangements tend to be both uncomfortable and unsightly and often do not fulfil their required function.

The present invention aims to mitigate or obviate some or all of the problems discussed above.

5 Throughout the description, the front of the insert is taken to be the part of the insert which, in use, is positioned toward the front of the user and the rear of the insert is taken to be the part of the insert which, in use, is positioned toward the back of the user.

10 The upper surface of the insert is the surface that will be closest to the user's genitalia in use, with the lower surface being on the opposing side.

According to the present invention there is provided a clothing insert adapted to be worn under clothing which, in use, covers the wearers
15 external genitalia resulting in a smooth outer profile, characterised in that the insert is more rigid transversely than it is longitudinally thus allowing greater flexibility of movement longitudinally than transversely.

Advantageously an insert which is more flexible longitudinally than
20 transversely is more comfortable for the user and is able to fit more closely to the wearer's body whilst maintaining its function and providing a smooth outer profile.

Optionally the cross section of the insert is more curved towards the rear
25 of the insert than the front of the insert.

The shape of the cross section of the insert changes as you travel along the length of the insert with a wider and flatter cross section provided toward the front of the insert and a narrower and more curved cross
30 section provided toward the rear of the insert.

In one option the insert is formed with multiple layers.

5 Preferably the insert is provided with an elongate upper layer and an elongate lower layer, wherein the upper layer is wider than the lower layer.

Preferably the upper layer is formed from a more flexible material than the lower layer.

10 Advantageously this means that the edges are soft and flexible, providing comfort to the wearer of the insert and allowing for users of different body sizes.

15 Optionally the insert may be provided with an outer surround or coat and a central or inner core.

Preferably the outer surround is a silicone material.

20 Preferably the inner core is a plastic material.

Most preferably the inner core is a more rigid material than the outer surround.

25 Optionally the inner core is shaped to run longitudinally through the insert and be wider in some sections than in others.

Providing the core in this manner means that the insert will still be flexible along its length but wider sections will cause the insert to be more rigid, or more stiff, across its width.

30

Another option is that the inner core is provided as a plurality of elongate elements positioned transversely along the width of the insert.

5 The elongate elements may be conjoined by a strip running longitudinally along the length of the insert.

The insert may be provided with a means for affixing the insert to a wearer's clothing.

10 Preferably the insert is provided with means for affixing on its lower surface.

Most preferably the insert is provided with an adhesive strip on its lower surface.

15

The adhesive strip may be provided with a protective cover that can be peeled off prior to the user attaching the insert to their clothing.

20 Alternatively the insert may be provided with means for improved adherence to a user's body.

The upper surface of the insert may be formed from a silicone material adapted to adhere to skin.

25 Preferably the insert is provided with means for ventilation.

Optionally the means for ventilation are apertures running through the insert from the upper to the lower surface.

30 Preferably the insert is formed from hypoallergenic materials.

In order to provide a better understanding of the present invention, embodiments will now be described, by way of example only, and with reference to the following drawings in which;

5

Figure 1 is a perspective view of one embodiment of an insert according to a first embodiment of the present invention; and

10

Figure 2 is a cross section view of an insert according to a first embodiment of the present invention; and

Figure 3 is a side view of an insert according to a first embodiment of the present invention; and

15

Figure 4 is a perspective view of a partial torso showing the positioning of the insert in use; and

Figure 5 is a perspective view of a second embodiment of the insert of the present invention; and

20

Figure 6A and 6B are cross section views of a second embodiment of the insert according to the present invention; and

Figure 7 is a plan view of a further embodiment of the invention.

25

In a first embodiment of the present invention, as generally depicted in figure 1, there is provided an insert **1** that is adapted to be worn under clothing (as indicated in figure 4) to cover the outer profile of a woman's pudendal cleft or external genitalia. The insert **1** is provided as a relatively
30 thin silicone and polyurethane pad which is shaped to generally conform to

a user's pubic region. The insert is wider and flatter at the front **1a** and narrower and more curved at the rear **1b**, which has been found to improve the comfort of the wearer.

5 The insert **1** is provided with an upper layer **2**, which is made from a moulded silicone, and which is both soft for comfortable positioning against the wearer's body, and hypoallergenic. The upper layer **2** is adapted to be worn closest to the user's external genitalia.

10 The insert **1** also has a lower layer **3** attached to and positioned below the upper layer **2**. The lower layer **3** is a semi flexible polyurethane material which has more rigidity than the silicone upper layer **2**. This allows the insert **1** to retain more flexibility longitudinally than across its width (as shown in figure 3). The lower layer is narrower than the upper layer such
15 that there is an overhanging skirt **4** of softer upper layer on either side of the insert **1** (as can be seen in figures 1 and 2). As the edges of the skirt **4** will come into contact with a wearer's groin region and in particular the area or groin fold at the top of a wearer's legs, it is useful to have some flexibility to allow for differing body shapes. The soft edges **4** also ensure
20 that the insert **1** does not rub against a wearer's skin during movement such as walking or running. The insert **1** is further provided with apertures which act as ventilation holes **5**. In the embodiment shown in Figure 1 the ventilation holes **5** extend through the lower layer **3** only, however they can also extend through the upper layer **2** if required.

25

It could be envisaged that the upper and lower layers may be formed from different materials, however the upper layer in this embodiment would be formed from a more rigid material than the lower layer. In order to facilitate the fixing of the insert **1** to a wearer's clothing, for example to the
30 inside of a swimsuit or underwear, the lower surface of the insert (i.e. the

opposing side to the upper layer) is provided with an adhesive strip **6**. Prior to use the adhesive strip can be provided with a peel off backing, the type of which is generally known in the art. Typically this type of insert **1** would be a single use disposable insert. It could be envisaged that
5 alternative types of insert may be provided for re-use, however these typically would not be provided with an adhesive strip and instead may simply be held in place between the users inner thighs. Re-usable versions of the insert would generally be formed from washable materials.

10 An alternative and preferred embodiment of the invention is shown in figures 5 and 6A/B. In this embodiment, rather than providing an upper layer and lower layer as previously, the insert **10**, is instead provided with a plastic inner core **30** surrounded by a silicone outer coat **20** (shown in figures 6A and 6B). The insert **10** as a whole is generally only 2-3mm
15 thick with the inner core being approximately 1mm thick. The inner core **30** is selected to be more rigid/less flexible than the surrounding coat. The plastic may be, for example, polyethylene, polyurethane or polypropylene. It is also envisaged that the inner core could also be a silicone material rather than a plastic, however it would be a more rigid (or less flexible)
20 silicone than the outer coat material. The plastic core **30** is shaped such that it has an elongate central trunk **17** with branches **18** extending from the trunk **17** at regular intervals across the width of the insert **10**. The thinner areas of the core **30** allow for flexibility along the length of the insert **1** whilst the wider sections provide more rigidity across the width of
25 the insert **10**. Figures 6A and 6B show cross sections of in insert **10** of this type at two different points. The shape of the cross section changes as you move along the length of the insert **10**, being wider and flatter at the front to fit across the pubic symphysis area. Again the insert **10** will have more flexibility longitudinally than across its width in the region of the

inner core (although the edges of the insert 10 that are closest to a wearer's legs will be entirely outer coat so will be comfortable).

Alternative and preferred shapes for the core **300** could be envisaged, shown for example in figure 7. The inner core 300 will generally be an elongate shape extending from the back to front of the insert **100**. In preferred embodiments the inner core 300 will interconnect with the outer coat. As discussed above the inner core may be branched, however, as shown in fig 7, there may only be small, irregular areas between branches which may be filled with outer coat **200** material. Irregular branches have the added benefit of holding the inner core 300 securely within the outer coat 200.

Various modifications and variations to the described embodiments of the invention will be apparent to those skilled in the art without departing from the scope of the invention as defined in the appended claims. Although the invention has been described in connection with specific preferred embodiments, it should be understood that the invention as claimed should not be unduly limited to such specific embodiment.

CLAIMS

1. An insert adapted to be worn under clothing which, in use, covers the wearers external genitalia resulting in a smooth outer profile, characterised in that the insert is more rigid transversely than it is longitudinally thus allowing greater flexibility of movement longitudinally than transversely.
5
2. An insert as in Claim 1 wherein the cross section of the insert is more curved towards the rear of the insert than the front of the insert.
10
3. An insert as in Claims 1 or 2 which is provided with an outer coat and an inner core.
15
4. An insert as in Claim 3 wherein the outer coat is a silicone material.
5. An insert as in Claims 3 or 4 wherein the inner core is a plastic material.
20
6. An insert as in any of Claims 3 to 5 wherein the inner core is a more rigid material than the outer surround.
7. An insert as in any of Claims 3 to 6 wherein the inner core is an elongate element positioned longitudinally within the insert.
25
8. An insert as in any of Claims 3 to 7 wherein the inner core is shaped to run longitudinally through the insert and be wider in some sections than in others.
30

9. An insert as in any of Claims 3 to 7 wherein the inner core is provided as a plurality of elongate elements positioned transversely along width of the insert.

5 10. An insert as in Claim 9 wherein the elongate elements are conjoined by strip running longitudinally along the length of the insert.

11. An insert as in Claim 1 wherein the insert has multiple layers.

10

12. An insert as in Claim 11 wherein the insert is provided with an elongate upper layer and an elongate lower layer, and wherein the upper layer is wider than the lower layer.

15 13. An insert as in Claim 12 wherein the upper layer is a more flexible material than the lower layer.

14. An insert as in any of the previous Claims wherein the insert is provided with a means for affixing the insert to a wearer's clothing.

20

15. An insert as in Claim 14 wherein the means for affixing are provided on the lower surface of the insert.

25 16. An insert as in Claims 14 or 15 wherein the affixing means is an adhesive strip on the insert's lower surface.

17. An insert as in Claim 16 wherein the adhesive strip is provided with a protective cover that can be peeled off prior to the user attaching the insert to their clothing.

30

18. An insert as in any of the previous Claims wherein the insert is provided with means for improved adherence to a user's body.

5 19. An insert as in Claim 18 wherein the upper surface of the insert is formed from a silicone material adapted to adhere to skin.

20. An insert as in any of the previous Claims wherein the insert is provided with means for ventilation.

10 21. An insert as in Claim 20 wherein the means for ventilation are apertures running through the insert from the upper to the lower surface.

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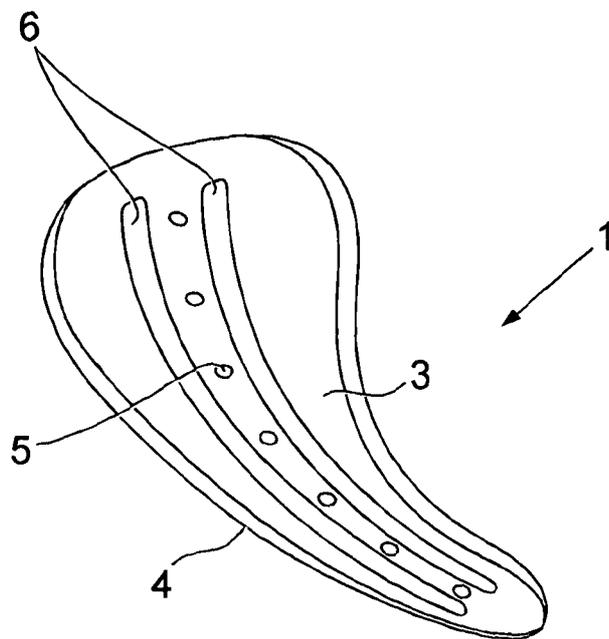


Fig. 1

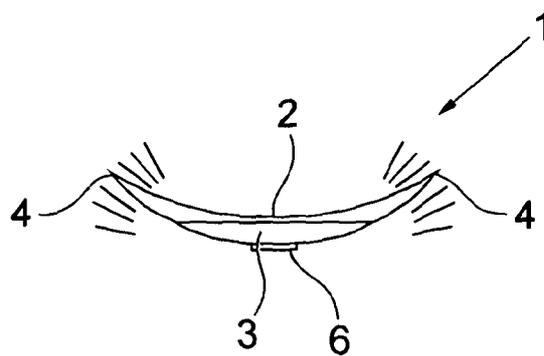


Fig. 2

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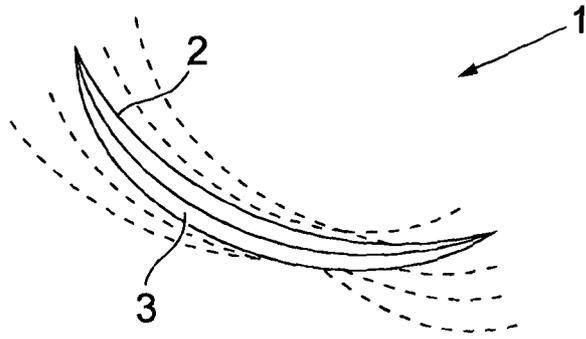


Fig. 3

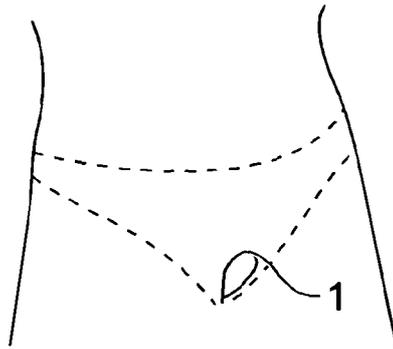


Fig. 4

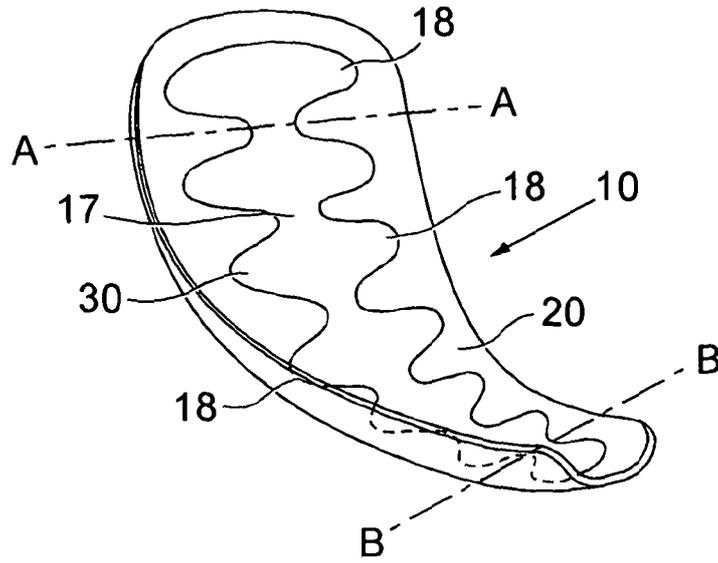


Fig. 5

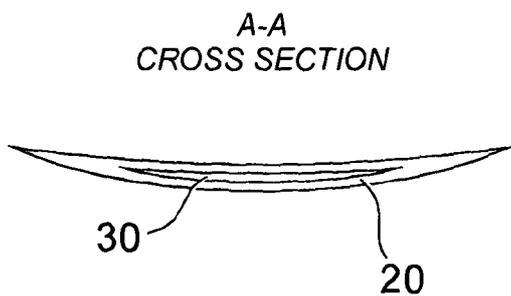


Fig. 6A

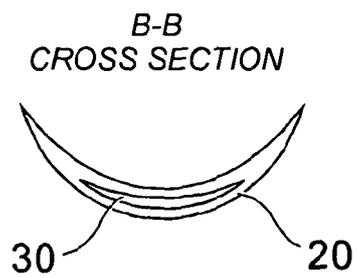


Fig. 6B

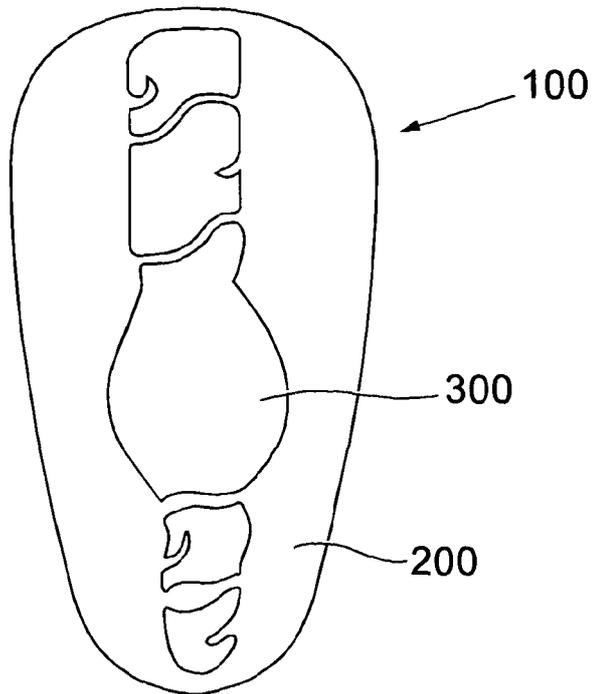


Fig. 7A



Fig. 7B

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2010/051499

A. CLASSIFICATION OF SUBJECT MATTER
INV. A41D27/12 A41B9/04
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A41D A41B A63B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 292 669 A (WEBB JEFFREY NORMAN [GB]) 6 March 1996 (1996-03-06) page 1, paragraph 3-5 page 2, paragraph 10 - page 3, paragraph 1 page 3, paragraph 4 - page 4, paragraphs 1,3,4 page 5, paragraph 3; figure 5 -----	1-8 , II-21
X	US 5 388 275 A (ORAM STEPHEN W [US]) 14 February 1995 (1995-02-14) column 4, line 66 - column 5, line 14 column 6, lines 13-24; figures 5,6,9 -----	I-8, II-21
X	US 3 909 847 A (HOLT M C ET AL) 7 October 1975 (1975-10-07) column 2, lines 25-50; figures 3,7 -----	1,2, 11-18
	-/--	

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- 'A' document defining the general state of the art which is not considered to be of particular relevance
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Date of the actual completion of the international search

13 December 2010

Date of mailing of the international search report

27/12/2010

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INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2010/051499

C(ContJnuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/19852 A2 (CONSTAN TATOS PETER BASIL [ZW] CONSTAN-TATOS PETER BASIL [ZW]) 14 March 2002 (2002-03-14) the whole document -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2010/051499

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2292669	A	06-03-1996	NONE	
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