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(56) Documents Cited

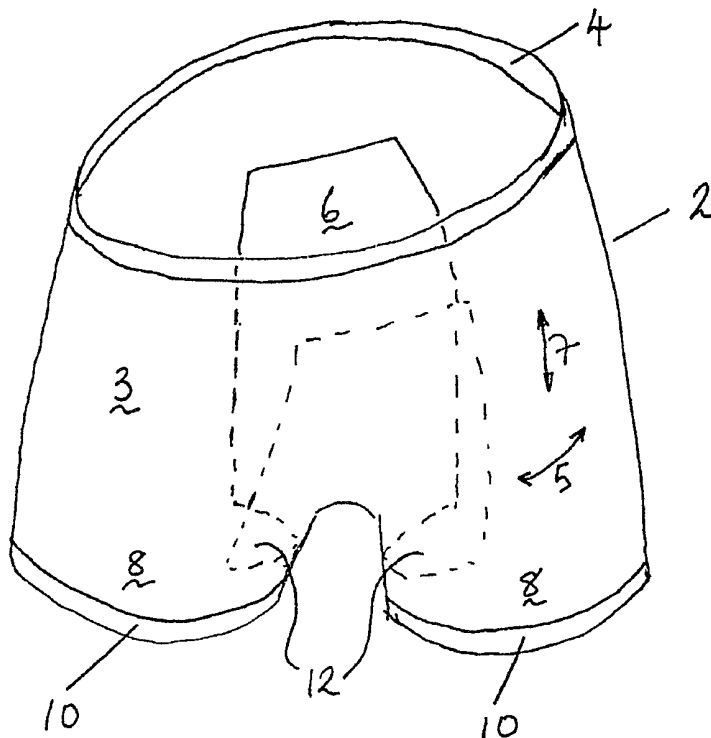
GB 2247605 A GB 2187659 A GB 2174289 A
GB 2112268 A GB 0636730 A WO 86/05386 A1

(58) Field of Search

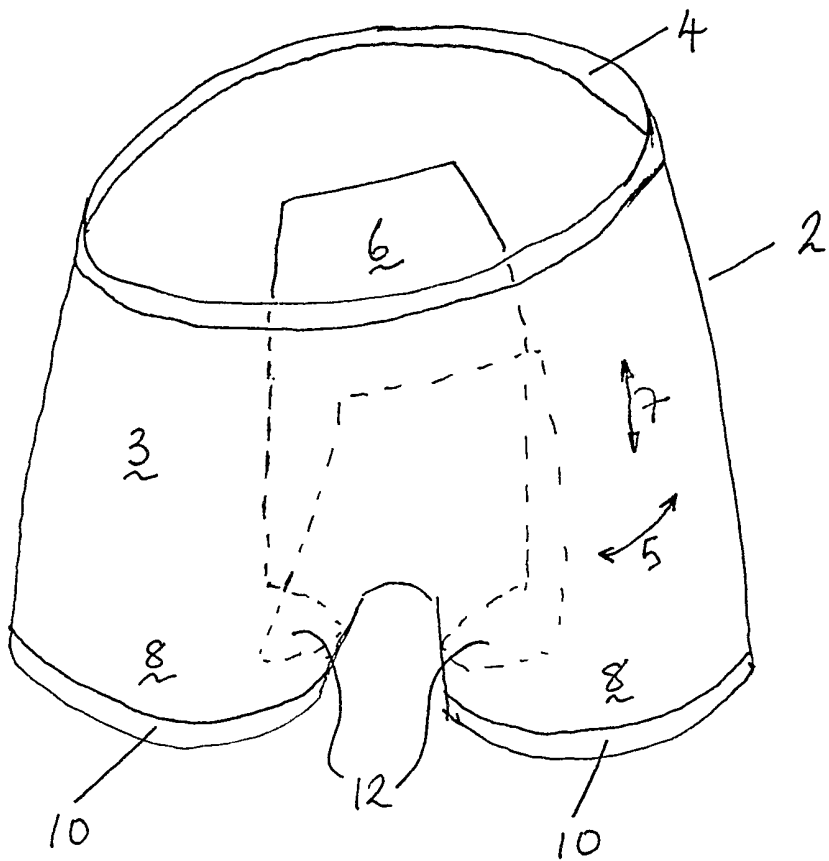
UK CL (Edition L) **A3V**
INT CL⁵ **A41B 9/00 9/02 9/04 9/12 , A61F 13/72**
ONLINE DATABASES : WPI

(54) **Panties**

(57) Panties for use with a sanitary, maternity or medical towel are provided that include an elasticated waistband 4 and a partial lining 6 of impermeable material. The panties are so configured and constructed that, in use, the towel is firmly held against a wearer's body by the panties via the impermeable material, and movement of the towel is substantially prevented. The material of the panties is substantially inelastic in direction 7 but is elastic in the direction 5.



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PANTIES

5 This invention relates to panties, in particular it relates to woman's panties for use in conjunction with a sanitary towel or maternity towel.

10 It is known that during menstruation, or following giving birth, women may use a sanitary towel or maternity towel, hereinafter collectively termed towels, to absorb menses or post-natal discharges respectively. The towel is generally placed inside a pair of woman's panties and held in place against the woman by those panties.

15 It is also possible that a result of a medical condition, or a medical treatment men may have to wear an absorbent pad in the region of their groin.

20 This arrangement is not always found to be satisfactory in that the towel may move from its intended position of use, because of the wearer's movements, the increase in weight of the towel during use, or a combination of both. The movement of the towel from its intended position against the wearer may lead to discomfort to the wearer and/or to staining of the women's panties and perhaps

outer garments.

To try to combat problems of movement, towels which incorporate adhesive sections are marketed. The adhesive
5 is used to adhere the towel to the panties to try to limit or prevent movement. This solution has a degree of effect, but may not substantially alleviate the problem when maternity towels are being used, or where there is a particularly heavy flow of the menses.

10

An alternative attempt to solve the problem is the provision of panties specifically designed for use with maternity towels. These panties are configured as an elasticated waistband with a gusset that is attached to
15 the waistband, and in use extends between the wearer's legs. The gusset includes an impermeable membrane which is so positioned to support the towel in the appropriate position against the wearer. This form of panties has not been found to substantially alleviate the problem of
20 movement of the towel from the desired position.

According to the present invention there are provided panties suitable for use in conjunction with a sanitary, maternity or medical towel, in which the panties have an
25 elastic waistband and are partially lined with an impermeable membrane, the impermeable membrane being so positioned in the panties that when worn in conjunction with a towel, the towel is fully supported against the wearer's body in an appropriate position by the
30 impermeable membrane, and the panties are so configured that they substantially prevent movement of the towel from its intended position of use by way of the construction of the panties and the materials used therefor.

It has been found that the optimum material for construction of the present invention is one in which the material is elastic in a first direction and relatively inelastic in a second direction, the first and second
5 directions being substantially perpendicular. This material is most optimally used when the elastic direction of the material is substantially circumferential about the wearer.

10 The directional difference in elasticity of the material has the substantial benefit of allowing the panties to stretch in a circumferential direction to firmly and elastically surround and grip the wearer. This firm elastic rounding and gripping of the wearer has the
15 effect that it is difficult for the towel to move from the desired position. The relative inelasticity of the material extending from the waistband to the region of the panties supporting the towel is desirable as it serves to substantially prevent the towel moving away
20 from the wearer's body as the towel increases in weight as it is used. This is achieved by the substantially inelastic material transmitting the increasing weight of the towel directly to the waistband which is elastically gripping the wearer. This is especially important when
25 the wearer is standing because if the towel were to move away from the wearer then there would be a greatly increased possibility of the towel moving and discomfort and/or staining occurring.

30 In a preferred embodiment the material of the panties is a mixture of cotton and elasticated acrylic fibres, for example LYCRA (Registered Trade Mark). Optimally the material for the panties is composed of 90% cotton by weight and 10% acrylic elastic fibres by weight.

In a particularly preferred embodiment the panties are configured such that a portion of the panties extends along a portion of the upper thigh of each leg of the wearer. The impermeable portion of the panties extends
5 at least partially along the portion of the panties extending along the wearer's legs. It is preferred that the openings in the panties through which the legs pass in this embodiment are elasticated, either through provision of additional elastic material, or by way of
10 the material of the panties.

The present invention will be further described and explained by way of example with reference to the accompanying Figure.

15

A pair of panties 2 is comprised of a material 3 attached to an elasticated waistband 4. The material 3 is most preferably composed of a mixture of 90% cotton and 10% acrylic elastic fibres such as LYCRA (Registered Trade
20 Mark). The material 3 has a substantially greater elasticity in the direction of arrow 5 than in the direction of arrow 7, the material in the direction of arrow 7 being relatively inelastic. The material 3 of panties 2 is so cut as to conform closely to the body
25 shape of the wearer and, when in use, tightly embraces the contours of the wearer. Attached to the material 3 on the face of material 3 adjacent to the wearer's skin is a piece of flexible impermeable material 6. The impermeable material 6 is so located and so configured
30 that when the panties 2 are being worn, the impermeable material 6 may hold a sanitary towel or maternity towel (not shown) in the correct position against the wearer.

In the particularly preferred embodiment illustrated in

the Figure the panties 2 have portions 8 that extend partially down the legs of the wearer. The edges of the apertures for the wearers legs in panties 2 are defined by elasticated bands 10 which help to prevent portions 8 from riding up the wearer's leg in use. The impermeable material 6 is so configured that portions 12 of material 6 extend into portions 8. This arrangement serves to give increased protection to the panties against staining.

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CLAIMS

1. Panties suitable for use in conjunction with a sanitary, maternity or medical towel, in which the
5 panties are partially lined with an impermeable membrane, the impermeable membrane being so positioned in the panties that when worn in conjunction with a towel, the towel is fully supported against a wearers body in an appropriate
10 position by the impermeable membrane, and the panties are so configured that they substantially prevent movement of the towel from its intended position of use by way of the construction of the panties and the materials used therefor.
15
2. Panties according to Claim 1 in which the panties are of a material that is elastic in a first direction and relatively inelastic in a second direction, the first and second directions being
20 substantially perpendicular, and in which the first elastic direction is substantially circumferential about the wearer when the panties are constructed and in use.
- 25 3. Panties according to Claim 1 or 2 in which the panties are of a material comprised of a mixture of cotton and acrylic elastic fibres.
- 30 4. Panties according to Claim 3 in which the material is comprised of 90% cotton by weight and 10% acrylic elastic fibre by weight.
5. Panties according to any one of claims 1 to 4 in which the panties are so configured that the panties

extend along a portion of each leg of the user.

5 6. Panties according to Claim 5 in which the
impermeable portion extends into the portions of the
panties that extend along the wearer's legs.

7. Panties according to any one of the preceding claims
and as hereinbefore described with reference to the
Figure.

10

1. Panties suitable for use in conjunction with a sanitary, maternity or medical towel, in which the
5 panties are partially lined with an impermeable membrane, the impermeable membrane being so positioned that in use it prevents staining of and leakage from the panties, characterised in that the material used for the panties, substantially
10 prevents movement of the towel from its intended position of use, by means of the composition and configuration of the material.

2. Panties according to Claim 1 in which the panties
15 are of a material that is elastic in a first direction and relatively inelastic in a second direction, the first and second directions being substantially perpendicular, and in which the first elastic direction is substantially circumferential
20 about the wearer when the panties are constructed and in use.

3. Panties according to Claim 1 or 2 in which the
25 panties are of a material comprised of a mixture of cotton and acrylic elastic fibres.

4. Panties according to Claim 3 in which the material
30 is comprised of 90% cotton by weight and 10% acrylic elastic fibre by weight.

5. Panties according to any one of claims 1 to 4 in
 which the panties are so configured that the panties extend along a portion of each leg of the user.

6. Panties according to Claim 5 in which the impermeable portion extends into the portions of the panties that extend along the wearer's legs.
- 5 7. Panties according to any one of the preceding claims and as hereinbefore described with reference to the Figure.

Relevant Technical Fields

- (i) UK Cl (Ed.L) A3V
 (ii) Int Cl (Ed.5) A41B 9/00, 9/02, 9/04, 9/12; A61F 13/72

Search Examiner
 D BUCKLEY

Date of completion of Search
 16 NOVEMBER 1993

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

Documents considered relevant following a search in respect of Claims :-
 1 TO 7

(ii) ONLINE DATABASES : WPI

Categories of documents

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|---|---|
| X: Document indicating lack of novelty or of inventive step. | P: Document published on or after the declared priority date but before the filing date of the present application. |
| Y: Document indicating lack of inventive step if combined with one or more other documents of the same category. | E: Patent document published on or after, but with priority date earlier than, the filing date of the present application. |
| A: Document indicating technological background and/or state of the art. | &: Member of the same patent family; corresponding document. |

Category	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2247605 A (MON WEI LIN) - see lines 18 to 26 of page 3	1
X	GB 2187659 A (KABUSHIKA KAISHA HARUMAC) - see lines 64 to 69 of page 1 and lines 15 to 33 of page 2	1
X	GB 2174289 A (CRAIG MEDICAL PRODUCTS) - see lines 26 to 41 of page 2	1
X	GB 2112268 A (COLGATE-PALMOLIVE) - see especially, lines 70 to 76 and 96 to 100 of page 1	1, 5 and 6
X	GB 636730 (AAL) - see lines 88 to 9 of page 1 and lines 5 to 31 of page 2	1
X	WO 86/05386 A1 (SEC OF STATE ...) - see line 30 of page 2 to line 2 of page 3	1

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).