



- (51) **International Patent Classification:**
A61F 13/494 (2006.01) A61F 13/49 (2006.01)
A61F 13/495 (2006.01)
- (21) **International Application Number:**
PCT/EP2012/075136
- (22) **International Filing Date:**
12 December 2012 (12.12.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
1121374.1 13 December 2011 (13.12.2011) 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, BN, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

Published:

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

(54) **Title:** ARTICLES WITH URINE RECEIVING POCKET IN REGISTRY WITH GENITALS

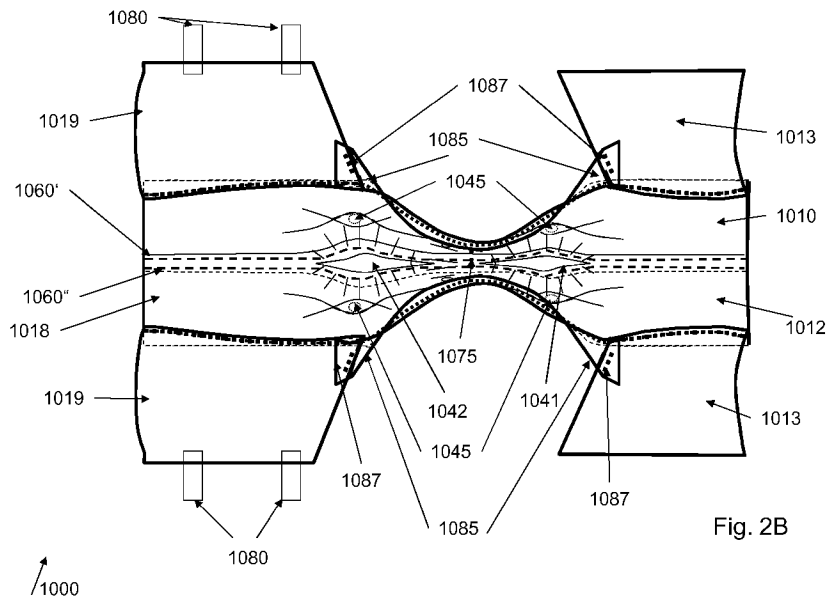
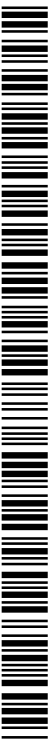


Fig. 2B

(57) **Abstract:** The present invention is an article such as a garment to be worn on the lower torso of a wearer, such as pants or diapers. The article is designed to provide good fit and provides for improved skin dryness for the wearer by allowing urine to pass into a urine receiving pocket, which is positioned in registry with the urine emanating genitals.



Articles with urine receiving pocket in registry with genitals

5 Field of the invention

The present invention is an article such as a garment to be worn on the lower torso of a wearer, such as pants or diapers. The article is designed to provide good fit and allows to provide improved skin dryness for the wearer by allowing urine to pass into a urine receiving pocket, which is positioned in registry with the urine emanating genitals.

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Background

Articles, which are to be worn on the lower torso of a wearer such as pants or diapers, are constantly sought to be improved with regard to their fit on the wearer and impact of bodily exudates like urine on the skin of a wearer. Since several years, the focus has been put on doing so by improving the elasticity of the materials employed therein. In a recent approach, leg hoops have been introduced so as to provide sustained body conforming fit, such as described in WO06/102974A1 (C4S).

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In addition to well fitting designs, skin dryness of a wearer has been a major focus area in development. Most approaches aim at improving the liquid handling properties of an article, such as by improving acquisition, distribution and storage properties for liquids like urine. Other approaches for improving the performance of absorbent articles aim at improving the separation of faeces from the skin of the wearer, such as disclosed in EP0386816 (P&G) showing an elasticated topsheet for use in a disposable absorbent article which has an aperture for allowing faecal material to pass through the topsheet into a void space in the disposable absorbent article. The topsheet allows urine to pass through itself by exhibiting a strike-through time of less than 8 sec (Edana test 150.0-84).

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US-5462541(K-C) describes an absorbent article comprising a topsheet, a backsheet, an absorbent core, and an elevating device for spacing the topsheet above the absorbent core to form a pocket-like shape. The topsheet can have an opening and the absorbent can have a hole therein, both of which receive and isolate waste material from the wearer.

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WO 09/119376A1 (Uni-Charm) discloses a diaper with a spacer and a separator aiming at reducing the contamination of the skin in the external genital and perineal area by excretion.

A particular approach for separating bodily discharges from the skin of a wearer is described in co-pending application WO2011/064272A2 by using a flexible faeces separation member, such as a faeces trap sheet, which is attached in a particular way such that an effective separation of faeces and skin respective genitals is achieved.

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However, these approaches fall short in providing a simple yet effective solution for improving the skin dryness of a wearer by separating the skin of the wearer from loaded and hence wet regions of the article yet allowing liquids, especially urine, to readily pass through the skin dryness member through a passageway.

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Summary

The present invention is an article for being worn on the lower torso of a wearer. The article comprises a base with a front region, a rear region and a crotch region there between, thereby defining a longitudinal (x-) and width (y-) direction, a longitudinal centreline and two opposite
10 longitudinally extending side margins. The base exhibits a first surface, intended to be oriented towards a wearer during use and a second opposite surface. The article further comprises a flexible skin dryness member, which is attached to the first surface of the base, whereby the attachment is adapted to allow spacing apart of the skin dryness member from the first surface of the base at least
15 along a portion of the longitudinal centreline, wherein the longitudinal side margins of the base are overfolded such that they overlay the skin dryness separation member at least in the crotch region. The overfolded longitudinal side margins are connected to the skin dryness member by a pick-up connection, which

- (i) is positioned cross-directionally relative to the longitudinal centre line at a distance of less than 10 cm, preferably less than 5 cm, more preferably less than 2.5 cm thereto, and
20 (ii) is positioned longitudinally at least in the crotch region of the article.

In the article, a passageway is formed positioned in registry with urine emanating body genitals.

In the article, the flexible skin dryness member may be executed as a skin dryness sheet, which forms a genital pocket between the skin dryness sheet, which is overlying the first surface of the base at least in the crotch region, and the first surface of the base. The pocket may further comprise
25 a passageway delimited at least partially by a discontinuity of the skin dryness sheet, and the passageway being adapted to allow liquids to be deposited between the skin dryness sheet and the first surface of the base, and the passage being positioned along or intersecting the longitudinal centre line. The discontinuity may be a slit extending through the skin dryness sheet, preferably extending essentially longitudinally, preferably at a length of at least 1 cm, preferably of a length
30 less than 90% of the length of the skin dryness sheet. The skin dryness sheet may be formed by two halves positioned relative to each other such that an opening is formed in the areas of the fluid emitting body openings. Elastic members may be positioned adjacent to the liquid passageway.

The cross-directional distance of the pick-up connection to the longitudinal side margins can be less than 10 cm, preferably less than 5 cm, more preferably less than 2.5 cm.

35 The pick-up connection may further have

- (iii) a longitudinal extension of less than 30 cm, preferably 15 cm, more preferably less than 5 cm.

The article may further comprise a stiffening element attached to the skin dryness sheet in the crotch region and to a leg hoop or the pick-up connection, which may comprise a cross-directionally extending strip of material, having a stiffness higher than the stiffness of the flexible skin dryness member.

5 The skin dryness member may be essentially liquid impermeable up to a hydrohead of at least 10 mbar, preferably 15 mbar, more preferably more than 25 mbar.

Optionally, the passage way positioned in registry with the urine emanating genitals extends longitudinally such that it is not in registry with the anus. The article may further comprise a passageway in registry of the anus of a wearer adapted to receive faeces in a faeces pocket. Further,

10 a separation member may separate the faeces pocket from the genital pocket.

Brief description of the Figures

Fig. 1 A and B show schematically an article according to the present invention comprising a skin dryness sheet as a particular embodiment;

15 Fig. 2 depicts schematically an article according to the present invention comprising a skin dryness sheet and additionally a further passageway which is to be positioned in registry with the anus..

The same numerals across different figures denote identical features.

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Detailed description

The present invention relates to articles, typically worn by humans on the lower torso, i.e. pants style articles or diapers. The articles according to the present invention are adapted to provide improved fit and skin cleanliness by an improved functionality with regard to the handling of

25 bodily discharges such as urine as may be discharged thereto.

The articles according to the present invention comprise a base formed by a centre piece comprising a front and a rear region, typically corresponding to the front and back waist regions of a wearer, and a crotch region there between, thereby defining the longitudinal orientation or x-direction of the article. The crotch region of the article corresponds to the crotch region of the

30 wearer, which may be considered to terminate rearwardly beyond the anus and forwardly beyond the genitals, The article further may comprise side panel regions, which extend laterally outwardly of the centre piece along the width y-direction of the article at least in the front and / or rear waist region. Within the present context, this refers to an article in its in-use configuration. During manufacturing, or in a folded article after manufacturing respectively in the pre-use configuration,

35 the side panels may be folded or stacked so as to overly the centre region, but are nonetheless considered as "extending laterally outwardly". The article according to the present invention is

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essentially symmetrical to its longitudinally extending centreline.

The present invention relates to articles which may be closed pants or pants-style articles or to articles, which are open products and which may be brought into a closed pants-style form upon donning such as conventional taped diapers. The present invention further relates to pre-forms of
5 such articles, which may require addition of certain elements or performance of certain process steps to be functional as an article.

The articles according to the present invention comprise a base, which may comprise well known elements of hygiene articles, such as an absorbent core, optionally with superabsorbent material and/or liquid distribution layers and a backsheet. In addition, the articles comprise a flexible skin
10 dryness member, positioned on the surface of the base which is intended to be oriented towards the wearer during use. The flexible skin dryness member will be positioned at least in a portion of the article which is positioned in the crotch region of the article forwardly of the urine or menses discharging body openings, when the article is worn. The flexible skin dryness member may be
15 executed to be integral with the wearer oriented topsheet web of the article, or it may overlie a separate topsheet of the base. As will be discussed herein below, the skin dryness member can be positioned flat or in a folded position on the wearer oriented surface of the base, but it is essential that it is sufficiently flexible – with regard to its properties but also with regard to its fixation to the
20 base – to allow it to be spaced apart from this base during the use at least along a portion of the longitudinally extending centre line of the article. This spacing is achieved by overfolding of the longitudinally extending side margins of the article respectively its flat unfolded pre-form towards the longitudinally extending centre-line at least in the crotch region of the article. Preferably, the
overfolded side margins have a distance to the longitudinally extending centre line of less than 10 cm, preferably less than 5 cm or even less than 2.5 cm. Further, the overfolded side margins are
connected to the flexible separation member at least in the crotch region by at least one pick-up
25 connection, such as a glue region, line, or even only a glue spot, or other appropriate connecting means, like thermal bonding. Preferably, this pick-up connection is positioned cross-directionally at a distance of less than 10 cm, preferably less than 5 cm or even less than 2.5 cm from the longitudinal centre line. The pick-up connection is also preferably positioned cross-directionally at a distance of less than 10 cm, preferably less than 5 cm or even less than 2.5 cm from the
30 longitudinal side margins of the centre piece. Preferably, the pick-up connection has a longitudinal extension of less than 30 cm, preferably less than 15 cm or even less than 5 cm.

The principles of the present invention are now further explained by referring to Fig. 1, schematically showing one particular embodiment, the details of which will be described further herein below. Fig. 1 depicts a pre-form of an article in a state prior to longitudinally folding and
35 applying the pick-up connection. As shown in Fig. 1A, the flat out stretched pre-form of an article 1000 has a front waist region 1012 and a rear waist region 1018 connected by a crotch region 1015,

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thereby defining a longitudinal (x-) direction 1001 of the article. A width (y-) direction 1002 of the article corresponds to the right-left orientation on a wearer. Typically, the article is symmetrical to its longitudinal centreline 1004. Typically, the thickness (z-direction) of the article is much smaller than the length and width, and extends perpendicularly thereto.

5 In an in-use configuration, the respective front and rear regions are respectively connected so as to form a pants style product. This connecting can be done permanently such as typically applied in so called training pants. This connecting can be done by the user or his/her caretaker, such as typically applied in openable diapers. This connecting may also be a combination of any conventional closure means, including separately applied belts or hoops.

10 The articles may be narrower in the crotch region than in the front or rear regions. As shown in Fig. 1A, front (1013) and rear (1019) side panels extend laterally outwardly of the centre piece forming the base in the front and rear regions. It should however be noted, that the present invention is evenly applicable, if the lateral extension of the side panels is less pronounced, including for example rectangularly shaped products which may be held in place by fixation means such as e.g. a
15 belt.

Articles according to the present invention may have absorbent elements, as is the case for disposable absorbent articles such as baby or adult incontinence diapers, or for training pants and the like. Such articles may also be designed without integral absorbent elements, but may be combined with separate absorbent elements, such as when pants are used in combination with
20 absorbent pads for the use in the context of adult incontinence or for feminine hygiene. Such articles may also be designed with no or relatively little absorbency, and may be used as disposable, or limited re-use underwear. Articles having no or only little absorbent capacity may be designed to withstand at least a limited amount of wash cycles without disintegrating.

Within the present context, the backsheet and core, and optionally other elements as commonly
25 used in conventional articles, such as core cover sheets (intended to keep superabsorbent polymer particles and/or fluff fibres contained in the core), are considered to form the base of an article according to the present invention, denoted 1010 in the Figures.

Within the context of the present invention, the pre-form of an article or the article itself comprises a base, which may comprise the elements as described above. The articles or the base of articles
30 according to the invention exhibit a first, wearer oriented, or inner surface, often also referred to as the topsheet side 1022, and a second, opposite or outer surface 1021, often referred to as backsheet side. The core cover sheet, i.e. the topsheet oriented side of the base, is typically made of liquid pervious material so as to allow urine to penetrate through to the absorbent elements. The outer surface is typically made of liquid impervious materials, such as polymeric films or liquid
35 impervious webs, all well known to a skilled person. Optionally, and often preferably, the outer material is at least in certain regions breathable, as may be achieved by using so called microporous

films or the like.

When referring to the topsheet side as wearer oriented or inner surface of the article, it should be noted, that not all of this surface needs to be arranged so as to be in contact with the skin of the wearer, but parts may be folded away, or may be overlaid by other materials, as will also be
5 discussed herein below. Similarly, not all of the backsheet or outer surface needs to be arranged away from the skin of a wearer, although any backsheet material which possibly may contact the skin of a wearer should be adapted with regard to skin friendliness. Thus, when the article is folded along longitudinal foldlines 1027 at least in the crotch region, the topsheet is connected to itself and the backsheet side is facing towards the wearer in the overfolded portions.

10 Articles according to the present invention further comprise a layer 1030 overlying the user oriented surface 1022 of the base, hereinafter referred to as "flexible skin dryness member". The flexible skin dryness member can be executed as two preferred embodiments, which are described in more detail herein below. In a first embodiment, which is depicted in Fig. 1A, the flexible skin dryness member 1030 hereinafter referred to as skin dryness sheet is exemplarily executed as an
15 additional rectangular web overlying the topsheet of the base and optionally being smaller than that. The size of the skin dryness sheet 1030 should be adapted to allow creation of a pocket for receiving liquids and the urine discharging genitals, i.e. labia respectively scrotum and /or penis.

The width 1039 of the skin dryness sheet 1030 will be limited by the width of the base in the crotch region. Of course, the absolute dimensions of the skin dryness sheet will depend on the size of the
20 product and may be larger for adult incontinence products than for baby diapers. Typically, the skin dryness sheet will have a width of less than 100%, often less than 90% or 75% of the crotch width of the article. Preferably, it should not be narrower than the "crotch width" of a wearer, i.e. the left to right distance of the crotch groin, i.e. between the creases of the juncture of the torso and the legs.

25 In a particular execution, the rear margin of the skin dryness sheet lies forwardly of the anus. In this execution, the skin dryness sheet is connected to the core cover sheet of the base by a connection 1038 at least in sections of its perimeter. The skin dryness sheet comprises a discontinuity as a liquid passageway positioned in registry with the urine or menses discharging or emanating body openings. This may be executed as an unconnected rearward perimeter of the sheet, or preferably,
30 as shown in Fig 1A, it may be an opening or slit 1040 through the skin dryness sheet.

The discontinuity will have a positioning and a longitudinal extension adapted to allow liquids to pass through. Thus, in an in-use configuration, the urine passageway, which comprises the discontinuity, will be positioned in the proximity of and in registry with the urine discharging genitals of a wearer, and henceforth the discontinuity will typically be positioned around the
35 longitudinal centreline of the article such that the discontinuity at least intersects the centreline. It may be positioned along this centreline such as when a straight cut is executed along the centre

line. Optionally, this cut along the centreline may intersect the front and/or rear margin of the skin dryness sheet. Alternatively, the discontinuity may be a terminating margin of the skin dryness sheet, such as the front cross-directionally extending margin thereof. Thus, the discontinuity should have a longitudinal extension of less than 30 cm, preferably less than 15 cm. The longitudinal extension may be less than this, e.g. when the discontinuity is executed as a longitudinally extending cut intersecting the front margin of the skin dryness sheet, and it may actually be zero in the case of the discontinuity being the forward cross-directionally extending margin itself.

Thus the skin dryness sheet together with the base over which it is positioned and from which it may be spaced apart forms a pocket for the genitals into which the liquid exudates are deposited.

10 Fig. 2B shows another execution of the present invention, whereby the flexible skin dryness member forms essentially the wearer oriented surface of the article or at least a major portion thereof, which extends over the full length of the article and which may cover the full width of the base or at least the centre piece thereof. The skin dryness member is attached to the base in the periphery of the article, but is not connected thereto in the crotch region (indicated by the hatched area 1065), where it further comprises a discontinuity as a passageway. This discontinuity may be an opening or a slit 1040 in the web, which forms the skin dryness member. The discontinuity may also be formed by omitting the connection to the base in the respective region. Preferably, the skin dryness member further comprises elastic elements at least along the perimeter of the discontinuity, such as elastic threads 1060' and 1060". This connecting is preferably executed such that liquid exudates cannot pass through, and may be a glue line or an ultrasonic welding line as well known in the art. A skilled person will readily realize that the term "connecting line" includes areas extending in the x- and-y-direction, such as a wide glue line, or a welding pattern. Also, whilst the skin dryness sheet is described in a rectangular embodiment, deviations from this shape are also within the scope of the present invention, such as when the skin dryness sheet is of an oval, elliptical, circular or even irregular shape, and a skilled person will readily adapt respective terms and features.

In a preferred execution, the skin dryness member 1030 is formed by two webs 1030' and 1030" respectively, overlapping each other along the longitudinally extending centre line of the article, where they are attached to each other. A discontinuity, such as a longitudinally extending slit 1040 is positioned in registry with the liquid discharging genitals allowing liquids to pass through the skin dryness member. The skin dryness member is unattached to the base at least in the region surrounding the discontinuity, so as to allow the lifting of the skin dryness sheet by the pick-up connections, as will be discussed further herein below, thusly forming a liquid receiving pocket between the base and the skin dryness member.

35 Optionally, elastic members, such as elastic threads 1060' and 1060" are attached in a stretched state to the skin dryness member at least in the proximity of the discontinuity. Preferably, they are

not attached respectively not stretched in regions extending forward and rearward of the pocket and into the waist sections of the article.

In an alternative execution, elastics 1060' and 1060'' are attached between skin dryness member 1030 - now executed as a single sheet positioned symmetrically to the product centreline - and a narrow strip of e.g. nonwoven material which is at least wide enough to cover the elastics and their bonding means (e.g. the glue spiral by which they may be attached).

The pocket is executed such that - in particular for a male user - the genitals may pass through the passageway into the pocket. In particular when the article is used in the context of faecal incontinence, the liquid passageway should be positioned such that it does not extend into the area of the anus, so as to prevent faeces to enter the pocket, which may result in soiling of the genitals.

A suitable material for the flexible skin dryness member is a soft web material, which should not cause skin irritation. Preferably, this web should not allow liquids such as urine or menses to penetrate through, at least in the region of the formed pocket. Typically, such a property is described by the hydrohead test and suitable materials should exhibit a hydrohead of at least 10 mbar, preferably at least 15 mbar, more preferably more than 25 mbar. They materials may even be essentially liquid impermeable, such as when plastic films are used. The property may be determined by measuring the hydrostatic pressure the material will support when a controlled level of water penetration occurs. The test may be executed by following the EDANA 120.2-02 resp. INDA 80.4 test method, such as by using a TexTest Hydrostatic Head Tester FX3000 (available from TexTest AG in Switzerland (<http://www.textest.ch>)). For this test, pressure is applied to a defined sample portion and gradually increased until water penetrates through the sample. The conditioned sample (i.e. adapted to the laboratory conditions of about 22°C and about 50% relative humidity) is clamped over the top of the column fixture by means of an appropriate gasketing material (o-ring style) to prevent side leakage during testing. The area of water contact with the sample is equal to the cross sectional area of the water column, which equals 28 cm². Water is pumped into the water column at a rate of 3 mbar/min, corresponding to an increase of about 3 cm water column per minute. When water penetration appears in three locations on the other surface of the sample, the pressure at which the third penetration occurs is recorded. If water immediately penetrates the sample (i.e., the sample provided no resistance), a zero reading is recorded. For each material, three specimens should be tested and the average result is reported.

An alternative way for describing the hydrophobicity of a web material is the strike through test, which may be executed according to the Edana method WSP70.3 (05). Materials suitable as a skin dryness member preferably exhibit a strike through time of more than 8 seconds, preferably of more than 30 seconds.

Without intending any limitation, a material suitable for certain embodiments may be a hydrophobic non-woven material of a base weight of about 10 to 30 g/m², such as being made from

PP-fibres having a thickness of from 0.1 dTex to 3 dTex or more. Such materials may also be composite materials, such as well known "SMS" composites, i.e. made of a layer of meltblown fibres sandwiched between two layers of spundbonded material.

In a particular execution of the present invention, the flexible skin dryness member may have
5 elastic properties, so as to enhance the contact to wearer's skin during use. such as by attaching longitudinally extending elastic outwardly adjacent to the slit or opening of the flexible skin dryness member as described in the above, or the flexible skin dryness member may be executed as a web with elastic properties, optionally varying along or across the web.

The present invention further includes a particular attachment of the flexible skin dryness member
10 by a pick-up connection. To this end, the longitudinal side margins of the base are folded over so as to overlay the flexible skin dryness member at least in the crotch region, such that the longitudinal side margins are positioned at a cross-directional distance to the longitudinal centreline of less than 10 cm, preferably less than 5 cm, more preferably less than 2.5 cm. The pick-up connection between the overfolded side margins along longitudinal folding lines 1027 and the flexible skin
15 dryness member is positioned cross-directionally close to the side margins, i.e. at a distance of less than 5 cm, preferably less than 5 mm, and not too far from the longitudinal centreline, i.e. at a distance of less than 10 cm, preferably less than 5 cm, more preferably less than 2.5 cm. The pick-up connection should not have a too long longitudinal extension as it might otherwise affect the overall fit of the article negatively, and thus the longitudinal extension should be less than 30 cm,
20 preferably less than 15 cm, more preferably less than 5 cm. The pick-up connection may be made of a continuous connecting line or region or of one or more lines, regions or dots.

The flexible skin dryness member remains essentially unattached to the underlying base at least in the proximity of the pick-up connection, such that upon donning and adapting the article to its in-use configuration, the pick-up connection will lift up the skin dryness sheet. The size of the non-
25 attached area is large enough if the product assumes the same outer shape as it would without presence of the pickup connection.

In particular embodiments, the articles of the present invention further comprise a stiffening member for supporting the spacing apart of the flexible skin dryness member from the base. Such a stiffening member may be any stiff material exhibiting a stiffness higher than the flexible skin
30 dryness member, e.g. when assessed according to the Taber stiffness test. Preferably, the stiffness is sufficient to urge the flexible skin dryness member towards the skin of the user. Such a stiffening member may be executed as one or more strips extending essentially cross-directionally and/or in the longitudinal direction of the article, and being affixed to the flexible skin dryness member at least in the proximity of the pick-up connection. Preferably, the stiffening member does not extend
35 into regions, where the flexible skin dryness member is connected to the base. Preferably, the stiffening member strip has a longitudinal extension in the article of more than about 1 mm,

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preferably more than about 1 cm. It may have a rectangular shape, though other shapes – including shapes having in certain parts a significantly longer extension in the longitudinal and cross direction of the article or closed structures like ovals or rings – are included in the present scope of the invention. .

- 5 In a particular and often preferred execution, the present invention may be combined with a faeces pocket or “faeces trap” as described in more detail in the above mentioned publication WO11/064272. Such an article is schematically depicted in Fig. 2 A and B, showing both a first urine passageway 1041 and a second faeces passage 1042 positioned rearwardly of the first. Preferably, the faeces trap and the urine pocket are separated by a separation member, such as a
- 10 barrier sheet. In the execution shown, the barrier sheet 1070 is preferably executed as a rectangular and preferably liquid and faeces impermeable material. It is connected with its forward margin 1074 to the base, but not to the skin dryness member, whilst the rearward margin 1075 is connected to the skin dryness member, but not to the base. At its longitudinally extending margins, it may be left unattached along the centre line region and preferably up into the folding line regions. Thus
- 15 upon lifting by means of the pick-up connecting points as described in the above, also the separation member is lifted so as to create a barrier preventing faeces to contaminate the urine pocket, and the genitals which may be positioned inside this pocket (for male users) or which may otherwise come into contact with the faeces through the liquid passageway. This is schematically depicted in Fig. 2B showing a top view of the article after the longitudinal side margins are
- 20 overfolded in the crotch region 1015 and connected by connection points 1045. The figure further indicates front (1013) and rear (1019) side panels, the latter ones with closure means such as tapes 1080 connected thereto. A leg hoop material 1085 is connected to the centre piece 1010 at least in portions of the crotch region and by connecting lines 1087 to the respective side panels. In other executions, the leg hoops may be overlying the front and rear sidepanel regions and extend beyond
- 25 the sidepanel into the crotch region where they are connected to the centre piece. This design ensures that urine and faeces are kept separate, thusly reducing the risk of bacteria growth and skin irritation. The skilled person will readily realize that the separation may also be executed by other means, such as by a rearwardly oriented barrier sheet connected to the base at its rear margin and to the skin dryness barrier in the front.
- 30 Whilst the skin dryness member and the separation member have been shown as rectangular webs, these may have other shapes, such as trapezoidal, triangular etc. or may have curvilinear margins. In a further particular execution, an article according to the present invention comprises a skin or body adherence substance. Such substances are well known in the art, such as described in WO 00/00111 (Palumbo). The body adherence substance may be applied to the article at least in parts
- 35 of the regions where the flexible skin dryness member can detach from the base, and be executed such that it is covered by a removable cover, or such that its adherent surface is exposed upon

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opening the article. Optionally, the substance may also develop its adhering properties during use, such as when employing a temperature triggered substance.

5 It should be noted that none of the described embodiments should be seen to limit the present invention. Also, a skilled person will readily realize that the various embodiments can be combined with other ones.

Claims

- 5 1. An article for being worn on the lower torso of a wearer, said article comprising a base which comprises
- a front region, a rear region and a crotch region there between, thereby defining a longitudinal (x-) and width (y-) direction, a longitudinal centreline and two opposite longitudinally extending side margins;
- 10 said base exhibiting a first surface, intended to be oriented towards a wearer during use and a second opposite surface;
- said article further comprising a flexible skin dryness member
- which is attached to said first surface of said base, whereby the attachment is adapted to allow spacing apart of said skin dryness member from said first surface of said base at least along a
- 15 portion of said longitudinal centreline;
- wherein
- said longitudinal side margins of said base are overfolded such that they overlay said skin dryness separation member at least in the crotch region ;
- and in that said overfolded longitudinal side margins are connected to said skin dryness
- 20 member by a pick-up connection, which
- (i) is positioned cross-directionally relative to said longitudinal centre line at a distance of less than 10 cm, preferably less than 5 cm, more preferably less than 2.5 cm thereto, and
- (ii) is positioned longitudinally at least in the crotch region of the article,
- characterized in that
- 25 a passageway is formed positioned in registry with urine emanating body genitals.
2. An article according to any of the preceding claims,
- wherein said flexible skin dryness member is a skin dryness sheet,
- forming a genital pocket
- 30 between said skin dryness sheet, which is overlying said first surface of said base at least in the crotch region, and said first surface of said base;
- said pocket further comprising a passageway delimited at least partially by a discontinuity of said skin dryness sheet, said passageway being adapted to allow liquids to be deposited between said skin dryness sheet and said first surface of said base, and said passageway being positioned along
- 35 or intersecting said longitudinal centre line.

3. An article according to claim 2, wherein said discontinuity is a slit extending through the skin dryness sheet, preferably extending essentially longitudinally, preferably at a length of at least 1 cm, preferably of a length less than 90% of the length of the skin dryness sheet.
- 5 4. An article according to claim 2, wherein said skin dryness sheet is formed by two halves positioned relative to each other such that an opening is formed in the areas of the fluid emitting body openings.
- 10 5. An article according to any of the preceding claims, further comprising elastic members adjacent to said liquid passageway.
6. An article according to any of the preceding claims, wherein the cross-directional distance of said pick-up connection to said longitudinal side margins is less than 10 cm, preferably less than 5 cm, more preferably less than 2.5 cm.
- 15 7. An article according to any of the preceding claims, wherein said pick up connection (iii) has a longitudinal extension of less than 30 cm, preferably 15 cm, more preferably less than 5 cm.
- 20 8. An article according to any of the preceding claims, further comprising a stiffening element attached to said skin dryness sheet in the crotch region and to a leg hoop or said pick-up connection.
- 25 9. An article according to claim 8, wherein said stiffening member comprises a cross-directionally extending strip of material, having a stiffness higher than the stiffness of said flexible skin dryness member.
- 30 10. An article according to any of the preceding claims, wherein said skin dryness member is essentially liquid impermeable up to a hydrohead of at least 10 mbar, preferably 15 mbar, more preferably more than 25 mbar.
- 35 11. An article according to any of the preceding claims, wherein said passage way positioned in registry with the urine emanating genitals extends longitudinally such that it is not in registry with the anus.
12. An article according to any of the preceding claims, further comprising a passageway in

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registry of the anus of a wearer adapted to receive faeces in a faeces pocket.

13. An article according to claim 12, further comprising a separation member for separating said faeces pocket from said genital pocket.

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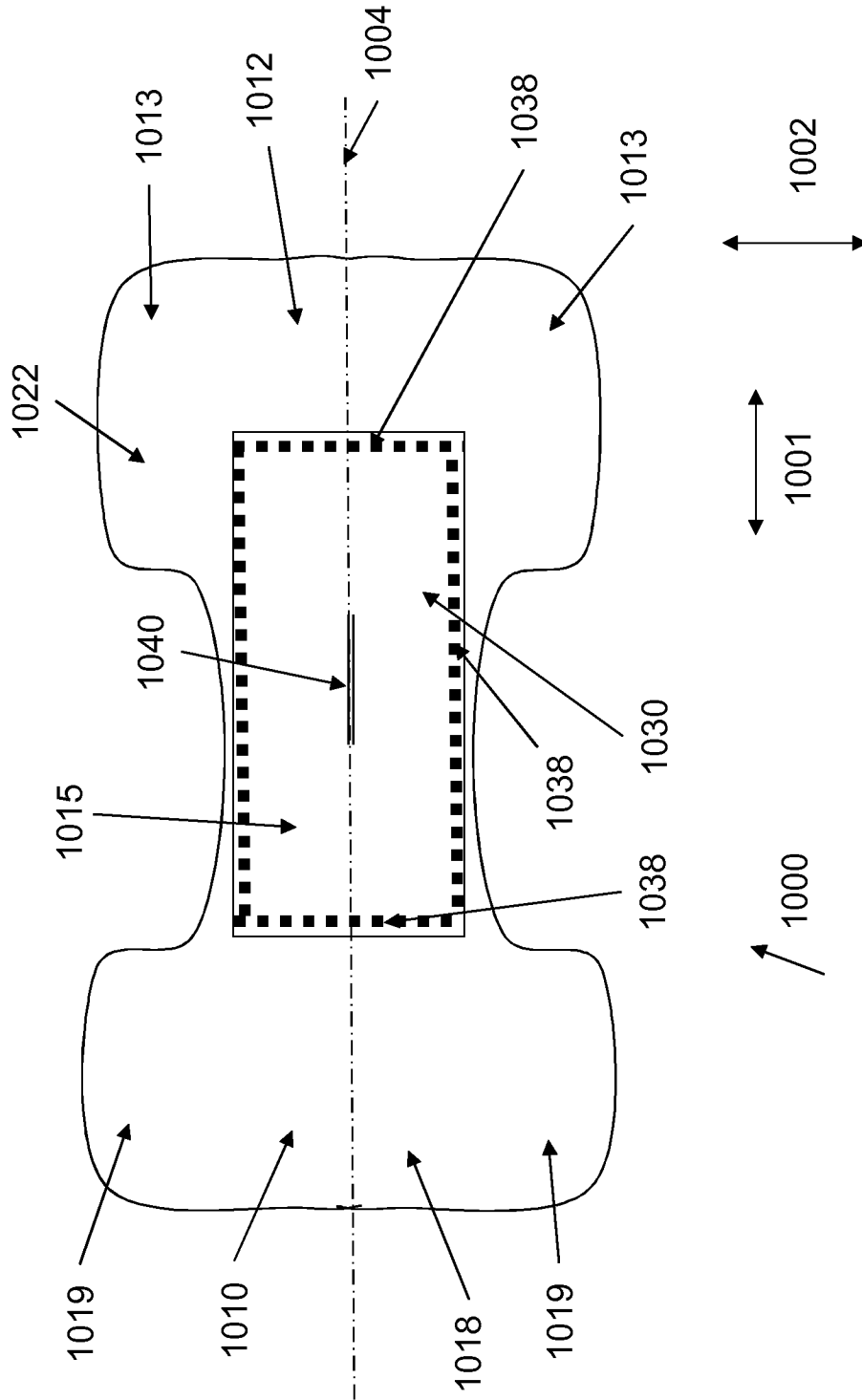


Fig. 1A

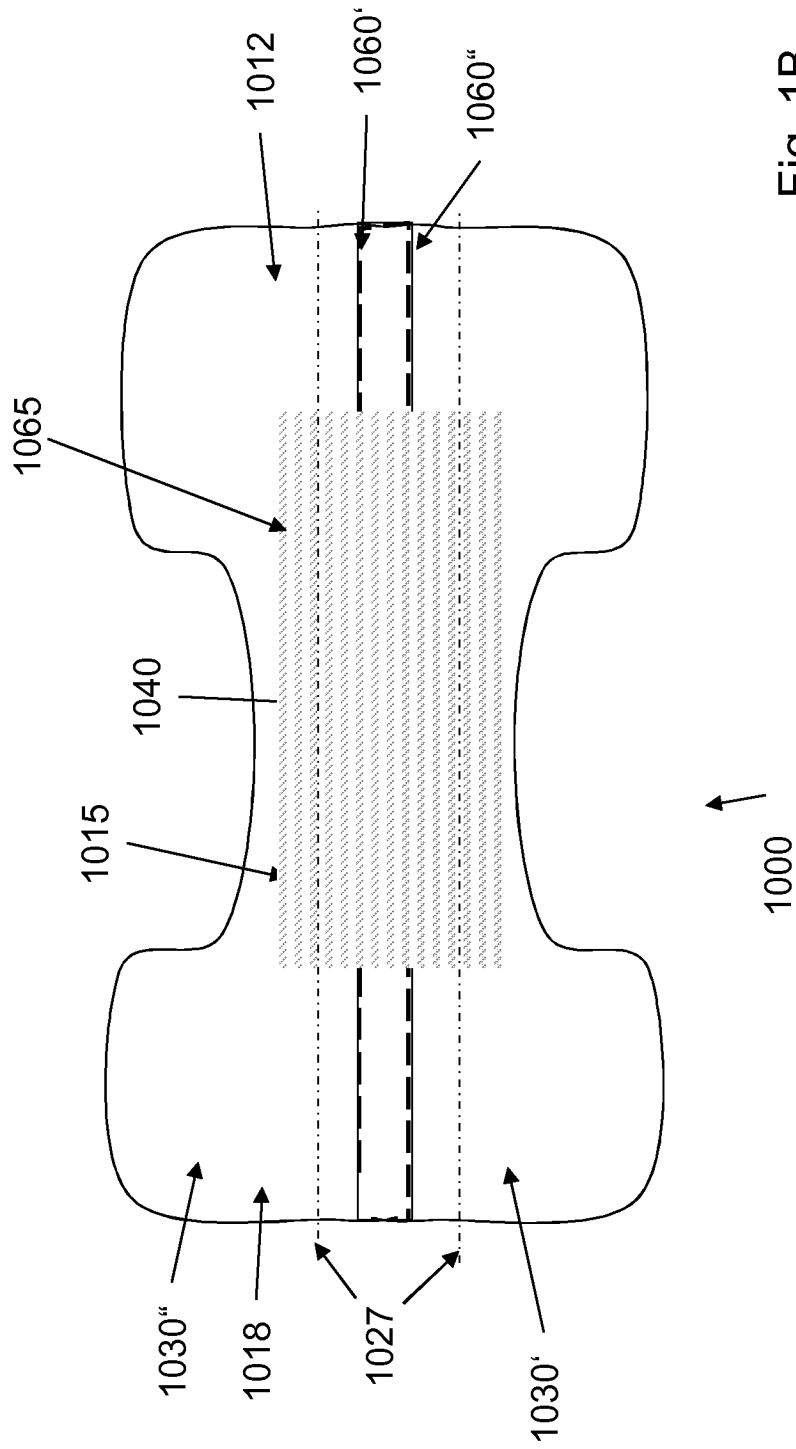


Fig. 1B

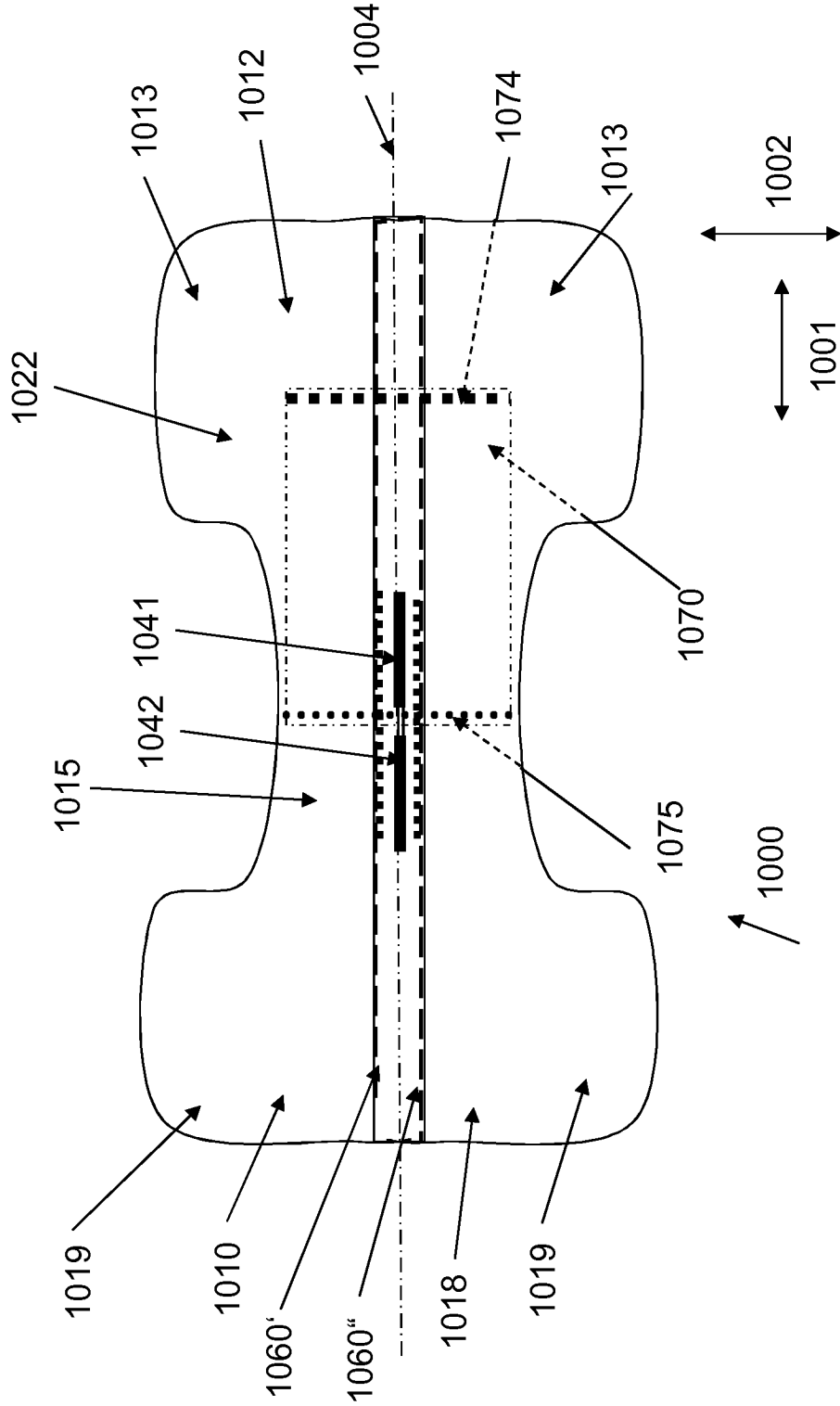


Fig 2A

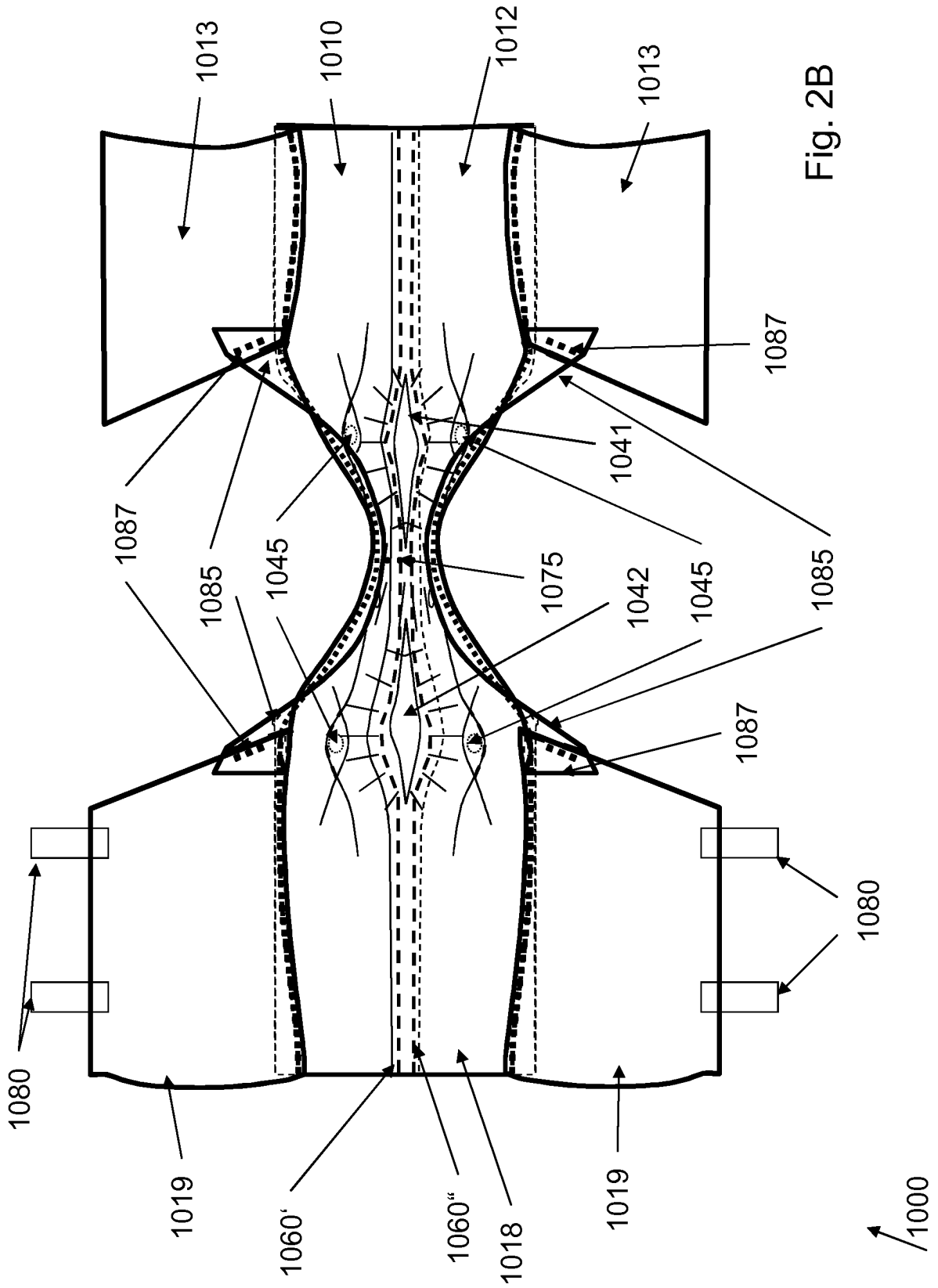


Fig. 2B

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2012/075136

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61F13/494 A61F13/495 A61F13/49
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)
A61F

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 practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	US 2006/241557 A1 (MORIYA REIKO [JP] ET AL) 26 October 2006 (2006-10-26) paragraphs [0185] - [0186]; figures 24G, 24H -----	1-13
A	WO 2007/088509 A1 (PROCTER & GAMBLE [US]; MARTYNUS CORNELIA BEATE [DE]; WCIORKA MAJA [DE]) 9 August 2007 (2007-08-09) page 2; figures 1-3 -----	1-13
A	US 7 763 003 B1 (YIP JENNIFER [US]) 27 July 2010 (2010-07-27) column 1, line 15 - column 2, line 37; figures 1-6 -----	1-13

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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- "&" document member of the same patent family

Date of the actual completion of the international search 11 February 2013	Date of mailing of the international search report 19/02/2013
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Mangin, Sophie
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