Search history

Search step	Result(s)	Query
2	35424	..SIMILARITY REFINE SS 1 RANKED 1
1	129655	..SEMSEARCH "ABSORBENT ARTICLE" 100 "ABSORBENT CORE" 58 "ARTICLE" 17 "BACK SECTION" 18 "BOWL SHAPED PORTION" 20 "CENTRAL PORTION" 19 "CHASSIS" 16 "CORE" 15 "CORE CREST" 100 "DISPOSABLE PANT" 100 "ELASTIC ELEMENT" 18 "ELASTIC MATERIAL" 79 "FRONT REGION" 93 "FRONT SECTION" 56 "GENITAL" 34 "INCONTINENCE" 100 "INFLUENCE" 18 "LONGITUDINAL DIRECTION" 41 "MALE USER" 100 "PANT DIAPER" 100 "PANT TYPE" 100 "PRESS FRONT PORTION" 22 "SANITARY PANT" 100 "SIDE ELEMENT ELASTICITY" 80 "SIDE GATHERING EFFECT" 20 "TRANSVERSE DIRECTION" 21 "TRANSVERSE SIDE" 58

200 Documents

Publication numbers	Title	Current assignees
EP3355843 A1	Disposable pant-type absorbent article specially adapted for a male user	ESSITY HYGIENE & HEALTH
EP2572689 A1	Disposable wearing article	UNICHARM
EP2740449 A1	Absorbent article with high absorbent material content	PROCTER & GAMBLE
EP2087871 A1	Absorbent article	KAO
EP2540269 A1	Disposable worn article	UNICHARM
EP1465565 A1	Absorbent article	SCA HYGIENE PRODUCTS
EP3288513 A1	Absorbent garment with close fit	KIMBERLY CLARK
EP1723939 A1	Pull-On Disposable Wearing Article	UNICHARM
EP2268249 A2	Disposable absorbent articles having gender-specific containment flaps	KIMBERLY CLARK
EP-689815 A1	Disposable absorbent article with improved waist containment and gasketing	KIMBERLY CLARK
JP2007082890 A	Underwear type diaper	KAO
EP2352474 A2	Gender-specific, disposable absorbent articles	KIMBERLY CLARK
EP1096910 A1	Disposable underpants including skewed absorbent core	KIMBERLY CLARK
EP2934404 A1	Elastic laminate and process for the manufacture of elastic laminate	SCA HYGIENE PRODUCTS, ...
EP1280492 A1	Disposable absorbent underpants	KIMBERLY CLARK WORLDWIDE
EP-437771 A2	Disposable absorbent garments	UNICHARM
EP1300124 A2	Shorts type disposable diaper	KAO
EP1281379 A2	Pants-type disposable diaper	UNICHARM
EP2109430 A2	Disposable hygiene item in the form of a pair of knickers, with an improved fit	PAUL HARTMANN, ...
WO200339422 A1	System and method for discretely coating elastic elements and absorbent articles made therewith	FIRST QUALITY BABY PRODUCTS, ...
WO9004374 A1	Disposable diaper with center gathers	FIRST QUALITY BABY PRODUCTS, ...
WO200185082 A1	Disposable absorbent underpants	KIMBERLY CLARK WORLDWIDE, ...
EP1108409 A2	Disposable diaper	UNICHARM
EP-993816 A2	Disposable pull-on undergarment	UNICHARM
WO200400188 A1	Absorptive article	UNICHARM
EP1661538 A1	Disposable absorbent article and process for making the same	UNICHARM

Publication numbers	Title	Current assignees
EP-617939 A2	Disposable diaper	UNICHARM
EP-761193 A2	Absorbent article of pants type	UNICHARM
EP1621168 A1	Pull-on disposable diaper	KAO
SE9503887 D0	Absorbent article, e.g. sanitary towel, briefs protection, etc.	SCA HYGIENE PRODUCTS
US20050055006 A1	Disposable pull-on undergarment	UNICHARM
EP1552801 A1	Pants type disposable diaper	UNICHARM
EP-787474 A1	Disposable absorbent undergarment of pants type	UNICHARM
EP1686939 A1	Disposable pull-on garment	PROCTER & GAMBLE
EP2207515 A1	Disposable nappy with separate belt or leg guards formed from laminate outer cover	KUVER DESIGNS
WO200622866 A1	Disposable absorbent underpants	KIMBERLY CLARK
WO200187588 A2	Targeted elastic laminate	KIMBERLY CLARK
US5855573 A	Sanitary panty	SCA HYGIENE PRODUCTS
US20010030014 A1	Elastic strand coating process	KWOK KUI-CHIU
EP2215998 A1	Disposable diaper	UNICHARM
EP-823846 A1	Absorbent article	SCA HYGIENE PRODUCTS
WO2018182469 A1	Disposable pant-type absorbent article adapted for a male user	ESSITY HYGIENE & HEALTH
SE9404365 D0	Absorbent materials e.g. for nappies and sanitary towels	MOELNLYCKE HEALTH CARE
EP2105115 A1	Disposable diaper	DAIO SEISHI
EP-748197 A1	Absorbent article with multiple zone structural elastic-like film web extensible waist feature	PROCTER & GAMBLE
EP2640330 A1	Absorbent article	UNICHARM
US5411498 A	Stretchable shaped absorbent garment	KIMBERLY CLARK WORLDWIDE
EP3357464 A1	Underpants-type diaper	UNICHARM
SE200004739 D0	Absorbent article, e.g. nappy, incontinence pad or sanitary towel, includes fold in absorbent body layer with line of weakness	SCA HYGIENE PRODUCTS
US20180221221 A1	Absorbent Articles With Channels	PROCTER & GAMBLE
WO200628509 A1	Disposable absorbent underpants	KIMBERLY CLARK
WO2019130971 A1	Pants-type absorbent article	UNICHARM
EP2621437 A1	Pants-type diaper	UNICHARM
SE200103982 L	Hygiene article, e.g. nappy, has closed side parts formed by joining together nappy end parts along article length edges	SCA HYGIENE PRODUCTS
EP1429705 A2	Disposable diaper	KAO
US5830203 A	Absorbent article and method of manufacturing the same	FIRST QUALITY BABY

Publication numbers	Title	Current assignees
		PRODUCTS, ...
EP2561846 A1	Absorbent article	UNICHARM
SE9604359 D0	Absorbent article, typically nappy or incontinence pad	MOELNLYCKE HEALTH CARE
US20160166444 A1	Disposable absorbent garment	ATTENDS HEALTHCARE PRODUCTS
EP-115286 A1	Method of making disposable diapers and diapers produced by this method.	BOUSSAC SAINT FRERES B
US20050013975 A1	Method of securing elastic strands to flat substrates and products produced by the method	NORDSON
SE9604360 D0	Absorbent liner comprising an absorption layer inside a water permeable cover	SCA HYGIENE PRODUCTS
SE9802799 D0	Hygiene article, e.g. sanitary towel or incontinence pad, with form element which can be deformed from a folded flat position to form a raised profile	SCA HYGIENE PRODUCTS
ZA9207394 B	No-waste absorbent product	JOHNSON & JOHNSON
AU2003255222 A1	Absorbent article with surface structure	UNICHARM
SE9801469 D0	Absorbent material for e.g. sanitary towels, incontinence pads or nappies	SCA HYGIENE PRODUCTS
SE9404517 D0	Compact matt forming wheel contg. moulds for prepn. of air laid absorbent articles e.g. nappies, sanitary towels or incontinence pads	MOELNLYCKE HEALTH CARE
SE9802479 D0	Disposible hygiene article, e.g. nappy or incontinence pad, contains hydrophobic front side material with opening covered by liquid permeable, hydrophilic piece and provided with barriers	SCA HYGIENE PRODUCTS
AU2010201983 A1	Disposable absorbent articles having multiple absorbent core components including replaceable components	PROCTER & GAMBLE
AU8059206 A	Absorbent article	COLGATE PALMOLIVE
SE9402906 D0	Absorbent bodies prepn. useful for nappies	MOELNLYCKE HEALTH CARE
GB-836395 A	Absorbent dressing	HECTOR WALLACE GRISWOLD
SE9802114 D0	Hygiene article, e.g. sanitary towel, incontinence pad or panty liner, having release layer made from foam material covering adhesive surface on impermeable underside	SCA HYGIENE PRODUCTS
SE9504703 D0	Absorbent product, e.g. nappy, sanitary towel or incontinence pad	SCA HYGIENE PRODUCTS
US20180289563 A1	Wearable article having graphics	PROCTER & GAMBLE
SE200104083 D0	Production of multi layer material for hygiene article, e.g. nappy, involves folding length edges of first and third layers	SCA HYGIENE PRODUCTS

Publication numbers	Title	Current assignees
	around length edges of second layer	
SE9404347 D0	Absorbent material thickness control useful esp. for web former	MOELNLYCKE HEALTH CARE
GB-531509 A	Improvements in a machine for making absorbent pads	INTERNATIONAL CELLUCOTTON
GB-394933 A	Improvements in and relating to the manufacture of sanitary towels and like absorbent bandages	HANS ROSENFELDER, ...
BE-903051 A	Sanitary towel or absorbent bandage has moisture permeable envelope - contg. absorbent pad with impermeable foil at rear and moisture-repellent but permeable viscose and/or propylene] wadding layer at front	MALDEREN PAUL VAN
SE9604693 D0	Snap fastening for diapers useful esp. for improved fit of diaper	MOELNLYCKE HEALTH CARE
SE9802198 D0	Sanitary towel containing absorbent layer with converging length direction bend lines in rear and intermediate towel regions on either side of length symmetry axis	SCA HYGIENE PRODUCTS
SE9603770 D0	Surface material for hygiene article	SCA HYGIENE PRODUCTS
SE9603003 D0	Liquid permeable cover layer for a hygiene article	SCA HYGIENE PRODUCTS
SE9401542 D0	Absorbent fibrous material structures mfr. for nappy, sanitary towel	SCA HYGIENE PRODUCTS
EP1455719 A1	Thin, flexible, low capacity absorbent article with leakage protection	KIMBERLY CLARK
AU8056239 A	Absorbent article	COLGATE PALMOLIVE
BR202015030563 U2	APPLIED CONSTRUCTIVE DISPOSAL IN DISMISSABLE DIAPER WITH TWO ABSORBENT LAYERS OVERLAPPED AND BORDER SPLITTING	RITA MAGALHAES
DE2041354 A1	Profiled suction cylinders - to develop structured continuous strip of absorbent cellular material	VP SCHICKEDANZ
GB-352049 A	Absorbent pad and method of and apparatus for manufacturing same	HARRISON ROBERT WILLIAMS
EP2328532 A1	Disposable absorbent article with varied distribution of absorbent particulate polymer material	PROCTER & GAMBLE
AU7839271 A	Absorbent panel	JOHNSON & JOHNSON
EP2450015 A1	Pants type absorptive article and method of manufacturing same	KAO
EP1083852 A1	Thin absorbent core made from folded absorbent laminate	FIRST QUALITY BABY PRODUCTS, ...
EP3240513 A1	Absorbent article having stretchable panels and method of making same	KIMBERLY CLARK
EP1139956 A1	Method of making refastenable, pant-like disposable absorbent articles	KIMBERLY CLARK

Publication numbers	Title	Current assignees
GB-890682 A	Absorbent fibrous bodies	ALFRED ADOLF BURGENI
BR200305879 A1	Procedimento de colocação de rede de integridade dentro de uma matriz absorvente	GRUPO P I MABE
EP-739169 A1	Method of enhancing the human immune system	PROCTER & GAMBLE
EP-692230 A1	Absorbent article with back half having higher basis capacity and a barrier	PROCTER & GAMBLE
SE9704490 D0	Hygiene article, e.g. nappy	SCA HYGIENE PRODUCTS
EP1139957 A1	Pant-like disposable absorbent articles with an easy opening feature	KIMBERLY CLARK
EP-808146 A1	Absorbent article having containment gaskets	KIMBERLY CLARK
SE9603771 D0	Surface material for hygiene article	SCA HYGIENE PRODUCTS
SE9602689 D0	Urine absorbent inlay for e.g. nappy or incontinence pad	SCA HYGIENE PRODUCTS
SE9601688 D0	Hygiene article, e.g. incontinence pad, sanitary towel or panty liner	SCA HYGIENE PRODUCTS
SE9601661 D0	Cover layer for hygiene article, e.g. sanitary towel, incontinence pad or nappy	MOELNLYCKE HEALTH CARE
SE9504687 D0	Absorbent product worn inside underwear, e.g. sanitary towel, panty liner or incontinence pad	MOELNLYCKE HEALTH CARE
EP1455707 A2	Continuous biaxially stretchable absorbent with low tension	KIMBERLY CLARK
EP1575470 A1	Absorbent core including folded substrate	KIMBERLY CLARK
EP1267771 A1	Thin absorbent core made from folded absorbent laminate	JOHNSON CONTROLS INTERNATIONAL
EP1236454 A2	Absorbent article having improved comfort during use by improved fit even when loaded and improved rewet performance	PROCTER & GAMBLE
WO2018118413 A1	Methods and apparatuses for making elastomeric laminates with elastic strands unwound from beams	PROCTER & GAMBLE
EP2081537 A2	Method for making a reusable disposable article having a replaceable absorbent insert	PROCTER & GAMBLE
EP-627210 A2	Sanitary absorbent article	KIMBERLY CLARK
EP2424480 A1	Method and apparatus for manufacturing elasticated webs comprising discontinuous elastic threads	SCA HYGIENE PRODUCTS, ...
ZM8900033 A1	Unitized sanitary napkin	JOHNSON & JOHNSON
BR202016024516 U1	CLOTH DIAPER FOR NEWBORN ENDOWED WITH SOCKET TO RECEIVE REUTILIZÁVEL OR ABSORBENT ABSORBENT DISMISSABLE COMPOSTÁVEL	ANA PAULA SILVA
WO2014103504 A1	Absorptive article and method for manufacturing same	LIVEDO
EP3200738 A1	Fixed and removable absorbent cores for absorbent articles	KIMBERLY CLARK
EP2750646 A1	Method of manufacturing absorbent article	UNICHARM

Publication numbers	Title	Current assignees
EP-661030 A2	Sanitary napkin	KAO
WO2016159978 A1	Absorbent article with waist containment member and method of manufacturing thereof	KIMBERLY CLARK
WO200798492 A2	Method of making an absorbent composite and absorbent articles employing the same	DSG TECHNOLOGY HOLDINGS
EP3223762 A1	Absorbent article having finger tabs and methods of manufacturing same	KIMBERLY CLARK WORLDWIDE
EP1448140 A1	Absorbent article having a body conforming absorbent composite	KIMBERLY CLARK
WO2016157653 A1	Absorbent article	UNICHARM
EP2532329 A1	Method and apparatus for making absorbent structures with absorbent material	PROCTER & GAMBLE
EP1018981 A2	Layered absorbent structure with a zoned basis weight and a heterogeneous layer region	KIMBERLY CLARK
WO201676203 A1	Absorbent article	KAO
JP2007282972 A	Method for manufacturing absorbent article	LIVEDO
EP1773266 A1	Method of forming an absorbent article having shaped absorbent core formed on a substrate	KIMBERLY CLARK
WO201434776 A1	Method for manufacturing absorptive article	KAO
EP-793469 A1	Absorbent article having a composite absorbent core	KIMBERLY CLARK
EP1835876 A1	Disposable absorbent article having leg wraps method of making same	DSG TECHNOLOGY HOLDINGS
CH-675829 A5	Absorbent pad for nappy or incontinence towel - comprises mixed fibre layer contacted by heated roller surface	DEMETRIO LEONE
BE-880886 A	Werkwijze en inrichting voor het vervaardigen van maandverband	UTERMOEHLEN
GB-705917 A	Improvements in and relating to absorbent pads, more especially for babies' diapers	SHELLER GLOBE
WO2016104184 A1	Pull-up type absorbent article	KAO
EP2524679 A1	Water-absorbable sheet structure	SUMITOMO SEIKA CHEMICALS
EP1253898 A1	Prefastened disposable absorbent articles having a stretch panel	KIMBERLY CLARK
EP1463474 A1	High swell absorbent changing a thin underpants-like garment into a thick diaper-like garment	MICROSOFT
EP-774946 A1	Sanitary napkin	KIMBERLY CLARK
EP1880700 A1	Disposable diaper	KAO
EP-532035 A2	Growth adjustable absorbent article	KIMBERLY CLARK
EP2727567 A1	Method for discharging absorptive article	UNICHARM

Publication numbers	Title	Current assignees
WO2008108476 A1	Absorber, sanitary goods utilizing the same and process for producing them	DAIKI
EP2088979 A2	Absorbent articles comprising graphics	PROCTER & GAMBLE
EP2085061 A1	Process for producing absorbent article, and absorbent article	UNICHARM
EP1813237 A2	Absorbent Core for an Absorbent Article	PROCTER & GAMBLE
EP1089690 A1	Method of making an absorbent article with prefastened side panels	KIMBERLY CLARK
WO201990291 A1	Absorbent article with conforming features	PROCTER & GAMBLE
EP3087961 A1	Method for producing absorbent article	DAIO SEISHI
EP2524678 A1	Water-absorbable sheet structure	SUMITOMO SEIKA CHEMICALS
EP3326594 A1	Production apparatus for bifolded member for absorbent articles and production method	UNICHARM
EP1793784 A2	Wrapped absorbent core	KIMBERLY CLARK
EP-137644 A2	Corrugated web structure	PERSONAL PRODUCTS
WO2018118614 A1	Absorbent article with absorbent core	PROCTER & GAMBLE
EP3238677 A1	Absorbent core with profiled distribution of absorbent material	PROCTER & GAMBLE
WO2015129367 A1	Production method for absorbent body	KAO
EP2540271 A1	Absorbent article	KAO
EP3212143 A1	A pant-type absorbent article comprising an elastic laminate	SCA HYGIENE PRODUCTS, ...
WO201573812 A1	Folded core absorbent article and related method	COVIDIEN
EP2832327 A1	Disposable undergarment	UNICHARM
EP2285331 A1	Disposable absorbent article with elastically contractible cuffs for better containment of liquid exudates	PROCTER & GAMBLE
EP3123990 A1	Manufacturing apparatus and manufacturing method for manufacturing absorbent article	UNICHARM
EP2737885 A1	Absorbent article production equipment	UNICHARM
EP-572033 A2	Absorbent article	KIMBERLY CLARK
EP3335682 A1	Manufacturing method for absorbing body	SUMITOMO SEIKA CHEMICALS
EP3000449 A1	Absorbent body and absorbent article containing said absorbent body	UNICHARM
EP1087739 A1	Disposable absorbent articles having passive side bonds and adjustable fastening systems	KIMBERLY CLARK
EP-311333 A2	Absorbent article having floating inner cuffs.	PROCTER & GAMBLE
EP3346963 A1	A disposable pant-type absorbent article with a leg cuff	ESSITY HYGIENE &

Publication numbers	Title	Current assignees
		HEALTH
EP-778763 A2	Thin absorbent article having wicking and crush resistant properties	KIMBERLY CLARK
EP2968022 A1	Method and apparatus for assembling refastenable absorbent articles	PROCTER & GAMBLE
EP2849697 A1	Absorbent articles having a belt portion with a texture zone having a texture ratio	PROCTER & GAMBLE
EP1310224 A2	Absorbent product	KOYO DISPOSABLE GOODS
EP1076542 A1	A disposable absorbent article having barriers with expandable attachment to an absorbent	KIMBERLY CLARK
EP3167858 A1	Absorbent cores having material free areas	PROCTER & GAMBLE
EP2535027 A1	Absorbent article having improved absorption properties	PROCTER & GAMBLE
WO201104270 A2	Simplified absorbent article construction	KIMBERLY CLARK WORLDWIDE
EP1858462 A1	A pant-type absorbent article and method for its manufacture	SCA HYGIENE PRODUCTS, ...
EP1578335 A1	Absorbent article with containment flaps	KIMBERLY CLARK
EP-613363 A1	Elasticized disposable training pant and method of making the same	PROCTER & GAMBLE
WO2018119472 A1	Disposable floating absorbent core and disposable absorbent assembly including same, and method of making same	DSG TECHNOLOGY HOLDINGS
EP3381424 A1	Absorbent article	UNICHARM
EP3191042 A1	Process for making an absorbent article comprising a topsheet/acquisition layer laminate	PROCTER & GAMBLE
WO2015170712 A1	Absorbent article	UNICHARM
EP1453449 A2	Disposable training pant designed specifically for late stage toilet training	KIMBERLY CLARK
EP-631768 A1	Absorbent core having improved fluid handling properties	PROCTER & GAMBLE
EP2844204 A1	Method for transferring absorbent articles and rejecting defective absorbent articles	PROCTER & GAMBLE
CN107361924 A	Body-adaptive leakage-proof absorption product and method for preparing same	BARON
EP3185835 A1	Absorbent article with leg cuffs	PROCTER & GAMBLE
EP2415433 A1	Device for producing absorbent article and method for producing absorbent article	UNICHARM
EP-376022 A2	Absorbent article having unitary waistcap and waistband	PROCTER & GAMBLE
EP2441418 A1	Absorbent structure	DRYLOCK TECHNOLOGIES
EP2186494 A1		

Publication numbers	Title	Current assignees
	Disposable bodily fluid absorptive wearing article of pants type	UNICHARM
EP-932381 A1	Absorbent article having a containment dam	KIMBERLY CLARK
EP2317963 A2	Method and apparatus for making disposable absorbent article having discontinuously distributed absorbent particulate polymer material and article made therewith	PROCTER & GAMBLE
WO200241816 A2	Pant-like disposable absorbent articles with a releasable line of weakness and a fastener	KIMBERLY CLARK

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RU2018114627
EP15905524
JP2018516468
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CA3000144

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EP3355843	A4	2019-03-20	EP3355843
JP2018534027	A	2018-11-22	JP2018534027
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Title

(EP3355843)
Disposable pant-type absorbent article specially adapted for a male user

Abstract

(EP3355843)

The disclosure concerns a disposable pant-type absorbent article (1) such as a pant diaper, a sanitary pant or incontinence pant specially adapted for a male user. The disposable pant-type absorbent article comprises a chassis having a front section and a back section, an absorbent core, a front region configured for receiving the genitals of a male user, a longitudinal direction (y) and a transverse direction (x), in which the front section (3) at least partly is made of an elastic material comprising at least one elastic element. A first portion of the elastic material extends over at least a central portion of the absorbent article for pressing a front portion of the absorbent core towards a user during use of the absorbent article. A second portion of an elastic material is located more towards a back than the first portion and includes at least one elastic element extending along the transverse sides of at least part of the front region (7). The absorbent article further comprises at least one elongated side elastic element attached in a substantially longitudinal direction on each transverse side (7a, 7b) of the front region (7) for providing a side gathering effect along the transverse sides (7a, 7b) of the front region (7), such that the absorbent core within the front region, under the influence of the side elastic elements (30) and the elastic web material is adapted to bulge outwardly during use of the article to form a bowl shaped portion for receiving the genitals of a male user. The disclosure also concerns a corresponding method for manufacturing the absorbent article.

Current assignees

ESSITI HYGIENE & HEALTH

ESSITY HEALTH GENE HEALTH ACTOR BORAG ESSITY HYGIENE & HEALTH AKTIEBOLAG

ESSITY HYGIENE & HEALTH

ESSITY HYGIENE & HEALTH AKTIEBOLAG

SCA HYGIENE PRODUCTS

Inventors

BÄCK LUCAS

Advantages / Previous drawbacks

(WO2017/058069)

It is desirable to provide the disposable pant-type absorbent article with some kind of bowl shaped portion in a front region of the absorbent article configured to receive the genitals of a male user.

The bowl shaped portion also may result in improved leakage protection because the side edges of the absorbent core may better adapt to the skin contour of user, such that the side edges of the absorbent core may exhibit improved sealing contact against the skin of a user.

A bowl shaped portion may also result in improved leakage protection because any escape of urine may be better confined within the bowl shaped portion, such that a more controlled and predictable flow characteristics may obtained.

This approach for forming the central portion free from tensioned elastic elements enables use of a cost-efficient manufacturing process.

Independent claims

(WO2017/058069)

CLAIMS A disposable pant-type absorbent article (1) such as a pant diaper, a sanitary pant or incontinence pant specially adapted for a male user, said disposable pant-type absorbent article comprises: a chassis having a front section and a back section, an absorbent core, a front region configured for receiving the genitals of a male user, a longitudinal direction (y) and a transverse direction (x), in which the front section (3) at least partly is made of an elastic material comprising at least one elastic element, wherein a first portion of the elastic material extends over at least a central portion of the absorbent article for pressing a front portion of the absorbent core towards a user during use of the absorbent article, wherein a second portion of an elastic material is located more towards a back than the first portion and includes at least one elongated side elastic element (30) extending along the transverse sides of at least part of the front region (7), wherein the absorbent article further comprises at least one elongated side elastic element (30) attached in a substantially longitudinal direction on each transverse side (7a, 7b) of the front region (7) for providing a side gathering effect along the transverse sides (7a, 7b) of the front region (7), such that the absorbent core within the front region, under the influence of the elongated side elastic elements (30) and the first portion (45) of the elastic material (10), is adapted to bulge outwardly during use of the article to form a bowl shaped portion for receiving the genitals of a male user. The pant-type absorbent article (1) according to claim 1 , characterised in that the elongated side elastic element (30) extends along the core sides towards the crest of the core in the front section and ends in the region between 70 mm below the crest of the core and 20

mm above the crest of core, preferably between 50 mm below the crest of the core and 20 mm above the crest of the core.
24. A method for manufacturing a disposable pant-type absorbent article (1), such as a pant diaper, a sanitary pant or incontinence pant, wherein a front region of the absorbent article is configured for receiving the genitals of a male user, the method comprising: forming a chassis from at least one web material, the chassis has a front section (3) and a back section, wherein the front section (3) at least partly is made of a elastic web material comprising at least one elastic element, wherein a first portion of the elastic material extends over at least a central portion of the absorbent article for pressing a front portion of the absorbent core towards a user during use of the absorbent article, and in which a second portion of an elastic material is located more towards a back than the first portion and includes at least one elongated side elastic element (30) extending along the transverse sides of at least part of the front region (7); and providing the chassis with an absorbent core (5) and at least one elongated side elastic element attached in a substantially longitudinal direction on each transverse side (7a, 7b) of the front region (7) for providing a side gathering effect along the transverse sides (7a, 7b) of the front region (7), such that the absorbent core within the front region, under the influence of the side elastic elements (30) and the laminated elastic web material is adapted to bulge outwardly during use of the article to form a bowl shaped portion for receiving the genitals of a male user.

Object of invention

(WO2017/058069)

An object of the present disclosure is to provide a disposable pant-type absorbent article and associated method for manufacturing the disposable pant-type absorbent article where the previously mentioned problem is at least partly avoided.

The disclosure concerns a disposable pant-type absorbent article such as a pant diaper, a sanitary pant or incontinence pant specially adapted for a male user, said disposable pant-type absorbent article comprises, a chassis having a front section and a back section, an absorbent core, a front region configured for receiving the genitals of a male user, a longitudinal direction (y) and a transverse direction (x), in which the front section at least partly is made of an elastic material comprising at least one elastic element, wherein a first portion of the elastic material extends over at least a central portion of the absorbent article for pressing a front portion of the absorbent core towards a user during use of the absorbent article,

This disclosure relates to a disposable pant-type absorbent article such as a pant diaper, a sanitary pant or incontinence pant specially adapted for a male user, wherein the article comprises a chassis having a front section and a back section and an absorbent core.

The disclosure also relates to a method of manufacturing such a disposable pant-type absorbent article.

IPC - International classification

A61F-013/15; A61F-013/47; A61F-013/471; A61F-013/49; A61F-013/491; A61F-013/491; A61F-013/494; A61F-013/496; A61F-013/53; A61F-013/534

Family 2/200 - FAMPAT - ©Questel

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EP11783561
TW100116877
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JP2010116775
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TWI531359	B	2016-05-01	TWI531359	
US8986276	B2	2015-03-24	US8986276	
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JP2011240054	A	2011-12-01	JP2011240054	
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2016-10-31

Title

(EP2572689)
Disposable wearing article

Abstract

(EP2572689)
A disposable wearing article having a cup-shaped portion adapted for temporary collection of bodily fluids such as urine without irritating the wearer's skin. Front waist elastics (18) are attached between a front outer sheet (11) and an inner sheet (13) and rear waist elastics (19) are attached between a rear outer sheet (12) and the inner sheet (13). An absorbent structure (30) is attached to an inner side of the inner sheet (13) and a pair of leg-cuffs (40) is attached between the absorbent structure (30) and the inner sheet (13). Lateral proximal portions of the respective leg cuffs (40) are bonded between the absorbent structure (30) and the inner sheet (13) and lateral distal portions (42) of the respective leg cuffs extend outwardly in a transverse direction (X) beyond the absorbent structure (30) and are not bonded to the inner sheet (13). These lateral distal portions (42) are provided with a plurality of cuff elastics (43). Front and rear waist regions (2, 3) respectively include first through third sub-regions (2a through 2c; 3a through 3c) which are adjacent one to another in this order and the respective sub-regions are provided with first through third waist elastics (18a through 18c; 19a through 19c). A tensile stress in the first and third sub-regions (2a, 2c) is higher than that in the second sub-region (2b) and the cuff elastics (43) extend to at least the second sub-region (2b).

Current assignees

UNICHARM

Inventors

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KOSAKA SHOSHI

Advantages / Previous drawbacks

(EP2572689)
Further, formation of the core material lessened areas 33 makes it possible to enlarge the absorptive surface area of the core and thereby to accelerate the absorption of bodily fluids such as urine.
In addition, these core material lessened areas 33 make it possible to enlarge the absorbent area and thereby to absorb body waste correspondingly at a higher rate.
Further, the core material lessened areas make it possible to reduce the stiffness in the transverse direction X of the third

sub-regions 2c, 3c and thereby to facilitate these third sub-regions 2c, 3c to be contracted under the effect of the third waist elastics 18c, 19c.

Particularly when body waste containing a large amount of liquid is excreted, it is difficult for the absorbent structure 30 to absorb such liquid content at once and such liquid content might leak out of the diaper 1.

difficult to

If the stiffness value is higher than 1.00 N*cm, the first and third sub-regions may not be contracted and it will be difficult to form the cup-shaped areas 50.

The second sub-regions 2b, 3b may be provided with none of the elastics as the case may be.

Independent claims

(EP2572689)

1. A disposable wearing article having a longitudinal direction and a transverse direction, the article comprising: a skin-facing side; a non-skin-facing side; a chassis including a front waist region, a rear waist region and a crotch region extending between the front and rear waist regions; a waist-opening defined by front and rear ends of the chassis; a pair of leg-openings defined by opposite lateral edges of the chassis; an absorbent structure lying at least in the crotch region; and a pair of leg-cuffs lying on the skin-facing side of the chassis, extending across the crotch region into the front and rear waist regions and spaced apart from each other in the transverse direction, wherein a plurality of front and rear waist elastics arranged to extend in the transverse direction and to be spaced apart from each other in the longitudinal direction are contractibly attached under tension to the front and rear waist regions, wherein: the chassis includes an inner sheet lying on the skin-facing side, an outer sheet lying on the side opposite to the skin-facing side and the waist elastics attached between the inner and outer sheets; the absorbent structure extends across the crotch region into the front and rear waist regions; the leg-cuffs respectively include lateral proximal portions bonded to the chassis, lateral distal portions opposed to the lateral proximal portions and adapted to be spaced upward from the chassis and cuff elastics contractibly attached under tension to the lateral distal portions; at least one of the front and rear waist elastics include first waist elastics lying on the chassis outboard of the absorbent structure as viewed in the longitudinal direction and third waist elastics attached so as to extend along at least portions of the leg-opening; and at least one of the front and rear waist regions includes a first subregion provided with the first waist elastics, a third subregion provided with the third waist elastics and a second subregion lying between the first and third sub-regions, wherein a tensile stress in the first and third sub-regions is higher than that in the second subregion and the cuff elastics extend at least to the second subregion.

Object of invention

(EP2572689)

An object of this invention is to provide a disposable wearing article having a cup-shaped portion adapted for temporary collection of bodily fluids such as urine without irritating the wearer's skin.

An object of this invention is to provide a disposable wearing article having a cup-shaped portion adapted for temporary collection of bodily fluids such as urine without irritating the wearer's skin.

Some embodiments of the present invention provide a disposable wearing article having a longitudinal direction and a transverse direction.

An object of this invention is to provide a disposable wearing article having a cup-shaped portion adapted for temporary collection of bodily fluids such as urine without irritating the wearer's skin.

The present invention relates to disposable wearing articles and more specifically to disposable wearing articles, for example, disposable diapers, toilet-training pants or incontinence briefs, each including a plurality of elastics attached to waist regions.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/496; A61F-013/496; A61F-013/53; A61F-013/551

Family 3/200 - FAMPAT - ©Questel

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EP2740449	A1	2014-06-11	EP2740449

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2012-12-10
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Title

(EP2740449)

Absorbent article with high absorbent material content

Abstract

(EP2740449)

An absorbent article (20) for personal hygiene such as a diaper or training pant, the absorbent article having a front edge (10) and a back edge (12), a longitudinal axis (80) extending in a longitudinal direction of the article, the article having a length L as measured along the longitudinal axis from the front edge to the back edge, a crotch point (C) defined as the point placed at a distance of two fifth of L from the front edge of the article on the longitudinal axis. The article comprises a pair of leg cuffs (32) with a raised section (34), and an absorbent core (28) comprising at least one channel (26, 26') at least partially oriented in the longitudinal direction (80) of the article. The article has a crotch width (Wd) before use as measured between the proximal edges of the leg cuffs at the level of the crotch point of from 70 mm to 200 mm, and a Relative Crotch Width Reduction (RCWR) of at least 30 mm per kg of absorbed fluid.

Current assignees

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ROSATI RODRIGO

Advantages / Previous drawbacks

(EP2740449)

These fold lines are a very good position for the raised edge of the barrier leg cuffs to follow because of (a) it is a low motion area, and (b) it is in a region closest to the body.

Although the prior art has provided different solutions to the problem of improving leakage prevention, it still beneficial to develop new and improved solution to provide better fit of the leg cuffs at high load.

This is particularly advantageous as the leakage prevention is thus increased when the article becomes highly loaded and thus when the leakage prevention is most needed.

This can lead to a loss of functionality of the barrier cuffs, with the increased possibly of leakage.

The absorbent core in this product does not comprise cellulose fluff, the absorbent material comprises essentially SAP.

Independent claims

(EP2740449)

1. An absorbent article (20) for personal hygiene such as a diaper or training pant, the absorbent article having a front edge (10) and a back edge (12), a longitudinal axis (80) extending in a longitudinal direction of the article, the article having a length L as measured along the longitudinal axis from the front edge to the back edge, a crotch point (C) defined as the point placed at a distance of two fifth of L from the front edge of the article on the longitudinal axis, the absorbent article comprising: - a liquid permeable topsheet (24), - a liquid impermeable backsheet (25), - a pair of barrier leg cuffs (34) extending at least partially between the front edge and the back edge of the diaper on opposite sides of the longitudinal axis and present at least at the longitudinal position of the crotch point (C), each barrier leg cuff being delimited by a proximal edge (64) joined directly or indirectly to the topsheet and/or the backsheet and a free terminal edge (66), - an absorbent core (28) between the topsheet and backsheet and comprising a core wrap (16, 16') enclosing an absorbent material (60), wherein the absorbent material comprises at least 80% of superabsorbent polymers ("SAP") by weight of the absorbent material, wherein the absorbent core comprises at least one channel (26, 26') at least partially oriented in the longitudinal direction of the article, wherein the article has a Relative Crotch Width Reduction (RCWR) of at least 30 mm/kg, wherein the RCWR is calculated according to the formula: RCWR=Wd-WwMw-Md wherein Wd is the dry crotch width and Ww is the wet crotch width at the crotch point, and Mw is the wet mass of the article and Md is the dry mass of the article, the measurements being made as indicated according to RCWR Test described herein, and wherein the article has a dry crotch width Wd of from to 70 mm to 200 mm.

Object of invention

(EP2740449)

The invention provides an absorbent article for personal hygiene such as a diaper or training pant having a front edge and a back edge.

The invention provides an absorbent article for personal hygiene such as a baby diaper, a training pant or an adult incontinence product.

The present inventors have found that it may be beneficial for the free edges of the barrier leg cuffs to follow the fold lines between legs and torso.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/475; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/53; A61F-013/531; A61F-013/532; A61F-013/534; A61F-013/534; A61F-013/537; A61F-013/539

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Title

(EP2087871)
Absorbent article

Abstract

(EP2087871)
An absorbent article 1 includes an absorbent body 3 and an outer cover 2. The outer cover 2 has a front section A, crotch section C, and a rear section B and includes an outer sheet 21, an inner sheet 22, and elastic members 23. The outer cover 2 has a below-waist gather formed of a composite stretch panel in its below-waist portion D. The composite stretch panel has the outer and inner sheets 21, 22 bonded at bonds discretely arranged in the stretch direction thereof and the direction perpendicular thereto. The elastic members 23 extend not to pass the bonds without being fixed to the outer and inner sheets 21, 22 at other than their both ends. The outer and inner sheets 21, 22 form folds continuously extending over a plurality of the elastic members 23. The waist portion F of the outer cover 2 has a lower extension percentage in its laterally middle part than in the other parts on both sides of the middle part.

Current assignees

KAO

Inventors

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OKUDA YASUYUKI

Advantages / Previous drawbacks

(EP2087871)

Known disposable pull-on diapers having an absorbent body including an absorbent core and an outer cover joined to the garment-facing side of the absorbent body include a diaper having the outer cover elasticized along the waist and the below-waist portions in both the front region and the rear region to provide a better fit to a wearer's body, such as, e.g., disclosed in Patent Document 1.

This is because it is necessary to secure tensile strength of the sheet in both the MD (the fiber orientation direction) and the CD (the direction perpendicular to the fiber orientation direction) so as to provide convenience of use, i.e., to secure tear resistance during diaper change and ease of tear along the side seals 11 when the diaper is disposed of.

It is only necessary that the fibers of the outer sheet 21 or the inner sheet 22 be oriented such that the vector connecting the leading end and the trailing end of the individual fibers is coincide with the stretch direction of the composite stretch panel 4.

If the outer sheet 21 is an embossed sheet, the folds 43 of the resulting composite stretch panel 4 are liable to be nonuniform, the outer sheet 21 has reduced pliability, and it is difficult to make a difference in bending stiffness between direction Y and direction X.

When the energy required to stretch the waist opening 12 exceeds 4 N.m, it is difficult for a mother to widen the diaper in the lateral direction (a mother does not feel easy to widen).

However, a manufacturing error can cause a few elastic members 42 to pass through a few bonds 41.

is difficult to make a difference in bending stiffness between direction Y and direction X.

Independent claims

(EP2087871)

1. An absorbent article comprising an absorbent body containing an absorbent core and an outer cover joined to the garment facing side of the absorbent body, the outer cover having a lateral direction and a longitudinal direction and a front section, a crotch section, and a rear section in the longitudinal direction thereof, the front section and the rear section each having a waist portion and a below-waist portion, wherein the outer cover comprises an outer sheet, an inner sheet, and a plurality of elastic members between the outer and the inner sheets and has a composite stretch panel having a stretch direction in each of the front section and the rear section, the composite stretch panel forming a waist gather and a below-waist gather in the waist portion and the below-waist portion, respectively, in each of the front and the rear sections, the composite stretch panel having the outer sheet and the inner sheet bonded to each other at bonds discretely provided in the stretch direction and a direction perpendicular to the stretch direction and having the elastic members disposed at positions other than the bonds and fixed neither to the outer sheet nor the inner sheet at other than their opposite ends so that each of the outer sheet and the inner sheet forms a plurality of folds continuously extending over a plurality of the elastic members, and the waist portion having a smaller extension percentage in a middle part thereof in the lateral direction of the outer cover than outer parts on both sides of the middle part in the lateral direction of the outer cover.

Object of invention

(EP2087871)

As a result, the tendencies of a diaper to slide/slip down on an infant of relatively small size and to leave indentation marks on an infant of relatively large size are eliminated, and there is provided a diaper that fits wearers of broader range of sizes.

The present invention relates to an absorbent article, such as a disposable diaper or a sanitary napkin.

The present invention relates to an absorbent article having an elasticized waist portion and an elasticized below-waist portion, wherein the elasticized waist and below-waist portions has good breathability and softness while making full use of the contractibility of the elastic members used for elasticization, have excellent cushioning properties, and gently hugs the infant's body, causing little indentation on the body.

The present invention provides an absorbent article including an absorbent body containing an absorbent core and an outer cover joined to the garment facing side of the absorbent body.

The present invention relates to an absorbent article, such as a disposable diaper or a sanitary napkin.

IPC - International classification

A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/514; A61F-013/515; A61F-013/538

Family 5/200 - FAMPAT - ©Questel

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MYPI2012003834
EP11747372
KR20127024443
BR112012021065
US13/580,533
AU2011221332
CN201180011204
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1905403

Family publication details

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IN7370/CHENP/2012	A	2014-01-10	IN2012CN07370
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US20130030402	A1	2013-01-31	US20130030402
EP2540269	A1	2013-01-02	EP2540269
VN32017	A	2012-12-25	VN--32017
CN102781387	A	2012-11-14	CN102781387
KR20120121916	A	2012-11-06	KR20120121916
AU2011221332	A1	2012-09-20	AU2011221332
JP2011177309	A	2011-09-15	JP2011177309
WO2011/105412	A1	2011-09-01	WO2011105412

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2012-12-25

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(AU2011221332)
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(KR101650221)
2016-08-22
(MY-168348)
2018-10-31

Title

(EP2540269)
Disposable worn article

Abstract

(EP2540269)
A disposable worn article diaper (1) includes: a central slit (45) formed in an absorber (40) such that the absorber (40) is curved to be convex toward an inward direction toward a wearer in a crotch region; side curved portions (46L, 46R) formed in the absorber (40) along the lengthwise direction such that the absorber (40) is curved to be convex toward the outward direction. The disposable worn article diaper (1) includes a crossing elastic member (7A) crossing the absorber (40) in middle crotch regions and fixed to the absorber (40). The absorber (40) is contracted by the crossing elastic member (7A) toward a center of the absorber in the widthwise direction.

Current assignees

UNICHARM

Inventors

ARAYAMA TAKAYA
MUKAI HIROTOMO

Advantages / Previous drawbacks

(EP2540269)
It will be appreciated that the drawings are schematically shown and the ratio and the like of each dimension are different from the real ones.
However, when it is necessary to increase an absorption amount, since it is difficult to increase an absorption area in the periphery of the constricted portions, it is not possible to easily increase the absorption amount.
Since no slits are formed in the backside middle crotch region S5 outside of the crossing elastic member 7A, the absorber 40X is difficult to be bent and is easy to be flat.
Thus, even when the crossing elastic member 7A crosses the absorber 40 in the backside middle crotch region S5, it is difficult for the wearer to have an uncomfortable feeling.
is difficult to be bent and is easy to be flat.

Independent claims

(EP2540269)

1. A disposable worn article comprising: a front waistline region; a back waistline region; a crotch region positioned between the front waistline region and the back waistline region, and brought into contact with a crotch portion of a wearer; a pair of middle crotch regions positioned between the crotch region and the front waistline region and between the crotch region and the back waistline region, an absorber having a lengthwise direction, a width wise direction perpendicular to the lengthwise direction, an inward direction toward the wearer, and an outward direction toward the opposite to the inward direction; a central curved portion formed in the absorber along the lengthwise direction such that the absorber is curved to be convex toward the inward direction in the crotch region; a pair of side curved portions formed in the absorber along the lengthwise direction such that the absorber is curved to be convex toward the outward direction at outside of the width wise direction from the central curved portion; and a crossing elastic member crossing the absorber along the width wise direction in at least either of the pair of middle crotch regions, and fixed to the absorber, wherein an apex surface of the absorber being convex by the central curved portion toward the inward direction is configured to make contact with the crotch portion, and the absorber is contracted by the crossing elastic member toward a center of the absorber in the width wise direction.

Object of invention

(EP2540269)

The present invention is summarized as a disposable worn article (for example, a pant-type diaper 1) including: a front waistline region (a front waistline region S2); a back waistline region (a back waistline region S3); a crotch region (a crotch region S1) positioned between the front waistline region and the back waistline region, and brought into contact with a crotch portion of a wearer; a pair of middle crotch regions (a foreside middle crotch region S4, and a backside middle crotch region S5) positioned between the crotch region and the front waistline region and between the crotch region and the back waistline region; an absorber (an absorber 40) having a lengthwise direction (a lengthwise direction L), a width wise direction (a width wise direction W) perpendicular to the lengthwise direction, an inward direction (an inward direction IN) toward the wearer, and an outward direction (an outward direction OUT) toward the opposite to the inward direction; a central curved portion (a central slit 45) formed in the absorber along the lengthwise direction such that the absorber is curved to be convex toward the inward direction in the crotch region; a pair of side curved portions (side slits 46L, 46R) formed in the absorber along the lengthwise direction such that the absorber is curved to be convex toward the outward direction at outside of the width wise direction from the central curved portion; and a crossing elastic member (a crossing elastic member 7A) crossing the absorber along the width wise direction in at least either of the pair of middle crotch regions, and fixed to the absorber, wherein an apex surface (apex surface 45a) of the absorber being convex by the central curved portion toward the inward direction is configured to make contact with the crotch portion, and the absorber is contracted by the crossing elastic member toward the center of the absorber in the width wise direction.

According to the characteristics of the present invention, it is possible to provide a disposable worn article, such as a pant-type diaper, capable of further improving absorbing power in the case of serving to improve the comfort of a wearer when wearing the disposable worn article and to prevent the leakage of bodily waste by curving an absorber.

The present invention relates to a disposable worn article having an absorber at which a curved portion to curve the absorber is formed.

The present invention relates to a disposable worn article having an absorber at which a curved portion to curve the absorber is formed.

IPC - International classification

A61F; A61F-013/15; A61F-013/15; A61F-013/45; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/496; A61F-013/53

Family 6/200 - FAMPAT - ©Questel

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MXPA04005479
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WOSE02/002287
SE0104438

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EP1465565
JP4409951
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EP1465565
AU2002360024
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JP4409951	B2	2009-11-20	JP4409951
JP2005514161	A	2005-05-19	JP2005514161
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EP1465565	A1	2004-10-13	EP1465565
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SE0104438	L	2003-06-29	SE200104438
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Title

(EP1465565)

Absorbent article

Abstract

(EP1465565)

Absorbent article of pants-like shape, such as incontinence pants, comprising an elastic waist portion, an absorbent element (5), and a liquid-impermeable outer layer (3). Said elastic waist portion is made from an elastic first piece (1) which is rectangular. A second piece (2) forms the front portion (11) and crotch portion (12) of the pants-like article. Said second piece (2) is elongate, and the width thereof is smaller than the length of the first piece (1). The absorbent element (5) is in its entirety arranged on the second piece (2). The width of the absorbent element (5) is narrowest in an area in the crotch portion (12), which area during use of the article is situated substantially in front of the genitals of the wearer. The absorbent element is continuously narrowing in a direction towards said area, and the absorption capacity of the absorbent element per unit area is greatest in the narrowest area.

Current assignees

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Inventors

HERMANSSON KENT

PORSOE BERITH

Advantages / Previous drawbacks

(EP1465565)

The first piece 1 is formed of an elastic material and is intended during use of the article to achieve an elastic tightening around the waist of the wearer, which tightening keeps the article in place and gives it a good fit.

In such a design, the number of requisite sizes can be kept down, which leads to savings and rational manufacturing compared to if there is a need for a larger assortment of sizes.

These side seams project laterally from the finished product and are undesirable because they project and interfere with the fit of garments worn over the top.

However, this publication from 1983 discloses primitive nappy pants which did not become a commercial product.

These overlapping portions do not serve any actual purpose on the finished product and are in fact undesirable because a lot of material is wasted, that is to say they are used for no other purpose than joining together.

The overlapping, joined-together portions are less of a nuisance and less uncomfortable for the wearer than the projecting side seams on previously known nappy pants.

Independent claims

(EP1465565)

1. Absorbent article in form of nonrefastenable absorbent pants, such as incontinence pants, nappy pants or sanitary towel pants, said absorbent article has a longitudinal direction and a transverse direction and comprising an elastic waist portion, an absorbent element (5), which has a length and a width and is intended to at least cover the genitals of the wearer during use of the article, and a liquid-impermeable outer layer (3) which is intended to enclose the absorbent element on at least that side thereof which faces away from the wearer during use of the article, characterized in, that said elastic waist portion is made from an elastic first piece (1) which has a length and a width and which is elongate in a length direction parallel to said transverse direction and is intended in use to partly surround the trunk of the wearer and to form a rear portion (8) and side portions (9, 10) of the pants-like article, in that a second piece (2) forming part of the article is designed to form a front portion (11) and a crotch portion (12) of the pants-like article, in that said second piece (2) has a length and a width and is elongate along the longitudinal direction with two opposite end edges and two opposite longitudinal side edges, in that the width of the second piece is, at least in the crotch portion (12), smaller than the length of the first piece (1), in that the second piece (2) is arranged with its length direction at right angles in relation to the length direction of the first piece and is connected by a first end portion (6) to one edge portion (7) along the length direction of the first piece, centrally thereon, in

that one end portion (13) of the first piece is connected to a first side edge portion (14) of one of said side edges of the second piece, and in that the other end portion (15) of the first piece is connected in a corresponding manner to a second side edge portion (16) of the other of said side edges of the second piece, in addition to which the absorbent element (5) is in its entirety arranged on the second piece (2), in that the width of the absorbent element (5) is narrowest in an area in the crotch portion (12), which area during use of the article is intended to be situated substantially in front of the genitals of the wearer, in that the absorbent element is narrowing in a direction towards said area, and in that the absorption capacity of the absorbent element per unit area is greatest in the narrowest area.

22. Method of manufacturing an absorbent article in form of nonrefastenable absorbent pants, such as incontinence pants, nappy pants or sanitary towel pants, said absorbent article has a longitudinal direction and a transverse direction and comprising an elastic waist portion, an absorbent element (5), which has a length and a width and is intended to at least cover the genitals of the wearer during use of the article, and a liquid-impermeable outer layer (3) which is intended to enclose the absorbent element on at least that side thereof which faces away from the wearer during use of the article, characterized in, that said elastic waist portion is made from an elastic first piece (1) which is essentially rectangular with a length and a width and is intended in use to partly surround the trunk of the wearer and to form a rear portion (8) and side portions (9, 10) of the pants-like article, in that a second piece (2) forming part of the article is designed to form a front portion (11) and a crotch portion (12) of the pants-like article, in that said second piece (2) is made with a length and a width and is arranged with its length direction along the longitudinal direction with two opposite end edges and two opposite longitudinal side edges, in that the width of the second piece (2) is designed, at least in the crotch portion (12), smaller than the length of the first piece (1), in that the second piece is arranged with its length direction at right angles in relation to the length direction of the first piece and is connected by a first end portion (6) to one edge portion (7) along the length of the first piece, centrally thereon, in that one end portion (13) of the first piece (1) is connected to a first side edge portion (14) of one of said side edges of the second piece (2), and in that the other end portion (15) of the first piece (1) is connected in a corresponding manner to a second side edge portion (16) of the other of said side edges of the second piece, and in addition to which superabsorbent material is arranged in the absorbent element (5), in that the absorbent element (5) is shaped with a width which is narrowest in an area in the crotch portion (12), which area during use of the article is intended to be situated substantially in front of the genitals of the wearer, in that the absorbent element is made with continuously narrowing width in a direction towards said area, in that superabsorbent material is arranged in the absorbent element with a continuously increasing concentration in the same direction, and in that the absorbent element (5) in its entirety is arranged on the second piece (2) forming part of the article before said piece is connected to said first piece (1).

Object of invention

(EP1465565)

The invention also relates to a method of manufacturing such absorbent articles of pants-like shape.

IPC - International classification

A41B-013/04; A61F-005/44; A61F-005/451; A61F-013/15; A61F-013/472; A61F-013/49; A61F-013/496; A61F-013/514; A61F-013/53; A61F-013/53; A61F-013/535

Family 7/200 - FAMPAT - ©Questel

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CN201580078869
EP15890915
JP2017552994
RU2017137817
BR112017021259
US15/569,536
KR20177031862
CO2017011046
MX2017012735

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CN107530205
EP3288513
JP6368439
RU2656826
BR112017021259
RU2656826
JP2018510733
US20180085263
EP3288513
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RU2656826	C9	2018-07-16	RU2656826
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RU2656826	C1	2018-06-06	RU2656826
JP2018510733	A	2018-04-19	JP2018510733
US20180085263	A1	2018-03-29	US20180085263
EP3288513	A1	2018-03-07	EP3288513
KR101833864	B1	2018-03-05	KR101833864
CO2017011046	A2	2018-01-16	CO2017011046
CN107530205	A	2018-01-02	CN107530205
MX2017012735	A	2017-11-30	MX2017012735
KR20170127038	A	2017-11-20	KR20170127038
AU2015393397	A1	2017-11-16	AU2015393397
BR112017021259	A1	2017-10-10	BR112017021259
WO2016/175780	A1	2016-11-03	WO2016175780

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2015-04-29
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Title

(EP3288513)
Absorbent garment with close fit

Abstract

(EP3288513)
An absorbent garment has a minimum crotch width less than 30% the front region width. The absorbent garment has an absorbent member minimum width less than 80 mm. The absorbent member minimum width is less than 53% the minimum crotch width and is less than 60% the absorbent member maximum width.

Current assignees

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Inventors

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DINS MARLENE R
HILT RONALD ALEX
KERINS MICHAEL J

Advantages / Previous drawbacks

(WO2016/175780)

However, the desire to make absorbent garments more like cloth underwear has to be balanced with the need to maintain product absorbency and performance.

Thus, there remains a need for absorbent articles designed to fit a wide range of adult shapes and sizes that has a close and comfortable fit and yet provides the necessary leakage and absorbency performance expected by the user.

[063] It has also been found that a highly shaped chassis can be advantageous in providing an absorbent garment with close to the body fit, comfort, and good product performance.

Specifically, narrowing the absorbent insert at the crotch by removing absorbent material can result in inadequate quantity of absorbent material to capture liquids before a leak occurs.

This balance is difficult on all product forms but is particularly pronounced with absorbent garments designed for use by adults because adequate amounts of absorbent material are initially needed at the crotch of the product near the point of insult.

Independent claims

(WO2016/175780)

10. An absorbent garment defining a longitudinal direction and a transverse direction, the absorbent garment comprising, a front panel defining a front panel edge, a front panel crotch edge, a front panel first side edge, and a front panel second side edge transversely opposed to the front panel first side edge, wherein the front panel defines a front panel width in the transverse direction between the front panel first side edge and the front panel second side edge; a back panel defining a back panel edge, a back panel crotch edge, a back panel first side edge, and a back panel second side edge transversely opposed to the back panel first side edge, wherein the back panel defines a back panel width in the transverse direction between the back panel first side edge and the back panel second side edge; an insert panel disposed longitudinally between and interconnecting the front panel and the back panel, the insert panel defines an insert panel width measured in the transverse direction between an insert panel first side edge and an insert panel second side edge, the insert panel width having a maximum and a minimum; the insert panel comprising a body-facing liner, a garment-facing back sheet, and an absorbent member positioned between the liner and the back sheet, wherein the absorbent member extends in the longitudinal direction from the front panel to the back panel, wherein the absorbent member defines an absorbent member width measured in the transverse direction between an absorbent member first side edge and an absorbent member second side edge, the absorbent member width having a maximum and a minimum, wherein the absorbent member minimum width is less than 80 mm, the absorbent member minimum width is less than 53% the insert panel minimum width, and the absorbent member minimum width is less than 60% the absorbent member maximum width; and wherein the front panel first side edge is connected to the back panel first side edge at a first side seam and the front panel second side edge is connected to the back panel second side edge at a second side seam to form a pant-like configuration having a waist opening and two leg openings.

14. An absorbent garment defining a longitudinal direction and a transverse direction, the absorbent garment comprising, a front region defining a front edge, a first front side edge, and a second front side edge transversely opposed to the first front side edge, wherein the front region defines a front region width in the transverse direction between the first front side edge and the second front side edge; a back region defining a back edge, a first back side edge, and a second back side edge transversely opposed to the first back side edge, wherein the back region defines a back region width in the transverse direction between the first back side edge and the second back side edge and wherein the absorbent garment defines a product length, as measured in the longitudinal direction between the front edge and the back edge, of at least 600 mm; a crotch region disposed in the longitudinal direction between and interconnecting the front region and the back region, wherein the crotch region defines a minimum crotch width, wherein the minimum crotch width is less than 30% the front region width; an absorbent member positioned in the crotch region and extending longitudinally from the front region to the

back region, wherein the absorbent member defines an absorbent member width measured transversely between an absorbent member first side edge and an absorbent member second side edge, the absorbent member width defining an absorbent member maximum width and an absorbent member minimum width, wherein the absorbent member minimum width is less than 80 mm, the absorbent member minimum width is less than 60% the absorbent member maximum width, the absorbent member minimum width is less than 53% the minimum crotch width, and the absorbent garment defines an absorbent capacity of at least 600 g; and the first front side edge is connected to the first back side edge at a first side seam and the second front side edge is connected to the second back side edge at a second side seam to form a pant-like configuration having a waist opening and two leg openings.

CLAIMS: 1. An absorbent garment defining a longitudinal direction and a transverse direction, the absorbent garment comprising, a front region defining a front edge, a first front side edge, and a second front side edge transversely opposed to the first front side edge, wherein the front region defines a front region width in the transverse direction between the first front side edge and the second front side edge; a back region defining a back edge, a first back side edge, and a second back side edge transversely opposed to the first back side edge, wherein the back region defines a back region width in the transverse direction between the first back side edge and the second back side edge; a crotch region disposed in the longitudinal direction between and interconnecting the front region and the back region, wherein the crotch region defines a minimum crotch width, wherein the minimum crotch width is less than 30% the front region width; an absorbent member positioned in the crotch region and defining an absorbent member width measured transversely between an absorbent member first side edge and an absorbent member second side edge, the absorbent member width defining an absorbent member maximum width and an absorbent member minimum width, wherein the absorbent member minimum width is less than 80 mm, the absorbent member minimum width is less than 60% the absorbent member maximum width, and the absorbent member minimum width is less than 53% the minimum crotch width.

Object of invention

(WO2016/175780)

[002] In one aspect, the present invention provides an absorbent garment defining a longitudinal direction and a transverse direction.

[011] In another aspect, the present invention provides an absorbent garment defining a longitudinal direction and a transverse direction.

[014] In another aspect, the present invention provides an absorbent garment defining a longitudinal direction and a transverse direction.

IPC - International classification

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Family 8/200 - FAMPAT - ©Questel

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CN200610121388
DE602006005736T
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US7722590	B2	2010-05-25	US7722590
CN100490769	C	2009-05-27	CN100490769C
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TWI299264	B	2008-08-01	TWI299264
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US20060264859	A1	2006-11-23	US20060264859
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(CN100490769C)
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(KR101169104)
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Title

(EP1723939)
Pull-On Disposable Wearing Article

Abstract

(EP1723939)
A pull-on disposable wearing article is provided with a chassis and an absorbent batt structure extending on the inner surface of the chassis. The chassis has a front waist region, a rear waist region and a crotch region and is composed of a base sheet which is substantially not elastically extensible/contractible, and first and second outer sheets stretched in a transverse direction and bonded in such a stretched state to outer surfaces of the base sheet in the front and rear waist regions, respectively, and being elastically extendible/contractible in the transverse direction. An absorbent batt structure is laid inside the chassis. The base sheet defining an inner surface of the chassis is formed with gathers as the first and second outer sheets contract.

Current assignees

UNICHARM

Inventors

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KINOSHITA AKIYOSHI

HASHIMOTO TATSUYA

Advantages / Previous drawbacks

(EP1723939)

It will be appreciated that the longitudinal and transverse axes Y, X respectively correspond to the lines in Fig. 2 along which respective sectional views are taken.

The article according to the present invention allows the wearer to visually recognize the leg-holes through the waist-hole broadened by the wearer to put the article on the body and to insert the legs through the respective leg-holes without a problem that the wearer's toes might catch on the peripheral edges of the leg-holes.

In view of the problems as have been described above, it is an object of the present invention to solve the problems of the conventional pull-on disposable wearing articles.

In this case, the crotch region 14 is heat treated for loss of extensibility except the side edges thereof so that these side edges may function as the crotch side sheets 50.

It will be apparent that none of the gathers is formed in the crotch region 14 of the not elastically extensible chassis 15 since the first and second outer sheets 20, 21 are not present in this crotch region 14.

Independent claims

(EP1723939)

1. A pull-on disposable wearing article comprising; a chassis having a longitudinal axis and a transverse axis being orthogonal to each other; an absorbent batt structure; said chassis having a front waist region made of a thermoplastic fibrous nonwoven fabric including a front waistband member adapted to be elastically extensible in a direction defined by said transverse axis but substantially not elastically extensible in a direction defined by said longitudinal axis, a rear waist region made of a thermoplastic fibrous nonwoven fabric including a rear waistband member adapted to be elastically extensible in a direction defined by said transverse axis but substantially not elastically extensible in a direction defined by said longitudinal axis, a crotch region being substantially not elastically extensible at least in the direction defined by said longitudinal axis, side edges of said crotch region opposite to each other in the direction defined by said transverse axis describing curves concaved by a predetermined depth toward the longitudinal axis as viewed with said chassis as a whole developed with said front and rear waist regions unfolded away from each other, a waist-hole and a pair of leg-holes; and said batt structure extending on an inner surface of said chassis between said front and rear waist regions, said article further comprising: and said chassis comprising a base sheet said front and rear waist regions, said crotch region and said concavely curved side edges thereof substantially not elastically extensible at least in the direction defined by said longitudinal axis and first and second outer sheets being elastically extensible in the direction defined by said transverse direction and bonded to respective outer surfaces of said front and rear waist regions of said base sheet while said first and second outer sheets being stretched in the direction defined by said transverse axis so that said base sheet is formed with gathers as said first and second outer sheets contract; and a pair of liquid-resistant crotch side sheets, each having a proximal edge, a free edge and opposite ends and being elastically extensible in the direction defined by said longitudinal axis, having said proximal edges bonded to said crotch region along vicinities of bottoms of said concavely curving edges below side edges of said batt structure and said opposite ends bonded to said front and rear waist regions so that, when the article is put on the wearer's body, nonbonded zones of said crotch side sheets including said free edges are freely extensible/contractible with respect to said side edges of said batt structure and extend outward approximately from side edges of a liquid-absorbent zone of said batt structure corresponding to said side edges of said crotch region.

Object of invention

(EP1723939)

The present invention relates generally to a pull-on disposable wearing article and particularly to such wearing article suitable for a pull-on incontinence diaper, a pull-on disposable diaper for infant, a disposable training pant for baby and particularly for pull-on disposable incontinence diaper.

According to the present invention, there is provided a pull-on disposable wearing article comprising a chassis having a longitudinal axis and a transverse axis being orthogonal to each other and an absorbent batt structure.

The present invention relates generally to a pull-on disposable wearing article and particularly to such wearing article

suitable for a pull-on incontinence diaper, a pull-on disposable diaper for infant, a disposable training pant for baby and particularly for pull-on disposable incontinence diaper.

IPC - International classification

A41B-013/04; A61F-005/44; A61F-013/00; A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/53

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JP2011504592
MX2010011084
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TW98111128
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RU2010146691
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MX2010011084
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TW201010679
WO2009/128029
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KR101568445	B1	2015-11-11	KR101568445
EP2268249	B1	2014-11-26	EP2268249
AU2009237346	B2	2014-02-13	AU2009237346
RU2489999	C2	2013-08-20	RU2489999
EP2268249	A4	2012-12-19	EP2268249
RU2010146691	A	2012-05-27	RU2010146691
US8079994	B2	2011-12-20	US8079994
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US20090264851	A1	2009-10-22	US20090264851
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Title

(EP2268249)

Disposable absorbent articles having gender-specific containment flaps

Abstract

(EP2268249)

In one aspect, the present invention relates to an array of gender-specific disposable absorbent articles having gender-specific containment flaps. In one embodiment, the array of articles comprises a first disposable absorbent article adapted to be worn by males, and a second absorbent article adapted to be worn by females. The first disposable absorbent article comprises a first pair of containment flaps, and the second disposable absorbent article comprises a second pair of containment flaps. The first pair of containment flaps differs from the second pair of containment flaps in at least one structural feature. In particular embodiments, the structural feature that differs is selected from the group consisting of flap active length, flap active-portion longitudinal position, flap tension, flap height, distal-to-distal spacing, and proximal-to-proximal spacing. In another aspect, the present invention pertains to a method of marketing gender- specific absorbent articles having gender-specific containment flaps.

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Advantages / Previous drawbacks

(EP2268249)

Also, a leg-opening front edge having a shorter anterior length is more likely to result in a boundary that better conforms to the curvature of the upper thigh of the typical female user of the article.

Figures 3 and 4, on the other hand, do not show a surge material, but do show both the absorbent core and the perimeter of the substrates used to encase the absorbent core.

Independent claims

(EP2268249)

1. An array of gender-specific disposable absorbent articles, the array comprising: a first disposable absorbent article adapted to be worn by males, the article comprising: a chassis (3) comprising a garment-side outer cover (54), a body side liner (52), and an absorbent core (24) sandwiched between the outer cover (54) and liner (52), the chassis (3) defining a waist opening front edge (12), a waist opening back edge (14), two side edges (8,10) connecting the waist opening front (12) and back edges (14), the absorbent core (24) defining an absorbent front edge (28) and an absorbent back edge; and a first pair of containment flaps (80) disposed on the chassis (3), each flap defining a proximal end and a distal end and each flap (80) having an elasticized first active portion, a first flap active length (84), a first flap active portion longitudinal position, a first flap tension, and a first flap height (98), each pair of flaps (80) defining a first distal-to-distal spacing (99) and a first proximal-to-proximal spacing (100); and a second disposable absorbent article adapted to be worn by females, the article comprising: a chassis (3) comprising a garment-side outer cover (54), a body side liner (52), and an absorbent core (24) sandwiched between the outer cover (54) and liner (52), the chassis (3) defining a waist opening front edge (12), a waist opening back edge (14), two side edges (8,10) connecting the waist opening front (12) and back edges (14), the absorbent core (24) defining an absorbent front edge (28) and an absorbent back edge; and a second pair of containment flaps (80) disposed on the chassis (3), each flap (80) defining a proximal end and a distal end and each flap (80) having an elasticized second active portion, a second flap active length (84), a second flap active portion longitudinal position, a second flap tension, and a second flap height (98), each pair of flaps (80) defining a second distal-to-distal spacing (99) and a second proximal-to-proximal spacing (100), characterised in that the first pair of containment flaps (80) differs from the second pair of containment flaps (80) in at least the structure feature of the first flap active portion longitudinal position

being further forward than the second flap active portion longitudinal position.

Object of invention

(EP2268249)

In another aspect, the present invention pertains to an array of gender-specific disposable absorbent articles having both gender-specific containment flaps as well as at least one additional gender-specific feature.

For purposes of this application, the term "anterior length" refers to the shortest distance between the waist-opening front edge and the leg-opening front edge.

The present invention provides an array of gender-specific disposable absorbent articles as claimed in claim 1.

In another aspect, the present invention pertains to an array of gender-specific disposable absorbent articles having both gender-specific containment flaps as well as at least one additional gender-specific feature.

In another aspect, the present invention pertains to an array of gender-specific disposable absorbent articles having both gender-specific containment flaps as well as at least one additional gender-specific feature.

The present invention provides an array of gender-specific disposable absorbent articles as claimed in claim 1.

In one aspect, the present invention pertains to an array of gender-specific disposable absorbent articles having gender-specific containment flaps.

In another aspect, the present invention pertains to an array of gender-specific disposable absorbent articles having both gender-specific containment flaps as well as at least one additional gender-specific feature.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/491; A61F-013/491; A61F-013/494; A61F-013/496; A61F-013/53; A61F-013/551

Family 10/200 - FAMPAT - ©Questel

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Application number

FR9507635
US08/268,054
CO95028198
PE27227695
BR9503001
SV1995000033
JP16163495
ZA9505282
KR19950017755
AU2322595
GB9513311
EP95110009
CA2147686

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FR2721822
US5601545
CO4410302
PE38496
BR9503001
SV1995000033
JPH0866426
ZA9505282
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FR2721822
EP0689815
CA2147686
GB9513311
BRPI9503001

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Family publication details

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BR9503001	A	1996-06-25	BR9503001
SV1995000033	A	1996-06-18	SV9500033
JPH0866426	A	1996-03-12	JP08066426
ZA9505282	B	1996-01-31	ZA9505282
KR960000179	A	1996-01-25	KR19960000179
AU2322595	A	1996-01-11	AU9523225
GB2290715	A	1996-01-10	GB2290715
FR2721822	A1	1996-01-05	FR2721822
EP0689815	A1	1996-01-03	EP-689815
CA2147686	A1	1995-12-30	CA2147686
GB9513311	D0	1995-09-06	GB9513311
BRPI9503001	A1	1995-08-15	BR9503001

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1994-06-29

Application dates

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1996-01-11
1996-01-10
1996-01-05
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1995-12-30
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Grant dates

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1997-02-11
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1997-04-04
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1996-01-31

Title

(EP-689815)
Disposable absorbent article with improved waist containment and gasketing

Abstract

(EP0689815)
A disposable absorbent article (20) having improved containment at the waist portion thereof comprises an absorbent layer (86) and a surge layer (114) in liquid communication therewith, and a liquid impermeable baffle layer (132) overlying portions of the absorbent layer (86)and the surge layer (114). The front edge (90) of the absorbent structure (42) is spaced from the back edge (150)of a waist elastic member (28) by a selected separation distance, thereby enhancing the gasketing effect of the waist elastic member (28) on the article (20). <MATH>

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THIESSEN RICHARD HARRY

Advantages / Previous drawbacks

(EP0689815)
As can be appreciated, multiple designs or constructions can be provided to absorbent layer 86 and absorbent panel 92.
It is not necessary for absorbent panel 92 to have the same width or thickness as absorbent layer 86.
Consequently, the sides, edges, and surfaces may be curved or sloping, thus making it possibly difficult to discern precise or exact boundaries, such as the boundaries between inner absorbent wall 94, front section surface 106, and back section surface 108.

Independent claims

(EP0689815)
1. A disposable absorbent article (20), comprising: a backsheet (44), an absorbent structure (42) disposed on said backsheet (44), said absorbent structure (42) comprising (i) an absorbent layer (86) comprising a front edge (90) and a back edge (88), and (ii) a surge layer (114) disposed on said absorbent layer (86), said surge layer (114) comprising a front edge (120) and a back edge (122), said surge layer front edge (120) and said surge layer back edge (122) being respectively spaced inwardly of said absorbent layer front edge (90) and said absorbent layer back edge (88), and a liquid impermeable baffle layer (132) overlying said front edge (90) of said absorbent layer (86).

Object of invention

(EP0689815)

According to one aspect of the invention this improvement includes improving the absorption capacity at the waist portion of the article, and enhancing the gasketing effect at the waist portion by providing a selected separation distance between a waist elastic member and the edge of the absorbent layer.

According to another aspect of the present invention there is provided a disposable absorbent article comprising a backsheet including a front portion with a front edge and a back portion with a back edge, and an absorbent structure on the backsheet.

Therefore, it is an object of the present invention to provide a disposable absorbent article having improved waste containment and gasketing at the waist portion thereof.

The present invention relates to disposable absorbent articles.

The present invention relates to disposable absorbent articles.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/496; A61F-013/53; A61F-013/53

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JP2007082890	A	2007-04-05	JP2007082890	

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Application dates

2005-09-26

Publication dates

2011-02-10

2007-04-05

Grant dates

(JP4679321)

2011-02-10

Title

(JP2007082890)

Underwear type diaper

Abstract

(JP2007082890)

PROBLEM TO BE SOLVED: To provide an underwear type diaper where the whole diaper can easily be pulled up by holding and pulling up the front section and where excellent wearing feeling is obtained.

SOLUTION: In the underwear type diaper, waist elastic members 51 are arranged along the direction of the width of the diaper in the vicinity of the waist opening parts of respective front section F and back section G. On the side of a diaper horizontal direction center line CL compared with the waist elastic members 51 of the respective front section F and back section G in a developed and stretched state, front section curve elastic members 71 and back section curve elastic

members 72 are curverdly arranged so as to approach the horizontal center line of the diaper on the side of the horizontal center part of the diaper, compared with that at both of the ends of the diaper width direction. The both of the elastic members 71 and 72 are ≥50 mm separated in the longitudinal direction of the diaper at the nearest part of each other in the vicinity of the width direction center part of the diaper, and the maximum displacement distance in the longitudinal direction of the diaper of the elastic members 71 is longer than the longest displacement distance of the diaper longitudinal direction of the elastic members 72.

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Current assignees

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Inventors

KOYAMA TAKAO

Advantages / Previous drawbacks

(JP2007082890)

In addition, in the diaper 1 while wearing, as shown in Fig. 5 (b), the elastic member 71, 72 by the action of contraction, diapers, and the buttocks of the wearer's abdomen region to deform into the shape having the same shape, but for good fit, without hunting, can provide good wearing feeling.

However, the diaper 1 patent, the corresponding position on the abdomen of the front body part, an elastic member is disposed in a transverse direction to the abdomen and the diaper, the elastic member and lifting the front body member and an elastic abdominal contraction forces intersect each other in order to interfere with each other, when pulling the diaper has a front body, its pulling force is not sufficiently transmitted to the resilient member to lift the back body part.

Independent claims

(JP2007082890)

The front body and back body has, at the waist opening and a pair of leg openings of the pants-type disposable diaper formed in, the front body and back body respectively near the waist opening, the waist elastic members are disposed along the diaper width direction, the front body and back body in the expanded state and the extend to which the respective waist elastic member than the side to the lateral centerline of the diaper, in the diaper width direction than in the end portions of the diaper in the diaper width direction in a central portion of the horizontal center line so as to approach, and are curved, the curvature of the curved elastic members and the front body member side and the back body part, the front body and back body and the curved elastic member the elastic member is curved, in the vicinity of the central portion to each other in the diaper width direction in the longitudinal direction of the diaper to the closest portion and spaced away 50 mm or more, and the back body in the longitudinal direction of the elastic member is curved to a maximum displacement distance of the diaper, the front body in the longitudinal direction of the curved elastic member is larger than a maximum displacement distance of the nappy pants-type diapers.

Object of invention

(JP2007082890)

PROBLEM TO BE SOLVED: Lifting the front body has, facilitate the overall diaper can be raised, in addition, an excellent wearing feeling can be obtained to provide a diaper.

SOLUTION: Pant diaper is of the present invention, each of the front body and the back body G F the waist opening 51 in the vicinity of the waist elastic members are disposed along the width direction of the diaper, the front body in the expanded state and the back body and extensible F g each of the waist elastic member 51 on the side of the diaper than the lateral centerline CL, diapers in the diaper width direction than in the end portions of the central portion of the side of the transverse center line of the diaper is curved so as to approach the front body 71 and a curved resilient member is disposed on the curved back body 72 and an elastic member, two elastic members 71, 72 is, in the vicinity of the central portion of the diaper with the nearest longitudinally spaced at least 50 mm and a diaper, an elastic member 71 and the maximum displacement distance in the longitudinal direction of the diaper, the elastic member 72 in the longitudinal direction of the diaper is greater than a maximum displacement distance.

SELECTED DRAWING: 3 Fig.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/496

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EP2352474
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RU2544150	C2	2015-03-10	RU2544150
CN102202628	B	2014-10-22	CN102202628B
AU2009312492	B2	2014-07-10	AU2009312492
EP2352474	A4	2014-03-05	EP2352474
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WO2010/052597	A3	2010-09-23	WO201052597
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AU2009312492	A1	2010-05-14	AU2009312492
US20100108554	A1	2010-05-06	US20100108554

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2014-10-22

Title

(EP2352474)
Gender-specific, disposable absorbent articles

Abstract

(EP2352474)
Disposable absorbent articles product designs tailored to the differing needs and preferences of males and females are disclosed. In particular embodiments, an array of gender-specific, disposable, absorbent articles comprises a package of first disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by females, and a package of second disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by males. The first disposable absorbent articles differ from the corresponding second disposable absorbent articles in any of a variety of aspects to customize the products for each gender. In certain embodiments, the array includes one product adapted for use by one gender, and a unisex product adapted for use by either gender.

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KRAUTKRAMER PATSY A

Advantages / Previous drawbacks

(WO2010/052597)

Also, a leg-opening front edge having a shorter anterior length is more likely to result in a boundary that better conforms to the curvature of the upper thigh of the typical female user of the article.

For example, for an adult incontinence garment, articles adapted for men may, in particular embodiments, desirably have a shorter crotch length 82 than the crotch length 82F for the corresponding articles adapted for women, to allow the product to better fit the relatively smaller legs which have been found to be common with aging men.

For example, for an adult incontinence garment, articles adapted for men may, in particular embodiments, desirably have a shorter product length 80 than the product length 8OF for the corresponding articles adapted for women, to allow the product to better fit below the bellies of aging men which frequently protrude from the rest of the body.

Figures 3 and 4, on the other hand, do not show a surge material, but do show both the absorbent core and the perimeter of the substrates used to encase the absorbent core.

For example, transversely folding the flaps outward may be more suitable for male users, in that the flaps may be expected to form a more "cup-like" shape, whereas transversely folding the flaps inward may be more suitable for female users, wherein such a design may be expected to cause less irritation in the female crotchal region.

Independent claims

(WO2010/052597)

We claim: 1. An array of gender-specific, disposable, absorbent articles, the array comprising: a package of first disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by females, each first disposable absorbent article having a first product length; a package of second disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by males, each second disposable absorbent article having a second product length; wherein the first product length is different from the second product length.

4. An array of gender-specific, disposable, absorbent articles, the array comprising: a package of first disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by females, each first disposable absorbent article having a first crotch length; a package of second disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by males, each second disposable absorbent article having a second crotch length; wherein the first crotch length is different from the second crotch length.

7. An array of gender-specific, disposable, absorbent articles, the array comprising: a package of first disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by females; a package of second disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by males; wherein either each first disposable absorbent article has a first graphic visible when viewing an inner, body-facing surface of the first disposable absorbent article , each second disposable absorbent article has a second graphic visible when viewing an inner, body-facing surface of the second disposable absorbent article, or both each first disposable absorbent article has a first graphic visible when viewing the inner, body-facing surface of the first disposable absorbent article and each second disposable absorbent article has a second graphic visible when viewing the inner, body-

facing surface of the second disposable absorbent article.

11. An array of gender-specific, disposable, absorbent articles, the array comprising: a package of first disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by females; a package of second disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by males; wherein the package of first disposable absorbent articles has a first fragrance, and the package of second disposable absorbent articles has either (1) a second fragrance different from the first fragrance or (2) no fragrance.

14. An array of gender-specific, disposable, absorbent articles, the array comprising: a package of first disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by females, each first disposable absorbent article having a first leg elastic member; a package of second disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by males, each second disposable absorbent article having a second leg elastic member; wherein the first leg elastic member extends along a first path and the second leg elastic member extends along a second path that has a different shape than the first path.

17. An array of gender-specific, disposable, absorbent articles, the array comprising: a package of first disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by females, each first disposable absorbent article having a separately attached first waistband; a package of second disposable absorbent articles, the package bearing indicia indicating that the articles therein are adapted to be worn by males, each second disposable absorbent article having a separately attached second waistband; wherein the first waistband differs from the second waistband in at least one of width and tension.

Object of invention

(WO2010/052597)

For purposes of this application, a women's article having this feature comprises a leg-opening front edge having (or, alternatively, establishing a boundary having) a greater convexity compared to the leg-opening front edge of the corresponding men's article.

For purposes of this application, the term "anterior length" refers to the shortest distance between the waist-opening front edge and the leg-opening front edge.

In one aspect, the present invention is directed to an an array of gender- specific, disposable, absorbent articles.

IPC - International classification

A61B-019/02; A61F-013/15; A61F-013/47; A61F-013/47; A61F-013/471; A61F-013/471; A61F-013/472; A61F-013/53; A61F-013/56; B65D-085/00

Family 13/200 - FAMPAT - ©Questel

Earliest priority number

US60/092,399P

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RU2001103890
JP2000558775
AU5209499
ARP990103373
CN99810829
ZA200100062
KR20017000322
EP99937217
BR9912002
WOUS99/015442

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RU2221531
JP2002520090
AU747138

AR019761
CN1316893
ZA200100062
KR20010053447
EP1096910
BR9912002
BRPI9912002
AU5209499
WO00/02511

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Family publication details

RU2221531	C2	2004-01-20	RU2221531
JP2002520090	A	2002-07-09	JP2002520090
AU747138	B2	2002-05-09	AU-747138
AR019761	A1	2002-03-13	AR--19761
CN1316893	A	2001-10-10	CN1316893
ZA200100062	B	2001-07-19	ZA200100062
KR20010053447	A	2001-06-25	KR20010053447
EP1096910	A1	2001-05-09	EP1096910
BR9912002	A	2001-04-10	BR9912002
BRPI9912002	A1	2001-04-10	BR9912002
AU5209499	A	2000-02-01	AU9952094
WO00/02511	A1	2000-01-20	WO200002511

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1998-07-10

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1999-07-08
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2001-01-03

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2004-01-20
2002-07-09
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2002-03-13
2001-10-10
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2000-01-20

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(RU2221531)

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(AU-747138)

2002-05-09

Title

(EP1096910)

Disposable underpants including skewed absorbent core

Abstract

(EP1096910)

A three dimensional disposable underpant having an absorbent core has been skewed forward by a factor of no more than 0.155. The absorbent core is disposed within the front, central, and back sections of the disposable underpant such that the length of the absorbent core in the back section of the disposable underpant divided by the length of the absorbent core in the front and central sections of the disposable underpant is less than 0.155 and the length of the absorbent core in the front section of the disposable underpant is greater than the length of the absorbent core in the back section of the disposable underpant. The disposable underpant may include elasticized leg and waist openings, resulting in the underpant being stretchable about the hip and stomach regions of a user.

Current assignees

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Advantages / Previous drawbacks

(WO00/02511)

As can be appreciated, the movement of aqueous liquid both away from the wearer and along the length and width of the absorbent core 50 results in an increase in the utilization of the area of the absorbent core 50 since the aqueous liquid moves towards the distal ends of the absorbent core 50, and the result is an improvement of the absorption characteristics of the absorbent core 50.

Thus, it becomes apparent that a need exists for an absorbent underpant-type garment that improves the absorbent characteristics and the containment characteristics of the underpant-type garment while still being comfortable to wear. Using waist elastic 21 having a different tension or elongation than the tension or elongation used in the waist portion elastic 22 can provide a better fitting underpant 12.

However, it is not intended that this term be limited to only a rectangular shape.

In addition, this form of underpant-type garment results in the costly and inefficient placement of absorbent material in the back region where it is not used and hence wasted.

Typically, the absorbent core is placed such that much of the absorbent capacity is located where it is not totally utilized and creates a configuration which is bulky, particularly in the center portion and back region.

Independent claims

(WO00/02511)

We Claim: 1. A disposable underpant defining an initial expanded shape having longitudinal and transverse axes, a front section, a back section, said front section and said back section being generally oppositely disposed on said longitudinal

axis and a central section disposed between said front section and said back section, and each said section having a length along the longitudinal axis of one third of the length of said underpant comprising: a) an outer cover having a front body portion and a back body portion connected by a crotch portion, said front and back body portions connected together to form a waist opening and two leg openings; and, b) an absorbent barrier composite associated within at least said crotch portion having a liquid impervious layer, a pervious layer, and a generally rectangular absorbent core having a front end edge and a back end edge positioned between said liquid impervious layer and a pervious layer, wherein said absorbent core is disposed within said sections such that the length of said absorbent core in the back section divided by the length of said absorbent core in said front section and said central section is less than 0.155 and said length of said absorbent core in said front section is greater than said length of absorbent core in said back section.

12. A disposable underpant defining an initial expanded shape having longitudinal and transverse axes, a front section, a back section, said front section and said back section being generally oppositely disposed on said longitudinal axis and a central section disposed between said front section and said back section, and each said section having a length along the longitudinal axis of one third of the length of said underpant comprising: a) an outer cover having a front body portion and a back body portion connected by a crotch portion, said front and back body portions connected together to form a waist opening and two leg openings; and, b) an absorbent barrier composite associated within at least said crotch portion having a liquid impervious layer, a pervious layer, and a generally rectangular absorbent core having a front end edge and a back end edge positioned between said liquid impervious layer and a pervious layer; and, c) said outer cover further comprises leg elastic positioned around each of said leg openings to form a gather around each said leg opening, and waist portion elastic positioned around said front and back body portions to form a gather of said front and back body portions, wherein said absorbent core is disposed within said sections such that the length of said absorbent core in the back section divided by the length of said absorbent core in said front section and said central section is less than 0.155 and said length of said absorbent core in said front section is greater than said length of absorbent core in said back section.

Object of invention

(WO00/02511)

Briefly, this invention describes a three dimensional, disposable, discrete underpant which typically includes elasticized leg openings and waist portion that is circumferentially stretchable about the hip and stomach regions and which provides incontinence protection.

The present invention provides an improved absorbent disposable underpant having improved absorption and containment characteristics as well as improved comfort characteristics.

This present invention relates to underpants in general, and more specifically to disposable incontinence underpants having a liquid impervious region and an absorbent core shifted forward for more effectively containing and absorbing body discharges and waste.

IPC - International classification

A61F; A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/53; A61F-013/53; A61F-013/72; A61L-015/42

Family 14/200 - FAMPAT - ©Questel

Earliest priority number

WOSE2012/051475

Application number

PL12881984T
CN201280077762
JP2015549305
EP12881984
TW102142055
CA2895643
MX2015007951
BR112015015014
RU2015129703
KR20157017042

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IN4378/DELNP/2015
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PL2934404
CN104869955
JP6298074
EP2934404
TWI605944
CA2895643
MX351204
BR112015015014
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RU2620747
KR101735309
RU2015129703
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IN4378/DELNP/2015
US20150328056
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MX2015007951
CN104869955
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AU2012397336
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CA2895643

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Family publication details

PL2934404	T3	2018-08-31	PL2934404
CN104869955	B	2018-08-14	CN104869955B
JP6298074	B2	2018-03-20	JP6298074
EP2934404	B1	2017-12-06	EP2934404
TWI605944	B	2017-11-21	TWI605944
CA2895643	C	2017-11-07	CA2895643
MX351204	B	2017-10-05	MX-351204
BR112015015014	A2	2017-09-26	BR112015015014
BR112015015014	A1	2017-08-29	BR112015015014
RU2620747	C2	2017-05-29	RU2620747
KR101735309	B1	2017-05-15	KR101735309
RU2015129703	A	2017-01-26	RU2015129703
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AU2012397336	B2	2016-05-19	AU2012397336
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EP2934404	A1	2015-10-28	EP2934404
MX2015007951	A	2015-10-08	MX2015007951
CN104869955	A	2015-08-26	CN104869955
KR20150091117	A	2015-08-07	KR20150091117
AU2012397336	A1	2015-07-09	AU2012397336
TW201434648	A	2014-09-16	TW201434648
WO2014/098683	A1	2014-06-26	WO201498683
CA2895643	A1	2014-06-26	CA2895643

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2012-12-21
2012-12-21
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2017-01-26
2016-08-03
2016-05-19
2016-03-03
2015-11-27
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2015-08-26

2015-08-07
2015-07-09
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2014-06-26
2014-06-26

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2017-05-15
(MX-351204)
2017-10-05
(CA2895643)
2017-11-07
(TWI605944)
2017-11-21
(CN104869955B)
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(PL2934404)
2018-08-31

Title

(EP2934404)
Elastic laminate and process for the manufacture of elastic laminate

Abstract

(EP2934404)
The present invention relates to an elastic laminate comprising a first nonwoven layer, a second nonwoven layer, and a plurality of elastic strands arranged in parallel with one another between said first and second nonwoven layers and to a process for the production of the laminate. The elastic laminate comprises elastic strands (412; 4120) that are stretched and individually coated with an adhesive. The first and second nonwoven layers are attached to the stretched elastic strands (412; 4120) to provide a corrugated elastic laminate (1200) when the elastic strands (412; 4120) are relaxed. At least one of the nonwoven layers is attached to the strands (412; 4120) at distinct adhesive bonding points (4122) in a repeating predetermined pattern in a lengthwise direction along the strands (412; 4120) to form a predetermined corrugation pattern, and the nonwoven layers are substantially free of adhesive, except in the adhesive bonding points (4122) where the layers are attached to the elastic strands (412; 4120).

Current assignees

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Advantages / Previous drawbacks

(EP2934404)

The basis weight of from 10 to 30 g/m2 has been found to provide best comfort and flexibility while processability of the material is still good.

However, adhesives are nevertheless desirable in the production of elastic laminates, since they are well-known in the art, safe, stable in the production and present an economic alternative for manufacturing laminates.

The nonwoven material layers or webs of the present invention may advantageously be selected from, for example, of spun bond, air laid, wet laid, carded or melt blown nonwovens.

The product suffers of the drawbacks listed above, e.g. the strands are unevenly coated, whereby an uneven surface structure is obtained for the laminate.

However, there are some drawbacks with the above-described production technology and the product obtained.

A low Surface roughness and Friction is known to cause less chafe for a wearer of hygiene articles and to correlate with perceived smoothness in sensorial tests.

Independent claims

(EP2934404)

1. An elastic laminate comprising a first nonwoven layer, a second nonwoven layer, and a plurality of elastic strands arranged in parallel with one another between said first and second nonwoven layers characterized in that - the elastic strands (412; 4120) are stretched and individually coated with an adhesive, and the first and second nonwoven layers are attached to the stretched elastic strands (412; 4120) to provide a corrugated elastic laminate (1200) when the elastic strands (412; 4120) are relaxed, wherein - at least one of the nonwoven layers is attached to the strands (412; 4120) at distinct adhesive bonding points (4122) in a repeating predetermined pattern in a lengthwise direction along the strands (412; 4120) to form a predetermined corrugation pattern, and - the nonwoven layers are substantially free of adhesive, except in the adhesive bonding points (4122) where the layers are attached to the elastic strands (412; 4120).

5. A process for the manufacture of an elastic laminate in a lamination process comprising the steps of: i. feeding a first nonwoven web (302) to the lamination process; ii. feeding a second nonwoven web (402) to the lamination process; iii. feeding a plurality of elastic strands (412) in parallel to the lamination process; iv. stretching the elastic strands (412); v. individually coating the elastic strands (412) with an adhesive; vi. bringing the first and second nonwoven webs (302; 402) and the stretched, adhesive coated, elastic strands (412) together; vii. compressing the first and second nonwoven webs (302; 402) and the stretched, adhesive coated elastic strands (412) together by means of at least one compression device (314) comprising a first compression means (312) and a second compression means (313) to form a laminate, wherein the at least the first compression means (312) has a predetermined surface pattern to form distinct adhesive bonding points (4122) in a repeating predetermined pattern in a lengthwise direction along the elastic strands (412); and viii. relaxing the elastic strands in the formed laminate to form a corrugated elastic laminate with a predetermined corrugation pattern.

Object of invention

(EP2934404)

The present invention relates also to a process for the manufacture of an elastic laminate in a lamination process.

The present invention relates to an elastic laminate comprising a first nonwoven layer, a second nonwoven layer and a plurality of elastic strands in between the nonwoven layers and to a process for the production of the elastic laminate.

The invention further relates for the use of the elastic laminate in absorbent products.

The aim of the present invention is to provide an elastic laminate having improved smoothness, softness, flexibility and breathability, as compared with laminates obtained as described above.

A further object of the invention is to reduce problems associated with the traditional adhesive spray technology in the production of elastic laminates and the problems experienced with the products produced by the process.

The aim of the present invention is to provide an elastic laminate having improved smoothness, softness, flexibility and breathability, as compared with laminates obtained as described above.

The aim of the present invention is to provide an elastic laminate having improved smoothness, softness, flexibility and breathability, as compared with laminates obtained as described above.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/56; B32B-003/28; B32B-005/26; B32B-007/04; B32B-007/06; B32B-007/14; B32B-037/14; D04H-003/00; D04H-003/02; D04H-003/08; D04H-003/12

Family 15/200 - FAMPAT - ©Questel

Earliest priority number

US08/971,389

Application number

BR0110230
US10/932,779
ZA200207917
JP2001581735
ARP010102033
MXPA02010139
EP01930800
KR20027014994
AU5730301
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BRPI0110230
US7150731
ZA200207917
US20050055001
BR0110230
BRPI0110230
JP2003532495
AR028391
MXPA02010139
EP1280492
KR20020091281
AU5730301
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Family publication details

BRPI0110230	A2	2010-01-19	BR200110230
US7150731	B2	2006-12-19	US7150731
ZA200207917	B	2006-04-26	ZA200207917
US20050055001	A1	2005-03-10	US20050055001
BR0110230	A	2005-01-18	BR200110230
BRPI0110230	A1	2005-01-18	BRPI0110230
JP2003532495	A	2003-11-05	JP2003532495
AR028391	A1	2003-05-07	AR--28391
MXPA02010139	A	2003-03-10	MX2002PA010139
EP1280492	A1	2003-02-05	EP1280492
KR20020091281	A	2002-12-05	KR20020091281
AU5730301	A	2001-11-20	AU200157303
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1997-11-17

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2001-04-26
2001-04-26
2001-04-26
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2006-04-26

Title

(EP1280492)
Disposable absorbent underpants

Abstract

(EP1280492)
The disposable underpants include an outer cover and an inner liner attached to the outer cover. An absorbent pad secured to the crotch portion, includes a liquid-permeable cover, a liquid impermeable baffle and an absorbent layer positioned therebetween. A first pair of leg elastics is secured between the outer cover and the inner liner at the front portion such that each of the first pair of leg elastics is positioned adjacent to one of the pair of leg openings. A second pair of leg elastics is secured between the outer cover and the inner liner at the back portion such that each of the second pair of leg elastics is positioned adjacent to one of the pair of leg openings. A third pair of leg elastics is secured between the liquid-permeable cover and the liquid impermeable baffle such that each of the third pair of leg elastics is positioned adjacent to one of the pair of leg openings intermediate one of the first and second pairs of leg elastics. Each of the third pair of leg elastics is separated from at least one of the first and second leg elastics by a gap. The first, second and third pairs of leg elastics allow gathers to form about each of the leg openings to prevent leakage of body fluid from the underpants.

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Advantages / Previous drawbacks

(KR20020091281)

It is another object of the present invention is easy to manufacture disposable absorbent underpants for providing a composition of this invention.

However, 2 only one of the pair of gap (84) and (86) if it is desired to use, can be doing so.

Gap (84) and (86) an elastic body (60) adjacent to the outer cover and an inner (12) liner (20), (68) and (76) of the force is a material which forms the wearer's thighs during use fits comfortably will allow. 1 the pair of the first pair of first gap (84) 1 and 1 2 gap (86) positions will result in a failure of fluid in the flow channel.

Independent claims

(WO01/85080)

We claim: 1. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined together by a crotch portion; b) an inner liner attached to said outer cover, said inner liner having at least a front portion and a back portion, said front and back portions of said outer cover and said inner liner being connected together to form a waist opening and a pair of leg openings; c) an absorbent pad secured to said crotch portion, said absorbent pad including a liquid-permeable cover, a liquid impermeable baffle and an absorbent layer positioned therebetween; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, each of said first pair of leg elastics being positioned adjacent to one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and said inner liner at said back portion, each of said second pair of leg elastics being positioned adjacent to one of said pair of leg openings; f) a third pair of leg elastics secured between said liquid-permeable cover and said liquid impermeable baffle, each of said third pair of leg elastics being positioned adjacent to one of said leg openings intermediate one of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from at least one of said first and second pairs of leg elastics by a gap, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants 2. The disposable absorbent underpants of claim 1 wherein one of said third pair of leg elastics is separated from one of said first pair of leg elastics by a gap having a dimension of at least about 0.125 inches.

10. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined together by a crotch portion; b) an inner liner having a front portion and a back portion joined together by a crotch portion, said front and back portions of said inner liner being attached to said front and back portions of said outer cover to form a waist opening and a pair of leg openings; c) an absorbent pad secured to said crotch portion of said inner liner and having a capacity for absorbing at least about 100 grams of body fluid, said absorbent pad including a liquid-permeable cover, a liquid impermeable baffle and an absorbent layer positioned therebetween; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, each of said first pair of leg elastics being positioned adjacent to one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and said inner liner at said back portion, each of said second pair of leg elastics being positioned adjacent to one of said pair of leg openings; f) a third pair of leg elastics secured between said liquid-permeable cover and said liquid impermeable baffle, each of said third pair of leg elastics being positioned adjacent to one of said leg openings intermediate one of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from at least one of said first and second pairs of leg elastics by a gap, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants.

15. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a

back portion joined together by a crotch portion; b) an inner liner attached to said outer cover, said inner liner having at least a front portion and a back portion, said front and back portions of said outer cover and said inner liner being connected together to form a waist opening and a pair of leg openings; c) an absorbent pad positioned over said crotch portion and having a capacity for absorbing at least about 100 grams of body fluid, said absorbent pad including a liquid-permeable cover, a liquid impermeable baffle, and a surge layer and an absorbent layer positioned between said liquid-permeable cover and said liquid impermeable baffle, said liquid impermeable baffle being secured to said crotch portion by an adhesive; d) a first pair of leg elastics secured between said front portion of said outer cover and said inner liner, each of said first pair of leg elastics being positioned adjacent to one of said pair of leg openings; e) a second pair of leg elastics secured between said back portion of said outer cover and said inner liner, each of said second pair of leg elastics being positioned adjacent to one of said pair of leg openings; f) a third pair of leg elastics secured between said liquid-permeable cover and said liquid impermeable baffle, each of said third pair of leg elastics being positioned adjacent to one of said leg openings intermediate one of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from at least one of said first and second pairs of leg elastics by a gap having a dimension of at least about 0.125 inches, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached to said front and back portions between said outer cover and said inner liner, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants.

Object of invention

(WO01/85080)

Briefly, this invention relates to disposable absorbent underpants for containing body fluid.

The general object of this invention is to provide disposable absorbent underpants for containing body fluid.

A more specific object of this invention is to provide disposable absorbent underpants for containing at least 100 grams of urine.

Another object of this invention is to provide disposable absorbent underpants for an adult suffering from incontinence.

A further object of this invention is to provide disposable absorbent underpants at a reasonable cost that can prevent leakage of body fluid.

Still another object of this invention is to provide disposable absorbent underpants that are easy to manufacture.

Still further, an object of this invention is to provide disposable absorbent underpants that are more comfortable to wear.

This invention relates. to disposable absorbent underpants for containing body fluid.

More specifically, this invention relates to disposable absorbent underpants for containing at least 100 grams of urine.

IPC - International classification

A61F; A61F-005/44; A61F-013/00; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/53

Family 16/200 - FAMPAT - ©Questel

Earliest priority number

JP32802289

Application number

CA2032388

DE69032509

EP95113384

DE69027592

EP90124650

KR900020011U

JP32802289

US08/002,028

GB9027299

GB9313999

AU6812590

US07/738,447

US07/626,783

Publication numbers

CA2032388
DE69032509
DE69032509
EP0688551
DE69027592
DE69027592
EP0437771
EP0688551
KR960001479
EP0688551
JP7059243
US5334152
GB2239783
GB2266445
GB2266445
AU641454
GB9313999
US5197960
EP0437771
US5055103
JP03186263
EP0437771
GB2239783
AU6812590
CA2032388
GB9027299

Questel unique family ID (FAN)

1146141

Family publication details

CA2032388	C	2000-07-04	CA2032388
DE69032509	T2	1999-04-22	DE69032509
DE69032509	D1	1998-08-27	DE69032509
EP0688551	B1	1998-07-22	EP-688551
DE69027592	T2	1997-02-06	DE69027592
DE69027592	D1	1996-08-01	DE69027592
EP0437771	B1	1996-06-26	EP-437771
EP0688551	A3	1996-03-06	EP-688551
KR960001479	Y1	1996-02-17	KR19960001479U
EP0688551	A2	1995-12-27	EP-688551
JP7059243	B2	1995-06-28	JP95059243
US5334152	A	1994-08-02	US5334152
GB2239783	B	1994-02-16	GB2239783
GB2266445	B	1994-02-16	GB2266445
GB2266445	A	1993-11-03	GB2266445
AU641454	B2	1993-09-23	AU-641454
GB9313999	D0	1993-08-18	GB9313999

US5197960	A	1993-03-30	US5197960
EP0437771	A3	1992-05-06	EP-437771
US5055103	A	1991-10-08	US5055103
JP03186263	A	1991-08-14	JP03186263
EP0437771	A2	1991-07-24	EP-437771
GB2239783	A	1991-07-17	GB2239783
AU6812590	A	1991-06-20	AU9068125
CA2032388	A1	1991-06-19	CA2032388
GB9027299	D0	1991-02-06	GB9027299

Earliest priority date

1989-12-18

Application dates

1989-12-18
1990-12-13
1990-12-17
1990-12-17
1990-12-17
1990-12-17
1990-12-18
1990-12-18
1990-12-18
1990-12-18
1991-07-31
1993-01-08
1993-07-06

Publication dates

2000-07-04
1999-04-22
1998-08-27
1998-07-22
1997-02-06
1996-08-01
1996-06-26
1996-03-06
1996-02-17
1995-12-27
1995-06-28
1994-08-02
1994-02-16
1994-02-16
1993-11-03
1993-09-23
1993-08-18
1993-03-30
1992-05-06
1991-10-08
1991-08-14
1991-07-24

1991-07-17
1991-06-20
1991-06-19
1991-02-06

Grant dates

(EP-437771)
1996-06-26
(EP-688551)
1998-07-22
(US5055103)
1991-10-08
(US5197960)
1993-03-30
(US5334152)
1994-08-02
(DE69027592)
1996-08-01
(DE69032509)
1998-08-27
(GB2266445)
1994-02-16
(GB2239783)
1994-02-16
(JP95059243)
1995-06-28
(AU-641454)
1993-09-23
(KR19960001479U)
1996-02-17
(CA2032388)
2000-07-04

Title

(EP-437771)
Disposable absorbent garments

Abstract

(EP0437771)
Here is disclosed an arrangement of elastic means (4A-4D) surrounding respective leg-openings (14) of garments (L) such as disposable diaper, wherein the elastic means surrounding each of the leg-openings comprises a plurality of first elastic members and a plurality of second elastic members; the first elastic members (4A) are positioned substantially along a front half of the leg-opening while the second elastic members (4B) are positioned substantially along a rear half of the leg-opening; the first and second elastic members have their tensile stress gradually decreasing from their longitudinally inner ends (4A2,4B2) toward their longitudinally outer ends (4A1,4B1); and the first and second elastic members have their inter-member spacings gradually enlarged from their longitudinally inner ends toward their longitudinally outer ends.

Current assignees

UNICHARM

Inventors

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OHNISHI HIROFUMI
MATSURA YOSHINORI

SASAKI TOHRU

Advantages / Previous drawbacks

(JP7059243)

However, the central portion 4A 2, 4B 2 also, so that the adhesive does not relax may be, in this way is adhered to, the backsheet 7 is located at a central portion of the adhesive is applied in addition to, the backsheet to the adhesive was not applied at all, the elastic member 4A, adhesive is applied to the whole of the 4B and the backsheet may be adhered to.

Independent claims

(EP0437771)

1. Disposable garments having a topsheet, a backsheet and elastic means provided along leg-openings defined at opposite sides of a crotch area connecting front and rear sections of the top- and backsheets, characterized by that: the elastic means surrounding each of the leg-openings comprises first and second elastic members; the first elastic member is positioned substantially along a front half of the leg-opening while the second elastic member is positioned substantially along a rear half of the leg-opening so that the first and second elastic members intersect each other at their longitudinally inner ends located adjacent a lower middle area of the leg-opening; and the first and second elastic members have their tensile stress gradually decreasing from their longitudinally inner ends toward their longitudinally outer ends.

2. Disposable garments having a topsheet, a backsheet and elastic means provided along leg-openings defined at opposite sides of a crotch area connecting front and rear sections of the top- and backsheets, characterized by that: the elastic means surrounding each of the leg-openings comprises a plurality of first elastic members and a plurality of second elastic members: the first elastic member is positioned substantially along a front half of said leg-opening while the second elastic member is positioned substantially along a rear half of the leg-opening so that the first and second elastic members intersect each other at their longitudinally inner ends located adjacent a lower middle area of the leg-opening; and the first and second elastic members have their inter-member spacings gradually enlarged from the longitudinally inner ends toward their longitudinally outer ends.

Object of invention

(EP0437771)

It is a first object of the invention to provide the disposable garments including the elastic means surrounding each leg-opening which has a tensile stress gradually decreasing from adjacent the lower middle area toward adjacent the upper middle area of the leg-opening.

It is a second object of the invention to provide the disposable garments including the elastic means surrounding each leg-opening which has a tensile stress gradually decentralized from adjacent the lower middle area toward adjacent the upper middle area of the leg-opening.

The first object set forth above is achieved, in accordance with the invention, by disposable garments having a topsheet, a backsheet and elastic means provided around leg-openings defined at opposite sides of a crotch area connecting front and rear sections of the top- and backsheets, wherein the elastic means surrounding each of the leg-openings comprises first and second elastic members, the first elastic member is positioned substantially along a front half of the leg-opening while the second elastic member is positioned substantially along a rear half of the leg-opening so that the first and second elastic members intersect each other at their longitudinally inner ends located adjacent a lower middle of the leg-opening, and the first and second elastic members have their tensile stress gradually decreasing from the longitudinally inner ends toward their longitudinally outer ends.

The second object set forth above is achieved, according to the invention, by disposable garments as has been described above, wherein the elastic means surrounding each of the leg-openings comprises a plurality of first elastic members and a plurality of second elastic members and the first and second elastic members have their inter-member spacings gradually enlarged from their longitudinally inner ends toward their longitudinally outer ends.

The present invention relates to disposable garments and more particularly to such garments such as diaper, incontinence pants and baby training pants.

The present invention relates to disposable garments and more particularly to such garments such as diaper, incontinence pants and baby training pants.

It is a first object of the invention to provide the disposable garments including the elastic means surrounding each leg-opening which has a tensile stress gradually decreasing from adjacent the lower middle area toward adjacent the upper

middle area of the leg-opening.

IPC - International classification

A41B-009/02; A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/496; A61F-013/514

Family 17/200 - FAMPAT - ©Questel

Earliest priority number

JP2001303859

Application number

EP02021348
JP2001303860
JP2001303859
TW91121880
CN02143703

Publication numbers

EP1300124
JP4127352
JP4111700
TWI271186
CN1264490
EP1300124
EP1300124
CN1408333
JP2003102778
JP2003102779

Questel unique family ID (FAN)

4978409

Family publication details

EP1300124	B1	2012-03-21	EP1300124
JP4127352	B2	2008-05-23	JP4127352
JP4111700	B2	2008-04-18	JP4111700
TWI271186	B	2007-01-21	TWI271186
CN1264490	C	2006-07-19	CN1264490C
EP1300124	A3	2003-12-03	EP1300124
EP1300124	A2	2003-04-09	EP1300124
CN1408333	A	2003-04-09	CN1408333
JP2003102778	A	2003-04-08	JP2003102778
JP2003102779	A	2003-04-08	JP2003102779

Earliest priority date

2001-09-28

Application dates

2001-09-28
2001-09-28
2002-09-23
2002-09-24
2002-09-28

Publication dates

2012-03-21
2008-05-23
2008-04-18

2007-01-21
2006-07-19
2003-12-03
2003-04-09
2003-04-09
2003-04-08
2003-04-08

Grant dates

(EP1300124)
2012-03-21
(JP4111700)
2008-04-18
(JP4127352)
2008-05-23
(CN1264490C)
2006-07-19
(TWI271186)
2007-01-21

Title

(EP1300124)
Shorts type disposable diaper

Abstract

(EP1300124)
A shorts type disposable diaper having a leg opening portion where a leg elastic member is formed, the leg elastic member including a first elastic member 71A through 71C which is arranged from the stomach side portion side to the under-crotch portion and a second elastic member 72A through 72C which is arranged from the back side portion side to the under-crotch portion, respective extension portions 71b, 72b of the first and second elastic members extending from a portion for forming the leg elastic region towards the widthwise center of the diaper including end portions 71c, 72c, which do not exhibit elastic contractibility, at a location where the extension portions do not reach the widthwise center of the diaper, one elastic member 71 and the other elastic member 72 being overlapped one upon the other at the extension portions 71b, 72b.

Current assignees

KAO

Inventors

TAKEI SHINOBU
ANDO KENJI
HAYASE TORU

Advantages / Previous drawbacks

(EP1300124)
This is easy to manufacture and good in efficiency.
Although a disposable diaper manufactured according to this conventional technique has such an advantage that a sense of fitness at the under-crotch area is good because the under-crotch portion, when in wear, is pulled up to the stomach side portion and the backside portion, it has such disadvantages that a sense of oppression is given to the under-crotch portion of the wearer and that if the absorbent core at the under-crotch portion is overly contracted in the width wise direction, absorption efficiency is degraded.
Moreover, the diaper is readily bent in a protruding fashion towards the wearer's body side at the area where the absorbent core is provided due to rigidity of the absorbent core, thus making it difficult to form, when in wear, a pocket shape which is useful for anti-leakage property and making it difficult to perform, after discharge of feces, a posttreatment easily and in a sanitary manner.

Moreover, there is a still additional disadvantage in that in case the diaper has elastic expanding and contracting properties at the under-crotch region, the absorbent core is contracted in the width wise direction at this specific area, thus making it difficult to utilizing the absorbent core effectively.

However, the abovementioned Laid-Open publication does not disclose the shape of the leg elastic member after cutting in detail.

Moreover, since the diaper is readily bent at the area where the elastic member is applied due to rigidity of the elastic member, it gives rise to such an additional disadvantage that a pocket having a favorable anti-leakage property is difficult to form.

difficult to

Independent claims

(EP1300124)

1. A shorts type disposable diaper comprising a liquid permeable topsheet, a liquid impermeable backsheet and a liquid retentive absorbent core, and having a waist opening portion and a pair of leg opening portions, said leg opening portion having a leg elastic region formed annularly along a peripheral edge thereof, said leg elastic region including a plurality of first elastic members arranged from a stomach side portion to an under-crotch portion and a plurality of second elastic members arranged from a backside portion to said under-crotch portion, said first and second elastic members including an annular portion forming portion for forming said leg elastic region and an extension portion extending from said annular portion forming portion towards a width wise center of said diaper, respective said extension portions of said first and second elastic members including an end portion at a location where said extension portions do not reach the width wise center of said diaper, said extension portions being designed so as not to exhibit elastic contractibility in a vicinity of said end portion, said extension portions of said first and second elastic members being arranged such that one elastic member and the other elastic member are overlapped.

7. A method for manufacturing a shorts type disposable diaper having a first and a second elastic member which are arranged along peripheral edges of a pair of leg opening portions and which are not arranged at a width wise central portion of an under-crotch portion, said method comprising the steps of: introducing said first and second elastic members in their stretched states onto a base material sheet which is continuously conveyed while swaying said first and second elastic materials in a direction orthogonal to a flowing direction of said base material sheet and thereafter cutting said first and second elastic members at an under-crotch central portion corresponding to a width wise central portion of an under-crotch portion of said diaper, said first and second elastic members being introduced in a state where one elastic member and the other elastic member are overlapped one upon the other at the under-crotch central portion and said overlapped elastic members being pressed and cut in a thick wise direction by a cutting protrusion.

8. A shorts type disposable diaper comprising a liquid permeable topsheet, a liquid impermeable backsheet and a liquid retentive absorbent core, and having a waist opening portion and a pair of leg opening portions, said leg opening portion having a leg elastic region formed annularly along a peripheral edge thereof, said leg elastic region including a plurality of first elastic members arranged from a stomach side portion to an under-crotch portion and a plurality of second elastic members arranged from a backside portion to said under-crotch portion, said first and second elastic members comprising an annular portion forming portion for forming said leg elastic region and an extension portion extending from said annular portion forming portion towards a width wise center of said diaper and including an end portion at a location where said extension portions do not reach the width wise center of said diaper, a maximum distance between a stomach side portion side edge portion of said extension portion which is located at a most stomach side portion side in a longitudinal direction of said diaper and a backside portion side edge portion of said extension portion which is located at a most backside portion side, in a developed and stretched state of said diaper, being smaller than a sum of maximum arrangement widths, in the longitudinal direction of said diaper, of said plurality of first and second elastic members at said annular portion forming portions.

Object of invention

(EP1300124)

This invention relates to a shorts type disposable diaper which is excellent in wearing feel and anti-leakage property, which can offer a nice looking feature, and which is easy to manufacture.

It is, therefore, one object (first object) of the present invention to provide a shorts type disposable which can be

manufactured easily and efficiently, which is easy to wear and good in wearing feel, which is excellent in absorption property and anti-leakage property, and which can offer a nice looking feature.

Another object (second object) of the present invention is to provide a shorts type disposable diaper in which a diaper exchange can be carried out in a sanitary manner after discharge of feces, which is easy to wear and good in wearing feel, which is excellent in absorption property and anti-leakage property, and which can offer a nice looking feature.

The present invention also provides a method for manufacturing a shorts type disposable diaper having a first and a second elastic member which are arranged along peripheral edges of a pair of leg opening portions and which are not arranged at a width wise central portion of an under-crotch portion said method comprising the steps of: introducing the first and second elastic members in their stretched states onto a base material sheet which is continuously conveyed while swaying the first and second elastic materials in a direction orthogonal to a flowing direction of the base material sheet and thereafter cutting the first and second elastic members at an under-crotch central portion corresponding to a width wise central portion of an under-crotch portion of the diaper, the first and second elastic members being introduced in a state where one elastic member and the other elastic member are overlapped one upon the other at the under-crotch central portion and the overlapped elastic members being pressed and cut in a thick wise direction by a cutting protrusion.

This invention relates to a shorts type disposable diaper which is excellent in wearing feel and anti-leakage property, which can offer a nice looking feature, and which is easy to manufacture.

Also, the present invention relates to a shorts type disposable diaper which can be exchanged in a sanitary manner after discharge of feces, which is easy to wear and good in wearing feel, which is excellent in absorption property and anti-leakage property, and which can offer a nice looking feature.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/496; A61F-013/496; A61F-013/514

Family 18/200 - FAMPAT - ©Questel

Earliest priority number

JP2001229260

Application number

JP2001229260
CN02127228
EP02255216
TW91116389
KR20020044607
US10/206,270
CA2394598

Publication numbers

JP3745984
CN1206971
EP1281379
TW534810
CN1399944
JP2003038554
KR20030011656
EP1281379
US20030023224
CA2394598

Questel unique family ID (FAN)

4057271

Family publication details

JP3745984	B2	2005-12-02	JP3745984

CN1206971	C	2005-06-22	CN1206971C
EP1281379	A3	2003-12-17	EP1281379
TW534810	B	2003-06-01	TW-534810
CN1399944	A	2003-03-05	CN1399944
JP2003038554	A	2003-02-12	JP2003038554
KR20030011656	A	2003-02-11	KR20030011656
EP1281379	A2	2003-02-05	EP1281379
US20030023224	A1	2003-01-30	US20030023224
CA2394598	A1	2003-01-30	CA2394598

Earliest priority date

2001-07-30

Application dates

2001-07-30
2002-07-23
2002-07-24
2002-07-26
2002-07-26
2002-07-29
2002-07-30

Publication dates

2005-12-02
2005-06-22
2003-12-17
2003-06-01
2003-03-05
2003-02-12
2003-02-11
2003-02-05
2003-01-30
2003-01-30

Grant dates

(JP3745984)
2005-12-02
(TW-534810)
2003-06-01
(CN1206971C)
2005-06-22

Title

(EP1281379)
Pants-type disposable diaper

Abstract

(EP1281379)
A pants-type disposable diaper 1 includes a chassis S1 and a liquid-absorbent member 4. The chassis is shaped in a pants-type and has a waist-hole 8 and a pair of leg-holes 9. Elastic members 18 extending in a longitudinal direction of the diaper 1 are arranged between a longitudinal center line bisecting a width of the liquid-absorbent member 4 in the waist-surrounding direction and respective side edges 4b of the liquid-absorbent member 4 so that a zone extending between the elastic members 18 on the liquid-absorbent member 4 is convexed toward the side facing away from a wearer's body as the elastic members 18 contract and this zone 19 defines a penis receiving zone 20 adapted to receive the wearer's penis

as the diaper 1 is worn.

Current assignees

UNICHARM

Inventors

ISHIKAWA HIROKI

KINOSHITA AKIYOSHI

Advantages / Previous drawbacks

(EP1281379)

The disposable diaper according to this invention has the advantageous effects that contraction of the first stretchable elastic members in the longitudinal direction deforms the liquid-absorbent member in the zone extending between the first stretchable elastic members so that this zone is deformed to be con vexed toward the garment and defines the penis receiving zone.

However, it is difficult with such a conventional diaper as those disclosed in the above-cited Publications for the wearer to keep a position of his penis in a transversely middle area of the front waist region and the crotch region of the diaper as the wearer' s penis is rather free to move within the diaper.

Independent claims

(EP1281379)

1. A pants-type disposable diaper comprising a chassis defining front and rear waist regions opposed to each other and a crotch region extending between said waist regions, and a liquid-absorbent member extending across said crotch region into said front and rear waist regions, said chassis having longitudinally opposite end portions lying outside longitudinally opposite ends of said liquid-absorbent member extending across said front and rear waist regions in a waist-surrounding direction and transversely opposite side portions lying outside transversely opposite side edges of said liquid-absorbent member extending across said front and rear waist regions in a longitudinal direction, and said front and rear waist regions being joined to each other in a vicinity of side edges contiguous to said opposite side portions forming a waist-hole and a pair of leg-holes, said pants-type disposable diaper further comprising: first stretchable elastic members extending in said longitudinal direction respectively arranged between a longitudinal centerline bisecting a width of said liquid-absorbent member and said opposite side edges of said liquid-absorbent member and secured in a stretched state between said chassis and said liquid-absorbent member so that a zone of said liquid-absorbent member extending between said first stretchable elastic members is deformed in a con vexed shape toward a sidefacing away from a wearer's body as said first stretchable elastic members contract.

Object of invention

(EP1281379)

It is an object of this invention to provide a pants-type disposable diaper improved so that a wearer's penis can be retained in a transversely middle zone of a front waist region and a crotch region of the diaper.

It is an object of this invention to provide a pants-type disposable diaper improved so that a wearer's penis can be retained in a transversely middle zone of a front waist region and a crotch region of the diaper.

It is an object of this invention to provide a pants-type disposable diaper improved so that a wearer's penis can be retained in a transversely middle zone of a front waist region and a crotch region of the diaper.

According to this invention, there is provided a pants-type disposable diaper comprising a chassis defining front and rear waist regions opposed to each other and a crotch region extending between the waist regions, and a liquid-absorbent member extending across the crotch region into the front and rear waist regions, the chassis having longitudinally opposite end portions lying outside longitudinally opposite ends of the liquid-absorbent member extending across the front and rear waist regions in a waist-surrounding direction and transversely opposite side portions lying outside transversely opposite side edges of the liquid-absorbent member extending across the front and rear waist regions in the longitudinal direction, and the front and rear waist regions being joined to each other in a vicinity of side edges contiguous to the opposite side portions forming a waist-hole and a pair of leg-holes.

This invention relates to a pants-type disposable diaper for absorption and containment bodily discharges.

This invention relates to a pants-type disposable diaper for absorption and containment bodily discharges.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496

Family 19/200 - FAMPAT - ©Questel

Earliest priority number

DE102007002290

Application number

AU2008207076
US12/502,802
JP2009545865
EP08701111
WOEP2008/000254
DE102007002290

Publication numbers

AU2008207076
US8303562
JP5058271
JP2010515555
US20090275911
EP2109430
WO2008/087006
WO2008/087006
AU2008207076
DE102007002290

Questel unique family ID (FAN)

1856920

Family publication details

AU2008207076	B2	2013-03-28	AU2008207076
US8303562	B2	2012-11-06	US8303562
JP5058271	B2	2012-08-10	JP5058271
JP2010515555	A	2010-05-13	JP2010515555
US20090275911	A1	2009-11-05	US20090275911
EP2109430	A2	2009-10-21	EP2109430
WO2008/087006	A3	2008-10-02	WO200887006
WO2008/087006	A2	2008-07-24	WO200887006
AU2008207076	A1	2008-07-24	AU2008207076
DE102007002290	A1	2008-07-17	DE102007002290

Earliest priority date

2007-01-16

Application dates

2007-01-16
2008-01-15
2008-01-15
2008-01-15
2008-01-15
2009-07-14

Publication dates

2013-03-28
2012-11-06
2012-08-10

2010-05-13
2009-11-05
2009-10-21
2008-10-02
2008-07-24
2008-07-24
2008-07-17

Grant dates

(US8303562)
2012-11-06
(JP5058271)
2012-08-10
(AU2008207076)
2013-03-28

Title

(EP2109430)
Disposable hygiene item in the form of a pair of knickers, with an improved fit

Abstract

(EP2109430)
The invention relates to a disposable absorbent hygiene item (2) in the form of a pair of knickers, said item comprising a central absorption part (22), an outer envelope (21) forming a base structure comprising a waist edge (20) which is closed all the way round in the periperal direction and forms an opening for the waist, a rear part (4) and a front part (6) comprising longitudinal lateral edge sections (16, 18), and a connecting region (10) arranged between the front part (6) and the rear part (4) and forming the leg openings (8 a, b). The item according to the invention has a central longitudinal axis (L) extending in a longitudinal direction and a transversal central axis (Q) extending through the centre of the connecting region (10), said transversal central axis dividing the connecting region into a front connecting region (10a) and a rear connecting region (10b). Each leg opening (8 a, b) comprises first thread-type or strip-type elasticating means in the front connecting region (10a) or second thread-type or strip-type elasticating means (2) in the rear connecting region (10b), which are arranged along a first section (30) or a second section (32) of each leg opening. The rear connecting region (10b) comprises an elastic element (E) between the respective longitudinal edge (5) of the central absorption part (22) and each leg opening (8 a, b), said elastic element (E) being oriented away from a region close to the leg opening, in a direction comprising both a transversal component (QQ) in the direction of the central longitudinal axis and a longitudinal component (LL) in the direction of the rear part (4).

Current assignees

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SAFEFRESH TECHNOLOGIES

Inventors

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KAUTZSCH FLORIAN
WENZEL BENJAMIN

Advantages / Previous drawbacks

(WO2008/087006)
It has been found to be advantageous and expedient, if the first elastification means of the third elastification means in the longitudinal direction are shown as the second elastification means of the further spaced apart from the third elastification means, since the risk of undesirable material accumulation in the center of the crotch region is considered to be particularly high.
Surprisingly this is beneficial to the fit of the hygiene article to a particular extent.
The back sheet may advantageously be tight but permeable to water but also in the use of non-woven materials such as

spunbond-meltblown-spunbond layers (M) and spunbond layerS, meltblown and spunbond layers - in particular laminates, such as sm or sms or smms laminates - - contain or consist of.

In such a case an undesirable gathering of the absorbent core can be avoided.

Independent claims

(WO2008/087006)

1. The disposable absorbent hygiene (2) article in the pant shape with an absorbent (22) core and a chassis-forming outer shell (21) having a waist opening forming a closed waist edge (20) continuous in the circumferential direction, and having longitudinal side edge portions (16, 18) having said front (6) part and back (4) part, and between the front portion (6) and a back part (4) of the leg openings is arranged with a (8 a, b) forming the crotch region (10), wherein the circumferentially continuous closed waist edge (20) and the leg openings (8 a, b) are formed, by longitudinal side edge portions (16, 18) of a front (6) and a back (4) portion of the chassis-forming outer sheath (21) by the manufacturer are connected to each other, and having a central longitudinal axis extending in a longitudinal direction (L) and a crotch region (10) extending in transverse direction through the center of the transverse center axis (Q), which the crotch region in a front crotch region (10a) and a rear crotch region (10b) divides, and wherein a respective leg opening (8 a, b) in the front crotch region (10a) - or band-shaped elastification means (1) comprises first thread, along a first portion (30) of the respective leg opening are arranged, and where the rear crotch region (10b) - or band-shaped elastification means (2) having second threads, along a second portion (32) of the respective leg opening (8 a, b) are arranged, and where the rear crotch region (10b) between the respective longitudinal (5) edge of the (22) absorbent core and of the respective leg opening (8 a, b) an elastic member (E) comprises, starting from an area close to the opening in a leg which is arranged, both Transverse component (QQ) in the direction toward the central longitudinal axis and a longitudinal component (LL) in the direction of the back (4) portion has.

Object of invention

(WO2008/087006)

It has been surprisingly found, that this is in the majority of users of the fit of the hygiene article significantly beneficial.

The aim of the present invention is based on the object, to improve the wearing comfort of absorbent hygiene articles of the type mentioned above.

The invention relates to a disposable personal care absorbent articles for adults in pant form, forming a waist opening with a circumferentially continuous closed waist edge and with leg openings, wherein the continuously closed waist edge and the leg openings in the circumferential direction are formed, by

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/496; A61F-013/496

Family 20/200 - FAMPAT - ©Questel

Earliest priority number

US09/985,885

Application number

US10/668,502

WOUS02/035424

US09/985,885

Publication numbers

US7118558

US20040158217

WO03/39422

US20030089447

Questel unique family ID (FAN)

43492168

Family publication details

US7118558	B2	2006-10-10	US7118558
US20040158217	A1	2004-08-12	US20040158217
WO03/39422	A1	2003-05-15	WO200339422

US20030089447 A1 2003-05-15 US20030089447

Earliest priority date

2001-11-06

Application dates

2001-11-06

2002-11-06

2003-09-24

Publication dates

2006-10-10

2004-08-12

2003-05-15

2003-05-15

Grant dates

(US7118558)

2006-10-10

Title

(WO200339422)

System and method for discretely coating elastic elements and absorbent articles made therewith

Abstract

(WO03/39422)

A softer absorbent article 10 is prepared by incorporating elastic strands 703 that are coated around their periphery. The elastic strands are coated with adhesive 600 by immersing them in an adhesive-filled applicator comb 400 prior to applying the elastic strands to a substrate.

Current assignees

FIRST QUALITY BABY PRODUCTS

FIRST QUALITY ENTERPRISES

FIRST QUALITY NONWOVENS

FIRST QUALITY PRODUCTS

FIRST QUALITY RETAIL SERVICES

FIRST QUALITY TISSUE

JOHNSON CONTROLS INTERNATIONAL

NUTEK DISPOSABLES

Inventors

MOLEE KENNETH JOHN

VERGONA JOSEPH B

Advantages / Previous drawbacks

(WO03/39422)

Accordingly, there exists a need to manufacture a softer absorbent garment that has not had garment materials "oversprayed" with adhesive during the step of coating of the elastic elements for assembly.

Additionally, a need exists to more uniformly and completely coat elastic elements with adhesive prior to bonding to an absorbent garment to promote product uniformity and improved adhesion of the elastic elements to the garment.

In addition, they make the garment more form-fitting for the wearer.

By maintaining the first and second carrier layers 32, 32' as a continuous supply of material, this method does not require the use of complex manufacturing techniques that are normaUy required to place discrete elasticized parts into a garment.

In usage, the adhesive spray coats not only the elastic elements but also "oversprays" to other sites, causing a number of undesirable consequences.

It has been found that in some cases the notched knife 900 does not have to fuUy sever the tummy elastics 3 and the carrier layers 32, 32', and may instead simply press against the layers 32, 32' with enough force to damage the tummy

elastics 3 by crushing them, thereby causing them to separate.

Independent claims

(WO03/39422)

We claim: 1. A method for applying elastic to an absorbent garment comprising: moving one or more elastic strands at a predetermined speed in a first direction through an appHcator comb having one or more slots, each slot corresponding to a respective elastic strand; providing adhesive to the applicator comb at a predetermined temperature and flow rate; depositing the adhesive onto the one or more elastic strands to form an adhesive coating around substantiaUy the entire periphery of each of the one or more elastic strands; applying the one or more elastic strands to a first sheet; applying a second sheet onto the first sheet such that the one or more elastic strands are between the first sheet and the second sheet.

18. An absorbent garment subassembly comprising: a first sheet; a second sheet; one or more elastic strands disposed between the first sheet and the second sheet; an adhesive coating disposed around substantiaUy the entire periphery of each elastic strand along at least part of each elastic strand's length.

26. An absorbent garment manufacturing system comprising: a first path for supplying a first layer of material; a second path for supplying a second layer of material; a third path for supplying one or more elastic strands; an appHcator comb, disposed along the third path, for applying adhesive to the one or more elastic strands; wherein the elastic strands are in registration with the appHcator comb so that the appHcator comb provides adhesive directly onto the periphery of the elastic strands and the appHcator comb does not directly deposit a substantial amount of adhesive on the first layer of material or the second layer of material or onto other parts of the absorbent garment manufacturing system.

Object of invention

(WO03/39422)

A method and system for discretely coating elastic elements prior to their incorporation in absorbent garments, as well as a softer absorbent garment than previously known made from the described method and system, is disclosed.

It has been found that elastic strands 602 having a denier of about 200 to about 2200, more preferably of about 400 to about 2000, and most preferably of about 600 to about 1800, may be used with the above-described slots.

The invention relates to the field of absorbent garments in general, and more particularly to an absorbent garment assembled with incorporated elastic elements that have been discretely coated with adhesive prior to their assembly into the body of the garment to create a softer article than previously known.

The invention also relates to a system and method of making the absorbent garment.

IPC - International classification

A61F; A61F-013/15; A61F-013/15; A61F-013/20; B05C-003/12; B05C-005/02

Family 21/200 - FAMPAT - ©Questel

Earliest priority number

US07/263,260

Application number

CA614682

US07/263,260

WOUS89/004782

Publication numbers

CA1335526

US4935021

WO90/04374

Questel unique family ID (FAN)

60269397

Family publication details

CA1335526	C	1995-05-16	CA1335526
US4935021	A	1990-06-19	US4935021
WO90/04374	A1	1990-05-03	WO9004374

Earliest priority date

1988-10-27

Application dates

1988-10-27

1989-09-29

1989-10-26

Publication dates

1995-05-16

1990-06-19

1990-05-03

Grant dates

(US4935021)

1990-06-19

(CA1335526)

1995-05-16

Title

(WO9004374)

Disposable diaper with center gathers

Abstract

(WO90/04374)

An absorbent article (10) embodied as a disposable diaper construction is disclosed which has been particularly configured for improved fit and comfort by the provision of a center gathering (6) arrangement. In the illustrated embodiments, the diaper includes an absorbent panel structure (14) which is positioned between associated facing (12) and backing layers (28), and further includes an arrangement of one or more elastic elements which extend longitudinally of the diaper (31). By this arrangement, a longitudinal gathering force is created on the absorbent panel of the diaper, whereby the diaper is shortened to improve its fit, thus enhancing comfort for the wearer as well as inhibiting leakage from the diaper.

Current assignees

FIRST QUALITY BABY PRODUCTS

FIRST QUALITY ENTERPRISES

FIRST QUALITY NONWOVENS

FIRST QUALITY PRODUCTS

FIRST QUALITY RETAIL SERVICES

FIRST QUALITY TISSUE

JOHNSON CONTROLS INTERNATIONAL

MCNEIL

NUTEK DISPOSABLES

PPC MCNEIL

PTB HOLDINGS

PTB INTERNATIONAL

Inventors

HUFFMAN GLORIA

PIENIAK HEINZ A

Advantages / Previous drawbacks

(WO90/04374)

Accordingly, it is very desirable to provide an arrangement which enhances the comfort and fit of a disposable diaper by reducing the typical bagginess which such diapers exhibit.

As will be appreciated, a variety of different materials may be employed for the fluid-pervious facing layer 12.

As will be appreciated, this pronounced bagginess of the typical disposable diaper construction, and the resultant bulkiness between the wearer's legs, interferes with the wearer's movements, and undesirably exposes the typically plastic moistur -

impervious backing layer to the inside of the wearer's thighs.

Independent claims

(WO90/04374)

1. A disposable diaper having improved fit and comfort for the wearer, comprising: an absorbent panel; a fluid-impervious facing layer positioned adjacent to and overlying one side of said absorbent panel, said facing layer being adapted for positioning in contact with the wearer of the diaper; a backing layer positioned on the other side of said absorbent panel; leg-gathering means positioned generally at the laterally opposite margins of said disposable diaper to conform the diaper to the legs of the wearer; and center gathering means operatively associated with said absorbent panel of said disposable diaper for providing a longitudinal gathering force on said absorbent panel so that the diaper conforms to the wearer for improved fit and comfort.

11. An absorbent article having improved fit and comfort for the wearer, comprising: an absorbent panel, said absorbent panel comprising a plurality of laterally adjacent, discrete panel sections; a fluid-pervious facing layer positioned adjacent to and overlying one side of said absorbent panel, said facing layer being adapted for positioning adjacent to the wearer of the absorbent article; a backing layer positioned on the other side of said absorbent panel; and center gathering means for providing a longitudinal gathering force on said absorbent panel so that the article conforms to the wearer for improved fit and comfort.

Object of invention

(WO90/04374)

The disclosure is intended to cover by the appended claims all such modifications as fall within the scope of the claims.

The present invention relates generally to disposable absorbent articles, and more particularly to an absorbent article such as a disposable diaper including an arrangement for providing a longitudinal gathering force on the absorbent panel of the article- whereby the article is longitudinally gathered, inwardly of its side margins, for improved fit and comfort for the wearer.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/56

Family 22/200 - FAMPAT - ©Questel

Earliest priority number

US08/971,389

Application number

BR0110705
US10/922,717
DE10196163T
ARP010102076
MXPA02010428
GB0228181
KR20027014996
AU5730401
WOUS01/013461

Publication numbers

BRPI0110705
US7344524
US20050055005
DE10196163
AR028403
MXPA02010428
GB2379378
BR0110705
BRPI0110705

GB0228181
KR20020091283
AU5730401
WO01/85082

Questel unique family ID (FAN)

26044

Family publication details

BRPI0110705	A2	2011-03-01	BR200110705
US7344524	B2	2008-03-18	US7344524
US20050055005	A1	2005-03-10	US20050055005
DE10196163	T1	2003-05-08	DE10196163T
AR028403	A1	2003-05-07	AR--28403
MXPA02010428	A	2003-04-25	MX2002PA010428
GB2379378	A	2003-03-12	GB2379378
BR0110705	A	2003-01-28	BR200110705
BRPI0110705	A1	2003-01-28	BRPI0110705
GB0228181	D0	2003-01-08	GB200228181
KR20020091283	A	2002-12-05	KR20020091283
AU5730401	A	2001-11-20	AU200157304
WO01/85082	A1	2001-11-15	WO200185082

Earliest priority date

1997-11-17

Application dates

2001-04-26
2001-04-26
2001-04-26
2001-04-26
2001-04-26
2001-04-26
2001-04-26
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2004-08-19

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2011-03-01
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2005-03-10
2003-05-08
2003-05-07
2003-04-25
2003-03-12
2003-01-28
2003-01-28
2003-01-08
2002-12-05
2001-11-20
2001-11-15

Grant dates

(US7344524)

2008-03-18

Title

(WO200185082)

Disposable absorbent underpants

Abstract

(WO01/85082)

This invention relates to disposable absorbent underpants for containing body fluid. The disposable underpants include an outer cover having a front portion and a back portion joined together by a crotch portion. An inner liner is attached to the outer cover. The inner liner has a front portion and a back portion joined together by a crotch portion. The front and back portions of the outer cover and the inner liner are connected together to form a waist opening and a pair of leg openings. An absorbent pad is secured to the crotch portion of the inner liner. The absorbent pad includes a liquid-permeable cover, a liquid impermeable baffle and an absorbent layer positioned therebetween. Discontinuous leg elastics are secured between the outer cover and the inner liner.

Current assignees

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Inventors

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DATTA PAUL JOSEPH

GROSS JACQUELINE ANN

VENTURINO MICHAEL BARTH

WEYENBERG STEVEN LAMBERT

BRUNNER MICHAEL SCOTT

Advantages / Previous drawbacks

(KR20020091283)

It is another object of the present invention is easy to manufacture disposable absorbent underpants for providing a gas of the present invention.

However, 2 only one of the pair of gap (90) and (92) if it is desired to use, can be doing so.

Independent claims

(WO01/85082)

We claim: 1. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined together by a crotch portion; b) an inner liner attached to said outer cover, said inner liner having at a front portion and a back portion joined together by a crotch portion, said front and back portions of said outer cover and said inner liner being connected together to form a waist opening and a pair of leg openings; c) an absorbent pad secured to said crotch portion, said absorbent pad including a liquid-permeable cover, a liquid impermeable baffle and an absorbent layer positioned therebetween; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, each of said first pair of leg elastics being positioned adjacent to one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and said inner liner at said back portion, each of said second pair of leg elastics being positioned adjacent to one of said pair of leg openings; f) a third pair of leg elastics secured between said outer cover and said inner liner at said crotch portion, each of said third pair of leg elastics being positioned adjacent to one of said leg openings intermediate one of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from said first pair of leg elastics by a first gap and being separated from second pair of leg elastics by a second gap, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants.

10. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined together by a crotch portion; b) an inner liner having a front portion and a back portion joined together

by a crotch portion, said front and back portions of said inner liner being attached to said front and back portions of said outer cover to form a waist opening and a pair of leg openings; c) an absorbent pad secured to said crotch portion of said inner liner and having a capacity for absorbing at least about 100 grams of body fluid, said absorbent pad including a liquid-permeable cover, a liquid impermeable baffle and an absorbent layer positioned therebetween; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, each of said first pair of leg elastics being positioned adjacent to one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and said inner liner at said back portion, each of said second pair of leg elastics being positioned adjacent to one of said pair of leg openings; f) a third pair of leg elastics secured between said outer cover and said inner liner, each of said third pair of leg elastics being positioned adjacent to one of said leg openings intermediate one of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from said first pair of leg elastics by a first gap and being separated from second pair of leg elastics by a second gap, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants.

15. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined together by a crotch portion; b) an inner liner having a front portion and a back portion joined together by a crotch portion, said front and back portions of said inner liner being attached to said front and back portions of said outer cover to form a waist opening and a pair of leg openings; c) an absorbent pad secured to said crotch portion of said inner liner and having a capacity for absorbing at least about 100 grams of body fluid, said absorbent pad including a liquid-permeable cover, a liquid impermeable baffle, and a surge layer and an absorbent layer positioned between said liquid-permeable cover and said liquid impermeable baffle, said liquid impermeable baffle being secured to said crotch portion by an adhesive; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, each of said first pair of leg elastics being positioned adjacent to one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and said inner liner at said back portion, each of said second pair of leg elastics being positioned adjacent to one of said pair of leg openings; f) a third pair of leg elastics secured between said outer cover and said inner liner, each of said third pair of leg elastics being positioned adjacent to one of said leg openings intermediate one of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from one of said first pair of leg elastics by a first gap and being separated from one of said second pair of leg elastics by a second gap, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants.

Object of invention

(WO01/85082)

Briefly, this invention relates to disposable absorbent underpants for containing body fluid.

The general object of this invention is to provide disposable absorbent underpants for containing body fluid.

A more specific object of this invention is to provide disposable absorbent underpants for containing at least 100 grams of urine.

Another object of this invention is to provide disposable absorbent underpants for an adult suffering from incontinence.

A further object of this invention is to provide disposable absorbent underpants at a reasonable cost that can prevent leakage of body fluid.

Still another object of this invention is to provide disposable absorbent underpants that are easy to manufacture.

Still further, an object of this invention is to provide disposable absorbent underpants that are more comfortable to wear.

This invention relates to disposable absorbent underpants for containing body fluid.

More specifically, this invention relates to disposable absorbent underpants for containing at least 100 grams of urine.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/494; A61F-013/494; A61F-013/496; A61F-013/496

Family 23/200 - FAMPAT - ©Questel

Earliest priority number

JP35908299

Application number

DE60030399T
KR20000076925
EP00311221
CA2328374
AU7229200
JP35908299
CN00135684
US09/737,903
TW89221849U
ID20001083D

Publication numbers

DE60030399
KR100669129
DE60030399
EP1108409
CA2328374
AU778919
JP3592599
CN1163204
US6402728
TW461314
EP1108409
KR20010062469
CN1300583
JP2001170107
US20010004689
ID28667
AU7229200
EP1108409
CA2328374

Questel unique family ID (FAN)

1261990

Family publication details

DE60030399	T2	2007-09-20	DE60030399
KR100669129	B1	2007-01-17	KR100669129
DE60030399	D1	2006-10-12	DE60030399
EP1108409	B1	2006-08-30	EP1108409
CA2328374	C	2005-11-22	CA2328374
AU778919	B2	2004-12-23	AU-778919
JP3592599	B2	2004-09-03	JP3592599
CN1163204	C	2004-08-25	CN1163204C
US6402728	B2	2002-06-11	US6402728
TW461314	U	2001-10-21	TW-461314U
EP1108409	A3	2001-09-12	EP1108409



KR20010062469	A	2001-07-07	KR20010062469
CN1300583	A	2001-06-27	CN1300583
JP2001170107	A	2001-06-26	JP2001170107
US20010004689	A1	2001-06-21	US20010004689
ID28667	A	2001-06-21	ID--28667
AU7229200	A	2001-06-21	AU200072292
EP1108409	A2	2001-06-20	EP1108409
CA2328374	A1	2001-06-17	CA2328374

Earliest priority date

1999-12-17

Application dates

1999-12-17
2000-12-13
2000-12-14
2000-12-14
2000-12-15
2000-12-15
2000-12-15
2000-12-15
2000-12-15
2000-12-15

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2007-09-20
2007-01-17
2006-10-12
2006-08-30
2005-11-22
2004-12-23
2004-09-03
2004-08-25
2002-06-11
2001-10-21
2001-09-12
2001-07-07
2001-06-27
2001-06-26
2001-06-21
2001-06-21
2001-06-21
2001-06-20
2001-06-17

Grant dates

(EP1108409)
2006-08-30
(US6402728)
2002-06-11
(DE60030399)
2006-10-12

(JP3592599)
2004-09-03
(CN1163204C)
2004-08-25
(AU-778919)
2004-12-23
(CA2328374)
2005-11-22
(KR100669129)
2007-01-17

Title

(EP1108409)
Disposable diaper

Abstract

(EP1108409)
A diaper 1 includes a topsheet 2, a backsheet 3 and a core 4 disposed therebetween to define a front and rear waist regions 20, 22 and a crotch region 21, and an elastic member 5 extending to surround a predetermined zone 4a of the core 4 about the vicinity of a longitudinal center line x is placed in a rear half A2 of the diaper 1 defined between the vicinity of a transverse center line Y and the end of the rear waist region 22 and secured under tension to the upper surface of the core so that the zone 4a of the core 4 is depressed downward to form a depression 6 as the elastic member 5 contracts.

Current assignees

UNICHARM

Inventors

OTSUBO TOSHIFUMI

Advantages / Previous drawbacks

(EP1108409)
The disposable diaper according to this invention enables the depression and/or the protuberance to be formed in the core without previously molding the core to form such depression and/or protuberance.
Furthermore, in view of the fact that most of the recent processes for making the core intend to achieve the maximum body wastes absorption with the core as thin as possible, it is difficult to form the core with a depression of a desired depth and a protuberance of a desired height.
difficult to

Independent claims

(EP1108409)
1. A disposable diaper contoured by transversely opposite side edges and longitudinally opposite ends and comprising a liquid-pervious topsheet, a liquid-impervious backsheet and a liquid-absorbent core having first and second surfaces and disposed between said topsheet and said backsheet to configure, longitudinally of said diaper, a front waist region, a rear waist region and a crotch region extending between said front and rear waist regions, said disposable diaper further comprising an elastic member being placed on secured under tension to said first surface of said core to surround a predetermined zone spaced inward from said transversely opposite side edges and said longitudinally opposite side ends so that said predetermined zone of said core is curved toward said second surface of said core as said elastic member contracts against a rigidity of said core.

Object of invention

(EP1108409)
An object of this invention is to provide a disposable diaper enabling the core to be formed in its predetermined zones with a depression and a protuberance without previously molding the core to form such depression and protuberance.
According to this invention, there is provided a disposable diaper contoured by transversely opposite side edges and longitudinally opposite ends and comprising a liquid-pervious topsheet, a liquid-impervious backsheet and a liquid-absorbent core having first and second surfaces and disposed between the topsheet and the backsheet to configure,

longitudinally of the diaper, a front waist region, a rear waist region and a crotch region extending between the front and rear waist regions.

An object of this invention is to provide a disposable diaper enabling the core to be formed in its predetermined zones with a depression and a protuberance without previously molding the core to form such depression and protuberance.

This invention relates to a disposable diaper for absorbing and containing body wastes.

An object of this invention is to provide a disposable diaper enabling the core to be formed in its predetermined zones with a depression and a protuberance without previously molding the core to form such depression and protuberance.

This invention relates to a disposable diaper for absorbing and containing body wastes.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/495; A61F-013/53

Family 24/200 - FAMPAT - ©Questel

Earliest priority number

JP29220298

Application number

DE69941173
EP99308016
KR19990043953
MYPI9904395
CN99121533
CA2285665
JP29220298
AU5359999
TW88216571U
ID990939D
BR9905276
SG1999005083

Publication numbers

DE69941173
EP0993816
KR100648153
MY121769
CN1221235
CA2285665
JP3429688
AU761154
TW505016
EP0993816
ID25710
BR9905276
BRPI9905276
SG74168
KR20000028995
JP2000116704
AU5359999
EP0993816
CN1250645
CA2285665

Questel unique family ID (FAN)

1249968

Family publication details

DE69941173	D1	2009-09-10	DE69941173
EP0993816	B1	2009-07-29	EP-993816
KR100648153	B1	2006-11-24	KR100648153
MY121769	A	2006-02-28	MY-121769
CN1221235	C	2005-10-05	CN1221235C
CA2285665	C	2003-11-04	CA2285665
JP3429688	B2	2003-07-22	JP3429688
AU761154	B2	2003-05-29	AU-761154
TW505016	U	2002-10-01	TW-505016U
EP0993816	A3	2001-05-02	EP-993816
ID25710	A	2000-11-02	ID--25710
BR9905276	A	2000-10-24	BR9905276
BRPI9905276	A1	2000-10-24	BR199905276
SG74168	A1	2000-07-18	SG--74168
KR20000028995	A	2000-05-25	KR20000028995
JP2000116704	A	2000-04-25	JP2000116704
AU5359999	A	2000-04-20	AU9953599
EP0993816	A2	2000-04-19	EP-993816
CN1250645	A	2000-04-19	CN1250645
CA2285665	A1	2000-04-14	CA2285665

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1998-10-14
1999-10-01
1999-10-06
1999-10-08
1999-10-12
1999-10-12
1999-10-12
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1999-10-12
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1999-10-14
1999-10-14

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2009-07-29
2006-11-24
2006-02-28
2005-10-05
2003-11-04
2003-07-22
2003-05-29
2002-10-01
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2000-11-02
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2000-07-18
2000-05-25
2000-04-25
2000-04-20
2000-04-19
2000-04-19
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(EP-993816)
2009-07-29
(DE69941173)
2009-09-10
(JP3429688)
2003-07-22
(AU-761154)
2003-05-29
(CA2285665)
2003-11-04
(CN1221235C)
2005-10-05
(MY-121769)
2006-02-28
(KR100648153)
2006-11-24

Title

(EP-993816)
Disposable pull-on undergarment

Abstract

(EP0993816)
A disposable pull-on undergarment 1 includes a pair of leg-openings 24 provided with elastic members 5, 6. Each of the elastic members 5, 6 extends along a peripheral edge of the leg-openings 24 and is spaced outward from each of transversely opposite side edges 4a of the core 4 by a distance which is larger in any one of the front and rear waist regions 20, 22 than the other of them as measured in a substantially middle zone of a crotch region 21. Along a folding line Y extending in the transverse direction to divide the undergarment in upper and lower halves, the undergarment 1 is folded toward any one of the front and rear waist regions in which the distance is relatively large.

Current assignees

UNICHARM

Inventors

OTSUBO TOSHIFUMI

Advantages / Previous drawbacks

(EP0993816)
While the portions 5b of the first elastic member 5 can be put against the wearer's skin more tightly than the portions 6b of the second elastic member 6 by adjusting the stretch stress of the first elastic member 5 higher than the stretch stress presented by the second elastic member 6, such adjustment may result in formation of undesirable creases on the portion of the absorbent core 4 lying in the front waist region 20.
However, such placement of the portions 5b may result in formation of undesirable creases 4b on the core 4.

Independent claims

(EP0993816)

1. A disposable pull-on undergarment having a front waist region, a rear waist region and a crotch region therebetween, said undergarment comprising a liquid-pervious topsheet, a liquid-impervious backsheet and a liquid-absorbent core disposed between said topsheet and said backsheet, said front and rear waist regions being joined to each other along transversely opposite side edges thereof to form a waist-opening and a pair of leg-openings, said waist-opening being provided with an elastic member extending under tension along a peripheral edge thereof and said leg-openings being provided with elastic means under tension wherein said elastic means associated with the respective leg-openings extend along respective peripheral edges thereof so that the adjacent one of said elastic means may be spaced from each of transversely opposite side edges of said absorbent core by a distance which is larger in any one of said front and rear waist regions than in the other of said front and rear waist regions as measured substantially in a middle zone of said crotch region, wherein: along a folding line extending in a transverse direction to divide said undergarment in upper and lower halves, said undergarment is folded toward any one of said front and rear waist regions in which said distance is relatively large so that said upper and lower halves are placed one upon another.

Object of invention

(EP0993816)

This invention relates to a disposable pull-on undergarment such as a disposable diaper for absorption and containment of bodily wastes.

It is an object of the present invention to provide a disposable pull-on undergarment adapted to be folded so that the individual undergarment or a set of undergarments may be easily packaged.

According to the present invention, there is provided a disposable pull-on undergarment having a front waist region, a rear waist region and a crotch region therebetween, the undergarment comprising a liquid-pervious topsheet, a liquid-impervious backsheet and a liquid-absorbent core disposed between the topsheet and the backsheet, the front and rear waist regions being joined to each other along transversely opposite side edges thereof to form a waist-opening and a pair of leg-openings, the waist-opening being provided with an elastic member extending under tension along its peripheral edge and the leg-openings being provided with elastic means under tension wherein the elastic means associated with the respective leg-openings extend along respective peripheral edges thereof so that each of the elastic means is spaced from the adjacent one of transversely opposite side edges of the absorbent core by a distance which is larger in any one of the front and rear waist regions than in the other of the front and rear waist regions as measured substantially in a middle zone of the crotch region.

This invention relates to a disposable pull-on undergarment such as a disposable diaper for absorption and containment of bodily wastes.

IPC - International classification

A41B-013/04; A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/494; A61F-013/494; A61F-013/496; A61F-013/72; B65B-063/04

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Earliest priority number

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Application number

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WO2004/000188

JPWO2004000188

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TWI257859	B	2006-07-11	TWI257859
TW200401629	A	2004-02-01	TW200401629
AU2003243959	A1	2004-01-06	AU2003243959
WO2004/000188	A1	2003-12-31	WO200400188
JPWO2004000188	A1	2003-12-31	JP2004000188W

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2003-12-31
2003-12-31

Grant dates

(TWI257859)
2006-07-11

Title

(WO200400188)
Absorptive article

Abstract

(WO2004/000188)
A disposable absorptive article wherein an absorptive article (10) containing an absorption body (20) and a sheet member covering the same further contains an adaptation structure (24) so that the latter is disposed on the human body side of the absorption body (20). The adaptation structure (24) contains a soft mini-package body (18) and a particle-like element (16) mutually movably wrapped in the mini-package body (18) and allowing an absorption subject substance to penetrate into the absorption body (20) and is fixed in position with a small width. It can be reliably fitted to the delicate shape of the urination opening, genital area or the like of the person wearing the absorptive article; thus it is superior in external appearance when worn on a person and capable of preventing leakage without spoiling the wearing feel.

Current assignees

UNICHARM

Inventors

TSUJI TOMOKO
UOSAWA TAKAKO

Advantages / Previous drawbacks

(WO2004/000188)
In addition, the absorbent body 2 0, the pressure applied to the 2 2 can be dispersed, the absorbent body 2 0, 2 2 of the absorption capacity of the nip may be difficult to influence of an advantage.
Therefore, the wearer of the absorbent article to the pudendal region of the urination opening and ensuring the fine shape such as by fitting, which is excellent in the appearance of the wearer, without compromising the fit to prevent the leakage of

the structure can be found to conform to the structure, this adaptive structure can be applied to other catamenial devices of the like, which is the problem of the present invention.

Independent claims

(WO2004/000188)

1 0. The umutsu undergarment, shorts, or, 9 wherein the pants as a function of the symbolic to undergarment.

2. The method of at least the cross-section of the parcel body 1 () and omega shape, said particulate elements substantially spherical Carvi to 1 characterized in that said absorbent article.

4. The absorber, the central absorbent body Z or left and right side absorbent body and loop comprises from 1 to 3 wherein the features of any one of the absorbent article.

8. To be absorbed for use in absorbing impact-absorbing member, wherein the compound to be absorbed at least a portion thereof as well as having a transmissive with respect to the absorbent sheet member and the cover, the absorbent article comprising, The absorbent article, or the wearer of the animal and to come in contact or near a pudendal Z and said pudendal or its vicinity and loop corresponding to a shape Z flexibly deforms in a contact surface for adaptation to the structure, wherein the body-facing side of the absorbent article is disposed comprises state, Wherein the conformal structure, a predetermined marginal space of the parcel body and the flexible material provided to the small envelope comprises a granular elements are wrapped, wherein said body side is disposed in a narrow-width characterized in that the sanitary product comprising the absorbent article.

9. An absorbent body for use in absorbing absorbed and, wherein the compound to be absorbed at least a portion thereof and having a transmissive with respect to the absorbent sheet member and the cover, the absorbent article comprising, The absorbent article, and the pubic area of the wearer or animal Z or in the vicinity thereof and to come in contact or near the pudendal The Z and corresponding to a shape of a contact surface comprising a flexibly deforms to conform to the structure, wherein the body-facing side of the absorbent article comprises a disposed state, The adaptation structures, and a spare space of a predetermined flexible parcel body provided in a state in which the envelope and the element is wrapped around a lowercase comprises particulate, wherein said body side arranged to narrow characterized in comprising the absorbent article is an undergarment.

Within a range of the transreflector 1. Compounds to be absorbed for absorbing impact-absorbing member, said transmissive with respect to the object to be absorbed at least a portion thereof as well as having a sheet member covering the absorbent, the absorbent article comprising, The absorbent article, the pudendal nerve and/or the wearer of the animal at or near a pudendal and/or said to come in contact in the vicinity thereof corresponding to a shape of a contact surface comprising a flexibly deforms to conform to the structure, wherein the body-facing side of the absorbent article is disposed comprises state, The adaptation structure, and a spare space of a predetermined flexible parcel body in a state in which the envelope is provided with a small-particulate element comprises and wrapped, narrow in width thereof in said body-facing side and disposed in the absorbent article.

Object of invention

(WO2004/000188)

In addition, the back sheet 6 8, in the horizontal direction in Fig. 9 except that a substantially central portion of the elastic body 6 2 at both sides of the elastic portion disposed uniformly in the sparse and, thereon, the waist elastic body 6 4 for fixing the elastic part is disposed is provided.

More specifically, the present invention, to provide as described below.

IPC - International classification

A41B-009/12; A61F-005/44; A61F-005/453; A61F-005/455; A61F-013/00; A61F-013/15; A61F-013/15; A61F-013/472; A61F-013/49; A61F-013/494; A61F-013/511; A61F-013/53; A61F-013/534; A61F-013/535

Family 26/200 - FAMPAT - ©Questel

Earliest priority number

JP2003207952

Application number

TH20041003198

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CN201010214676
HK06107793
EP04771892
US12/341,423
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IN0332/KOLNP/2006
JP2004163419
MYPI20043388
CN200480027291
RU2006108260
KR20067003297
KR20077000832
TW93122130
US10/920,459
WOJP2004/011931

Publication numbers

TH51056
BRPI0413216
ES2422413
CN102038579
HK1087608
EP1661538
US8221376
US8114058
CN102038579
IN247487
JP4652724
MY142396
CN1856285
EP1661538
US20090105677
US20090095403
RU2325890
KR100779932
KR100779933
RU2006108260
IN0332/KOLNP/2006
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EP1661538
KR20060031703
TWI241907
TW200522920
US20050080394
JP2005095574
TH68099

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62026731

Family publication details

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CN102038579	B	2013-08-21	CN102038579B
HK1087608	A1	2013-08-09	HK1087608
EP1661538	B1	2013-04-24	EP1661538
US8221376	B2	2012-07-17	US8221376
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IN247487	B	2011-04-15	IN-247487
JP4652724	B2	2010-12-24	JP4652724
MY142396	A	2010-11-30	MY-142396
CN1856285	B	2010-11-10	CN1856285B
EP1661538	A4	2009-05-27	EP1661538
US20090105677	A1	2009-04-23	US20090105677
US20090095403	A1	2009-04-16	US20090095403
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KR100779932	B1	2007-11-28	KR100779932
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KR20070022391	A	2007-02-26	KR20070022391
CN1856285	A	2006-11-01	CN1856285
BRPI0413216	A	2006-10-03	BR200413216
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EP1661538	A1	2006-05-31	EP1661538
KR20060031703	A	2006-04-12	KR20060031703
TWI241907	B	2005-10-21	TWI241907
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US20050080394	A1	2005-04-14	US20050080394
JP2005095574	A	2005-04-14	JP2005095574
TH68099	A	2005-03-24	TH--68099
WO2005/016213	A1	2005-02-24	WO200516213

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2003-08-19

Application dates

2004-06-01
2004-07-23
2004-08-18
2004-08-19
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2013-04-24
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2012-07-17
(JP4652724)
2010-12-24
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2008-06-10
(TWI241907)
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(KR100779933)
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2010-11-10
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2010-11-30
(IN-247487)
2011-04-15
(HK1087608)
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(CN102038579B)
2013-08-21
(ES2422413)
2013-09-11
(TH--51056B)
2016-09-02

Title

(EP1661538)
Disposable absorbent article and process for making the same

Abstract

(EP1661538)
The present invention aims to provide a disposable absorbent article such as a disposable diaper including fastener means by means of which front and rear waist regions are releasably connected with each other improved so that the fastener means are not affected by contraction of elastic members arranged in these waist regions. In this absorbent article, a waist region (12) and/or a waist region (13) is or are divided into elasticized intermediate zone (23) provided with elastic means (19) and inelasticized transversely opposite side edge zones (24) provided with none of the elastic means (19) and contiguous to transversely opposite side edges of the intermediate zone (23) . Fastener means (21) and/or (22) are provided in the transversely opposite side edge zones (24).

Current assignees

UNICHARM

Inventors

OTSUBO TOSHIFUMI
YAMAMOTO HIROKI
SUGITO TOMOKO

Advantages / Previous drawbacks

(EP1661538)
The improvement according to the present invention is in that the first waist region has an elasticized intermediate zone and inelasticized transversely opposite side edge zones in which the fastener means are attached to the first waist region. The nonwoven fabric sheets 25, 26 may be treated with repellent conventionally used for component materials constituting

the article of the type as described herein if it is desired to enhance a liquid-resistant effect.

As will be best seen in Fig. 3, the absorbent structure 18 comprises a liquid-absorbent core 28, a flexible and liquid-pervious upper sheet 29 covering a top surface of the core 28 and a flexible and liquid-resistant lower sheet 30 covering a bottom surface of the core 28.

Namely, the chassis is formed from a material differing from the material for the main body in the conventional disposable absorbent article and components such as tape-like tabs attached to transversely opposite side edge portions of the main body so as to extend outward from these side edge portions do not correspond to the transversely opposite side edge portions of the chassis according to the present invention.

is accompanied with a problem that the fastener means may be unintentionally disengaged from the landing zone.

Assumed that these waist regions are formed by a nonwoven fabric made of staple fibers or continuous filaments of synthetic resin as this is usually the case and particularly such a nonwoven fabric contains fibers or filaments oriented to cross the tear off direction defined by the tear off lines, it is difficult to tear the front waist region off from the rear waist region.

Such gathers make it difficult to bring the fastener means in a firm engagement with a landing zone and an unstable engagement is accompanied with a problem that the fastener means may be unintentionally disengaged from the landing zone.

As one of measures to overcome such a problem, it may be contemplated that none of the elastic members is distributed over the part of the waist region to be provided with the fastener means.

While it is technically possible to provide the waist region partially with the elastic members, such a measure is not suitable for a mechanical apparatus driven at a high speed to mass produce the article as described herein at a low cost.

is difficult to tear the front waist region off from the rear waist region.

Independent claims

(EP1661538)

1. A disposable absorbent article comprising: an absorbent chassis having a first waist region; a second waist region, a crotch region extending between these waist regions; leg region extending on transversely opposite sides of said crotch region wherein; of said first and second waist regions, at least said first waist region being provided with first elastic means adapted to operate in a waist-surrounding direction of a wearer; said leg regions being provided second elastic means adapted to operate in a leg-surrounding direction of the wearer; said first waist region being provided along transversely opposite side edge portions thereof with fastener means adapted to be releasably engaged one with another and thereby to releasably connect said first and second waist regions; and said first waist region having an elasticized intermediate zone and inelasticized transversely opposite side edge zones in which said fastener means are attached to said first waist region.

Object of invention

(EP1661538)

It is an object of the present invention to provide a disposable absorbent article adapted to solve the problem as has been described above and a method of making the same.

It is another object of the present invention to provide a disposable absorbent article including a fastener means adapted to be free from the affection of elastic members even when these elastic members contract and a method of making the same.

It is still another object of the present invention to provide a disposable absorbent article having front and rear waist regions previously connected with each other and adapted to be easily torn off from one another, if desired, and a method of making the same.

The present invention aims to provide a disposable absorbent article such as a disposable diaper including fastener means by means of which front and rear waist regions are releasably connected with each other improved so that the fastener means are not affected by contraction of elastic members arranged in these waist regions.

It is an object of the present invention to provide a disposable absorbent article adapted to solve the problem as has been described above and a method of making the same.

It is an object of the present invention to provide a disposable absorbent article adapted to solve the problem as has been described above and a method of making the same.

The present invention aims to provide a disposable absorbent article such as a disposable diaper including fastener means by means of which front and rear waist regions are releasably connected with each other improved so that the fastener means are not affected by contraction of elastic members arranged in these waist regions.

The present invention relates to a disposable absorbent article used for absorption and containment of body wastes and to a method of making the same.

The invention particularly relates to a disposable absorbent article such as an open or pull-on type diaper for an infant or incontinent patient or training pants and a method of making the same.

The present invention relates to a disposable absorbent article used for absorption and containment of body wastes and to a method of making the same.

IPC - International classification

A61F; A61F-005/44; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/56; A61F-013/62

Family 27/200 - FAMPAT - ©Questel

Earliest priority number

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Application number

JP07193893
ES94105089T
KR19940006518U
DE59407363
EP94105089
CA2119659
AU5795294
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1197035

Family publication details

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EP0617939	B1	1998-12-02	EP-617939
CA2119659	C	1998-07-21	CA2119659
AU675276	B2	1997-01-30	AU-675276
GB2276529	B	1996-12-18	GB2276529
PH30013	A	1996-10-29	PH--30013
EP0617939	A3	1996-01-10	EP-617939
US5447508	A	1995-09-05	US5447508
CN2193155	Y	1995-03-29	CN2193155U
AU5795294	A	1994-10-06	AU9457952
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JP06277251	A	1994-10-04	JP06277251
CA2119659	A1	1994-10-01	CA2119659
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1993-03-30

Application dates

1993-03-30
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1994-10-04
1994-10-01
1994-05-25

Grant dates

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(US5447508)
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(DE59407363)
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(GB2276529)
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(JP3012425)
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(CN2193155U)
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(PH--30013)
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(AU-675276)
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(CA2119659)
1998-07-21
(KR200138495U)
1999-04-01
(ES2127303)
1999-04-16

Title

(EP-617939)
Disposable diaper

Abstract

(EP0617939)
Disposable diaper which comprises a front part and a back part provided with an elasticity which is to act upon the hip line. Flexible elements are applied to one outer layer of a disposable diaper around the first and second leg openings, so that a first flexible element provided around a first leg opening extends further along a curved path into the front part and the back part and ends at a lateral edge of the front part and the back part, whereas a second flexible element provided around a second leg opening extends along the curved path into the front part and the back part and ends at the other lateral edge of the front part and the back part. The respective flexible elements each comprise a multiplicity of rubber-like, elastic threads which extend in parallel to one another.

Current assignees

UNICHARM
YOU ARE A BEAUTIFUL

Inventors

NUMANO KAZUKI
SASAKI TOHRU

Advantages / Previous drawbacks

(EP0617939)
Portions of the front - and of the rear part, the longitudinally opposite ends of the distally and proximally the crotch region lie, are generally difficult to be implemented in tight contact with the wearer's skin, thereby fitting feeling is impaired and it is

often a rapid wick ing of the urine excreted is problematic.

Such material is however relatively expensive and necessarily increases the material costs.

Independent claims

(EP0617939)

1. The disposable diaper, comprising a liquid pervious topsheet, a liquid impervious backsheet, between these laid, liquid absorbent core and a waist opening and leg openings in each case of elastic elements, characterized in, that the elastic members arranged around the leg openings and a second elastic member comprise a first elastic member, a plurality of rubber-like elastic threads include, in parallel with each other in a transverse direction opposite edges of a crotch region extending in the front - and rear, wherein one of the left leg opening its associated first elastic member along a curved path in the front - and further extends to an edge of the front - and rear and of the rear part ends, while the second leg opening associated with the second elastic element is further along a curved path in the front - and the rear part and at the other extends, opposite side edge of the front - and of the rear part ends.

Object of invention

(EP0617939)

The present invention relates to a disposable diaper, for absorbing and holding urine and other bodily the exudates is used.

The present invention relates to a disposable diaper, for absorbing and holding urine and other bodily the exudates is used.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/494; A61F-013/494

Family 28/200 - FAMPAT - ©Questel

Earliest priority number

JP19773295

Application number

TH19961002560
SA96170178
JP19773295
DE69617565
EP96305695
AU6073196
CA2181955
KR19960032137
TW86206164U
US08/691,047

Publication numbers

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SA1061
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DE69617565
DE69617565
EP0761193
AU714939
CA2181955
KR0158550
TW336479
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KR970009759
EP0761193
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TH23477

AU6073196

CA2181955

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1199776

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SA1061	B1	2006-07-31	SA---1061
JP3515834	B2	2004-04-05	JP3515834
DE69617565	T2	2002-10-24	DE69617565
DE69617565	D1	2002-01-17	DE69617565
EP0761193	B1	2001-12-05	EP-761193
AU714939	B2	2000-01-13	AU-714939
CA2181955	C	1999-07-06	CA2181955
KR0158550	B1	1998-12-15	KR100158550
TW336479	U	1998-07-11	TW-336479U
US5749865	A	1998-05-12	US5749865
EP0761193	A3	1997-10-01	EP-761193
KR970009759	A	1997-03-27	KR19970009759
EP0761193	A2	1997-03-12	EP-761193
JP09038134	A	1997-02-10	JP09038134
TH23477	A	1997-02-10	TH--23477
AU6073196	A	1997-02-06	AU9660731
CA2181955	A1	1997-02-03	CA2181955

Earliest priority date

1995-08-02

Application dates

1995-08-02

1996-07-22

1996-07-24

1996-07-26

1996-07-28

1996-07-31

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1996-08-01

1996-08-01

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2004-04-05

2002-10-24

2002-01-17

2001-12-05

2000-01-13

1999-07-06

1998-12-15

1998-07-11

1998-05-12
1997-10-01
1997-03-27
1997-03-12
1997-02-10
1997-02-10
1997-02-06
1997-02-03

Grant dates

(EP-761193)
2001-12-05
(US5749865)
1998-05-12
(DE69617565)
2002-01-17
(JP3515834)
2004-04-05
(KR100158550)
1998-12-15
(CA2181955)
1999-07-06
(AU-714939)
2000-01-13
(TH--29713B)
2011-03-09

Title

(EP-761193)
Absorbent article of pants type

Abstract

(EP0761193)
An absorbent article of pants type comprises a front waist-opening marginal stretchable region (23a) and a front waist stretchable region (24a) having upper, intermediate and lower stretchable subregions (28a,28b,28c). Their elongation stresses stand in a relationship of the front waist-opening marginal stretchable region (23a) > the lower stretchable subregion (28c) > the upper stretchable subregion (28a) > the intermediate stretchable subregion (28b).

Current assignees

UNICHARM

Inventors

YAMAMOTO MASAMITSU
IGAUE TAKAMITSU
SASAKI TORU

Advantages / Previous drawbacks

(EP0761193)
Thus, it will be difficult for these auxiliary elastic members to prevent said "slip down" and they tend to exert on the middle regions of a baby's belly an excessive pressure which may obstruct the baby's smooth abdominal breathing.
will be difficult for these auxiliary elastic members to prevent said "slip down" and they tend to exert on the middle regions of a baby's belly an excessive pressure which may obstruct the baby's smooth abdominal breathing.

Independent claims

(EP0761193)
1. An absorbent article of pants type comprising a laminated panel composed of a liquid-permeable topsheet, a liquid-

impermeable backsheet and a liquid-absorbent core panel disposed between said topsheet and said backsheet, said laminated panel being folded in two sections followed by bonding these two sections along transversely opposite side edges except a longitudinally intermediate region so as to define front and rear waist regions, a crotch region, a waist-opening and a pair of leg-openings, wherein there are provided first elastic means around said waist-opening so as to be circumferentially stretchable, second elastic means around each of said leg-openings so as to be circumferentially stretchable and third elastic means transversely extending between said waist-opening and said leg-opening across said core panel so as to be circumferentially stretchable, characterized in that: said first elastic means is arranged in front and rear waist-opening marginal stretchable regions defined between respective upper ends of said waist-opening and respective first border lines transversely extending along respective upper ends of said core panel as viewed in said front and rear waist regions; said third elastic means provided on said front waist region is arranged in a front waist stretchable region defined between said first borderline in said front waist region and a second borderline connecting respective upper portions of said pair of leg-openings; said front waist stretchable region comprises upper, intermediate and lower stretchable subregions; and said first elastic means in said front waist-opening marginal stretchable region presents an elongation stress higher than that presented by said third elastic means in each of said upper and lower stretchable subregions, and said third elastic means in said upper and lower stretchable subregions presents an elongation stress higher than that presented by said third elastic means in said intermediate stretchable subregion.

Object of invention

(EP0761193)

It has been found by the inventors that the aforesaid problems can be effectively eliminated by arranging elastic members of relatively high elongation stresses in waist-opening marginal regions as well as in upper and lower subregions of the front and rear waist regions of the diaper, so that elastic members arranged in intermediate subregions of the front and rear waist regions may preferably function to hold an inner surface of the diaper in these subregions in soft but gap-free contact with the baby's skin.

It has been also found that elongation stresses of the auxiliary elastic members provided on the rear waist region may be lower than those of the auxiliary elastic members provided on the front waist region of the diaper because, in view of the particular body form substantially common to babies, the rear waist region is less important than the front waist region for prevention of the aforesaid "slip down".

The present invention relates to an absorbent article of pants type and more particularly to a disposable absorbent article of pants type such as a diaper of pants type, incontinence pants, or training pants.

The present invention relates to an absorbent article of pants type and more particularly to a disposable absorbent article of pants type such as a diaper of pants type, incontinence pants, or training pants.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/64

Family 29/200 - FAMPAT - ©Questel

Earliest priority number

JP2004224838

Application number

US11/192,182
DE602005002413T
EP05016561
KR20050069060
TW94125844
SG200504721

Publication numbers

US8016805
DE602005002413
DE602005002413
EP1621168

KR100705184
TWI275385
KR20060048882
TW200614974
SG119348
US20060025746
EP1621168

Questel unique family ID (FAN)

14446143

Family publication details

US8016805	B2	2011-09-13	US8016805	
DE602005002413	T2	2008-06-12	DE602005002413	
DE602005002413	D1	2007-10-25	DE602005002413	
EP1621168	B1	2007-09-12	EP1621168	
KR100705184	B1	2007-04-06	KR100705184	
TWI275385	B	2007-03-11	TWI275385	
KR20060048882	A	2006-05-18	KR20060048882	
TW200614974	A	2006-05-16	TW200614974	
SG119348	A1	2006-02-28	SG-119348	
US20060025746	A1	2006-02-02	US20060025746	
EP1621168	A1	2006-02-01	EP1621168	

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2004-07-30

Application dates

2005-07-28
2005-07-29
2005-07-29
2005-07-29
2005-07-29
2005-07-29

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2011-09-13
2008-06-12
2007-10-25
2007-09-12
2007-04-06
2007-03-11
2006-05-18
2006-05-16
2006-02-28
2006-02-02
2006-02-01

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2007-09-12
(US8016805)
2011-09-13
(DE602005002413)

2007-10-25
(TWI275385)
2007-03-11
(KR100705184)
2007-04-06

Title

(EP1621168)
Pull-on disposable diaper

Abstract

(EP1621168)
A pull-on disposable diaper 1 has, between a waist opening 5 and leg openings 6, a region 71 having a width of 15 to 35 mm in each of a front section A and a rear section B. The region 71, while worn by a wearer, applies a pressure of 1.1 to 2.5 kPa to the wearer's body. With the diaper 1 opened and stretched out, the distance from the longitudinal centerline of the diaper to the widthwise middle of the region 71 in the front section A is 180 to 220 mm, and the distance from the longitudinal centerline of the diaper to the widthwise middle of the region 71 in the rear section B is 180 to 220 mm. A waist portion around the waist opening 5, while worn by a wearer, applies a pressure of 0.3 to 1.5 kPa to the wearer's body.

Current assignees

KAO

Inventors

SASAKI JUN
KANAI TAEKO
OTSUKA MICHIKO

Advantages / Previous drawbacks

(EP1621168)
The waist portion 5 having its constrictive pressure falling within the recited range offers another advantage that the waist portion 5 is easy to widen, which makes diapering easy.
Hence, it is desirable that the ratio of the difference between a higher wearing pressure of the first portion 71 of either one of the front section A and the rear section B and a lower wearing pressure of the first portion 71 of the other section to the higher wearing pressure be within 30%.
To avoid such a disadvantage, it is meaningful that the maximum pressure exerted by the subsection 7B should be 2.5 kPa or lower.
However, the above-described configurations tend to make the diapers difficult to put on because of a strong constrictive force exerted in the waist portion.
is difficult to keep the subsection 7B on the wearer's upper iliac region, and the diaper 1 easily slides down, resulting in a dull, droopy appearance.
is difficult to keep the first portion 71 on the upper iliac region of the wearer, and the diaper 1 easily moves down, resulting in a dull, droopy appearance.
If that pressure is less than 1.1 kPa, it is difficult to keep the first portion 71 on the upper iliac region of the wearer, and the diaper 1 easily moves down, resulting in a dull, droopy appearance.
If the average wearing pressure of the subsection 7B is less than 0.9 kPa, it is difficult to keep the subsection 7B on the wearer's upper iliac region, and the diaper 1 easily slides down, resulting in a dull, droopy appearance.

Independent claims

(EP1621168)
1. A pull-on disposable diaper having a waist opening and a pair of leg openings, the diaper comprising a front section and a rear section, and having regions which are located between the waist opening and the leg openings at the front section and the rear section, respectively, and which, while worn by a wearer, apply a pressure of 1.1 to 2.5 kPa to the wearer's body, the regions having a width of 15 to 35 mm, the distance from the longitudinal centerline of the diaper in the opened and stretched out state to the width wise middle of the region in the front section being 180 to 220 mm, the distance from the longitudinal centerline of the diaper in the opened and stretched out state to the width wise middle of the region in the

rear section being 180 to 220 mm, and a waist portion around the waist opening, while worn by a wearer, applies a pressure of 0.3 to 1.5 kPa to the wearer's body

5. A method of diapering using a pull-on disposable diaper having a waist opening and a pair of leg openings comprising putting the pull-on diaper on a wearer and tightening the part of the diaper applied to the part of the wearer's body from the iliac crest to the anterior superior iliac spine with a prescribed means to apply a wearing pressure of 1.1 to 2.5 kPa to that part of the wearer's body.

6. A pull-on disposable diaper having a waist opening, a pair of leg openings, and a pair of side seals, the diaper having a total length of 440 to 530 mm and a sideseal length of 90 to 140 mm in the opened and stretched out state thereof, and the diaper comprising hypothetically quartered first to fourth subsections having equal widths in the diaper length direction from the waist opening to the leg openings, wherein the second subsection applies, while worn by a wearer, an average pressure of 0.9 to 1.8 kPa and a maximum pressure of 2.5 kPa or lower to the wearer's body, and the first and the third subsections apply, while worn by a wearer, a lower pressure to the wearer's body than the second subsection.

Object of invention

(EP1621168)

The present invention provides a pull-on disposable diaper having a waist opening and a pair of leg openings.

The present invention relates to pull-on disposable diapers, particularly those for older babies and toddlers.

The present invention relates to pull-on disposable diapers, particularly those for older babies and toddlers.

The present invention also provides a method of putting a pull-on disposable diaper having a waist opening and a pair of leg openings on a wearer.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496

Family 30/200 - FAMPAT - ©Questel

Earliest priority number

SE9503887

Application number

SE9503887

Publication numbers

SE508629

SE9503887

SE9503887

Questel unique family ID (FAN)

36849987

Family publication details

SE508629	C2	1998-10-19	SE-508629
SE9503887	L	1997-05-04	SE9503887
SE9503887	D0	1995-11-03	SE9503887

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1995-11-03

Application dates

1995-11-03

Publication dates

1998-10-19

1997-05-04

1995-11-03

Grant dates

(SE-508629)

1998-10-19

Title

(SE-508629)

Absorbent article, e.g. sanitary towel, briefs protection, etc.

Abstract

(SE9503887)

The fluid-impermeable outer layer (1) is connected in a peripheral direction with the inner layer (2) and has adhesive parts (7) for releasably holding the absorbent article in place against the textile of the briefs during use. The absorbent article can be folded before and/or after use for exposing only the fluid impermeable outer layer. The adhesive parts for releasably maintaining the absorbent article in place during use are arranged only to adhere to the soft textile material and to adhere releasably the textile inner layer when the article is folded together. The absorbent article is divided by two fold lines which run across its longitudinal centre line, thus forming three sections. At least one of the adhered parts is arranged on the outer casing (1) on the first end section and adheres the outer layer soft textile in the absorbent article second end section when the first section is folded in over the intermediate section inner layer and the second end section is then folded over the folded-in first end section.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

HANSSON ROY

FROEJDH ARNE

IPC - International classification

A61F; A61F-013/15

Family 31/200 - FAMPAT - ©Questel

Earliest priority number

JP29220298

Application number

US10/967,484

Publication numbers

US7156831

US20050055006

Questel unique family ID (FAN)

43509821

Family publication details

US7156831	B2	2007-01-02	US7156831	
US20050055006	A1	2005-03-10	US20050055006	

Earliest priority date

1998-10-14

Application dates

2004-10-18

Publication dates

2007-01-02

2005-03-10

Grant dates

(US7156831)

2007-01-02

Title

(US7156831)

Disposable pull-on undergarment

Abstract

(US20050055006)

A disposable pull-on undergarment includes a pair of leg-openings provided with elastic members. Each of the elastic members extends along a peripheral edge of the leg-openings and is spaced outward from each of transversely opposite side edges of the core by a distance which is larger in any one of the front and rear waist regions than the other of them as measured in a substantially middle zone of a crotch region. Along a folding line Y extending in the transverse direction to divide the undergarment in upper and lower halves, the undergarment is folded toward any one of the front and rear waist regions in which the distance is relatively large.

Current assignees

UNICHARM

Inventors

OTSUBO TOSHIFUMI

Advantages / Previous drawbacks

(US20050055006)

However, such placement of the portions 5b may result in formation of undesirable creases 4b on the core 4.

While the portions 5b of the first elastic member 5 can be put against the wearer's skin more tightly than the portions 6b of the second elastic member 6 by adjusting the stretch stress of the first elastic member 5 higher than the stretch stress presented by the second elastic member 6, such adjustment may result in formation of undesirable creases on the portion of the absorbent core 4 lying in the front waist region 20.

Independent claims

(US20050055006)

1. A disposable pull-on undergarment comprising a front waist region; a rear waist region; a crotch region which extends between the front waist region and the rear waist region; a liquid-pervious, topsheet; a liquid-impervious backsheet; and a liquid-absorbent core disposed between said liquid-pervious topsheet and said liquid-impervious backsheet, said front and rear waist regions being joined to each other along transversely opposite side edges thereof to form a waist-opening and a pair of leg-openings, said disposable pull-on diaper further comprising an elastic member extending under tension along a peripheral edge of the waist-opening and elastic means provided under tension adjacent the pair of leg-openings, said elastic means being directly secured to at least said backsheet, said elastic means associated with respective ones of the pair of leg-openings extending along respective peripheral edges thereof so that portions of the elastic means maybe spaced from each of transversely opposite side edges of said liquid-absorbent core by a distance which is larger in one of said front and rear waist regions than in the other of said front and rear waist regions as measured substantially in a middle zone of said crotch region, said elastic means further having portions that extend between the liquid-absorbent core and the liquid-impervious backsheet, said disposable pull-on undergarment being foldable along a folding line which extends in a transverse direction to divide said undergarment into upper and lower halves, whereby said undergarment can be folded toward any one of said front and rear waist regions in which said distance is relatively large so that said upper and lower halves are placed upon one upon another.

Object of invention

(US20050055006)

It is an object of the present invention to provide a disposable pull-on undergarment adapted to be folded so that the individual undergarment or a set of undergarments may be easily packaged.

According to the present invention, there is provided a disposable pull-on undergarment having a front waist region, a rear waist region and a crotch region therebetween, the undergarment comprising a liquid-pervious topsheet, a liquid-impervious backsheet and a liquid-absorbent core disposed between the topsheet and the backsheet, the front and rear waist regions being joined to each other along transversely opposite side edges thereof to form a waist-opening and a pair of leg-openings, the waist-opening being provided with an elastic member extending under tension along its peripheral edge and the leg-openings being provided with elastic means under tension wherein the elastic means associated with the respective leg-openings extend along respective peripheral edges thereof so that each of the elastic means is spaced from the adjacent one of transversely opposite side edges of the absorbent core by a distance which is larger in any one of the front and rear waist regions than in the other of the front and rear waist regions as measured substantially in a middle zone of the crotch region.

This invention relates to a disposable pull-on undergarment such as a disposable diaper for absorption and containment of

bodily wastes.

IPC - International classification

A41B-013/04; A61F-005/44; A61F-013/15; A61F-013/20; A61F-013/494; A61F-013/494; A61F-013/496; A61F-013/72; B65B-063/04

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JP2002255986

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BR0314416
AT03795266T
US11/044,291
EP03795266
JP2003208458
MYPI20033276
CN03822953
CA2496284
AU2003257596
KR20067016152
KR20057003289
WOJP03/011090

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BRPI0314416
BRPI0314416
AT526924
US8034040
EP1552801
EP1552801
JP4336540
MY138471
CN100479794
CA2496284
AU2003257596
KR100718526
KR100662603
KR20060095581
CN1684651
BR0314416
BRPI0314416
EP1552801
US20050131378
KR20050037593
JP2004141641
AU2003257596
WO2004/024045
CA2496284

Questel unique family ID (FAN)

1023128

Family publication details

BRPI0314416	B1	2012-11-13	BR200314416
BRPI0314416	A2	2012-06-26	BR200314416
AT526924	T	2011-10-15	ATE526924
US8034040	B2	2011-10-11	US8034040
EP1552801	B1	2011-10-05	EP1552801
EP1552801	A4	2009-10-21	EP1552801
JP4336540	B2	2009-07-03	JP4336540
MY138471	A	2009-06-30	MY-138471
CN100479794	C	2009-04-22	CN100479794C
CA2496284	C	2008-11-18	CA2496284
AU2003257596	B2	2008-01-10	AU2003257596
KR100718526	B1	2007-05-16	KR100718526
KR100662603	B1	2007-01-02	KR100662603
KR20060095581	A	2006-08-31	KR20060095581
CN1684651	A	2005-10-19	CN1684651
BR0314416	A	2005-07-19	BR200314416
BRPI0314416	A1	2005-07-19	BRPI0314416
EP1552801	A1	2005-07-13	EP1552801
US20050131378	A1	2005-06-16	US20050131378
KR20050037593	A	2005-04-22	KR20050037593
JP2004141641	A	2004-05-20	JP2004141641
AU2003257596	A1	2004-04-30	AU2003257596
WO2004/024045	A1	2004-03-25	WO200424045
CA2496284	A1	2004-03-25	CA2496284

Earliest priority date

2002-08-30

Application dates

2003-08-22
2003-08-29
2003-08-29
2003-08-29
2003-08-29
2003-08-29
2003-08-29
2003-08-29
2003-08-29
2005-01-28
2005-02-25
2006-08-10

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2011-10-11
2011-10-05
2009-10-21
2009-07-03
2009-06-30

2009-04-22
2008-11-18
2008-01-10
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2007-01-02
2006-08-31
2005-10-19
2005-07-19
2005-07-19
2005-07-13
2005-06-16
2005-04-22
2004-05-20
2004-04-30
2004-03-25
2004-03-25

Grant dates

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2011-10-05
(US8034040)
2011-10-11
(JP4336540)
2009-07-03
(KR100662603)
2007-01-02
(KR100718526)
2007-05-16
(AU2003257596)
2008-01-10
(CA2496284)
2008-11-18
(CN100479794C)
2009-04-22
(MY-138471)
2009-06-30
(ATE526924)
2011-10-15
(BR200314416)
2012-11-13

Title

(EP1552801)
Pants type disposable diaper

Abstract

(EP1552801)
A pull-on disposable diaper 1 is provided in a waist covering region with a tape tab 14 extending in a waist-circumferential direction. The tape tab 14 comprises a fixed tape section 14a secured to an outer sheet 3 of the diaper and a movable tape section 14e contiguous to the fixed tape section 14a. The movable tape section 14e has a distal end portion 24 and a proximal end portion 28. The distal end portion 24 is formed with a finger grip zone 14d and an attaching means 16a located short of this finger grip zone 14d. The proximal end portion 28 is contiguous to one end portion 22 of the fixed tape

section 14a. The attaching means 16a is releasably attached to a zone of the fixed tape section 14a in which the fixed tape section 14a is curved to bulge in a direction spaced apart outwardly from an outer surface of the waist covering region 5.

Current assignees

UNICHARM

Inventors

SASAKI TORU

ITO KYOKO

Advantages / Previous drawbacks

(EP1552801)

Such arrangement is advantageous in that the adhesive tape tab 14 can be easily unfolded, a quantity of self-adhesive 16 used can be minimized and the adhesive tape tab 14 unfolded in this manner can be quickly anchored on the desired spot of the diaper 1.

It is also possible to attach the adhesive tape tab 14 to the outer sheet 3 so as to be placed upon the auxiliary elastic member 8 and thereby to make the curve of the adhesive tape tab 14 more remarkable.

Independent claims

(EP1552801)

1. A pull-on disposable diaper having a waist covering region, a crotch covering region, a waist-hole and a pair of leg-holes and being provided on an outer surface of said waist covering region with a tape tab extending in a waist-circumferential direction of said waist covering region and having an attaching means to be applicable to one of said waist covering region and said crotch covering region, said disposable diaper further comprising: said waist covering region having a part stretchable and contractible in an elastic manner in said waist-circumferential direction and provided with gathers brought by contraction of an elastic member included in said waist covering region and repeating a dent and a bulge one after another in said waist-circumferential direction; said tape tab comprising a fixed tape section permanently attached to said outer surface and a movable tape section contiguous to said fixed tape section, said movable tape section having a proximal end portion and a distal end portion, said proximal end portion being contiguous to one end of said fixed tape section in said waist-circumferential direction, said distal end portion having a finger grip zone and lying aside to another end portion opposed to said one end portion of said fixed tape section or lying aside to said one end portion in consequence of folding back of said movable tape section in a vicinity of another end portion; said attaching means being formed on an inside surface opposed to said outer surface of said waist covering region and located short of said finger grip zone of said movable tape section; at least a part of said fixed tape section and said movable tape section being curved so as to bulge in a direction spaced apart outwardly from said outer surface of said waist covering region as said waist covering region elastically contracts in said waist-circumferential direction; and said attaching means being releasably attached to said part of one of said fixed tape section and said movable tape section.

6. A pull-on disposable diaper having a waist covering region, a crotch covering region, a waist-hole and a pair of leg-holes and being provided on an outer surface of said waist covering region with a tape tab extending in a waist-circumferential direction of said waist covering region and having an attaching means to be applicable to one of said waist covering region and said crotch covering region, said disposable diaper further comprising: said waist covering region having a part stretchable and contractible in an elastic manner in said waist-circumferential direction and provided with gathers brought by contraction of an elastic member included in said waist covering section and repeating a dent and a bulge one after another in said waist-circumferential direction; said tape tab comprising a fixed tape section permanently attached to said outer surface and a movable tape section contiguous to said fixed tape section, said movable tape section having a proximal end portion and a distal end portion, said proximal end portion being contiguous to one end of said fixed tape section in said waist-circumferential direction, said distal end portion having a finger grip zone and said attaching means; said attaching means being formed on the inside surface opposed to said outer surface of said waist covering region and located short of said finger grip zone of said movable tape section; and said attaching means being releasably attached to said bulge of said gathers.

Object of invention

(EP1552801)

The present invention relates to a pull-on disposable diaper.

In the aspect of the present invention, there is provided a pull-on disposable diaper having a waist covering region, a crotch covering region, a waist-hole and a pair of leg-holes and being provided on an outer surface of the waist covering region with a tape tab extending in a waist-circumferential direction of the waist covering region and having an attaching means to be applicable to one of the waist covering region and the crotch covering region.

It is an object of the present invention to provide an improved pull-on disposable diaper having a tape tab whose attaching means applicable to a waist covering region or a crotch covering region is releasably attached to the diaper.

It is an object of the present invention to provide an improved pull-on disposable diaper having a tape tab whose attaching means applicable to a waist covering region or a crotch covering region is releasably attached to the diaper.

The present invention relates to a pull-on disposable diaper.

It is an object of the present invention to provide an improved pull-on disposable diaper having a tape tab whose attaching means applicable to a waist covering region or a crotch covering region is releasably attached to the diaper.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/551; A61F-013/56; A61F-013/58

Family 33/200 - FAMPAT - ©Questel

Earliest priority number

JP1599596

Application number

MYPI9700310
KR19970002773
CN97100482
EP97870009
JP01599596
TW86221145U
AU1240497
US08/787,477
SG1997000168

Publication numbers

MY119552
KR100437173
CN1124120
EP0787474
JP3150601
TW365810
AU705295
US5876392
SG52911
CN1162444
JP09206330
KR970058674
AU1240497
EP0787474

Questel unique family ID (FAN)

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Family publication details

MY119552	A	2005-06-30	MY-119552
KR100437173	B1	2005-04-06	KR100437173
CN1124120	C	2003-10-15	CN1124120C

EP0787474	B1	2002-07-24	EP-787474
JP3150601	B2	2001-03-26	JP3150601
TW365810	U	1999-08-01	TW-365810U
AU705295	B2	1999-05-20	AU-705295
US5876392	A	1999-03-02	US5876392
SG52911	A1	1998-09-28	SG--52911
CN1162444	A	1997-10-22	CN1162444
JP09206330	A	1997-08-12	JP09206330
KR970058674	A	1997-08-12	KR19970058674
AU1240497	A	1997-08-07	AU9712404
EP0787474	A1	1997-08-06	EP-787474

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2002-07-24
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2002-07-24
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2001-03-26
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2003-10-15
(KR100437173)
2005-04-06
(MY-119552)
2005-06-30

Title

(EP-787474)
Disposable absorbent undergarment of pants type

Abstract

(EP0787474)
A disposable absorbent undergarment of pants type (1) such as a disposable diaper is provided on front (6) and rear (7) waist regions with a plurality of elastic members (21,22,21A,22A,21B,22B) circumferentially extending parallel one to another and spaced apart one from another along a longitudinal axis of the undergarment so that, between each pair of adjacent elastic members provided on one of the front and rear waist regions, each elastic member provided on the other of the front and rear waist regions is interposed so that they do not overlap.

Current assignees

UNICHARM

Inventors

HISADA KENICHI

Advantages / Previous drawbacks

(US5876392)
In view of the problem described above, it is a principal object of the invention to provide a disposable absorbent pants type undergarment provided on front and rear waist regions thereof with circumferentially extending elastic members arranged to eliminate a concern that the elastic members might deteriorate touch of the diaper particularly at transversely opposite side edges thereof.
The respective elastic members 21, 22 arranged in this manner do not overlap each other as the diaper 1 is folded in two and thereby the side edges 12, 14; 13, 15 of the diaper can be maintained in a relatively planar and smooth state not only before but also after being subjected to ultrasonic-seaming.

Independent claims

(EP0787474)
1. A disposable absorbent undergarment of pants type (1) having a longitudinal axis, a front region (6), a rear region (7) and a crotch region (8) therebetween, the undergarment comprising a liquid-permeable topsheet (2), a liquid-impermeable backsheet (3) and a liquid-absorbent core (4) disposed therebetween, the front (6) and rear (7) waist regions being put flat with the topsheet being located inside and joined together along transversely opposite side edges (12, 13, 14, 15) thereof to define a waist-opening and a pair of leg-openings and provided with a plurality of elastic members (21, 22) circumferentially extending parallel one to another and spaced apart one from another along the longitudinal axis, wherein: the elastic members comprise an arrangement such that, between each pair of adjacent elastic members provided on one of the front and rear waist regions, each of the elastic members provided on the other of the front and rear waist regions is interposed.

Object of invention

(EP0787474)
The present invention relates generally to disposable absorbent undergarments of pants type suitable to be used in the form of a disposable diaper, training pants, incontinence pants or the like.
The present invention relates generally to disposable absorbent undergarments of pants type suitable to be used in the form of a disposable diaper, training pants, incontinence pants or the like.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/496; A61F-013/62

Family 34/200 - FAMPAT - ©Questel

Earliest priority number

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Application number

JP2006538562
CN200480033385
BRPI0416631
ZA200603979
IN2688/DELNP/2006
MXPA06005744
KR20067009706
EP04819533
ARP040104276
WOUS2004/038290
AU2004292432
CA2546999
US10/985,208

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JP4494412
CN100482190
BRPI0416631
ZA200603979
IN2688/DELNP/2006
JP2007509725
BRPI0416631
BRPI0416631
CN1878522
MXPA06005744
KR20060090732
EP1686939
AR046646
WO2005/051263
AU2004292432
CA2546999
US20050107763

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46026

Family publication details

JP4494412	B2	2010-04-16	JP4494412
CN100482190	C	2009-04-29	CN100482190C
BRPI0416631	A2	2009-04-28	BR200416631
ZA200603979	B	2008-03-26	ZA200603979
IN2688/DELNP/2006	A	2007-08-10	IN2006DN02688
JP2007509725	A	2007-04-19	JP2007509725
BRPI0416631	A	2007-01-16	BR200416631
BRPI0416631	A1	2007-01-16	BRPI0416631
CN1878522	A	2006-12-13	CN1878522
MXPA06005744	A	2006-08-17	MX2006PA005744

KR20060090732	A	2006-08-14	KR20060090732
EP1686939	A1	2006-08-09	EP1686939
AR046646	A1	2005-12-14	AR--46646
WO2005/051263	A1	2005-06-09	WO200551263
AU2004292432	A1	2005-06-09	AU2004292432
CA2546999	A1	2005-06-09	CA2546999
US20050107763	A1	2005-05-19	US20050107763

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2003-11-19

Application dates

2004-11-10
2004-11-17
2004-11-17
2004-11-17
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2010-04-16
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2007-08-10
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Grant dates

(JP4494412)
2010-04-16
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2008-03-26
(CN100482190C)
2009-04-29

Title

(EP1686939)

Disposable pull-on garment

Abstract

(EP1686939)

A disposable pull-on garment comprising an absorbent main body and a ring-like elastic belt is disclosed. The pull-on garment has a waist opening and leg openings and extends in a longitudinal direction and a transverse direction. The pull-on garment comprises an absorbent main body and a ring-like elastic belt. The absorbent main body comprises a liquid pervious topsheet, a liquid impervious backsheet and an absorbent core disposed therebetween. The absorbent main body has longitudinal side edges, transverse end edges, a front waist panel, a back waist panel and a crotch panel. The front waist panel and the back waist panel are not joined directly. The ring-like elastic belt is surrounded by a transverse waist border and a transverse abdomen border. The ring-like elastic belt has a central panel and side panels. The central panel is joined to the front waist panel and the back waist panel of the absorbent main body to form one waist opening and two leg openings. The ring-like elastic belt is not disposed in the crotch panel of the absorbent main body. The ring-like elastic belt comprises a front belt and a back belt. Each belt comprises a belt layer and a belt elastic material joined to the belt layer. The belt elastic material comprises a waist elastic material disposed adjacent the transverse waist border and a side elastic material disposed on the side panel. The waist elastic material of the back belt comprises a waist border elastic material and a waist anchoring elastic material extending between the waist border elastic material and the side elastic material. The waist anchoring elastic material generates a greater stress against an applied extension force than the side elastic material of the back belt.

Current assignees

PROCTER & GAMBLE

Inventors

MATSUDA TOSHIYUKI

FUJIMOTO KENJI

NAKAHATA HIROSHI

Advantages / Previous drawbacks

(WO2005/051263)

Based on the foregoing, there is a need for a disposable pull-on garment which does not cause a detachment problem of the members constituting the pull-on garment while being less costly.

However, the central panel 80 of the front and back belt 84, 86 does not extend into the crotch panel 56 of the main body 38 and is not disposed in the crotch panel 56.

This structure is less costly, allows the crotch region 30 of the diaper to be less bulky and eliminates various drawbacks of conventional pull-on diaper.

Independent claims

(WO2005/051263)

1. A disposable pull-on garment having a waist opening and leg openings and extending in a longitudinal direction and a transverse direction, the pull-on garment comprising an absorbent main body and a ring-like elastic belt, wherein the absorbent main body comprises a liquid pervious topsheet, a liquid impervious backsheet and an absorbent core disposed therebetween, and the absorbent main body has longitudinal side edges, transverse end edges, a front waist panel, a back waist panel and a crotch panel, the front waist panel and the back waist panel being not joined directly, the ring-like elastic belt is surrounded by a transverse waist border and a transverse abdomen border, the ring-like elastic belt has a central panel and side panels, the central panel is joined to the front waist panel and the back waist panel of the absorbent main body to form one waist opening and two leg openings, the ring-like elastic belt is not disposed in the crotch panel of the absorbent main body, and the ring-like elastic belt comprises a front belt and a back belt, each belt comprises a belt layer and a belt elastic material joined to the belt layer, the belt elastic material comprises a waist elastic material disposed adjacent the transverse waist border and a side elastic material disposed on the side panel, and the waist elastic material of the back belt comprises a waist border elastic material and a waist anchoring elastic material extending between the waist border elastic material and the side elastic material, and the waist anchoring elastic material generates a greater

stress against an applied extension force than the side elastic material of the back belt.

Object of invention

(US20050107763)

A disposable pull-on garment comprising an absorbent main body and a ring-like elastic belt is disclosed.

The present invention relates to disposable pull-on garments which are donned by inserting the wearer's legs into the leg openings and sliding the garment up into position about the lower torso.

The present invention is directed to a disposable pull-on garment having a waist opening and leg openings and extending in a longitudinal direction and a transverse direction.

IPC - International classification

A61F; A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/496

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CA2701574
KR20107008013
CN200880115758
AU2008307142
EP08800097
US12/450,409
JP2010527291
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MX2010003694
WOAU2008/001462

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CA2701574
KR101562842
CN101854899
AU2008307142
EP2207515
US8449518
JP5238030
JP2010540125
CN101854899
IN0723/MUMNP/2010
EP2207515
KR20100075499
MX2010003694
US20100036340
WO2009/043101
AU2008307142
CA2701574

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6620310

Family publication details

CA2701574	C	2016-01-19	CA2701574
KR101562842	B1	2015-10-23	KR101562842
CN101854899	B	2015-09-16	CN101854899B

AU2008307142	B2	2015-02-05	AU2008307142
EP2207515	A4	2014-03-05	EP2207515
US8449518	B2	2013-05-28	US8449518
JP5238030	B2	2013-04-05	JP5238030
JP2010540125	A	2010-12-24	JP2010540125
CN101854899	A	2010-10-06	CN101854899
IN0723/MUMNP/2010	A	2010-08-20	IN2010MN00723
EP2207515	A1	2010-07-21	EP2207515
KR20100075499	A	2010-07-02	KR20100075499
MX2010003694	A	2010-05-17	MX2010003694
US20100036340	A1	2010-02-11	US20100036340
WO2009/043101	A1	2009-04-09	WO200943101
AU2008307142	A1	2009-04-09	AU2008307142
CA2701574	A1	2009-04-09	CA2701574

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2007-10-02

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2008-10-02
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2010-07-21
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2010-05-17
2010-02-11
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(KR101562842)
2015-10-23
(CA2701574)
2016-01-19

Title

(EP2207515)
Disposable nappy with separate belt or leg guards formed from laminate outer cover

Abstract

(EP2207515)
A disposable nappy includes a disposable nappy body portion (3) and a separate belt (5) to secure the nappy body to the person. The belt includes a number of Velcro-type fastener portions that attach to a cover stock material of the nappy. The cover stock material is of a material that includes fibres that can retain the Velcro-type fasteners. Also defined are leg guards (19) formed from outer edges of a laminate cover layer.

Current assignees

CUBA DESIGNS
KUVER DESIGNS

Inventors

ALLISON-ROGERS SUSAN MARGARET

Advantages / Previous drawbacks

(WO2009/043101)
In broad terms the disposable nappy of the present invention comprises (a) a disposable nappy body, preferably made with compostable materials in accordance with the above definition to enable easy, economical "recycling" of a used nappy through domestic or commercial composting, and (b) a reusable (may be recyclable and/or compostable) removable fastening belt to minimise resources used in each nappy and to provide a better fit than traditional side tape fasteners with elastic waist fittings.
The Velcro type fastening system makes it possible to allow a wide range of size adjustments for the one nappy and gives a secure very close fit for the front, back and sides.
Not only does it make it possible to replace the traditional side fastening tapes which are integrally connected to nappy bodies, but it also makes it possible to replace the need for elastic in the waist for fitting that is often found in the more expensive disposable nappies.
The removable easy- fit belt makes it possible to minimise resources used to manufacture disposable nappies and to provide a better fit than traditional disposable nappies.

Independent claims

(WO2009/043101)
CLAIMS 1. A disposable nappy comprises: (a) a disposable nappy body that is shaped to fit around a crotch region of a person wearing the nappy; and (b) a separate belt to secure the nappy body to the person, wherein the belt includes one or more than one Velcro-type fastener and the body of the nappy includes an outer coverstock of a material at least in the region that is contacted by the belt that has fibres that can retain the Velcro-type fastener or fasteners.
12. A compostable disposable nappy body that is shaped to fit around a crotch region of a person wearing the nappy that comprises a multi-layer laminate of: (a) an outer coverstock made from a soft fluffy biodegradable rayon non-woven material or a similar material to provide a soft comfortable covering while also providing a suitable fiber filament finish which can catch on a Velcro-type fastener or fasteners of a separate belt for retaining the nappy body to the crotch region of a wearer; (b) a waterproof film for containing solids and liquids, preferably made from a breathable biodegradable starch-

based material; (c) an absorbent fluff pulp layer, preferably made from a non-chlorine bleached material, more preferably made from farmed trees and/or unbleached fluff pulp, that is combined with a super absorbing polymer ("SAP") for absorbency; and (d) an inner lining, preferably made from a hydrophobic ompostable hydroentangled or non-woven rayon material or a similar material.

14. A disposable nappy body that is shaped to fit around a crotch region of a person wearing the nappy that comprises: (a) a multi-layer laminate of an outer coverstock; a waterproof film for containing solids and liquids; an absorbent fluff pulp layer, and an inner lining; and (b) a leg guard on each side of the nappy body that are formed by folding and gluing outer sides of the laminate to form narrow elasticised strips of the laminate on opposite sides of the nappy body, with the strips forming the leg guards and, in forming the leg guards, narrowing the area between the legs.

16. A method of manufacturing a disposable nappy that comprises : (a) forming a multi-layer laminate of an outer coverstock; a waterproof film for containing solids and liquids; a fluff pulp layer, stretched lengths of elastic, and an inner lining; and (b) forming a leg guard on each side of the nappy body by folding inwardly and gluing outer sides of the laminate to form narrow elasticised strips of the laminate on opposite sides of the nappy body, with the strips forming the leg guards and, in forming the leg guards, narrowing the area between the legs.

Object of invention

(WO2009/043101)

According to the present invention there is provided a disposable nappy that comprises:

The present invention also relates to a method of manufacturing nappies.

The present invention relates to disposable nappies.

The present invention relates particularly, although by no means exclusively, to disposable nappies that are compostable.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/505; A61F-013/51; A61F-013/53; A61F-013/551; A61F-013/56; A61F-013/62; A61F-013/64; A61F-013/66; A61L-015/60

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US10/922,717

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2004-08-19

Application dates

2005-03-29

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2006-03-02

Title

(WO200622866)

Disposable absorbent underpants

Abstract

(WO2006/022866)

A disposable absorbent article is disclosed having a waist opening and a pair of leg openings. The absorbent article has first, second and third pairs of leg elastics secured between an outer cover and an inner liner. The first, second and third leg elastics are arranged around each of the pair of leg openings with each of the third pair of leg elastics being positioned

intermediate one of each of the first and second pairs of leg elastics. Each of the third pair of leg elastics is also separated from one of the first pair of leg elastics by a first gap and from one of the second pair of leg elastics by a second gap.

Current assignees

KIMBERLY CLARK

Inventors

CAZZATO TIM RICHARD

DATTA PAUL JOSEPH

GROSS JACQUELINE ANN

VENTURINO MICHAEL BARTH

WEYENBERG STEVEN LAMBERT

BRUNNER MICHAEL SCOTT

Independent claims

(WO2006/022866)

1. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined together by a crotch portion; b) an inner liner attached to said outer cover, said inner liner having a front portion and a back portion joined together by a crotch portion, said inner liner having a width W3 at said crotch portion, and said front and back portions of both said outer cover and said inner liner being joined together to form a waist opening and a pair of leg openings; c) an absorbent pad including a liquid permeable cover, a liquid-impermeable baffle and an absorbent layer positioned therebetween, said baffle being secured to said crotch portion of said inner liner, and said absorbent pad having a width W2 which is less than said width W3; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, each of said first pair of leg elastics being positioned within 0.5 inches of one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and said inner liner at said back portion, each of said second pair of leg elastics being positioned within 0.5 inches of one of said pair of leg openings; f) a third pair of leg elastics secured between said outer cover and said inner liner at said crotch portion, each of said third pair of leg elastics being positioned within 0.5 inches of one of said leg openings intermediate one of each of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from one of each of said first pair of leg .elastics by a first gap of at least about 0.125 inches and each of said third pair of leg elastics being separated from one of each of said second pair of leg elastics by a second -gap of at least about 0.125 inches, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants.

10. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined together -by a crotch portion; b) an inner liner attached to said outer cover, said inner liner having a front portion and a back portion joined together by a crotch portion, said inner liner having a width W3 at said crotch portion, said front and back portions of said outer cover and said inner liner being joined together to form a waist opening and a pair of leg openings, and said crotch portion of both said outer cover and said inner liner having arcuate side edges; c) an absorbent pad having a capacity for absorbing at least about 100 grams of body fluid, said absorbent pad including a liquid permeable cover, a liquid- impermeable baffle and an absorbent layer positioned therebetween, said -baffle being secured to said crotch portion of said inner liner, and said absorbent pad having a width W2 which is less than said width W3; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, each of said first pair of leg elastics being positioned within 0.5 inches of one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and said inner liner at said back portion, each of said second pair of leg elastics being positioned within 0.5 inches of one of said pair of leg openings; f) a third pair of leg elastics secured between said outer cover and said inner liner at said crotch portion, each of said third pair of leg elastics being positioned within 0.5 inches of one of said leg openings and each having an arcuate profile parallel to one of said arcuate side edges, each of said third pair of leg elastics being intermediate one of each of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from one of each of said first pair of leg elastics by a first gap of at least about 0.25 inches and .each of -said third pair of leg elastics being separated from one of each of said second pair of leg elastics by a second gap of at least about 0.25 inches, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg

openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants.

15. The disposable absorbent underpants of daim 14 wherein each of said first gaps has a dimension of from between about 0.375 inches to about 5 inches along said longitudinal centerline when said front and back portions ate free from one another.

16. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined -together by a crotch portion; b) an inner liner attached to said outer cover, said inner liner having a front portion and a back portion joined together by a crotch portion, said inner liner having a width W3 at said crotch portion, said front and back portions of said outer cover and said inner liner being joined together to form a waist opening and a pair of leg openings, and said crotch portion of both said outer cover and said inner liner having arcuate side edges; c) an absorbent pad having a capacity for absorbing at least about 500 grams of body fluid, said absorbent pad including a liquid permeable cover, a liquid- impermeable baffle and an absorbent layer positioned therebetween, said -baffle being secured to said crotch portion of said inner liner by an adhesive, and said absorbent pad having a width W2 which is less than said width W3; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, each of said first pair of leg elastics being positioned within about 0.25 inches of one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and -said inner liner at said back portion, each of said second pair of leg elastics being -positioned within about 0.25 inches of one of said pair of leg openings; f) a third pair of leg elastics secured between said outer cover and said inner liner at said crotch portion, each of said third pair of leg elastics being positioned within about 0.25 inches of one of said leg openings and each having an arcuate profile parallel to one of said arcuate side edges, each of said third pair of leg elastics being intermediate one of each of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from one of each of said first -pair of leg elastics by a first gap of at least about 0.25 inches and each of said third pair of leg elastics being separated from one of each of said second pair of ieg elastics by a second gap of at least about 0.25 inches, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants.

Object of invention

(WO2006/022866)

Briefly, this invention relates to disposable absorbent underpants for containing body fluid.

This invention relates to disposable absorbent underpants having a waist opening and a pair of leg openings.

More specifically, this invention relates to disposable absorbent underpants having first, second and third leg elastics surrounding -each leg opening and the three leg elastics are separated by first and second gaps.

More specifically, this invention relates to disposable absorbent underpants having first, second and third leg elastics surrounding -each leg opening and the three leg elastics are separated by first and second gaps.

Briefly, this invention relates to disposable absorbent underpants for containing body fluid.

It has been found that straight sided edges, formed in the crotch portion 26, do not function as well as arcuate side edges.

IPC - International classification

A61F-013/15; A61F-013/15

Family 37/200 - FAMPAT - ©Questel

Earliest priority number

US60/204,246P

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GB0228523

DE10196199T

MXPA02011281

KR20027015292

WOUS01/015580
US09/855,188
AU6312001

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BRPI0110860
BR0110860
BRPI0110860
GB2378920
DE10196199
MXPA02011281
GB2378920
GB0228523
KR20020091838
WO01/87588
US20020009940
AU6312001
WO01/87588

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Family publication details

BRPI0110860	A2	2010-01-05	BR200110860
BR0110860	A	2005-02-09	BR200110860
BRPI0110860	A1	2005-02-09	BRPI0110860
GB2378920	B	2004-12-01	GB2378920
DE10196199	T1	2003-06-12	DE10196199T
MXPA02011281	A	2003-04-25	MX2002PA011281
GB2378920	A	2003-02-26	GB2378920
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WO01/87588	A2	2001-11-22	WO200187588

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2001-05-15
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2003-02-26
2003-01-15
2002-12-06
2002-08-22
2002-01-24
2001-11-26
2001-11-22

Grant dates

(GB2378920)
2004-12-01

Title

(WO200187588)
Targeted elastic laminate

Abstract

(WO01/87588)
A targeted elastic laminate material having different zones of tension across a width of a material roll and methods for making the same. In one embodiment, the targeted elastic laminate material has at least one low tension zone with first filaments having a first basis weight and at least one high tension zone having second filaments with a second basis weight greater than the first basis weight. The second basis weight is greater due to increased average thickness of the second filaments and/or increased frequency of second filaments relative to the first filaments. In another embodiment, at least two polymers or polymer blends having different set properties are used to produce varying tension zones across the material. In yet another embodiment, the targeted elastic laminate material includes an elastic film with elastic strands placed thereon. The targeted elastic laminate material has elastic properties that provide improved fit characteristics to disposable personal care products.

Current assignees

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Advantages / Previous drawbacks

(WO01/87588)
For these and other reasons, there is a need for a targeted elastic laminate material having different zones of tension across the width of the material, not requiring separate steps to form the high and low tension zones, for improved performance and appearance at a lower cost.
Further, there is a need for an easier and less expensive process for making the targeted elastic material, compared to conventional processes for making conventional elastic laminate materials, whereby the laminate material can be wound

onto a roll having a uniform diameter across the width of the roll for easy processing.

It will be appreciated that the strands may be laid out periodically, non-periodically, and in various spacings, groupings, sizes, and compositions of elastic material according to the effect desired from the elastic laminate and the use to which it is put.

The elastic laminate provides better adhesion to its surrounding fabric, a more cloth-like look, eliminates elastic strand slippage caused by usage of thicker elastic fibers; provides processing advantages such as eliminating custom extrusion dies, and provides better post processing appearance, such as when cutting to form smaller strips of elastic material; and will give stretch and better stress relaxation performance as a result of the lamination.

Furthermore, a garment can be produced according to the present invention without the use of a separately manufactured, separately attached elastic band, and is easier and less expensive to manufacture than a conventional garment having one or more elastic bands at the opening.

However, this procedure is expensive and often results in an uncomfortable material.

These varying diameters cause unwinding difficulties in the converting process due to the tendency of the material to steer across guide rolls and to not lay flat on the cutting rolls.

Independent claims

(WO01/87588)

1. A targeted elastic laminate material, comprising: at least one low tension zone, the low tension zone including a plurality of elastomeric first filaments, the low tension zone having a first basis weight; at least one high tension zone, the high tension zone including a plurality of elastomeric second filaments, the high tension zone having a second basis weight higher than the first basis weight; and a facing layer bonded to at least a first side of the low tension zone and a first side of the high tension zone.

3. The targeted elastic laminate material of Claun 1 , wherein the second basis weight is at least 50%> greater than the first basis weight.

25. A method of producing a targeted elastic laminate material, comprising the steps of: extruding a plurality of elastomeric first filaments from a plurality of spinning holes in at least one first spin plate region; extruding a plurality of elastomeric second filaments from a plurality of spii-ning holes in at least one second spin plate region, the second filaments having a greater basis weight than a basis weight of the first filaments; cooling the first and second filaments; stretching the first and second filaments; forming a laminate material by adhering the stretched first and second filaments to a first facing material and an opposing second facing material; and relaxing the laminate material.

38. A method of producing a targeted elastic laminate material, comprising the steps of: extruding a plurality of elastomeric first filaments from a first spinning system having at least one first die, the first die having at least one spin plate region with a plurality of first spinning holes; extruding a plurality of elastomeric second filaments from a second spinning system having at least one second die, the second die having at least one spin plate region with a plurality of second spinning holes, the second filaments having a greater basis weight than a basis weight of the first filaments; cooling the first and second filaments; stretching the first and second filaments; forming a laminate material by adhering the. stretched first and second filaments to a first facing material and an opposing second facing material; and relaxing the laminate material.

49. A disposable garment comprising a targeted elastic laminate material, the targeted elastic laminate material comprising: at least one low tension zone, the low tension zone having a plurality of elastomeric first filaments, the first filaments having a first basis weight; at least one high tension zone, the high tension zone having a plurality of elastomeric second filaments, the second filaments having a second basis weight higher than the first basis weight; a facing material bonded to at least a first side of the low tension zone and a first side of the high tension zone.

59. A targeted elastic laminate material, comprising: at least one low tension zone, the low tension zone including a plurality of elastomeric first filaments, the first filaments including a first elastomeric polymer; at least one high tension zone, the high tension zone including a plurality of elastomeric second filaments, the second filaments including a second elastomeric polymer; and a facing material bonded to at least a first side of the low tension zone and a first side of the high tension zone.

80. A method of producing a targeted elastic laminate material, comprising the steps of: extruding a plurality of elastomeric first filaments having a first elastomeric composition, from a first spinning system; extruding a plurality of elastomeric second filaments having a second elastomeric composition, from a second spinning system; cooling the first and second

filaments; stretching the first and second filaments; forming a laminate material by adhering the stretched first and second filaments to a first facing material and an opposing second facing material; and relaxing the laminate material.

108. A disposable garment comprising a targeted elastic laminate material, the targeted elastic laminate material comprising: at least one low tension zone, the low tension zone having a plurality of first filaments made of a first elastomeric polymer composition; at least one high tension zone, the high tension zone having a plurality of second filaments made of a second elastomeric polymer composition; a facing material bonded to at least a first side of the low tension zone and a first side of the high tension zone.

118. An elastomeric laminate, comprising : a. an elastomeric film having a first major surface and a second major surface; and b. a sfrand of an elastomeric material secured to the first major surface of the elastomeric film.

145. An elastomeric laminate, comprising: a. an elastomeric film having a first major surface and a second major surface; b. a plurality of sfrands of an elastomeric polymer material secured to the first major surface of the elastomeric film; and c. a facing sheet bonded to at least one of the elastomeric film or the elastomeric strands.

146. A process of making an elastomeric laminate, comprising: a. producing an elastomeric film; b. producing elastomeric strands; c. securing the elastomeric sfrands to the elastomeric film.

167. A process of making an elastomeric laminate, comprising: a. extruding an elastomeric film onto a first cooling roll; b. extruding elastomeric strands onto a second cooling roll; c. feeding the elastomeric film and elastomeric strands from the first and second cooling rolls into a roller nip and securing the elastomeric strands to the elastomeric film; d. adliering a facing sheet to at least one of the elastomeric film and elastomeric strands in the roller nip.

Object of invention

(WO01/87588)

For the purposes of the invention, a baby wipe is considered a personal care garment.

It has been found that, when utilizing a 12-filament/inch spinplate hole density, an approximately 45 angle (shown in Figs. 20 and 24) allows the system to operate effectively.

IPC - International classification

A41D-031/00; A41D-031/02; A61F-013/15; B32B-005/00; B32B-005/04; B32B-005/08; B32B-005/14; B32B-005/26; B32B-037/14

Family 38/200 - FAMPAT - ©Questel

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1999-01-05

Grant dates

(US5855573)

1999-01-05

Title

(US5855573)

Sanitary panty

Abstract

(US5855573)

The present invention relates to a sanitary panty including a back-part (2), a front-part (1), an intermediate crotch-part (3) and elastic devices (11-14) which extend between the front-part and the back-part of the panty and function to press an absorbent body (8) permanently mounted or removably attached to the panty into abutment with the wearer's body. Two elastic devices (11, 12) extend from a region (V) in the crotch-part of the panty to the front-edge of the front-part (1) while diverging relative to one another and extending generally symmetrically in relation to a central line (A-A) which extends through the back-part (2), the crotch-part (3) and the front-part (1) of the panty.

Current assignees

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Advantages / Previous drawbacks

(US5855573)

The combined absorbent body 8, comprising the primary and the secondary absorbent bodies, is enclosed conventionally between a fluid-permeable casing sheet and a fluid-impermeable but advantageously air-permeable casing sheet which lies against the panty in use.

The absorbent body 9 is advantageously comprised of one or more layers of roll material, i.e. absorbent material which has earlier been compressed and treated so that the materials can be stored in the form of rolls.

This is highly advantageous when the combined absorbent body 8 is a removable type body, since its configuration clearly indicates where the absorbent body 8 shall be placed in the panty.

The object of the panty according to this publication is to eliminate the drawbacks of sanitary panties that are produced entirely of elastic material, by causing the uniformly distributed elastic threads to press a sanitary napkin or like article carried in the panty into essentially uniform abutment with the wearer's body.

The invention is therefore limited solely by the content of the following claims.

Independent claims

(US5855573)

1. A sanitary panty, comprising: a backpart having lateral sides, a front-part having lateral sides, the lateral sides of the backpart being joined to the lateral sides of the front-part so as to form a waist and define leg openings, an intermediate crotch-part, and elastic means which extend between the front-part and the backpart of the panty for pressing an absorbent body attached to the panty into abutment with a wearer's body, said elastic pressing means includes two elastic devices which extend from a laterally centrally located region in the crotch-part of the panty to a front-edge of the front-part while diverging relative to one another and extending generally symmetrically in relation to a central line which extends through the backpart, the crotch-part and the front-part of the panty.

18. An incontinence guard panty comprising: a backpart having lateral sides, a front-part having lateral sides, the lateral sides of the backpart being joined to the lateral sides of the front-part so as to form a waist and define leg openings, an intermediate crotch-part, and elastic means which extend between the front-part and the backpart of the incontinence guard panty for pressing an absorbent body attached to the incontinence guard panty into abutment with a wearer's body, said elastic pressing means includes two elastic devices which extend from a laterally centrally located region in the crotch-part of the incontinence guard panty to a front-edge of the incontinence guard panty while diverging relative to one another and extending generally symmetrically in relation to a central line which extends through the backpart, the crotch-part and the front-part of the incontinence guard.

26. A sanitary panty comprising: a backpart having lateral sides, a front-part having lateral sides, an intermediate crotch-part having lateral sides, the lateral sides of the front and back-parts being joined together to form leg openings and a waist opening, an absorbent body attached to the panty in the crotch-part on an inside thereof which faces a wearer's body when the panty is used, and two elastic devices for pressing the absorbent body attached to the panty into abutment with the wearer's body, the two elastic devices extending from the crotch-part of the panty to the backpart of the panty adjacent to a central line which extends through the backpart, the crotch-part and the front part of the panty, wherein, at the crotch-part,

the two elastic devices are closer to the central line than to the crotch-part lateral sides, and the two elastic devices extend from the crotch-part to a front-edge of the front-part of the panty while diverging relative to one another.

Object of invention

(US5855573)

An object of the present invention is to solve this problem more effectively than known sanitary panties and to provide a sanitary panty which is comfortable to wear and which is highly effective in preventing leakage from an absorbent body carried by the panty.

The present invention relates to a sanitary panty or to a light-incontinence guard having a backpart, a front-part, an intermediate crotch-part and elastic devices which extend between the front-part and the backpart of the panty and which function to press an absorbent body permanently mounted or removably attached to the panty into abutment with the wearer's body.

The present invention relates to a sanitary panty including a backpart (2), a front-part (1), an intermediate crotch-part (3) and elastic devices (11-14) which extend between the front-part and the backpart of the panty and function to press an absorbent body (8) permanently mounted or removably attached to the panty into abutment with the wearer's body.

IPC - International classification

A61F-013/15; A61F-013/15

Family 39/200 - FAMPAT - ©Questel

Earliest priority number

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Application number

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US20010054477

US20010030014

Questel unique family ID (FAN)

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US20010054477	A1	2001-12-27	US20010054477
US20010030014	A1	2001-10-18	US20010030014

Earliest priority date

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2001-04-14

Publication dates

2001-12-27

2001-10-18

Title

(US20010030014)

Elastic strand coating process

Abstract

(US20010030014)

A method for applying fluids to a strand and useable for bonding adhesive coated strands to substrates in the production of bodily fluid absorbing hygienic articles, by drawing the strand along an isolated path, moving a fluid or adhesive fiber back and forth across a path of the strand as the fluid fiber is dispensed toward the strand, and capturing substantially all of the fluid fiber on the isolated strand, and in some applications contacting an adhesive coated strand with the substrate to bond the strand thereto. The adhesive fiber is vacillated back and forth across a path of the strand beyond opposing sides

thereof to at least partially coat all sides thereof with adhesive. In bodily fluid absorbing hygienic articles, the methods substantially eliminate fabric stiffening and loss of moisture absorbing capacity thereof, provide substantially uniformly bonding along the axial dimension of the strand to ensure uniform bunching of fabrics, optimum fluid absorption, and comfort.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(US20010030014)

[0003] It is often desirable to bond or adhere relatively elongated members, or strands, onto substrates.

It is desirable in other applications, for example where an elastic strand 30 forms a waste band or other stretchable portion of a garment, to apply adhesive substantially uniformly along the axial dimension thereof, and preferably at least partially to all sides of the strand, to ensure uniform bonding of the strand 30 along an axial dimension thereof to a fabric substrate, thereby providing substantially uniform bunching of the fabric as the elastic strand contracts.

Nonuniform bunching is undesirable from an aesthetic viewpoint, and more substantively nonuniform bunching of the fabric compromises the ability of the fabric to form an effective fluid seal, and reduces the softness and comfort thereof when stretched against the wearer's body.

This stiffening is particularly undesirable in diaper and other undergarment applications where the elastic strand bunches the fabric to form waste bands and other stretchable portions that contact the body intimately.

Independent claims

(US20010030014)

1. A method for applying adhesive to a strand, and useable for bonding the strand to a substrate in the production of bodily fluid absorbing hygienic articles, the method comprising: drawing the strand along a path separated spatially from the substrate; dispensing an adhesive fiber toward the strand; capturing substantially all of the adhesive fiber on the strand when the strand is spatially separated from the substrate; and contacting the adhesive coated strand with the substrate to bond the strand to the substrate.

13. A method for applying fluid to a strand, and useable for bonding the strand to a substrate in the production of bodily fluid absorbing hygienic articles, the method comprising: drawing the strand along an isolated path; dispensing a fluid fiber toward the strand; moving the fluid fiber back and forth across a path of the strand as the fluid fiber is dispensed toward the strand; capturing substantially all of the fluid fiber on the strand; and coating all sides of the strand at least partially with fluid.

Object of invention

(US20010030014)

[0016] It is another more particular object of the invention to provide novel methods for bonding strands to substrates in the production of bodily fluid absorbing hygienic articles by drawing the strand along a path separated spatially from the substrate, dispensing an adhesive fiber toward the strand so that at least a portion of the adhesive fiber crosses the path of the strand and contacts the strand, capturing substantially all of the adhesive fiber on the strand when the strand is spatially separated from the substrate to at least partially coat the strand with adhesive, and contacting the adhesive coated strand with the substrate to bond the strand thereto.

[0011] It is an object of the invention to provide novel methods for applying fluids to strands, and for bonding adhesive coated strands to substrates, and combinations thereof, that are economical and overcome problems in the prior art. [0012] It is another object of the invention to provide novel methods for applying hot melt adhesives to elastic strands, and for bonding adhesive coated elastic strands to fabrics to form waist bands and other stretchable portions in the manufacture of a variety of bodily fluid absorbing hygienic articles and disposable absorbent products using reduced amounts of adhesive. [0013] It is a further object of the invention to provide novel methods for bonding adhesive coated elastic stands to fabric substrates in the manufacture of a variety of bodily fluid absorbing hygienic articles, wherein the elastic strand is bonded to the fabric substantially uniformly along an axial length thereof to ensure uniform bunching of the fabric, thereby providing optimum comfort and fluid absorption, and an aesthetically pleasing, more marketable product. [0014] It is yet another

object of the invention to provide novel methods for reducing the amount of adhesive applied to elastic strands bonded to underlying fabric substrates in the manufacture of a variety of bodily fluid absorbing hygienic articles to reduce the possibility of melting the fabric with hot melt adhesives, to substantially eliminate fabric stiffening and to eliminate loss of moisture absorbing capacity thereof, and to reduce costs, especially costs associated with excess adhesive usage. [0015] It is a more particular object of the invention to provide novel methods for applying fluids to a strand, useable for bonding the strand to a substrate in the production of bodily fluid absorbing hygienic articles, by drawing the strand along an isolated path, moving a fluid fiber across a path of the strand as the fluid fiber is dispensed toward the strand so that the fiber contacts the strand, and capturing substantially all of the fiber on the isolated strand.

[0002] The invention relates generally to adhesive dispensing systems, and more particularly to processes for bonding one or more relatively elongated strands to one or more substrates, especially bonding stretched elastic strands to fabrics in the manufacture of bodily fluid absorbing hygienic articles.

IPC - International classification

A61F-013/15; A61F-013/15

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BRPI0819073
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TW104121317
TW97143375
BRPI0819072
KR20107013067
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EP2221031
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EP2221031	B1	2017-07-19	EP2221031
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AU2008322092	A1	2009-05-22	AU2008322092
AU2008322070	A1	2009-05-22	AU2008322070

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2008-08-14
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2019-02-05

Title

(EP2215998)

Disposable diaper

Abstract

(EP2215998)

The present invention on its first aspect provides a disposable diaper improved so as to prevent body waste from leaking sideways without sacrificing a bodily fluid absorbing capacity of a liquid-absorbent structure and to assure appropriate fitness to the wearer's body. In each of front and rear waist regions 13, 14, a disposable diaper 10 comprises an upper elasticized region 18 extending in a vicinity of a waist-opening periphery 16a, lower elasticized regions 20A, 20B, intermediate elasticized region 19 extending between the upper elasticized region 18 and the lower elasticized regions 20A, 20B and outside longitudinally opposite ends 12a, 12b of a liquid-absorbent structure 12, and, at least in the front waist region 13 of the front and rear waist regions 13, 14, a non-elasticized region 30 opposed to a central zone of a liquid-absorbent core wherein a tensile stress of the intermediate elasticized region 19 is lower than a tensile stress of the upper elasticized region 18.

Current assignees

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Inventors

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YAGI AKIKO

MAKI HIDEAKI

Advantages / Previous drawbacks

(EP2215998)

As will be appreciated from the foregoing description, the extending ratio of the third elastic members 33 may be set to be higher than those of the first and second waist elastic members 31, 32 to ensure that the lower elasticized regions 20A, 20B can be extended depending on the wearer's body shape and in response to the wearer's movement and thereby any significant displacement of the liquid-absorbent structure 12 can be avoided.

As a result, it is difficult to leave a clearance gap between the wearer's body and the absorbent structure and it is still more difficult to assure a space sufficiently large to receive and retain discharged feces without spreading the latter.

It should be noted that a distance between the chucks should be appropriately changed depending on the test piece and, when it is difficult to obtain the test piece having a width of 25 mm, the measurement may be carried out on the basis of the test piece having an optional width and the measurement result may be converted into a tensile stress value to be obtained on the basis of the test piece having a width of 25 mm.

difficult to

If the first waist-surrounding elastic members 31 are attached, under a tension given by the extending ratio less than about 200%, to the inner layer sheet 27, it will be difficult to broaden the waist-opening 16 sufficiently to receive the wearer's legs smoothly even if it is tried to pull the waist-opening periphery 16a in the transverse direction Y when the diaper 10 is put on the wearer's body.

Practically in consequence, it is difficult to put the diaper 10 on the wearer' s body.

is difficult to leave a clearance gap between the wearer's body and the absorbent structure and it is still more difficult to assure a space sufficiently large to receive and retain discharged feces without spreading the latter.

difficult to

difficult to

Independent claims

(EP2215998)

1. A disposable diaper comprising: a chassis having a longitudinal direction, a transverse direction, a sidefacing the wearer's skin and a sidefacing away from the wearer's skin and configurationally comprising a front waist region, a rear waist region, a crotch region extending between said front and rear waist regions, a waist-opening and a pair of leg-openings, a liquid-absorbent structure provided on said sidefacing the wearer' s skin of said chassis and extending across said crotch region further into said front and rear waist regions, said liquid-absorbent structure containing therein a liquid-absorbent core, and, in each of said front and rear waist regions, said disposable diaper comprises an upper elasticized

region 18 extending in a vicinity of a periphery of said waist-opening, lower elasticized regions, intermediate elasticized region extending between the upper elasticized region and the lower elasticized regions and outside longitudinally opposite ends of the liquid-absorbent structure, and a non-elasticized region, said disposable diaper being characterized in that at least in the front waist region of the front and rear waist regions, said non-elasticized region opposed to a central zone of said liquid-absorbent core wherein a tensile stress of the intermediate elasticized region is lower than a tensile stress of the upper elasticized region.

2. A disposable diaper comprising a chassis having a longitudinal direction, a transverse direction, a sidefacing the wearer's skin and a sidefacing away from the wearer's skin and configurationally comprising a front waist region, a rear waist region, a crotch region extending between said front and rear waist regions, a waist-opening and a pair of leg-openings, a liquid-absorbent structure provided on said sidefacing the wearer's skin of said chassis and extending across said crotch region further into said front and rear waist regions, said liquid-absorbent structure containing therein a liquid-absorbent core, and, a plurality of waist elastic members extending under tension in said transverse direction, said disposable diaper being characterized in that: said waist elastic members comprise first waist elastic members extending in a transverse direction in a vicinity of said waist-opening periphery and second waist elastic members provided between said leg-openings peripheries and said first waist elastic members and extending in said transverse direction across opposite lateral regions so as not to be present in central zones of said front and rear waist regions, and said second waist elastic members in said front waist region extend from transversely opposite side edges of said front waist region in said transverse direction beyond transversely opposite side edges of said liquid-absorbent core while said second waist elastic members in said rear waist region extend from transversely opposite side edges in said transverse direction and terminate short of said side edges of said liquid-absorbent core.

Object of invention

(EP2215998)

The first aspect of the present invention relates to a disposable diaper and particularly to a disposable diaper having a good fit to the wearer's body.

The second aspect of the present invention relates to a disposable diaper and particularly to a disposable diaper adapted to prevent bodily fluids from leaking sideways and to protect the wearer's body from soiling due to defecation without sacrificing a desired absorption capacity.

According to the present invention on its second aspect, there is provided a disposable diaper comprising a chassis having a longitudinal direction, a transverse direction, a sidefacing the wearer's skin and a sidefacing away from the wearer's skin and configurationally comprising a front waist region, a rear waist region, a crotch region extending between the front and rear waist regions, a waist-opening and a pair of leg-openings, a liquid-absorbent structure provided on the sidefacing the wearer's skin of the chassis and extending across the crotch region further into the front and rear waist regions, the liquid-absorbent structure containing therein a liquid-absorbent core, and, a plurality of waist elastic members extending under tension in the transverse direction.

According to the present invention on its first aspect, there is provided a disposable diaper comprising: a chassis having a longitudinal direction, a transverse direction, a sidefacing the wearer's skin and a sidefacing away from the wearer's skin and configurationally comprising a front waist region, a rear waist region, a crotch region extending between said front and rear waist regions, a waist-opening and a pair of leg-openings, a liquid-absorbent structure provided on the sidefacing the wearer's skin of the chassis and extending across the crotch region further into said front and rear waist regions, the liquid-absorbent structure containing therein a liquid-absorbent core, and, in each of the front and rear waist regions, the disposable diaper comprises an upper elasticized region extending in a vicinity of a periphery of the waist-opening, lower elasticized regions, an intermediate elasticized region extending between the upper elasticized region and the lower elasticized regions and outside longitudinally opposite ends of the liquid-absorbent structure, and a non-elasticized region.

The first aspect of the present invention relates to a disposable diaper and particularly to a disposable diaper having a good fit to the wearer's body.

The first aspect of the present invention relates to a disposable diaper and particularly to a disposable diaper having a good fit to the wearer's body.

The first aspect of the present invention relates to a disposable diaper and particularly to a disposable diaper having a good fit to the wearer's body.

IPC - International classification

A61F-013/05; A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/496; A61F-013/53; A61F-013/58

Family 41/200 - FAMPAT - ©Questel

Earliest priority number

SE9501619

Application number

PL32273196
ES96912366T
US08/913,718
DE69610419
EP96912366
JP53322596
TNSN96065
PE00030196
AU5520096
TW85104480
WOSE96/000501
ZA9603431
SE9501619
IL11790696
GB9608873

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PL184789
ES2153103
US6179820
DE69610419
DE69610419
EP0823846
JPH11504825
TNSN96065
EP0823846
PL322731
PE48397
AU5520096
TW290450
WO96/34588
ZA9603431
SE504062
SE9501619
IL117906
GB9608873
SE9501619

Questel unique family ID (FAN)

1455198

Family publication details

PL184789	B1	2002-12-31	PL-184789
ES2153103	T3	2001-02-16	ES2153103

US6179820	B1	2001-01-30	US6179820
DE69610419	T2	2001-01-25	DE69610419
DE69610419	D1	2000-10-26	DE69610419
EP0823846	B1	2000-09-20	EP-823846
JPH11504825	A	1999-05-11	JP11504825
TNSN96065	A1	1998-12-31	TN9600065
EP0823846	A1	1998-02-18	EP-823846
PL322731	A1	1998-02-16	PL96322731
PE48397	A1	1997-12-18	PE9700483
AU5520096	A	1996-11-21	AU9655200
TW290450	B	1996-11-11	TW-290450
WO96/34588	A1	1996-11-07	WO9634588
ZA9603431	B	1996-11-06	ZA9603431
SE504062	C2	1996-10-28	SE-504062
SE9501619	L	1996-10-28	SE9501619
IL117906	A	1996-08-04	IL-117906
GB9608873	D0	1996-07-03	GB9608873
SE9501619	D0	1995-05-03	SE9501619

Earliest priority date

1995-05-03

Application dates

1995-05-03
1996-04-15
1996-04-15
1996-04-18
1996-04-18
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1996-04-18
1996-04-30
1996-04-30
1996-05-02
1996-05-02

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2002-12-31
2001-02-16
2001-01-30
2001-01-25
2000-10-26
2000-09-20
1999-05-11
1998-12-31
1998-02-18
1998-02-16
1997-12-18

1996-11-21
1996-11-11
1996-11-07
1996-11-06
1996-10-28
1996-10-28
1996-08-04
1996-07-03
1995-05-03

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2000-09-20
(US6179820)
2001-01-30
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2000-10-26
(SE9501619)
1996-10-28
(ZA9603431)
1996-11-06
(TW-290450)
1996-11-11
(ES2153103)
2001-02-16
(PL-184789)
2002-12-31

Title

(EP-823846)
Absorbent article

Abstract

(EP0823846)
The present invention relates to an absorbent article (1) such as a pair of absorbent pants, a nappy, an incontinence protection article or the like having a substantially elongated shape and presenting a frontal waist region (2), a rear waist region (3) and a crutch region (4) positioned therebetween having two leg edge-portions (5, 6). The article comprises an inner fluid-permeable layer (7), a fluid-barrier layer (8) and an absorbent core (9) enclosed therebetween. The article also comprises elastic elements (10) which are arranged along four different paths (11, 12, 13, 14). One segment of each path follows at least a portion of a leg edge-portion (5, 6) and the paths together enclose a collection region (15) positioned between the article's leg edge-portions (5, 6), which region (15), under the influence of the elastic elements (10), bulges and forms a fluid-collecting basin.

Current assignees

MOELNLYCKE HEALTH CARE
MOLNYCHE
SCA HYGIENE PRODUCTS

Inventors

FERNFORS INGEMAR

Advantages / Previous drawbacks

(EP0823846)
It is therefore desirable to give the collection region 15 a bulging bowl-shape primarily for preventing the fluid from running out sideways towards the leg edge-portions 5, 6.

The basic idea of the invention is, by means of a suitable distribution of elastic forces over the surface of the article, both to create a bowl-formed container in the receiving zone, for collection of fluid and faeces, as well as to create contracting forces around the contours of the leg edge-openings in order to give a good seal against the users legs.

The absorbent core 9 can advantageously by made up of a plurality of different layers of absorbent material, or of different regions which present mutually different characteristics with regard to their capacity for absorbing, spreading and storing fluid.

One disadvantage with such a solution is that those segments of the paths which extend across the article's crutch region exert an undesirable lateral tension in the receiving zone.

It has shown itself to be the case that even a poor dimensioning of the receiving zone, for instance an abundance of absorption material, as well as a lack thereof, can give rise to undesirable formation of folds in the absorbent core which facilitates an un controlled spread of the fluid which is not capable of being absorbed immediately.

One disadvantage with such a solution is

It has namely shown itself to be the case that the elastic tensions which are obtained only act on a central part of the leg edge-portions and subject the entire receiving zone to a laterally-directed compression force, whereby the sought-after sealing around the wearer's legs is deficient and unwelcome folds considerably diminish the absorption capacity.

Independent claims

(EP0823846)

1. A fluid-absorbent article intended for disposal after use, such as a pair of absorbent pants, a nappy, an incontinence protection article or the like, with a substantially elongated shape and presenting a frontal waist region (2), a rear waist region (3) and a crotch region (4) therebetween, said crotch region having two leg edge-portions (5, 6), further comprising an inner fluid-permeable layer (7) which is intended to lie against the user's skin during use, a fluid-barrier layer (8) which is intended to face away from the user during use and which is substantially impermeable to fluids, and an absorbent core (9) enclosed between the inner layer (7) and the fluid-barrier layer (8), said article further comprising elastic elements (10), wherein the elastic elements are attached along at least four different paths (11, 12, 13, 14), and wherein a first path (11) and a second path (12) extend from the frontal waist region (2) to the rear waist region (3), from one side of the article's central longitudinal axis (16) to the opposite side of the article's central longitudinal axis (16), and wherein the first path (11) and the second path (12) intersect the article's central longitudinal axis (16) at different locations, and wherein a third path (13) and a fourth path (14) are mirror images of the first path (11) and second path (12) respectively, with respect to the article's longitudinal central axis (16), and wherein a segment of each path follows at least a part of a leg edge-portion (5, 6), and the paths together enclose a collection region (15) positioned between the article's leg edge-portions (5, 6), and wherein the portion of each of the paths (11, 12, 13, 14) which define said collection region (15) is formed as a curve, characterized in that in that at least one elastic element (10) is attached in a stretched condition along each path such that said region (15), under the influence of at least the curved path portions in the collection region (15), bulges and forms a fluid collecting basin.

Object of invention

(US6179820)

Said another way, the present invention provides a fluid absorbent article intended for disposal after use, that is a pair of absorbent pants, a nappy, or an incontinence protection article.

An absorbent article'such as a pair of absorbent pants, a nappy, an incontinence protection article or the like having a substantially elongated shape is provided.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/494; A61F-013/494

Family 42/200 - FAMPAT - ©Questel

Earliest priority number

WOSE2017/050295

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Questel unique family ID (FAN)

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Family publication details

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Earliest priority date

2017-03-28

Application dates

2017-03-28

Publication dates

2018-10-04

Title

(WO2018182469)

Disposable pant-type absorbent article adapted for a male user

Abstract

(WO2018/182469)

The invention relates to a disposable pant-type absorbent article (1), such as a pant diaper, a sanitary pant or incontinence pant being adapted for a male user, and a method for manufacturing such a disposable pant-type absorbent article (1). The disposable pant-type absorbent article (1) is characterised in that the absorbent core (5) of the article (1) has a wide portion (22) in the front segment (17). The article (1) is further characterised in that the laminated web material of the front panel (3) of the article (1) has a first at least partly elastic region (11) extending primarily in the transverse direction and being located adjacent the leg edges (21 a, 21 b) of the front panel (3), and a second at least partly elastic region (12) extending primarily in the transverse direction and being located next to the first elastic region (11) and closer to the waist edge (20) of the front panel. The first at least partly elastic region (11) is distinct from the second at least partly elastic region (12) in terms of at least one structural elastic feature. An elasticised part (39) of the laminated web material of the first at least partly elastic region (11) or an inner imaginary extension (23) of the elasticised part (39) meet a longitudinal core edge (14) in said wide portion (22) of the core (5).

Current assignees

ESSITY HYGIENE & HEALTH

Inventors

BÄCK LUCAS

KLINTE OLSSON ANNA

ERIKSSON KATARINA

Advantages / Previous drawbacks

(WO2018/182469)

A rectangular shape front panel 3 enables cost-efficient manufacturing because all elastic threads of the front panel 3 may also be arranged in the transverse direction of the absorbent article 1, i.e. along the machine direction in the manufacturing machine.

The latter is particularly advantageous when the elastic threads exhibit a curved orientation over the transverse length of the absorbent article 1.

Such a flat area is typically desirable in the area where the absorbent core 5 overlaps the front and/or back panels 3, 4 because the gathering effect of active elastic threads on the absorbent core 5 may be deemed having a negative effect on the absorption capacity of the absorbent core 5.

Independent claims

(WO2018/182469)

1. A disposable pant-type absorbent article (1), such as a pant diaper, a sanitary pant or incontinence pant, having a longitudinal direction (Y) and a transverse direction (X), said disposable pant-type absorbent article (1) being adapted for a male user and comprises: a front panel (3) made of laminated web material and having a waist edge (20), a pair of leg

edges (21a, 21b) and a pair of side edges (9a, 9b), a backpanel (4) having a waist edge (25), a pair of leg edges (27a, 27b), a pair of side edges (10a, 10b), and an absorbent insert (2) located mainly in a crotch portion of the absorbent article (1) and being connected to the front and back panels (3, 4) and having an absorbent core (5) with longitudinal core edges (14), a front core edge (15) and a back core edge (16), wherein the core (5) has a front segment (17) with a length (L2) in the longitudinal direction (Y) which is 30 % of the total length (L5) of the core (5) in the longitudinal direction (Y) and extending from a front core edge (15), a back segment (18) with a length (L3) in the longitudinal direction (Y) which is 30 % of the total length (L5) of the core (5) in the longitudinal direction (Y) and extending from a back core edge (16), and a middle segment (19) with a length (L4) in the longitudinal direction (Y) which is 40 % of the total length (L5) of the core (5) in the longitudinal direction (Y) and being located between the front and back segments (17, 18), wherein the core (5) has a wide portion (22) in the front segment (17), which wide portion (22) has a width (Wl) in the transverse direction (X) that is at least 1.1 times greater than the maximal width (W2) in the transverse direction (X) of the core (5) in the back segment (18), wherein the laminated web material of the front panel (3) has a first at least partly elastic region (11) extending primarily in the transverse direction and being located adjacent the leg edges (21a, 21b) of the front panel (3), and a second at least partly elastic region (12) extending primarily in the transverse direction and being located next to the first elastic region (11) and closer to the waist edge (20) of the front panel (3), wherein the first at least partly elastic region (11) is distinct from the second at least partly elastic region (12) in terms of at least one structural elastic feature, and wherein an elasticised part (39) of the laminated web material of the first at least partly elastic region (11), or an inner imaginary extension (23) of the elasticised part (39) of the laminated web material of the first at least partly elastic region (11), meet a longitudinal core edge (14) in said wide portion (22) of the core (5).

23. Method for manufacturing a disposable pant-type absorbent article (1) such as a pant diaper, a sanitary pant or incontinence pant, having a longitudinal direction (Y) and a transverse direction (X), said disposable pant-type absorbent article (1) being adapted for a male user and comprises: a front panel (3) made of laminated web material and having a waist edge (20), a pair of leg edges (21a, 21b) and a pair of side edges (9a, 9b), a backpanel (4) having a waist edge (25), a pair of leg edges (27a, 27b), a pair of side edges (10a, 10b), an absorbent insert (2) located mainly in a crotch portion of the absorbent article (1) and being connected to the front and back panels (3, 4) and having an absorbent core (5), wherein the core (5) has a front segment (17) with a length (L2) in the longitudinal direction (Y) which is one-third of the total length (L5) of the core (5) in the longitudinal direction (Y) and extending from a front core edge (15), a back segment (18) with a length (L3) in the longitudinal direction (Y) which is one-third of the total length (L5) of the core (5) in the longitudinal direction (Y) and extending from a back core edge (16), and a middle segment (19) with a length (L4) in the longitudinal direction (Y) which is one-third of the total length (L5) of the core (5) in the longitudinal direction (Y) and being located between the front and back segments (17, 18), wherein the method comprises: - providing the core (5) with a wide portion (22) in the front segment (17), which wide portion (22) has a width (Wl) in the transverse direction (X) that is at least 1.1 times greater than the maximal width (W2) in the transverse direction (X) of the core (5) in the back segment (18), - providing the laminated web material of the front panel (3) with a first at least partly elastic region (11) extending primarily in the transverse direction (X) and being located adjacent the leg edges (21a, 21b) of the front panel (3), - providing the laminated web material of the front panel (3) with a second at least partly elastic region (12) extending primarily in the transverse direction (X) and being located next to the first elastic region (11) and closer to the waist edge (20) of the front panel (3), - providing the first at least partly elastic region (11) with at least one structural elastic feature distinguishing the first at least partly elastic region (11) from the second at least partly elastic region (12) in terms of the at least one structural elastic feature, and - arranging the elasticised part (39) of the laminated web material of the first at least partly elastic region (11), or an inner imaginary extension (23) of the elasticised part (39) of the laminated web material of the first at least partly elastic region (11), such that it meet a longitudinal core edge (14) in said wide portion (22) of the front segment (17).

Object of invention

(WO2018/182469)

The disclosure relates to a disposable pant-type absorbent article, such as a pant diaper, a sanitary pant or incontinence pant, having a longitudinal direction and a transverse direction.

The disclosure relates to a disposable pant-type absorbent article, such as a pant diaper, a sanitary pant or incontinence pant, having a longitudinal direction and a transverse direction, wherein said disposable pant-type absorbent article is

adapted for a male user.

The disclosure further relates to a method of production of a disposable pant-type absorbent article.

It is an object of the present disclosure to provide a disposable pant-type absorbent article being adapted for a male user addressing the abovementioned desires.

IPC - International classification

A61F-013/471; A61F-013/49; A61F-013/491; A61F-013/491; A61F-013/496; A61F-013/53; A61F-013/68

Family 43/200 - FAMPAT - ©Questel

Earliest priority number

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SE9404365

Publication numbers

SE508185

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Questel unique family ID (FAN)

36849523

Family publication details

SE508185	C2	1998-09-07	SE-508185	
SE9404365	L	1996-06-16	SE9404365	
SE9404365	D0	1994-12-15	SE9404365	

Earliest priority date

1994-12-15

Application dates

1994-12-15

Publication dates

1998-09-07

1996-06-16

1994-12-15

Grant dates

(SE-508185)

1998-09-07

Title

(SE-508185)

Absorbent materials e.g. for nappies and sanitary towels

Abstract

(SE9404365)

An absorbent article such as an absorbent garment or the like, contg. an absorbent unit comprising the following layers: (A) a layer (10) of a hydrophilic absorbent material; (B) a layer (15) adjacent to (A) of wadding material layer in the form of a mesh with distinct holes (16); and (C) a porous material layer (20) which is contact with parts (13) of (A) via the holes in (B) and with parts (17) of (B) and forms the inner surface of the unit which comes into contact with the skin of the wearer. The prepn. of the articles is also claimed, in which a layer (B) is cut in a first direction at a number of locations (18) and then stretched in a direction (F-F) transverse to the first direction to form a mesh with distinct holes and then (B) is secured to layer (A), with a layer (C) being secured to one side of (B) so that parts (21) of (C) come into contact with parts of (A) through the mesh holes.

Current assignees

MOELNLYCKE HEALTH CARE

Inventors

ROENNBERG PETER

IPC - International classification

A61F-013/15; A61F-013/15

Family 44/200 - FAMPAT - ©Questel

Earliest priority number

JP2006356350

Application number

IN2729/KOLNP/2009
TR201806848T
EP07860484
KR20097015628
CN200780042902
US12/448,626
RU2009128981
JP2007022293
JP2006356350
IN1998/KOLNP/2009
WOJP2007/075281

Publication numbers

IN299745
TR201806848
EP2105115
KR101436022
EP2105115
CN101541281
US8282617
RU2434618
RU2009128981
JP4549354
JP4477622
US20090326504
EP2105115
CN101541281
KR20090098991
IN2729/KOLNP/2009
IN1998/KOLNP/2009
JP2008188050
JP2008161572
WO2008/081930

Questel unique family ID (FAN)

6851657

Family publication details

IN299745	B	2018-08-06	IN-299745
TR201806848	T4	2018-06-21	TR201806848
EP2105115	B1	2018-03-07	EP2105115
KR101436022	B1	2014-08-29	KR101436022
EP2105115	A4	2013-05-29	EP2105115
CN101541281	B	2013-03-13	CN101541281B

US8282617	B2	2012-10-09	US8282617
RU2434618	C2	2011-11-27	RU2434618
RU2009128981	A	2011-02-10	RU2009128981
JP4549354	B2	2010-07-16	JP4549354
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US20090326504	A1	2009-12-31	US20090326504
EP2105115	A1	2009-09-30	EP2105115
CN101541281	A	2009-09-23	CN101541281
KR20090098991	A	2009-09-18	KR20090098991
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JP2008161572	A	2008-07-17	JP2008161572
WO2008/081930	A1	2008-07-10	WO200881930

Earliest priority date

2006-12-28

Application dates

2006-12-28
2007-01-31
2007-12-28
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2007-12-28
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2007-12-28
2009-05-27
2009-07-27

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2014-08-29
2013-05-29
2013-03-13
2012-10-09
2011-11-27
2011-02-10
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2009-12-31
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2009-09-23
2009-09-18
2009-09-04
2009-06-19
2008-08-21
2008-07-17

2008-07-10

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2018-03-07

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2012-10-09

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2010-03-19

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2011-11-27

(CN101541281B)

2013-03-13

(KR101436022)

2014-08-29

(TR201806848)

2018-06-21

(IN-299745)

2018-08-06

Title

(EP2105115)

Disposable diaper

Abstract

(EP2105115)

[Means for Solving Problems] In an underpants type disposable diaper, including: a ventral-side outer sheet 12F and a back-side outer sheet 12B which are not connected but separated at a crotch portion; an absorber 20 having a liquid impervious sheet and a crotch outer sheet 12M laminated on an underside of the liquid impervious sheet in the absorber so as to be exposed on an external surface of a product, assuming that the number of sheets disposed on the underside of the liquid impervious sheet is B1 at the intermediate portion 23, A1 at front- and back-side outer overlap sections X and Z, and C1 at the front- and back-side outer nonoverlap sections 20F and 20B, there is established a relationship of B1<C1<A1.

Current assignees

DAIO SEISHI

DAJO PEJPER

JAPAN ABSORBENT TECHNOLOGY INSTITUTE

Inventors

KANEDA MASAHIRO

Advantages / Previous drawbacks

(EP2105115)

This makes it possible to keep material costs down and improve air permeability at the crotch portion.

Accordingly, a main object of the present invention is to improve air permeability of a diaper at a waist portion.

As stated above, the present invention provides advantages of improved air permeability at the waist portion and the like.

There is no particular limitation on a cross-section shape of the tow constitutional fibers, and the tow constitutional fibers may be circular, elliptic, odd (e.g.

In addition, there is no particular limitation on raw fibers for use in such a nonwoven fabric.

There is thus no particular limitation on a material for the liquid impervious sheet 70.

Independent claims

(EP2105115)

1. An underpants type disposable diaper, comprising: a barrel-shaped waist portion that includes a ventral-side outer sheet for covering a waist of a wearer on a ventral side and a backside outer sheet for covering a waist of a wearer on a backside, in which the ventral- and backside outer sheets are joined together at joined sections at edges on the both sides in a width direction, and the ventral- and backside outer sheets are not connected but separated at a crotch portion; and an absorber that is connected at a front end portion to the ventral-side outer sheet on an inner surface at a central portion in the width direction and is connected at a backend portion to the backside outer sheet on an inner surface at a central portion in the width direction, in which an intermediate portion between the front and backend portions is exposed to outside from a separation area between the ventral- and backside outer sheets at the crotch portion, wherein the absorber has a liquid pervious topsheet arranged on a topside, a liquid impervious sheet arranged on an underside, and an absorbent element interposed between the foregoing sheets to absorb and retain a liquid, a crotch outer sheet is laminated on an underside of the liquid impervious sheet in the absorber so as to be exposed on an external surface of a product, and the crotch outer sheet is disposed in an area ranging in a front-back direction from a position between the front end portion of the absorber and a crotch-side edge of the ventral-side outer sheet to a position between the backend portion of the absorber and a crotch-side edge of the backside outer sheet, the underpants type disposable diaper including: a front-side outer nonoverlap section defined by an area ranging in the front-back direction from the front end portion of the absorber to the front end portion of the crotch outer sheet; a front-side outer overlap section in which the front end portion of the crotch outer sheet and the crotch-side end of the ventral-side outer sheet overlap each other; a backside outer nonoverlap section defined by an area in the front-back direction ranging from the backend portion of the absorber to the backend portion of the crotch outer sheet; and a backside outer overlap section in which the backend portion of the crotch outer sheet and the crotch-side end of the backside outer sheet overlap each other, and assuming that the number of sheets disposed on the underside of the liquid impervious sheet is B1 at the intermediate portion, A1 at the front- and backside outer overlap sections, and C1 at the front- and backside outer nonoverlap sections, there is established a relationship of B1<C1<A1.

Object of invention

(EP2105115)

The present invention relates to an underpants type disposable diaper with two separate ventral- and backside outer sheets.

The present invention relates to an underpants type disposable diaper with two separate ventral- and backside outer sheets.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/42; A61F-013/45; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/496; A61F-013/496; A61F-013/51; A61F-013/514; A61F-013/515; A61F-013/84

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MYPI9500493
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US10/039,997
ES95909528T
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US7527615
MY119243
US20040224132
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ES2133741
DE69510923
KR100348235
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EP0748197
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EP0748197	B1	1999-07-21	EP-748197
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AU1746395	A	1995-09-11	AU9517463
WO95/22951	A1	1995-08-31	WO9522951
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(CN1095651C)
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(KR100348235)
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(MY-119243)

2005-04-30

Title

(EP-748197)

Absorbent article with multiple zone structural elastic-like film web extensible waist feature

Abstract

(EP0748197)

Absorbent articles such as disposable diapers, incontinent briefs, diaper holders, training pants, feminine hygiene garments and the like, that have a unique waist feature that improves the dynamic fit as well as the containment characteristics of the absorbent article. Such absorbent articles comprise a chassis assembly (22) preferably comprising a liquid pervious topsheet (24), a liquid impervious backsheet (26), and an absorbent core (28) positioned between the topsheet and the backsheet; an extensible back waist feature; and a closure system (40, 41) for maintaining the absorbent article on the wearer. The extensible back waist feature provides an extensible feature that provides a more comfortable and contouring fit by initially conformably fitting the diaper to the wearer and by sustaining this fit. The extensible back waist feature has a hip panel (38), a central waistband panel (32), and a pair of side panels (36). The force/extension characteristics of each panel is designed to provide such improved fit and containment. While each panel of the extensible waist feature may be constructed from a number of extensible materials, the panels preferably comprise a structural elastic-like film web. The structural elastic-like film (SELF) web (Fig. 5) exhibits an elastic-like behavior in the direction of elongation without the use of added elastic materials. The configuration of the SELF web in each panel has specific characteristics to provide the desired force/extension characteristics of each panel.

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Advantages / Previous drawbacks

(EP0748197)

Therefore, it is an object of the present invention to provide a relatively low cost, easy to manufacture, absorbent article having sustained dynamic fit about the wearer during use.

Patent 5,087,255 entitled "Absorbent Article Having Inflected Barrier Cuffs" issued to Sims on February 11, 1992, discloses an absorbent article having inflected barrier cuffs with the distal edge positioned outboard of the proximal edge in one waist region and inboard in the other to provide better fit about the hips/buttocks.

It is an even further object of the present invention to provide an extensible backwaist feature on an absorbent article that enhances fit and containment by providing multiple zones or panels having different force/extension properties to better distribute the forces encountered by the backwaist feature during use and provide the necessary stretch and extension characteristics in those zones.

However, elastics are costly and require a certain degree of manipulation and handling during assembly.

Further, while elastics do provide a degree of stretch for the absorbent article, the components of the absorbent article to which the elastics are attached are typically not elastic such that the elastics must be prestretched prior to being secured to the absorbent article or the inelastic components must be subjected to mechanical stretching (e.g., ring rolling) to enable the added elastic to be effective.

Independent claims

(EP0748197)

1. A disposable absorbent article (20) having a front waist region and a backwaist region, the absorbent article including a chassis assembly (22) comprising a liquid pervious topsheet (24), a liquid impervious backsheet (26) joined with said topsheet, and an absorbent core (28) positioned between said topsheet and said backsheet, and an extensible backwaist feature (32) positioned in said backwaist region, said extensible backwaist feature comprising a hip panel (38) joined to and extending longitudinally outwardly from said chassis assembly (22), said hip panel (38) being extensible in a direction having a vector component in the lateral direction, a central waistband panel (34) joined with and extending longitudinally outwardly from said hip panel (38), said central waistband panel (34) being extensible in a direction having a vector component in the lateral direction, and a pair of side panels (36) joined with and extending laterally outwardly from said central waistband panel (34) and at least a portion of said hip panel (38), each said sidepanel being extensible in a direction having a vector component in the lateral direction characterized in that the extension force of said central waistband panel (34) is greater than the extension force of said hip panel (38).

Object of invention

(EP0748197)

The present invention relates to absorbent articles such as diapers, incontinent briefs, training pats, and the like, and more particularly, to absorbent articles having an extensible waist feature providing dynamic fit about the wearer as well as improved containment characteristics of the absorbent article.

The present invention relates to absorbent articles such as diapers, incontinent briefs, training pats, and the like, and more particularly, to absorbent articles having an extensible waist feature providing dynamic fit about the wearer as well as improved containment characteristics of the absorbent article.

It is a further object of the present invention to provide an absorbent article having a unique extensible waist feature, preferably without the use of elastic, that provides sustained dynamic fit and improved resistance to leakage during use due to the conformability of the materials forming the waist feature by virtue of their readily extensible nature.

It is a still further object of the present invention to provide an extensible waist feature on a absorbent article that exhibits a "elastic-like" behavior in the direction of applied force or elongation without the use of additional elastic material.

The present invention provides absorbent articles such as disposable diapers, incontinent briefs, diaper holders, training pants, feminine hygiene garments and the like, that have a extensible backwaist feature that improves the dynamic fit as well as the containment characteristics of the absorbent article.

The present invention provides absorbent articles such as disposable diapers, incontinent briefs, diaper holders, training pants, feminine hygiene garments and the like, that have a extensible backwaist feature that improves the dynamic fit as well as the containment characteristics of the absorbent article.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/56; A61F-013/72

Family 46/200 - FAMPAT - ©Questel

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TW100142342
CN201180053340
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TW201235019
JP2012110366
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EP2640330	B1	2016-08-24	EP2640330
TWI508712	B	2015-11-21	TWI508712
CN103200915	B	2015-09-09	CN103200915B
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2015-11-21

Title

(EP2640330)
Absorbent article

Abstract

(EP2640330)
An absorbent article ensuring that even when excreted urine diffuses by running down the wearer's skin, the urine is prevented from leaking out of the absorbent article. In the absorbent article 1 of the present invention, an absorbent sheet 50 has at least one absorbent polymer-existing region 54 in which the absorbent polymer 51 is sandwiched by at least one liquid-pervious sheet 52 and 53 and at least one absorbent polymer-nonexisting region 55 which is free of absorbent polymer. The at least a part of the absorbent sheet 50 is disposed in a rear waist region 12, and a planar shape of the absorbent polymer-existing region 54 disposed on the rear waist region 12 side of the longitudinal center of the crotch region 13 of the absorbent sheet 50 is a nearly V-shaped with an apex facing in the direction from the front waist region 11 to the rear waist region 12 in the longitudinal direction of the absorbent article 1.

Current assignees

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Advantages / Previous drawbacks

(EP2640330)
In order to solve the problem above, the present invention employs the following configuration.

Independent claims

(EP2640330)
1. An absorbent article consisting of a front waist region, a rear waist region and a crotch region located between the front and rear regions in a longitudinal direction from a front side to a rear side, comprising: a liquid-pervious topsheet, a backsheet, an absorption body intervening between said topsheet and said backsheet, and an absorbent sheet between said topsheet and said absorption body, comprising at least one liquid-pervious sheet having sandwiched thereby an absorbent polymer, wherein: said absorbent sheet has at least one absorbent polymer-existing region in which said absorbent polymer is sandwiched by said at least one liquid-pervious sheet and at least one absorbent polymer-nonexisting region which is free of absorbent polymer, at least a part of said absorbent sheet is disposed in said rear waist region, and a planar shape of said absorbent polymer-existing region disposed on said rear waist region side of the longitudinal center in said crotch region of said absorbent sheet is a nearly V-shaped with an apex facing in the direction from said front waist region to said rear waist region in the longitudinal direction of said absorbent article.

Object of invention

(EP2640330)
The present invention relates to an absorbent article.
More specifically, the present invention relates to an absorbent article such as urine-absorbing pad, disposable diaper, toilet training pant and incontinence brief.
The present invention relates to an absorbent article.
That is, the present invention is an absorbent article consisting of a front waist region, a rear waist region and a crotch region located between the front and rear regions in a longitudinal direction from a front side to a rear side, comprising a

liquid-pervious topsheet, a backsheet, an absorption body intervening between the topsheet and the backsheet, and an absorbent sheet between the topsheet and the absorption body, comprising at least one liquid-pervious sheet having sandwiched thereby an absorbent polymer, wherein the absorbent sheet has at least one absorbent polymer-existing region in which an absorbent polymer is sandwiched by at least one liquid-pervious sheet and at least one absorbent polymer-nonexisting region which is free of absorbent polymer, at least a part of the absorbent sheet is disposed in the rear waist region, and a planar shape of the absorbent polymer-existing region disposed on the rear waist region side of the longitudinal center of the crotch region of the absorbent sheet is a nearly V-shaped with an apex facing in the direction from the front waist region to the rear waist region in the longitudinal direction of the absorbent article.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/47; A61F-013/47; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/53; A61F-013/532; A61F-013/535; A61F-013/537

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(US5411498)

1995-05-02

Title

(US5411498)

Stretchable shaped absorbent garment

Abstract

(US5411498)

A stretchable absorbent garment having a fluid-pervious inner layer, an outer layer, and an absorbent structure located between said inner and outer layers, and at least two generally parallel elastomeric strands stretch bonded to the garment along its length such that when in a relaxed state, all of the above described elements are reduced in length.

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Advantages / Previous drawbacks

(US5411498)

Generally, it is desirable that the fluid-pervious inner layer be soft and have a generally cloth like feel, thus enhancing the comfort of a wearer.

For example, the absorbent structure can include 5 to 95 weight percent of high-absorbency material and preferably includes about 10 to 30 weight percent of the high-absorbency material to provide more efficient performance.

It is desirable to provide a stretchable absorbent garment for absorbing body liquids.

No. 4,847,134, the use of the stretchable web may, in some instances, adversely affect the absorption of body fluids depending on the placement of the stretchable layer within the absorbent product and its ability to pass a fluid.

Independent claims

(US5411498)

1. A stretchable shaped absorbent garment having a length, a width, and a thickness, said garment comprising: (A) a fluid-pervious inner layer having a length and a width; (B) an outer layer having a length and a width; (C) an absorbent structure having a length and a width, said absorbent structure being located between said inner and outer layers; and (D) a plurality of generally parallel elastomeric strands stretch bonded to said garment along substantially its entire length, said elastomeric strands being located between said inner and outer layers, with at least one of said elastomeric strands being positioned between said inner layer and said absorbent structure and at least one of said elastomeric strands being positioned between said absorbent structure and said outer layer; such that, when in a relaxed state, said elastomeric strands reduce the length of said inner layer, outer layer, and absorbent structure across the width of the garment.

22. A stretchable shaped absorbent garment having a length, a width, and a thickness, said garment comprising: (A) a fluid-pervious inner layer having a length and a width; (B) an outer layer having a length and a width and being formed from a soft, cloth like, nonwoven material; (C) an absorbent structure having a length and a width, said absorbent structure comprising a layer of cellulosic fibers and a high-absorbency material and being located between said inner and outer layers; (D) a fluid-impervious layer located between said absorbent structure and said outer layer; and (E) at least four generally parallel elastomeric strands stretch bonded to said garment along substantially its entire length, with at least two of said elastomeric strands being located between said inner layer and said absorbent structure and at least two of said elastomeric strands being located between said absorbent structure and said outer layer; such that, when in a relaxed state, said elastomeric strands reduce the length of said inner layer, outer layer, absorbent structure, and fluid-impervious layer across the width of the garment by at least about 40 percent.

23. A method for forming a shaped absorbent garment said garment comprising a fluid-impervious inner layer having a length and a width, an outer layer having a length and a width, and an absorbent structure having a length and a width, said absorbent structure being located between said inner layer and said outer layer; the steps of the method comprising: (A) stretch bonding at least four generally parallel, elastomeric strands to said garment along substantially its entire length, at least two of said strands being positioned in different locations throughout the thickness of the garment, with at least one elastomeric strand positioned between said inner layer and said absorbent structure and at least one elastomeric strand positioned between said absorbent structure and said outer layer; and (B) bonding the inner layer, outer layer, and absorbent structure to one another.

Object of invention

(US5411498)

The present invention relates to an absorbent garment suitable for use in absorbing body fluids.

The present invention is directed to a stretchable absorbent garment.

Specifically, the present invention relates to a stretchable shaped absorbent garment.

In another aspect, the present invention concerns a garment such as that described above further comprising integral attachment means.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/514; A61F-013/53; A61F-013/56; A61F-013/64

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Questel unique family ID (FAN)

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EP3357464	B1	2019-07-10	EP3357464
EA032551	B1	2019-06-28	EA--32551
EA201890568	A1	2019-01-31	EA201890568
JP6404201	B2	2018-10-10	JP6404201
IN201817015684	A	2018-10-05	IN201817015684
EP3357464	A4	2018-08-15	EP3357464
EP3357464	A1	2018-08-08	EP3357464
CN108135752	A	2018-06-08	CN108135752
TW201726084	A	2017-08-01	TW201726084
WO2017/056937	A1	2017-04-06	WO201756937
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2017-04-06
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(EP3357464)
2019-07-10
(JP6404201)
2018-10-10
(EA--32551)
2019-06-28

Title

(EP3357464)
Underpants-type diaper

Abstract

(EP3357464)
At least one of the front waistline member (4) and the rear waistline member (6) includes a first region (R1) including both side edges (30E) along the longitudinal direction (L) of the region where the absorber is disposed and outside in the width direction (W), and a second region (R2) provided outside the first region in the width direction. Extension stress of the first region (R1) is smaller than extension stress of the second region (R2).

Current assignees

UNICHARM

Inventors

MUKAI HIROTOMO
NINOMIYA AKIHIDE
SHIOMI AKIHISA

Advantages / Previous drawbacks

(EP3357464)
The present invention is provided to solve the above problem and, it is an object of the present invention to provide a pants-type diaper that can achieve a wider effective absorbing range of the absorber, adjust stretchability of the elastic members in the width direction, and improve the wearing feeling of the absorber.
Thus, it is difficult to adjust stretchability of the elastic member in the width direction.
is difficult to adjust stretchability of the elastic member in the width direction.

Independent claims

(EP3357464)
1. A pants-type diaper, comprising: a width direction and a longitudinal direction which are orthogonal to each other; a front waistline member; a rear waistline member; an absorber body extending from the front waistline member to the rear waistline member; an absorber disposed in the absorber body; and a plurality of elastic members disposed at predetermined intervals in the longitudinal direction in the front waistline member and the rear waistline member, wherein at least one of the front waistline member and the rear waistline member includes a first region including both side edges along the longitudinal direction of the region where the absorber is disposed and outside in the width direction, and a second region provided outside the first region in the width direction, and extension stress of the first region is smaller than extension stress of the second region.

Object of invention

(EP3357464)

As described above, the present invention can provide the pants-type diaper that can achieve a wider effective absorbing range of the absorber, adjust the stretchability of the elastic members in the width direction, and improve the wearing feeling of the absorber.

As described above, the present invention can provide the pants-type diaper that can achieve a wider effective absorbing range of the absorber, adjust the stretchability of the elastic members in the width direction, and improve the wearing feeling of the absorber.

The first aspect of present invention is a pants-type diaper, including: a width direction and a longitudinal direction which are orthogonal to each other; a front waistline member; a rear waistline member; an absorber body extending from the front waistline member to the rear waistline member; an absorber disposed in the absorber body; and a plurality of elastic members disposed at predetermined intervals in the longitudinal direction in the front waistline member and the rear waistline member, wherein at least one of the front waistline member and the rear waistline member includes a first region including both side edges along the longitudinal direction of the region where the absorber is disposed and outside in the width direction, and a second region provided outside the first region in the width direction, and extension stress of the first region is smaller than extension stress of the second region.

The present invention relates to pants-type diapers.

The present invention relates to pants-type diapers.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/496; A61F-013/534; A61F-013/535

Family 49/200 - FAMPAT - ©Questel

Earliest priority number

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Family publication details

SE518067	C2	2002-08-20	SE-518067
SE0004739	L	2002-06-21	SE200004739
SE0004739	D0	2000-12-20	SE200004739

Earliest priority date

2000-12-20

Application dates

2000-12-20

Publication dates

2002-08-20

2002-06-21

2000-12-20

Grant dates

(SE-518067)

2002-08-20

Title

(SE-518067)

Absorbent article, e.g. nappy, incontinence pad or sanitary towel, includes fold in absorbent body layer with line of weakness

Abstract

(SE0004739)

At least one fold (125) with a specific geometry and at least one line of weakness is provided in one or more of the absorbent layers (124). An absorbent article (101) comprises an absorbent body (104) with at least one absorbent layer enclosed in a cover with a liquid-permeable layer (102) and a liquid-impermeable layer (103). At least one fold is provided in the absorbent layer, the fold having a base line (126) extending in the plane of the layer, and a free edge (128) located at a distance from the base line. The fold length is defined between two end points (134, 135) and the fold width is defined by the distance between the base line and free edge. Maximum fold width is at a point in between the end points and this width is greater than that at either of the end points. At least one line of weakness extends in the width direction of the fold, from the free edge towards the base line.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

FERNFORS INGEMAR

IPC - International classification

A61F; A61F-013/53

Family 50/200 - FAMPAT - ©Questel

Earliest priority number

US61/870,391P

Application number

US15/942,607

US14/467,095

Publication numbers

US20180221221

US9987176

US20150065975

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Family publication details

US20180221221	A1	2018-08-09	US20180221221
US9987176	B2	2018-06-05	US9987176
US20150065975	A1	2015-03-05	US20150065975

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2013-08-27

Application dates

2014-08-25

2018-04-02

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2018-08-09

2018-06-05

2015-03-05

Grant dates

(US9987176)

2018-06-05

Title

(US20180221221)

Absorbent Articles With Channels

Abstract

(US20180221221)

The present disclosure is directed, in part, to an absorbent article comprising a topsheet, a backsheet and absorbent core positioned at least partially intermediate the topsheet and the backsheet. The absorbent core comprises an absorbent material positioned within a core wrap. The absorbent core defines a first channel therein. A material is positioned at least partially intermediate the topsheet and the core wrap. The material defines a second channel therein.

Current assignees

PROCTER & GAMBLE

Inventors

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Advantages / Previous drawbacks

(US20180221221)

It may be advantageous that the topside of the core wrap, i.e., the side placed closer to the wearer in the absorbent article, be more hydrophilic than the bottom side of the core wrap.

In an embodiment, neither the first nor the second substrates need to be shaped, so that they can be rectangularly cut for ease of production but other shapes are within the scope of the present disclosure.

The absorbent material may advantageously comprise little or no airfelt (cellulose) fibers, in particular the absorbent core may comprise less than 15%, 10%, 5%, 3%, 2%, 1% airfelt (cellulose) fibers by weight, or may even be substantially free of, or free of, cellulose fibers, specifically reciting all 0.1% increments within the specified ranges and all ranges formed therein or thereby.

Independent claims

(US20180221221)

1. An absorbent article comprising: a central longitudinal axis; a total longitudinal length extending in a direction parallel to the central longitudinal axis; a front waist region; a rear waist region; a crotch region positioned intermediate the front waist region and the rear waist region, wherein the front waist region, the rear waist region, and the crotch region each define of the total longitudinal length of the absorbent article; a liquid permeable topsheet forming a portion of a wearer-facing surface of the absorbent article; a liquid impermeable backsheet; an absorbent core disposed at least partially intermediate the liquid permeable topsheet and the liquid impermeable backsheet and comprising an absorbent material, wherein the absorbent material is positioned within a core wrap, wherein the absorbent material comprises superabsorbent polymers, wherein the absorbent core defines a first channel therein, and wherein the first channel is free of overlap with the central longitudinal axis; and a material positioned at least partially intermediate the liquid permeable topsheet and the core wrap, wherein the material is free of any superabsorbent polymers, wherein the material defines a second channel therein, wherein the second channel is free of overlap with the central longitudinal axis, and wherein the second channel extends into the front waist region.

13. An absorbent article comprising: a central longitudinal axis; a total longitudinal length extending in a direction parallel to the central longitudinal axis; a front waist region; a rear waist region; a crotch region positioned intermediate the front waist region and the rear waist region, wherein the front waist region, the rear waist region, and the crotch region each define of the total longitudinal length of the absorbent article; a liquid permeable topsheet forming a portion of a wearer-facing surface of the absorbent article; a liquid impermeable backsheet film; an absorbent core disposed at least partially

intermediate the liquid permeable topsheet and the liquid impermeable backsheet film and comprising an absorbent material, wherein the absorbent material is positioned within a core wrap, wherein the absorbent core defines a first channel therein, and wherein the absorbent core defines a second channel therein; and a material positioned at least partially intermediate the liquid permeable topsheet and the core wrap, wherein the material defines a third channel therein, wherein the third channel extends into the front waist region, and wherein the third channel is free of overlap with the central longitudinal axis.

Object of invention

(US20180221221)

This so called C-wrap construction may provide benefits such as improved resistance to bursting in a wet loaded state compared to a sandwich seal.

The polymers of the present disclosure are present in an amount to improve the mechanical properties of the fiber, the opacity of the fiber, optimize the fluid interaction with the fiber, improve the processability of the melt, and improve attenuation of the fiber.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/53; A61F-013/533; A61F-013/537

Family 51/200 - FAMPAT - ©Questel

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WOUS2005/010562

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2004-09-02

Application dates

2005-03-29

Publication dates

2006-03-16

Title

(WO200628509)

Disposable absorbent underpants

Abstract

(WO2006/028509)

A disposable absorbent article is disclosed having a waist opening and a pair of leg openings. The absorbent article has first, second and third pairs of leg elastics secured between an outer cover and an inner liner. The first, second and third leg elastics are arranged around each of the pair of leg openings with each of the third pair of leg elastics being positioned intermediate one of each of the first and second pairs of leg elastics. Each of the third pair of leg elastics is also separated from one of the first pair of leg elastics by a first gap and from one of the second pair of leg elastics by a second gap.

Current assignees

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Inventors

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DATTA PAUL JOSEPH

GROSS JACQUELINE ANN

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WEYENBERG STEVEN LAMBERT

BRUNNER MICHAEL SCOTT

Independent claims

(WO2006/028509)

We claim: 1. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined together by a crotch portion, said crotch portion having an hourglass configuration with a minimum width W3; b) an inner liner having a front portion and a back portion, said front and back portions of said inner liner being attached to said front and back portions, respectively, of said outer cover, and said inner liner and said outer cover being joined together to form a waist opening and a pair of leg openings; c) an absorbent pad including a liquid permeable cover, a liquid-impermeable baffle and an absorbent layer positioned therebetween, said baffle being secured to said crotch portion of said outer cover, said absorbent pad having a width W2 which is less than said width W3, and said absorbent pad overlapping at least about 80% of said crotch portion; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, at least a portion of the length of each of said first pair of leg elastics being aligned parallel to an edge of one of said leg openings, and each of said first pair of leg elastics being positioned within 1 inch of one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and said inner liner at said back portion, at least a portion of the length of -each of said second pair of leg elastics being aligned parallel to an edge of one of said leg openings, and each of said second pair of leg elastics being positioned within 1 inch of one of said pair of leg openings; f) a third pair of leg elastics secured between said liquid permeable cover and said liquid-impermeable baffle, said third pair of leg elastics having an arcuate profile, each of said third pair of leg elastics being positioned within 1 inch of . one of said leg openings intermediate one of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from one of each of said first pair of leg elastics by a first gap of at least about 0.125 inches and each of said third pair of leg elastics being separated from one of each of said second pair of leg elastics by a second gap of at least about 0.125 inches, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants.

10. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined together by a crotch portion, said crotch portion having an hourglass configuration with a minimum width W3; b) an inner liner having a front portion and a back portion, said front and back portions of said inner liner being attached to said front and back portions, respectively, of said outer cover, and said inner liner and said outer cover being joined together to form a waist opening and a pair of leg openings; c) an absorbent pad including a liquid permeable cover, a liquid-impermeable baffle and an absorbent layer positioned therebetween, said baffle being secured to said crotch portion of said outer cover, said absorbent pad having a capacity for absorbing at least about 100 grams of body fluid, said absorbent pad having a width W2 which is less than said width W3, and said absorbent pad overlapping at least about 80% of said crotch portion; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, at least a portion of the length of each of said first pair of leg elastics being aligned parallel to an edge of one of said leg openings, and each of said first pair of leg elastics being positioned within 1 inch of one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and said inner liner at said back portion, at least a portion of the length of each of said second pair of leg elastics being aligned parallel to an edge of one of said leg openings, and each of said second pair of leg elastics being positioned within 1 inch of one of said pair of leg openings; f) a third pair of leg elastics secured between said liquid permeable cover and said liquid-impermeable baffle, said third pair of leg elastics having an arcuate profile, each of said third pair of leg elastics being positioned within 1 inch of one of said leg openings intermediate one of said first and second -pairs of leg elastics, each of said third pair of leg elastics being separated from one of -each of said first pair of leg elastics by a first gap of at least about 0.125 inches and each of said third pair of leg elastics being separated from one of each of said second pair of leg elastics by a second gap of at least about 0.125 inches, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to

prevent leakage of body fluid from said underpants.

16. A disposable absorbent underpants for containing body fluid comprising: a) an outer cover having a front portion and a back portion joined together by a crotch portion, said crotch portion having an hourglass configuration with a minimum width W3; b) an inner liner having a front portion and a back portion joined together by a crotch portion, said crotch portion having an hourglass configuration with a minimum width W4 wherein W4 is equal to W3, and said inner liner and said outer- coyer being joined together to form a waist opening and a pair of leg openings; c) an absorbent pad including a liquid permeable cover, a liquid-impermeable baffle and an absorbent layer positioned therebetween, said baffle being secured to said crotch portion of said inner liner, said absorbent pad having a capacity for absorbing at least about 500 grams of body fluid, said absorbent pad having a width W2 which is less than said width. W3, and said absorbent pad overlapping at least about 80% of said crotch portion; d) a first pair of leg elastics secured between said outer cover and said inner liner at said front portion, at least a portion of the length of each of said first pair of leg elastics being aligned parallel to an edge of one of said leg openings, and each of said first pair of leg elastics being positioned within 1 inch of one of said pair of leg openings; e) a second pair of leg elastics secured between said outer cover and said inner liner at said back portion, at least a portion of the length of each of said second pair of leg elastics being aligned parallel to an edge of one of said leg openings, and each of said second pair of leg elastics being positioned within 1 inch of one of said pair of leg openings; f) a third pair of leg elastics secured between said liquid permeable cover and said liquid-impermeable baffle, said third pair of leg elastics having an arcuate profile, each of said third pair of leg elastics being positioned within 1 inch of one of said leg openings intermediate one of said first and second pairs of leg elastics, each of said third pair of leg elastics being separated from one of each of said first pair of leg elastics by a first gap of at least about 0.125 inches and each of said third pair of leg elastics being separated from one of each of said second pair of leg elastics by a second gap of at least about 0.125 inches, said first, second and third pairs of leg elastics allowing gathers to form about each of said leg openings to prevent leakage of body fluid from said underpants; and g) waist elastic attached between said outer cover and said inner liner at said front and back portions, said waist elastics allowing gathers to form about said waist opening to prevent leakage of body fluid from said underpants.

Object of invention

(WO2006/028509)

Briefly, this invention relates to disposable absorbent underpants for containing body fluid.

It has been found that straight sided edges formed in the crotch portion do not function as well as arcuate side edges.

This invention relates to disposable absorbent underpants having a waist opening and a pair of leg openings.

More specifically, this invention relates to disposable absorbent underpants having first, second and third leg elastics surrounding each leg opening and the three leg elastics are separated by first and second gaps.

IPC - International classification

A61F-005/44; A61F-013/00; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/53

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WO2019/130971	A1	2019-07-04	WO2019130971

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2019-07-04

2019-04-17

Grant dates

(JP2019118556)

2019-04-17

Title

(WO2019130971)

Pants-type absorbent article

Abstract

(WO2019/130971)

A pants-type absorbent article (1) which includes: an absorbent body (10) that is provided with an absorbent core (11) and is folded at a lower end to form a front side and a rear side; and a front belt portion (23) that has a front extensible region (23s) that stretches and contracts in the left-right direction. The absorbent core (11) has a front portion (10F), which is a portion folded to the front side in the front-rear direction, and the absorbent core (11) has, in the front portion (10F), a pair of inclined low basis weight regions (31) which incline from the top to the bottom in the vertical direction and from the outer sides in the left-right direction to the center and which have basis weights that are lower than the surrounding regions. The entirety of the pair of inclined low basis weight regions (31) overlaps the front extensible region (23s).

Current assignees

UNICHARM

Inventors

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ONISHI, Kazuaki

Atsushi Murakami

Nagayama Yui

Kondo Daisuke

Advantages / Previous drawbacks

(WO2019/130971)

That is, the absorbent core 11 is bent by the deformation of the 3 two-dimensionally, the wearer's skin and it becomes difficult to fit.

On the other hand, the elastic nonwoven fabric 215,225 is the welded portion 25a, in order to increase a thickness of between 25b, 213,223 and the skin-side sheet 214,224 is crushed a bulge of the non-skin-side sheet is difficult, a good appearance and softness feel can be maintained.

Therefore, problems such as sweat or sweatiness likely to occur in the waist region 211,221, the welded portion 25b by the air permeability can be prevented from being impaired, a suitable air permeability can be ensured.

Independent claims

(WO2019/130971)

1. Intersect each other in the vertical direction and the horizontal direction and the longitudinal direction, disposed along the vertical direction with an absorbent core, in the vertical direction at the lower end of the absorbent body and bent back and forth, the absorbent body is bonded to the front upper end portion, the contraction in the horizontal direction and the front elastic area having a front belt, a pant-type absorbent article having, the absorbent core, the front-rear direction on the front

side of the front portion has a bent portion, of the absorbent core is, in the front side, from upward to downward of the vertical direction, and, the horizontal direction from the outside of inclined toward the center side, the region around the lower basis weight than the inclination of the pair has a low basis weight region, the pair of inclined weight region as a whole is low, a resize area that is overlapped with the front, and a pant-type absorbent article.

Object of invention

(JP6503448)

In addition, the present invention relates to, without departing from the scope thereof, can be improved and the change, or an equivalent thereof is included in the present invention is of course.

IPC - International classification

A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/532

Family 53/200 - FAMPAT - ©Questel

Earliest priority number

JP2010222213

Application number

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JP2010222213
CN201180046688
JP2013503296
TH20131001567
US13/823,408
WOJP2011/005557

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EP2621437
JP5847999
CN103124547
JP5621907
EP2621437
JPWO2012120671
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US20130245588
EP2621437
CN103124547
JP2012075566
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EP2621437	B1	2016-12-14	EP2621437
JP5847999	B2	2015-12-04	JP5847999
CN103124547	B	2015-10-07	CN103124547B
JP5621907	B2	2014-10-03	JP5621907
EP2621437	A4	2014-08-20	EP2621437
JPWO2012120671	A1	2014-07-07	JP2012120671W
TH127617	A	2013-09-20	TH-127617
US20130245588	A1	2013-09-19	US20130245588
EP2621437	A1	2013-08-07	EP2621437
CN103124547	A	2013-05-29	CN103124547
JP2012075566	A	2012-04-19	JP2012075566

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2011-03-09
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2015-10-07

Title

(EP2621437)
Pants-type diaper

Abstract

(EP2621437)
In a pants-type diaper 1, two folding lines 3A which are extensive in a longitudinal direction L of the pants-type diaper 1 and which are spaced in a widthwise direction W of the pants-type diaper 1 are formed at an absorber 2 that is disposed in a crotch region A of the pants-type diaper 1. A plurality of compression lines 4A which are extensive in the widthwise direction W and which are spaced in the longitudinal direction L are formed in a predetermined region of the absorber 2. The predetermined region is a region includes the folding lines 3A and which is extensive in the widthwise direction W from one side edge part to the other side edge part of the absorber. An angle formed by a centerline CL in a widthwise direction W in the compression lines 4A and the widthwise direction W is configured so as to be included in a range of 0 degrees to 45 degrees. Two of the compression lines 4A are adjacent to each other in the longitudinal direction L are configured so as to approach at a predetermined portion.

Current assignees

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UNICHARM

Inventors

MISHIMA YOSHITAKA

FUJIMOTO KAZUYA

Advantages / Previous drawbacks

(EP2621437)

It is desirable that: a basis weight of pulp is within a range from 100 g/m2 to 500 g/m2 (for example, 151 g/m2); and a basis weight of SAP is within a range from 0 g/m2 to 300 g/m2 (for example, 106 g/m2).

However, the Applicant found the following problem associated with the pants-type diaper described above.

Therefore, in order to solve such a problem, in such a pants-type diaper, it has been considered to configure the diaper so as to increase the width of the absorber that is disposed in the inner-leg region of the pants-type diaper, thereby increasing a surface area of such an absorber.

As shown in Fig. 4, an intermediate layer 2A in which pulp and SAP are mixed with each other does not exist on a wall face of the folding lines 3A (slits 3A), and a pulp layer 2B is configured so as to exist.

Independent claims

(EP2621437)

1. A pants-type diaper comprising: an absorber (2) having a core including a pulp, the absorber being configured so that each face of the core is sandwiched by a covering sheet, wherein: at least two folding lines (3A, 3B) which are extensive in a longitudinal direction of the pants-type diaper and which are spaced in a width wise direction of the pants-type diaper (1) are formed at the absorber that is disposed in a crotch region of the pants-type diaper; a plurality of compression lines (4A) which are extensive in a width wise direction of the pants-type diaper (1) and which are spaced in the longitudinal direction of the pants-type diaper (1) are formed in a predetermined region of the absorber (2); the predetermined region is a region which includes the folding lines (3A, 3B) and which is extensive in a width wise direction from one side edge part to the other side edge part of the absorber (2); an angle which is formed by a centerline along a width wise direction located in the compression lines (4A) and the width wise direction of the pants-type diaper (1) is configured so as to be included in a range of 0 degrees to 45 degrees; and two of the compression lines (4A) which are adjacent to each other in the longitudinal direction of the pants-type diaper (1) are configured so as to approach at a predetermined portion; the core is made of: an intermediate layer (2A), in which a pulp and an SAP are mixed with each other, and a pulp layer (2B); the folding line (3A) is formed by a slit; and the pulp layer (2B) is configured so as to exist on a wall face of the slit and the intermediate layer (2A) is configured so as not to exist on the wall face of the slit; and the intermediate layer (2A) is configured so as to be disposed inside of the pulp layer (2B).

Object of invention

(EP2621437)

The present disclosure relates to a pants-type diaper.

The present disclosure relates to a pants-type diaper.

IPC - International classification

A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/53; H04L-009/08; H04L-009/32

Family 54/200 - FAMPAT - ©Questel

Earliest priority number

SE0103982

Application number

SE0103982

Publication numbers

SE520495

SE0103982

Questel unique family ID (FAN)

36863082

Family publication details

SE520495	C2	2003-07-15	SE-520495
SE0103982	L	2003-05-29	SE200103982

Earliest priority date

2001-11-28

Application dates

2001-11-28

Publication dates

2003-07-15

2003-05-29

Grant dates

(SE-520495)

2003-07-15

Title

(SE-520495)

Hygiene article, e.g. nappy, has closed side parts formed by joining together nappy end parts along article length edges

Abstract

(SE0103982)

The article (1) has closed side parts formed by joining together the nappy end parts along the article length edges (11), creating a waist opening and two leg holes. A hygiene article comprises a front part (7'), a rear part (7'') and an intermediate part (15), and contains an absorbent body (21) enclosed between a liquid permeable surface layer (27) and a cover layer (31). The cover layer remains secured to the absorbent body when wet in the length edge regions (23) of the latter. The cover layer is secured directly or indirectly to the absorbent body at one or both ends of the nappy, within a restricted area (35) located on the nappy central length axis (13). This area extends over a distance in the cross-direction (3) which is less than the cross-direction distance of the absorbent body. The article has closed side parts formed by joining together the nappy end parts along the article length edges, creating a waist opening and two leg holes.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

SANDIN CECILE

IPC - International classification

A61F-013/15; A61F-013/15

Family 55/200 - FAMPAT - ©Questel

Earliest priority number

JP2001289941

Application number

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CN02805832

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KR100889720

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EP1429705
JP3901496
CN1232237
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KR20040034596
US20040078017
TW576737
WO03/026545
JP2003144492
AU2002328060
WO03/026545

Questel unique family ID (FAN)

66094664

Family publication details

KR100889720	B1	2009-03-23	KR100889720
DE60223697	T2	2008-10-30	DE60223697
DE60223697	D1	2008-01-03	DE60223697
EP1429705	B1	2007-11-21	EP1429705
JP3901496	B2	2007-01-12	JP3901496
CN1232237	C	2005-12-21	CN1232237C
EP1429705	A2	2004-06-23	EP1429705
CN1494406	A	2004-05-05	CN1494406
KR20040034596	A	2004-04-28	KR20040034596
US20040078017	A1	2004-04-22	US20040078017
TW576737	B	2004-02-21	TW-576737
WO03/026545	A3	2003-08-14	WO200326545
JP2003144492	A	2003-05-20	JP2003144492
AU2002328060	A1	2003-04-07	AU2002328060
WO03/026545	A2	2003-04-03	WO200326545

Earliest priority date

2001-09-21

Application dates

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2002-09-12
2002-09-12
2002-09-12
2002-09-12
2002-09-12
2002-09-12
2002-09-16
2003-08-11

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2007-11-21

2007-01-12
2005-12-21
2004-06-23
2004-05-05
2004-04-28
2004-04-22
2004-02-21
2003-08-14
2003-05-20
2003-04-07
2003-04-03

Grant dates

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2007-01-12
(TW-576737)
2004-02-21
(CN1232237C)
2005-12-21
(KR100889720)
2009-03-23

Title

(EP1429705)
Disposable diaper

Abstract

(EP1429705)
A disposable diaper comprising a liquid permeable topsheet 2, a liquid impermeable backsheet 3, and a liquid retentive absorbent member 4 and having a substantially oblong shape, the absorbent member 4 in the crotch portion having a middle absorbent portion 42 which occupies the middle 3/7 of the width of the absorbent member 4 and side absorbent portions 43 which each occupy the outermost 1/7 of the width of the absorbent member 4, wherein each side absorbent portion 43 has a larger unit absorption capacity than the middle absorbent portion 42, hydrophobic sheets 3 and 21 are disposed on the lateral outer edge of each side absorbent portion 43 to cover from the upper to lower surfaces of the edge, and an elastic member 71 is disposed in the part having each side absorbent portion 43 in the longitudinal direction of the side absorbent portion 43.

Current assignees

KAO

Inventors

KOYAMA TAKAO
ITO HIDEKAZU
INADA HIROSHI
ARIMURA TAKAHIRO

Advantages / Previous drawbacks

(EP1429705)
The abovementioned structure as well as the higher unit absorption capacity of the side absorbent portions 43 than that of the middle absorbent portion 42 make it possible to securely and effectively bring the absorbing performance of the side absorbent portions 43 to its best advantage and also to improve the leakproofness and the fit while holding down the

production cost.

As a result, the absorbing capability of the absorbent member 4 is made efficient and full use of, which makes it possible to achieve improved leak proof performance even if the total absorption capacity of the absorbent member 4 is equal to or less than that of a conventional disposable diaper.

Another object of the present invention is to provide a disposable diaper which provides a good fit to the inner side of the thighs and has excellent leak proof performance.

The bending capability of the intermediate portion 44' formed between the middle embossed portion 42' and the side embossed portions 43' may be limited to only a part of the length of the absorbent member 4.

The present inventors have considered this as the main cause of skin troubles and found that wrinkling or bunching of the absorbent member can be reduced to suppress development of skin troubles such as a bed sore by lowering the joint area ratio between the absorbent member and the backsheet in the back portion and/or the stomach portion than that in the crotch portion.

Independent claims

(EP1429705)

1. A disposable diaper comprising a liquid permeable topsheet, a liquid impermeable backsheet, and a liquid retentive absorbent member and having a substantially oblong shape consisting of a back portion, a crotch portion, and a stomach portion, said absorbent member in the crotch portion having a middle absorbent portion which occupies 3/7 of the width of the absorbent member in the crotch portion and side absorbent portions which each occupy 1/7 of the width of the absorbent member in the crotch portion, wherein each of said side absorbent portions has a larger unit absorption capacity than said middle absorbent portion, one or two hydrophobic sheet(s) are disposed on the lateral outer edge of each of said side absorbent portions to cover from the upper to lower surfaces of said edge, and an elastic member is disposed in the part having each of said side absorbent portions in the longitudinal direction of said side absorbent portions.

7. A disposable diaper adapted to be used in combination with an auxiliary absorbent article placed on the inner side of the diaper, which comprises a liquid permeable topsheet, a liquid impermeable backsheet, and a liquid retentive absorbent member and having a substantially oblong shape consisting of a back portion, a crotch portion and a stomach portion, said absorbent member in the crotch portion having a middle absorbent portion which occupies 1/3 of the width of the absorbent member in the crotch portion and side absorbent portions which each occupy 1/3 of the width of the absorbent member in the crotch portion, wherein each of said side absorbent portions has a higher maximum degree of swelling on absorption than said middle absorbent portion, at least part of the inner surface of the part having each of said side absorbent portions comes into contact with a wearer's thigh while worn, and wherein an elastic member is disposed in the part having each of said side absorbent portions in the longitudinal direction of said side absorbent portion.

Object of invention

(EP1429705)

The present invention relates to a disposable diaper which can be produced at a lower cost and has greatly improved performance in leakproofness and fit.

The present invention relates to a disposable diaper which is used in combination with an auxiliary absorbent article, more particularly a disposable diaper having greatly improved performance in preventing leakage from the crotch and holding the auxiliary absorbent article.

The present invention relates to a disposable diaper excellent in fit to the inner side of wearer's thighs and leakproofness.

The present invention relates to a disposable diaper which securely bends at an expected position irrespective of slight variations in wearer's size or a diaperer's manner of diapering and thereby secures a desired fit and/or leakproofness.

The present invention relates to a disposable diaper in which the surface in contact with a wearer's body or a member disposed thereabouts, particularly an absorbent member greatly influential on the skin, hardly wrinkles or bunches up and therefore hardly causes skin troubles such as a bed sore.

A first object of the present invention is to provide a disposable diaper which can be produced at a lower cost and has greatly improved performance in leakproofness and fit.

A second object of the present invention is to provide a disposable diaper which has greatly improved performance in preventing leakage and holding an auxiliary absorbent article.

Still another object of the present invention is to provide a disposable diaper, the absorbent member of which securely

bends at an expected position in spite of variations of a wearer's size or manner of diapering thereby secures a desired fit and/or leak proof performance.

Yet another object of the present invention is to provide a disposable diaper in which the surface in contact with a wearer's body or a member disposed thereabouts, particularly an absorbent member greatly influential on the skin hardly wrinkles or bunches up and hardly causes skin troubles such as a bed sore.

In a first aspect of the present invention, there is provided a disposable diaper comprising a liquid permeable topsheet, a liquid impermeable backsheet, and a liquid retentive absorbent member and having a substantially oblong shape consisting of a back portion, a crotch portion and a stomach portion, wherein the absorbent member in the crotch portion has a middle absorbent portion which occupies 3/7 of the width of the absorbent member in the crotch portion and side absorbent portions which each occupy 1/7 of the width of the absorbent member in the crotch portion, wherein each of the side absorbent portions has a larger unit absorption capacity than the middle absorbent portion, one or two hydrophobic sheet(s) are disposed on the lateral outer edge of each of the side absorbent portions to cover from the upper to lower surfaces of the edge, and an elastic member is disposed in the part having each of the side absorbent portions in the longitudinal direction of the side absorbent portions.

In a second aspect of the present invention, there is provided a disposable diaper adapted to be used in combination with an auxiliary absorbent article placed on the inner side of the diaper, which comprises a liquid permeable topsheet, a liquid impermeable backsheet, and a liquid retentive absorbent member and having a substantially oblong shape consisting of a back portion, a crotch portion, and a stomach portion, the absorbent member in the crotch portion having a middle absorbent portion which occupies 1/3 of the width of the absorbent member in the crotch portion and side absorbent portions which each occupy 1/3 of the width of the absorbent member in the crotch portion, wherein each of the side absorbent portions has a higher maximum degree of swelling on absorption than the middle absorbent portion, and at least part of the inner surface of the part having each of the side absorbent portions comes into contact with a wearer's thigh while worn.

One or more of the objects of the invention are accomplished by a disposable diaper comprising a liquid permeable topsheet, a liquid impermeable backsheet, and a liquid retentive absorbent member and having a substantially oblong shape, wherein both side absorbent portions of the absorbent member in the crotch portion bend downward in conformity with the inner side of wearer's thighs while worn, and a plurality of compressed parts are formed on each of the side absorbent portions at intervals in the longitudinal direction of the side absorbent portions.

One or more of the objects of the invention are accomplished by a disposable diaper comprising a liquid permeable topsheet, a liquid impermeable backsheet, and a liquid retentive absorbent member and having a substantially oblong shape, wherein the absorbent member has a middle embossed portion, side embossed portions disposed on both sides of the middle embossed portion, and an intermediate portion disposed between the middle embossed portion and each of the side embossed portions, each of the middle and side embossed portions having the topsheet side thereof embossed and extending in the longitudinal direction of the diaper, and the absorbent member bends downward in the intermediate portion while worn.

A first object of the present invention is to provide a disposable diaper which can be produced at a lower cost and has greatly improved performance in leakproofness and fit.

A first object of the present invention is to provide a disposable diaper which can be produced at a lower cost and has greatly improved performance in leakproofness and fit.

The present invention relates to a disposable diaper which can be produced at a lower cost and has greatly improved performance in leakproofness and fit.

A first object of the present invention is to provide a disposable diaper which can be produced at a lower cost and has greatly improved performance in leakproofness and fit.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/53; A61F-013/53; A61F-013/532

Family 56/200 - FAMPAT - ©Questel

Earliest priority number

US08/248,423

Application number

US08/674,815

Publication numbers

US5830203

Questel unique family ID (FAN)

43031934

Family publication details

US5830203	A	1998-11-03	US5830203

Earliest priority date

1994-05-24

Application dates

1996-07-03

Publication dates

1998-11-03

Grant dates

(US5830203)

1998-11-03

Title

(US5830203)

Absorbent article and method of manufacturing the same

Abstract

(US5830203)

An absorbent article incorporating a main body which has a waist hole and a pair of leg holes, and comprises a topsheet positioned in a facing relation to a wearer's body, a backsheet positioned opposite thereto, and an absorbent core interposed between the backsheet and the topsheet. The topsheet is a composite which comprises two layers of sheet material and two elastic members sandwiched between the two sheets of material. The topsheet further has communicating means disposed in a crotch region of the absorbent article for receiving body exudates. The communicating means is surrounded by the elastic members which form leg gathers, and serves as a passage to communicate body exudates to a space defined between the topsheet and the backsheet. The absorbent article of the present invention can provide excellent flexibility, a snug fit and comfort to a wearer during use, while effectively preventing leakage from the leg gathers.

Current assignees

FIRST QUALITY BABY PRODUCTS

FIRST QUALITY ENTERPRISES

FIRST QUALITY NONWOVENS

FIRST QUALITY PRODUCTS

FIRST QUALITY RETAIL SERVICES

FIRST QUALITY TISSUE

JOHNSON CONTROLS INTERNATIONAL

NUTEK DISPOSABLES

PTB HOLDINGS

PTB INTERNATIONAL

Inventors

SUZUKI MIGAKU

FUKUI HIROAKI

Advantages / Previous drawbacks

(US5830203)

Thus, it is advantageous to separate urine from fecal matter.

This has an advantage in production because the elastic members may easily be held between the two layers.

However, the present invention allows the use of a topsheet of single layer material, if the elastic members can be suitably secured on the topsheet.

This construction is more efficient and economical to manufacture than previously known constructions of tapeless absorbent articles that require at least three elastic members to form a similar pair of U-shaped patterns inverted relative to each other.

One drawback of conventional tapeless absorbent articles is urine leakage from sides of the articles.

Another major drawback thereof is a poor isolation or containment of fecal material.

Independent claims

(US5830203)

1. An absorbent article comprising: a main body having a waist hole, first and second leg holes, and a crotch region, the main body comprising a topsheet for facing toward a wearer's body, a backsheet disposed outwardly of the topsheet, and an absorbent core interposed between the topsheet and the backsheet; the topsheet defining a communicating means having a periphery for permitting fecal material to pass therethrough in the crotch region of the article; a first elastic member forming substantially one half of a first leg gather on the first leg hole and one half of a second leg gather on the second leg hole; and a second elastic member forming substantially a second half of the first leg gather on the first leg hole and substantially a second half of the second leg gather on the second leg hole, the first and second elastic members together defining the first and second leg gathers; wherein the first elastic member extends around substantially one half of the periphery of the communicating means; wherein the second elastic member extends around substantially a second half of the periphery of the communicating means, the first and second elastic members together encircling the communicating means; and wherein the communicating means comprises a through aperture formed in and extending through the topsheet.

4. An absorbent article comprising: a main body having a waist hole and a pair of leg holes each having a first end and a second end, and a crotch region, the main body comprising a topsheet for facing toward a wearer's body, a backsheet disposed outwardly of the topsheet, and an absorbent core interposed between the topsheet and the backsheet; a waist gather disposed along the waist hole; a leg gather disposed along each of the leg holes; the topsheet comprising a dual-layered sheet material, first and second elastic members interposed and secured between the dual-layered sheet material, and communicating means having a periphery for permitting fecal material to pass therethrough in the crotch region of the article; the first elastic member extending along a periphery of a first leg hole from the first end thereof to a midpoint thereof, continuously extending therefrom along one portion of the periphery of the communicating means to a midpoint of a second leg hole, and further extending therefrom to the first end of the second leg hole so that the first elastic member is disposed in a first substantially U-shaped configuration; the second elastic member extending along a periphery of a first leg hole from the second end thereof to a midpoint thereof, continuously extending therefrom along a portion of the periphery of the communicating means to a midpoint of the second leg hole, and further extending therefrom to the second end of the second leg hole so that the second elastic member is disposed in a second substantially U-shaped configuration which is inverted relative to the first U-shaped configuration; and wherein the communicating means comprises a through aperture formed in and extending through the dual-layered sheet material.

Object of invention

(US5830203)

It is an object of the present invention to provide an improved absorbent article which is capable of eliminating the above-described disadvantages that conventional articles possess, so that any undesirable deformation of the crotch region due to the contracting force of the elastic members can be avoided, and the effective containment of fecal material in the crotch region is insured.

In accordance with the present invention, there is provided an absorbent article which is provided with a main body having a waist hole and a pair of leg holes.

The present invention relates to a pant-type absorbent article (such as those often referred to as "tapeless-type" or "training pant type") which includes a pair of leg holes for leg insertion, and a waist hole for encircling a waist portion of a body.

The present invention further relates to a method for manufacturing such an absorbent article.

IPC - International classification

A61F-013/15; A61F-013/15

Family 57/200 - FAMPAT - ©Questel

Earliest priority number

JP2010096532

Application number

MYPI2012004663
MYPI2012004563
EP11772016
JP2010096532
TH20121005486
US13/640,494
CN201180019786
SG2012077236
AU2011243566
WOJP2011/059650

Publication numbers

MY165018
MY161224
EP2561846
JP5466072
TH125014
US20130079743
EP2561846
CN102844008
SG184912
AU2011243566
JP2011224134
WO2011/132681

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Family publication details

MY165018	A	2018-02-28	MY-165018
MY161224	A	2017-04-14	MY-161224
EP2561846	A4	2014-04-09	EP2561846
JP5466072	B2	2014-01-31	JP5466072
TH125014	A	2013-06-28	TH-125014
US20130079743	A1	2013-03-28	US20130079743
EP2561846	A1	2013-02-27	EP2561846
CN102844008	A	2012-12-26	CN102844008
SG184912	A1	2012-11-29	SG-184912
AU2011243566	A1	2012-11-15	AU2011243566
JP2011224134	A	2011-11-10	JP2011224134
WO2011/132681	A1	2011-10-27	WO2011132681

Earliest priority date

2010-04-19

Application dates

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2011-04-19

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2013-03-28
2013-02-27
2012-12-26
2012-11-29
2012-11-15
2011-11-10
2011-10-27

Grant dates

(JP5466072)
2014-01-31
(MY-161224)
2017-04-14
(MY-165018)
2018-02-28

Title

(EP2561846)
Absorbent article

Abstract

(EP2561846)
In the disclosed absorbent article (1), in a front torso-surrounding region (S10A), the distance (D1) between the elastic member (100A) that is most towards leg-surrounding openings among a plurality of elastic members that extend roughly linearly in the widthwise direction (W) and the edges (E1) that are on the leg-surrounding opening (P) side of the front torso-surrounding region (S10A) is configured in a manner so as to gradually shorten and then gradually lengthen when going from both side edges (C) towards the center in the widthwise direction (W).

Current assignees

UNICHARM

Inventors

MUKAI HIROTOMO
WATABE YOSHIHISA

Advantages / Previous drawbacks

(EP2561846)
According to the configuration, in the joined portion where force could be exerted easily, which was a problem in the conventional absorbent article, particularly, in the lower end of the joined portion at the leg hole opening P side in which overlapping of the material is lesser as compared to the longitudinal direction end sides of the front waistline portion S10A

and the rear waistline portion S10B, because a portion in which the elastic members are not provided is arranged in the front waistline portion S10A, the sealability improves, resulting in an effect that the joining strength is easy to achieve. Furthermore, the absorbent article having the aforementioned configuration has a problem in that, in order to reduce the cost, when the basis weight of the waistline sheet is reduced, the problem of breakage of the joined portion in the both-side edges, particularly, the exertion of force at the upper and lower ends of the joined portion resulting in the occurrence of breakage from the portion was seen.

Independent claims

(EP2561846)

1. An absorbent article, comprising: a chassis; and an absorbent body, wherein the chassis includes a front waistline portion, a rear waistline portion, and a crotch portion provided between the front waistline portion and the rear waistline portion, respective one of both-side edges of the front waistline portion and respective one of both-side edges of the rear waistline portion are configured to be joined, and in the front waistline portion, a distance between an elastic member closest to a leg hole opening from among a plurality of elastic members extending in an almost straight line in a width direction and an edge at the leg hole opening side of the front waistline portion is configured to increase gradually after decreasing gradually from the both-side edges towards a center in the width direction.

Object of invention

(EP2561846)

The present invention relates to an absorbent article.

The present invention relates to an absorbent article.

IPC - International classification

A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496

Family 58/200 - FAMPAT - ©Questel

Earliest priority number

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Application number

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SE9604359

SE9604359

Questel unique family ID (FAN)

36849086

Family publication details

SE507775	C2	1998-07-13	SE-507775
SE9604359	L	1998-05-28	SE9604359
SE9604359	D0	1996-11-27	SE9604359

Earliest priority date

1996-11-27

Application dates

1996-11-27

Publication dates

1998-07-13

1998-05-28

1996-11-27

Grant dates

(SE-507775)

1998-07-13

Title

(SE-507775)

Absorbent article, typically nappy or incontinence pad

Abstract

(SE9604359)

An absorbent article (1), such as a nappy or an incontinence pad for adults, comprises a liquid-tight outer cover layer (4), a water permeable inner cover layer (3) which is contact with the skin of the person wearing it, and an absorption body (2) enclosed between the two cover layers. The front section (8) of the article is worn against the belly, the rear section (10) is worn against the back and the intermediate section (9) is worn between the legs. A piece of liquid permeable material (11) extending over the inner cover layer and into the intermediate section of the article is attached to the edges (12-14) of the inner cover layer which are facing towards the rear section of the article and towards the sides of the article, forming an open pocket between the inner cover layer and this piece of material. Preferably the liquid permeable material forming the pocket is an elastic nonwoven.

Current assignees

MOELNLYCKE HEALTH CARE

Inventors

TERNSTROEM INGELA

HEDLUND CARINA

IPC - International classification

A61F; A61F-013/15

Family 59/200 - FAMPAT - ©Questel

Earliest priority number

US62/090,503P

Application number

US14/966,898

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Questel unique family ID (FAN)

73306194

Family publication details

US20160166444 A1 2016-06-16 US20160166444

Earliest priority date

2014-12-11

Application dates

2015-12-11

Publication dates

2016-06-16

Title

(US20160166444)

Disposable absorbent garment

Abstract

(US20160166444)

Disposable absorbent garments, comprising front and rear waist and a central absorbent assembly comprising a liquid-absorbent core, where at least one of the front and rear waist portions comprises: a composite of an elastic sheet material and a non-woven fabric layer, and a plurality of elastic strands. In some of the present garments, the elastic strands are positioned on both sides of the liquid-absorbent core, and each strand has a first end laterally offset from the liquid-absorbent core and extending outward toward a respective leg edge of the waist portion. In others of the present garments, the elastic strands are positioned between the absorbent core and the elastic sheet material, and each extends laterally a majority of the distance between first and second side edges.

Current assignees

ATTENDS HEALTHCARE PRODUCTS

Inventors

FINLAYSON RICHARD E

GASTON WILLIAM W

Advantages / Previous drawbacks

(US20160166444)

The hybrid nature of the present film-and-strand elastic structure has been found to provide important improvements in performance and ease of use.

Independent claims

(US20160166444)

1. A disposable absorbent garment, comprising: front and rear waist portions each having a waist edge, a leg edge, and first and second side edges extending between the waist edge and the leg edge; and a central absorbent assembly having a first end, a second end, and first and second leg edges extending between the first and second ends, the central absorbent assembly coupled to the front and rear waist portions such that the central absorbent assembly extends between the respective leg edges of the front and rear waist portions, the central absorbent assembly comprising a liquid-permeable facing layer, a substantially liquid-impermeable backing layer, and a liquid-absorbent core positioned between the facing layer and the backing layer; where at least one of the front and rear waist portions comprises: a composite of an elastic sheet material and a nonwoven fabric layer, the elastic sheet material overlapping a respective end of the central absorbent assembly and extending toward the waist edge of the waist portion; and a first plurality of elastic strands on both sides of the liquid-absorbent core, each of the first plurality of elastic strands having a first end laterally offset from the liquid-absorbent core and extending outward toward a respective leg edge of the waist portion.

18. A disposable absorbent garment, comprising: front and rear waist portions each having a waist edge, a leg edge, and first and second side edges extending between the waist edge and the leg edge; a central absorbent assembly having a first end, a second end, and first and second leg edges extending between the first and second ends, the central absorbent assembly coupled to the front and rear waist portions such that the central absorbent assembly extends between the respective leg edges of the front and rear waist portions, the central absorbent assembly comprising a liquid-permeable facing layer, a substantially liquid-impermeable backing layer, and a liquid-absorbent core positioned between the facing layer and the backing layer; where at least one of the front and rear waist portions comprises: a composite of an elastic sheet material and a nonwoven fabric layer, the elastic sheet material overlapping a respective end of the central absorbent assembly and extending toward the waist edge of the waist portion; and a first plurality of elastic strands between the absorbent core and the elastic sheet material, each of the second plurality of elastic strands extending laterally a majority of the distance between the first and second side edges.

Object of invention

(US20160166444)

The present invention relates generally to disposable absorbent garments, such as, for example, for adult incontinence use or infant care; and, more particularly, but not by of limitation, to brief-like disposable absorbent products including at least one waist portion that includes a combination of elastic sheet material and elastic strand material for improved comfort and containment characteristics.

The disclosure is intended to cover, by the appended claims, all such modifications as fall within the scope of the claims.

IPC - International classification

A61F-013/49; A61F-013/49

Family 60/200 - FAMPAT - ©Questel

Earliest priority number

FR8300780

Application number

EP84100320

US07/225,563

US06/572,071
DE3461414
AT84100320T
FR8300780
DE84100320T
ES529005

Publication numbers

EP0115286
US4917696
US4666542
DE3461414
AT23785
EP0115286
FR2539274
DE115286
ES529005
ES8406861
EP0115286
FR2539274

Questel unique family ID (FAN)

144897

Family publication details

EP0115286	B2	1994-11-30	EP-115286
US4917696	A	1990-04-17	US4917696
US4666542	A	1987-05-19	US4666542
DE3461414	D1	1987-01-15	DE3461414
AT23785	T	1986-12-15	ATE023785
EP0115286	B1	1986-11-26	EP-115286
FR2539274	B1	1985-05-03	FR2539274
DE115286	T1	1985-01-31	DE-115286T
ES529005	A0	1984-09-01	ES-529005
ES8406861	A1	1984-09-01	ES8406861
EP0115286	A1	1984-08-08	EP-115286
FR2539274	A1	1984-07-20	FR2539274

Earliest priority date

1983-01-19

Application dates

1983-01-19
1984-01-13
1984-01-13
1984-01-13
1984-01-13
1984-01-19
1984-01-19
1988-07-28

Publication dates

1994-11-30
1990-04-17

1987-05-19
1987-01-15
1986-12-15
1986-11-26
1985-05-03
1985-01-31
1984-09-01
1984-09-01
1984-08-08
1984-07-20

Grant dates

(EP-115286)
1986-11-26
(US4666542)
1987-05-19
(US4917696)
1990-04-17
(FR2539274)
1985-05-03
(DE3461414)
1987-01-15
(ES8406861)
1984-09-01
(ATE023785)
1986-12-15

Title

(EP-115286)
Method of making disposable diapers and diapers produced by this method.

Abstract

(EP0115286)
The starting material consists of a multistrand elastic tape (7) which is fed by the apparatus (11) and then separated by the successive separators (20, 24, 30, 31, 32, 33) into two arrays (35, 36) of four individual elastic strands. Each individual strand passes into a longitudinal groove of an adhesive application unit (37, 38), the strands passing out completely coated with hot melt liquid adhesive at high temperature. Adhesive bonding to the flexible sheet (1) moving in the direction of the arrows (2) is effected as soon as contact is made with the said sheet. A diaper pantie is obtained which on each side of the absorbent pad has a plurality of elastic strands disposed side by side.
(From US4666542 A)

Current assignees

BOUSSAC SAINT FRERES B
BOUSSAC SAINT FRERES B LILLE
P & A U D O U C & A FRENCH
PEAUDOUCE A FRENCH SOCIETY ANONYME

Inventors

DE JONCKHEERE RAPHAEL

Advantages / Previous drawbacks

(EP0115286)
Such a diaper which is referred to as sometimes complete diaper makes it possible to replace both the conventional absorbent layer and the impermeable pant that was used in combination with said layer.
The use for the manufacture of such a multistrand elastic tape of a natural latex rubber yarns extruded in bare makes it

possible to obtain individual strands of a very high elasticity which may undergo an elongation of up to 300%.

The passage in the adhesive applicator device therefore makes it possible to obtain for each of the individual elastic strands, an elastic filament stretched completely coated with liquid adhesive at high temperature.

Upon contact with the flexible sheet 1, the temperature is lowered below 1 this which causes the solidification of the adhesive liquid and the fixing by bonding of the strands 8 to the surface of the sheet 1.

The greater rigidity of the diaper at the location of the absorbent pad 63 and in particular to the location of each of these side edges causes a lesser deformation capability of the diaper to the elastic strand 8 which is located closer to the side edge of the absorbent pad 63.

In order to solve the main difficulty of the method of the invention, namely a correct sizing of the various individual strands, it is envisaged to use a sizing block for each set of individual strands from a lateral strip.

Independent claims

(EP0115286)

1. Method of continuously manufacturing disposable diapers comprising an absorbent pad placed between an outer shell that is impervious to moisture and permeable interior partition, the set comprising lateral cutouts to allow passage of the legs and means fastened to the casing rectangular flexible impermeable by means of adhesive bonding at least a portion of their length and are arranged at each side of the absorbent pad, in which method the elastic means are fed continuously, intermittently bonded together and brought into contact with the inner face of the outer shell impermeable driven by a rotary drum with a smooth surface, characterized by the fact that supplied continuously with a predetermined voltage multistrand (7) elastic tape formed by hot extrusion of individual strands (8) and subsequent securing of the strands in (8) a single plane by contact before cooling; is separated in the multistrand elastic tape different individual strands (8) making up the device by passing it on each side of one or more organs separating successive (20, 26, 30, 31, 32, 33) disposed perpendicularly to the path of the tape; passed each strand (8) into a longitudinal groove (54) of a device for applying adhesive (39), said groove being fed intermittently in high temperature liquid adhesive so that the strand (8) passing through the groove is embedded over its entire periphery in the adhesive; is caused to come into contact and each strand (8) thus coated with adhesive intermittently and stretched with the impermeable enclosure (1) moving at the periphery of the (4) drum.

17. Disposable diaper comprising an absorbent pad (63) placed between an outer shell that is impervious to moisture (1) and an impermeable inner web, the set comprising lateral cuts (62) to allow passage of the legs and means fastened to the casing rectangular flexible impermeable by bonding to at least a portion of their length and are arranged at each side of the absorbent pad, characterized by the fact that the elastic means comprise on each side of the absorbent pad (63) assembly (66, 67) of at least two individual elastic strands spaced transversely of each other, the strand which is closer to the cushion being in the immediate vicinity of the lateral edge of the cushion.

Object of invention

(EP0115286)

The main subject of the invention to reduce in particular the costs of the raw material used for the production of the crotch elastic means while facilitating their attachment by gluing and by reducing the tightening exerted on the user.

The main subject of the invention to reduce in particular the costs of the raw material used for the production of the crotch elastic means while facilitating their attachment by gluing and by reducing the tightening exerted on the user.

The present invention also relates to the disposable diaper obtained by the implementation of the method of the invention.

IPC - International classification

A41B-013/02; A61F-013/15; A61F-013/15; B05C-005/02; B05C-011/10

Family 61/200 - FAMPAT - ©Questel

Earliest priority number

US10/619,069

Application number

US10/619,069

Publication numbers

US20050013975

Questel unique family ID (FAN)

44007017

Family publication details

US20050013975 A1 2005-01-20 US20050013975

Earliest priority date

2003-07-14

Application dates

2003-07-14

Publication dates

2005-01-20

Title

(US20050013975)

Method of securing elastic strands to flat substrates and products produced by the method

Abstract

(US20050013975)

A method of securing an elastic strand to a sheet of material includes moving the elastic strand and the sheet in a converging manner from a position in which the elastic strand is spaced from the sheet to another position in which the elastic strand contacts one surface of the sheet. Discrete elongate segments of adhesive are intermittently applied to the strand. The elongate segments of adhesive secure the strand to the sheet. Various articles of manufacture may be formed using the method, including hygienic articles such as diapers.

Current assignees

NORDSON

Inventors

BROCK REUBEN

HAYDER RAZA

Advantages / Previous drawbacks

(US20050013975)

At the same time, the elastic properties of the strands will not be significantly compromised and this should provide for better creep resistance or retained elasticity in the final product.

It will be appreciated that the first and second flat substrates may either be completely separate materials secured together or may be portions of the same material which have been folded over to form the first and second substrates with the elastic strand(s) held therebetween.

As will be appreciated, higher speed production lines will require a higher frequency actuation to achieve the desired spacing of adhesive segments 30 on the elastic strands 14.

Any of the methods discussed generally above may be applied to situations involving the securement of more than one elastic strand to a flat substrate or sheet of material.

Independent claims

(US20050013975)

1. A method of intermittently applying discrete elongate segments of adhesive to an elastic strand for securing the elastic strand to a sheet of material comprising: moving the elastic strand and the sheet in a converging manner from a first position in which the elastic strand is spaced from the sheet to a second position in which the elastic strand contacts one surface of the sheet, intermittently applying discrete elongate segments of adhesive to the strand, and contacting the elongate segments of adhesive, the strand and the sheet with one another when the elastic strand and the sheet are in the second position to secure the strand to the sheet.

15. A method of intermittently applying discrete elongate segments of adhesive to a plurality of spaced apart elastic strands for securing the plurality of spaced apart elastic strands to a sheet of material comprising: moving the elastic strands and the sheet in a converging manner from a first position in which the elastic strands are spaced from the sheet to a second position in which the elastic strands contact one surface of the sheet, intermittently applying discrete elongate segments of

adhesive to each of the strands, and contacting the elongate segments of adhesive, the strands and the sheet with one another when the elastic strands and the sheet are in the second position to secure the strands to the sheet.

28. An article comprising: a first flat substrate, and an elastic strand secured on said first flat substrate by a plurality of discrete, separated elongate segments of adhesive contacting said elastic strand and said first flat substrate.

32. An article comprising: a flat substrate, and an elastic strand positioned on said flat substrate, said elastic strand and said flat substrate secured together by a plurality of discrete, separated elongate segments of adhesive.

Object of invention

(US20050013975)

Some of the main goals in this area of technology relate to achieving the necessary bond strength between the elastic strands and the substrates while at the same time transferring the desired elastic properties of the strands to the substrates.

The present invention generally relates to technology associated with securing elastic strands to flat substrates and, more particularly, to the high speed securement of elastic strands to substrates such as those used in producing hygienic articles such as diapers.

In accordance with this aspect of the invention, the discrete elongate segments of adhesive may be applied to the elastic strand in any of the manners described above.

IPC - International classification

A61F-013/15; A61F-013/15; B05C-005/02; B32B-007/14

Family 62/200 - FAMPAT - ©Questel

Earliest priority number

SE9604360

Application number

SE9604360

Publication numbers

SE512780

SE9604360

SE9604360

Questel unique family ID (FAN)

36854742

Family publication details

SE512780	C2	2000-05-15	SE-512780
SE9604360	L	1998-05-28	SE9604360
SE9604360	D0	1996-11-27	SE9604360

Earliest priority date

1996-11-27

Application dates

1996-11-27

Publication dates

2000-05-15

1998-05-28

1996-11-27

Grant dates

(SE-512780)

2000-05-15

Title

(SE-512780)

Absorbent liner comprising an absorption layer inside a water permeable cover

Abstract

(SE9604360)

An absorbent inlay designed to be placed inside an absorbent article such as a nappy or incontinence pad as a liner above the absorption body in the article, comprises an elongated absorption layer (2) enclosed within a water permeable material cover (3). The absorption layer is 1-5 cm wide and is provided with attachments (4, 5), preferably parallel strips of pressure-sensitive adhesive covered with removable release film (6, 7) for securing the inlay inside the article.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

STROM HANSSEN ANNETTE

IPC - International classification

A61F; A61F-013/15; A61F-013/53

Family 63/200 - FAMPAT - ©Questel

Earliest priority number

SE9802799

Application number

SE9802799

Publication numbers

SE517914

SE9802799

SE9802799

Questel unique family ID (FAN)

36860612

Family publication details

SE517914	C2	2002-07-30	SE-517914
SE9802799	L	2000-02-22	SE9802799
SE9802799	D0	1998-08-21	SE9802799

Earliest priority date

1998-08-21

Application dates

1998-08-21

Publication dates

2002-07-30

2000-02-22

1998-08-21

Grant dates

(SE-517914)

2002-07-30

Title

(SE-517914)

Hygiene article, e.g. sanitary towel or incontinence pad, with form element which can be deformed from a folded flat position to form a raised profile

Abstract

(SE9802799)

The form element (18) is normally folded flat, but can be deformed using part of the article (1) to create a raised profile for when the article is being worn. A hygiene article such as a sanitary towel, incontinence pad or panty liner has an elongated shape with a form element on the top side in the middle region (12) of the article in between its two end sections (10, 11). Prior to use the form element is flat, and it has a fold line for making it possible to deform it to create a raised profile during article use. A part is also provided in the article for deforming the form element into a raised profile.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

SAMUELSSON ANN

IPC - International classification

A61F; A61F-013/15; A61F-013/474

Family 64/200 - FAMPAT - ©Questel

Earliest priority number

US07/766,989

Application number

TW81109536

ZA9207394

Publication numbers

TW258651

ZA9207394

Questel unique family ID (FAN)

44748045

Family publication details

TW258651	B	1995-10-01	TW-258651
ZA9207394	B	1994-03-25	ZA9207394

Earliest priority date

1991-09-27

Application dates

1992-09-25

1992-11-28

Publication dates

1995-10-01

1994-03-25

Grant dates

(ZA9207394)

1994-03-25

(TW-258651)

1995-10-01

Title

(ZA9207394)

No-waste absorbent product

Abstract

(ZA9207394)

A novel method for manufacturing a layer of a laminated, disposable absorbent product, such as a fluid-permeable cover layer, an absorbent core layer or a fluid-impervious backing layer thereof, with a comparatively small amount of waste matter. The method comprises the steps of longitudinally cutting a continuous web of starting material according to a cyclic pattern constructed with line segments corresponding to the edge contour of the disposable absorbent product. The cutting operation divides the continuous web in two strips, each strip having a patterned longitudinal edge whose outline corresponds to the cyclic pattern. The strips are crossed and joined to one another in a parallel and in a phase relationship to form a compound web having longitudinal edges producing repeatedly the edge contour of the disposable absorbent product. The invention extends to integrating this method into an operation for manufacturing disposable absorbent products, and to a novel apparatus for carrying out the methods according to the invention and the resulting products. (From US6171432 B1)

Current assignees

JOHNSON & JOHNSON

Inventors

BRISEBOIS HENRI

MENARD MICHAEL JOSEPH

FUNG PAUL

IPC - International classification

A61F; A61F-013/15; A61F-013/15; B32B

Family 65/200 - FAMPAT - ©Questel

Earliest priority number

JP8196699

Application number

AU2003255222

Publication numbers

AU2003255222

AU2003255222

Questel unique family ID (FAN)

1709039

Family publication details

AU2003255222	B2	2005-08-04	AU2003255222
AU2003255222	A1	2003-11-13	AU2003255222

Earliest priority date

1999-03-25

Application dates

2003-10-22

Publication dates

2005-08-04

2003-11-13

Grant dates

(AU2003255222)

2005-08-04

Title

(AU2003255222)

Absorbent article with surface structure

Current assignees

UNICHARM

Inventors

FUJIOKA YOSHIHISA

WADA ICHIRO

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/472; A61F-013/49; A61F-013/511

Family 66/200 - FAMPAT - ©Questel

Earliest priority number

SE9801469

Application number

SE9801469

Publication numbers

SE514126
SE9801469
SE9801469

Questel unique family ID (FAN)

36856346

Family publication details

SE514126	C2	2001-01-08	SE-514126
SE9801469	L	1999-10-28	SE9801469
SE9801469	D0	1998-04-27	SE9801469

Earliest priority date

1998-04-27

Application dates

1998-04-27

Publication dates

2001-01-08
1999-10-28
1998-04-27

Grant dates

(SE-514126)
2001-01-08

Title

(SE-514126)
Absorbent material for e.g. sanitary towels, incontinence pads or nappies

Abstract

(SE9801469)
A mechanical bond is formed between high and low density absorbent fibre layers (1, 2) by needling. An absorbent material used in hygiene articles such as sanitary towels, incontinence pads or nappies comprises two layers of absorbent fibre material, one layer (2) having a higher density than the other (1). The two layers are bonded together mechanically. An Independent claim is also included for a method of mechanically bonding a low density absorbent fibre layer with a high density absorbent fibre layer by needling using an arrangement of blunt needles urged into the high density layer.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

SOEDERBERG EVA

IPC - International classification

A61F; A61F-013/15

Family 67/200 - FAMPAT - ©Questel

Earliest priority number

SE9404517

Application number

SE9404517

Publication numbers

SE503012
SE9404517
SE9404517

Questel unique family ID (FAN)

36844847

Family publication details

SE503012	C2	1996-03-11	SE-503012
SE9404517	L	1996-03-11	SE9404517
SE9404517	D0	1994-12-27	SE9404517

Earliest priority date

1994-12-27

Application dates

1994-12-27

Publication dates

1996-03-11

1996-03-11

1994-12-27

Grant dates

(SE9404517)

1996-03-11

Title

(SE-503012)

Compact matt forming wheel contg. moulds for prepn. of air laid absorbent articles e.g. nappies, sanitary towels or incontinence pads

Abstract

(SE9404517)

A method for the prepn. of air-laid absorbent articles involves placing sheets of the absorbent material into moulds on a rotating matt forming wheel that conveys the moulds through at least one matt forming hood and then removing the air-laid articles using at least one transfer wheel that transfers the article to a conveyor. Each of these transfer wheels allows one or more moulds of a certain shape to pass by without the air-laid article being removed for transfer to the conveyor. The appts. for carrying out this method is also claimed.

Current assignees

MOELNLYCKE HEALTH CARE

Inventors

GOERANSSON CLAES

IPC - International classification

A61F-013/15; A61F-013/15

Family 68/200 - FAMPAT - ©Questel

Earliest priority number

SE9802479

Application number

SE9802479

Publication numbers

SE519142

SE9802479

SE9802479

Questel unique family ID (FAN)

36861813

Family publication details

SE519142	C2	2003-01-21	SE-519142
SE9802479	L	2000-01-10	SE9802479
SE9802479	D0	1998-07-09	SE9802479

Earliest priority date

1998-07-09

Application dates

1998-07-09

Publication dates

2003-01-21

2000-01-10

1998-07-09

Grant dates

(SE-519142)

2003-01-21

Title

(SE-519142)

Disposible hygiene article, e.g. nappy or incontinence pad, contains hydrophobic front side material with opening covered by liquid permeable, hydrophilic piece and provided with barriers

Abstract

(SE9802479)

The material (501) for the front side of the article (514) has at least one piece (507) of liquid-permeable, hydrophilic material joined to it to cover an opening (506) in the front side material. Barriers (508-511) around the opening have hydrophobic outside surfaces (513a, 513b) facing in the opposite direction to the opening. A front side material having a first side for contact with the skin and a second side designed to face an absorbent core in a disposible hygiene article comprises a hydrophobic material with edge sections (505) surrounding at least one opening. At least one piece of liquid-permeable, hydrophilic material is secured via binding points to these edge sections so that it covers the opening and forms a liquid inlet in the front side material. The arrangement of the binding points creates barrier sections on the front side, which at least partially surround the opening. The insides (512a, 512b) of the barrier sections face in the opening direction, and the outsides are essentially hydrophobic. Independent claims are also included for (a) a method of preparing the laminate, and (b) the disposible hygiene article.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

HERMANSSON KENT

RAGNARSON CHRISTINA

LINDSTROEM AASA

IPC - International classification

A61F; A61F-013/15; A61F-013/51

Family 69/200 - FAMPAT - ©Questel

Earliest priority number

AU2003293106

Application number

AU2006209375

AU2010201983

Publication numbers

AU2006209375

AU2010201983

AU2006209375

Questel unique family ID (FAN)

1796620

Family publication details

AU2006209375	B2	2010-06-17	AU2006209375
AU2010201983	A1	2010-06-10	AU2010201983

AU2006209375 A1 2006-10-05 AU2006209375

Earliest priority date

2003-11-26

Application dates

2006-09-08

2010-05-18

Publication dates

2010-06-17

2010-06-10

2006-10-05

Grant dates

(AU2006209375)

2010-06-17

Title

(AU2010201983)

Disposable absorbent articles having multiple absorbent core components including replaceable components

Current assignees

PROCTER & GAMBLE

Inventors

LAVON GARY DEAN

BECK THEODORA

YOUNG GERALD ALFRED

HARDIE STEPHEN LEBEUF

HEINRICH THOMAS

KLINE MARK JAMES

MILBRADA EDWARD JOHN

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/42

Family 70/200 - FAMPAT - ©Questel

Earliest priority number

AU5920680

Application number

AU5920680

Publication numbers

AU529570

AU5920680

Questel unique family ID (FAN)

1117577

Family publication details

AU529570 B2 1983-06-09 AU-529570

AU5920680 A 1980-08-21 AU8059206

Earliest priority date

1980-06-10

Application dates

1980-06-10

Publication dates

1983-06-09

1980-08-21

Grant dates

(AU-529570)

1983-06-09

Title

(AU-529570)

Absorbent article

Current assignees

COLGATE PALMOLIVE

Inventors

PATIENCE H G FITZGERALD D

IPC - International classification

A61F-013/15; A61F-013/15

Family 71/200 - FAMPAT - ©Questel

Earliest priority number

SE9402906

Application number

SE9402906

Publication numbers

SE503358

SE9402906

SE9402906

Questel unique family ID (FAN)

36845108

Family publication details

SE503358	C2	1996-05-28	SE-503358
SE9402906	L	1996-03-02	SE9402906
SE9402906	D0	1994-09-01	SE9402906

Earliest priority date

1994-09-01

Application dates

1994-09-01

Publication dates

1996-05-28

1996-03-02

1994-09-01

Grant dates

(SE-503358)

1996-05-28

Title

(SE-503358)

Absorbent bodies prepn. useful for nappies

Abstract

(SE9402906)

A method for the prepn. of absorbent bodies comprising a pref. fibrous material and opt. particulate super-absorbent material, used as body fluid absorbing materials for e.g. nappies, sanitary towels, incontinence pads or bandages, comprises the deposition by vacuum forces of a finely divided airborne absorbent material onto an air-permeable forming element moving in one direction, and then using a cutting jet impinging in a direction transverse to the movement of the forming element to separate excess material from the formed web, which is subsequently reused in the prepn. process.

The appts. for this method is also claimed.

Current assignees

MOELNLYCKE HEALTH CARE

Inventors

FORSBRING GOERAN

IPC - International classification

A61F-013/15; A61F-013/15

Family 72/200 - FAMPAT - ©Questel

Earliest priority number

US836395X

Application number

GB1684055

Publication numbers

GB836395

Questel unique family ID (FAN)

17681260

Family publication details

GB836395	A	1960-06-01	GB-836395

Earliest priority date

1954-06-16

Application dates

1955-06-10

Publication dates

1960-06-01

Grant dates

(GB-836395)

1960-06-01

Title

(GB-836395)

Absorbent dressing

Abstract

(GB836395)

836,395. Surgical dressings. GRISWOLD, H. W. June 10, 1955 [June 16, 1954 (3); May 2, 1955], No. 16840/55. Class 81 (2). [Also in Group VIII] An absorbent pad comprises an absorbent core and a cover of soft permeable non-woven fabric, the fabric comprising fibres arranged in areas of relatively great fibre density bordering areas of relatively small or zero fibre density, e.g. holes, the fibres being in mechanical engagement with one another, in unstressed positions and in mechanical equilibrium. The absorbent core 11 is made from fluffed wood pulp or layers of creped cellulose. An inner cover of creped cellulose may be provided. The cover 12 consists of groups 15 of fibres which with junctions 16 define circular holes 14 arranged in a regular pattern such as that defined by the intersections of two sets of parallel lines crossing at right angles or 120 degrees. The holes 14 may alternatively be square or triangular. Fibres in each group 15 are substantially parallel to the perimeters of the holes they surround but extend in diverse directions at each juncture 16, the fibres being longer than the groups containing them. The fibres are normally between “ and 2 inch long, but unbeaten or unhydrated paper-making fibres shorter than this may be used. The fibres may be of cotton, wood, wool, jute, ramie, abaca, viscose or cuprammonium rayon, cellulose acetate, nylon or " Dynel " (Registered Trade Mark). The fabric may be strengthened by adhesive binding material or binder applied by printing or impregnation. The cover is made from a fibrous web, e.g. a three-ply laminate of carded cotton webs, using apparatus described in Specification 836,397. The web is passed around a rotating drum having circular perforations through which water is directed by nozzles within the drum. Water passing through the web forms holes which are arranged in a pattern corresponding to the pattern of the perforations in the drum.

Specifications 816,673 and 836,396 also are referred to.

Current assignees

HECTOR WALLACE GRISWOLD

IPC - International classification

A61F-013/15; A61F-013/15

Family 73/200 - FAMPAT - ©Questel

Earliest priority number

SE9802114

Application number

SE9802114

Publication numbers

SE515585

SE9802114

SE9802114

Questel unique family ID (FAN)

36857971

Family publication details

SE515585	C2	2001-09-03	SE-515585
SE9802114	L	1999-12-16	SE9802114
SE9802114	D0	1998-06-15	SE9802114

Earliest priority date

1998-06-15

Application dates

1998-06-15

Publication dates

2001-09-03

1999-12-16

1998-06-15

Grant dates

(SE-515585)

2001-09-03

Title

(SE-515585)

Hygiene article, e.g. sanitary towel, incontinence pad or panty liner, having release layer made from foam material covering adhesive surface on impermeable underside

Abstract

(SE9802114)

The release layer (16) covering the adhesive surface (15) on the liquid-impermeable underside (7) of the article is made from foam material. An absorbent article such as a sanitary towel, incontinence pad or panty liner comprises a liquid-permeable top side, a liquid-impermeable underside, an adhesive surface on the underside, and a release layer covering the adhesive surface. The release layer comprises a foam material layer that can be at least partly removed from the adhesive surface.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

DREVIK SOLGUN

SAMUELSSON ANN

IPC - International classification

A61F; A61F-013/15; A61F-013/58

Family 74/200 - FAMPAT - ©Questel

Earliest priority number

SE9504703

Application number

SE9504703

Publication numbers

SE508616

SE9504703

SE9504703

Questel unique family ID (FAN)

36849960

Family publication details

SE508616	C2	1998-10-19	SE-508616
SE9504703	L	1997-06-30	SE9504703
SE9504703	D0	1995-12-29	SE9504703

Earliest priority date

1995-12-29

Application dates

1995-12-29

Publication dates

1998-10-19

1997-06-30

1995-12-29

Grant dates

(SE-508616)

1998-10-19

Title

(SE-508616)

Absorbent product, e.g. nappy, sanitary towel or incontinence pad

Abstract

(SE9504703)

Absorbent structure for eg. a nappy, sanitary towel or incontinence pad, comprising at least two layers (2, 3) of different material. The first layer (2) comprises super-absorbent material which may be folded to width greater than the width of the second layer (3), which preferably comprises cotton wool. The length edges of the two layers are coincidental. Part (10) of the first layer is folded around the length edges (6) of the second layer and part, but not all, of this layer. This folded first layer forms one or more openings (7) that provide access to the second layer. Absorbent products containing these structures are also claimed.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

ALBINO ROBERT

GUSTAFSSON ANDERS

IPC - International classification

A61F; A61F-013/15

Family 75/200 - FAMPAT - ©Questel

Earliest priority number

US15/479,604

Application number

US15/479,604

Publication numbers

US20180289563

Questel unique family ID (FAN)

81567080

Family publication details

US20180289563 A1 2018-10-11 US20180289563

Earliest priority date

2017-04-05

Application dates

2017-04-05

Publication dates

2018-10-11

Title

(US20180289563)

Wearable article having graphics

Abstract

(US20180289563)

The present disclosure is directed to a wearable article comprising a front region, a back region, a crotch region between the front region and the back region, and a main body covering the entire crotch region and at least part of the front region and the back region in the longitudinal direction, wherein at least one of the front region and the back region comprises a first graphic provided by a first material, and a second graphic provided by a second material wherein the first material and the second material differ from each other, and the first and second graphics are not disposed in the main body. The present disclosure is also directed to a wearable article comprising a front region, a back region, a crotch region between the front region and the back region, and a main body covering the entire crotch region and at least part of the front region and the back region in the longitudinal direction, wherein at least one of the front region and the back region comprises a first graphic provided by a first material which is liquid when it is applied to provide the first graphic.

Current assignees

PROCTER & GAMBLE

Inventors

MORIMOTO KOICHI

IPC - International classification

A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/84

Family 76/200 - FAMPAT - ©Questel

Earliest priority number

SE0104083

Application number

SE0104083

Publication numbers

SE520706

SE0104083

SE0104083

Questel unique family ID (FAN)

36863275

Family publication details

SE520706 C2 2003-08-12 SE-520706

SE0104083	L	2003-06-05	SE200104083
SE0104083	D0	2001-12-04	SE200104083

Earliest priority date

2001-12-04

Application dates

2001-12-04

Publication dates

2003-08-12

2003-06-05

2001-12-04

Grant dates

(SE-520706)

2003-08-12

Title

(SE-520706)

Production of multi layer material for hygiene article, e.g. nappy, involves folding length edges of first and third layers around length edges of second layer

Abstract

(SE0104083)

A second layer (6) is placed on top of a combination of first and third layers (5, 7), the first length edges (8, 12) of these two layers are folded over the two length edges (10, 11) of the second layer and all three layers are joined together along the second layer length edges on either side of the second layer. The second length edges (9, 12) of the first and third layers are bent outwards in the material cross-direction to create raised portions. A method is claimed for making a web of multi-layer material, especially for a hygiene article such as a nappy, incontinence pad or sanitary towel. The material comprises three layers, each with two edges extending in the web length direction. The method comprises the following steps: (a) the first and third layers are arranged essentially parallel to each other in the web length direction, the first edges of these layers being separated by a distance (14); and (b) applying a second layer with a width (15) less than the distance between the first edges of the first and third layers on top of the combination of these two layers, folding the first edges of these two layers over the first and second edges of the second layer and joining the layers together along the first and second edges of the second layer on either side of the latter. Bending the second edges of the first and third layers outwards in the material cross-direction creates raised portions formed by the first edges of these layers surrounding the first and second edges of the second layer. Independent claims are also included for: (a) the material made by this method; and (b) a hygiene article containing a layer of this material.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

WESSEL PETER

OLANDERSSON BERTIL

IPC - International classification

A61F; A61F-013/15; A61F-013/539

Family 77/200 - FAMPAT - ©Questel

Earliest priority number

SE9404347

Application number

SE9404347

Publication numbers

SE508745

SE9404347

SE9404347

Questel unique family ID (FAN)

36850123

Family publication details

SE508745	C2	1998-11-02	SE-508745
SE9404347	L	1996-06-14	SE9404347
SE9404347	D0	1994-12-13	SE9404347

Earliest priority date

1994-12-13

Application dates

1994-12-13

Publication dates

1998-11-02

1996-06-14

1994-12-13

Grant dates

(SE-508745)

1998-11-02

Title

(SE-508745)

Absorbent material thickness control useful esp. for web former

Abstract

(SE9404347)

Prepn. of absorbent materials comprises: (i) using an air-permeable forming element as a web former in which an underpressure is generated where: (1) some of the absorbent material is dispensed or applied to the side regions of the formed web via dispensed layer(s) previously formed in a sepn. process away from the main forming element.

Current assignees

MOELNLYCKE HEALTH CARE

Inventors

GUSTAFSSON ANDERS

IPC - International classification

A61F-013/15; A61F-013/15

Family 78/200 - FAMPAT - ©Questel

Earliest priority number

GB2155439

Application number

GB2155439

Publication numbers

GB531509

Questel unique family ID (FAN)

17424622

Family publication details

GB531509	A	1941-01-06	GB-531509

Earliest priority date

1939-07-25

Application dates

1939-07-25

Publication dates

1941-01-06

Grant dates

(GB-531509)

1941-01-06

Title

(GB-531509)

Improvements in a machine for making absorbent pads

Abstract

(GB531509)

531,509. Catamenial appliances. BURGESS, A. F. (International Cellucotton Products Co.). July 25, 1939, No. 21554. [Class 81 (ii)] A catamenial pad, Figs. 11, 12 comprises a folded absorbent web 17 enclosing an absorbent strip 18 for distributing absorbed fluid longitudinally by means of compressed longitudinal areas. A waterproof strip 19 covers one face of the pad, and the whole is enclosed between absorbent webs 20, 21 which at their extended ends 22 are compressed to unite them, and sheets of loose fluffy cotton 23, 24 are applied above and below the pad. The side edges are covered by waterproof strips 25, 26 and cotton-covered strips 27, 28 which overlap the top and bottom surfaces and are adhesivelv attached thereto to hold the waterproof strips in place. Preferably a suitable marking such as a coloured thread 29 is provided on the outer gauze wrapper to indicate the side which should be worn away from the body. The general arrangement of the rolls of material supplying the various parts of the pad is illustrated in Fig. 13, the reference numbers for the rolls and webs being the same as for the corresponding layers of the pad, with the addition of b for a roll and a for a web. The webs 17a, 18a, 19a are fed at right angles to the feed of the other webs and pass over direction-changing means so that all the webs are parallel on entering between rollers 33, 34 which feed the assembly towards the cutting mechanism. This arrangement of the web feeds renders the various rolls more accesible. The side strips are fed from rolls 25b, 26b, 27b, 28b, past a breaker 43 on to the outer gauze 15 supplied from a roll 40 and a severed pad 16 is fed so as to overlap the side pieces. The coloured thread 29 is fed from a roll 29a. The directionchanging means for the webs is shown in Fig. 10 which also shows how the web 17a is folded so as to enclose the narrow web 18a. A guide roller 59 driven at a faster rate than the travel of the web, reduces the tension on that part which lies between it and the feed rollers 33, 34. The mounting of the roll 17b is shown in Fig. 9. The roll is mounted in one end of a rod 69 pivoted centrally to a rod 63 which is pivoted upon the machine frame at 64, a locking pin 67 keeping the rod 63 normally in its vertical position. When a roll is nearly exhausted the rod 69 is swung through 180‹ and a new roll is mounted on the other end. For this purpose the rod 63 may be swung outwards for ready accessibility, and a counterweight is provided to facilitate handling, and other rolls may be mounted similarly. As the web 23a is of low tensile strength its roll 23b is supported on a feed roller 87, Fig. 4, and the web passes under electrically connected fingers 89 and above a surface 88 so that if the web breaks the whole machine is stopped and a part of the weight of the roll 23b is borne by a spring 93. The various rolls are driven from an electric motor 62 by means of gearing, chains and belts. The assembled webs after leaving the rollers 33, 34 are fed to the cutting means by an intermittent reciprocating feed operated by a cam 145, Fig. 1, which operates a rock-lever 146 which effects the horizontal feed, and a cam 147 which lifts a vertically-slidable member 148 to lift the feed mechanism out of engagement with the web assembly on its backward travel.

Current assignees

INTERNATIONAL CELLUCOTTON

IPC - International classification

A61F-013/15; A61F-013/15

Family 79/200 - FAMPAT - ©Questel

Earliest priority number

GB662733

Application number

GB662733

Publication numbers

GB394933

Questel unique family ID (FAN)

17264823

Family publication details

GB394933 A 1933-07-06 GB-394933

Earliest priority date

1933-03-04

Application dates

1933-03-04

Publication dates

1933-07-06

Grant dates

(GB-394933)

1933-07-06

Title

(GB-394933)

Improvements in and relating to the manufacture of sanitary towels and like absorbent bandages

Abstract

(GB394933)

394,933. Catamenial appliances; absorbent bandages; severing-devices. ROSENFELDER, H., 2, Arkwright Road, Hampstead, and ST. ANDREW MILLS, Ltd., 34, St. Andrew Road, Walthamstow, both in London. March 4, 1933, No. 6627. [Class 81 (ii).] An apparatus for the manufacture of sanitary towels and like absorbent bandages which consist of an absorbent filling arranged within a tubular cover, is characterized by a hollow mandrel 8 arranged between and held by conveyer bands 3, 5, 7, and formed with a part spherical head 8<1> constituting an abutment preventing forward movement of the mandrel. A knitted or gauze tube 10 is drawn over the mandrel from spool 9 by means of the conveyer bands, and encloses the filling 12 introduced into the open end of the mandrel. The completed towel is cut by severing means 13, a portion of the cover being left empty at either end. The severing means may consist of two blades 13 hinged behind a diaphragm 14, and actuated through links 16 connected to a hinged lever 17, 19, Fig. 3. The shears may be pedal operated, but hand operation is preferred. The introduction of the pieces 12 into the mandrel may be effected by hand, and the tube pulled by hand thereover from the accumulated pile held up by resilient checking arms 11, Fig. 1. For automatically introducing the filling pieces, there is provided a supply box 28, Fig. 11, into which are periodically fed from conveyer 31 the filling pieces 12. The bottom of the box 28 is formed of two slides which, through cams and rocking levers, are periodically opened, thereby depositing the filling piece into a feeding drawer 22. After a towel has been severed, this drawer is moved forward by a lever 23, actuated by cam 24, and carries with it the slide 25. At the extremity of the forward travel thereof, a stop 27 engages the rocking arm 26 connected to the slide, retaining it while the drawer 22 and arm 23 return. The filling 12 is thereby deposited in a recess 21 in the bottom wall of the mandrel directly on to the tubular cover 10, which, after withdrawal of the stop 27 and consequent return of the slide 25, is moved forward by the conveyer bands to enclose the filling. The towel is severed by shears 13 which, with all of the other operation parts, are suitably synchronized.

Current assignees

HANS ROSENFELDER

ST ANDREW MILLS

IPC - International classification

A61F-013/15; A61F-013/15

Family 80/200 - FAMPAT - ©Questel

Earliest priority number

BE215458

Application number

BE215458

Publication numbers

BE903051

Questel unique family ID (FAN)

2381534

Family publication details

BE903051	A	1985-12-02	BE-903051

Earliest priority date

1985-08-12

Application dates

1985-08-12

Publication dates

1985-12-02

Grant dates

(BE-903051)

1985-12-02

Title

(BE-903051)

Sanitary towel or absorbent bandage has moisture permeable envelope - contg. absorbent pad with impermeable foil at rear and moisture-repellent but permeable viscose and/or propylene] wadding layer at front

Abstract

(BE903051)

The sanitary towel or the like comprises a moisture-permeable outer envelope (1) contg. an absorbent pad (5) at one side covered by impermeable foil (2). Between the other side of the pad and the envelope, a layer (6) of moisture-repellent wadding material, preferably consisting of viscose, polypropylene or a combination thereof. The envelope may consist of permeable but moisture-repellent (non-woven) material. The pad may have at least the side facing the foil provided with impressed, pref. wave-shaped, longitudinal grooves (7) to promote distribution of the moisture.

Current assignees

MALDEREN PAUL VAN

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/56

Family 81/200 - FAMPAT - ©Questel

Earliest priority number

SE9604693

Application number

SE9604693

Publication numbers

SE507317

SE9604693

SE9604693

Questel unique family ID (FAN)

36848649

Family publication details

SE507317	C2	1998-05-11	SE-507317
SE9604693	L	1997-01-08	SE9604693
SE9604693	D0	1996-12-19	SE9604693

Earliest priority date

1996-12-19

Application dates

1996-12-19

Publication dates

1998-05-11

1997-01-08

1996-12-19

Grant dates

(SE-507317)

1998-05-11

Title

(SE-507317)

Snap fastening for diapers useful esp. for improved fit of diaper

Abstract

(SE9604693)

A snap fastening for closing an absorbent article, e.g. a diaper or incontinence guard comprises: (i) discrete pieces of material (7; 26), e.g. discrete strips, which are placed in mutually corresp. pairs on the absorbent article and which pref. are made of thermoplastic material; (ii) male and female elements (10; 11, 16; 17, 27; 28, 29; 30) formed on the same piece arranged such that they can only engage another such element in one orientation; and (iii) the male and female locking elements, pref. the whole of the discrete pieces of material in which the locking elements are formed, covered with nonwoven material. Also claimed are: (i) a method of mfg. diapers where discrete pieces of material are sepd. from a web and applied to a second web, (ii) a method of mfg. absorbent articles having fasteners comprising forming locking elements in regions of the pieces, and (iii) a method of mfg. absorbent articles comprising producing male and female formations in the regions and delivering to opposed outer surfaces of a diaper.

Current assignees

MOELNLYCKE HEALTH CARE

Inventors

LUNDBERG HAKON

GUSTAFSSON ANDERS

JOENBRINK ANNA KARIN

IPC - International classification

A41H-037/04; A61F; A61F-013/15

Family 82/200 - FAMPAT - ©Questel

Earliest priority number

SE9802198

Application number

SE9802198

Publication numbers

SE515584

SE9802198

SE9802198

Questel unique family ID (FAN)

36857969

Family publication details

SE515584	C2	2001-09-03	SE-515584
SE9802198	L	1999-12-19	SE9802198
SE9802198	D0	1998-06-18	SE9802198

Earliest priority date

1998-06-18

Application dates

1998-06-18

Publication dates

2001-09-03

1999-12-19

1998-06-18

Grant dates

(SE-515584)

2001-09-03

Title

(SE-515584)

Sanitary towel containing absorbent layer with converging length direction bend lines in rear and intermediate towel regions on either side of length symmetry axis

Abstract

(SE9802198)

The absorbent layer (1) has converging bend lines (13, 14) extending in the length direction on either side of the towel length symmetry axis (A-A) in the rear and intermediate regions (5, 6) of the towel. A sanitary towel contains an absorbent layer enclosed within liquid-permeable and impermeable layers which has converging length direction bend lines extending on either side of the towel length symmetry axis, in at least the rear and intermediate regions of the towel.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

DREVIK SOLGUN

IPC - International classification

A61F; A61F-013/15

Family 83/200 - FAMPAT - ©Questel

Earliest priority number

SE9603770

Application number

SE9603770

Publication numbers

SE512347

SE9603770

SE9603770

Questel unique family ID (FAN)

36854260

Family publication details

SE512347	C2	2000-03-06	SE-512347
SE9603770	L	1998-04-16	SE9603770
SE9603770	D0	1996-10-15	SE9603770

Earliest priority date

1996-10-15

Application dates

1996-10-15

Publication dates

2000-03-06

1998-04-16

1996-10-15

Grant dates

(SE-512347)

2000-03-06

Title

(SE-512347)

Surface material for hygiene article

Abstract

(SE9603770)

A surface material (1) for absorbent hygiene articles such as nappies, sanitary towels or incontinence pads, comprises a layer (2) of hydrophobic material containing a pattern of cavities (4) which are provided with holes (5) leading to the inside surface of the surface material. The outside of the hydrophobic layer is rendered hydrophilic within the cavity regions. Also claimed is a method for rendering depressions in a hygiene article surface material hydrophilic, comprising placing the material in a gastight fashion upon a carrier with the cavities forming outwards projecting profiles and then introducing an ionised gas (mixture) into the region around the carrier.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

HELMFRIDSSON BROR-INGE

IPC - International classification

A61F; A61F-013/15

Family 84/200 - FAMPAT - ©Questel

Earliest priority number

SE9603003

Application number

SE9603003

Publication numbers

SE511832

SE9603003

SE9603003

Questel unique family ID (FAN)

36853616

Family publication details

SE511832	C2	1999-12-06	SE-511832
SE9603003	L	1998-02-20	SE9603003
SE9603003	D0	1996-08-19	SE9603003

Earliest priority date

1996-08-19

Application dates

1996-08-19

Publication dates

1999-12-06

1998-02-20

1996-08-19

Grant dates

(SE-511832)

1999-12-06

Title

(SE-511832)

Liquid permeable cover layer for a hygiene article

Abstract

(SE9603003)

A liquid permeable surface material used in an absorbent product comprises a laminate (1) of two separate material layers (2, 3) bonded together. The first layer (2) is a preferably thin nonwoven with a high tensile strength. The second layer (3) is a relatively thick fibrous layer with a low density and tensile strength. At least the first layer contains holes or perforations (4). The laminate is permanently deformed by stretching it to an elongation of at least 110 % in one or more directions. Hygiene articles such as incontinence pads, nappies or sanitary towels containing this material as a cover layer on the opposite side of an absorbent layer to a liquid impermeable layer, are also claimed.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

HANSSON ROY

HENRIKSSON KENNETH

IPC - International classification

A61F; A61F-013/15

Family 85/200 - FAMPAT - ©Questel

Earliest priority number

SE9401542

Application number

SE9401542

Publication numbers

SE508839

SE9401542

SE9401542

Questel unique family ID (FAN)

36850215

Family publication details

SE508839	C2	1998-11-09	SE-508839
SE9401542	L	1995-11-05	SE9401542
SE9401542	D0	1994-05-04	SE9401542

Earliest priority date

1994-05-04

Application dates

1994-05-04

Publication dates

1998-11-09

1995-11-05

1994-05-04

Grant dates

(SE-508839)

1998-11-09

Title

(SE-508839)

Absorbent fibrous material structures mfr. for nappy, sanitary towel

Abstract

(SE9401542)

A process for the prepn. of an absorbent fibrous structure comprises: (a) pressing a moving profiled mould against an essentially uncompacted continuous fibrous web, and then (b) pressing the discrete fibrous core sections out of the web.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

EDWARDSON GUNNAR

IPC - International classification

A61F-013/15; A61F-013/15

Family 86/200 - FAMPAT - ©Questel

Earliest priority number

US10/025,173

Application number

BR0214708
JP2009186995
EP02805668
KR20047008623
JP2003554082
AU2008202523
AU2002366808
RU2004117163
CN02824240
ARP020104978
MXPA04005279
WOUS02/041119

Publication numbers

BR0214708
JP5002625
EP1455719
BRPI0214708
KR100988715
JP4576119
JP2009254912
AU2008202523
AU2008202523
AU2002366808
RU2311160
BR0214708
BRPI0214708
JP2005532083
CN1599586
RU2004117163
AR038454
EP1455719
MXPA04005279
KR20040068190
AU2002366808
WO03/053321

Questel unique family ID (FAN)

73734796

Family publication details

BR0214708 B1 2012-08-21 BR200214708



JP5002625	B2	2012-05-25	JP5002625
EP1455719	B1	2011-10-26	EP1455719
BRPI0214708	A2	2011-02-01	BR200214708
KR100988715	B1	2010-10-18	KR100988715
JP4576119	B2	2010-08-27	JP4576119
JP2009254912	A	2009-11-05	JP2009254912
AU2008202523	B2	2009-05-21	AU2008202523
AU2008202523	A1	2008-06-26	AU2008202523
AU2002366808	B2	2008-03-06	AU2002366808
RU2311160	C2	2007-11-27	RU2311160
BR0214708	A	2006-11-14	BR200214708
BRPI0214708	A1	2006-11-14	BRPI0214708
JP2005532083	A	2005-10-27	JP2005532083
CN1599586	A	2005-03-23	CN1599586
RU2004117163	A	2005-03-20	RU2004117163
AR038454	A1	2005-01-19	AR--38454
EP1455719	A1	2004-09-15	EP1455719
MXPA04005279	A	2004-09-13	MX2004PA005279
KR20040068190	A	2004-07-30	KR20040068190
AU2002366808	A1	2003-07-09	AU2002366808
WO03/053321	A1	2003-07-03	WO200353321

Earliest priority date

2001-12-19

Application dates

2002-12-18
2002-12-19
2002-12-19
2002-12-19
2002-12-19
2002-12-19
2002-12-19
2002-12-19
2002-12-19
2002-12-19
2008-06-06
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2011-10-26
2011-02-01
2010-10-18
2010-08-27
2009-11-05
2009-05-21
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2004-07-30
2003-07-09
2003-07-03

Grant dates

(EP1455719)
2011-10-26
(JP4576119)
2010-08-27
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2012-05-25
(RU2311160)
2007-11-27
(AU2002366808)
2008-03-06
(AU2008202523)
2009-05-21
(KR100988715)
2010-10-18
(BR200214708)
2012-08-21

Title

(EP1455719)
Thin, flexible, low capacity absorbent article with leakage protection

Abstract

(EP1455719)
A disposable absorbent pant having fluid handling characteristics useful for encouraging toilet training. The pant includes a thin, flexible absorbent pad that can accommodate one or two insults with a low probability of leakage. The pant can be less than about 5 millimeters thick, with the absorbent pad being less than about 3 millimeters thick. The pant has a limited absorbent capacity of between about 30 grams and about 400 grams, which contributes to a slow fluid intake, pooled fluid, and delayed fluid lock-up in the absorbent pad. The pant also has considerable fluid distribution, resulting in a large area of wetness. Each of these fluid handling characteristics provides awareness to a wearer of the filled status of the pant.

Current assignees

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Inventors

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OLSON CHRISTOPHER PETER
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Advantages / Previous drawbacks

(EP1455719)

This squishy feeling makes the absorbent pad more mobile and uncomfortable.

This absorbent article capacity and product design provides better leakage performance than cloth training pants or underwear, with low leakage probabilities for insults below the anticipated single void volume.

Thin absorbents not only provide for a greater garment-like appearance and improved discretion when worn under other garments, but also may provide limited absorbent capacity that results in fluid handling characteristics that encourage children to complete the toilet training process at a faster rate than children wearing currently available disposable diapers and training pants.

Independent claims

(EP1455719)

1. A disposable absorbent pant (20), comprising: a chassis (32) defining a waist opening, and first and second leg openings; the chassis (32) including an outer cover (40), a body side liner (42) at least partially bonded to the outer cover, and an absorbent pad (44) positioned between the outer cover and the body side liner; the disposable absorbent pant having an intake rate for a 40 milliliter insult of at least 7 seconds, an intake rate for an 80 milliliter insult of at least 45 seconds, a final flow back of a 40 milliliter insult of less than 35% of an initial flow back of the 40 milliliter insult, a final flow back, of an 80 milliliter insult of less than 60% of an initial flow back of the 80 milliliter insult, and a fluid distribution of an 80 milliliter insult of at least 60%, each according to a Cradle Test; wherein the absorbent pad has a thickness of less than about 2 millimeters, and wherein the absorbent pant has a total mass of less than 30 grams.

Object of invention

(EP1455719)

The present invention is directed to a disposable absorbent garment and a method of using such a garment to encourage a wearer, such as a child, to accelerate through the toilet training process.

The present invention is directed to a disposable absorbent garment and a method of using such a garment to encourage a wearer, such as a child, to accelerate through the toilet training process.

The present invention provides a disposable absorbent pant in accordance with claim 1.

This invention is directed to a disposable absorbent pant having fluid handling characteristics that encourage a wearer to progress through and complete the toilet training process.

The present invention provides a disposable absorbent pant in accordance with claim 1.

This invention is directed to a disposable absorbent pant having fluid handling characteristics that encourage a wearer to progress through and complete the toilet training process.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/42; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/53; A61F-013/53

Family 87/200 - FAMPAT - ©Questel

Earliest priority number

US05/503,887

Application number

AU5623980

Publication numbers

AU538300

AU5623980

Questel unique family ID (FAN)

82923386

Family publication details

AU538300	B2	1984-08-09	AU-538300
AU5623980	A	1980-07-10	AU8056239

Earliest priority date

1974-09-06

Application dates

1980-03-06

Publication dates

1984-08-09

1980-07-10

Grant dates

(AU-538300)

1984-08-09

Title

(AU-538300)

Absorbent article

Abstract

(AU5623980)

An absorbent article for the perineum comprising, an elongated absorbent pad assembly having a front surface for facing the perineum, a back surface, and separable side portions adjacent the front surface of the pad assembly. The side portions define a longitudinally extending channel adjacent the lateral mid-point of the pad assembly, such that the side portions separate during use to expose an increased area of the pad assembly.

(From US4029101 A)

Current assignees

COLGATE PALMOLIVE

Inventors

CHESKY SHELDON

PATIENCE DONALD

IPC - International classification

A61F-013/15; A61F-013/15

Family 88/200 - FAMPAT - ©Questel

Earliest priority number

BR202015030563U

Application number

BR202015030563U

Publication numbers

BR202015030563

Questel unique family ID (FAN)

77735100

Family publication details

BR202015030563 U2 2017-11-07 BR202015030563

Earliest priority date

2015-12-03

Application dates

2015-12-03

Publication dates

2017-11-07

Title

(BR202015030563)

APPLIED CONSTRUCTIVE DISPOSAL IN DISMISSABLE DIAPER WITH TWO ABSORBENT LAYERS OVERLAPPED AND BORDER SPLITTING

Abstract

(BR202015030563)

applied constructive disposal in dismissable diaper with two absorbent layers overlapped and border splitting. to clear

present of utility model one mentions to an innovative applied constructive disposal in a model of dismissable diaper endowed with two layers abson/overlapping beings, one for excrementss and another one for urine, separate for an impermeable barrier of form that the excrementss absorbed for the first layer do not enter thus in contact with the second overlapping layer and if they mix the urine not yet absorbed, what it would result in a contamination of the urinary device, causing urinary infection. to present invention basically it is constituted by a dismissable diaper (1) endowed with two overlapping absorbent layers, being the layer frontai (2) overlapped to the rear layer (3), both separate ones for an impermeable barrier (4) intended not to allow the contact of excrementss with the urine, causing as a consequence, not with difficulty, urinary infection in the children and aged, and great concerns for its parents and caregivers.

Current assignees

RITA MAGALHAES

Inventors

RITA MAGALHÃES

IPC - International classification

A61F-013/15; A61F-013/15

Family 89/200 - FAMPAT - ©Questel

Earliest priority number

DE2041354

Application number

CH963471

DE2041354

Publication numbers

CH520819

DE2041354

Questel unique family ID (FAN)

4640093

Family publication details

CH520819	A	1972-03-31	CH-520819
DE2041354	A1	1972-02-24	DE2041354

Earliest priority date

1970-08-20

Application dates

1970-08-20

1971-06-20

Publication dates

1972-03-31

1972-02-24

Grant dates

(CH-520819)

1972-03-31

Title

(DE2041354)

Profiled suction cylinders - to develop structured continuous strip of absorbent cellular material

Abstract

(DE2041354)

Profiled suction cylinders are used to draw up cellular flock material between two lines of cellular mesh to produce a padded absorbent material with regularly spaced thin sections as separation points for subsequent cutting. The cylinder profiles ensure that the absorbent material is pinched at regular and pre-set intervals with less flock material drawn into the zone to be reduced in thickness.

Current assignees

VP SCHICKEDANZ

Inventors

MAULHARDT OTTO DIPL-ING

SCHLAGBAUER JOHANN

IPC - International classification

A61F-013/15; A61F-013/15

Family 90/200 - FAMPAT - ©Questel

Earliest priority number

US352049X

Application number

GB977230

Publication numbers

GB352049

Questel unique family ID (FAN)

17249024

Family publication details

GB352049	A	1931-06-29	GB-352049

Earliest priority date

1929-04-10

Application dates

1930-03-27

Publication dates

1931-06-29

Grant dates

(GB-352049)

1931-06-29

Title

(GB-352049)

Absorbent pad and method of and apparatus for manufacturing same

Abstract

(GB352049)

352,049. Absorbent pads. WILLIAMS, H. R., 141, East 81st Street. New York, U.S.A. March 27, 1930, No. 9772. Conven.. tion date, April 10. 1929. [Class 81 (ii).] In an apparatus for manufacturing absorbent pads of the kind consisting of an easily disintegrated filling contained in a gauze wrapper fibrous material is supplied from two separate chambers and is drawn out therefrom to form two sheets which are to be superimposed, a deodorizing powder is applied to the inner face of one sheet followed by a layer of mucilage, a strip of gauze is interposed between the sheets and they are then pressed together, wrapped in a covering of paper water. proofed on one face of the pad and cut into lengths which are wrapped in an outer cover of gauze &c. Fibrous material is supplied to chambers 2, 2a separated by an adjustable partition 3a and is drawn by suction applied at 1, 1a against travelling bands 6, 6a of wire gauze by which it is conveyed through orifices on to upper and lower sheets, the upper sheet being supported by a plate 20a. Deodorizing powder is applied to the lower sheet from a box 21 and starch paste from a nozzle 19. A sheet of gauze 16 is led from the reel 15 between the layers of fibre which are led between rollers 22, 23 to a table 24 over which one or more plies of paper are led by a conveyer belt 34 from reels 27, 27a. Before passing to the table the paper is treated with a water-proofing material applied by rolls 82, 83, 87 to that part of the paper which will be overlapped in the subsequent folding operation which is effected by folders of known type. The compound sheet enclosed in the folded paper wrapping is carried forward by intermittently operated conveyer belts 43, 43a so that during the stationary periods so produced the sheet may be severed by a device 46, 47 which cuts out parts so as to leave a series of separate pads with curved ends. These pads are then wrapped by a known folding device

in gauze supplied from a reel 55, the wrapped pads are separated by a knife 65, 66 and the open ends are folded by suitable means. In a modified apparatus the web feeding and starch applying devices are so arranged that starch is applied on the under face of the gauze 16. The pad produced by the apparatus is of the form shown in Fig. 8 and produces the outer gauze wrapper 63, inner and outer webs 39, 40 of the inner wrapper of cellulose sheet, a strip 16 of reinforcing gauze and the two layers 20, 20a of wood pulp.

Current assignees

HARRISON ROBERT WILLIAMS

IPC - International classification

A61F-013/15; A61F-013/15

Family 91/200 - FAMPAT - ©Questel

Earliest priority number

US61/077,498P

Application number

BRPI0913634
US12/485,953
US15/138,244
CA2729328
EP09774279
JP2011516791
CN200980125475
MX2010014489
WOUS2009/049150
CA2854964

Publication numbers

BRPI0913634
US9572728
US20160235606
CA2729328
EP2328532
JP2011526812
EP2328532
CN102076297
MX2010014489
WO2010/002828
US20100004614
CA2854964
CA2729328

Questel unique family ID (FAN)

4181714

Family publication details

BRPI0913634	A2	2018-02-14	BR200913634
US9572728	B2	2017-02-21	US9572728
US20160235606	A1	2016-08-18	US20160235606
CA2729328	C	2014-08-19	CA2729328
EP2328532	B1	2012-08-08	EP2328532
JP2011526812	A	2011-10-20	JP2011526812
EP2328532	A1	2011-06-08	EP2328532
CN102076297	A	2011-05-25	CN102076297

MX2010014489	A	2011-04-11	MX2010014489
WO2010/002828	A1	2010-01-07	WO201002828
US20100004614	A1	2010-01-07	US20100004614
CA2854964	A1	2010-01-07	CA2854964
CA2729328	A1	2010-01-07	CA2729328

Earliest priority date

2008-07-02

Application dates

2009-06-17
2009-06-30
2009-06-30
2009-06-30
2009-06-30
2009-06-30
2009-06-30
2009-06-30
2009-06-30
2016-04-26

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2016-08-18
2014-08-19
2012-08-08
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2011-06-08
2011-05-25
2011-04-11
2010-01-07
2010-01-07
2010-01-07
2010-01-07

Grant dates

(EP2328532)
2012-08-08
(US9572728)
2017-02-21
(CA2729328)
2014-08-19

Title

(EP2328532)
Disposable absorbent article with varied distribution of absorbent particulate polymer material

Abstract

(EP2328532)
A disposable absorbent article comprising an absorbent core located in a chassis and comprising absorbent particulate polymer material having a basis weight that varies across the absorbent core. Methods for making such an absorbent core and corresponding disposable absorbent article are also disclosed.

Current assignees

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Inventors

ASHTON GREGORY

NISHIKAWA MASAHARU

WCIORKA MAJA

Advantages / Previous drawbacks

(EP2328532)

According to a certain embodiment, the upper acquisition layer 52 may comprise a material that provides good recovery when external pressure is applied and removed.

The diaper 10 may also include such other features as are known in the art including front and rear ear panels, waist cap features, elastics and the like to provide better fit, containment and aesthetic characteristics.

High energy pretreatment typically temporarily increases the surface energy of a low surface energy surface (such as PP) and thus enables better wetting of a nonwoven by the nanoparticle dispersion in water.

problems such as that described above and provides a disposable absorbent article which comprises a chassis and an absorbent core.

Independent claims

(EP2328532)

1. A disposable absorbent article comprising: a chassis including a topsheet and a backsheet; and an absorbent core located between the topsheet and the backsheet and comprising absorbent particulate polymer material, the disposable absorbent article having a longitudinal axis extending from a first end to a second end and the absorbent particulate polymer material present in the absorbent core has a basis weight that varies across the absorbent core In a direction perpendicular to the longitudinal axis the absorbent core (14) comprises first and second side absorbent zones (120 and 122) spaced from one another and extending substantially parallel to the longitudinal axis (36) and a central absorbent zone (121) extending along the longitudinal axis (36) and between the first and second side absorbent zones (120 and 122), the absorbent particulate polymer material in the first and second side absorbent zones (120 and 122) of the absorbent core (14) has a basis weight, the absorbent particulate polymer material in the central absorbent zone (121) of the absorbent core (14) has a basis weight, and the basis weight of the absorbent particulate polymer material in the first and second side absorbent zones (120 and 122) is greater than the basis weight of the absorbent particulate polymer material in the central absorbent zone (121).

Object of invention

(EP2328532)

More particularly, the invention is directed to an absorbent article having sealed lateral edges to contain loose fibers and particles within the structure.

The apparatus and method thus provide an article having optimal zoned absorbency in a cost-effective manner.

The present invention generally relates to an absorbent article, and more particularly to absorbent articles comprising absorbent particulate polymer material.

The present invention generally relates to an absorbent article, and more particularly to absorbent articles comprising absorbent particulate polymer material.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/53; A61F-013/53; A61F-013/532; A61F-013/534; A61F-013/534; A61F-013/535; A61F-013/539; A61F-013/56; A61L-015/22; A61L-015/58; A61L-015/60

Family 92/200 - FAMPAT - ©Questel

Earliest priority number

AU3927178

Application number

AU3927178

Publication numbers

AU522418

AU3927178

Questel unique family ID (FAN)

1089931

Family publication details

AU522418	B2	1982-06-03	AU-522418
AU3927178	A	1980-02-28	AU7839271

Earliest priority date

1978-08-25

Application dates

1978-08-25

Publication dates

1982-06-03

1980-02-28

Grant dates

(AU-522418)

1982-06-03

Title

(AU-522418)

Absorbent panel

Current assignees

JOHNSON & JOHNSON

Inventors

ABERSON GERHARD

STULGATE EMILY

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/20

Family 93/200 - FAMPAT - ©Questel

Earliest priority number

JP2009157272

Application number

EP10794113

TH20111003844

CN201080024161

TW99121697

KR20117030994

US13/377,765

RU2012102389

JP2010094365

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JP2009157273

JP2009188340

IN10145/DELNP/2011

WOJP2010/060991

Publication numbers

EP2450015

TH56892

CN102448418

TWI510224

KR101558322
US9011404
RU2538524
JP5534914
JP5523909
JP5415165
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RU2012102389
EP2450015
IN10145/DELNP/2011
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JP2011036538
JP2011025006
TW201103513
JP2011010839
WO2011/001944

Questel unique family ID (FAN)

7613852

Family publication details

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TH56892	B	2017-08-22	TH--56892B
CN102448418	B	2016-10-26	CN102448418B
TWI510224	B	2015-12-01	TWI510224
KR101558322	B1	2015-10-19	KR101558322
US9011404	B2	2015-04-21	US9011404
RU2538524	C2	2015-01-10	RU2538524
JP5534914	B2	2014-05-09	JP5534914
JP5523909	B2	2014-04-18	JP5523909
JP5415165	B2	2013-11-22	JP5415165
JP5415178	B2	2013-11-22	JP5415178
RU2012102389	A	2013-08-10	RU2012102389
EP2450015	A4	2013-05-08	EP2450015
IN10145/DELNP/2011	A	2012-10-19	IN2011DN10145
TH116622	A	2012-10-01	TH-116622
EP2450015	A1	2012-05-09	EP2450015
CN102448418	A	2012-05-09	CN102448418
US20120095429	A1	2012-04-19	US20120095429
KR20120030107	A	2012-03-27	KR20120030107
JP2011224046	A	2011-11-10	JP2011224046
JP2011036538	A	2011-02-24	JP2011036538
JP2011025006	A	2011-02-10	JP2011025006
TW201103513	A	2011-02-01	TW201103513
JP2011010839	A	2011-01-20	JP2011010839

WO2011/001944 A1 2011-01-06 WO201101944

Earliest priority date

2009-07-01

Application dates

2009-07-01
2009-08-17
2010-04-15
2010-04-15
2010-06-28
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2010-06-28
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2011-12-22

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2015-12-01
2015-10-19
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2011-02-01
2011-01-20
2011-01-06

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2017-11-01
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2015-04-21

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(RU2538524)
2015-01-10
(KR101558322)
2015-10-19
(TWI510224)
2015-12-01
(CN102448418B)
2016-10-26
(TH--56892B)
2017-08-22

Title

(EP2450015)
Pants type absorptive article and method of manufacturing same

Abstract

(EP2450015)
A pull-on absorbent article 1 including a front outer cover 2A to be worn around a wearer's front side, a rear outer cover 2B to be worn around the wearer's rear side, and an absorbent assembly 3 fixed to the front and the rear outer cover so as to bridge them and having a pair of side seals 4 and 4. The length of each of the front and the outer cover 2A and 2B in the longitudinal direction of the article is uniform in the lateral direction and larger than that of the side seals 4 so that the front and the outer cover have extension portions 21a and 21b, respectively, that extend downward from the side seals. The extension portion 21a and/or the extension portion 21b of the front and/or the rear outer cover has/have an elasticized region extensible in the lateral direction in a region located laterally outward of each side edge of the absorbent assembly 3.

Current assignees

KAO

Inventors

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ANDO KENJI
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MORITA AKIO

Advantages / Previous drawbacks

(EP2450015)
As stated, although pull-on absorbent articles of the type having independent front and rear side outer covers offer the advantage of removing the need to trim a continuous length of outer cover or reducing the size of unnecessary parts to be trimmer away, there still is a room for improvement on appearance around the crotch portion and body fit.
Although pull-on absorbent articles of the type having independent front and rear side outer covers offer the advantage of removing the need to trim a continuous length of outer cover or reducing the size of unnecessary parts to be trimmed off, they frequently look like out-of-date loincloth while worn, which does not suit many consumers' preference.
As stated, although pull-on absorbent articles of the type having independent front and rear outer covers offer the advantage of removing the need to trim a continuous length of outer cover or reducing the size of unnecessary parts to be

trimmed away, conventional pull-on absorbent articles of this type, for example, the pull-on garment of patent literature 1 leaves room for improvement in the prevention of skin overhydration.

Accordingly, the invention relates to a method for efficiently producing a pull-on absorbent article that provides a good appearance, good protection against skin overhydration, and wearer comfort.

However, the pull-on garment of patent literature 1 does not look good either, particularly when seen from the front.

Patent literature 3 gives no suggestion about the appearance problem associated with absorbent articles, such as diapers, having independent front and rear outer covers.

In the modification where the absorbent article, such as a diaper, does not have a front and/or a rear extension portion 21a and/or 21b and instead has a first and a second elasticized region G2 and G3 in the front and/or the rear main portion 20a and/or 20b, the advantages obtained by making the length L2b smaller than the length L1b in the rear outer cover 2B and making the length L2a smaller than the length L1a in the front outer cover 2A include improvement in fit, prevention of diaper's sliding down, and adaptability to relatively slender bodies.

Independent claims

(EP2450015)

1. A pull-on absorbent article comprising a front outer cover adapted to be worn around a wearer's front side, a rear outer cover adapted to be worn around the wearer's rear side, and an absorbent assembly fixed to the front and the outer cover so as to bridge them, the article having a longitudinal direction and a lateral direction, and the article having a pair of side seals formed by joining the front outer cover and the rear outer cover along their lateral side edges, each of the front and the outer cover having a laterally uniform length in the longitudinal direction, being longer than the side seals in the longitudinal direction, and having an extension portion extending downward from the side seals, and the extension portion of the front outer cover and/or the extension portion of the rear outer cover having an elasticized region exhibiting extensibility and contractibility in the lateral direction in a region located laterally outward of each side edge of the absorbent assembly.

6. A pull-on absorbent article comprising a front outer cover adapted to be worn around a wearer's front side, a rear outer cover adapted to be worn around the wearer's rear side, and an absorbent assembly fixed to the front outer cover and the rear outer cover so as to bridge them, the article having a longitudinal direction and a lateral direction, and the article having a pair of side seals formed by joining the front outer cover and the rear outer cover along their lateral side edges, each of the front and the outer cover being longer than the side seals in the longitudinal direction and having an extension portion extending downward from the side seals, and the extension portion of the front outer cover comprising two sheets and at least one elastic member therebetween, the front outer cover having opposite fixing parts each at or near the respective lateral size edges thereof, and the at least one elastic member being fixed to the two sheets at the opposite fixing parts and not being fixed to either of the two sheets between the opposite fixing parts, and the two sheets of the extension portion of the front outer cover being bonded to each other in a region that overlaps the absorbent assembly at a linear bond extending in the lateral direction.

10. A pull-on absorbent article comprising a front outer cover adapted to be worn around the wearer's front, a rear outer cover adapted to be worn around the wearer's rear, and an absorbent assembly fixed to the front outer cover and the rear outer cover so as to bridge them, the front outer cover and the rear outer cover being connected to each other to make a loop, the article having a longitudinal direction and a lateral direction, at least one of the front and the rear outer cover having a first elasticized region extensible in the lateral direction and located closer to the crotch portion of the absorbent article than the respective longitudinal end of the absorbent assembly and a second elasticized region extensible in the lateral direction and located closer to the crotch portion than the first elasticized region, each of the first and the second elasticized region comprising two sheets and an elastic member disposed between the two sheets in its stretched state and having a non-elasticized subregion formed by cutting the elastic member in an area overlapping the absorbent assembly and a pair of elasticized subregions located one on each side of the non-elasticized subregion, and the non-elastieized subregion of the first elasticized region and the non-elasticized subregion of the second elasticized region being different in length in the lateral direction.

20. A method for producing a pull-on absorbent article comprising a front outer cover adapted to be worn around a wearer's front side, a rear outer cover adapted to be worn around the wearer's rear side, and an absorbent assembly fixed to the front outer cover and the rear outer cover so as to bridge them, the article having a pair of side seals formed by joining the

front outer cover and the rear outer cover along their lateral side edges, the method comprising the steps of: superposing two continuous sheets with a plurality of elastic members disposed therebetween, bonding the continuous sheets to each other in parts to make a composite sheet by forming bonds such that the bonds are discretely arranged in the machine direction to make at least three rows of bonds and that every elastic member is sandwiched between adjacent two of the rows of bonds, cutting the composite sheet in half to obtain two narrower continuous sheets in a way that every bond making up one of the rows of bonds is cut in two in the cross-machine direction, fixing an adsorbent assembly to the narrower continuous sheets so as to bridge them while advancing the narrower continuous sheets at a predetermined distance from each other to make a continuous-form absorbent article, folding the continuous-form absorbent article in two, and forming side seals in the continuous-form absorbent article and cutting the continuous-form absorbent article to obtain individual pull-on absorbent articles.

Object of invention

(EP2450015)

The present invention relates to a pull-on (pants type) absorbent article, such as a pull-on disposable diaper, and a method of making the same.

Accordingly, the invention relates to, in a second aspect, a pull-on absorbent article which is of the type wherein the outer cover is separated into a front outer cover adapted to be worn around the front of a wearer and a rear outer cover adapted to be worn around the rear of the wearer and is yet excellent in appearance.

The present invention relates to a pull-on (pants type) absorbent article, such as a pull-on disposable diaper, and a method of making the same.

Accordingly, the present invention relates to, in its first aspect, a pull-on absorbent article which is of the type wherein the outer cover is separated into a front outer cover adapted to be worn around the front of a wearer and a rear outer cover adapted to be worn around the rear of the wearer and is yet successfully prevented from sliding down.

Accordingly, the present invention relates to, in its first aspect, a pull-on absorbent article which is of the type wherein the outer cover is separated into a front outer cover adapted to be worn around the front of a wearer and a rear outer cover adapted to be worn around the rear of the wearer and is yet successfully prevented from sliding down.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/496; A61F-013/496; B32B-037/00; D04H-003/04

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CA2326564
CN99806735
EP99914241
MXPA00009451
US09/676,951
JP2000540795
BR9909274
US09/050,003
AU3213399
WOUS99/006805

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CA2326564
CN1297242
EP1083852
MX219306
US6646180
JP2002509764

BR9909274
BRPI9909274
CN1303255
MXPA00009451
EP1083852
US6068620
AU3213399
WO99/49826
CA2326564

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CA2326564	C	2007-10-09	CA2326564
CN1297242	C	2007-01-31	CN1297242C
EP1083852	A4	2005-03-30	EP1083852
MX219306	B	2004-03-05	MX-219306
US6646180	B1	2003-11-11	US6646180
JP2002509764	A	2002-04-02	JP2002509764
BR9909274	A	2001-10-16	BR9909274
BRPI9909274	A1	2001-10-16	BRPI9909274
CN1303255	A	2001-07-11	CN1303255
MXPA00009451	A	2001-06-01	MX2000PA009451
EP1083852	A1	2001-03-21	EP1083852
US6068620	A	2000-05-30	US6068620
AU3213399	A	1999-10-18	AU9932133
WO99/49826	A1	1999-10-07	WO9949826
CA2326564	A1	1999-10-07	CA2326564

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2000-10-02

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2001-10-16

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2001-07-11
2001-06-01
2001-03-21
2000-05-30
1999-10-18
1999-10-07
1999-10-07

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2007-10-09

Title

(EP1083852)
Thin absorbent core made from folded absorbent laminate

Abstract

(EP1083852)
A disposable absorbent garment (10) comprising a topsheet (30), a back-sheet (32), an absorbent core (342) disposed between the topsheet and backsheet is disclosed. The absorbent core is formed from a folded laminate (342) comprising three layers, including an upper layer (342b), a lower layer (342c), a central fibrous layer (342a) including from about 50 percent to about 95 percent by weight super-absorbent polymer, and about 5 percent to about 50 percent by weight stabilization additives. The upper, and lower layers comprise tissue, airlaid fluff pulp or synthetic non-woven fibrous layers. The central fibrous layer is adhesively bonded to both the upper, and lower layers; all layers together assisting to maintain the dry, and wet integrity of the absorbent core. Folding of the thin absorbent laminate provides an absorbent core that can handle large doses of urine. The folded structure provides a central channel (360) that provides free volume for temporary liquid storage, and increases the surface area of laminate available for liquid absorption. The absorbent garment thus formed is very thin, lightweight, and economical.

Current assignees

FIRST QUALITY BABY PRODUCTS
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FIRST QUALITY PRODUCTS
FIRST QUALITY RETAIL SERVICES
FIRST QUALITY TISSUE
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Advantages / Previous drawbacks

(WO99/49826)

In general, some of the most important performance attributes of an absorbent core of a diaper (or any other absorbent garment) are functional capacity, rate of absorption, and core stability in use.

Therefore, it is highly desirable to provide an absorbent article with a thin, pulpless, absorbent core having improved core stability in-use, SAP efficiency and absorption rate.

They generally allow for an efficient utilization of the SAP material at high SAP concentrations.

The dry forming process typically has lower conversion costs than the wet process, since the equipment used in a dry process is typically less complex and can run at higher line speeds.

Independent claims

(WO99/49826)

1. An absorbent article comprising: a liquid permeable topsheet; a backsheet; and an absorbent core positioned between the topsheet and the backsheet, said absorbent core comprising a longitudinally C-folded absorbent laminate, said absorbent laminate comprising: an upper layer; a lower layer; an absorbent layer positioned between the upper and lower layers; wherein said absorbent layer comprises from about 50 to about 95 percent by weight SAP.

34. An absorbent article comprising: a liquid permeable topsheet; a backsheet associated with said topsheet; and an absorbent core positioned between the topsheet and the backsheet, the absorbent core comprising an absorbent laminate, said absorbent laminate having a thickness of about 0.5-1.1 mm and comprising: an upper layer near the topsheet; a lower layer near the backsheet; and an absorbent layer positioned between the upper and lower layers; wherein said absorbent core includes a central area and two side marginal edges, a front edge and a back edge and wherein said two side 54 marginal edges of said absorbent core are folded inwardly to form a longitudinal channel extending along said central area from the front edge to the back edge of the absorbent core.

38. An absorbent core comprising a longitudinally folded absorbent laminate, said absorbent laminate comprising: an upper layer; a lower layer; and an absorbent layer positioned between the upper and lower layers, wherein said absorbent layer comprises from about 50 to about 95 percent SAP and has a SAP efficiency of greater than about 70 percent.

46. An absorbent article comprising: a liquid permeable topsheet; a backsheet; and an absorbent core positioned between the topsheet and the backsheet, said absorbent core comprising a longitudinally C-folded roll-good absorbent material, said absorbent material comprises about 50-95 percent by weight SAP; wherein said C-folded absorbent core includes a central channel area, two side marginal areas, a front edge and a back edge and wherein said two side marginal areas are C-folded at least once, forming two side folded areas and a central channel area wherein said central channel provides free volume for containing liquid temporarily until the liquid can be absorbed by the absorbent material.

Object of invention

(WO99/49826)

It is therefore an object of the invention to provide a thin absorbent garment having an improved ability to retain fluids.

It is another object of the invention to provide an absorbent garment having improved comfort, fit and wearability.

It is yet another object of the invention to provide an absorbent garment having a thin absorbent core.

It is a further object of the invention to provide an absorbent garment with a pulpless absorbent core having SAP as a substantial percentage of its basis weight, generally greater than 50%, the absorbent core being substantially free of gel blocking, i.e., the core retaining high SAP efficiency.

It is yet a further object of the invention to provide an absorbent core comprising one or more laminates wherein one of the layers of the laminate or laminates is a high-density, high SAP-containing layer.

These and other objects of the invention are achieved by a disposable absorbent article comprising a thin, folded, pulpless absorbent core.

The present invention relates generally to absorbent garments.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/53; A61F-013/53; B32B-005/00

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BR112017013144
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CN201480084101
AU2014415570
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EP3240513
EP3240513
KR101817579
BR112017013144
US20170348158
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KR20170094378
CN106999315
AU2014415570
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EP3240513	B1	2019-08-21	EP3240513
EP3240513	A4	2018-07-18	EP3240513
KR101817579	B1	2018-02-21	KR101817579
BR112017013144	A2	2018-01-02	BR112017013144
US20170348158	A1	2017-12-07	US20170348158
EP3240513	A1	2017-11-08	EP3240513
KR20170094378	A	2017-08-17	KR20170094378
CN106999315	A	2017-08-01	CN106999315
AU2014415570	A1	2017-07-20	AU2014415570
BR112017013144	A1	2017-07-04	BR112017013144
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2016-07-07

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Title

(EP3240513)
Absorbent article having stretchable panels and method of making same

Abstract

(EP3240513)
An absorbent article includes bond seams that are positioned forwardly towards the article central longitudinal direction from the lateral-most side edges of the article, and which are aligned with the highest point of high rise leg openings on the article. The absorbent article is conformable on both front and back panels, with the front panel being narrower in dimension than the back panel. The bond seams and leg openings can be seen on the front surface of the relaxed and flattened absorbent article. Such absorbent article may be manufactured along the article transverse direction by use of differential tension during manufacture, or differential retractive properties of elastic base materials.

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Advantages / Previous drawbacks

(EP3240513)
Such is desirable so as to provide a more conformable fit across different areas of a user's anatomy.
Such adult consumers are interested in product appearance, as there is a desire to enhance the overall personal experience of using such products, while reducing incontinence-related stigmas.
In such forward- directed seam configurations, especially in refastenable products, there is therefore a need for article designs and production methods that can produce such articles efficiently.
While such asymmetrically-shaped panels are desirable, they have sometimes been difficult to manufacture on a mass production line, depending on manufacturing method.
"Absorbent article" stigmas are aggravated byproduct designs which are seen as bulky and ill-fitting; byproduct designs having an outline that can be seen through a user's clothing and which do not resemble underwear; by relatively high levels of noise made from such products during use, such noise created from specific product construction materials; and by an overall "artificial" visual appearance of such products when viewed by the user and also by third parties.
However, it has been difficult to produce such articles in an efficient and cost-effective way, without having to either utilize traditional and inefficient cut and placement techniques or nonconformable backpanel materials.

Independent claims

(EP3240513)

1. An absorbent article for encircling a user's lower abdominal region, said absorbent article having a longitudinal direction, a central longitudinal direction, a transverse direction ending in opposing lateral-most side edges, and a depth direction, said absorbent article including an absorbent article front surface and an absorbent article back surface, two leg openings having opening edges, and a waist opening defined by a waist edge with a minimum transverse direction width when said absorbent article is in a relaxed and flattened state, said absorbent article comprising: an absorbent core insert including a liquid permeable topsheet layer, a liquid impermeable backsheet layer, and at least one absorbent core layer sandwiched between said liquid permeable topsheet layer and said liquid impermeable backsheet layer; said absorbent core insert including two opposing longitudinal direction ends and opposing lateral direction side edges extending between said opposing longitudinal direction ends, said absorbent core insert forming the crotch portion of said absorbent article; asymmetrically shaped front and back panels which together form said waist edge of said absorbent article waist opening, said front panel being elastic along said absorbent article transverse direction, and said backpanel being at least extensible along said absorbent article transverse direction; said front and back panels being respectively bonded to opposing longitudinal direction ends of said absorbent core insert, and further bonded to each other along bond seams situated inwardly from said absorbent article opposing lateral-most side edges and along said absorbent article front surface; such that the distance between a bond seam and the closest lateral-most side edge being between about 2.5 % and 25 % of the minimum transverse direction width of the waist edge of said absorbent article; optionally wherein said distance between a bond seam and the closest lateral-most side edge is between about 5 % and 22.5% of the minimum transverse direction width of the waist edge of said absorbent article.

10. A method of making an absorbent article comprising steps of: a) producing a first sheet of an elastic material having a longitudinal and transverse direction, with said first sheet being elastic in at least the transverse direction, b) producing a second sheet of at least an extensible material having a longitudinal and transverse direction, with said second sheet being at least extensible in at least the transverse direction; and placing said first and second sheets in parallel along their transverse directions on an absorbent article production line; c) producing an absorbent core insert having opposing longitudinal direction ends for attachment to said sheets of elastic and at least extensible materials, and opposing lateral side edges extending between said opposing longitudinal direction ends, and bonding the opposing longitudinal direction ends of said absorbent core insert to said sheets of elastic and at least extensible material in a configuration that is perpendicular to said first and second sheet transverse directions while such first and second sheets are under desired levels of tension; d) moving said bonded sheets and absorbent core insert through a manufacturing process on said absorbent article production line, along said sheet transverse directions such that differential tensions are applied along said transverse direction to said elastic material compared with said at least extensible material, said tension applied to said elastic material being larger than that applied to said at least extensible material; e) cutting elongated leg opening shapes along said sheets' longitudinal direction and adjacent said opposing lateral side edges of said absorbent core insert so that the highest point of the cuts will align with side bond seams; f) bringing the elastic material sheet and the extensible material sheet together to form an absorbent article blank having elongated leg openings with distinct vertex configurations, and subsequently bonding said material sheets to one another along side bond seams that are generally aligned with said sheets' longitudinal direction and aligned with said vertex configurations in order to form an absorbent article with said elastic sheet and said at least extensible sheet having the same transverse direction width, while maintaining said sheets under their respective tensions; g) cutting said absorbent article from said absorbent article blank and removing such tension such that said elastic sheet transverse direction width narrows with respect to said at least extensible sheet transverse direction width as a result of differential levels of retraction upon or in said sheets, whereby said bond seams rotate from a lateral-most side location to a forwardly positioned location, off of the lateral-most side edge.

15. A method of making an absorbent article comprising steps of: a) producing a first sheet of an elastic material having a longitudinal and transverse direction, with said first sheet being elastic in at least the transverse direction, b) producing a second sheet of at least an extensible material having a longitudinal and transverse direction, with said second sheet being at least extensible in at least the transverse direction; and placing said first and second sheets in parallel along their transverse directions on an absorbent article production line; c) moving said first and second sheets through a manufacturing process on said absorbent article production line, along said sheet transverse directions such that

differential tensions are applied along said transverse direction to said first sheet compared with said second sheet, said tension applied to said first sheet being larger than that applied to said second sheet; d) producing an absorbent core insert having opposing longitudinal direction ends for attachment to said first sheet and second sheet, and opposing lateral side edges extending between said opposing longitudinal direction ends, and bonding the opposing longitudinal direction ends of said absorbent core insert to said first sheet and said second sheet in a configuration that is perpendicular to said first sheet and second sheet transverse directions while such first and second sheets are under desired levels of tension; e) cutting elongated leg opening shapes along said sheets' longitudinal direction so that the highest point of the cuts will align with bond seams; f) bringing the first sheet and second sheet together to form an absorbent article blank, and subsequently bonding said material sheets to one another along bond seams that are generally aligned with said sheets' longitudinal direction in order to form an absorbent article with said first sheet and said second sheet having the same transverse direction width, while maintaining said sheets under their respective tensions; g) cutting said absorbent article from said absorbent article blank and removing such tension such that said first sheet transverse direction width narrows with respect to said second sheet transverse direction width as a result of differential levels of retraction upon or in said sheets, whereby said bond seams rotate from a lateral-most side location to a position location inward of the lateral-most side edge.

Object of invention

(EP3240513)

The present invention is generally directed to absorbent personal care articles to be worn around a user's lower abdominal region.

In particular, the present invention is directed to absorbent garment-style, personal care articles such as absorbent briefs, pants, panties, and diapers with stretchable or extensible panels, as well as methods for producing such articles.

For the purposes of this application, like features may be represented by like numbers between the figures.

For the purposes of this application, the term "bond seam" refers to that structure of connection between the front and back panels by which the panels are fixed together in the absorbent article, Such bond seam may be for example, by adhesive, ultrasonic or thermal bond methods, or a combination thereof.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/70; A61F-013/72

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DE69925933T
EP99964240
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BR9916113
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EP1139956
DE69942678
EP1470808

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KR100623133
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EP1139956
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BR9916113
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EP1470808	B2	2016-10-26	EP1470808
DE69925933	T3	2013-09-19	DE69925933
EP1139956	B2	2013-04-17	EP1139956
DE69942678	D1	2010-09-23	DE69942678
EP1470808	B1	2010-08-11	EP1470808
JP4495857	B2	2010-04-16	JP4495857
EP1470808	A3	2008-03-19	EP1470808
KR100623133	B1	2006-09-12	KR100623133
DE69925933	T2	2006-05-11	DE69925933
DE69925933	D1	2005-07-28	DE69925933
EP1139956	B1	2005-06-22	EP1139956
EP1470808	A2	2004-10-27	EP1470808
AU755450	B2	2002-12-12	AU-755450
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AR021705	A1	2002-07-31	AR--21705
BR9916113	A	2002-06-04	BR9916113
BRPI9916113	A1	2002-06-04	BRPI9916113
CO5111007	A1	2001-12-26	CO5111007A1
KR20010101268	A	2001-11-14	KR20010101268
EP1139956	A1	2001-10-10	EP1139956
US6113717	A	2000-09-05	US6113717
AU2052100	A	2000-07-12	AU200020521
WO00/37007	A1	2000-06-29	WO200037007

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1999-12-14
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2006-09-12

Title

(EP1139956)

Method of making refastenable, pant-like disposable absorbent articles

Abstract

(EP1139956)

A method of making a refastenable, pant-like, disposable absorbent article includes attaching a pair of opposed side panels (48) to the side edges of an absorbent chassis (28) such hat they extend laterally outward from and between the front and back waist regions of the article. One of the side margins of each side panel (48) is permanently attached to the side edge of the absorbent chassis (28) in one of the waist regions and the other side margin of each side panel (48) is refastenably attached to the side edge of the absorbent chassis (28) in the opposite waist region. The side panels (48) are refastenably attached before the article is packaged to provide the pant-like disposable absorbent article.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP1139956)

That is, there remains a need for absorbent articles which conform to the wearer to effectively contain bodily exudates, which are capable of being pulled up and down over the hips and buttocks of the wearer without opening, which are readily secured about and removed from the wearer in a convenient and clean manner and which allow easy inspection by the caregiver to assist in determining whether the article is soiled.

Moreover, there is a need for improved methods of reliably and consistently making such pant-like disposable absorbent articles.

The present invention advantageously provides methods of making refastenable, pant-like disposable absorbent articles in a reliable and efficient manner.

Moreover, it is desirable that such absorbent articles, after being soiled, can be removed from the wearer in a convenient and clean manner without undesirably soiling the caregiver or surrounding area such as the clothes of the wearer.

For example, the side panels have been difficult to tear when attempting to remove the article from the waist of the wearer instead of pulling the article down over the hips of the wearer.

In response to the difficulties and problems discussed above, a new method of making refastenable, pant-like disposable absorbent articles have been discovered.

Independent claims

(EP1139956)

1. A method of making a pant-like, refastenable, disposable absorbent article (20) which defines a front waist region (22), a backwaist region (24), a crotch region (26) which extends between and connects said waist regions, a longitudinal direction (38) and a lateral direction (40), said method comprising: a) providing a continuous web of interconnected absorbent chassis (80) wherein each of said absorbent chassis defines an exterior surface (36), an interior surface (34) opposite said exterior surface, a pair of laterally opposed side edges (30) and a pair of longitudinally opposed waist edges (32); b) providing a pair of opposed side panels (48) which define a first side margin (50) and a second side margin (52) opposite said first side margin; c) permanently attaching said first side margin (50) of said side panels (48) to said side edge (30) of each of said absorbent chassis (28) in one of said front waist region (22) or said backwaist region (24) to provide a permanent joint (76); d) selectively cutting said continuous web of interconnected absorbent chassis (80) into discrete absorbent articles (20); e) folding each of said discrete absorbent articles about a fold line extending in a lateral direction through said crotch region (26) of said article thereby positioning said waist regions (22,24) in a facing relationship; and f)

refastenably attaching said second side margin (52) of said side panels (48) to said side edge (30) of each of said absorbent chassis (28) in said other waist region to provide a refastenable joint (78) thereby providing said pant-like, refastenable, disposable absorbent article.

Object of invention

(EP1139956)

The present invention relates to methods of making disposable absorbent articles which are adapted to contain body exudates.

More particularly, the present invention relates to methods of making refastenable, pant-like disposable absorbent articles.

In one aspect, the present invention concerns a method of making a refastenable, pant-like, disposable absorbent article which defines a front waist region, a backwaist region, a crotch region which extends between and connects said waist regions, a longitudinal direction and a lateral direction.

In particular, the present invention provides refastenable, pant-like disposable absorbent articles which are capable of being reliably pulled up or down over the hips of the wearer to assist in the toilet training of the wearer similar to conventional training pants.

The present invention relates to methods of making disposable absorbent articles which are adapted to contain body exudates.

In one aspect, the present invention concerns a method of making a refastenable, pant-like, disposable absorbent article which defines a front waist region, a backwaist region, a crotch region which extends between and connects said waist regions, a longitudinal direction and a lateral direction.

In one aspect, the present invention concerns a method of making a refastenable, pant-like, disposable absorbent article which defines a front waist region, a backwaist region, a crotch region which extends between and connects said waist regions, a longitudinal direction and a lateral direction.

In particular, the present invention provides refastenable, pant-like disposable absorbent articles which are capable of being reliably pulled up or down over the hips of the wearer to assist in the toilet training of the wearer similar to conventional training pants.

IPC - International classification

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1962-03-07

Title

(GB-890682)

Absorbent fibrous bodies

Abstract

(GB890682)

890,682. Surgical dressings. BURGENI, A. A. May 1, 1958 [May 1, 1957; Sept. 26, 1957 (2)], Nos. 13929/57, 30269/57 and 30270/57. Class 81 (2). [Also in Group VIII] An absorbent component of a surgical dressing is made by moistening a surface of a porous, loosely compacted single-layered fibrous bat and applying pressure to form an integral densified paper-like skin at the moistened surface. The bat 12 which is made from comminuted wood pulp fibres or cotton linters which may be combined with fibres of silk, linen, wool, nylon or cellulose acetate, has a compacted paper-like layer 14 on its upper and/or lower surfaces. Two such bats may be pressed on top of one another to provide a pad with compacted layers on its upper and/or lower surfaces and across its interior the area of the compacted layer may be smaller than the area of the surface on which it is formed. Longitudinal or transverse grooves 63, 64 may be formed on the bat surface during compression, regions of higher and lower capillarity being thus formed in the compacted layer. A catamenial napkin 66 is formed from an upper pad 67 having a grooved compacted layer 69 and separated by water-repellent tissue 70 from a lower pad 62 having an upper embossed compacted layer, the two pads being wrapped in paper 71 and a textile cover 72. A pad 19 (Fig. 4) comprising bats 20, 21 with a compacted layer 22 between them is formed by compressing superimposed webs 73, 74 (Fig. 16) between rollers 80, 81, the upper surface of the lower web 74 having been moistened by a spray 75. The compression rollers may be shaped to produce lateral or transverse grooves or other embossing in the compacted layer. The compression rollers may be separated from the web surface by an endless band, of natural or synthetic fibres, glass filaments, wire or rubber threads, which after passing between the rollers is peeled from the treated web at an obtuse angle to the direction of travel. The endless band may pass through the moistening agent so that it moistens the web surface on passing between the compression rollers. The amount of moisture applied to the bat is between 0.0005 and 0.03 c.c./sq. cm. and the pressure applied is between 5 and 100 lbs./sq. inch. The bat surface is moistened by water, glycols, glycerol or sorbitol. The liquid applied may contain bactericides, fungicides, softening agents, sizes, adhesives or textile sizing or finishing agents, e.g. starches, dextrins, casein, cellulose, polyvinyl acetate, polyvinyl chloride, waxes, dibutoxyethyl phthalate. Wadding, paper or gauze may be applied over the compacted layer during compression. Specification 482,343 is referred to.

Current assignees

ALFRED ADOLF BURGENI

IPC - International classification

A61F-005/48; A61F-013/00; A61F-013/15

Family 98/200 - FAMPAT - ©Questel

Earliest priority number

MXPA02012812

Application number

BR0305879

ES200302795

ARP030104385

CO03104664

MXPA02012812

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BRPI0305879

ES2253957

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MXPA02012812

BR0305879

BRPI0305879

Questel unique family ID (FAN)

24707

Family publication details

BRPI0305879	A2	2010-03-30	BR200305879
ES2253957	B1	2007-12-01	ES2253957
ES2253957	A1	2006-06-01	ES2253957
AR042235	A1	2005-06-15	AR--42235
CO5520043	A1	2005-05-31	CO5520043A1
MXPA02012812	A	2004-09-03	MX2002PA012812
BR0305879	A	2004-08-31	BR200305879
BRPI0305879	A1	2004-05-18	BR200305879

Earliest priority date

2002-12-19

Application dates

2002-12-19
2003-11-26
2003-11-27
2003-11-27
2003-11-27

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2007-12-01
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2005-06-15
2005-05-31
2004-09-03
2004-08-31
2004-05-18

Grant dates

(ES2253957)
2007-12-01

Title

(BR200305879)
Procedimento de colocação de rede de integridade dentro de uma matriz absorvente

Abstract

(BRPI0305879)
The incorporation of an integrity net in an absorbent matrix has cellulose fibres carried by air to a transfer chamber for entry into guides in a drum, made as a fine mesh. The vacuumed drum has differing-vacuum-level zones and a transfer belt, and the matrixes exit continuously to the production line.
(From ES2253957 A1)

Current assignees

GRUPO P I MABE

Inventors

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MONTEROS CARLOS CANALES ESPINO
MARTINEZ RAUL GONZALEZ
FERNANDEZ LUCIA SANCHEZ

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/534; A61F-013/534; D04H-003/03

Family 99/200 - FAMPAT - ©Questel

Earliest priority number

US08/178,686

Application number

EP96907000
JP51857695
BR9606739
JP52172696
CA2208424
VN000622
HK98103495
DE69603701
KR19970074671
GR990402425T
DK96907000T
TW87207830U
ES96907000T
AT96907000T
AU1597795
HU9802065
CO96000739
MX9602692
KR19970704671
CN96192167
TR9700620T
CZ210797
MX9705096
NO973182
FI972912
AR10093696
PE00001696
US08/178,686
EP95907976
WOUS96/000085
AU5019596
ZA9600135
WOUS95/000085
CA2180465

Publication numbers

EP0802776
JP3335360
BRPI9606739
JP3205342
CA2208424
VN0001437
HK1004106

HK1004106
DE69603701
KR100244613
GR3031324
DK0802776
TW374314
ES2134600
DE69603701
AT183069
EP0802776
AU707926
KR19990046157
HU9802065
JPH10512164
CO4650272
JPH10507439
MX9602692
KR19980701282
CN1176591
TR199700620
CZ210797
BR9606739
BRPI9606739
MX9705096
EP0802776
NO973182
FI972912
AR000700
FI972912
NO973182
PE8897
US5602109
EP0739169
WO96/21408
AU5019596
ZA9600135
WO96/21408
CA2208424
AU1597795
WO95/18547
CA2180465

Questel unique family ID (FAN)

60051889

Family publication details

EP0802776	B2	2005-01-26	EP-802776
JP3335360	B2	2002-10-15	JP3335360
BRPI9606739	B1	2002-04-30	BR9606739
JP3205342	B2	2001-09-04	JP3205342



CA2208424	C	2001-04-24	CA2208424
VN0001437	B	2000-09-25	VN---1437B
HK1004106	A1	2000-07-07	HK1004106
HK1004106	A1	2000-07-07	HK1004106
DE69603701	T2	2000-03-16	DE69603701
KR100244613	B1	2000-02-15	KR100244613
GR3031324	T3	1999-12-31	GR3031324
DK0802776	T3	1999-12-13	DK-802776T
TW374314	U	1999-11-11	TW-374314U
ES2134600	T3	1999-10-01	ES2134600
DE69603701	D1	1999-09-16	DE69603701
AT183069	T	1999-08-15	ATE183069
EP0802776	B1	1999-08-11	EP-802776
AU707926	B2	1999-07-22	AU-707926
KR19990046157	A	1999-07-05	KR19990046157
HU9802065	A2	1999-03-29	HU9802065
JPH10512164	A	1998-11-24	JP10512164
CO4650272	A1	1998-09-03	CO4650272A1
JPH10507439	A	1998-07-21	JP10507439
MX9602692	A	1998-06-30	MX9602692
KR19980701282	A	1998-05-15	KR19987001282
CN1176591	A	1998-03-18	CN1176591
TR199700620	T1	1998-01-21	TR199700620
CZ210797	A3	1998-01-14	CZ9702107
BR9606739	A	1997-12-30	BR9606739
BRPI9606739	A1	1997-12-30	BRPI9606739
MX9705096	A	1997-10-31	MX9705096
EP0802776	A2	1997-10-29	EP-802776
NO973182	L	1997-09-10	NO-973182
FI972912	A	1997-09-09	FI9702912
AR000700	A1	1997-08-06	AR----700
FI972912	A0	1997-07-09	FI9702912
NO973182	D0	1997-07-09	NO9703182
PE8897	A1	1997-05-05	PE9700088
US5602109	A	1997-02-11	US5602109
EP0739169	A1	1996-10-30	EP-739169
WO96/21408	A3	1996-09-12	WO9621408
AU5019596	A	1996-07-31	AU9650195
ZA9600135	B	1996-07-30	ZA9600135
WO96/21408	A2	1996-07-18	WO9621408
CA2208424	A1	1996-07-18	CA2208424
AU1597795	A	1995-08-01	AU9515977
WO95/18547	A1	1995-07-13	WO9518547
CA2180465	A1	1995-07-13	CA2180465

Earliest priority date

1994-01-10

Application dates

1994-01-10

1995-01-05
1995-01-05
1995-01-05
1995-01-05
1995-01-05
1996-01-09
1996-01-10
1996-01-10
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1997-07-09
1997-07-09
1997-07-10
1998-04-24
1999-09-24

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2005-01-26
2002-10-15
2002-04-30
2001-09-04
2001-04-24
2000-09-25
2000-07-07
2000-07-07
2000-03-16
2000-02-15
1999-12-31
1999-12-13
1999-11-11
1999-10-01
1999-09-16

1999-08-15
1999-08-11
1999-07-22
1999-07-05
1999-03-29
1998-11-24
1998-09-03
1998-07-21
1998-06-30
1998-05-15
1998-03-18
1998-01-21
1998-01-14
1997-12-30
1997-12-30
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1997-09-10
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1995-08-01
1995-07-13
1995-07-13

Grant dates

(EP-802776)
1999-08-11
(US5602109)
1997-02-11
(DE69603701)
1999-09-16
(JP3205342)
2001-09-04
(JP3335360)
2002-10-15
(ZA9600135)
1996-07-30
(AU-707926)
1999-07-22
(ATE183069)

1999-08-15
(ES2134600)
1999-10-01
(DK-802776T)
1999-12-13
(GR3031324)
1999-12-31
(KR100244613)
2000-02-15
(KR100244613)
2000-02-15
(HK1004106)
2000-07-07
(VN---1437B)
2000-09-25
(CA2208424)
2001-04-24
(BR9606739)
2002-04-30

Title

(EP-739169)
Method of enhancing the human immune system

Abstract

(EP0739169)
An improved enteral nutritional formula containing nucleotide equivalents (RNA, mono-, di- and triphosphate nucleotides, nucleosides and adjuncts such as activated sugars) at a level of at least 10 mg/100 Kcal(kilocalorie) of formula is disclosed. The formula comprises carbohydrates, lipids, proteins, vitamins and minerals and four (4) nucleotide equivalents at specific levels and ratios. The invention also discloses novel methods of production and analytical techniques. This invention also provides a dietary formula that enhances the immune system and alleviates diarrhea.

Current assignees

ABBOTT LABORATORIES
MIRAE PRECISION
PROCTER & GAMBLE

Inventors

MASOR MARC LEIF
HILTY MILO DUANE

Advantages / Previous drawbacks

(EP0802776)
Thus, it would be advantageous to provide an absorbent article having a waist feature that provides improved fit, reduced leakage, and enhanced wearer comfort.
Such an embodiment is useful as a training pant, a pull-on diaper or the like.
The bolstering waist feature of the present invention is able to compensate for this loss of contractive force because its thickness increases (i.e. caliper increases) as it becomes saturated with aqueous body liquids.
Examples of other causes of reduced lateral tension in the waist region include stretching of nonelastic elements in the waist and slippage of the fastening system 36.
The following modifications to this test method should be made: 1) Samples are conditioned to and testing conducted at 88 F (31,1 C), 55% relative humidity. 2) The test samples comprise sections of absorbent articles rather than of fabrics. 3) The flex ural rigidity is measured only in the longitudinal direction since that is the direction of bending which results in loss of fit. 4) All samples are tested so they bent toward outer surface 64 since that is the direction of bending when a diaper folds

over. 5) Samples are tested in both the dry state and when saturated. 6) Cantilever bending value equals the length of overhang as defined in ASTM method D 1388.

When absorbent articles are worn, loss of stiffness in the waist area, particularly due to the repeated application of the forces encountered during normal wear, can cause the core materials to slump down, away from the waist regions of the absorbent article and into the crotch regions so the contribution of the core materials to stiffness in the waist regions is substantially eliminated.

Independent claims

(EP0802776)

1. An absorbent article (20)for fitting about a wearer's body, the absorbent article having longitudinal (100) and lateral (02) centerlines, which respectively define a longitudinal and a lateral direction, longitudinal edges (54), a crotch region (46), and first (42) and second (44) waist regions, the absorbent article comprising: an absorbent core (28) comprising at least a fluid redistribution component which is capable of transporting aqueous body liquids from said crotch region to at least one of said waist regions; an outer cover joined to said absorbent core and having longitudinal sides and lateral ends which define the perimeter of said outer cover preferably said outer cover comprises a liquid impervious backsheet (26) and a liquid pervious topsheet (24) joined to said backsheet about said perimeter, said absorbent core being positioned between said topsheet and said backsheet; means for creating lateral tension through at least a portion of said waist regions disposed in said waist regions, preferably said means for creating lateral tension comprises a fastening system (36), and said absorbent article further comprises a bolstering waist feature (38) for reducing loss of fit for said absorbent article that is positioned in at least one of said waist regions, preferably in both of said waist regions said bolstering waist feature being in effective fluid communication with said absorbent core, characterized by said bolstering waist feature having a caliper growth ratio of at least 3.0:1, preferably said bolstering waist feature being an extension of said fluid redistribution component of said absorbent core.

Object of invention

(EP0802776)

Therefore, it is an object of the present invention to provide an absorbent article having sustained dynamic fit about the waist of the wearer during use.

It is a further object of the present invention to provide an absorbent article having a unique bolstering waist feature that provides sustained dynamic fit and improved resistance to leakage during use.

It is a still further object of the present invention to provide an absorbent article having a unique bolstering waist feature which reduces sagging, gapping, or rollover at the front of the diaper as well as overall sliding/slipping of the absorbent article or the absorbent core during use.

The present invention provides absorbent articles such as disposable diapers, incontinent briefs, training pants and the like that have a unique bolstering waist feature that improves the dynamic fit of the absorbent article and reduces the risk of premature waist leakage.

The present invention provides absorbent articles such as disposable diapers, incontinent briefs, training pants and the like that have a unique bolstering waist feature that improves the dynamic fit of the absorbent article and reduces the risk of premature waist leakage.

The present invention relates to absorbent articles such as diapers, training pants, incontinent briefs, and the like, and more particularly, to absorbent articles having a waist feature providing dynamic fit about the wearer throughout the wear cycle of the absorbent article as well as improved containment characteristics for the absorbent article.

The present invention relates to absorbent articles such as diapers, training pants, incontinent briefs, and the like, and more particularly, to absorbent articles having a waist feature providing dynamic fit about the wearer throughout the wear cycle of the absorbent article as well as improved containment characteristics for the absorbent article.

IPC - International classification

A23C-009/152; A23L-001/29; A23L-001/30; A23L-001/305; A41B-009/12; A61F-005/44; A61F-013/00; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/496; A61F-013/53; A61F-013/56; A61K-031/70; A61K-035/20; A61K-035/60; A61K-038/00; A61K-038/17; A61L-015/42; A61P-037/04

Family 100/200 - FAMPAT - ©Questel

Earliest priority number

EP94110798

Application number

CA2194364
US08/776,100
KR97700132T
AU2957495
JP50435995
MX9700329
KR19970700132
ZA9505755
WOUS95/008339
EP94110798

Publication numbers

CA2194364
CA2194364
US6103952
KR100256475
AU707067
JPH10502548
MX9700329
KR19970704393
KR970704393
ZA9505755
AU2957495
WO96/01607
CA2194364
EP0692230

Questel unique family ID (FAN)

80860853

Family publication details

CA2194364	C	2001-07-31	CA2194364
CA2194364	C	2001-07-31	CA2194364
US6103952	A	2000-08-15	US6103952
KR100256475	B1	2000-05-15	KR100256475
AU707067	B2	1999-07-01	AU-707067
JPH10502548	A	1998-03-10	JP10502548
MX9700329	A	1998-01-31	MX9700329
KR19970704393	A	1997-09-06	KR19977004393
KR970704393	A	1997-09-06	KR19970704393
ZA9505755	B	1996-04-09	ZA9505755
AU2957495	A	1996-02-09	AU9529574
WO96/01607	A1	1996-01-25	WO9601607
CA2194364	A1	1996-01-25	CA2194364
EP0692230	A1	1996-01-17	EP-692230

Earliest priority date

1994-07-12

Application dates

1994-07-12
1995-06-30
1995-06-30
1995-06-30
1995-06-30
1995-06-30
1995-06-30
1995-07-11
1997-01-10
1997-01-10

Publication dates

2001-07-31
2001-07-31
2000-08-15
2000-05-15
1999-07-01
1998-03-10
1998-01-31
1997-09-06
1997-09-06
1996-04-09
1996-02-09
1996-01-25
1996-01-25
1996-01-17

Grant dates

(US6103952)
2000-08-15
(ZA9505755)
1996-04-09
(AU-707067)
1999-07-01
(KR100256475)
2000-05-15
(KR100256475)
2000-05-15
(CA2194364)
2001-07-31

Title

(EP-692230)
Absorbent article with back half having higher basis capacity and a barrier

Abstract

(EP0692230)
An absorbent article comprises a relatively high absorbent capacity in the back half section and a liquid barrier means between the transverse center line of the core and the back waist edge of the backsheet. Hereby leakage from the back of the absorbent aritcle is reduced and the product is especially adapted for bedridden incontinent users ranging from walking infants to adults. <MATH>

Current assignees

PROCTER & GAMBLE

Inventors

BEWICK-SONNTAG CHRISTOPHER PHI

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COSTEA HELENE KARIN

DIVO MICHAEL NMN

SCHOENE RAINER WALTER MAX

Advantages / Previous drawbacks

(EP0692230)

It was found that absorbent gelling materials having a Gel Layer Permeability of at least 4x10 cm /s/g can advantageously be used in the layer 71.

High gel strength absorbent gelling material particles will undergo relatively little deformation upon being wetted such that the gelling material does not flow into the capillary void space of the fibrous material and causes undesired gel blocking. However, the amount of absorbent gelling material cannot be increased at will, as at higher concentrations gel blocking will occur.

Independent claims

(EP0692230)

1. Absorbent article (1) comprising a liquid permeable topsheet (24), a liquid impermeable backsheet (26) and an absorbent core (3) interposed between the topsheet and the backsheet, the backsheet comprising a perimeter having a front waist edge (39) and a backwaist edge (40), the core (3) comprising a layer (64) of absorbent material which layer (64) comprises: - a perimeter having two longitudinal edges (13,13'), a front transverse edge (7) and a back transverse edge (9), - a transverse centerline (15) located midway between the front transverse edge (7) and the back transverse edge (9), - a front half section (17) located between the transverse centerline (15) and the front transverse edge (7) and - a back half section(19) located between the transverse centerline (15) and the back transverse edge (9), characterised in that the average basis capacity of the absorbent material located in the front half section (17) of the layer (64) is lower than the average basis capacity of the absorbent material located in the back half section (19) of the layer (64), a liquid barrier means (37,38,39,43,55) being located between the transverse centerline (15) of the layer (64) and the backwaist edge (40) of the backsheet (26) to prevent liquids from leaking to the backwaist edge (40) of the backsheet (26).

Object of invention

(EP0692230)

It is an object of the present invention to provide an absorbent product which provides reduced leakage when used in a lying down position.

It is another object of the invention to provide an absorbent article that is especially adapted for users ranging from walking infants to adults, especially women users, when confined to a predominantly lying down position.

The invention relates to an absorbent article comprising a liquid permeable topsheet, a liquid impermeable backsheet and an absorbent core comprising a layer of absorbent material, interposed between the topsheet and the backsheet, the backsheet comprising a perimeter having a front waist edge and a backwaist edge, the layer of absorbent material comprising: a perimeter having two longitudinal edges, a front transverse edge and a back transverse edge, a transverse centerline located midway between the front transverse edge and the back transverse edge, a front half section located between the transverse centerline and the front transverse edge and a back half section located between the transverse centerline and the back transverse edge.

It was found that layers having a wet compressibility of at least 5cm g and a drip capacity of at least 10g g can be successfully used in acquisition/distribution layer 69.

It is an object of the present invention to provide an absorbent product which provides reduced leakage when used in a lying down position.

It is an object of the present invention to provide an absorbent product which provides reduced leakage when used in a lying down position.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/53; A61F-013/53; B32B-003/00; B32B-005/18

Family 101/200 - FAMPAT - ©Questel

Earliest priority number

SE9704490

Application number

SE9704490

Publication numbers

SE520411

SE9704490

SE9704490

Questel unique family ID (FAN)

36863003

Family publication details

SE520411	C2	2003-07-08	SE-520411
SE9704490	L	1999-06-04	SE9704490
SE9704490	D0	1997-12-03	SE9704490

Earliest priority date

1997-12-03

Application dates

1997-12-03

Publication dates

2003-07-08

1999-06-04

1997-12-03

Grant dates

(SE-520411)

2003-07-08

Title

(SE-520411)

Hygiene article, e.g. nappy

Abstract

(SE9704490)

An absorbent article (1) with two side edges (11, 12) extending in the length direction on either side of its central length axis (22) and two end edges (13, 14) extending in the cross-direction, comprises an absorbent layer (4) with corresponding side and end edges (11'-14') enclosed between liquid-permeable and impermeable layers (2, 3). Elongated elastic members (23, 24, 27, 28) are provided along the side edges of the article. A flexible side flap formed by parts of at least one of the liquid-permeable and impermeable layers extends along both side edges of the article between the side edges of the article and absorbent layer. Each of the article and absorbent layer side edges includes an inwards-curved segment to stretch the article and absorbent layer slightly in the cross-direction. The elastic members comprise first elastic bodies (23, 24) in each side flap along the curved segments of the article side edges, and second elastic bodies (27, 28) along the curved segments of the absorbent layer side edges, all of these segments having approximately the same degree of curvature. The elastic bodies have a degree of curvature corresponding to that of the corresponding side edges.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

ADAMSSON CHRISTINA

HERMANSSON KENT

IPC - International classification

A61F; A61F-013/15; A61F-013/494

Family 102/200 - FAMPAT - ©Questel

Earliest priority number

US09/216,545

Application number

JP2000589124
DE69925934T
EP99966244
KR20017007604
US09/706,294
PL36473299
TW92220096U
AU2183500
ARP990106376
ZA200103934
CO99078789
BR9915792
WOUS99/029706

Publication numbers

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DE69925934
EP1139957
KR100623132
DE69925934
US6972012
DE69925934
EP1139957
PL364732
TW588646
AU757271
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JP2002532196
AR021673
ZA200103934
CO5111014
KR20010101269
EP1139957
BR9915792
BRPI9915792
AU2183500
WO00/37010

Questel unique family ID (FAN)

71159

Family publication details

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DE69925934	T3	2009-07-30	DE69925934
EP1139957	B2	2009-03-18	EP1139957
KR100623132	B1	2006-09-12	KR100623132
DE69925934	T2	2006-05-11	DE69925934

US6972012	B1	2005-12-06	US6972012
DE69925934	D1	2005-07-28	DE69925934
EP1139957	B1	2005-06-22	EP1139957
PL364732	A1	2004-12-13	PL99364732
TW588646	U	2004-05-21	TW-588646U
AU757271	C	2003-09-18	AU-757271
AU757271	B2	2003-02-13	AU-757271
JP2002532196	A	2002-10-02	JP2002532196
AR021673	A1	2002-07-31	AR--21673
ZA200103934	B	2002-05-15	ZA200103934
CO5111014	A1	2001-12-26	CO5111014A1
KR20010101269	A	2001-11-14	KR20010101269
EP1139957	A1	2001-10-10	EP1139957
BR9915792	A	2001-08-21	BR9915792
BRPI9915792	A1	2001-08-21	BRPI9915792
AU2183500	A	2000-07-12	AU200021835
WO00/37010	A1	2000-06-29	WO200037010

Earliest priority date

1998-12-18

Application dates

1999-12-13
1999-12-14
1999-12-15
1999-12-15
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1999-12-15
1999-12-16
2000-11-03
2001-05-15
2001-06-16

Publication dates

2009-10-02
2009-07-30
2009-03-18
2006-09-12
2006-05-11
2005-12-06
2005-07-28
2005-06-22
2004-12-13
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2002-07-31

2002-05-15
2001-12-26
2001-11-14
2001-10-10
2001-08-21
2001-08-21
2000-07-12
2000-06-29

Grant dates

(EP1139957)
2005-06-22
(US6972012)
2005-12-06
(DE69925934)
2005-07-28
(JP4381611)
2009-10-02
(ZA200103934)
2002-05-15
(AU-757271)
2003-02-13
(KR100623132)
2006-09-12

Title

(EP1139957)
Pant-like disposable absorbent articles with an easy opening feature

Abstract

(EP1139957)
A pant-like, refastenable, disposable absorbent article (20) includes an absorbent chassis (28) and a pair of opposed side panels (48). The absorbent chassis defines a pair of laterally opposed side edges (30) and a pair of longitudinally opposed waist edges (32). The side panels (48) extend between the side edges (30) of the absorbent chassis to define a waist opening and a pair of leg openings in the pant-like disposable absorbent article (20). Each of the opposed side panels (48) defines a first side margin (52) which is permanently attached to the side edge (30) of the absorbent chassis in a back waist region (24) of the absorbent article to provide a permanent joint (76). Each of the opposed side panels further defines a second side margin (50) opposite the first side margin (52) which is refastenably attached to the side edge of the absorbent chassis in the front waist region of the absorbent article to provide a refastenable joint (78).

Current assignees

KIMBERLY CLARK
KIMBERLY CLARK WORLDWIDE

Inventors

ROESSLER THOMAS HAROLD
SUPRISE JODY DOROTHY
VOGT ROBERT EUGENE
BLENKE TIMOTHY JAMES

Advantages / Previous drawbacks

(EP1139957)
That is, there remains a need for absorbent articles which conform to the wearer to effectively contain bodily exudates, which are capable of being pulled up and down over the hips and buttocks of the wearer without opening, which are readily secured about and removed from the wearer in a convenient and clean manner and which allow easy inspection by the

caregiver to assist in determining whether the article is soiled.

Moreover, there is a need for improved methods of reliably and consistently making such pant-like disposable absorbent articles.

Moreover, it is desirable that such absorbent articles, after being soiled, can be removed from the wearer in a convenient and clean manner without undesirably soiling the caregiver or surrounding area such as the clothes of the wearer.

The present invention advantageously provides pant-like, refastenable disposable absorbent articles which include an easy opening feature and methods of making the same.

For example, the side panels have been difficult to tear when attempting to remove the article from the waist of the wearer instead of pulling the article down over the hips of the wearer.

In response to the difficulties and problems discussed above, new pant-like disposable absorbent articles which have an easy opening feature and methods of making the same have been discovered.

Independent claims

(EP1139957)

1. A pant-like, prefastened, refastenable disposable absorbent article (20) which defines a front waist region (22), a backwaist region (24), a crotch region (26) which extends between and connects said waist regions, a longitudinal direction (38) and a lateral direction (40), said absorbent article comprising: a) an absorbent chassis (28) which defines an exterior surface (36), an interior surface (34) opposite said exterior surface, a pair of laterally opposed side edges (30) and a pair of longitudinally opposed waist edges (32); b) a pair of opposed elastic back panels (72) which are respectively permanently attached to said side edges (30) of said absorbent chassis (28) in said backwaist region (24) of said absorbent article; c) a pair of opposed elastic front panels (70) which are respectively refastenably attached to said side edges (30) of said absorbent chassis (28) in said front waist region (22) of said absorbent article to provide a refastenable joint (78) wherein said front panel (70) and said backpanel (72) on each side edge (30) of said absorbent chassis are permanently connected together along a sideseam (74) to define a waist opening and a pair of leg openings and provide said pant-like, prefastened, refastenable, disposable absorbent article; d) a fastener (62) located on each of said front panels (70) which is refastenably engaged with said exterior surface (36) of said absorbent chassis (28) in said front waist region (22) to provide said refastenable joint (78); and e) a releasable bond (64) located on each of said front panels (70) which releasably bonds each front panel (70) to said respective side edges of said absorbent chassis in said front waist region (22) to assist in maintaining said pant-like, prefastened disposable absorbent article in the prefastened condition.

11. A process for manufacturing a pant-like, prefastened, refastenable, disposable absorbent article (20) which defines a front waist region (22), a backwaist region (24), a crotch region (26) which extends between and connects said waist regions, an absorbent chassis (28) which defines a pair of opposed side edges (30) and a pair of opposed waist edges (32), the process comprising: a) providing a continuous web of interconnected absorbent chassis (28); b) permanently attaching a pair of laterally opposed elastic back panels (72) to said side edges of said absorbent chassis in said backwaist region to provide a permanent joint (76); c) refastenably attaching a pair of laterally opposed elastic front panels (70) to said side edges of said absorbent chassis in said front waist region of said absorbent article to provide a refastenable joint (78), wherein refastenably attaching includes refastenably engaging a fastener (62) located on side margins (50) of said front panels (70) to said exterior surface of said absorbent chassis in said front waist region to provide said refastenable joint (78) and further includes releasably bonding said side margins (50) of said front panels (70) to said side edges (30) of said absorbent chassis (28) in said front waist region (22) to assist said fasteners (62) in providing said refastenable joints (78); d) selectively cutting said continuous web of interconnected absorbent chassis (28) into discrete absorbent articles; e) folding each of said discrete absorbent articles about a fold line extending in a lateral direction through said crotch region of said article thereby positioning said front panels (70) and said back panels (72) in a facing relationship; and f) connecting said front panels and said back panels together along a pair of laterally opposed side seams (74) to define a waist opening and a pair of leg openings and provide said pant-like, refastenable, disposable absorbent article.

Object of invention

(EP1139957)

In particular, the present invention provides pant-like disposable absorbent articles which are capable of being reliably pulled up or down over the hips of the wearer to assist in the toilet training of the wearer similar to conventional training pants.

The present invention relates to disposable absorbent articles which are adapted to contain body exudates.

In accordance with the present invention there is provided a pant-like, refastenable, disposable absorbent article as claimed in claim 1.

In particular, the present invention provides pant-like disposable absorbent articles which are capable of being reliably pulled up or down over the hips of the wearer to assist in the toilet training of the wearer similar to conventional training pants.

The present invention relates to disposable absorbent articles which are adapted to contain body exudates.

More particularly, the present invention relates to pant-like disposable absorbent articles having an easy opening feature and methods of making the same.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/56; A61F-013/62

Family 103/200 - FAMPAT - ©Questel

Earliest priority number

US08/386,588

Application number

JP52431496
KR19970705512
DE69618175
EP96906236
TW87218892U
AU4968596
MX9705840
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PE00008896
AR10134096
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SV1996000011
GB9602706
ZA9600783
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CA2210689

Publication numbers

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KR100420094
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EP0808146
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JPH10513380
KR19980702117
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AR000925
US5649918
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GB2297683
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GB9602706

Questel unique family ID (FAN)

60046258

Family publication details

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EP0808146	B1	2001-12-19	EP-808146
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CA2210689	A1	1996-08-15	CA2210689
FR2730407	A1	1996-08-14	FR2730407
GB2297683	A	1996-08-14	GB2297683
GB9602706	D0	1996-04-10	GB9602706

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1995-02-10

Application dates

1995-02-10
1996-02-01
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1996-08-14
1996-08-14
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1997-07-22
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1997-11-07
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2002-01-31
(GB2297683)
1997-06-11
(JP3922724)
2007-03-02
(ZA9600783)
1996-09-05
(AU-703450)
1999-03-25
(KR100420094)

2004-05-03

Title

(EP-808146)

Absorbent article having containment gaskets

Abstract

(EP0808146)

Disclosed is a distinctive absorbent article which includes a pair of stretchable leg containment gaskets (38). The leg containment gaskets include a bodyfacing surface (82) which extends along a width of the leg containment gaskets and which is adapted to be in a contacting relationship with a wearer's body when is use. An outboard edge (68) of each of the leg containment gaskets is attached to the longitudinal side portions of the absorbent article along an attached width (86). An inboard edge (66) of each of the leg containment gaskets remains unattached from said longitudinal side portions in at least the crotch portion of the absorbent article along an unattached width (84). The attached width of each of the leg containment gaskets in the crotch portion of the absorbent article is at least about 30 percent of the width of the leg containment gasket. The absorbent article may also include a pair of stretchable waist containment gaskets (40, 42). In addition, the absorbent article may include at least one waist flap (100,, 102) to provide additional void volume to help contain bodily exudates.

Current assignees

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KIMBERLY CLARK WORLDWIDE

Inventors

SCHLEINZ ALAN FRANCIS

Advantages / Previous drawbacks

(EP0808146)

Moreover, there is a need for an absorbent article which is capable of maintaining sufficient void volume under typical loading conditions.

The present invention advantageously provides an absorbent article which includes leg containment gaskets which are capable of efficiently containing bodily exudates while providing a conforming, comfortable fit about the wearer.

Such void volume is desirable to provide containment of body exudates and, in particular, containment of solid and semisolid body exudates.

In response to the difficulties and problems discussed above, a new absorbent article which has leg containment gaskets and sufficient void volume to contain body exudates has been discovered.

Independent claims

(EP0808146)

1. An absorbent article which includes a front portion (22), a rear portion (24), a crotch portion (26) which extends between and connects said front portion (22) to said rear portion (24) and a pair of longitudinal side portions (28), said absorbent article comprising: a) an outer cover (32) b) a body side liner (30) which is superposed on said outer cover (32); c) an absorbent core (34) which is located between said outer cover (32) and said body side liner (30) and which includes a pair of longitudinal edges (54); and d) a pair of leg containment gaskets (38), each of which includes an inboard edge (66), an outboard edge (68), a width (70), a thickness (72), a body facing surface (82) and at least one elongated elastic member (64) which is configured to gather said leg containment gasket when relaxed, wherein said outboard edge (68) is attached to said longitudinal side portions (28) of said absorbent article along an attached width (86) and said inboard edge (66) remains unattached from said longitudinal side portions (28) in at least said crotch portion (26) of said absorbent article along an unattached width (84) and wherein said inboard edge (66) of each of said leg containment gaskets (38) is configured to provide a channel (74,76) to contain body exudates, characterised in that said attached width of each of said leg containment gaskets (38) in said crotch portion (26) of said absorbent article is at least about 60 percent of said width of each of said leg containment gaskets (38) and wherein each of said leg containment gaskets (38) has a Gurley Stiffness of at least about 50 milligrams.

Object of invention

(EP0808146)

The present invention relates to an absorbent article which includes containment gaskets.
The invention more particularly relates to an absorbent article which uses a composite material to provide containment gaskets which provide a seal against the body of a wearer to prevent leakage of body exudates.
The invention also relates to an absorbent article which includes such containment gaskets and at least one waist flap to provide a barrier and additional void volume to contain body exudates.
The present invention provides an absorbent article which includes leg containment gaskets which are configured to efficiently contain body exudates while providing a conforming, comfortable fit about the wearer.
In another preferred embodiment, the present invention provides an absorbent article which includes a front portion, a rear portion, a crotch portion which extends between and connects the front portion to the rear portion and a pair of longitudinal side portions.
The present invention provides an absorbent article which includes leg containment gaskets which are configured to efficiently contain body exudates while providing a conforming, comfortable fit about the wearer.
The present invention relates to an absorbent article which includes containment gaskets.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/53; A61F-013/53; A61F-013/56

Family 104/200 - FAMPAT - ©Questel

Earliest priority number

SE9603771

Application number

SE9603771

Publication numbers

SE517864
SE9603771
SE9603771

Questel unique family ID (FAN)

36860566

Family publication details

SE517864	C2	2002-07-23	SE-517864
SE9603771	L	1998-04-16	SE9603771
SE9603771	D0	1996-10-15	SE9603771

Earliest priority date

1996-10-15

Application dates

1996-10-15

Publication dates

2002-07-23
1998-04-16
1996-10-15

Grant dates

(SE-517864)
2002-07-23

Title

(SE-517864)
Surface material for hygiene article

Abstract

(SE9603771)
A surface material (2) for absorbent hygiene articles such as nappies, sanitary towels or incontinence pads, comprises a layer of hydrophobic material containing a pattern of inwards pointing cavities (4) arranged in parallel rows across the width

of the material, which extend in the material length direction. The cavities are provided with holes (5) oriented in the width direction, which lead to the inside surface of the surface material. The areas in between or outside the rows of cavities are provided with outwards pointing ridges (6) having round tips. The machinery for making this surface material is also claimed, comprising a counter-roll with rows of cog-like profiles extending around its surface, a cutting device for making length direction incisions in a web of material supported by the roll and a press roll positioned downstream of the cutting device with circumferential direction ribs that press into the gaps between the cogs. The counter-roll also has inwards facing grooves extending in the circumferential direction between the rows of cogs that engage with the ribs on the press roll.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

HELMFRIDSSON BROR-INGE

IPC - International classification

A61F; A61F-013/15; A61F-013/511

Family 105/200 - FAMPAT - ©Questel

Earliest priority number

SE9602689

Application number

SE9602689

Publication numbers

SE511978

SE9602689

SE9602689

Questel unique family ID (FAN)

36853793

Family publication details

SE511978	C2	2000-01-10	SE-511978
SE9602689	L	1998-01-09	SE9602689
SE9602689	D0	1996-07-08	SE9602689

Earliest priority date

1996-07-08

Application dates

1996-07-08

Publication dates

2000-01-10

1998-01-09

1996-07-08

Grant dates

(SE-511978)

2000-01-10

Title

(SE-511978)

Urine absorbent inlay for e.g. nappy or incontinence pad

Abstract

(SE9602689)

A urine-collecting inlay (3) with a flat triangular shape is designed to be placed over the genitals in an adsorbent article such as a nappy or incontinence pad. It comprises a first, second and upper sections (1, 2, 25) facing upwards towards the wearer`s stomach, whilst a lower section (26) faces downwards towards the limbs. The first and second wing sections (1,

2) are connected along a line with at least one continuously or intermittently curved section to form the peak-shaped top section. The bowl-shaped lower section and a hole (30) passing through it in are located in the bottom of the inlay so that the line joining the two wings passes through the hole. The shape of the wings allows them to be folded together about the line joining them so that a flat inlay is formed.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

HANSSON ROY

IPC - International classification

A61F; A61F-013/15

Family 106/200 - FAMPAT - ©Questel

Earliest priority number

SE9601688

Application number

SE9601688

Publication numbers

SE510509

SE9601688

SE9601688

Questel unique family ID (FAN)

36851982

Family publication details

SE510509	C2	1999-05-31	SE-510509	
SE9601688	L	1997-11-04	SE9601688	
SE9601688	D0	1996-05-03	SE9601688	

Earliest priority date

1996-05-03

Application dates

1996-05-03

Publication dates

1999-05-31

1997-11-04

1996-05-03

Grant dates

(SE-510509)

1999-05-31

Title

(SE-510509)

Hygiene article, e.g. incontinence pad, sanitary towel or panty liner

Abstract

(SE9601688)

An absorbent product (1) used as eg. incontinence pad, sanitary towel or panty liner and designed to be supported by the edge regions in an underwear garment contains an absorption layer (4) sandwiched between a liquid permeable layer (2) and a liquid impermeable layer (3). At least one tab (20, 21) attached to one of the length sides (16, 17) of the product is designed to be folded around the garment leg hole edges.The tab material contains at least one area of weakness (26) with a lower tear strength than the rest of the tab to form a tear line used to at least partially detach the tab from the length side of the product.

Current assignees

SCA HYGIENE PRODUCTS

Inventors

STORM HANSSEN ANNETTE

TRAENK BIBBI

IPC - International classification

A61F; A61F-013/15

Family 107/200 - FAMPAT - ©Questel

Earliest priority number

SE9601661

Application number

SE9601661

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SE9601661

Questel unique family ID (FAN)

36848367

Family publication details

SE507051	C2	1998-03-23	SE-507051
SE9601661	L	1997-10-31	SE9601661
SE9601661	D0	1996-04-30	SE9601661

Earliest priority date

1996-04-30

Application dates

1996-04-30

Publication dates

1998-03-23

1997-10-31

1996-04-30

Grant dates

(SE-507051)

1998-03-23

Title

(SE-507051)

Cover layer for hygiene article, e.g. sanitary towel, incontinence pad or nappy

Abstract

(SE9601661)

A liquid permeable cover layer (1) for hygiene articles has a series of interspaced elongated strips of material (2) distributed over at least its central surface area. The strips are folded into wave shapes to form hills (3) and valleys (4) on both sides. The hills form the contact surface of the article with the person wearing it. Also claimed is the preparation of this layer, comprising: (i) folding a first layer of material to form a series of parallel pleats with hills and valleys; (ii) folding a second layer of liquid permeable material to form similar pleats extending in the opposite z-direction; (iii) placing the second layer on top of the first layer with the two sets of pleats at right angles to each other and the valleys in the first layer attached to the top side of the second layer; (iv) cutting the first layer along lines running parallel to and in between the top edges of the pleats in the second layer; and (v) eliminating pleats in the second layer.

Current assignees

MOELNLYCKE HEALTH CARE

Inventors

HANSSON ROY

ARESKOUG STEFAN

IPC - International classification

A61F; A61F-013/15

Family 108/200 - FAMPAT - ©Questel

Earliest priority number

SE9504687

Application number

SE9504687

Publication numbers

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SE9504687

SE9504687

Questel unique family ID (FAN)

36849521

Family publication details

SE508204	C2	1998-09-14	SE-508204
SE9504687	L	1997-06-30	SE9504687
SE9504687	D0	1995-12-29	SE9504687

Earliest priority date

1995-12-29

Application dates

1995-12-29

Publication dates

1998-09-14

1997-06-30

1995-12-29

Grant dates

(SE-508204)

1998-09-14

Title

(SE-508204)

Absorbent product worn inside underwear, e.g. sanitary towel, panty liner or incontinence pad

Abstract

(SE9504687)

Absorbent product, eg. sanitary towel, panty liner or incontinence pad, with an absorption layer (4) between liquid permeable and impermeable surface layers (2, 3). The absorption layer has two end edges (6, 7) extending in the width direction of the product, two side edges (8, 9) extending in the length direction, two end sections (10, 11), central section (12) between the two end sections, and two wings (14, 15) projecting out from the side edges on either side of the central section. Each of the wings contains elastic regions (20) running parallel to the absorption layer side edges, used to pull both of the wings and both ends of the absorption layer towards the central section.

Current assignees

MOELNLYCKE HEALTH CARE

Inventors

SAMUELSSON ANN

IPC - International classification

A61F; A61F-013/15; A61F-013/58

Family 109/200 - FAMPAT - ©Questel

Earliest priority number

US09/034,681

Application number

EP02778509
KR20047008510
US11/906,713
JP2003552190
MXPA04005253
ARP030100063
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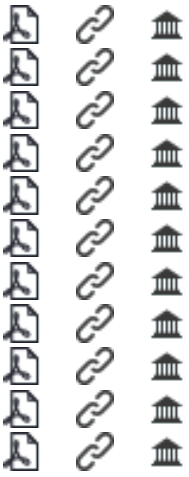
Questel unique family ID (FAN)

43159451

Family publication details

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EP1455707	A2	2004-09-15	EP1455707
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US6404878	B1	2002-06-11	US6404878
US6160883	A	2000-12-12	US6160883



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1998-03-04

Application dates

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2001-12-18
2002-10-09
2002-10-09
2002-10-09
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2003-01-10
2004-06-04
2007-10-03

Publication dates

2013-01-16
2009-11-17
2008-12-23
2006-01-19
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2003-06-30
2003-06-26
2003-06-26
2002-06-11

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2000-12-12

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2004-01-27

(US7469046)

2008-12-23

(KR100927511)

2009-11-17

Title

(EP1455707)

Continuous biaxially stretchable absorbent with low tension

Abstract

(EP1455707)

A dynamic-fitting absorbent article that includes a liquid impermeable outer cover (42), a liquid permeable bodyside liner (44) in superimposed relation to the outer cover (42) and a continuous elastic absorbent core (28) disposed between the outer cover (42) and the bodyside liner (44). The continuous elastic absorbent core (28) can extend from about 80 to about 400 percent upon application of a force of from about 60 to about 325 grams. The continuous elastic absorbent core (28) can have a tension reducing geometry in the crotch section of the article. Additionally, the continuous elastic absorbent core can have a dry tensile strength and a wet tensile strength that is at least 95% of the dry tensile strength.

Current assignees

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Advantages / Previous drawbacks

(EP1455707)

Once the materials are selected for each component of the absorbent article, the materials must all work together to provide an article that is easy to apply, fits comfortably and performs its intended function.

Therefore, it is desirable to have the central and bulkiest component capable of elongating with the application of a relatively low force.

It can be desirable for the article to form some "memory" of the elongation during application and to not completely or nearly completely retract.

Otherwise, the absorbent article would be difficult to use or uncomfortable to wear.

difficult to

This workhorse component can be thick and bulky relative to the other components of the article.

The elastic absorbent cores of the invention also provide elongation without high tension; high tension, elastic components can make an absorbent article uncomfortable to wear and can affect the performance of the article.

Independent claims

(EP1455707)

1. A dynamic-fitting absorbent article comprising: a liquid impermeable, biaxially stretchable outer cover; a liquid permeable, biaxially stretchable body side liner in superimposed relation to the outer cover; and a continuous elastic absorbent core disposed between the outer cover and the body side liner; characterised in that: the continuous elastic absorbent core has a tension of from 60 to 325 grams when extended by 80% of an initial length; the continuous elastic absorbent core recovers no more than 80% of an original dimension upon relaxation of the extension force; the continuous elastic absorbent core includes less than 25% of an elastic material; the continuous elastic absorbent core has a dry tensile strength, and has a wet tensile strength that is at least 95% of the dry tensile strength; and the continuous elastic absorbent core has a tension reducing geometry in a crotch section of the absorbent core.

Object of invention

(EP1455707)

It has been found that the absorbent core 28 of the present invention is particularly useful when the width dimension in the crotch region 26 is from 2.5 to 12.7 centimeters (1.0 to 5.0 inches), desirably no more than 7.6 centimeters (3.0 inches) and more desirably no more than 5.1 centimeters (2.0 inches).

In a particular aspect of the invention, the containment flaps 56 extend along the entire length of the absorbent core 28 to better contain the body exudates.

According to the present invention there is provided a dynamic-fitting absorbent article as defined by claim 1.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/53; A61F-013/53; H04M-003/42; H04M-007/00; H04Q-003/00

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BR0316799
EP03752288
US12/110,079
KR20057009617
JP2004560290
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MXPA05005562
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AU2003270584
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BRPI0316799
EP1575470
US8207395
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JP4455342
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KR20050084006
AR042267
AU2003270584
WO2004/054489
US20040116885

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Family publication details

BRPI0316799	B1	2017-05-30	BR200316799
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BRPI0316799	A2	2012-06-26	BR200316799
KR101018503	B1	2011-03-03	KR101018503
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BR0316799	A	2005-11-01	BR200316799
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US20040116885	A1	2004-06-17	US20040116885

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2011-03-03
(BR200316799)
2017-05-30

Title

(EP1575470)
Absorbent core including folded substrate

Abstract

(EP1575470)
An absorbent core is provided including a substrate that performs at least one fluid handling function. At least a portion of at least one region of the substrate has been modified by aperturing, calendering, coating, creping, heating, printing stretching, or a combination thereof to impart at least one different fluid handling function. The substrate is folded to provide a plurality of panels wherein at least a portion of one panel corresponds to at least a portion of the modified region of the substrate. An absorbent article including the absorbent core and a process for making the absorbent core are also disclosed.

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Advantages / Previous drawbacks

(EP1575470)
The process may further include compressing, densifying, embossing, or shaping the folded absorbent core to provide a better body fit.
Despite all of these techniques there is still a need for an absorbent core that is thin, durable, structurally stable and performs multiple functions.
Preferably, the absorbent core is also relatively thin in order to provide better fit and comfort when included in a personal care product.

Unfortunately, these layered assemblies are generally bulky and do not conform well to the anatomy of the wearer.

Independent claims

(EP1575470)

1. An absorbent core (10) comprising: a substrate (12) that performs a first fluid handling function wherein the substrate is folded to provide a plurality of panels (14), wherein the substrate is folded to provide an absorbent core having a cross-sectional configuration selected from the group consisting of an "e"-shape (16), a "z"-shape (18), a sigma-shape (22), and an accordion-shape (26); characterised in that at least one of the plurality of panels performs at least one fluid handling function distinct from at least one other panel, wherein at least a portion (12) of at least one panel corresponds to at least a portion of one region of the substrate that has been modified to perform a different fluid handling function; and wherein at least a portion of one panel corresponds to a region of the substrate that has been coated or treated with a modifying material, wherein the modifying material is a binding agent, the binding agent including an absorbent adhesive composition, wherein the absorbent adhesive composition includes a crosslinkable binder composition comprising an alkoxysilane grafted poly(ethylene oxide).

17. A process for making an absorbent core (10) comprising: providing a substrate (12) that performs at least one fluid handling function; modifying at least a portion of one region of the substrate to impart at least one different fluid handling function; and folding the substrate to provide a plurality of panels (14), wherein at least a portion of at least one panel corresponds to at least a portion of the modified region of the substrate, and wherein at least one of the plurality of panels performs at least one fluid handling function distinct from at least one other panel; wherein the substrate is folded to provide an absorbent core having a cross-sectional configuration selected from the group consisting of an "e"-shape, a "z"-shape, a sigma-shape, and an accordion-shape; and said step of modifying the portion of the region of the substrate comprises coating or treating said portion with a modifying material; wherein the modifying material is a binding agent, the binding agent including an absorbent adhesive composition, wherein the absorbent adhesive composition includes a crosslinkable binder composition comprising an alkoxysilane grafted poly(ethylene oxide).

Object of invention

(EP1575470)

The present invention provides an absorbent core in accordance with claim 1.

The present invention also provides an absorbent article in accordance with claim 12 and an absorbent garment in accordance with claim 14.

The present invention also provides a process for making an absorbent core in accordance with claim 17.

The present invention relates to an absorbent core that includes a substrate that is folded to provide a plurality of panels at least one of which performs at least one fluid handling function distinct from at least one other panel.

The present invention provides an absorbent core in accordance with claim 1.

The present invention may provide absorbent articles, such as disposable diapers, training pants, adult incontinence products, sanitary napkins, and the like, that include a folded absorbent core that provides multiple desired fluid handling functions within a single composite.

IPC - International classification

A61F-005/44; A61F-005/451; A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/49; A61F-013/53; A61F-013/534; A61F-013/534; A61F-013/537; B32B-003/00; B32B-005/02

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CA2389246	C	2008-05-20	CA2389246
EP1267771	A4	2006-06-21	EP1267771
JP2004500165	A	2004-01-08	JP2004500165
US6632209	B1	2003-10-14	US6632209
EP1267771	A1	2003-01-02	EP1267771
AU1582301	A	2001-06-06	AU200115823
WO01/34082	A1	2001-05-17	WO200134082
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Title

(EP1267771)

Thin absorbent core made from folded absorbent laminate

Abstract

(EP1267771)

A disposable absorbent garment (10) comprising a topsheet (30), abacksheet (32), and an absorbent core (342) disposed between the topsheet and the backsheet. The absorbent core is formed from a folded laminate comprising three layers, including an upper layer (342b), a lower layer (342c) and a central fibrous layer (342a) including from about 50 to about 95 percent by weight superabsorbent polymer and about 5 to about 50 percent by weight stabilizing additives. The upper and lower layers comprise tissue, airlaid fluff pulp or synthetic non-woven fibrous layers. The central fibrous layer is adhesively bonded to both the upper and lower layers, all layers together assisting to maintain the dry and wet integrity of the absorbent core. Folding of the thin absorbent laminate provides an absorbent core that can handle large doses of urine. The folded structure provides a central channel (360) that provides free volume (371) for temporary liquid storage, isolation and containment of bowel movements, and increases the surface area of laminate available for liquid absorption.

Current assignees

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NUTEK DISPOSABLES

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Advantages / Previous drawbacks

(EP1267771)

In general, some of the most important performance attributes of an absorbent core of a diaper (or any other absorbent garment) are functional capacity, rate of absorption, and core stability in use.

They generally allow for an efficient utilization of the SAP material at high SAP concentrations.

Therefore, it is highly desirable to provide an absorbent article with a thin, pulpless, absorbent core having improved core stability in-use, bowel movement containment ability, SAP efficiency and absorption rate.

The dry forming process typically has lower conversion costs than the wet process, since the equipment used in a dry process is typically less complex and can run at higher line speeds.

Independent claims

(EP1267771)

1. An absorbent article comprising: a liquid permeable topsheet (30) with an opening positioned so as to allow for passage of a bowel movement from an intended user through the topsheet; a backsheet (32); and an absorbent core positioned between the topsheet and the backsheet; wherein said absorbent core comprises a longitudinally C-folded absorbent laminate (342), said absorbent laminate comprising an upper layer (342b), a lower layer (342c), and an absorbent layer (342a) positioned between the upper and lower layers; wherein said C-folded absorbent laminate is folded to include a central channel area (360), two side marginal areas (370), a front edge and a back edge and wherein said two side marginal areas are C-folded at least once, forming two side folded areas and a central channel area, said central channel providing free volume; wherein said free volume provides for containment of bowel movements which have passed though the opening in said topsheet, and provides for containment of liquid temporarily until the liquid can be absorbed by the absorbent laminate, characterized in that said absorbent layer comprises from 50 to 95 percent by weight SAP and said absorbent layer comprises at least one of fibrous additives and particulate additives, wherein said fibrous additives are selected from a group consisting of cellulose acetate fibers, rayon fibers, lyocell fibers, polyacrylonitrile fibers, surface-modified (hydrophilic) polyester fibers, surface-modified polyolefin/polyester bicomponent fibers, surface-modified

polyester/polyester bicomponent fibers, polypropylene fibers, other olefin fibers, cotton fibers, cotton linters and blends thereof, and wherein said particulate additives are selected from a group consisting of potato, corn, wheat, and rice starches and partially cooked starches.

Object of invention

(EP1267771)

The present invention relates generally to absorbent garments.

It is yet a further object of the invention to provide an absorbent core comprising one or more laminates wherein one of the layers of the laminate or laminates is a high-density, high SAP-containing layer.

These and other objects of the invention are achieved by an absorbent article comprising a liquid permeable topsheet with an opening positioned so as to allow for passage of a bowel movement from an intended user through the topsheet, a backsheet, and an absorbent core positioned between the topsheet and the backsheet, wherein said absorbent core comprises a longitudinally C-folded absorbent laminate, said absorbent laminate comprising an upper layer, a lower layer and an absorbent layer positioned between the upper and lower layers, wherein said C-folded absorbent laminate is folded to include a central channel area, two side marginal areas, a front edge and a back edge and wherein said two side marginal areas are C-folded at least once, forming two side folded areas and a central channel area, said central channel providing free volume, wherein said free volume provides for containment of bowel movements which have passed though the opening in said topsheet, and provides for containment of liquid temporarily until the liquid can be absorbed by the absorbent laminate, characterized in that said absorbent layer comprises from 50 to 95 percent by weight SAP and said absorbent layer comprises at least one of fibrous additives and particulate additives, wherein said fibrous additives are selected from a group consisting of cellulose acetate fibers, rayon fibers, lyocell fibers, polyacrylonitrile fibers, surface-modified (hydrophilic) polyester fibers, surface-modified polyolefin/polyester bicomponent fibers, surface-modified polyester/polyester bicomponent fibers, polypropylene fibers, other olefin fibers, cotton fibers, cotton linters and blends thereof, and wherein said particulate additives are selected from a group consisting of potato, corn, wheat, and rice starches and partially cooked starches.

The present invention relates generally to absorbent garments.

It is therefore an object of the invention to provide a thin absorbent garment having an improved ability to retain fluids.

It is a further object of the invention to provide an absorbent garment having an improved ability to isolate and contain bowel movements away from the user's skin.

It is another object of the invention to provide an absorbent garment having improved comfort, fit and wearability.

It is yet another object of the invention to provide an absorbent garment having a thin absorbent core.

It is a further object of the invention to provide an absorbent garment with a pulpless absorbent core having SAP as a substantial percentage of its basis weight, generally greater than 50%, the absorbent core being substantially free of gel blocking, i.e., the core retaining high SAP efficiency.

IPC - International classification

A61F-005/44; A61F-005/452; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/514; A61F-013/53; A61F-013/53; B32B-027/00

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ES97917664T
DE69717157
EP97917664
SA98190383
CZ340899
JP54157198
BR9714654
CN97182204

IL13207197
CA2285429
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VN000784
TR9902644T
NO994652
PE00021398
TW87105325
ID980436
AU2592797
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DE69717157
EP0975294
SA933
CZ296731
JP3771276
BRPI9714654
CN1177575
IL132071
CA2285429
HK1025497
HU222356
ES2185927
PT975294
DE69717157
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AT227553
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EP1236454
EG21419
US6278037
IL132071
KR20010005749
HU0002363
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JP2000510033
CN1259855
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VN4363
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PE66999
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ID21351
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CA2285429
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CZ296731	B6	2006-05-17	CZ-296731
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EP0975294	B1	2002-11-13	EP-975294
EP1236454	A2	2002-09-04	EP1236454
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BRPI9714654	A1	2000-07-11	BRPI9714654

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TR199902644	T2	2000-05-22	TR199902644
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Title

(EP1236454)

Absorbent article having improved comfort during use by improved fit even when loaded and improved rewet performance

Abstract

(EP1236454)

Absorbent article comprising an absorbent core with a crotch region and at least one waist region, whereby said crotch region has a lower ultimate fluid storage capability than said at least one waist region. The article further has an improved fluid handling performance in particular a low rewet value for minimising skin hydration during use, such as measured by the post acquisition collagen rewet method value not exceeding 180 mg.

Current assignees

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Advantages / Previous drawbacks

(EP1236454)

With this terminology, "comfort" for the wearer is at present predominantly being addressed by improving chassis elements, such as by adopting the chassis elements of the diaper to provide good "fit" of the article and to be soft and cushioning.
Recently, attempts have been made to also adopt the form and shape of the absorbent structure to allow good fit.
While it is not necessary that the pairs of side panels or each sidepanel be identical, they are preferably mirror images one of the other.
With regard to fibres used for producing such webs, there is nearly no limitation in principle - though certain specific web forming and bonding processes might not be fully compatible with certain materials or fibre types.
The test specimen is carefully placed onto the sample holder such that the edges coincide with the bottom and side edges (321 and 322) of the sample holder, i.e. such that it does not extend outside the sample holder plate.
However, the disclosed designs for absorbent articles do not consider the fit requirement of fitting well between the legs of the wearer, nor the fluid handling requirements, such as achieving appropriate skin dryness and fluid acquisition.

Independent claims

(EP1236454)
1. Absorbent article comprising a crotch region and one or more waist regions, characterized in that said article has a crotch region Post Acquisition Collagen Rewet Method value of less than 180 mg.

Object of invention

(EP1236454)
For the purposes of the present invention, fibre curl is measured in terms of a two dimensional plane.
The present invention relates to absorbent articles which are primarily designed to receive and retain bodily discharges such as - and foremost - urine.
The present invention relates to absorbent articles which are primarily designed to receive and retain bodily discharges such as - and foremost - urine.
Hence it is an object of the present invention to provide absorbent articles having an improved fit also when being loaded, together with good fluid handling performance, especially having a good rewet performance..
It is a further object of the present invention to achieve this by selectively placing ultimate storage capacity away from the crotch region.
It is a further object of the present invention to provide this feature without detrimentally affecting the fit when dry by providing designs with low bulk in the article crotch region.
It is a further object of the invention to achieve this by using distribution materials having high flux wick ing properties, It is a further object of the invention to achieve this by using Superabsorbent polymers.
It is a further object of the invention, to achieve this by using porous absorbent materials, such as made by HIPE polymerisation.

IPC - International classification

A61F; A61F-005/44; A61F-013/00; A61F-013/15; A61F-013/15; A61F-013/40; A61F-013/49; A61F-013/53; A61F-013/53; A61F-013/534; B32B

Family 113/200 - FAMPAT - ©Questel

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GB201908214
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IN201917016478
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CN201780074641
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US20180169964
US20180170026
US20180170027

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Family publication details

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GB2571237	A	2019-08-21	GB2571237
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CN110022812	A	2019-07-16	CN110022812
CN110022813	A	2019-07-16	CN110022813
CN110022816	A	2019-07-16	CN110022816
CN110022817	A	2019-07-16	CN110022817
CN110022820	A	2019-07-16	CN110022820
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Title

(WO2018118413)

Methods and apparatuses for making elastomeric laminates with elastic strands unwound from beams

Abstract

(WO2018/118413)

The present disclosure relates to methods for assembling elastomeric laminates, wherein elastic material may be stretched and joined with either or both first and second substrates. A first beam is rotated to unwind a first plurality of elastic strands from the first beam in the machine direction. The first plurality of elastic strands are positioned between the first substrate and the second substrate to form the elastomeric laminate. Before the first plurality of elastic strands are completely unwound from the first beam, a second beam is rotated to unwind the second plurality of elastic strands from the second beam. Subsequently, the advancement of the first plurality of elastic strands from the first beam is discontinued. Thus, the elastomeric laminate assembly process may continue uninterrupted while switching from an initially utilized elastic material drawn from the first beam to a subsequently utilized elastic material drawn from the second beam.

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Advantages / Previous drawbacks

(WO2018/118413)

It is to be appreciated that the first elastic belt 106 and the second elastic belt 108 may comprise the same materials and/or may have the same structure.

Consequently, it would be beneficial to provide a method and apparatus for producing elastomeric laminates with beams of elastic strands that can be replaced without having to stop the assembly process.

It is to be appreciated that the leg cuffs 156 can be and are sometimes also referred to as leg bands, side flaps, barrier cuffs, elastic cuffs or gasketing cuffs.

Independent claims

(WO2018/118413)

1. A method for making an elastomeric laminate, the method comprising the steps of: providing a first plurality of elastic strands (318) wound onto a first beam (316); providing a second plurality of elastic strands (322) wound onto a second beam (320); rotating a first roller (324) about a first axis of rotation (328) extending in a cross direction, the first roller (324) comprising an outer circumferential surface (326) comprising a surface speed VI; rotating a second roller (330) about a second axis of rotation (334) extending in the cross direction, the second roller (330) comprising an outer circumferential surface (332) comprising a surface speed VI, wherein the first roller (324) and the second roller (330) rotate in opposite directions, and wherein the first roller (324) is adjacent the second roller (330) to define a nip (336) between the first roller (324) and the second roller (330); advancing a first substrate (306) and a second substrate (308) through the nip (336); rotating the first beam (316) to unwind the first plurality of elastic strands (318) from the first beam (316) in a machine direction at a speed V2, wherein the first plurality of elastic strands (318) are separated from each other in the cross direction, and wherein V2 is less than VI; stretching the first plurality of elastic strands (318) in the machine direction by advancing the first plurality of elastic strands (318) from the first beam (316) through the nip (336) and between the first substrate (306) and the second substrate (308); connecting the second plurality of elastic strands (322) with a splicer member (354); rotating the second beam (320) to unwind the second plurality of elastic strands (322) from the second beam (320) in the machine direction, wherein the second plurality of elastic strands (322) are separated from each other in the cross direction; advancing the splicer member (354) and the second plurality of elastic strands (322) through the nip (336); and discontinuing advancement of the first plurality of elastic strands (318) through the nip (336) subsequent to advancing the splicer member (354) through the nip (336).

Object of invention

(WO2018/118413)

The present disclosure relates to methods for manufacturing absorbent articles, and more particularly, to apparatuses and

methods for making elastomeric laminates that may be used as components of absorbent articles.

In another aspect, a method for making an elastomeric laminate comprises the steps of: providing a first plurality of elastic strands wound onto a first beam; providing a second plurality of elastic strands wound onto a second beam; rotating a first roller about a first axis of rotation extending in a cross direction, the first roller comprising an outer circumferential surface comprising a surface speed VI; providing a first substrate comprising a first surface and an opposing second surface; advancing the first surface of the first substrate onto the outer circumferential surface of the first roller; rotating the first beam to unwind the first plurality of elastic strands from the first beam in a machine direction at a speed V2, wherein the first plurality of elastic strands are separated from each other in the cross direction, and wherein V2 is less than VI; stretching the first plurality of elastic strands in the machine direction by advancing the first plurality of elastic strands from the first beam onto second surface of the first substrate; advancing the combined first substrate and the first plurality of elastic strands in the machine direction from the first roller; connecting the second plurality of elastic strands with a splicer member; rotating the second beam to unwind the second plurality of elastic strands from the second beam in the machine direction, wherein the second plurality of elastic strands are separated from each other in the cross direction; combining the splicer member and the second plurality of elastic strands with the first plurality of elastic strands on the second surface of the first substrate; and subsequently discontinuing advancement of the first plurality of elastic strands onto the second surface of the first substrate.

The present disclosure relates to methods for manufacturing absorbent articles, and more particularly, to apparatuses and methods for making elastomeric laminates that may be used as components of absorbent articles.

In a first aspect, a method for making an elastomeric laminate comprises the steps of: providing a first plurality of elastic strands wound onto a first beam; providing a second plurality of elastic strands wound onto a second beam; rotating a first roller about a first axis of rotation extending in a cross direction, the first roller comprising an outer circumferential surface comprising a surface speed VI; rotating a second roller about a second axis of rotation extending in the cross direction, the second roller comprising an outer circumferential surface comprising a surface speed VI, wherein the first roller and the second roller rotate in opposite directions, and wherein the first roller is adjacent the second roller to define a nip between the first roller and the second roller; advancing a first substrate and a second substrate through the nip; rotating the first beam to unwind the first plurality of elastic strands from the first beam in a machine direction at a speed V2, wherein the first plurality of elastic strands are separated from each other in the cross direction, and wherein V2 is less than VI; stretching the first plurality of elastic strands in the machine direction by advancing the first plurality of elastic strands from the first beam through the nip and between the first substrate and the second substrate; connecting the second plurality of elastic strands with a splicer member; rotating the second beam to unwind the second plurality of elastic strands from the second beam in the machine direction, wherein the second plurality of elastic strands are separated from each other in the cross direction; advancing the splicer member and the second plurality of elastic strands through the nip; and discontinuing advancement of the first plurality of elastic strands through the nip subsequent to advancing the splicer member through the nip.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/491; A61F-013/493; A61F-013/494; A61F-013/494; A61F-013/496; A61F-013/496; A61F-013/511; A61F-013/514; A61F-013/551; A61F-013/64; B29C-065/00; B29C-065/08; B29C-065/48; B29C-065/74; B32B-005/02; B32B-005/04; B32B-005/26; B32B-007/12; B32B-027/12; B32B-037/00; B32B-037/12; B32B-037/14; B32B-037/22; B65H-039/16; B65H-049/00; B65H-069/02; D01D-005/08; D02G-003/32; D04H-003/005; D04H-003/12

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EP07827011

JP2009535857

CA2669509

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CN200780042086
MX2009005027
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CA2669509
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4137173

Family publication details

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2013-06-26
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2010-08-03
(JP4987986)
2012-05-11
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2012-01-10

Title

(EP2081537)
Method for making a reusable disposable article having a replaceable absorbent insert

Abstract

(EP2081537)
A method for making absorbent articles such as diapers and training pants having a pocket for receiving a removable core component is provided. A method for manufacturing an absorbent article comprises providing a wearer facing portion and a garment facing portion, and providing a first absorbent core component with either the wearer facing portion or the garment facing portion. The wearer facing portion and the garment facing portion are associated such that an openable chassis pocket is formed there between, the wearer facing portion and the garment facing portion being separable to create an access opening to the openable chassis pocket for receiving a replaceable absorbent core component.

Current assignees

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Inventors

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HARDIE STEPHEN LEBEUF

Advantages / Previous drawbacks

(EP2081537)
To provide the above-described functionality, compositions for the absorbent core 10 may be selected such that the acquisition side of the absorbent layer is comparatively free of small, high surface area fibers that provide good distributive and storage characteristics, and such that the distributive side of the absorbent layer has a comparatively higher proportion of such small, high surface area fibers so as to provide greater distribution characteristics.
It would be advantageous to provide an absorbent article that provides improved fit and wearer comfort, even after the article is wetted with body fluids, such as by reducing the relative amount of fluid retained in the article's crotch region. It would be further advantageous to provide an absorbent article which has reduced bulk in the crotch region in both the dry and wet states.
Accordingly, it would be desirable to provide an absorbent article having an openable chassis pocket for receiving a

replaceable absorbent core component wherein the replaceable absorbent core component can be replaced without having to remove the absorbent article from the wearer.

A third potential benefit resulting from the use of a multipiece absorbent core 10 is the capability of removing and/or replacing components of the absorbent core to regenerate the storage/redistribution capacity of the absorbent core.

In addition to the added cost and waste associated with discarding reusable materials, it is often inconvenient to remove and replace the entire absorbent article when absorbent core components are saturated.

Therefore, the removal of the absorbent insert is often inconvenient and time consuming.

Thus, the overall performance of the absorbent article may be limited by the inability to transport the liquid to the farthest reaches of the absorbent core.

Independent claims

(EP2081537)

1. A method for manufacturing an absorbent article, the absorbent article being adapted to be worn about a lower torso of a human body, the absorbent article having a chassis forming a waist opening (13) and a pair of leg openings (15) and having longitudinally opposing first and second waist end edges (16a, 16b), longitudinally opposing first and second waist regions (12, 14) adjacent to respective waist end edges. and a crotch region (66) longitudinally intermediate of the first and second waist regions, the method comprising: providing a wearer facing portion (2) including a topsheet (61), the wearer facing portion, (2) having it first direcdon of travel along the article's longitudinal (17) providing a garment facing portion (3) including a backsheet (62) the garment facing (3) portion having a second direction of travel along the article's lateral axis (18) providing a first absorbent core component (50, 51, 52) associated with one of the garment facing portion (3) or the wearer facing portion (2); changing the wearer facing portion (2) from the first direction of travel to the second direction of travel; and associating the wearer facing portion (2) with the garment facing portion (3) such that an openable chassis pocket (5) if formed there between, the wearer facing portion (2) and the garment facing portion (3) being separable to create an access opening (44) to the openable chassis pocket for receiving a replaceable absorbent core component (20, 30), characterized in that the openable chassis pocket (5) is at least partially formed between the first absorbent core component (50, 51, 52) and the garment facing portion (2) or the first absorbent core component (50, 51, 52) comprises a plurality of layers of absorbent material, wherein the openable chassis pocket (5) is at least partially formed between layers of the first absorbent core component (50, 51, 52).

Object of invention

(EP2081537)

The present invention relates to a method for making absorbent articles such as diapers and training pants.

The present invention relates to a method for making absorbent articles such as diapers and training pants.

More particularly, the present invention relates to a method for making absorbent articles such as diapers and training pants having an operable chassis pocket for receiving a replaceable absorbent core component.

The invention further relates to a method for making absorbent articles having an openable chassis pocket wherein a replaceable absorbent core component is disposed.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/505; A61F-013/53; A61F-013/70; A61F-013/74; B32B-037/22; B32B-038/04

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DE69423535

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AU6078494
CN94104766
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JP3479114
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Family publication details

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DE69423535	T2	2000-12-21	DE69423535
DE69423535	D1	2000-04-27	DE69423535
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EP0627210	B1	2000-03-22	EP-627210
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BRPI9401649	A1	1994-06-14	BR9401649

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1994-08-02

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1994-11-04
1994-06-14

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(ATE190829)
2000-04-15
(KR100324062)
2002-06-20

Title

(EP-627210)

Sanitary absorbent article

Abstract

(EP0627210)

An absorbent article (10) comprises a substantially liquid-impermeable outer cover member (30) having a length (90) and a width (92). The outer cover (30) provides a rear waistband portion (14) and a front waistband portion (12), and has a layer of polymer film material on an outer surface of the front waistband portion (12) of the outer cover (30). A liquid permeable topsheet layer (28) is provided for contacting a wearer's skin, and an absorbent body (32) is interposed between the outer cover (30) and the topsheet layer (28). The absorbent body (32) has a length (94) and width (96) which are smaller than the outer cover length (90) and width (92), thereby providing end margins and side margins of the outer cover. An adhesive fastening mechanism (36) adheres to the film layer to secure the front and rear waistband portions (12,14) of the outer cover (30) about the wearer. An elastic member (82) is connected to provide elasticized gathers along a cross-direction of the rear waistband portion (14) of the outer cover (30). An outermost layer (84) of substantially nonwettable, resilient material is connected to overlie the polymer film of the outer cover along the front waistband portion (12) of the outer cover (30), thereby sandwiching the polymer film between the topsheet layer (28) and the outermost layer (84) of resilient material. The outermost resilient material (84) has a lengthwise extent (86) which is less than the length (90) of the outer cover (30).

Current assignees

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Advantages / Previous drawbacks

(EP0627210)

The addition of a layer of surge management material into the absorbent structure, however, can advantageously improve the overall uptake rate of the composite absorbent structure.

The various aspects of the absorbent article of the invention can advantageously provide a distinctive combination of comfort, absorbent efficiency and resistance to leakage.

The arrangement which includes the recess in retention portion 48 can advantageously increase the area of contact and liquid communication between the retention portion and surge management portion.

Due to the high concentrations of superabsorbent particles, or other high-absorbency material, in retention portion 48, there can be an increased difficulty with regard to containing the high-absorbency particles within the retention portion and restricting the movement or migration of the superabsorbent onto the body side of the diaper.

Structures that require complicated folding can be excessively difficult to configure on a moving infant, and typically employed materials have permitted excessive wick ing of liquids out from the absorbent.

difficult to

Independent claims

(EP0627210)

1. An absorbent article (10), comprising: a substantially liquid-impermeable outer cover member (30), said outer cover providing a rear waistband portion (14) and a front waistband portion (12); a liquid permeable topsheet layer (28) for contacting a wearer's skin; an absorbent body (32) interposed between said outer cover (30) and said topsheet layer (28);

a fastening means (36) to secure said front and rear waistband portions (12,14) of said outer cover layer (30) about said wearer; an outermost layer (84) of substantially nonwettable, resilient material connected to overlie said outer cover (30) in said front waistband portion (12) of said outer cover (30), thereby sandwiching said outer cover member (30) between said topsheet layer (28) and said outermost layer (84) of resistant material.

Object of invention

(EP0627210)

The invention therefore provides an absorbent article according to independent claim 1 or 4.

This invention relates to absorbent articles, particularly absorbent personal care products.

The invention provides an absorbent article having an umbilical protection feature and an abbreviated absorbent structure.

The invention further provides disposable garments which are worn by sensitive individuals, such as infants, and include a mechanism for selectively protecting or avoiding contact with tender regions of the body, such as the umbilical region of a newborn infant.

This invention relates to absorbent articles, particularly absorbent personal care products.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/514; A61F-013/56

Family 116/200 - FAMPAT - ©Questel

Earliest priority number

WOSE2009/050468

Application number

JP2012508430
CN200980160182
CN201080029313
EP09844117
US13/318,055
US13/318,060
RU2011148587
EP10770023
JP2012508423
TW99113660
WOSE2009/050468
WOSE2010/050445

Publication numbers

JP5706396
CN102458336
CN102458337
EP2424480
US8764926
US8764927
RU2501541
EP2424481
JP5409897
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RU2011148587
EP2424481
JP2012525198
JP2012525286
CN102458336
CN102458337

US20120055613
US20120055615
EP2424480
EP2424481
TW201043206
WO2010/126415
WO2010/126431

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7660363

Family publication details

JP5706396	B2	2015-03-06	JP5706396
CN102458336	B	2014-11-12	CN102458336B
CN102458337	B	2014-07-23	CN102458337B
EP2424480	B1	2014-07-09	EP2424480
US8764926	B2	2014-07-01	US8764926
US8764927	B2	2014-07-01	US8764927
RU2501541	C2	2013-12-20	RU2501541
EP2424481	B1	2013-11-27	EP2424481
JP5409897	B2	2013-11-15	JP5409897
EP2424480	A4	2013-07-03	EP2424480
RU2011148587	A	2013-06-10	RU2011148587
EP2424481	A4	2012-12-12	EP2424481
JP2012525198	A	2012-10-22	JP2012525198
JP2012525286	A	2012-10-22	JP2012525286
CN102458336	A	2012-05-16	CN102458336
CN102458337	A	2012-05-16	CN102458337
US20120055613	A1	2012-03-08	US20120055613
US20120055615	A1	2012-03-08	US20120055615
EP2424480	A1	2012-03-07	EP2424480
EP2424481	A1	2012-03-07	EP2424481
TW201043206	A	2010-12-16	TW201043206
WO2010/126415	A1	2010-11-04	WO2010126415
WO2010/126431	A1	2010-11-04	WO2010126431

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Application dates

2009-04-30
2009-04-30
2009-04-30
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2014-07-09
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2013-12-20
2013-11-27
2013-11-15
2013-07-03
2013-06-10
2012-12-12
2012-10-22
2012-10-22
2012-05-16
2012-05-16
2012-03-08
2012-03-08
2012-03-07
2012-03-07
2010-12-16
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2013-11-27
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2014-07-09
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2013-11-15
(JP5706396)
2015-03-06
(RU2501541)
2013-12-20
(CN102458337B)
2014-07-23
(CN102458336B)
2014-11-12

Title

(EP2424481)
Method and apparatus for manufacturing elasticated webs comprising discontinuous elastic threads

Abstract

(EP2424481)
The invention provides methods for manufacturing elasticated webs comprising discontinous elastic threads, and methods

for manufacturing articles from such elasticated webs. Apparatus for carrying out the methods of the invention are also provided. The invention also relates to elasticated webs and articles which can be manufactured using the methods of the invention.

Current assignees

ESSITY HYGIENE & HEALTH AKTIEBOLAG

SCA HYGIENE PRODUCTS

Inventors

BAECK LUCAS

Advantages / Previous drawbacks

(EP2424481)

In particular, it is useful to have more elastic threads in the portion of the elasticated web 140 which is to become the rear portion of a pant-type article 20, or an absorbent article 10.

This profiled arrangement allows close contact between the belts 401, 402, and/or the resilient belt and the anvil 620 and allows the loops 501, 503 of the elastic threads 500, 502 to be tightly secured.

In addition, it is advantageous to be able to control the fate of waste material, particularly at the disposal stage.

This in turn leads to difficulties in maintaining the correct tension in the elastic members, and may cause crumpling, foreshortening or wrinkling of the elasticated components.

This in turn causes problems in terms of appearance (due to bunching) and liquid handling (due to undesired compression of the absorbent core causing liquid-channelling creases).

It is generally undesirable that elastic members are located in the crotch portion, as they can cause chafing/rubbing in this sensitive area.

Independent claims

(EP2424481)

1. A method for manufacturing an elasticated web (140) having discontinuous elastic threads (510, 511), said method comprising the steps of; a. providing a first web (200), said first web (200) having a primary extension in the machine direction (MD), first (201) and second (202) faces and a first edge (203) and a second edge (204), said first and second edges (203, 204) extending in the machine direction (MD); b. providing a second web (300), said second web (300) also having a primary extension in the machine direction (MD), first (301) and second (302) faces and a first edge (303) and a second edge (304), said first and second edges (303, 304) extending in the machine direction (MD); c. providing a third web (700) said third web (700) having a primary extension in the machine direction (MD), first (701) and second (702) faces and a first edge (703) and a second edge (704), said first and second edges (703, 704) extending in the machine direction (MD); d. arranging said third web (700) to lie adjacent and substantially parallel with said first web (200), in a spaced arrangement with the first faces (201, 701) of said webs (200, 700) facing the same direction, such that the first edges (203, 703) of respective first (200) and third (700) webs are adjacent; e. applying a first adhesive (250) to at least a portion of the first face (201) of said first web (200) or to at least a portion of the first face (301) of the second web (300); f. applying a second adhesive (260) to at least a portion of the first face (701) of said third web (700) or to at least a portion of the first face (301) of the second web (300); g. applying at least one first elastic thread (500) on at least the portion of said first face (201) of said first web (200) or on at least the portion of said first face (301) of said second web (300) which comprises said first adhesive (250); wherein said at least one first thread (500) is applied in a first pattern (P1), said first pattern (P1) oscillating in the cross-direction (CD) and extending in the machine direction (MD), h. applying at least one second elastic thread (502) on at least the portion of said first face (701) of said third web (700) or to at least the portion of said first face (301) of said second web (300) which comprises said second adhesive (260); wherein said at least one second elastic thread (502) is applied in a second pattern (P2), said second pattern (P2) oscillating in the cross-direction (CD) and extending in the machine direction (MD), i. applying a portion of the first face (301) of said second web (300) on the first face (201) of said first web (200), and fixing said first (200) and second webs (300) together such that said at least one first elastic thread (500) is partly sandwiched between the first faces (201, 301) of respective first and second webs (200, 300); such that the first pattern (P1) extends over the first edge (203) of the first web (200) to form first loops (501) in said first elastic thread (500) which project in the cross-direction (CD) from said first edge (203) of said first web (200); j. applying a portion of the first face (301) of said second web (300) on the first face (701) of said third web (700), and fixing

said third (700) and second webs (300) together such that said at least one second elastic thread (502) is partly sandwiched between the first faces (301, 701) of respective second and third webs (300, 700); such that the second pattern (P2) extends over the first edge (703) of the third web (700) to form second loops (503) in said second elastic thread (502) which project in the cross-direction (CD) from said first edge (703) of said third web (700); and such that said first and second patterns (P1, P2) are synchronised such that the point in the machine direction (MD) at which the first elastic threads (500) are located furthest from the first edge (203) of the first web (200) corresponds substantially to the point in the machine direction (MD) at which the second elastic threads (502) are located furthest from the first edge (703) of the third web (700); k. securing the first loops (501) of said first elastic threads (500) in a first loop retaining means (410) comprising at least one resilient belt (401) and at least one anvil (620), said loop retaining means (410) being located adjacent the first edge (203) of said first web (200); l. securing the second loops (503) of said second elastic threads (502) in a second loop retaining means (411) comprising at least one resilient belt (403) and at least one anvil (620), said second loop retaining means (410) being located adjacent the first edge (703) of said third web (700); m. cutting all the first elastic threads (500) substantially at the point at which each first elastic thread (500) crosses the first edge (203) of said first web (200) such that the loops (501) become detached from the first web (200); n. cutting all the second elastic threads (502) substantially at the point at which each second elastic thread (502) crosses the first edge (703) of said third web (700) such that the loops (503) become detached from the third web (700); wherein step d. can take place at any point in the process before step i. so as to provide an elasticated web (140) having discontinuous elastic threads (510, 511).

Object of invention

(EP2424481)

In particular, the present invention aims to provide a method for providing an elasticated web having discontinuous elastic threads, in which the tension in the elastic threads can be readily control led, in which cutting of the elastic threads can be accurately control led, and in which material wastage is minimised.

In particular, the present invention aims to provide a method for providing an elasticated web having discontinuous elastic threads, in which the tension in the elastic threads can be readily control led, in which cutting of the elastic threads can be accurately control led, and in which material wastage is minimised.

The present invention relates to methods for manufacturing an elasticated web.

The invention provides a method for manufacturing an elasticated web 140 having discontinuous elastic threads 510, 511.

The present invention relates to methods for manufacturing an elasticated web.

The invention further relates to an apparatus for forming said elasticated web.

The invention also relates to methods for manufacturing an absorbent article.

The invention also provides elasticated webs and absorbent articles which can be manufactured using the methods of the invention.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/496; B32B-037/20; B32B-037/22; B32B-038/18; B65H-037/00; B65H-051/18

Family 117/200 - FAMPAT - ©Questel

Earliest priority number

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ZA8906921

ZM3389

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ZM3389

Questel unique family ID (FAN)

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ZA8906921	B	1991-05-29	ZA8906921

ZM3389 A1 1991-04-30 ZM8900033

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1988-09-12

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Publication dates

1991-05-29

1991-04-30

Grant dates

(ZA8906921)

1991-05-29

Title

(ZM8900033)

Unitized sanitary napkin

Abstract

(ZM3389)

This invention relates to a novel absorbent structure and absorbent products containing this absorbent structure. More particularly, the absorbent structure of this invention contains a high-loft, bulky, low-density cover layer, a higher density transfer layer, a very high density, retentive reservoir layer and an impermeable barrier layer. The cover and barrier layers are sealed around their periphery and, preferably, all the layers are bonded to each other to form a unitized structure.
(From US5466232 A)

Current assignees

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Inventors

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SERGE CADIEUX

LEVESQUE YVON

YVON LEVESQUE

IPC - International classification

A61F; A61F-013/15; B32B

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BR202016024516 U2 2018-05-02 BR202016024516

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Earliest priority date

2016-10-20

Application dates

2016-10-20

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2018-05-02

2017-06-27

Title

(BR202016024516)

CLOTH DIAPER FOR NEWBORN ENDOWED WITH SOCKET TO RECEIVE REUTILIZÁVEL OR ABSORBENT ABSORBENT DISMISSABLE COMPOSTÁVEL

Abstract

(BR202016024516)

fralda de pano para recém nascidos dotada de cavidade para receber absorvente reutilizável ou absorvente descartável compostável, patente de invenção de uma fralda de pano que oferece a opção de utilizar internamente um absorvente reutilizável de tecido superabsorvente ou um absorvente descartável compostável ou biodegradável, derivada de patente invenção concedida pelo, desenvolvimento da fralda de pano dotada de capa anti-vazamento e absorvente reutilizável e regulagens de tamanho, número br 10 2012 017905-9, obtida por esta postulante (ana paula silva cpf 299 773 568 82); a fralda de pano objeto dessa patente, é compreendida por uma modelagem de fralda que forma uma cavidade sem furos de costura utilizada para acomodar o absorvente reutilizável superabsorvente dobrado ou absorvente descartável compostável ou biodegradável; a cavidade formada pela fralda contém barreiras laterais que criam proteção e impede vazamentos de fezes e urina, se ajustando confortavelmente à bebês de 03 a 06 kg; no caso do uso do absorvente reutilizável o tecido para ser inserido internamente é supera bsorvente e pode possuir ou não uma camada de tecido com efeito sempre seco costurada no tecido superabsorvente; o conjunto possibilita a troca do absorvente mantendo a estrutura da fralda limpa, pode— se escolher pelo uso do absorvente reutilizável de algodão que é lavado em máquina de lavar, ou pelo uso do absorvente descartável compostável ou biodegradável produzidas com matérias-primas naturais biodegradáveis.

Current assignees

ANA PAULA SILVA

Inventors

ANA PAULA SILVA

IPC - International classification

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Family 119/200 - FAMPAT - ©Questel

Earliest priority number

JP2012286134

Application number

TW102140231

JP2012286134

CN201390001019U

KR20157016784

WOJP2013/079572

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JP6126842

CN204971875

KR20150100692

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66435313

Family publication details

TWI600416	B	2017-10-01	TWI600416
JP6126842	B2	2017-05-10	JP6126842
CN204971875	U	2016-01-20	CN204971875U
KR20150100692	A	2015-09-02	KR20150100692
TW201436777	A	2014-10-01	TW201436777
JP2014124509	A	2014-07-07	JP2014124509
WO2014/103504	A1	2014-07-03	WO2014103504

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2012-12-27

Application dates

2012-12-27
2013-10-31
2013-10-31
2013-10-31
2013-11-06

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2017-05-10
2016-01-20
2015-09-02
2014-10-01
2014-07-07
2014-07-03

Grant dates

(JP6126842)
2017-05-10
(CN204971875U)
2016-01-20
(TWI600416)
2017-10-01

Title

(WO2014103504)
Absorptive article and method for manufacturing same

Abstract

(WO2014/103504)
An absorptive article (1) comprises: an absorption body (2) which has a front-rear direction and a widthwise direction and which has a top sheet (3), a back sheet (4), and an absorptive core (5) disposed between the top sheet (3) and the back sheet (4); first flaps (6) which are provided on the skin-side surface of the absorption body (2) so as to extend in the front-rear direction; and second flaps (9) which are provided on the skin-side surface of the absorption body (2) so as to extend in the front-rear direction. The first flaps (6) are provided on both sides, respectively, of the centerline (C) of the absorption body (2) in the widthwise direction, are provided with first elastic members (7) extending in the front-rear direction, and are formed so as to tilt outward in the widthwise direction. The second flaps (9) are provided on the outside of the first flaps (6), respectively, in the widthwise direction and are provided with second elastic members (10) extending in the front-rear direction.

Current assignees

LIVEDO

Inventors

HASEBE YUKI

AMANO EMI

Advantages / Previous drawbacks

(WO2014/103504)

In addition, the liquid-impermeable center sheet case, the right and left side of the center sheet by providing a spaced center sheet, the auxiliary absorber 1 overflows from the region between the first flap and the transition to the urine or the like, the left and right center sheet portion between the center sheet passing through the top sheet, the absorbent core can be advantageously absorbed.

In addition, the liquid-impermeable center sheet case, the right and left side of the center sheet by providing a spaced center sheet, the auxiliary absorber 1 overflows from the region between the first flap and the transition to the urine or the like, the left and right center sheet portion between the center sheet passing through the top sheet, the absorbent core can be advantageously absorbed.

1 The first flap and the second flap 2, the falling-down state, the first flap 1 is positioned under the first flap 2 is preferably formed. 2 And the second flap 1 in this manner if the flaps are created, the first flap 1 and/or the second flap 2 while ensuring the height of the leading edge, the rising edge of the first flap 2 first becomes difficult to be disturbed by the flap 1. According to the second flap 1 has been formed, one of the first flap 1 inward in the width direction is going to fall also, the other second flap 1 does not hinder one of the first flap 1 inward in the width direction easily prevented from completely falling down.

That is, one of the first flap 1 collapse inward in the width direction is going to be, on the other second flap 1 does not hinder one of the first flap 1 inward in the width direction easily prevented from completely falling down.

Independent claims

(WO2014/103504)

The front-rear direction and has a width direction, the top sheet and the back sheet and an absorbent core disposed between them and the absorber pattern having, on the skin side surface of said absorber provided so as to extend in the longitudinal direction of the first flap and 1, wherein the skin side surface of the absorbent body provided so as to extend in the longitudinal direction of the first absorbent article having flaps 2, wherein said first flap is 1, wherein the center of the widthwise direction of the absorber are disposed on each side of the line, the first elastic member 1 extending in the longitudinal direction is provided, is inclined outwardly in the width direction are formed, wherein the first flap is 2, 1 of said first flap are each provided with outwardly in the width direction, the first elastic member 2 extending in the longitudinal direction is provided and wherein the absorbent article.

1 A first elastic member is disposed in a center sheet 1 step of obtaining the first flap; sidesheet 2 the second elastic member is disposed in a first step of obtaining a flap 2; in the width direction of the central portion of the topsheet, the first elastic member 1 is positioned outward in the width direction of the second flap such that the joining step 1; both sides in the width direction of the top sheet, the first elastic member 2 so as to be located inward in the width direction of the first step of joining the flap 2; on the backsheet of the absorbent core and wherein the step of disposing; 1 2 the first flap and the second flap is joined to the topsheet, an absorbent core is laminated to the back sheet disposed by a step of the method of manufacturing the absorbent article characterized in that the.

Object of invention

(WO2014/103504)

In this case, a separate assembly is provided after the step of cutting step, a continuum of the absorbent body in the step of cutting the individual in the width direction are cut by the cutting line, the first flap and the second flap 1 formed by an absorption body 2 can be obtained separately.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/493; A61F-013/494; A61F-013/494; A61F-013/505; A61F-013/51; A61F-013/532

Family 120/200 - FAMPAT - ©Questel

Earliest priority number

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Application number

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CN201580047150
US15/515,440
EP15846252
KR20177009008
WOUS2015/051833

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MX362728
CN106794094
US10117786
EP3200738
KR101828230
US20170239099
EP3200738
CN106794094
MX2017002782
KR20170041278
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MX362728	B	2019-02-05	MX-362728
CN106794094	B	2018-12-11	CN106794094B
US10117786	B2	2018-11-06	US10117786
EP3200738	A4	2018-03-21	EP3200738
KR101828230	B1	2018-02-09	KR101828230
US20170239099	A1	2017-08-24	US20170239099
EP3200738	A1	2017-08-09	EP3200738
CN106794094	A	2017-05-31	CN106794094
MX2017002782	A	2017-05-30	MX2017002782
KR20170041278	A	2017-04-14	KR20170041278
WO2016/053728	A1	2016-04-07	WO201653728

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2017-05-31
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2018-11-06
(KR101828230)
2018-02-09
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(MX-362728)
2019-02-05

Title

(EP3200738)
Fixed and removable absorbent cores for absorbent articles

Abstract

(EP3200738)
Manufacturing a multiple use absorbent article includes producing an absorbent article having a liquid permeable chassis topsheet, a liquid impermeable chassis backsheet, and a chassis absorbent core sandwiched between the chassis topsheet and the chassis backsheet. The method also includes producing an absorbent insert having an insert topsheet, an insert backsheet, and an insert absorbent core. The method also includes producing a separable line of weakness within or adjacent to the peripheral sealing region, and bonding the insert backsheet to the chassis topsheet, wherein the line of weakness provides for separation of the absorbent insert into a removable portion configured to be removed from the chassis absorbent unit, and a resident portion that remains bonded to the chassis absorbent unit.

Current assignees

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Inventors

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FRANGER STEPHEN D

Advantages / Previous drawbacks

(WO2016/053728)
Changing such absorbent articles can be difficult, especially when away from home.
The bonded perimeter of the absorbent insert is lateral to the line of weakness along peripheral edges of the absorbent insert, such that the bonding does not preferably extend in the depth direction of the article, in the line of weakness region. While it is also known to include multiple absorbent articles stacked in a compound configuration, such that a series of absorbent articles are adhesively attached one atop the other, so as to allow the user to remove one article at a time, such configuration often leads to relatively bulky products and side leakage problems.

Independent claims

(WO2016/053728)
20. A method of manufacturing a multiple use absorbent article comprising: producing an absorbent article having a liquid permeable chassis topsheet, a liquid impermeable chassis backsheet, and a chassis absorbent core sandwiched between the chassis topsheet and the chassis backsheet; producing a first absorbent insert having a first insert topsheet, a first insert backsheet, and a first insert absorbent core, the first insert absorbent core having a core peripheral outer edge and being sandwiched between the first insert topsheet and the first insert backsheet, the first absorbent insert including a

peripheral sealing region sealing the first insert topsheet to the first insert backsheet outside the core peripheral outer edge; producing a separable line of weakness within or adjacent to the peripheral sealing region of the first absorbent insert; bonding the insert backsheet to the chassis topsheet; producing a second absorbent insert having a second insert topsheet, a second insert backsheet, and a second insert absorbent core, the second insert absorbent core having a core peripheral outer edge and being sandwiched between the second insert topsheet and the second insert backsheet, the second absorbent insert including a peripheral sealing region sealing the second insert topsheet to the second insert backsheet outside the core peripheral outer edge; producing a separable line of weakness within or adjacent to the peripheral sealing region of the second absorbent insert; and bonding the second insert backsheet to one or both of the first insert topsheet and the chassis topsheet.

We claim: 1 . A method of manufacturing a multiple use absorbent article comprising: producing an absorbent article having a liquid permeable chassis topsheet, a liquid impermeable chassis backsheet, and a chassis absorbent core sandwiched between the chassis topsheet and the chassis backsheet; producing an absorbent insert having an insert topsheet, an insert backsheet, and an insert absorbent core, the insert absorbent core having a core peripheral outer edge and being sandwiched between the insert topsheet and the insert backsheet, the absorbent insert including a peripheral sealing region sealing the insert topsheet to the insert backsheet at or outside the core peripheral outer edge; producing a separable line of weakness within or adjacent to the peripheral sealing region; and bonding the insert backsheet to the chassis topsheet, wherein the line of weakness provides for separation of the absorbent insert into a removable portion configured to be removed from the chassis absorbent unit, and a resident portion that remains bonded to the chassis absorbent unit.

Object of invention

(WO2016/053728)

The present disclosure also provides a method of manufacturing a multiple use absorbent article including producing an absorbent article having a liquid permeable chassis topsheet, a liquid impermeable chassis backsheet, and a chassis absorbent core sandwiched between the chassis topsheet and the chassis backsheet.

The present disclosure provides an opportunity to improve the changing experience while making it easy and intuitive to use.

The present disclosure provides several attributes that are advantageous.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/47; A61F-013/49; A61F-013/505; A61F-013/84

Family 121/200 - FAMPAT - ©Questel

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JP2011185850
CN201280042171
US14/241,878
ARP120103174
TW101131013
WOJP2012/005274

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EP2750646
JP6005916
CN103781447
EP2750646
US20140338822
EP2750646
CN103781447

AR087702

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EP2750646	B1	2018-01-31	EP2750646
JP6005916	B2	2016-09-16	JP6005916
CN103781447	B	2016-03-23	CN103781447B
EP2750646	A4	2015-02-25	EP2750646
US20140338822	A1	2014-11-20	US20140338822
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AR087702	A1	2014-04-09	AR--87702
TW201336480	A	2013-09-16	TW201336480
WO2013/031150	A1	2013-03-07	WO201331150
JP2013046663	A	2013-03-07	JP2013046663

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2016-03-23

Title

(EP2750646)

Method of manufacturing absorbent article

Abstract

(EP2750646)

A method of manufacturing an absorbent article includes a first absorption layer-forming step of forming a first absorption layer configuring the absorber, and a second absorption layer-forming step of forming a second absorption layer configuring the absorber, and laminated on to the first absorption layer. In the first absorption layer-forming step, a first absorption layer is formed while forming the curving unit in symmetry with respect to a virtual central line dividing a width of the absorber in the widthwise direction into two, and extending in the longitudinal direction, and in the second absorption layer-forming step, the second absorption layer is formed without providing the curving unit in a crotch region that is adapted to be in contact with a crotch of the wearer.

Current assignees

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Advantages / Previous drawbacks

(EP2750646)

It will be appreciated that the drawings are schematic representations and are not drawn to scale unless otherwise specified.

However, because the first absorption layer 41 that is positioned at the lower side is sucked in uniformly by the suction mechanism of the conveyor 230, even when slits are formed, it becomes difficult for the absorber to tear off or to get deformed.

Independent claims

(EP2750646)

1. A method of manufacturing an absorbent article including an absorber (40) having a longitudinal direction, a width wise direction perpendicular to the longitudinal direction, an inner direction for facing a wearer, and an outer direction opposite to the inner direction, wherein a curving unit that allows the absorber (40) to curve in the inner direction or the outer direction is formed in the absorber, said method comprising: a first absorption layer-forming step of forming a first absorption layer (41) configuring the absorber (40); and a second absorption layer-forming step of forming a second absorption layer (42) configuring the absorber (40), and laminated on to the first absorption layer (41), wherein in the first absorption layer-forming step, the first absorption layer (41) is formed with the curving unit in symmetry with respect to a virtual central line dividing a width of the absorber (40) in the width wise direction into two, and extending in the longitudinal direction, and in the second absorption layer-forming step, the second absorption layer (42) is formed without providing the curving unit in a crotch region (S3) that is adapted to be in contact with a crotch of the wearer, wherein the curving unit is configured by a slit formed in the first absorption layer (41), and wherein in the first absorption layer-forming step, a first curving unit including a first slit (45) and extending in the longitudinal direction is formed in the center of the crotch region (S3) in the width wise direction, and a second curving unit including a pair of second slits (46) and extending in the longitudinal direction is formed outboard of the first curving unit in the width wise direction, and a third curving unit including a pair of third slits (47) and extending in the longitudinal direction is formed outboard of the second curving unit in the width wise direction.

Object of invention

(EP2750646)

The present disclosure relates to a method of manufacturing an absorbent article including a curving unit which is capable of curving an absorber.

The present disclosure relates to a method of manufacturing an absorbent article including a curving unit which is capable of curving an absorber.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/45; A61F-013/49; A61F-013/49; A61F-013/53; A61F-013/534; A61F-013/535; A61F-

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Family 122/200 - FAMPAT - ©Questel

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CN200410005048
CN200410008055
DE69433651
CN94113553
EP99109215
CN02147270
DE69431684
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DE69425236
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US08/910,105
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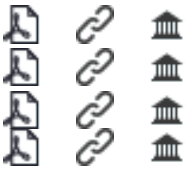
CN1274289
CN1223324
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DE69433651
EP0937445
CN1427120
DE69431684
DE69431684
EP0937444
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EP0661030
US6068619
EP0937445
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US5865822
EP0661030
CN1126067
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CN1274289	C	2006-09-13	CN1274289C
CN1223324	C	2005-10-19	CN1223324C
CN1528258	A	2004-09-15	CN1528258



DE69433651	T2	2004-08-19	DE69433651
CN1511505	A	2004-07-14	CN1511505
CN1148159	C	2004-05-05	CN1148159C
DE69433651	D1	2004-04-29	DE69433651
EP0937445	B1	2004-03-24	EP-937445
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DE69431684	D1	2002-12-12	DE69431684
EP0937444	B1	2002-11-06	EP-937444
DE69425236	T2	2000-11-30	DE69425236
DE69425236	D1	2000-08-17	DE69425236
EP0661030	B1	2000-07-12	EP-661030
US6068619	A	2000-05-30	US6068619
EP0937445	A3	1999-09-15	EP-937445
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EP0937444	A2	1999-08-25	EP-937444
EP0937445	A2	1999-08-25	EP-937445
US5865822	A	1999-02-02	US5865822
EP0661030	A3	1998-06-03	EP-661030
CN1126067	A	1996-07-10	CN1126067
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1994-12-23
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Title

(EP-661030)
Sanitary napkin

Abstract

(EP0661030)
An absorbent member in an absorbent article comprises a absorbent polymer and cellulose fibers. The absorbent polymer has a centrifugal retentive capacity for physiological saline of 30 g/g or more and a permeation rate of physiological saline of 10 ml/minute or more. The cellulose fibers are crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of the cellulose fibers. Particularly, an absorbent member in a sanitary napkin has a centrifugal retentive capacity of pseudo-blood of 30 g or more and a permeation rate of pseudo-blood of 50 ml/minute or more. Also, a topsheet in the absorbent article comprises a liquid-permeable sheet, which comprises at least a layer in contact with a user's skin and a layer not in contact with the user's skin, the layers being overlaid and combined with each other into a unitary body. The layer in contact with the user's skin comprises a porous film of a thermoplastic resin or a nonwoven fabric

of synthetic fibers. The layer not in contact with the user's skin comprises an absorbent sheet, which comprises at least bulky cellulose fibers. The absorbent member and the topsheet should preferably comprise crosslinked cellulose fibers.

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Advantages / Previous drawbacks

(EP0661030)

In the present invention, more advantageous effects can be obtained, in particular, in cases where the cellulose fibers, which are subjected to the crosslinking, have the degree of fiber roughness of 0.3 mg/m or more and, at the same time, have the degree of fiber roundness of 0.5 or more.

In particular, at present, there is a need for a very thin sanitary napkin, which has an excellent absorption performance and is free of the problems with regard to reflow of body fluids from an absorbent member to the surface, stickiness to the body, and leakage even during a long period of use under conditions of large excretion amounts.

However, none of these proposed techniques can solve the essential problems in that the strength of the pulp decreases markedly when the pulp is wetted.

none of these proposed techniques can solve the essential problems in that, when the pulp is wetted, it becomes twisted, the fiber spaces become small, and the reabsorption rate becomes low.

none of these proposed techniques can solve the essential problems in that the strength of the pulp decreases markedly when the pulp is wetted.

However, none of these proposed techniques can solve the essential problems in that, when the pulp is wetted, it becomes twisted, the fiber spaces become small, and the reabsorption rate becomes low.

Patent specification cannot solve the essential problems in that, when the hydrophilic fibers are wetted, the spaces among the fibers become small, and the reabsorption rate becomes low.

Independent claims

(EP0661030)

1. An absorbent article comprising a liquid permeable topsheet, a liquid impermeable backsheet and a liquid retentive absorbent member interposed between said topsheet and said backsheet, said absorbent article being characterized in that: said absorbent member comprises an absorbent polymer and cellulose fibers; said absorbent polymer has a centrifugal retentive capacity for physiological saline, which is measured after equilibrium absorption swelling with the physiological saline, of 30 g/g or more, and a permeation rate of physiological saline of 10 ml/minute or more, said permeation rate being measured by introducing 0.05 g of said absorbent polymer into a cylinder having a cross-sectional area of 0.785 cm (inner diameter: 10 mm), allowing said absorbent polymer to absorb and swell with physiological saline until the swelling reaches equilibrium, and thereafter causing physiological saline to permeate through said absorbent polymer; and said cellulose fibers are crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of said cellulose fibers.

16. A sanitary napkin comprising a liquid permeable topsheet, a liquid impermeable backsheet, and a liquid retentive absorbent member interposed between said topsheet and said backsheet, said sanitary napkin being characterized in that: the absorbent member has a centrifugal retentive capacity for pseudo-blood, which is measured after equilibrium absorption swelling with the pseudo-blood, of 30 g/g or more, and a permeation rate of pseudo-blood of 50 ml/minute or more, said permeation rate being measured by securing the absorbent member having a thickness of 0.5 to 5 mm to an end of a cylinder having a cross-sectional area of 10 cm (inner diameter: 35.8 mm), allowing the absorbent member to absorb and swell with pseudo-blood until the swelling reaches equilibrium, and thereafter causing pseudo-blood to permeate through the absorbent member.

24. A composite absorbent paper comprising a permeable absorbent paper and a diffusing absorbent paper, wherein the permeable absorbent paper comprises 50 to 98 parts by weight of bulky crosslinked cellulose fibers obtainable by an

intramolecular and/or intermolecular crosslinking of cellulose fibers having a degree of fiber roughness of 0.3 mg/m or more, and 2 to 50 parts by weight of thermally fusible bonding fibers, the permeable absorbent paper having a basis weight of 20 to 60 g/m ; the diffusing absorbent paper comprises 20 to 80 parts by weight of bulky crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of cellulose fibers having a degree of fiber roughness of 0.3 mg/m or more, 80 to 20 parts by weight of hydrophilic fine fibers, and 0 to 30 parts by weight of thermally fusible bonding fibers, the diffusing absorbent paper having a basis weight of 20 to 60 g/m ; and the permeable absorbent paper and the diffusing absorbent paper are combined with each other into a unitary body.

28. A diffusing absorbent paper comprising 20 to 80 parts by weight of bulky crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of cellulose fibers having a degree of fiber roughness of 0.3 mg/m or more, 80 to 20 parts by weight of hydrophilic fine fibers, and 0 to 30 parts by weight of thermally fusible bonding fibers, wherein the diffusing absorbent paper has a basis weight of 20 to 60 g/m , a thickness under a load of 2.5 g/m of 0.2 to 0.8 mm, an absorption height after 1 minute absorption of physiological saline by Klemm's Method of 50 mm or more, and an absorption height after 10 minutes absorption of physiological saline by Klemm's Method of 100 mm or more.

30. A permeable absorbent paper comprising 50 to 98 parts by weight of bulky crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of cellulose fibers having a degree of fiber roughness of 0.3 mg/m or more, and 2 to 50 parts by weight of thermally fusible bonding fibers, wherein the permeable absorbent paper has a basis weight of 20 to 60 g/m .

32. Bulky crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of cellulose fibers having a degree of fiber roughness of 0.3 mg/m or more.

36. An absorbent article comprising a liquid permeable topsheet, a liquid impermeable backsheet, and a liquid retentive absorbent member interposed between said topsheet and said backsheet, said absorbent article being characterized in that: said topsheet comprises at least a first layer in contact with a user's skin and a second layer not in contact with the user's skin, said layers being overlaid and combined with each other into a unitary body, said first layer comprises a perforated film made of a thermoplastic resin or a nonwoven fabric made of synthetic fibers, and said second layer comprises an absorbent sheet made of at least bulky cellulose fibers.

Object of invention

(EP0661030)

The present invention provides an absorbent article comprising a liquid permeable topsheet, a liquid impermeable backsheet and a liquid retentive absorbent member interposed between the topsheet and the backsheet, the absorbent article being characterized in that: the absorbent member comprises an absorbent polymer and cellulose fibers; the absorbent polymer has a centrifugal retentive capacity for physiological saline, which is measured after equilibrium absorption swelling with the physiological saline, of 30 g/g or more, and a permeation rate of physiological saline of 10 ml/minute or more, the permeation rate being measured by introducing 0.05 g of the absorbent polymer into a cylinder having a cross-sectional area of 0.785 cm (inner diameter: 10 mm), allowing the absorbent polymer to absorb and swell with physiological saline until the swelling reaches equilibrium, and thereafter causing physiological saline to permeate through the absorbent polymer; and the cellulose fibers are crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of the cellulose fibers.

The present invention also provides a sanitary napkin comprising a liquid permeable topsheet, a liquid impermeable backsheet, and a liquid retentive absorbent member interposed between the topsheet and the backsheet, the sanitary napkin being characterized in that: the absorbent member has a centrifugal retentive capacity for pseudo-blood, which is measured after equilibrium absorption swelling with the pseudo-blood, of 30 g/g or more, and a permeation rate of pseudo-blood of 50 ml/minute or more, the permeation rate being measured by securing the absorbent member having a thickness of 0.5 to 5 mm to an end of a cylinder having a cross-sectional area of 10 cm (inner diameter: 35.8 mm), allowing the absorbent member to absorb and swell with pseudo-blood until the swelling reaches equilibrium, and thereafter causing pseudo-blood to permeate through the absorbent member.

The present invention further provides a composite absorbent paper comprising a permeable absorbent paper and a diffusing absorbent paper, wherein the permeable absorbent paper comprises 50 to 98 parts by weight of bulky crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of cellulose fibers having a degree of fiber roughness of 0.3 mg/m or more, and 2 to 50 parts by weight of thermally fusible bonding fibers, the permeable

absorbent paper having a basis weight of 20 to 60 g/m ; the diffusing absorbent paper comprises 20 to 80 parts by weight of bulky crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of cellulose fibers having a degree of fiber roughness of 0.3 mg/m or more, 80 to 20 parts by weight of hydrophilic fine fibers, and 0 to 30 parts by weight of thermally fusible bonding fibers, the diffusing absorbent paper having a basis weight of 20 to 60 g/m ; and the permeable absorbent paper and the diffusing absorbent paper are combined with each other into a unitary body.

The present invention still further provides a diffusing absorbent paper comprising 20 to 80 parts by weight of bulky crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of cellulose fibers having a degree of fiber roughness of 0.3 mg/m or more, 80 to 20 parts by weight of hydrophilic fine fibers, and 0 to 30 parts by weight of thermally fusible bonding fibers, wherein the diffusing absorbent paper has a basis weight of 20 to 60 g/m , a thickness under a load of 2.5 g/m of 0.2 to 0.8 mm, an absorption height after 1 minute absorption of physiological saline by Klemm's Method of 50 mm or more, and an absorption height after 10 minutes absorption of physiological saline by Klemm's Method of 100 mm or more.

The present invention also provides a permeable absorbent paper comprising 50 to 98 parts by weight of bulky crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of cellulose fibers having a degree of fiber roughness of 0.3 mg/m or more, and 2 to 50 parts by weight of thermally fusible bonding fibers, wherein the permeable absorbent paper has a basis weight of 20 to 60 g/m .

The present invention further provides bulky crosslinked cellulose fibers obtainable by an intramolecular and/or intermolecular crosslinking of cellulose fibers having a degree of fiber roughness of 0.3 mg/m or more.

The present invention still further provides an absorbent article comprising a liquid permeable topsheet, a liquid impermeable backsheet, and a liquid retentive absorbent member interposed between the topsheet and the backsheet, the absorbent article being characterized in that: the topsheet comprises at least a first layer in contact with a user's skin and a second layer not in contact with the user's skin, the layers being overlaid and combined with each other into a unitary body, the first layer comprises a perforated film made of a thermoplastic resin or a nonwoven fabric made of synthetic fibers, and the second layer comprises an absorbent sheet made of at least bulky cellulose fibers.

Accordingly, the primary object of the present invention is to provide cellulose fibers for use in an absorbent article, which do not undergo the twist and permanent set in fatigue even when they are wetted with liquid.

Another object of the present invention is to provide an absorbent paper for use in an absorbent article, which absorbent paper has a high permeability to liquid.

A further object of the present invention is to provide an absorbent paper for use in an absorbent article, which absorbent paper has a high liquid diffusing capacity.

A still further object of the present invention is to provide an absorbent paper for use in an absorbent article, which absorbent paper has a high permeability to a liquid and a high liquid diffusing capacity.

Another object of the present invention is to provide an absorbent article, which exhibits little retention of liquid on the surface, a high liquid absorbency, and little stickiness.

A further object of the present invention is to provide an absorbent member for use in an absorbent article, which absorbent member very quickly absorbs and diffuses liquid and which is free of reflow of the liquid to the surface and liquid leakage.

A still further object of the present invention is to provide an absorbent article, which restricts reflow of the liquid from an absorbent member to the surface and liquid leakage even when it is put on and used for a long period of time or even when it is used under violent motion, and which has a high absorbency and a high comfortableness.

This invention relates to bulky cellulose fibers having a high liquid absorbency, an absorbent paper and an absorbent member each using said cellulose fibers, a topsheet using said cellulose fibers, and an absorbent article using said cellulose fibers.

This invention relates to bulky cellulose fibers having a high liquid absorbency, an absorbent paper and an absorbent member each using said cellulose fibers, a topsheet using said cellulose fibers, and an absorbent article using said cellulose fibers.

IPC - International classification

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Family 123/200 - FAMPAT - ©Questel

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KR20177027396
CN201580077352
MX2017011125
AU2015389960
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RU2664957	C1	2018-08-23	RU2664957
BR112017018888	A2	2018-04-24	BR112017018888
US20180071155	A1	2018-03-15	US20180071155
KR20170132767	A	2017-12-04	KR20170132767
CN107405229	A	2017-11-28	CN107405229
MX2017011125	A	2017-11-28	MX2017011125
AU2015389960	A1	2017-10-19	AU2015389960
BR112017018888	A1	2017-09-12	BR112017018888
WO2016/159978	A1	2016-10-06	WO2016159978

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Title

(WO2016159978)
Absorbent article with waist containment member and method of manufacturing thereof

Abstract

(WO2016/159978)
An absorbent article (10, 110, 210) can include a waist containment member (54) with a first longitudinal side edge (72), a second longitudinal side edge (74), a proximal portion (76), and a distal portion (78). A fold (79a) can separate the proximal portion (76) from the distal portion (78). The proximal portion (76) can be coupled to the chassis (11) and the distal portion (78) can be configured to freely move with respect to the chassis (11) when the absorbent article (10, 110, 210) is in a relaxed configuration to provide a containment pocket (82). The absorbent article (10, 110, 210) can include a pair of containment flaps (50, 52). The containment flaps (50, 52) can each include a base portion (64) and a projection portion (66).

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Advantages / Previous drawbacks

(WO2016/159978)
It can be appreciated, however, that if the proximal portion 76 of the waist containment member 54 is to be disposed under the base portion 364 of the containment flaps 350, 352, then the waist containment member 54 can be bonded to the body facing surface 19 of the chassis 1 1 (e.g., the body facing surface 345 of the absorbent assembly web 344) before the base portion 364 of the containment flaps 350, 352 are bonded to the body facing surface 19 of the chassis 1 1 (e.g., body facing surface 345 of the absorbent assembly web 344).
Thus, there is a desire for improvements to containment systems and containment members of absorbent articles to prevent leakage of exudates, especially in the waist regions of the absorbent article.

Independent claims

(WO2016/159978)
1. An absorbent article including a front waist region, a rear waist region, a crotch region, a longitudinal axis and a lateral axis, the absorbent article comprising: a chassis including an absorbent body, the chassis including a body facing surface and a garment facing surface; a pair of containment flaps including a first containment flap and a second containment flap, the first containment flap being on a first side of the longitudinal axis and the second containment flap being on a second side of the longitudinal axis, the first and second containment flap each comprising: a base portion including a proximal end and a distal end; and a projection portion configured to extend away from the body facing surface of the chassis in at least

the crotch region when the absorbent article is in a relaxed configuration; and a waist containment member disposed on the body facing surface of the chassis, the waist containment member comprising: a first longitudinal side edge and a second longitudinal side edge, the first longitudinal side edge being disposed laterally outward of the proximal end of the base portion of the first containment flap, the second longitudinal side edge being disposed laterally outward of the proximal end of the base portion of the second containment flap; a proximal portion, the proximal portion being coupled to the body facing surface of the chassis; and a distal portion, a fold separating the distal portion from the proximal portion, the distal portion of the waist containment member being free to move with respect to the chassis when the absorbent article is in the relaxed configuration.

A folded absorbent article including a front waist region, a rear waist region, a crotch region, a longitudinal axis and a lateral axis, the absorbent article comprising: a chassis including an absorbent body, the chassis including a body facing surface and a garment facing surface; a pair of longitudinally extending fold lines including a first longitudinally extending fold line and a second longitudinally extending fold line, the first longitudinally extending fold line being on a first side of the longitudinal axis and the second longitudinally extending fold line being on a second side of the longitudinal axis; and a waist containment member disposed on the body facing surface of the chassis, the waist containment member comprising: a first longitudinal side edge and a second longitudinal side edge, the first longitudinal side edge being disposed laterally outward of the first longitudinally extending fold line and the second longitudinal side edge being disposed laterally outward of the second longitudinally extending fold line; a proximal portion, the proximal portion being coupled to the body facing surface of the chassis; and a distal portion, a fold separating the distal portion from the proximal portion, the distal portion of the waist containment member being free to move with respect to the chassis.

2. An absorbent article including a front waist region, a rear waist region, a crotch region, a longitudinal axis and a lateral axis, the absorbent article comprising: a chassis including an absorbent body, the chassis including a body facing surface and a garment facing surface; and a waist containment member disposed on the body facing surface of the chassis, the waist containment member comprising: a first longitudinal side edge and a second longitudinal side edge, the first longitudinal side edge being disposed on a first side of the longitudinal axis and the second longitudinal edge being disposed on a second side of the longitudinal axis; a proximal portion, the proximal portion being coupled to the body facing surface of the chassis; and a distal portion, a fold separating the distal portion from the proximal portion, the distal portion of the waist containment member being free to move with respect to the chassis, the waist containment member including a first width in the lateral direction and the chassis including a second width in the lateral direction, a ratio of the first width to the second width is about 0.85 to about 1.00.

24. A method of manufacturing an absorbent article, the absorbent article including a front waist region, a rear waist region, a crotch region, a longitudinal axis and a lateral axis, the method comprising: providing an absorbent assembly including a bodyside liner, an outer cover, and an absorbent body disposed between the bodyside liner and the outer cover, the absorbent assembly including a body facing surface; providing a pair of containment flaps including a first containment flap and a second containment flap, the first containment flap and the second containment flap each including a base portion and a projection portion; bonding the base portion of each of the first and the second containment flaps to the body facing surface of the absorbent assembly, the base portion of each of the first and the second containment flaps each including a proximal end and a distal end; providing a continuous web of waist containment member material; folding at least a portion of the continuous web of waist containment member material upon itself; cutting the continuous web of waist containment member material to provide a waist containment member including a proximal portion, a distal portion, a first longitudinal side edge, and a second longitudinal side edge, the folding of the at least a portion of the continuous web of waist containment member material providing a separation between the distal portion of the waist containment member and the proximal portion of the waist containment member; and bonding the proximal portion of the waist containment member to the body facing surface of the absorbent assembly such that the first longitudinal side edge of the waist containment member is disposed laterally outward of the proximal end of the base portion of the first containment flap and the second longitudinal side edge of the waist containment member is disposed laterally outward of the proximal end of the base portion of the second containment flap, the distal portion of the waist containment member being free to move with respect to the proximal portion of the waist containment member when the absorbent article is in the relaxed configuration.

Object of invention

(US20180071155)

The present disclosure relates to absorbent articles.

IPC - International classification

A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/495; A61F-013/496; A61F-013/51; A61F-013/53

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MYPI2016001407
US15/584,675
US14/134,001
CN201611138810
MYPI20083173
HK16106723
US13/424,041
CN200780014162
CA2643482
CN201510324850
US11/360,115
WOUS2007/062614

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MY164473
US20170296402
US9757284
CN106580559
MY161060
HK1218706
US9561139
CN101426461
CA2643482
CN105147462
US20140180230
US20120175056
US8148598
CN101426461
WO2007/098492
WO2007/098492
CA2643482
US20070197987

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MY164473	A	2017-12-18	MY-164473
US20170296402	A1	2017-10-19	US20170296402
US9757284	B2	2017-09-12	US9757284
CN106580559	A	2017-04-26	CN106580559
MY161060	A	2017-04-14	MY-161060
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CN101426461	A	2009-05-06	CN101426461
WO2007/098492	A3	2008-02-21	WO200798492
WO2007/098492	A2	2007-08-30	WO200798492
CA2643482	A1	2007-08-30	CA2643482
US20070197987	A1	2007-08-23	US20070197987

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2012-04-03
2009-05-06
2008-02-21
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(HK1218706)
2017-03-10
(MY-161060)
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(MY-164473)
2017-12-18

Title

(WO200798492)
Method of making an absorbent composite and absorbent articles employing the same

Abstract

(WO2007/098492)
A method of making an absorbent composite that includes a first fabric, a second fabric, and particles positioned between the two fabrics and absorbent articles made from the absorbent composite. The particles are secured between the two fabric using adhesive, thermal plastic or combinations thereof. The fabrics are bonded together in a manner that limits particle movement between the fabrics. The bond pattern may define pockets or other shapes. In applications in which the bond pattern forms pockets, the particles may be positioned in the pockets. The particles may be SAP particles or other particles with advantageous properties.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(WO2007/098492)
Alternatively, a separate dispensers advantageously positioned along the production line (not shown) may be used to deposit different types of particles such as, for example, skin care particles.
It is readily understood that FIGURES 1-5 show different embodiments of the novel method and that aspects of the various methods may be advantageously combined depending on the need.
[0007] Accordingly, there exists a need for an improved absorbent product that continues the trend of decreasing product thickness, while minimizhig product stiffness and otherwise exhibiting excellent absorbency.
However, because there is still a movement of the particles, the absorbent core does not exhibit uniform absorbency.
It should also be realized that such equivalent constructions do not depart from the invention as set forth in the appended claims.
The absorbent matrix is very bulky relative to the topsheet, backsheet, and SAP.

Independent claims

(WO2007/098492)
1. A method of manufacturing a composite sheet, comprising the steps of positioning a first fabric to receive particles; depositing particles on said first fabric; applying adhesive to a second fabric; positioning said second fabric relative to said first fabric; and forming bond sites that extend between said first and second fabric.

21. A method of manufacturing a composite sheet, comprising the steps of positioning a first fabric to receive particles; positioning particles on the first fabric; securing the particles relative to said first fabric; positioning a second fabric over the particles; and forming bond sites that join said first fabric to said second fabric.

31. A disposable absorbent article, comprising: a topsheet; a backsheet; and an absorbent core disposed therebetween, wherein at least a portion of one of said backsheet, topsheet, and absorbent core is an absorbent composite comprising a first fabric; a second fabric bonded to said first fabric; and particles adhered between said first and second fabric.

43. A disposable absorbent article comprising: a topsheet; a backsheet; an absorbent composite comprising a first fabric; a second fabric bonded to said first fabric; and an absorbent layer of particles adhered between said first and second fabric, wherein said absorbent layer is disposed between the topsheet arid backsheet, and generally centrally at a location identified as a crotch region, said absorbent layer providing an absorbent core for absorbing bodily exudates received in said crotch region.

53. A disposable absorbent article comprising; a topsheet; a backsheet; and an absorbent core disposed between said topsheet and said backsheet, said absorbent core comprising: a first fabric; a second fabric; bond sites at which said first fabric is connected to said second fabric; and an absorbent layer of particles adhered between said first and second fabric.

63. An absorbent composite comprising, a first fabric; a second fabric bonded to said first fabric; and an effective concentration of particles secured between the first and second fabric.

Object of invention

(WO2007/098492)

[0001] The present invention relates generally to a method of making an absorbent composite.

The present invention also relates generally to disposable absorbent articles employing absorbent composites.

[0008] The present invention discloses an absorbent composite that does not require an absorbent matrix and a novel method of making the absorbent composite.

The present invention also discloses an absorbent article that incorporate the absorbent- composite.

[0009] The present invention is also directed to an improved absorbent article incorporating the novel absorbent composite.

[00010] One embodiment of the present invention is a method of manufacturing a composite sheet, comprising the steps of positioning a first fabric to receive particles, depositing particles on the first fabric, applying adhesive to a second fabric, positioning the second fabric relative to the first fabric, and forming bond sites that extend between the first and second fabric.

IPC - International classification

A61F; A61F-013/15; A61F-013/15; A61F-013/494; A61F-013/494; A61F-013/514; A61F-013/53; A61F-013/532; A61F-013/535; A61F-013/536; A61F-013/539

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CN201480083330
US15/327,496
MX2017006064
EP14906886
KR20177015488
RU2017119205
AU2014412737
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WOUS2014/067615
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CN107072839
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MX360520
EP3223762
KR101823312
RU2642042
EP3223762
US20170252230
CN107072839
MX2017006064
KR20170073702
AU2014412737
AR102771
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TW201618738

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US10188560	B2	2019-01-29	US10188560
MX360520	B	2018-11-05	MX-360520
EP3223762	A4	2018-06-06	EP3223762
KR101823312	B1	2018-01-29	KR101823312
RU2642042	C1	2018-01-23	RU2642042
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MX2017006064	A	2017-07-27	MX2017006064
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AR102771	A1	2017-03-22	AR-102771
WO2016/085491	A1	2016-06-02	WO201685491
TW201618738	A	2016-06-01	TW201618738

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2018-01-23
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2017-07-27
2017-06-28
2017-06-08
2017-03-22
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2019-04-02

Title

(EP3223762)
Absorbent article having finger tabs and methods of manufacturing same

Abstract

(EP3223762)
A method of manufacturing an absorbent article includes feeding a first web of material in a machine direction, feeding a second web of material in the machine direction, the second web being spaced from the first web by a gap, attaching an absorbent assembly to the first web and the second web such that the absorbent assembly spans the gap between the first and second webs, forming a partial cut line through the second web, folding the first web into face-to-face relationship with the second web after forming the partial cut line, and cutting the first and second webs after folding the first web into face-to-face relationship with the second web to separate the absorbent article from the first and second webs. The partial cut line defines at least one finger tab on the absorbent article.

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Advantages / Previous drawbacks

(WO2016/085491)
As a result, certain absorbent articles, such as articles manufactured in a cross-machine direction (i.e., processes in which the longitudinal direction of the article is oriented perpendicular to the conveying direction of the process), lack satisfactory means of separating the seams of the article. [0006] Thus, there exists a need for an absorbent article having finger tabs

that facilitate separating the seams of the article.

Moreover, there exists a need for a simplified process for manufacturing such articles that does not require complicated processing steps.

[0004] Some users may find the attachment difficult to open because the attachment is designed to withstand stresses placed on the attachment by movement of the wearer without unintentionally opening (i.e., separation of the seam).

Independent claims

(WO2016/085491)

1. A method of manufacturing an absorbent article, the method comprising: feeding a first web of material in a machine direction; feeding a second web of material in the machine direction, the second web being spaced from the first web by a gap; attaching an absorbent assembly to the first web and the second web such that the absorbent assembly spans the gap between the first and second webs; forming a partial cut line through the second web; folding the first web into face-to-face relationship with the second web after forming the partial cut line; and cutting the first and second webs after folding the first web into face-to-face relationship with the second web to separate the absorbent article from the first and second webs, the partial cut line defining at least one finger tab on the absorbent article.

13. A method of manufacturing an absorbent article, the method comprising: feeding a first web of material in a machine direction; feeding a second web of material in the machine direction, the second web being spaced from the first web by a gap; attaching an absorbent assembly to the first web and the second web such that the absorbent assembly spans the gap between the first and second webs; folding the first web into face-to-face relationship with the second web; and cutting the first and second webs while the first and second webs are in face-to-face relationship to separate the absorbent article from the first and second webs, wherein cutting the first and second webs forms finger tabs on the absorbent article.

21. A method of manufacturing an absorbent article, the method comprising: feeding a first web of material in a machine direction; feeding a second web of material in the machine direction, the second web being spaced from the first web by a gap; attaching an absorbent assembly to the first web and the second web such that the absorbent assembly spans the gap between the first and second webs; folding the first web into face-to-face relationship with the second web; and forming an undulated cut line through at least one of the first web and the second web to form an integral finger tab on the absorbent article.

27. An absorbent article defining a longitudinal direction and a transverse direction, the absorbent article comprising: a front panel defining a front waist edge and first and second front side edges spaced apart in the transverse direction; a rear panel defining a rear waist edge spaced apart from the first waist edge in the longitudinal direction, and first and second rear side edges spaced apart in the transverse direction, the front panel being connected to the rear panel by a pair of side seams when the absorbent article is in a wear configuration to define a waist opening and a pair of leg openings, each side seam extending between one of the leg openings and the waist opening; an absorbent assembly extending longitudinally between and interconnecting the front panel and the rear panel; and a gripping feature comprising a pair of finger tabs integrally formed with one of the front panel and the rear panel, the pair of finger tabs including a first finger tab extending transversely outward from the front panel or rear panel along the first side edge of the corresponding front panel or rear panel, and a second finger tab extending transversely outward from the front panel or rear panel along the second side edge of the corresponding front panel or rear panel.

34. A method of manufacturing an absorbent article, the method comprising: feeding a web of material in a machine direction, the web defining a first portion and a second portion spaced from the first portion in a cross-machine direction; attaching an absorbent assembly to the web such that the absorbent assembly is oriented in the cross-machine direction; forming a partial cut line through the second portion of the web; folding the first portion of the web into face-to-face relationship with the second portion of the web after forming the partial cut line; and cutting the web after folding the first portion into face-to-face relationship with the second portion to separate the absorbent article from the web, the partial cut line defining at least one finger tab on the absorbent article.

47. An absorbent article defining a longitudinal direction and a transverse direction, the absorbent article comprising: a chassis including a front portion, a rear portion, and a crotch portion extending between and interconnecting the front portion and the rear portion, the front portion defining first and second front side edges spaced apart in the transverse direction, the rear portion defining first and second rear side edges spaced apart in the transverse direction, the front portion being connected to the rear portion by a pair of side seams when the absorbent article is in a wear configuration to

define a waist opening and a pair of leg openings, each side seam extending between one of the leg openings and the waist opening; an absorbent assembly attached to the chassis along at least the crotch portion; and a gripping feature comprising a pair of finger tabs integrally formed with one of the front portion and the rear portion of the chassis, the pair of finger tabs including a first finger tab extending transversely outward from the front portion or rear portion along the first side edge of the corresponding front portion or rear portion, and a second finger tab extending transversely outward from the front portion or rear portion along the second side edge of the corresponding front portion or rear portion.

Object of invention

(WO2016/085491)

[0008] In another aspect, a method of manufacturing an absorbent article is provided.

[001 1] In yet another aspect, a method of manufacturing an absorbent article is provided.

[0010] In yet another aspect, an absorbent article is provided.

IPC - International classification

A41B-013/04; A61F-013/15; A61F-013/15; A61F-013/45; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/56; A61F-013/60; A61F-013/66

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Earliest priority number

US09/053,251

Application number

EP02757297
DE60239557
CA2463880
KR20047005471
BR0213369
AU2002323321
TW91132131
ARP020103990
MXPA04003424
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DE60239557
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CA2463880
KR100988147
BRPI0213369
AU2002323321
TWI243666
BR0213369
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AR036927
EP1448140
MXPA04003424
KR20040053167
TW200300075
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CA2463880
US6556154

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EP1448140	B1	2011-03-23	EP1448140
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KR100988147	B1	2010-10-18	KR100988147
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CA2463880	A1	2003-05-15	CA2463880
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1998-03-31
2002-08-22
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2007-03-22
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Title

(EP1448140)
Absorbent article having a body conforming absorbent composite

Abstract

(EP1448140)
An absorbent garment comprises a body panel and an absorbent composite having a longitudinally extending length and a laterally extending width and comprising a backsheet, a topsheet and a retention portion disposed between the backsheet and the topsheet. The absorbent composite is connected to the body panel and comprisesa side margin that is not attached to the body panel and that extends laterally outboard and terminates in a free edge. In one preferred embodiment, the free edge does not extend along the entirety of the length of the absorbent composite. Rather, the entire width of an end of the absorbent composite is secured to the body panel. Preferably,the width of the side margin along the portion of the absorbent composite overlapping the body panel is relatively constant.

Current assignees

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Advantages / Previous drawbacks

(EP1448140)
As such, the absorbent composite can reduce or otherwise affect the extensibility of the body panel, especially when it is desired to have a wider absorbent composite.
The present invention provides significant advantages over other absorbent garments and methods for the use and

manufacture thereof.

As such, the flaps do not contribute to the overall width of the absorbent composite.

Independent claims

(EP1448140)

1. An absorbent garment comprising: longitudinally spaced first and second body panels (4,6) each having a body side surface (10), a terminal waist edge (18,20) and a terminal crotch edge (14,16), wherein said crotch edges (14,16) of said first and second body panels (4,6) are longitudinally spaced apart to form an opening (34) therebetween in the crotch region (120) of the garment and wherein said waist edges (18,20) of said first and second body panels (4,6) are longitudinally spaced apart; and an absorbent composite (50) having a longitudinally extending length, a laterally extending width and longitudinally opposed first and second end regions (56,58) having respective first and second ends (60,62), said absorbent composite (50) comprising a backsheet (68), a topsheet (64) and a retention portion (70) disposed between said backsheet (68) and said topsheet (64), wherein said absorbent composite (50) bridges said opening (34) between said crotch edges (14,16) of said first and second body panels (4,6) and wherein said first end region (56) of said absorbent composite (50) overlaps and is connected to said body side surface (10) of said first body panel (4) along a longitudinally extending center portion thereof and across an entirety of said width of said absorbent composite (50) at said first end (60) thereof, and wherein said second end region (58) of said absorbent composite (50) overlaps and is connected to said body side surface (10) of said second body panel (6) along a longitudinally extending center portion thereof and across an entirety of said width of said absorbent composite (50) at said second end (62) thereof, wherein said absorbent composite (50) comprises a pair of laterally opposed side margins terminating in opposite, longitudinally extending outboard free edges, respectively, wherein said side margins are not attached to said first and second body panels and wherein each longitudinally extending free edge extends between the connection across said width of said absorbent composite (50) at said first end thereof to the connection across said width of the absorbent composite (50) at said second end thereof, and wherein first and second portions of each of said side margins overlapping said first and second body panels (4,6) respectively between said center portion and said free edge each have a relatively constant width between said center portion and said free edge.

Object of invention

(EP1448140)

In another aspect of the invention, a method of protecting a user from bodily exudates comprises applying the absorbent garment to the body of the user.

The present invention relates generally to an absorbent garment, and in particular, to an absorbent garment having a body conforming absorbent composite.

In accordance with the present invention there is provided an absorbent garment as claimed in claim 1.

In another aspect of the invention, a method of protecting a user from bodily exudates comprises applying the absorbent garment to the body of the user.

The present invention relates generally to an absorbent garment, and in particular, to an absorbent garment having a body conforming absorbent composite.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/494; A61F-013/494; A61F-013/496; H03H-011/04; H03M-001/10; H03M-001/68

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JP6373216
VN55765
IN201717032433
KR20170132852
CN107427391
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KR101913534	B1	2018-10-30	KR101913534
JP6373216	B2	2018-08-15	JP6373216
VN55765	A	2018-01-25	VN--55765
IN201717032433	A	2017-12-22	IN201717032433
KR20170132852	A	2017-12-04	KR20170132852
CN107427391	A	2017-12-01	CN107427391
JP2016189851	A	2016-11-10	JP2016189851
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Title

(WO2016157653)
Absorbent article

Abstract

(WO2016/157653)

An absorbent article having a thickness direction, a widthwise direction and a lengthwise direction that are perpendicular to one another, and having an absorbent body provided with an absorbent core having liquid-absorbing fibers. The absorbent body is provided with a folding line that that guides in a manner such that folding occurs, projects toward the skin-side in the thickness direction, and extends in the lengthwise direction. The absorbent core has a low-density section that exhibits a lower distribution density of liquid-absorbing fibers than do the surrounding sections and is formed in the location of the folding line in the widthwise direction, a skin-side layer positioned on the skin side in the thickness direction relative to the low-density section, and a non-skin-side layer positioned on the non-skin side in the thickness direction relative to the low-density section. However, the liquid-absorbing fibers are present in the low-density section. The skin-side layer is folded in a manner such that the section corresponding to the folding line projects toward the skin side in the thickness direction.

Current assignees

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Inventors

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TERASOMA NOZOMI

Advantages / Previous drawbacks

(WO2016/157653)

That is, may not be necessary for the wing part 1w.

However, as described in the introduction, in which the central position in the width direction has a shape protruding to the side of the skin, the pulling of the sanitary napkin 1 and the shorts of the wearer to change during the course of obtaining, in a case where if it changes, the sanitary napkin 1 in contact with the labia become difficult, or it is difficult to enter between the labia, as a result, the fitting property is deteriorated.

Incidentally, in the case where it is difficult to visually confirm if such, may be as follows.

The present invention, in view of the above-mentioned problems in the above-mentioned, it is an object, the shape of the absorbent article, along the line projects toward the skin such as a meandering while enabling stably maintained, so that good absorbency is also obtained.

Independent claims

(WO2016/157653)

The longitudinal direction and a widthwise direction orthogonal to the direction of thickness of the absorbent article to be placed, an absorbent core having a liquid-absorbent fibers have a absorber, the absorber in the thickness direction of said skin side so as to protrude to induce the user to bend along the longitudinal direction of said line are provided, wherein the absorbent core, in said width direction are formed in the position of the polygonal line, wherein the distribution density of the liquid absorbent fiber is lower than the surrounding part and a low density portion, wherein the low density portion in the thickness direction than the skin side layer positioned on the side of the skin, wherein the low density portion in the thickness direction than the non-skin side of the non-skin side layer is located, and, wherein the low density portion, and said liquid absorbent fibers are present, wherein the skin side layer is, wherein the portion corresponding to the polygonal line in the thickness direction so as to project into the skin side of the bent absorbent article characterized in that the.

Object of invention

(WO2016/157653)

And the arrangement pattern is a staggered pattern, but not limited to any.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/47; A61F-013/472; A61F-013/49; A61F-013/49; A61F-013/511; A61F-013/53; A61F-013/533; A61F-013/534; A61F-013/534; A61F-013/537; A61F-013/539

Family 128/200 - FAMPAT - ©Questel

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BR112013031719
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JP2014514879
CA2838841
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US20170231828
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US10245188	B2	2019-04-02	US10245188
US20190038477	A1	2019-02-07	US20190038477
EP2532329	B1	2018-09-19	EP2532329
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BR112013031719	A2	2016-12-06	BR112013031719
US9492328	B2	2016-11-15	US9492328
JP5996638	B2	2016-09-02	JP5996638
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RU2564621	C2	2015-10-10	RU2564621
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RU2013156989	A	2015-07-20	RU2013156989
IN10581/DELNP/2013	A	2014-12-26	IN2013DN10581
JP2014534820	A	2014-12-25	JP2014534820
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US20140027066	A1	2014-01-30	US20140027066
MX2013014591	A	2014-01-24	MX2013014591
BR112013031719	A1	2014-01-14	BR112013031719
SG195284	A1	2013-12-30	SG-195284
US8568566	B2	2013-10-29	US8568566
WO2012/170798	A1	2012-12-13	WO2012170798
US20120312491	A1	2012-12-13	US20120312491
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2015-07-20
2014-12-26
2014-12-25
2014-07-11
2014-02-26
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Title

(EP2532329)
Method and apparatus for making absorbent structures with absorbent material

Abstract

(EP2532329)
Apparatus (1) and method for producing absorbent structures with absorbent layers with channel(s) without absorbent material, using a first moving endless surface (20) with specific raised strip(s) (25) and a second moving endless surface (30) with specific mating strip(s) (31).

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP2532329)
The absorbent material (100) herein may advantageously comprise less than 15% by weight of water, or less than 10%, or less than 8% or less than 5%.

In any such case, it may be preferred that none of the edge zones described above comprises such raised strips (21).
In any such case, it may be preferred that none of the edge zones described above comprises such mating strips (31).

Independent claims

(EP2532329)

1. An apparatus (1) for making an absorbent structure for an absorbent article, comprising a supporting sheet (200) and thereon an absorbent layer with a longitudinal dimensional and transverse dimension and a height dimension, said absorbent layer comprising an absorbent material (100) with therein one or more channels that are substantially free of absorbent material, said apparatus (1) having: a) a feeder (60) for feeding said absorbent material (100) to a first moving endless surface (20); b) a transfer means (210) for transferring a supporting sheet (200) to a second moving endless surface (30); c) a first moving endless surface (20), having one or more absorbent layer-forming reservoirs (25) with a longitudinal dimension and averaged length, a perpendicular transverse dimension and average width, and, perpendicular to both, a depth dimension and average depth, and a void volume for receiving said absorbent material (100) therein, said reservoir(s) comprising one or more substantially longitudinally extending raised strips (21), each having an average width W of at least 5% of the average width of the reservoir, and an average length L of at least 5% and at the most 80% of the average longitudinal dimension of the reservoir; said reservoir(s) (25) being for transferring said absorbent material (100) to said second moving endless surface (30) adjacent and in proximity thereto: d) a second moving endless surface (30), having an outer shell that has one or more air permeable or partially air permeable receptacle(s) (33) for receiving said supporting sheet (200) thereon or therein, and said receptacle(s) (33) having one or more substantially longitudinally extending mating strips (31), having each an average width W' being from 0.5 x W to 1.2 x W, and each having an average length L' being from 0.8 x L to 1.2 x L, whereby said outer shell is preferably connected to one or more vacuum systems for facilitating retention of said supporting sheet (200) and/or said absorbent material (100) thereon, and whereby, in a meeting point, said first moving endless surface (20) and said second moving endless surface (30) are adjacent and in close proximity of one another during transfer of said absorbent material (100) from said first to said second moving endless surface; and whereby each mating strip (31) is substantially mating with a raised strip (21), during transfer of said absorbent material.

15. A method for making an absorbent structure with a longitudinal dimensional and transverse dimension and height dimension, and comprising a supporting sheet (200) and thereon an absorbent layer of absorbent material (100) and therein one or more channels with substantially no absorbent material, said method comprising the steps of: a) providing a feeder (60) for feeding said absorbent material (100) to a first moving endless surface (20); b) providing a transfer means for transferring a supporting sheet (200) to a second moving endless surface (30); c) providing a first moving endless surface (20), having one or more absorbent layer-forming reservoirs (25) with a longitudinal dimension and averaged length, a perpendicular transverse dimension and average width, and, perpendicular to both, a depth dimension and average depth, and a void volume for receiving said absorbent material (100) therein, said reservoir(s) comprising one or more substantially longitudinally extending raised strips (21) , each having an average width W of at least 5% of the average width of the reservoir, and an average length L of at least 5% and at the most 80% of the average longitudinal dimension of the reservoir; said reservoir(s) being for transferring said absorbent material (100) to said second moving endless surface (30) adjacent and in proximity thereto; d) providing a second moving endless surface (30), having an outer shell that has one or more air permeable or partially air permeable receptacle (33) for receiving said supporting sheet (200) thereon or therein, with a receiving area and with one or more substantially longitudinally extending mating strips (31), and having each an average width W' being from 0.5 x W to 1.2 x W, and an average length L' being from about 0.8 x L to 1.2 x L, whereby said outer shell is preferably connected to one or more vacuum systems for facilitating retention of supporting sheet (200) and/or said absorbent material (100) thereon, and whereby, in a meeting point, said first moving endless surface (20) and said outer shell are at least partially adjacent to one another and in close proximity of one another during transfer of said absorbent material (100) and such that each mating strip (31) is substantially completely adjacent and in close proximity to a raised strip (21) during transfer of said absorbent material; e) feeding with said feeder (60) an absorbent material (100) to said first moving endless surface (20), in at least said reservoir(s) (25) thereof; f) optionally, removing any absorbent material (100) on said raised strip(s) (21); g) simultaneously, transferring said supporting sheet (200) to said second moving endless surface, onto or into said receptacle(s) (33); h) selectively transferring in said meeting point, said absorbent material (100) with said first moving endless surface (20) only to said portion of the supporting sheet

(200) that is on or in said receiving area of said receptacle (33), but substantially not to said portion(s) of the supporting sheet (200) that are on said mating strip(s).

Object of invention

(EP2532329)

The present invention relates to a method for making an absorbent structure with strips that are free of absorbent material, by receiving absorbent material on a first surface with raised strips that do not receive absorbent material, and transferring it therewith to a second surface with mating strips, that meet with said raised strips, and that then do not receive absorbent material; and to apparatuses combining such first and second surfaces.

It has been found that improved fit can be obtained by providing absorbent articles with absorbent structures whereby the absorbent material is structured in machine direction, optionally with areas that comprise less or no absorbent material, for improved bending flexibility in use (in the direction corresponding to the machine direction).

The present invention provides an apparatus and method for providing such absorbent structures, having suitable transportation channels, which allow reduction of the usage of absorbent material and/or channels that improve fit/flexibility.

The present invention provides an apparatus (1) for making an absorbent structure comprising a supporting sheet (200) and thereon an absorbent layer with a longitudinal dimensional and transverse dimension and a height dimension, said absorbent layer comprising an absorbent material (100) with therein one or more channels that are substantially free of absorbent material, said apparatus (1) having: a) a feeder (60) for feeding said absorbent material (100) to a first moving endless surface; b) a transfer means for transferring a supporting sheet (200) to a second moving endless surface; c) a first moving endless surface (20), having one or more absorbent layer-forming reservoirs (25) with a longitudinal dimension and averaged length, a perpendicular transverse dimension and average width, and, perpendicular to both, a depth dimension and average depth, and a void volume for receiving said absorbent material (100) therein, said reservoir(s) comprising one or more substantially longitudinally extending raised strips (21) (not having a void volume and hence not receiving said absorbent material (100) therein), each having an average width W of at least 5% of the average width of the reservoir (25) (in some embodiments preferably at least 5 mm), and an average length L of at least 5% and at the most 80% of the average longitudinal dimension of the reservoir; said reservoir(s) being for transferring said absorbent material (100) to said second moving endless surface (30) adjacent and in proximity thereto; d) said second moving endless surface (30), having an outer shell that has one or more air permeable or partially air permeable receptacles (33) for receiving said supporting sheet (200) thereon or therein, and said receptacle (33) having one or more substantially longitudinally extending substantially mating strips (31), having each an average width W' of from 0.5 x W to 1.2 x W, preferably at least 2.5 mm, preferably having an average length L' being from about 0.8 x L to 1.2 x L provided at the most 90% of the longitudinal dimension of the reservoir, whereby said outer shell is preferably connected to one or more secondary vacuum systems for facilitating retention of said supporting sheet (200) and/or said absorbent material (100) thereon, and whereby, in a meeting point, said first moving endless surface (20) and said outer shell and/or second moving endless surface (30) are adjacent to one another and in close proximity of one another during transfer of said absorbent material (100) and whereby each mating strip (31) is adjacent and in close proximity to a raised strip (21) during transfer of said absorbent material.

The invention also provides methods using said apparatus (1) of the invention, and/or for making an absorbent structure with a longitudinal dimensional and transverse dimension and height dimension, and comprising a supporting sheet (200) and thereon an absorbent layer of absorbent material (100) and therein one or more channels with substantially no absorbent material, said method comprising the steps of: a) providing a feeder (60) for feeding said absorbent material (100) to a first moving endless surface; b) providing a transfer means for transferring a supporting sheet (200) to a second moving endless surface; c) providing a first moving endless surface (20), having one or more absorbent layer-forming reservoirs (25) with a longitudinal dimension and averaged length, a perpendicular transverse dimension and average width, and, perpendicular to both, a depth dimension and average depth, and a void volume for receiving said absorbent material (100) therein, said reservoir(s) comprising one or more substantially longitudinally extending raised strips (21) , each having an average width W of at least 5% of the average width of the reservoir, and an average length L of at least 5% and at the most 80% of the average longitudinal dimension of the reservoir; said reservoir(s) being for transferring said absorbent material (100) to said second moving endless surface (30) adjacent and in proximity thereto; d) providing a second moving endless surface (30), having an outer shell that has one or more air permeable or partially air permeable receptacles (33) with for receiving said supporting sheet (200) thereon or therein, with a receiving area and with one or

more substantially longitudinally extending mating strips (31) that may be air impermeable, and having each an average width W' of from 0.5 x W to 1.2 x W, an average length L' being from about 0.8 x L to 1.2 x L provided at the most 90% of the longitudinal dimension of the reservoir, whereby said outer shell is preferably connected to one or more secondary vacuum systems for facilitating retention of supporting sheet (200) and/or said absorbent material (100) thereon, and whereby, in a meeting point, said first moving endless surface (20) and said second surface (30) / outer shell are at least partially adjacent to one another and in close proximity of one another during transfer of said absorbent material (100) and such that each mating strip (31) is substantially completely adjacent and in close proximity to a raised strip (21) during transfer of said absorbent material; e) feeding with said feeder (60) an absorbent material (100) to said first moving endless surface, in at least said reservoir(s) (25) thereof; f) optionally, removing any absorbent material (100) on said raised strips (21); g) simultaneously, transferring said supporting sheet (200) to said second moving endless surface, onto or into said receptacle (33); h) selectively transferring in said meeting point, said absorbent material (100) with said first moving endless surface (20) only to said part of the supporting sheet (200) that is on or in said receiving area of said receptacle (33).

The invention also relates to absorbent structures, cores obtainable by the method herein or with the apparatus herein, and absorbent articles, such as pads or in particular diapers, comprising such a structure or core.

IPC - International classification

A61F-013/00; A61F-013/15; A61F-013/15; A61F-013/47; A61F-013/49; A61F-013/49; A61F-013/53; A61F-013/532; B31F-001/07; D21F-001/48; D21F-011/00; D21F-011/08; D21H-027/30

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BR9815392
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KR20007003815
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BRPI9815392	A1	2001-09-04	BRPI9815392
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AU1360399	A	1999-04-27	AU9913603
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Title

(EP1018981)

Layered absorbent structure with a zoned basis weight and a heterogeneous layer region

Abstract

(EP1018981)

A distinctive absorbent article includes an absorbent core having multiple absorbent layers, wherein the absorbent layers interact in such a manner which preferentially locates absorbed liquid in an appointed, high saturation wicking layer. The localization of the liquid within this wicking layer increases the potential of this layer to move liquid through capillary action due to the higher saturation level and increased amount of liquid available. The intake capability of the absorbent system is maintained or improved over current systems by keeping a second layer of the absorbent system at low saturation levels through as many insults of the product as possible, while providing optimum intake performance through appropriate control of the composite properties. The low saturation in this layer provides void volume for the incoming insult as well, as a high permeability, thus increasing the intake rate of the absorbent system as a whole, but the structure of the low saturation layer is also balanced to provide an appropriately high level of capillary tension to provide enough control of the liquid to stop leakage from occurring. This low saturation layer is used in addition to a surge material and provides intake functionality in addition to that provided by the surge material. In particular aspects of the invention, the body side layer of the absorbent core does not extend over the entire surface of the overall absorbent core, therefore is not used as the high saturation, wicking layer, but as the intake layer. This arrangement also allows the intake layer to be in direct contact with the incoming liquid, therefore allowing for more immediate access and improved intake function. In additional aspects, at least one primary layer region can have a non-uniform, selectively zoned basis weight distribution. Particular configurations of the at least one primary layer region can be constructed with a target area of such primary layer region having a basis weight which is less than a basis weight of another non-target portion of the primary layer region. Moreover, at least one primary layer region can have a heterogeneous structure. In particular constructions, the at least one primary layer region can include a plurality of two or more sublayers.

Current assignees

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Advantages / Previous drawbacks

(WO99/17679)

The liquid can advantageously be concentrated in the layer region of the absorbent core which is appointed to provide the desired, relatively high distribution of liquids, while the layer region appointed to provide void volume and intake can remain relatively low in saturation.

In most cases the relative basis weights or superabsorbent concentrations of the layer regions can be configured and arranged so that suitably cooperating materials with the appropriate properties will be able to work in the system and provide good performance.

The properties of this layer region can advantageously be balanced with an appropriately high level of capillary tension to provide enough control of the liquid to substantially stop undesired leakage.

The two or more absorbent layer regions can advantageously interact in a manner which preferentially locates an appointed liquid in a selected layer region.

Although some of these parameters have individually been discussed in the past, it is has remained difficult to provide an effective combination of these attributes within a single composite structure, while maintaining desirable consumer attributes.

One problem resulting in leakage is the inability of the absorbent core to fully uptake liquids rapidly and completely when large amounts of liquids are discharged into the absorbent article.

Optionally, the absorbency rate may be limited and/or controlled by modifying the neutralization rate of the selected superabsorbent material, or by modifying or otherwise controlling the chemical ~ mechanism employed to produce the neutralization of the selected superabsorbent.

Independent claims

(WO99/17679)

We claim: 1. An absorbent article, comprising: a backsheet layer; a substantially liquid permeable topsheet layer; an absorbent composite structure sandwiched between said backsheet and topsheet layers, said absorbent composite including an absorbent core having a first primary layer region and at least a second primary layer region; said second primary layer region having a selectively zoned, non-uniform basis weight; at least one of said first and second primary layer regions includes a plurality of sublayers; and at least one of said first and second primary layer regions having a Liquid Wicking Value of at least about 38%.

9. An absorbent article which includes an absorbent core having a first primary layer region and at least a second primary layer region; wherein said second primary layer region having a selectively zoned, non-uniform basis weight; said second primary layer region includes a heterogeneous plurality of sublayers; said absorbent core has a longitudinal length, a lateral width and an appointed front-most edge; said first primary layer region has a basis weight of not less than about 100 g/m2 and not more than about 700 g/m2 , said first primary layer region has a first layer region density of not less than about 0.03 g/cm3 and not more than about 0.4 g/cm3 ; said first primary layer region includes fibrous material in an amount which is not less than about 25 wt% and is not more than about 80 wt%; said fibrous material includes fibers having fiber sizes which are not less than about 4 m and not more than about 20 m; said first primary layer region includes a superabsorbent material in an amount which is not less than about 50 wt% and is not more than about 80 wt%; said superabsorbent material includes superabsorbent particles having particle sizes which are not less than about 110 m and are not more than about 1000 m; said superabsorbent material has an MAUL value of not less than about 20 g/g; and said superabsorbent material has a Tau value of not less than about 0.8 min.

Object of invention

(WO99/17679)

The disclosed invention is an absorbent system which includes multiple absorbent layer regions.

The invention can also provide a desired Flow Conductance Value, such as a Flow Conductance Value of at least about 7 * 10"6 cm3.

In additional aspects, the invention can provide a combined Conductance-Wicking value of at least about 14 * 10"6 cm3.

Further aspects of the invention can provide a system which provides the desired Flow Conductance Value and also includes at least one layer region having the desired Liquid Wicking Value.

The present invention relates to a layered absorbent structure.

More particularly, the invention relates to a layered, composite absorbent structure with individual layers which are

constructed and arranged to selectively cooperate to provide desired performance parameters in the composite, layered structure.

IPC - International classification

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CN107148259	B	2018-09-25	CN107148259B
JP6386883	B2	2018-09-05	JP6386883
CN107148259	A	2017-09-08	CN107148259
TW201628576	A	2016-08-16	TW201628576
JP2016087288	A	2016-05-23	JP2016087288
WO2016/076203	A1	2016-05-19	WO201676203

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2014-11-10

Application dates

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2015-11-10

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(JP6386883)
2018-09-05
(CN107148259B)
2018-09-25

Title

(WO201676203)

Absorbent article

Abstract

(WO2016/076203)

A narrow central opening (5) and a pair of narrow lateral openings (6, 6) extending in a longitudinal direction (X) are formed in a base-layer absorbent core (231). A top-layer absorbent core (230) and the central opening (5) are superposed in plan view, and the central opening (5) extends the entire length in the longitudinal direction (X) of the top-layer absorbent core (230). An opening extending in the longitudinal direction (X) and penetrating through the top-layer absorbent core (230) in the thickness direction thereof is not formed in the region where the base-layer absorbent core (231) and the central opening (5) are superposed in plan view. A pair of standing gathers (24, 24) is provided on skin-facing surfaces of left- and right-side sections of an absorbent core (23). Standing-gather-forming elastic members (26) and the absorbent core (23) are superposed in plan view in the unfolded and extended state of the absorbent article (1).

Current assignees

KAO

Inventors

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KATOH TAKAHIRO

MIYAMURA TAKESHI

Advantages / Previous drawbacks

(JP2016087288)

Non-stretchable sheet 31B, 32 is, in the vertical direction or lateral direction X Y-stretchable is preferred, both X, none of the Y-stretchable is preferred.

Independent claims

(WO2016/076203)

A liquid retentive absorbent core, the ventral side of the wearer to the dorsal and ventral AR AR back side thereof and having a crotch portion located between and together with, a back side from the side of the lower abdominal via a longitudinally extending in a lateral direction perpendicular thereto and in an absorbent article having, said absorbent core is, the absorbent core and the upper absorbent core non-skin-facing surface of the lower layer of the lower layer is disposed at the side absorbent core with a two-layer structure which includes a structure, wherein the lower absorbent core in the lateral direction of the central portion, said lower absorbent core and a narrow penetrating in the thickness direction of the central opening formed so as to extend in the longitudinal direction and with which, both in the horizontal direction of the central opening outwardly, said lower absorbent core and a pair of penetrating in the thickness direction of the narrow side opening, extend in the longitudinal direction and the central opening is formed and symmetrically with respect to a reference, wherein the absorbent core and the upper layer in a plan view overlaps with the central opening, the overlayer that the central opening of the longitudinal direction of the absorbent core and extend over the entire length, wherein the top layer to the absorbent core, said absorbent core in a plan view of the lower layer in the region overlapping the central opening of, wherein the absorbent core and the upper layer in a thickness direction extending in the longitudinal direction through the opening is not formed, in the longitudinal direction of the absorbent core along the side of the left and right portions of the skin-facing surface, which faces the wearer during the wearer's skin side of a pair of stands up toward the standing gathers are provided, the stereo gathers, the skin-facing side of the absorbent core has a proximal end side of the wearer's skin so as to form a free end side of the stand, wherein the elastic member is formed on a free end of the standing gathers stretched in the longitudinal direction and are arranged such that, of the absorbent article and deployed in a plan view in a stretched state, said elastic member for forming a standing gathers of the absorbent core and overlaps the absorbent article.

Object of invention

(JP2016087288)

PROBLEM TO BE SOLVED: Excellent wearing feeling and the leak tightness of the pant to provide an absorbent article.

SOLUTION: Underlying absorbent core 231 to, and extending in the longitudinal direction of the narrow central opening X 5 and a pair of narrow side opening 6,6 has been formed.

An absorbent core layer in a plan view 230 central opening 5 in an overlapping relationship with, a central opening 5 upper absorbent core 230 X along the length of the longitudinal direction of the extending.

An upper absorbent core 230 is, the absorbent core layer in a plan view 231 central opening 5 region overlapping, the absorbent core layer 230 in the thickness direction and extending in the longitudinal direction through an opening formed therein X is not.

An absorbent core 23 skin-facing side of the right and left sides of a pair of three-dimensional gathers 24,24 is provided.

An absorbent article 1 rasterization in a plan view and in the extended state, the resilient member for forming a three-dimensional gathers 26 and an absorbent core 23 overlap with each other.

SELECTED DRAWING: FIG 2

IPC - International classification

A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/53; A61F-013/535

Family 131/200 - FAMPAT - ©Questel

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22883077

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JP4965157	B2	2012-04-06	JP4965157
JP2007282972	A	2007-11-01	JP2007282972

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2007-11-01

Grant dates

(JP4965157)

2012-04-06

Title

(JP2007282972)

Method for manufacturing absorbent article

Abstract

(JP2007282972)

PROBLEM TO BE SOLVED: To easily change over manufacture of a plurality of kinds of absorbent articles different in size.

SOLUTION: In the manufacture of the absorbent article, a plurality of absorbent cores are arrayed at a first pitch on a first sheet member to be a back sheet (step S18), and an absorbent article sheet is formed by covering the absorbent cores with a second sheet member to be a top sheet and a sidewall part and also joining the second sheet member with the first sheet member (step S19). After compression and leg part notching formation are applied to the absorbent article sheet, the absorbent article sheet is cut between the absorbent cores to thereby form the plurality of absorbent articles. In the manufacture of the absorbent article, the array pitch of the absorbent cores is changeable between the first pitch and a second pitch larger than the first pitch in arraying the absorbent cores. Consequently, the manufacture of the two kinds of

absorbent articles different in size can be easily changed over.

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Current assignees

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Inventors

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Advantages / Previous drawbacks

(JP2007282972)

However, the size of the small or large step 1 is intended to be worn, cannot be worn too small, and motions leaking out from the gap is too large it may be possible.

Independent claims

(JP2007282972)

To receive excrement from the wearer and a plurality of types of different size method for the manufacture of absorbent articles, a) so as to rotate about a predetermined rotation axis has a substantially cylindrical shape on the side of the suction drum in a circumferential direction around the rotation axis and arranged in a plurality of suction areas, said suction drum rotating step sequentially while the absorbent material and adsorbent, b) of said suction drum rotating in contact with or adjacent said side of said side while moving in the movement direction on at least one, a plurality of suction areas wherein the absorbent material are sequentially transferred from a continuous material sheet to form the absorbent core, c) an absorbent core between said sheets a plurality of suction at the position corresponding to the boundary region is cut to form a plurality of absorbent core, d) 1 carried in the longitudinal direction of the second sheet member on a predetermined plurality of said absorbent core longitudinally arranged at a pitch, said plurality of said first sheet member and the absorbent core 1 is covered with the first sheet member 2 from the side opposite to the first seat member and seat member 1 and 2 of the absorbent core surrounding by a plurality of continuous material and bonding the sheet to form an absorbent article, e) a sheet of an absorbent article wherein the plurality of sheet-shaped absorbent core between a plurality of cutting to form the article, and, wherein said d) step, the plurality of pitches of said absorbent core, said first and second pitch 1 is greater than the first pitch and the pitch 1 2 and capable of switching between, said first pitch and the pitch of the arrangement of claim 1 whereby, the E) step 1 of the first size is formed of an absorbent article, wherein the first pitch and the pitch of the arrangement of claim 2 by, wherein said e) step 1 of the first longitudinal length is longer than the size of the absorbent article 2 the absorbent article according to the size of the first form and a method of manufacturing an absorbent article.

Object of invention

(JP2007282972)

PROBLEM TO BE SOLVED: A plurality of types of absorbent articles of different sizes to facilitate fabrication of the switch.

SOLUTION: In the manufacture of the absorbent article, a first back sheet and a sheet member 1 on which a plurality of absorbent core 1 and a second pitch in the array (S18 step), the top sheet and side wall and a second sheet member with a plurality of absorbent core 2 cover 1 and the second sheet member to the first sheet member 2 are bonded to the absorbent article (S19 step) sheet is formed.

The, absorbent article against the compression and the legs after the cut-out is formed, the absorbent core of the absorbent article by cutting the sheet between the plurality of the absorbent article is formed.

A method of manufacturing the absorbent article, the absorbent core in sequence, first the pitch of the pitch of the absorbent core 1 is larger than the first pitch and the pitch of 1 can be switched between 2 and thereby, the absorbent articles of different sizes to facilitate manufacture of the type 2 can be switched.

SELECTED DRAWING: 5.

A figure

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49

Family 132/200 - FAMPAT - ©Questel

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BRPI0512065
KR20067027773
CN200580021481
KR20127020044
JP2007519241
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EP1773266
BRPI0512065
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KR101190487
CN101014310
KR20120091474
JP4904262
US7938813
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EP1773266
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MXPA06014873
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Family publication details

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BRPI0512065	A2	2016-12-06	BR200512065
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CN101014310	B	2012-08-29	CN101014310B
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BRPI0512065	A1	2008-02-06	BRPI0512065
CN101014310	A	2007-08-08	CN101014310
EP1773266	A1	2007-04-18	EP1773266
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WO2006/007339	A1	2006-01-19	WO200607339
AU2005262583	A1	2006-01-19	AU2005262583
US20060009743	A1	2006-01-12	US20060009743

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2005-06-09
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2011-05-10
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(KR101190487)
2012-10-12
(BRPI0512065)
2017-07-25

Title

(EP1773266)
Method of forming an absorbent article having shaped absorbent core formed on a substrate

Abstract

(EP1773266)
An absorbent article includes a stretchable substrate layer and an absorbent core formed directly on the substrate layer, and adhesively attached to the substrate layer. The absorbent core includes about 40-99% by weight superabsorbent particles and about 1-60% by weight adhesive fibers. The absorbent core does not prevent the substrate layer or absorbent article from stretching. The absorbent article can be a personal care absorbent article or a medical absorbent article, and is suitably stretchable or elastic in at least one direction.

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Advantages / Previous drawbacks

(EP1773266)
It would be desirable to produce the final shape of the absorbent core by inline formation without requiring die cutting, thus

avoiding these drawbacks.

Precise control of the adhesive deposition may be more difficult because the air jets will urge several of the adhesive streams together before they contact the substrate 35.

Alternatively, stretching of the outer cover, body side liner or other substrate layer can cause tearing of the absorbent core.

Independent claims

(EP1773266)

1. A method of forming an absorbent article, the absorbent article comprising: a stretchable substrate layer (35); and a shaped absorbent core (40) including a combination of superabsorbent particles (51) and adhesive fibers (53) formed by deposition onto, and adhesively attached to, the substrate layer (35); the absorbent core (40) comprising about 40-99% by weight superabsorbent particles (51) and about 1-60% by weight melt blown adhesive fibers (53), the absorbent core having a front end, a rear end, and two lateral sides wherein the lateral sides are uncut, and have a fuzzy or serrated configuration of laterally extending peaks and valleys; the absorbent core further comprising a central region and two end regions, wherein at least one of the end regions is wider than the central region, wherein the method comprises forming and shaping the absorbent core inline during assembly of the absorbent article, and wherein the absorbent core is shaped by controlling the application of the adhesive melt blown fibers to the substrate layer using a plurality of individually programmable meltblowing nozzles.

2. A method of forming an absorbent article, the absorbent article comprising: a stretchable substrate layer (35); and a shaped absorbent core (40) including a combination of superabsorbent particles (51) and adhesive fibers (53) formed by deposition onto, and adhesively attached, to the substrate layer (35); the absorbent core (40) comprising about 40-99% by weight superabsorbent particles (51) and about 1-60% by weight melt blown adhesive fibers (53), the absorbent core having a front end, a rear end, and two lateral sides wherein the lateral sides are uncut, and have a fuzzy or serrated configuration of laterally extending peaks and valleys; the absorbent core further comprising a central region and two end regions,wherein at least one of the end regions is wider than the central region, wherein the method comprises forming and shaping the absorbent core inline during assembly of the absorbent article, and wherein the absorbent core is shaped by applying a continuous stream of adhesive melt blown fibers through a plurality of meltblowing nozzles (1-14) on the substrate layer (35) and controlling the application of the adhesive melt blown fibers to the substrate layer using one or more air nozzles (60) to deliver air jets at predetermined velocities, sufficient to urge the continuous adhesive streams from at least the outer adhesive nozzles inward and toward the center of the substrate layer (35) at periodic intervals.

Object of invention

(EP1773266)

The present invention is directed to a method of making an absorbent article including at least a liquid-permeable body side liner, an outer cover, and an absorbent core between them.

This invention is directed to a method of making an absorbent article having an absorbent core which can be formed and shaped on a substrate during manufacture of the absorbent article.

IPC - International classification

A61F; A61F-013/00; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/53; A61F-013/53; A61L-015/58; A61L-015/60

Family 133/200 - FAMPAT - ©Questel

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CN104602657
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CN104602657
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TH160755	A	2017-03-09	TH-160755
VN42647	A	2015-06-25	VN--42647
CN104602657	A	2015-05-06	CN104602657
JP2014046008	A	2014-03-17	JP2014046008
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2018-08-01
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2017-06-30

Title

(WO201434776)
Method for manufacturing absorptive article

Abstract

(WO2014/034776)
This manufacturing method is a method for manufacturing an absorptive article which is provided with an absorption body (4) formed by wrapping an absorptive core (41) with a core wrapping sheet (42). The absorption body (4) has a raised section (40) which is partially raised in the thickness direction. This manufacturing method is provided with a recess forming step for supplying the continuous body (400) of the absorption body between a protrusion roller (9), which has protrusions (91) on the outer peripheral surface thereof, and a flat roller (10) to form, by means of the protrusions (91), recesses (7) entering the inside of the raised section (40) and to cause the core wrapping sheet (42) to enter the inside of the raised

section (40). The protrusions (91) are configured in such a manner that the tip portion (91b) of each of the protrusions (91) protrudes stepwise and that the tip portion (91b) has a sticking-out section (910). The relationship between the width (W1) of the tip of the sticking-out section (910) and the height (h) of protrusion of the sticking-out section (910) to the tip thereof is set to W1 >=h.

Current assignees

KAO

Inventors

MATSUNAGA RYUJI

Advantages / Previous drawbacks

(WO2014/034776)

In this way, the core rap sheet 42, the skin-facing surface of the absorbent core 41 having a first side of the non-skin-facing surface side of the core rap sheet 1 and covering the first core rap sheet 2 and therefore, the convex portion of the roll at the time of pressing the convex portions in the width direction is difficult to tension the, hard core rap sheet 42 is broken, the raised portions 40 from entering the inside of the concave portion 7 are easily formed.

In particular, in the sanitary napkin 1, the first lower layer 2 lower core rap sheet 42d1 and the second 1 of the overlap between the 42d2 core rap sheet 43 is not by an adhesive agent, are isolated, a portion of the tension at the time of pressing the convex roll hardly get more difficult for breakage of the core rap sheet 42.

Independent claims

(WO2014/034776)

An absorbent core having a core rap sheet of the absorbent body is wrapped in the manufacture of absorbent articles in the method, the absorber includes, in the direction of thickness of the raised portion has a raised portion, wherein the continuous body of the absorbent body, a plurality of convex portions having a circumferential surface of the roll and supplied to a portion between the convex and flat-rolled sheet, in which each convex portion by said, said absorber section of the ridges of the concave portion is formed which has entered the interior and, wherein the core rap sheet rldges portion may enter the interior of a concave portion forming step, said recess forming step for said each convex portion is, the leading end portion protrudes in a stepwise manner, the tip portion and has a protrusion, the protrusion portion (W1) and the width of the tip until the tip of the protruding portion (h) the protruding height of the relationship, and W1h method for the manufacture of absorbent articles.

The absorbent core is wrapped in the absorber core rap sheet of the absorbent article, the absorber includes, in the direction of thickness of the raised portion has a raised portion, said absorber is, the protruding portion of the absorbent body which has entered the interior of the plurality has a recess, said core rap sheet is, on the skin-facing side of the absorbent core covering that is separate from the sheet, wherein the non-skin-facing surface side of the absorbent core that has a seat cover, the non-skin-facing side of the sheet in said recess covering the protrusion extends into the interior of the absorbent article.

Object of invention

(WO2014/034776)

The invention relates to a sanitary napkin 1, as shown in Fig. 1, the concave portion rows 7L of 2, 7L in one of the concave portion rows 7L, 7 in the vertical direction in the adjacent grooves, the distance between the 7 (pitch) is the same.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/472; A61F-013/53; A61F-013/534; A61F-013/536

Family 134/200 - FAMPAT - ©Questel

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EP95937645

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FR2727009
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WO96/15748	A2	1996-05-30	WO9615748
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FR2727009	A1	1996-05-24	FR2727009
GB9524003	D0	1996-01-24	GB9524003

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1994-11-23

Application dates

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1996-05-28
(TW-341506)
1998-10-01
(AU-703318)
1999-03-25
(MX-226150)

2005-02-08
(KR100479140)
2005-06-16

Title

(EP-793469)
Absorbent article having a composite absorbent core

Abstract

(EP0793469)
Disclosed is a distinctive composite absorbent core (34) and an absorbent article (20) incorporating the same. The absorbent core (34) comprises at least one absorbent portion (60) and at least one porous resilient portion (62). The porous resilient portion (62) is located adjacent the absorbent portion (60) and has a wet compression recovery of at least about 85 percent. The porous resilient portion (62) may have a basis weight of from about 50 to about 250 grams per square meter and a density of not more than about 0.050 grams per cubic centimeter. In a particular aspect, the porous resilient portion (62) has a mean pore size of at least about 1.50 millimeters. In a particular aspect, the absorbent article incorporates the absorbent core (34) and has an absorbent core crotch width dimension which may be no more than about 6.35 centimeters. In another particular aspect, the absorbent article also has a fluid intake rate of at least about 10 milliliters per second. 00000

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP0793469)
If it is desired to present the outer cover 32 with a more cloth like feeling, the outer cover 32 may comprise a polyethylene film having a nonwoven web laminated to the outer surface thereof, such as a spun bond web of polyolefin fibers.
The present invention can advantageously provide an absorbent article having an absorbent structure which has a relatively narrow crotch width and is capable of efficiently distributing fluids to more effectively utilize the absorbent capacity of the absorbent article.
Moreover, there is a need for an absorbent structure which has sufficient resiliency, both wet and dry, such that it is capable of maintaining sufficient void volume under typical loading conditions.
Furthermore, said first (102) and said second (104) absorbent portions comprise a high-absorbency material capable of absorbing at least 10 times its own weight in liquid and said first porous resilient portion (108) is substantially free of high-absorbency material such that it does not retain high amounts of fluid and has a mean pore size of at least about 1.5 mm and is sandwiched between said first (102) and said second (104) absorbent portions such that said first porous resilient portion (108) is in direct fluid communication with said first (102) and said second (104) absorbent portions.
However, absorbent articles having a narrow crotch width commonly fail or leak at the legs before the total absorbent capacity of the absorbent article is utilized.
In response to the difficulties and problems discussed above, a new absorbent article having a composite absorbent core has been discovered.

Independent claims

(EP0793469)
1. A composite absorbent core suitable for use in an absorbent article having a narrow crotch width, said absorbent core (100) having a front section (50), a back section (52) and a crotch section (54) which extends between and connects said front section (50) to said back section (52), said absorbent core (100) comprising: a first absorbent portion (102), and a first porous resilient portion (108) which has a void volume and which has a wet compression recovery of at least about 85 percent, characterized by said narrow crotch width being no more than 6.35 cm, and by a second absorbent portion (104), wherein the first absorbent portion (102) is located in said back section (52) and said crotch section (54) of said absorbent

core (100), and the second absorbent portion (104) is located in said front section (50) of said absorbent core (100) and not in said back section (52) of said absorbent core (100) and wherein said first (102) and said second (104) absorbent portions comprise a high-absorbency material capable of absorbing at least 10 times its own weight in liquid and said first porous resilient portion (108) is substantially free of high-absorbency material such that it does not retain high amounts of fluid and has a mean pore size of at least about 1.5 mm and is sandwiched between said first (102) and said second (104) absorbent portions such that said first porous resilient portion (108) is in direct fluid communication with said first (102) and said second (104) absorbent portions.

Object of invention

(EP0793469)

The present invention intends to overcome the above problems.

The invention more particularly relates to composite absorbent cores which have a relatively narrow crotch width for improved fit and performance.

Generally stated, the present invention can provide a distinctive composite absorbent core which is suitable for use in an absorbent article.

The present invention intends to overcome the above problems.

The present invention relates to an absorbent article having a composite absorbent core.

The present invention relates to an absorbent article having a composite absorbent core.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/53; A61F-013/53

Family 135/200 - FAMPAT - ©Questel

Earliest priority number

US60/633,842P

Application number

EP05853498
BRPI0518368
HK13102999
CN201210103216
ES05853498T
TH20061000220
MYPI20060214
CA2593041
US12/764,874
HK09100886
CN200580047751
AU2005313943
US11/295,781
MX2007006714
WOUS2005/044595

Publication numbers

EP1835876
BRPI0518368
HK1175685
CN102657574
ES2532262
TH43275
MY152563
EP1835876
CA2593041

US8784397
HK1123181
CN102657574
CN101232859
AU2005313943
US20110015607
US7704243
BRPI0518368
BRPI0518368
CN101232859
EP1835876
MX2007006714
TH81808
WO2006/063218
AU2005313943
CA2593041
US20060122571

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5405602

Family publication details

EP1835876	B2	2017-11-22	EP1835876
BRPI0518368	B1	2017-10-17	BR200518368
HK1175685	A1	2016-05-06	HK1175685
CN102657574	B	2015-06-03	CN102657574B
ES2532262	T3	2015-03-25	ES2532262
TH43275	B	2015-03-23	TH--43275B
MY152563	A	2014-10-31	MY-152563
EP1835876	B1	2014-10-29	EP1835876
CA2593041	C	2014-10-21	CA2593041
US8784397	B2	2014-07-22	US8784397
HK1123181	A1	2012-12-07	HK1123181
CN102657574	A	2012-09-12	CN102657574
CN101232859	B	2012-06-20	CN101232859B
AU2005313943	B2	2011-08-18	AU2005313943
US20110015607	A1	2011-01-20	US20110015607
US7704243	B2	2010-04-27	US7704243
BRPI0518368	A1	2008-11-18	BRPI0518368
BRPI0518368	A2	2008-11-18	BR200518368
CN101232859	A	2008-07-30	CN101232859
EP1835876	A1	2007-09-26	EP1835876
MX2007006714	A	2007-08-14	MX2007006714
TH81808	A	2006-12-14	TH--81808
WO2006/063218	A1	2006-06-15	WO200663218
AU2005313943	A1	2006-06-15	AU2005313943
CA2593041	A1	2006-06-15	CA2593041
US20060122571	A1	2006-06-08	US20060122571

Earliest priority date

2004-12-06

Application dates

2005-12-06
2005-12-06
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2006-01-18
2006-01-20
2009-01-30
2010-04-21
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2017-10-17
2016-05-06
2015-06-03
2015-03-25
2015-03-23
2014-10-31
2014-10-29
2014-10-21
2014-07-22
2012-12-07
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2012-06-20
2011-08-18
2011-01-20
2010-04-27
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2007-09-26
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2006-12-14
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2006-06-15
2006-06-15
2006-06-08

Grant dates

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2014-10-29
(US7704243)
2010-04-27
(US8784397)

2014-07-22
(AU2005313943)
2011-08-18
(CN101232859B)
2012-06-20
(HK1123181)
2012-12-07
(CA2593041)
2014-10-21
(MY-152563)
2014-10-31
(TH--43275B)
2015-03-23
(ES2532262)
2015-03-25
(CN102657574B)
2015-06-03
(HK1175685)
2016-05-06
(BR200518368)
2017-10-17

Title

(EP1835876)
Disposable absorbent article having leg wraps method of making same

Abstract

(EP1835876)
A leg wrap structure is provided in a disposable absorbent garment such as a diaper or training pants. The leg wrap structure has a base layer, a top layer, and an elastic construction disposed therebetween. The elastic construction includes a plurality of spaced apart (e.g. generally equally spaced apart) elastic elements (e.g. strands or threads) that are aligned in a generally in generally parallel relation. Further, the top and base layers define a region of inelasticity. The leg wrap structure provides for the efficient formation of a reservoir and a plurality of fluid dams each capable of capturing a quantity of fluid to minimize the occurrence of fluid leaks from the absorbent article. Methods of forming such absorbent articles are disclosed.

Current assignees

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Inventors

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CHANG KUO-SHU EDWARD
WALKER IAN

Advantages / Previous drawbacks

(EP1835876)
This shaped product facilitates a better fit of the product around the waist of the wearer without increasing the amount of material within the sidepanel that would be gathered around the user's legs when worn.
Thus, it would be beneficial to provide an absorbent article designed to sustain the proper fit of the article around the legs of the wearer.
It may be necessary or useful to prefix the article in this configuration by applying spots of adhesive 94 (figures 29-33), or

by using any other suitable means to ensure that the article is fitted correctly to the wearer.

A limitation of such products is leakage out of the leg seals between the absorbent article and the wearer's leg or waist and onto adjacent clothing.

This is most evident with loose fecal material which is not easily absorbed by the absorbent article and tends to freely flow on the top surface of the absorbent article.

difficult to

A limitation of such products is

can be difficult to form and maintain in every application as it can be dependent on how the absorbent article 8 is placed on the user and movements the user might make whilst wearing the diaper.

Independent claims

(EP1835876)

1. A disposable absorbent article (8) having a longitudinal centreline (40) and comprising: an absorbent core (14) disposed between a liquid pervious topsheet (10) and a liquid impervious backsheet (12); and a pair of flexible leg wraps (18) adapted to wrap around a wearers legs and extending outwardly from and along side edges of said absorbent core (14), said leg wraps (18) each including a plurality of spaced-apart elastic strands (20) separated from the absorbent core (14) by an inelastic zone and extending longitudinally, wherein during use of the absorbent article (8), the leg wraps (18) and absorbent core (14) are able to form a reservoir and a plurality of fluid dams (90) are defined at least in part by the plurality of elastic strands (20), with each fluid dam (90) capable of capturing a volume of liquid waste from passing through the leg wrap, and wherein prior to use with the absorbent article (8) disposed in a generally flat, open condition, the distance between the absorbent core (14) and the nearest strand of elastic is between 19 mm to 64 mm, the number of elastic strands (20) per leg wraps (18) is between 4 and 10 strands, and a distance between the individual elastic strands (20) is between 4 mm to 30 mm.

14. A method of making a disposable absorbent article (8) method comprising: providing a central body with an absorbent core (14); and providing a pair of elasticized leg wraps (18) adapted to wrap around a wearers legs and extending outwardly from and along side edges of said absorbent core (14), each said leg wrap having a plurality of elastic strands (20) extending generally along a longitudinal direction of the absorbent article (8), wherein prior to use with said absorbent core and leg wraps in a relaxed state, said leg wraps extend away from a longitudinal centreline (40) of the body in a nonoverlapping manner, wherein with the absorbent article (8) provided in a flat, opened orientation, the distance between the central absorbent core (14) and the elastic strand nearest to the central body is between 19 mm to 64 mm, and the spacing between said elastic strand nearest to the central body and the elastic strand furthest from the central body is greater than 38 mm, the number of elastic strands (20) per leg wraps (18) is between 4 and 10 strands, and a distance between the individual elastic strands (20) is between 4 mm to 30 mm.

Object of invention

(EP1835876)

The present invention relates to absorbent articles such as disposable diapers, and more particularly, to absorbent articles having elastic leg wraps capable of forming a reservoir to contain liquid and a plurality of fluid dams further capable of retaining liquid to improve the overall containment characteristics of the absorbent article, especially the containment of loose fecal material.

The present invention relates generally to a disposable absorbent article or garment and a method of making same.

More particularly, the invention relates to a disposable absorbent article, such as a baby diaper or disposable pull-on garment, that includes a pair of elasticized leg wraps for preventing liquid and/or solid exudate leakage and providing better fit and aesthetic appearance.

Embodiments of the present invention provide an absorbent article having improved containment characteristics.

In one aspect of the present invention, a disposable absorbent article has a central body and a pair of elasticized leg wraps.

In another aspect of the invention, leg wraps incorporated with or into the inventive disposable absorbent article is characterized by an elastic stretch property or elasticity in the longitudinal direction.

In another aspect of the invention, leg wraps incorporated with or into the inventive disposable absorbent article is characterized by an elastic stretch property or elasticity in the longitudinal direction.

The present invention relates generally to a disposable absorbent article or garment and a method of making same.

IPC - International classification

A61F; A61F-013/00; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/496; A61F-013/496

Family 136/200 - FAMPAT - ©Questel

Earliest priority number

CH393888

Application number

CH393888

Publication numbers

CH675829

Questel unique family ID (FAN)

4699956

Family publication details

CH675829 A5 1990-11-15 CH-675829

Earliest priority date

1988-10-24

Application dates

1988-10-24

Publication dates

1990-11-15

Grant dates

(CH-675829)

1990-11-15

Title

(CH-675829)

Absorbent pad for nappy or incontinence towel - comprises mixed fibre layer contacted by heated roller surface

Abstract

(CH675829)

The absorbent pad is made by mixing a cellular fibrous material with theroplastics fibres with a ratio of between 30: 1 and 4:1, before applying the mixed fibres to a surface to obtain a uniform layer. This is then contacted by at least one hot surface, eg a heated roller (18), before application of a cover layer. Pref the mixed probe layer is applied to a paper carrier (14) in a feed pipe (9), followed by a forming station (17) ensuring an even coating, with a hot bed (16) beneath the forming station, with a temp of between 200 and 220 degrees. A heated roller (18) on the opposite side to the hot bed acts on the applied layer, with 2 further heated rollers (19) contacting both sides of the layer after the heated bed. ADVANTAGE - Low-cost mfr.

Current assignees

DEMETRIO LEONE

Inventors

LEONE DEMETRIO

IPC - International classification

A61F-013/15; A61F-013/15; B31D-001/04

Family 137/200 - FAMPAT - ©Questel

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NL7909258

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BE198765

Publication numbers

NL7909258

BE880886

Questel unique family ID (FAN)

2378015

Family publication details

NL7909258	A	1981-07-16	NL7909258
BE880886	A	1980-04-16	BE-880886

Earliest priority date

1979-12-21

Application dates

1979-12-21

1979-12-27

Publication dates

1981-07-16

1980-04-16

Grant dates

(BE-880886)

1980-04-16

Title

(BE-880886)

Werkwijze en inrichting voor het vervaardigen van maandverband

Abstract

(BE880886)

An endless gauze belt on to which absorbent cellulosic material is deposited from a feed hopper, and beneath which, in alignment with the hopper, a suction arrangement is fitted, is used for the prodn. of diapers for menstruation. The gauze belt used has a number of closed zones; the pitch between neighbouring zones being equal to the desired length in the direction of motion of the cellulosic layer. The sides of the closed zones running transversely across the gauze belt are curved so that the cellulosic layers are convex at their ends. Used to produce pads of cellulose fibres without the difficulties which are inherent in the cutting of a continuous fleece into sections, esp. without the increased cost of the additional strip of material for preventing the fibres being pulled out by the knife.

(From NL7909258 A)

Current assignees

KONINK UTERMOHLEN

UTERMOEHLEN

IPC - International classification

A61F-013/15; A61F-013/15

Family 138/200 - FAMPAT - ©Questel

Earliest priority number

GB81551

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Publication numbers

GB705917

Questel unique family ID (FAN)

17594069

Family publication details

GB705917 A 1954-03-24 GB-705917

Earliest priority date

1951-01-11

Application dates

1951-01-11

Publication dates

1954-03-24

Grant dates

(GB-705917)

1954-03-24

Title

(GB-705917)

Improvements in and relating to absorbent pads, more especially for babies' diapers

Abstract

(GB705917)

705,917. Surgical dressings. SHELLER, Ltd., A. Jan. 11, 1952 [Jan. 11, 1951], No. 815/51. Class 81(2) [Also in Group VII] A pad especially for use in a baby's diaper comprises a rectangular pack 1 of absorbent material, e.g. unsized paper reinforced by a layer of woven material 2, e.g. muslin, which covers the central part of one face of the pack 1 and may be secured to it by stitching 3. Specification 673,984, [Group VII], is referred to.

Current assignees

SHELLER GLOBE

Inventors

SCHELLER ALFRED

IPC - International classification

A61F-013/15; A61F-013/15

Family 139/200 - FAMPAT - ©Questel

Earliest priority number

JP2014261168

Application number

TH20171003529
CN201580067070
AU2015368909
RU2017126144
IN201717020914
JP2014261168
WOJP2015/084784

Publication numbers

TH65804
CN106999320
AU2015368909
TH174961
AU2015368909
RU2639969
IN201717020914
CN106999320
AU2015368909
JP2016120018
JP5960791

WO2016/104184

Questel unique family ID (FAN)

73404015

Family publication details

TH65804	B	2018-10-24	TH--65804B
CN106999320	B	2018-09-25	CN106999320B
AU2015368909	B9	2018-04-05	AU2015368909
TH174961	A	2018-03-29	TH-174961
AU2015368909	B2	2018-03-15	AU2015368909
RU2639969	C1	2017-12-25	RU2639969
IN201717020914	A	2017-11-24	IN201717020914
CN106999320	A	2017-08-01	CN106999320
AU2015368909	A1	2017-07-20	AU2015368909
JP2016120018	A	2016-07-07	JP2016120018
JP5960791	B2	2016-07-01	JP5960791
WO2016/104184	A1	2016-06-30	WO2016104184

Earliest priority date

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Application dates

2014-12-24
2015-12-11
2015-12-11
2015-12-11
2015-12-11
2015-12-11
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Publication dates

2018-10-24
2018-09-25
2018-04-05
2018-03-29
2018-03-15
2017-12-25
2017-11-24
2017-08-01
2017-07-20
2016-07-07
2016-07-01
2016-06-30

Grant dates

(JP2016120018)
2016-07-01
(RU2639969)
2017-12-25
(AU2015368909)
2018-03-15
(CN106999320B)
2018-09-25

(TH--65804B)

2018-10-24

Title

(WO2016104184)

Pull-up type absorbent article

Abstract

(WO2016/104184)

Provided is a pull-up type absorbent article (1) provided with a abdomen-side sheet member, a back-side sheet member, and an absorbent body. The pull-up type absorbent article has, on both sides of the absorbent body: first leakage prevention cuffs (34) having free ends located inside the side edges of an absorption body (33); and second leakage prevention cuffs (37) having free ends extending further outward than the side edges of the absorption body (33). A front surface sheet (31) and the first leakage prevention cuffs (34) have folded-back sections (31c) folded from the skin-facing surface side of the absorption body (33) to the non-skin-facing surface side thereof. Sheet materials (35) which form the first leakage prevention cuffs (34) have, on the non-skin-facing surface side of the absorption body (33) at positions inside the side edges of the absorption body (33): upper affixed sections (35u) which are affixed to the front surface sheet (31); and lower affixed sections (35d) which are affixed to a lower sheet. The length L1, the length L2, the distance L3, and the distance L4 satisfy the relationships of (1) L1≤L2, (2) L2≤L1+L3, and (3) L3≤L4.

Current assignees

KAO

Inventors

ONDA AIKO

Advantages / Previous drawbacks

(WO2016/104184)

Is an object of the present invention therefore, has the disadvantage that the conventional technology described above can be solved relating to providing a pant-type absorbent article.

Independent claims

(WO2016/104184)

The belly side of the sheet member and which are arranged at the ventral side, the back of the wearer is disposed at the side of the sheet member and the back side, a back side of the abdominal-side sheet member and fixed to the sheet member is bridged and an absorption body comprising a vertically, and the abdominal-side sheet member and a back-side sheet member are joined to each other, a pair of side seal portion, the waist opening and a pair of leg openings are formed in a pant-type absorbent article, said absorbent body, the surface forming the liquid absorbent surface sheet and the liquid holding absorbent bodies, each of the both sides of the longitudinal direction, said free end is located inside the side edges of the absorber than the second leak-proof cuffs 1, the side edges of the absorbent body more toward the outside of the first leak-barrier cuff extends 2 has a field of view, wherein the surface sheet and said second leak-barrier cuff is 1, wherein the outside of both side edges of the absorber, the absorber from the side of the skin-facing surface of the non-skin-facing surface side has a folded portion folded over, leak-proof sheet material forming the first cuff is 1, the non-skin-facing surface side of the absorbent body in the width direction from both side edges of the absorbent is located at a position spaced inwardly, the top sheet is fixed to the lower and upper fixing portion fixed to the sheet of the lower fixing unit which has, wherein said first leak-barrier cuff 1 from said second free end of a length of up to L1, wherein said first leak-barrier cuff 2, leak-proof cuffs 1 first return portion of the free end of the leak-barrier cuff 2 from the first length of up to L2, wherein said first leak-barrier cuff between the folded portion of claim 1 wherein the distance between the lower and the fixing portion L3, wherein said upper surface of said sheet between the folded portion and the fixing portion when the distance between the L4, satisfying the following relational formula (1) - (4) all of the pant-type absorbent article. (1) L1 L2 (2) L4 L1 + L3 L3 L4 (4) L2 L1 + L3 (3)

Object of invention

(JP5960791)

Therefore an object of the present invention, the above-described conventional technique has the disadvantage that to solve a pant-type absorbent article is provided.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/496; A61F-013/496; A61F-013/53

Family 140/200 - FAMPAT - ©Questel

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JP2010004935

Application number

KR20127020970
JP2011549906
TW100101121
ES10843196T
AU2010342026
DK10843196T
EP10843196
US13/521,464
CN201080061383
WOJP2010/073537

Publication numbers

KR101727775
JP5981720
TWI494136
ES2538451
AU2010342026
DK2524679
EP2524679
EP2524679
US20120328861
EP2524679
KR20120112784
CN102711698
AU2010342026
TW201138867
WO2011/086843
JPWO2011086843

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1865533

Family publication details

KR101727775	B1	2017-04-17	KR101727775
JP5981720	B2	2016-08-05	JP5981720
TWI494136	B	2015-08-01	TWI494136
ES2538451	T3	2015-06-22	ES2538451
AU2010342026	B2	2015-05-28	AU2010342026
DK2524679	T3	2015-04-27	DK2524679T
EP2524679	B1	2015-04-08	EP2524679
EP2524679	A4	2013-10-30	EP2524679
US20120328861	A1	2012-12-27	US20120328861
EP2524679	A1	2012-11-21	EP2524679
KR20120112784	A	2012-10-11	KR20120112784
CN102711698	A	2012-10-03	CN102711698

AU2010342026	A1	2012-08-16	AU2010342026
TW201138867	A	2011-11-16	TW201138867
WO2011/086843	A1	2011-07-21	WO201186843
JPWO2011086843	A1	2011-07-21	JP2011086843W

Earliest priority date

2010-01-13

Application dates

2010-12-27
2010-12-27
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2010-12-27
2010-12-27
2011-01-12

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2017-04-17
2016-08-05
2015-08-01
2015-06-22
2015-05-28
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2015-04-08
2013-10-30
2012-12-27
2012-11-21
2012-10-11
2012-10-03
2012-08-16
2011-11-16
2011-07-21
2011-07-21

Grant dates

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2016-08-05
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2015-04-27
(AU2010342026)
2015-05-28
(ES2538451)
2015-06-22
(TWI494136)
2015-08-01
(KR101727775)

2017-04-17

Title

(EP2524679)

Water-absorbable sheet structure

Abstract

(EP2524679)

A water-absorbent sheet structure comprises a structure in which an absorbent layer comprising a water-absorbent resin and an adhesive is sandwiched with nonwoven fabrics from an upper side and a lower side of the absorbent layer, wherein the water-absorbent resin is contained in an amount of from 100 to 1,000 g/m 2 , and wherein a mass-average particle size of the water-absorbent resin is from 50 to 800 μm, and wherein a particle size rate index of the water-absorbent resin is 0.12 s/μm or less, and wherein the water-absorbent sheet structure has a peeling strength of from 0.05 to 3.0 N/7 cm. The water-absorbent sheet structure according to the present invention exhibits some effects that a water-absorbent sheet structure has excellent shape retaining ability even when the structure is thin, so that the water-absorbent sheet structure does not undergo deformation of the form before liquid absorption or after the absorption, and is capable of sufficiently exhibiting absorbent properties such as liquid permeability, a small amount of liquid re-wet, and a small liquid slope leakage.

Current assignees

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Inventors

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MATSUSHITA HIDEKI

INABA HARUKA

HANDA MASAYOSHI

Advantages / Previous drawbacks

(EP2524679)

In order to avoid these disadvantages, it is preferable to use a water-absorbent resin having an appropriate average particle size and a fast water-absorption rate in a secondary absorbent layer.

When adhesive strength of an absorbent laminate is weakened in order to improve liquid absorbent properties of the abovementioned absorbent laminate, not only a large amount of the absorbent resin is detached upon working the laminate, thereby making unfavorable economically, but also the laminate is exfoliated due to deficiency in adhesive strength, so that there are some possibilities of loss of commercial values.

However, when distribution or diffusion of a liquid upon actually using in an absorbent article such as disposable diapers is considered, there is a disadvantage that if a large amount of the water-absorbent resin is formed into a soft gel-like state by absorption of the liquid, a so-called "gel-blocking phenomenon" takes place, whereby liquid diffusibility is markedly lowered and a liquid permeation rate of the absorbent material is slowed down.

In order to try to avoid such phenomena, a ratio of hydrophilic fibers and a water-absorbent resin would be limited, thereby posing limitations in the thinning of an absorbent article.

Independent claims

(EP2524679)

1. A water-absorbent sheet structure comprising a structure in which an absorbent layer comprising a water-absorbent resin and an adhesive is sandwiched with nonwoven fabrics from an upper side and a lower side of the absorbent layer, wherein the water-absorbent resin is contained in an amount of from 100 to 1,000 g/m2, and wherein a mass-average particle size of the water-absorbent resin is from 50 to 800 m, and wherein a particle size rate index of the water-absorbent resin is 0.12 s/ m or less, and wherein the water-absorbent sheet structure has a peeling strength of from 0.05 to 3.0 N/7 cm.

Object of invention

(EP2524679)

The present invention relates to a water-absorbent sheet structure which can be used in the fields of hygienic materials and the like.

The present inventors have found that a water-absorbent resin having a fast water-absorption rate (seconds) per unit particle size, in other words, a particle size rate index, satisfying within a given range is one of the important elements for the water-absorbent sheet structure to satisfy all the objectives in liquid absorbent properties, and workability, feel, and peeling strength at high levels, and the present invention is perfected thereby.

The present invention relates to a water-absorbent sheet structure which can be used in the fields of hygienic materials and the like.

More specifically, the present invention relates to a water-absorbent sheet structure which is thin and can be suitably used in absorbent articles, such as disposable diapers.

In addition, the present invention relates to an absorbent article such as disposable diapers using the water-absorbent sheet structure.

In view of the above, an object of the present invention is to provide a water-absorbent sheet structure which is capable of avoiding the gel blocking phenomenon even when the water-absorbent sheet structure contains a very small amount of pulps, so that the water-absorbent sheet structure has excellent fundamental properties (fast liquid permeation rate, sufficient water-retention capacity, small amount of liquid rewet, small liquid leakage, and shape retaining ability), and is capable of accomplishing thinning.

IPC - International classification

A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/53; A61F-013/53; A61F-013/534; A61F-013/534; A61L-015/22; B32B-027/12

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EP02744802
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DE60231723
EP02742187
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NO325199
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US7297139
DE60222679
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RU2302848
KR100738795
ZA200309681
BR0210738
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US7297139	B2	2007-11-20	US7297139
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KR100738795	B1	2007-07-12	KR100738795
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(NO-325182)
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Title

(EP1253898)
Prefastened disposable absorbent articles having a stretch panel

Abstract

(EP1253898)
A prefastened, refastenable, disposable absorbent article includes an absorbent chassis, at least one stretch panel, and a pair a primary fasteners. The absorbent chassis defines a pair of longitudinally opposed end edges and a pair of laterally opposed side edges. The stretch panel is located in one of the waist regions and defines a waist edge, a pair of laterally opposed outboard edges which are located laterally beyond the side edges of the absorbent chassis, and an inward edge which is located longitudinally inward from the waist edge. The pair of primary fasteners are located on the laterally opposed outboard edges of the stretch panel and are releasably prefastened to an opposite waist region of the absorbent chassis to releasably engage a front waist region to a rear waist region to provide the prefastened disposable absorbent article.

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Advantages / Previous drawbacks

(EP1253898)

Moreover, it is desirable that such absorbent articles, after being soiled, can be removed from the wearer in a convenient and clean manner without undesirably soiling the caregiver or surrounding area such as the clothes of the wearer.

That is, there remains a need for absorbent articles which conform to the wearer to effectively contain bodily exudates, which are capable of being pulled up and down over the hips and buttocks of the wearer without opening, which are readily secured about and removed from the wearer in a convenient and clean manner, and which allow easy inspection by the caregiver to assist in determining whether the article is soiled.

The present invention advantageously provides prefastened, refastenable, disposable absorbent articles which include a stretch panel.

In response to the difficulties and problems discussed above, new prefastened, refastenable, disposable absorbent articles which have a stretch panel have been invented.

For example, the side panels have been difficult to tear when attempting to remove the article from the waist of the wearer instead of pulling the article down over the hips of the wearer.

Lengths less than the above-specified ranges do not provide the improved fit and appearance of the article on the wearer and may result in excessive red marking.

Independent claims

(EP1253898)

1. A prefastened disposable absorbent article comprising an absorbent chassis (28) which defines a front waist region (22), a rear waist region (24), a crotch region (26) which extends between and connects said waist regions (22,24), a pair of longitudinally opposed end edges (32), and a pair of laterally opposed side edges (30), said absorbent article characterised in that it comprises: a) at least one stretch panel (70) which is located in one of said waist regions of said absorbent chassis and which defines a waist edge (72), a pair of laterally opposed outboard edges (74) which are located laterally beyond said side edges (30) of said absorbent chassis, and an inward edge (76) which is located longitudinally inward from said waist edge; b) a pair of primary fasteners (62) which are located on said laterally opposed outboard edges (74) of said stretch panel (70) and which are releasably prefastened to an opposite waist region of said absorbent chassis (28) to releasably engage said front waist region (22) to said rear waist region (24) to provide said prefastened disposable absorbent article; and c) a pair of side bonds (90) which are located a distance of at least 1.0 cm laterally inward of said primary fasteners (62) on said one waist region and which releasably connect an overlapped portion of said one waist region to said opposite waist region to assist in maintaining said prefastened absorbent article in a prefastened condition.

Object of invention

(EP1253898)

The present invention provides a prefastened disposable absorbent article as claimed in claim 1.

The present invention provides a prefastened disposable absorbent article as claimed in claim 1.

The present invention relates to disposable absorbent articles which are adapted to contain body exudates.

More particularly, the present invention relates to prefastened absorbent articles having stretch panels for improved fit and performance.

In another particular aspect, the stretch panel may comprise a center bridge panel, and a pair of laterally opposed side panels which are connected to opposed lateral edges of the bridge panel and which extend laterally beyond the side edges of the absorbent chassis.

The present invention relates to disposable absorbent articles which are adapted to contain body exudates.

IPC - International classification

A44B-018/00; A61F; A61F-005/44; A61F-013/00; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/496; A61F-013/56; A61F-013/62; A61F-015/00

Family 142/200 - FAMPAT - ©Questel

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BR0214714

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EP05111840
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CN200510128755
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AU2002357712
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4792

Family publication details

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EP1679619	A2	2006-07-12	EP1679619

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RU2004117168	A	2005-03-20	RU2004117168
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WO03/053309	A1	2003-07-03	WO200353309

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Application dates

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2006-11-14
(RU2302845)
2007-07-20
(ZA200404440)
2006-06-28
(AU2002357712)
2007-10-04

Title

(EP1463474)
High swell absorbent changing a thin underpants-like garment into a thick diaper-like garment

Abstract

(EP1463474)
A pant-like absorbent garment having a swellable absorbent core positioned between an outer cover and a body side liner at least partially bonded to the outer cover. The swellable absorbent core is swellable to a final thickness (tf) which is at least three times an initial thickness (ti) of the swellable absorbent core; tf >/= 3ti. The significant swelling renders the garment suitable for use as a toilet training aid.

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Advantages / Previous drawbacks

(WO03/053309)
Hook type fasteners typically include a fabric or material having a base or backing structure and a plurality of hook members extending upwardly from at least one surface of the backing structure, h contrast to the loop type fasteners which desirably include a flexible fabric, the hook material advantageously includes a resilient material to minimize unintentional disengagement of the fastener components as a result of the hook material becoming deformed and catching on clothing or other items.
It will be appreciated that details of the foregoing embodiments, given for puoses of illustration, are not to be construed as limiting the scope of this invention.
The increased thickness makes the training pant 20 look and feel more like a diaper to the wearer and encourages the wearer to replace the garment with a dry training pant 20, as well as encourage training. hi one embodiment of this invention, the swelling of the absorbent core 44 as a result of the first insult creates a void area in the absorbent core 44 that enhances uptake and fluid distribution during subsequent insults.

Independent claims

(EP1679619)

1. An automated method for evaluating at least one link included in a webpage, the webpage being configured for display via a browser program to a user, the webpage containing commands which, when executed, generate the at least one link, the commands being configured for execution upon a provision of input by the user, the method comprising: (A) causing the at least one link to be generated by simulating the provision of the input.

7. A computer-readable medium having instructions encoded thereon, which instructions, when executed, perform a method for evaluating at least one link included in a webpage, the webpage being configured for display via a browser program to a user, the webpage containing commands which, when executed, generate the at least one link, the commands being configured for execution upon a provision of input by the user, the method comprising: (A) causing the at least one link to be generated by simulating the provision of the input.

13. A system for per forming an automated method for evaluating at least one link included in a webpage, the webpage being configured for display via a browser program to a user, the webpage containing commands which, when executed, generate the at least one link, the commands being configured for execution upon a provision of input by the user, the system comprising: a generation controller to cause the at least one link to be generated by simulating the provision of the input.

Object of invention

(EP1679619)

Aspects of the invention are directed to an automated method of identifying the links included in a webpage.

This invention relates to computer software, and more particularly to software which may be used to validate aspects of web sites.

This invention relates to computer software, and more particularly to software which may be used to validate aspects of web sites.

IPC - International classification

A61F; A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/53; A61F-013/53; G06F-013/00; G06F-017/00; G06F-017/30

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2018-03-20
2011-02-10
2010-09-08
2005-12-22
2004-04-21
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1994-11-24
1994-11-18
1994-11-13

Grant dates

(EP1057465)
2003-04-23
(EP-774946)
2001-04-04
(US5454800)
1995-10-03
(FR2705028)
1995-10-27
(DE69432574)
2003-05-28
(DE69427040)
2001-05-10
(JP3754447)
2005-12-22
(AU-680910)
1997-08-14
(PH--30927)
1997-12-23
(HK1014481)
2001-11-09
(KR100323181)
2002-09-26
(CA2104263)
2003-07-01
(CN1146378C)
2004-04-21

Title

(EP-774946)
Sanitary napkin

Abstract

(EP0774946)
An absorbent article is disclosed for absorbing body fluids such as urine, menses, blood, excrement, etc. The absorbent article includes a liquid-permeable cover (36), a liquid-impermeable baffle (38) and an absorbent positioned therebetween. The absorbent is constructed of first (44) and second (46) members each having a predetermined width, with the width of

the first member being equal to or greater than the width of the second member. The second member is positioned below at least a portion of the first member. The second member has a higher wicking capability than said first member and this facilitates movement of body fluid in a horizontal plane throughout the second member. The body fluid present in the second member will then be transferred back into the first member over an area equal to the saturated area of the second member. The second member can comprise more than one layer, with the layers separate and distinct or formed by folding a single sheet of tissue one or more times.

Current assignees

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KIMBERLY CLARK WORLDWIDE

Inventors

HIRT DEDE ANN

FINCH VALERIE VICTORIA

COUTURE-DORSCHNER LAURIE

Advantages / Previous drawbacks

(EP0774946)

Because of this, there is a desire to construct an absorbent article, especially a thin article, which has adequate fluid capacity and rapid fluid intake while using a lesser amount of superabsorbent or by eliminating superabsorbents altogether. It is also desirable to construct an absorbent article which can deliver a post-use visual signal to the user that the body fluid is staying in the center of the article.

The second member has a higher wick ing capability than said first member to facilitate movement of body fluid in a horizontal plane throughout the second member.

are very expensive and can cause gel blocking as they swell up with fluid.

However, superabsorbent materials are very expensive and can cause gel blocking as they swell up with fluid.

Independent claims

(EP0774946)

1. An absorbent article (10; 10') comprising an absorbent (16; 26) including first and second members (18, 20; 30, 32; 44, 46) each having a predetermined width, said first member (18; 30; 44) having a width which is greater than or equal to the width of said second member (20; 32; 46), said second member positioned below at least a portion of said first member, said second member having a higher wick ing capability than said first member, characterized in that said wick ing capability of said first and second members is expressed as a ratio of length of a fluid stain in said second member to length of a fluid stain in said first member, said ratio being at least 1.7 when the length of said fluid stain in said second member is at least 76 mm.

Object of invention

(EP0774946)

This invention relates to an absorbent article for absorbing body fluid.

Briefly, this invention relates to an absorbent article for absorbing body fluids such as urine, menses, blood, excrement, etc.

This invention relates to an absorbent article for absorbing body fluid.

More particularly, this invention relates to an absorbent article, such as a sanitary napkin, which provides a post-use visual signal to the user that the body fluid is staying in the center of the article.

Briefly, this invention relates to an absorbent article for absorbing body fluids such as urine, menses, blood, excrement, etc.

The general object of this invention is to provide an absorbent article for absorbing body fluids such as urine, menses, blood, excrement, etc.

A more specific object of this invention is to provide an absorbent article, such as a sanitary napkin, which provides a post-use visual signal to the user that the fluid is staying in the center of the article.

Another object of this invention is to provide an absorbent article for absorbing body fluid which has improved wick ing capabilities expressed by a ratio of length of a fluid stain in a member having a high wick ing capability to length of a fluid stain in another member having a lower wick ing capability than the high wick ing member, the ratio being at least 1.7 when the length of the fluid stain in the high wick ing member is at least 76 mm.

A further object of this invention is to provide an absorbent article having stain masking properties in that the fluid stain in

the first absorbent member is less severe than the fluid stain in the second absorbent member.

Still another object of this invention is to provide an absorbent article which is less than 5 mm thick and which is easy to manufacture and low in cost.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/42; A61F-013/45; A61F-013/49; A61F-013/49; A61F-013/53; A61F-013/534; A61F-013/534; A61F-013/537

Family 144/200 - FAMPAT - ©Questel

Earliest priority number

JP2005135625

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EP06745426
KR20077027112
TW95115767
CN200680015877
US11/920,051
CN201010502653
JP2005218450
JP2005218146
WOJP2006/308144

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EP1880700
KR101255592
TWI377051
CN101170978
EP1880700
US7972316
CN101947164
JP4662463
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CN101170978
EP1880700
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JP2007029482
TW200701961
JP2006341061
WO2006/120847
JP3857292

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6545264

Family publication details

EP1880700	B1	2017-03-01	EP1880700
KR101255592	B1	2013-04-16	KR101255592
TWI377051	B	2012-11-21	TWI377051
CN101170978	B	2012-07-04	CN101170978B
EP1880700	A4	2011-08-31	EP1880700
US7972316	B2	2011-07-05	US7972316
CN101947164	A	2011-01-19	CN101947164
JP4662463	B2	2011-01-14	JP4662463

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CN101170978	A	2008-04-30	CN101170978
EP1880700	A1	2008-01-23	EP1880700
KR20080007475	A	2008-01-21	KR20080007475
JP2007029482	A	2007-02-08	JP2007029482
TW200701961	A	2007-01-16	TW200701961
JP2006341061	A	2006-12-21	JP2006341061
WO2006/120847	A1	2006-11-16	WO2006120847
JP3857292	B1	2006-09-22	JP3857292

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2005-05-09

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2005-07-28
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2012-07-04
2011-08-31
2011-07-05
2011-01-19
2011-01-14
2009-04-02
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2008-01-21
2007-02-08
2007-01-16
2006-12-21
2006-11-16
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(CN101170978B)
2012-07-04
(TWI377051)
2012-11-21
(KR101255592)
2013-04-16

Title

(EP1880700)
Disposable diaper

Abstract

(EP1880700)
A disposable diaper (1) has a waist opening portion and a pair of leg opening portions and contains an absorbent body including a topsheet and an absorbent core. The absorbent core (4) is composed of a central absorbent member (41) and a pair of side absorbent members (42) disposed on both sides of the central absorbent member (41). The central absorbent member (41) is discrete from the side absorbent members (42) in at least the crotch portion (C). Each side absorbent member has a raising elastic member which is provided near its outboard edge along the longitudinal direction, so that the side absorbent member (42) rises while worn. The diaper is configured to exert a higher wearing pressure in its regions (91) that are to be applied to a wearer's body part between the iliac crests and the anterior superior iliac spines than in its waist opening portion while worn.

Current assignees

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Inventors

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OTSUKA MICHIKO
TOMITA MINA

Advantages / Previous drawbacks

(EP1880700)
The present invention also provides a disposable diaper which while worn provides a good appearance, fit and leakage protection in the crotch portion thereof and keeps leak-preventive cuffs provided on both sides thereof from hanging out of the leg openings.
Hence, it is desirable that the ratio of the difference between a higher one, taken as A, of two pressure values of the first region 91 on the stomach portion A and the back portion B and a lower one, taken as B, to the higher one, i.e., (A-B)/A, be within 30%.
Although this configuration provides a good appearance and fit immediately after putting the diaper on a wearer, the crotch portion of the diaper after urine absorption is excessively puffed out due to the swell of the large amount of the polymer, which spoils the appearance.
If that pressure is less than 1.1 kPa, it is difficult to keep the first region 91 on the iliac region of the wearer, and the diaper 1 easily moves down, resulting in a dull, droopy appearance.
Additionally, bagginess of a diaper makes it difficult to put outer clothing, such as shorts and pants, over the diaper only to provide a droopy appearance.
If that pressure is more than 2.5 kPa, on the other hand, the diaper 1 will not only constrict the wearer's body too strong but also be difficult to put on a wearer.
difficult to

Independent claims

(EP1880700)
1. A disposable diaper which comprises an absorbent body comprising a topsheet and an absorbent core and has a waist opening portion and a pair of leg opening portion, wherein the absorbent core comprises a central absorbent member and a pair of side absorbent members disposed on both sides of the central absorbent member, the central absorbent member

being discrete from the pair of side absorbent members in at least the crotch portion of the diaper, each side absorbent member having a side absorbent member-raising elastic member which is provided near the outboard edge thereof along the longitudinal direction, so that the side absorbent member is configured to rise while the diaper is worn, and the diaper is configured to exert a higher pressure to the body of a wearer in its region adapted to be applied to a wearer's body part between the iliac crests and the anterior superior iliac spines than in the waist opening portion while worn.

4. A disposable diaper which comprises an absorbent body comprising a topsheet and an absorbent core, wherein the absorbent core comprises a central absorbent member and a pair of side absorbent members disposed on both sides of the central absorbent member, the central absorbent member being discrete from the pair of side absorbent members in at least the crotch portion of the diaper, the absorbent core has a side absorbent member-raising elastic member provided on both sides thereof along the longitudinal direction, so that the absorbent body is configured to raise both side portions thereof in the crotch portion of the diaper, and the absorbent body has a leak-preventive cuff provided on both sides thereof, each cuff comprising a cuff-forming sheet joined to the absorbent body and a cuff-forming elastic member fixed in its stretched state to near the free edge of the cuff-forming sheet, each cuff further comprising a cuff-drawing elastic member provided along a position outboard of the side absorbent member-raising elastic member in a flat-out state of the diaper.

Object of invention

(EP1880700)

The present invention provides, in its first aspect, a disposable diaper including an absorbent body and having a waist opening portion and a pair of leg opening portion.

The present invention relates to a disposable diaper, particularly a pull-on (pants type) disposable diaper.

The present invention also relates to a disposable diaper that provides a neat appearance while worn and high leakage protection.

The present invention provides a disposable diaper which while worn is kept from sliding down with the wearer's movement and sagging or drooping at the crotch portion with the weight of urine absorbed.

The present invention relates to a disposable diaper, particularly a pull-on (pants type) disposable diaper.

The present invention provides a disposable diaper which while worn is kept from sliding down with the wearer's movement and sagging or drooping at the crotch portion with the weight of urine absorbed.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/496; A61F-013/496; A61F-013/511; A61F-013/514; A61F-013/53; A61F-013/532

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Earliest priority number

US07/757,789

Application number

MYPI9603703

DE69224949

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ES92115589T

EP92115589

KR920016559

TR86992

EG52792

AU2289792

US08/109,776

US07/868,915

JP23988892

BR9203279

ZA9206772

MX9204900

Publication numbers

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Family publication details

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DE69224949	T2	1998-11-19	DE69224949
ES2113903	T3	1998-05-16	ES2113903
DE69224949	D1	1998-05-07	DE69224949
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ZA9206772	B	1993-03-10	ZA9206772
MX9204900	A	1993-03-01	MX9204900
BRPI9203279	A1	1992-09-29	BR9203279



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1991-09-11

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1992-04-15
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1998-04-01
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(US5366453)
1994-11-22
(DE69224949)
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(ZA9206772)
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(AU-657990)
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(EG--19494)
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(KR100231128)
1999-11-15
(ES2113903)
1998-05-16
(CA2057687)
2002-09-17
(MY-132255)
2007-09-28

Title

(EP-532035)
Growth adjustable absorbent article

Abstract

(EP0532035)
A growth adjustable diaper (2) for newborn babies is adjustable in length by use of a foldable absorbent panel (48) at the front edge (6) of the diaper, and is adjustable about the waist of the baby by means of ear members (14, 16) that can overlap and attach to each other or not overlap and attach to the front section (4) of the diaper. Cushion barriers (52, 58) are provided at the crotch section (12) and back waist edge (10) to protect the newborn's sensitive, tender skin.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP0532035)
Thus, it can be appreciated that current diapers do not provide an optimum absorbent article for newborn babies.
Thus, it would be desirable to have a diaper exclusively designed for a newborn between the age of zero and about four months that provides adjustability in size to accommodate this rapid growth.

Independent claims

(EP0532035)

1. A growth adjustable absorbent article (2), comprising: a backsheet (18) including a front section (4) having a front edge (6), a back section (8) having a back edge (10), and an intermediate crotch section (12), a main absorbent body (22) being disposed on at least said intermediate crotch section (12), and a foldable absorbent panel (48) being disposed on said front section (4) between said main absorbent body (22) and said front edge (6) of said front section (4), said foldable absorbent panel (48) being movable between a first position wherein said foldable absorbent panel (48) is substantially coplanar with said main absorbent body (22) and a second position wherein said foldable absorbent panel (48) is folded inwardly upon said main absorbent body (22), whereby the length of said article is adjustable to accommodate the growth of a newborn baby.

Object of invention

(EP0532035)

The invention provides a newborn's growth adjustable absorbent diaper having variable overlapping and nonoverlapping ears.

In one aspect of the invention, there is provided a growth adjustable absorbent article comprising a backsheet including a front section, a back section, and an intermediate crotch section, and a main absorbent body disposed on at least the intermediate crotch section.

This invention pertains to a disposable article, and more particularly to a growth adjustable disposable absorbent article.

This invention pertains to a disposable article, and more particularly to a growth adjustable disposable absorbent article.

IPC - International classification

A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/494; A61F-013/511; A61F-013/514; A61F-013/56; A61F-013/62

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Earliest priority number

JP2011147780

Application number

KR10-2013-7033051
TH20131007426
BR112013032823
TW101123265
MYPI2013004662
EP12808215
JP2011147780
CN201280032228
IN10352/CHENP/2013
US14/130,144
VN2014000145
WOJP2012/066747

Publication numbers

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TH55770
BR112013032823
TH152888
TWI528952
MY156189
EP2727567
JP5841758
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EP2727567

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US20140196585
EP2727567
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KR20140027403
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TW201320982
JP2013013521
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MY156189	A	2016-01-20	MY-156189
EP2727567	B1	2016-01-06	EP2727567
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EP2727567	A4	2014-12-31	EP2727567
IN10352/CHENP/2013	A	2014-11-14	IN2013CN10352
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US20140196585	A1	2014-07-17	US20140196585
EP2727567	A1	2014-05-07	EP2727567
VN37571	A	2014-04-25	VN--37571
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CN103619293	A	2014-03-05	CN103619293
TW201320982	A	2013-06-01	TW201320982
JP2013013521	A	2013-01-24	JP2013013521
WO2013/005682	A1	2013-01-10	WO201305682

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2011-07-01

Application dates

2011-07-01
2012-06-28
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(TH--55770B)
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Title

(EP2727567)
Method for discharging absorptive article

Abstract

(EP2727567)
A method of ejecting absorbent articles PD of the present invention comprises: a step of providing a joint portion P1 where a trailing end of the continuous web WB is joined to a starting end of a next continuous web WB, a step of controlling a timing of supplying the continuous web WB so as to locate the joint portion P1 at a central portion of the absorbent articles PD in a machine direction MD, based on a length of the continuous web from the joint portion P1 up to a cutting location P2 and a dimension L1 of the absorbent articles PD in the machine direction MD of the continuous web WB; and a step of disengaging only absorbent articles PD having the joint portion P1 and ejecting the absorbent articles PD in the course of the manufacturing line.

Current assignees

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Inventors

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WATANABE TOMOHIRO

MIYAKI MASANOBU

Advantages / Previous drawbacks

(EP2727567)

It will be appreciated that the drawings are schematically shown and the ratio and the like of each dimension are different from the real ones.

Independent claims

(EP2727567)

1. A method of ejecting absorbent articles that is used in a manufacturing line of the absorbent articles, including: a step of arranging absorbers on a conveyed continuous web; a step of cutting the continuous web arranged with the absorbers at every predetermined interval in a conveyance direction of conveying the continuous web; and a step of providing a joint portion where a trailing end of the continuous web is joined to a starting end of a next continuous web, the method comprising: a step of controlling a timing of supplying the continuous web so as to locate the joint portion at a central portion of the absorbent articles in a conveyance direction, based on a length of the continuous web from the joint portion up to a cutting location of the continuous web in the cutting step and a dimension of the absorbent articles in a conveyance direction of the continuous web; and a step of disengaging only absorbent articles having at least the joint portion from the manufacturing line and ejecting the absorbent articles in the course of the manufacturing line.

Object of invention

(EP2727567)

The present invention relates to a method of ejecting an absorbent article used in a manufacturing line of the absorbent article.

The present invention relates to a method of ejecting an absorbent article used in a manufacturing line of the absorbent article.

So far, the present invention is disclosed through the above embodiments.

IPC - International classification

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IN3258/KOLNP/2009

WO2008/108476

Questel unique family ID (FAN)

44294364

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IN3258/KOLNP/2009	A	2010-05-21	IN2009KN03258
WO2008/108476	A1	2008-09-12	WO2008108476

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2008-03-03
2008-03-03
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2013-03-22
2010-09-30
2010-06-17
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2013-11-12
(JP5224400)
2013-03-22
(IN-304350)
2018-12-12

Title

(WO2008108476)
Absorber, sanitary goods utilizing the same and process for producing them

Abstract

(WO2008/108476)
An absorber that has a tea leaf pulverizate of 0.05 to 4.6 mm particle size dispersed and retained in a pulp fiber material of 0.1 to 7 mm fiber length so as to have not only appropriate water absorbing capacity, dryability and odor elimination performance but also appropriate visual quality and so as to be capable of maintaining sanitary conditions for a relatively prolonged period of time; and sanitary goods utilizing the absorber. The absorber has a superior-surface-constituting superior water-absorbing paper layer part, an inferior-surface-constituting inferior water-absorbing paper layer part and a water-absorbing mixture layer part interposed between the superior water-absorbing paper layer part and the inferior water-absorbing paper layer part, these layer parts superimposed on each other in layered form and integrated together. The absorber is characterized in that the water-absorbing mixture layer part is composed of a pulp fiber material pulverizate of 0.1 to 7 mm fiber length made by beating, a tea leaf pulverizate of 0.05 to 4.6 mm particle size and a smaller amount of water-absorbing resin than the pulp fiber material pulverizate. With respect to this absorber and sanitary goods utilizing the absorber, there can be provided sanitary goods that through mixing of the tea leaf pulverizate, excel in sanitary and deodorizing performances without detriment to the water absorbing capacity.

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Advantages / Previous drawbacks

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The present inventors, the best water absorption properties of the absorbent body, due to the different depending on the purpose, the water absorption ability of the absorbing materials, 'penetration rate', 'dry speed', 'return number', 'return amount', '' and 'water absorption amount of the pot as described in' subdivided in the item, in which the electro-measured for these items by, at the time of manufacturing of the absorbent body for use with the selection of the material can be easily discovered.

However, fine particles of less than 0.0 5 mm do not enter the ground tea leaves can be prepared as described above, it has an odor after use, such as urine having a relatively high liquid permeation rate, the water absorption speed and dry to hold the amount of adsorbent and absorbent sanitary use and can be further increased.

However, mixing of savage tea leaf powder particles, the mixed layer of the absorbent in a manufacturing stage, the tea leaf powder savage the surface portion of the water-absorbing particles in the mixed layer is reduced, so that as much as possible the distribution of the mixed, to use an adsorbent and absorbent of the sanitary article surface, a region of the particles of the tea leaf powder savage, it is difficult to see from outside the, it is preferable to improve the appearance.

In addition, the prior art, the absorbent body, the water absorption is noticed, exclusively, the performance is limited and the water absorption in a short time can be increased because, the absorbent body, so as to increase the water absorption rate, is made.

However, the absorbent body in order to have a deodorant, tea leaves are mixed, the problem is decreased absorption speed.

Independent claims

(WO2008/108476)

Within a range of the transreflector 1. That form the top surface of the water-absorbent paper layer portion and an upper, a lower portion that forms the lower face of the water-absorbent paper layer portion, the upper and the lower layer of the water-absorbent sheet of the water-absorbent paper layer provided between the portion of the water-absorbent mixed layer superposed on the layered portion are integrally formed in the absorber, a mixture of the water-absorbent layer portion, the fiber length is preferably 0.1 to 7 mm and the beaten pulp fiber material and the pulverized product of, 0.0 5 to 4.6 mm and a particle size of the pulverized product of green tea leaves, compared to the first frame with a small amount of the pulp fiber material powder which contains a mixture of the water absorbent resin bymixing formed and characterized in that the absorbent body.

2. That form the top surface of the water-absorbent paper layer portion and an upper, a lower portion that forms the lower face of the water-absorbent paper layer portion, the upper and the lower layer of the water-absorbent sheet of the water-absorbent paper layer provided between the portion of the mixed layer and a layer of water absorbent portion is integrally formed and are overlapped in the absorber, a mixture of the water-absorbent layer portion, the fiber length is preferably 0.1 to 7 mm and the beaten pulp fiber material and savage powder of, in particle size of 0.0 5 to 4.6 mm and savage powder tea leaves, a lesser amount of the pulverized pulp fiber material containing a palatable bra and the pulverized product of the material, the pulverized pulp fiber material containing a lower amount of the water absorbent resin bymixing formed and characterized in that the absorbent body.

3. That form the top surface of the water-absorbent paper and the upper layer portion, that forms the lower face and the lower layer portion of the water-absorbent paper, absorbent paper layer of the upper and the lower portion of the water-absorbent paper layer provided between the portion of the water-absorbent paper layer and the intermediate portion, the upper part and the intermediate layer of the water-absorbent sheet of the water-absorbent paper layer provided between the upper layer portion and the mixing of the water-absorbent, wherein the bottom of the water-absorbent paper layer part and the intermediate layer portion of the water-absorbent sheet is disposed between the lower absorbent layer portion in the absorbent article which comprise and mixing, the mixture of the water-absorbent layer portion is formed on the upper, refined fiber with a freeness 0.1 fibers having a fiber length of 7 mm in the pulverized product of the material to the pulp fibers are formed, the lower layer portion is formed on the water-absorbent mixture, the fiber length is preferably 0.1 to 7

mm refined fiber with a freeness of pulp fibers and the pulverized product of the material, the particle size of 0.0 5 to 4.6 mm of tea leaves and savage powder, wherein the pulverized product of the material of a small amount of the pulp fibers than the water-absorbent resin and a mixture containing is formed, the upper layer portion of the water-absorbent paper, absorbent paper layer portion before the intermediate serial, the lower layer portion of the water-absorbent sheet, the upper and the lower portion of the mixed layer of the water-absorbent layer portion is formed of the mixed aqueous bMG, superposed on the layered integrally formed and characterized in that the absorbent body.

4. That form the top surface of the water-absorbent paper layer portion and an upper, a lower portion that forms the lower face of the water-absorbent paper layer portion, the upper and the lower layer of the water-absorbent sheet of the water-absorbent paper layer provided between the portion of the water-absorbent paper layer and a middle portion, the upper part and the intermediate layer of the water-absorbent sheet of the water-absorbent paper layer provided between the portion of the mixed layer and the upper part of the contact portion of the water-absorbent, wherein the bottom of the water-absorbent paper layer part and the intermediate water absorbent paper layer portion disposed between the lower layer portion of the water-absorbent mixture comprising in the absorbent body, the upper layer portion is formed on the water-absorbent mixture, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of pulverized pulp fiber material and formed of a compound, a mixture of the water-absorbent layer portion is formed on the lower, fiber length is preferably from 0.1 to 7 mm and the period of the beating of the pulp fibers and savage material powder, a particle size of 0.0 5 to 4.6 mm of tea leaves and savage powder, wherein a small amount of a plastic material of the pulp fibers than the pulverized material and pulverized material containing material, the pulp fiber in a smaller amount of the water absorbent resin bymixing savage material powder mixture containing formed in, the upper layer portion of the water-absorbent paper, absorbent paper layer and said intermediate portion, the lower layer portion of the water-absorbent sheet, the upper and the lower portion of the mixed layer of the water-absorbent layer portion is formed on the water-absorbent mixture, superposed on the layer which is formed integrally with and characterized in that the absorbent body.

5. That form the top surface of the water-absorbent paper layer portion and an upper, a lower portion that forms the lower face of the water-absorbent paper layer portion, the upper and the lower layer of the water-absorbent sheet of the water-absorbent paper layer provided between the portion of the water-absorbent paper layer and a middle portion, the upper part and the intermediate layer of the water-absorbent sheet of the water-absorbent paper layer provided between the upper layer portion of the water-absorbent mixture and, wherein the bottom of the water-absorbent paper layer part and the intermediate water absorbent paper layer disposed between the lower absorbent layer portion and the absorbent article which comprise in a mixture, the mixture of the water-absorbent layer portion is formed on the upper portion, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of pulp fibers and savage material powder, the pulp fiber material in a smaller amount of the pulverized material in particle size of 0.0 5 to 4.6 mm and a mixture containing savage powder tea leaves formed in, mixing of the water-absorbent layer portion is formed on the lower, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of pulverized material and a fibrous material and the minimum or pulses, in particle size of 0.0 5 to 4.6 mm and tea leaves savage powder, pulp fiber savage material powder in a smaller amount of a mixture containing a water-absorbent resin and formed in, the upper layer portion of the water-absorbent paper, absorbent paper layer and said intermediate portion, the lower layer portion of the water-absorbent sheet, the upper and the lower portion of the mixed layer of the water-absorbent layer portion is formed on the water-absorbent mixture, superposed on the layer which is formed integrally with and characterized in that the absorbent body.

6. That form the top surface of the water-absorbent paper layer portion and an upper, a lower portion that forms the lower face of the water-absorbent paper layer portion, the upper and the lower layer of the water-absorbent sheet of the water-absorbent paper layer provided between the portion of the water-absorbent paper layer and a middle portion, the upper part and the intermediate layer of the water-absorbent sheet of the water-absorbent paper layer provided between the upper layer portion and the mixing of the water-absorbent, wherein the bottom of the water-absorbent paper layer part and the intermediate water absorbent paper layer disposed between the lower layer portion of the water-absorbent mixture comprising in the absorbent body, the upper layer portion is formed on the water-absorbent mixture, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of the pulverized product of the material and the pulp fibers, the pulp fibers in a smaller amount of 4.6 mm to 0.0 5 savage material powder with a particle size of the pulverized product of tea leaves and formed from a mixture containing and, mixing the water-absorbent layer portion is formed on the lower, refined fiber with a freeness of the fiber length is 0.1 to 7 mm and the minimum pulse savage and fibrous material powder, 0.0 5 to

4.6 mm and a particle size of the pulverized product of green tea leaves, a lesser amount of the pulverized product of the pulp fiber material and the plastic-containing material of the pulverized product, the pulp fiber and the water-absorbent resin powder material cracks in a smaller amount of a mixture containing a formed in, the upper layer portion of the water-absorbent paper, absorbent paper layer and said intermediate portion, the lower layer portion of the water-absorbent sheet, the upper and the lower portion of the mixed layer of the water-absorbent layer portion is formed on the water-absorbent mixture, superposed on the layer which is formed integrally with and characterized in that the absorbent body.

7. That form the top surface of the water-absorbent paper layer portion and an upper, a lower portion that forms the lower face of the water-absorbent paper layer portion, the upper and the lower layer of the water-absorbent sheet of the water-absorbent paper layer provided between the portion of the water-absorbent paper layer and a middle portion, the upper part and the intermediate layer of the water-absorbent sheet of the water-absorbent paper layer provided between the upper layer portion of the water-absorbent mixture and, wherein the bottom of the water-absorbent paper layer part and the intermediate water absorbent paper layer portion disposed between the lower layer portion of the water-absorbent mixture comprising in the absorbent body, the upper layer portion is formed on the water-absorbent mixture, in which the fiber length is 0.1 to 7 mm and the beaten pulp fiber material and the pulverized material, the material of the pulp fibers in a smaller amount of the pulverized material in particle size of 0.0 5 to 4.6 mm and tea leaves savage powder, pulp fiber material powder in a smaller amount of the plastic-containing material powder savage cracks and formed of a mixture containing a non-stop TREN, mixing of the water-absorbent layer portion is formed on the lower portion, the fiber length is 0.1 to 7 mm refined fiber with a freeness of the pulverized product and said fibrous material comprises pulp material, the particle size of 0.0 5 to 4.6 mm and the pulverized product of green tea leaves, a lesser amount of the pulverized pulp fiber material and a mixture containing the water-absorbent resin is formed, the upper layer portion of the water-absorbent paper, absorbent paper layer and said intermediate portion, the lower layer portion of the water-absorbent sheet, the upper and the lower portion of the mixed layer of the water-absorbent layer portion is formed by mixing the water-absorbent, superposed on the layer which is formed integrally with and characterized in that the absorbent body.

8. That form the top surface of the water-absorbent paper layer portion and an upper, a lower portion that forms the lower face of the water-absorbent paper layer portion, the upper and the lower layer of the water-absorbent sheet of the water-absorbent paper layer provided between the portion of the water-absorbent paper layer and a middle portion, the upper part and the intermediate layer of the water-absorbent sheet of the water-absorbent paper layer provided between the portion of the mixed layer and the upper part of the contact portion of the water-absorbent, wherein the bottom of the water-absorbent paper layer part and the intermediate water absorbent paper layer disposed between the lower layer portion and the absorbent article which comprise a mixture of the water-absorbent in, the upper layer portion is formed on the water-absorbent mixture, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of pulp fibers and savage material powder, the pulp fibers in a smaller amount of 4.6 mm to 0.0 5 savage material powder with a particle size of the pulverized product and tea leaves, the pulp fiber material powder pulverized material and a plastic-containing material cracks in a smaller amount of a mixture containing the non-stop may be formed, mixing of the water-absorbent layer portion is formed on the lower portion, the fiber length is 0.1 to 7 mm refined fiber with a freeness of pulp fibers and savage atomospshere material powder, a particle size of 4.6 mm to 0.0 5 of tea leaves and savage powder, a lesser amount of the pulverized pulp fiber material of the pulverized product and the plastic-containing material, a lesser amount of the pulp fiber savage material powder and the water-absorbent resin and formed from a mixture containing, water absorbent paper layer of the upper section, wherein the intermediate layer portion of the water-absorbent paper, absorbent paper layer portion and the lower, wherein the upper and the lower portion of the mixed layer of the water-absorbent layer portion is formed by mixing the water-absorbing, superposed on the layered integrally formed to be in characterized in that the absorbent body.

1 0. At least one sheet of absorbent paper formed by the water-absorbent paper layer on top of the lower portion, the lower layer portion from the lower part of the water-absorbent paper while the water was drawn, in which the fiber length is 0.1 to 7 mm and the beaten pulp fibers of savage material powder, a particle size of 4.6 mm to 0.0 5 of the pulverized product of tea leaves and help to pattern the pulverized product of the fiber material in a smaller amount of a mixture containing a water-absorbent resin placed thereon, to form a portion of the engagement layer mooney viscosity of the water-absorbent, the water-absorbent mixture on top of the layer, at least one sheet of absorbent paper placed on the water-absorbent paper layer portions are formed in the upper, the upper layer portion of the water-absorbent sheet, and the lower layer of the water-absorbent mixture bMG aqueous paper layer unit are superimposed on each other to form a stratified, in which the

stratified product having the thus formed integrally Pressability and characterized in that the method of manufacturing the absorbent body.

1 1. At least one sheet of absorbent paper by the paper layer is formed on the lower portion of the water-absorbent, water-absorbent sheet from the lower side of the lower layer portion while the water was drawn, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of the pulverized pulp fiber material, the particle size of 0.0 5 to 4.6 mm of the pulverized product of tea leaves, the fiber material powder and the minimum or amino paraxyleneglycol savage a lesser amount of a plastic material containing the pulverized pulp fibers and the water-absorbent resin powder material cracks of a smaller amount of a mixture containing a placed thereon, to form a mixture of the water-absorbent layer portion, the mixed layer deposited on top of the water-absorbent, at least one sheet of absorbent paper is placed on top of the water-absorbent paper layer and to form a unit, the upper layer portion of the water-absorbent paper, absorbent paper layer and a lower portion of the mixed layer is overlaid on the portion of the water-absorbent aligned with the longitudinal axis to form a solvent in which the stratified, the formed integrally Pressability stratified Aegiceras methaerylates and the manufacturing method of the absorbent body.

1 2. At least one sheet of absorbent paper formed by the water-absorbent paper layer on top of the lower portion, the lower the water-absorbent paper layer portion with suction from the lower side, the absorbent material is placed in the powder mixture, the mixture layer portions are formed in the bottom of the water-absorbent, water-absorbent mixture over the top of the lower layer portion, and one or more of the interleaf paper envelope is covered with a water-absorbent intermediate layer portions are formed in the, the intermediate layer on top of the water-absorbent paper, absorbent paper from the lower side of the lower layer portion with suction, the water-absorbent material powder mixture is placed in the mixing of the water-absorbent layer part is formed on the surface of the upper, the upper layer portion on top of the water-absorbent mixture, at least one sheet of absorbent paper are formed on the substrate by the water-absorbent paper is placed on the upper layer portion to form a solvent in which the stratified with, the upper layer portion of the water-absorbent paper, absorbent upper part of the mixed layer, intermediate layer portion of the water-absorbent sheet, the lower portion of the mixed layer and the lower portion of the water-absorbent water-absorbent paper layer portion formed by integrally press molding of a stratified product to produce an absorption body in the manufacturing method of the absorbent body, the upper absorbent layer portion mixed, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of pulp fibers and savage material powder is formed, the lower layer portion of the water-absorbent mixture, which is 0.1 to 7 mm of the beating of the pulp fibers spread savage material powder and, 0.0 5 to 4.6 mm and a particle size of the pulverized product of green tea leaves, a lesser amount of the pulverized pulp fiber material and the water-absorbent resin formed of a mixture containing characterized in that the method of manufacturing the absorbent body.

1 3. At least one sheet of absorbent paper formed by the water-absorbent paper layer on top of the lower portion, the lower the water-absorbent paper layer portion with suction from the lower side, the absorbent material is placed in the powder mixture, the mixture layer portions are formed in the bottom of the water-absorbent, water-absorbent mixture over the top of the lower layer portion, and one or more of the interleaf paper envelope is covered with a water-absorbent intermediate layer portions are formed in the, the intermediate layer on top of the water-absorbent paper, absorbent paper from the lower side of the lower layer portion with suction, the water-absorbent material powder mixture is placed in the mixed layer portions are formed in the top of the water-absorbent, water-absorbent mixture on top of the upper layer, at least one sheet of absorbent paper form by being made of the water-absorbent paper layer is placed on the upper portion to form a stratified, the upper layer portion of the water-absorbent paper, absorbent upper part of the mixed layer, intermediate layer portion of the water-absorbent sheet, the lower portion of the mixed layer and the lower portion of the water-absorbent water-absorbent paper layer portion formed by integrally press molding of a stratified product to produce an absorption body in the manufacturing method of the absorbent body, the upper absorbent layer portion mixed, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of pulp fibers and the pulverized product of the material, the particle size of 0.0 5 to 4.6 mm is formed from a plurality of tea leaves and savage powder, the lower layer portion of the water-absorbent mixture, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of pulverized material and a fibrous material and the minimum or pulses, in particle size of 0.0 5 to 4.6 mm and savage powder tea leaves, said pulp fiber material in a smaller amount of the pulverized product of the plastic-containing material and grinds, savage material powder of the pulp fiber and a lesser amount of a mixture containing a water-absorbent resin characterized in that the formed to be in the manufacturing method of the absorbent body.

1 4. At least one sheet of absorbent paper by the paper layer is formed on the lower portion of the water-absorbent, water-absorbent sheet from the lower side of the lower layer portion with suction, the absorbent material powder mixture and the product is placed, and the mixed layer portions are formed in the bottom of the water-absorbent, water-absorbent mixture over the lower layer portion, one or more of an envelope of the water-absorbent paper layer is covered with a sheet to form the intermediate, the intermediate layer on top of the water-absorbent paper, absorbent paper from the lower side of the lower layer portion with suction, the water-absorbent material powder mixture is placed in the mixing of the water-absorbent layer part is formed on the surface of the upper, the upper layer portion on top of the water-absorbent mixture, at least one sheet of absorbent paper form by an upper layer portion being made of the water-absorbent paper to form a solvent in which the stratified placed thereon, the upper layer portion of the water-absorbent sheet, the upper layer portion of the water-absorbent mixture, the intermediate water absorbent paper layer unit, the lower portion of the mixed layer and the lower portion of the water-absorbent water-absorbent paper layer portion formed by integrally press molding of a stratified product to produce an absorption body in the manufacturing method of the absorbent body, the upper absorbent layer portion mixed, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of pulp fibers and savage material powder, a particle size of 4.6 mm to 0.0 5 of tea leaves and savage powder, wherein the pulverized pulp fiber material in a smaller amount of the plastic-containing material and a mixture containing the pulverized material is formed, a mixture of a lower absorbent layer portion, the fiber length is 7 m m to 0.1 refined fiber with a freeness of pulp fibers and a frame material powder, a particle size of 0.0 5 to 4.6 mm and the pulverized product of green tea leaves, serial pulp fiber material before the pulverized product of the water absorbent resin bymixing a lesser amount of a mixture containing the formed characterized in that the manufacturing method of the absorbent body.

1 5. At least one sheet of absorbent paper has been formed by the water-absorbent paper layer on top of the lower portion, the lower layer portion of the water-absorbent paper with suction from the lower side, the absorbent material is placed in the powder mixture, the mixture layer portions are formed in the bottom of the water-absorbent, water-absorbent mixed layer over the top of the lower portion, and one or more of the interleaf paper envelope is covered with a water-absorbent intermediate layer portions are formed in the, the intermediate layer on top of the water-absorbent paper, absorbent paper from the lower side of the lower layer portion with suction, the water-absorbent material powder mixture is placed in the mixing of the water-absorbent layer part is formed on the surface of the upper, the upper portion of the water-absorbent mixture on top of the layer, at least one sheet of absorbent paper form by being made of the water-absorbent paper layer is placed on the upper portion to form a stratified, the upper layer portion of the water-absorbent paper, absorbent upper part of the mixed layer, intermediate layer portion of the water-absorbent sheet, the lower portion of the mixed layer and the lower portion of the water-absorbent water-absorbent paper layer portion formed by integrally press molding of a stratified product to produce an absorption body in the manufacturing method of the absorbent body, the upper absorbent layer portion mixed, the fiber length is preferably 0.1 to 7 mm refined fiber with a freeness of pulp fibers and savage material powder, a particle size of 4.6 mm to 0.0 5 of the pulverized product of tea leaves and, wherein the pulverized pulp fiber material in a smaller amount of the plastic-containing material and a mixture containing the pulverized material is formed, the lower absorbent layer portion is mixed, the fiber length is 7 m m to 0.1 refined fiber with a freeness of pulp fiber material and the pulverized material, 0.0 5 to 4.6 mm and a particle size of the pulverized product of green tea leaves, serial pulp fibers before the plastic-containing material in a smaller amount of the pulverized product of the material of the pulverized product and the water absorbing resin and formed of a mixture containing characterized in that the method of manufacturing the absorbent body.

Object of invention

(WO2008/108476)

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An object of the present invention to offer a footpad to the pulverized pulp fiber material, a powdered form of a superabsorbent polymer, the shell of the tea of dry matter and fluids from the tea leaves retained in the pulverized product is formed of a portion of the mixed layer of the absorbent disposable absorbers or absorbent is used in the case of sanitary goods, green tea, oolong tea and leached from the tea leaves and tea leaves obtained together with a dry matter of exudates since the tea leaves, can be mixed with a small amount of the tea shell, further, uneven mixing of the tea leaves in tea leaves to compensate for the dried exudate, reducing unevenness in a mixture of the tea leaves, the growth of

bacteria and odor inhibiting the action of small variations in the absorbent body and is therefore preferred.

IPC - International classification

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Family 148/200 - FAMPAT - ©Questel

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Title

(EP2088979)
Absorbent articles comprising graphics

Abstract

(EP2088979)
An absorbent article may comprise a first zone comprising graphics and a second zone comprising graphics, wherein the first and second zones have different elastic properties. Further, the absorbent article may comprise a first absorbent article component and a second absorbent article component having substantially different elastic properties, wherein the first absorbent article component comprises an elastomer. Additionally, the absorbent article may comprise a third absorbent article component overlapping the first and second absorbent article components, wherein the third absorbent article component comprises graphics on at least the portions which overlap the first and second absorbent article components.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(WO2008/070131)
It is a desire of the present invention to provide absorbent articles that look like underwear, while, at the same time, incorporating absorbent article components that offer the benefits and functionality of the latest technologies (e.g., high stretch components integrated with low/no stretch components, highly breathable components, etc.).
More specifically, it is a desire of the present invention to provide absorbent articles comprising graphics spanning the viewable absorbent article components, including absorbent articles comprising stretchable and breathable components. Further, it is a desire of the present invention to provide absorbent articles that have a Seam Noticeability Rating of less than about 7.
The elastic member 70 of the front ear panels 46 may include the elastomeric material 124 (see FIG. 5) which extends laterally outward from the chassis 41 to provide good fit by generating the optimal retention (or sustained) force at the waist and side areas of the wearer.
There is a desire to make disposable absorbent articles look more like underwear.
However, if the elastomeric material does not have good adhesive properties, additional adhesive may be utilized.

Independent claims

(WO2008/070131)
1. An absorbent article, comprising: a first component comprising graphics; a second component comprising graphics; wherein the first and the second components have different elastic properties; and wherein the second component is an outer cover.
9. A method of constructing an absorbent article, comprising the steps of: a) attaching first, second, third, fourth, and fifth absorbent article components, such that at least four seams are formed; and b) applying a printing technique to the first,

second, third, fourth, and fifth absorbent article components, such that graphics are applied to each of the first, second, third, fourth, and fifth absorbent article components, wherein the first and second absorbent article components are side panels and the third absorbent article is an outer cover.

10. An absorbent article, comprising: a side zone comprising graphics; a central zone comprising graphics; a core comprising absorbent gelling material as the main absorbing engine; a stretchable outer cover; wherein the side zone and the central zone have substantially different elastic properties; wherein the outer cover has an MVTR of at least about 1000 g/m2/24 hr; and wherein a seam between the side zone and the central zone has an SNR of less than about 7.

11. An absorbent article, comprising: a first graphic component in a left front side zone; a second graphic component in the left back side zone; a third graphic component in a central zone; wherein the first and second graphic components are side panels; wherein the first and second graphic components have substantially similar elastic properties as compared to each other; wherein the third graphic component is an outer cover and has substantially different elastic properties as compared to the first and second graphic components; wherein a seam is formed between the left front side zone and the central zone; and wherein the seam has an SNR of less than about 6.

12. An absorbent article, comprising: a first graphic component spanning a central zone and a side zone, wherein the first graphic component is an outer cover; a leg band zone; a waist band zone; a seam in a central area of the side zone; wherein the side zone is substantially more elastic than the central zone; and wherein the seam has an SNR of less than about 5.

Object of invention

(WO2008/070131)

The present invention relates to the field of absorbent articles, and more particularly to the field of absorbent articles comprising graphics and/or color fields.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/514; A61F-013/72; A61F-013/84; A61L-015/16; B21D-039/00; B32B-037/00; B32B-038/14

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Title

(EP2085061)

Process for producing absorbent article, and absorbent article

Abstract

(EP2085061)

The invention provides an absorbent article that is small and that can be easily worn by a user and a method for producing the absorbent article. The absorbent article that is used in abutment against a user's body includes: an absorbent body for absorbing fluid; and an absorbent-article main body whose face on a side close to the user' s body in use is joined to the absorbent body. The absorbent body has a longitudinal direction, a width direction, and a thickness direction. One end section of the absorbent body in the longitudinal direction is undetachably joined to the absorbent-article main body, and another end section of the absorbent body in the longitudinal direction is detachably joined to a portion inside an outer edge of the absorbent-article main body. The absorbent body has a non-joined section that is not joined to the absorbent-article main body, between the joined section on a side close to the other end section and the outer edge of the absorbent-article main body.

Current assignees

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Advantages / Previous drawbacks

(EP2085061)

This makes it possible to prevent the base absorbent body 10 and the like after the cutting from being attached to the roller having the cutter blade, and to separate the base absorbent body 10 and the like from the cutter in such a manner as to move the base absorbent body 10 and the like in the transport direction.

Thus, it is desirable that the rear end is temporarily fixed to the main body section in a detachable manner until the absorbent article is used.

Thus, the one end section in the longitudinal direction of the one absorbent body contained in the continuous body and the absorbent-article main body can be more firmly joined to each other such that they cannot be detached from each other.

The invention has been made in view of conventional problems as described above, and an advantage thereof is to provide an absorbent article that is small and that can be easily worn by a user, and a method for producing the absorbent article.

Herein, when merely the front portion of the surface structure is fixed, a position of the rear end of the surface structure is unstable, and catching the rear end of the surface structure is difficult for the user.

Independent claims

(EP2085061)

1. An absorbent article that is used in abutment against a user's body, comprising: an absorbent body that has a longitudinal direction, a width direction perpendicular thereto, and a thickness direction perpendicular to the longitudinal direction, and that is positioned on a side close to the user's body in use; and an absorbent-article main body positioned farther from the user's body than the absorbent body, a face, on a side far from the user's body, of one end section of the absorbent body in the longitudinal direction and a face of the absorbent-article main body on the side close to the user's body being undetachably joined to each other, the absorbent article having a joined section in which a face, on the side far from the user's body, of another end section of the absorbent body in the longitudinal direction and the face of the absorbent-article main body on the side close to the user's body are detachably joined to each other inside an outer edge of the absorbent-body main body, the absorbent article having a non-joined section in which the absorbent body and the absorbent-article main body are not joined to each other between the joined section and the outer edge of the absorbent-article main body.

3. A method for producing an absorbent article that is used in abutment against a user's body, comprising: a continuous-body production step that produces a continuous body in which absorbent bodies used for absorbing fluid and having a

longitudinal direction, a width direction perpendicular thereto, and a thickness direction perpendicular to the longitudinal direction are continuously arranged; and a continuous-body joining step that undetachably joins a face on a side far from the user's body in one end section, in the longitudinal direction, of one of the absorbent bodies contained in the continuous body to a face on a side close to the user's body in use in an absorbent-article main body, and that detachably joins a face on the side far from the user's body in another end section, in the longitudinal direction, of that absorbent body to the face on the side close to the user's body in use in the absorbent-article main body, the continuous body being joined in the continuous-body joining step to the absorbent-article main body in such a manner as to have a non-joined section in which the absorbent body and the absorbent-article main body are not joined to each other between a detachably joined section of the continuous body and an outer edge of the absorbent article being produced.

6. A method for producing an absorbent article that is used in abutment against a user's body, comprising: a single-absorbent-body production step that produces as a discrete member an absorbent body used for absorbing fluid and having a longitudinal direction, a width direction perpendicular thereto, and a thickness direction perpendicular to the longitudinal direction; and an absorbent-body joining step that undetachably joins a face on a side far from the user's body in one end section of the absorbent body in the longitudinal direction to a face on a side close to the user's body in use in an absorbent-article main body, and that detachably joins a face on the side far from the user's body in another end section of the absorbent body in the longitudinal direction to the face on the side close to the user's body in use in the absorbent-article main body, the absorbent body being joined in the absorbent-body joining step to the absorbent-article main body in such a manner as to have a non-joined section in which the absorbent body and the absorbent-article main body are not joined to each other between a detachably joined section of the absorbent body and an outer edge of the absorbent article being produced.

Object of invention

(EP2085061)

The invention provides an absorbent article that is small and that can be easily worn by a user and a method for producing the absorbent article.

The present invention relates to an absorbent article and a method for producing the absorbent article.

The present invention relates to an absorbent article and a method for producing the absorbent article.

According to the invention, it is possible to provide an absorbent article that is small and that can be easily worn by a user, and a method for producing the absorbent article.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/472; A61F-013/474; A61F-013/475; A61F-013/505; A61F-013/53

Family 150/200 - FAMPAT - ©Questel

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2017-10-27

Title

(EP1813237)
Absorbent Core for an Absorbent Article

Abstract

(EP1813237)
An absorbent core (28) is described which includes first and second substrate layers each having absorbent particulate polymer material deposited thereon and encased with thermoplastic material, the first and second substrate layers being combined together such that said thermoplastic material of each said first and second substrate layers contact one another. The thermoplastic material has a softening point in a range from 50° C to 300° C, a glass transition temperature of less than 25° C, and a storage modulus G' measured at 60° C of less than 300,000 Pa.The absorbent particulate polymer material is immobilized when wet such that the absorbent core achieves a wet immobilization of more than about 50%.

Current assignees

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Inventors

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SIDDIQUEE SANAUL KABIR
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TOMBUELT THOMAS

Advantages / Previous drawbacks

(EP1813237)
While this construction certainly provides good immobilisation of the absorbent hydrogel particles in the dry state, it seems

that only a lesser immobilisation can be achieved in the urine loaded state.

Hence, to provide good wearing comfort it is very important to keep the absorbent materials comprised by a diaper or other absorbent article in their intended position, both when the article is dry and when the article is fully or partially loaded with urine (or other bodily liquids).

This absorbent core is useful for providing an absorbent article of increased wearing comfort.

Therefore, it is believed that this absorbent article does not provide a very satisfactory immobilization of the absorbent material in the fully or partially urine loaded state.

Independent claims

(EP1813237)

1. An absorbent core (28) comprising absorbent material, said core including first and second substrate layers (100) each having absorbent particulate polymer material deposited thereon and encased with thermoplastic material; said first and second substrate layers being combined together such that said thermoplastic material of each said first and second substrate layers contact one another; wherein said thermoplastic material has a softening point in a range from 50 C to 300 C, a glass transition temperature of less than 25 C, and a storage modulus G' measured at 60 C of less than 300,000 Pa; and wherein said absorbent particulate polymer material is immobilized when wet such that said absorbent core achieves a wet immobilization of more than about 50% according to the Wet Immobilization Test; wherein said absorbent material optionally comprises absorbent fibrous material in an amount representing less than 10% of fibrous material as compared to the weight of said particulate absorbent polymer.

Object of invention

(EP1813237)

The present invention concerns an absorbent article, preferably a disposable absorbent article, such as a diaper.

The present invention specifically concerns an absorbent core for such an absorbent article which provides an improved immobilization of absorbent polymer material when the article is fully or partially urine loaded.

The present invention concerns an absorbent article, preferably a disposable absorbent article, such as a diaper.

The present invention concerns an absorbent article, preferably a disposable absorbent article, such as a diaper.

The present invention concerns an absorbent article, preferably a disposable absorbent article, such as a diaper.

The present invention concerns an absorbent article, preferably a disposable absorbent article, such as a diaper.

The present invention specifically concerns an absorbent core for such an absorbent article that provides an improved immobilization of absorbent polymer material when the article is fully or partially urine loaded.

The present invention concerns an absorbent article, preferably a disposable absorbent article, such as a diaper.

IPC - International classification

A01K-023/00; A47L-013/17; A61B-019/00; A61F; A61F-005/44; A61F-013/00; A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/45; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/51; A61F-013/511; A61F-013/53; A61F-013/53; A61F-013/532; A61F-013/534; A61F-013/535; A61F-013/539; A61L-015/00; A61L-015/24; B32B-005/22; B32B-033/00; C08L-077/00

Family 151/200 - FAMPAT - ©Questel

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JP2000554320
BR9911174
KR20007014384
DE69920908T
EP99902357
HK02100647
US09/455,571
RU2001101871
CN99807567

AU2235899
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CO99006839
US09/100,825
WOUS99/001061

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JP4316141
BRPI9911174
KR100579033
DE69920908
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EP1089690
HK1039047
US6667085
RU2218139
CN1124832
JP2002518096
AU742637
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CO5090834
CN1306410
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EP1089690
BR9911174
BRPI9911174
US6036805
AU2235899
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Family publication details

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BRPI9911174	B1	2006-10-10	BRPI9911174
KR100579033	B1	2006-05-12	KR100579033
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BRPI9911174	A1	2001-03-27	BRPI9911174
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AU2235899	A	2000-01-05	AU9922358
WO99/65439	A1	1999-12-23	WO9965439



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(US6667085)
2003-12-23
(DE69920908)
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(JP4316141)
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(RU2218139)
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(AU-742637)
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(CN1124832C)
2003-10-22
(HK1039047)
2004-07-09
(KR100579033)
2006-05-12
(BRPI9911174)
2006-10-10

Title

(EP1089690)
Method of making an absorbent article with prefastened side panels

Abstract

(EP1089690)
A method of making a prefastened disposable absorbent article includes providing a continuous web (80) of interconnected absorbent articles and releasably attaching a pair of opposed side panels (28) to one of the waist regions on each of the absorbent articles. Each of the opposed side panels (28) includes a primary fastener which releasably engages the one waist region to provide the releasable attachment. Each of the side panels (28) also defines side portions which extend laterally outward beyond the side edges of the absorbent article in the one waist region. The continuous web (80) is selectively cut into discrete absorbent articles which are then folded about a fold line extending in a lateral direction through the crotch region of the article thereby positioning the waist regions of the article in a facing relationship. The method further includes securing the side portions of the side panels (28) to the side edges of the absorbent article in the opposite waist region to provide the prefastened absorbent article.

Current assignees

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Inventors

MCNICHOLS PATRICK SEAN

Advantages / Previous drawbacks

(EP1089690)
The present invention advantageously provides a method of making prefastened disposable absorbent articles which include an adjustable fastening system for improved fit and performance.
Moreover, it is desirable that such absorbent articles, after being soiled, can be removed from the wearer in a convenient and clean manner without undesirably soiling the caregiver or surrounding area such as the clothes of the wearer.
Moreover, there is a need for improved methods of reliably and consistently making such absorbent articles.
In response to the difficulties and problems discussed above, new methods of making a prefastened disposable absorbent articles which have an adjustable fastening system have been discovered.
For example, the side panels have been difficult to tear when attempting to remove the article from the waist of the wearer

instead of pulling the article down over the hips of the wearer.

Independent claims

(EP1089690)

1. A method of making a prefastened disposable absorbent article (20) which defines a front waist region (22), a backwaist region (24), a crotch region (26) which extends between and connects said waist regions (22, 24), a pair of opposed side edges (30) and a pair of opposed waist edges (32), said method characterised in that it comprises : a) providing a continuous web (80) of interconnected absorbent articles (20); b) releasably attaching a pair of opposed side panels (28) to one of said waist regions (22, 24) on each of said absorbent articles (20) wherein each of said opposed side panels (28) includes a primary fastener (62) thereon which releasably engages said one waist region to provide said releasably attachment and wherein each of said side panels (28) defines side portions (70) which extend laterally outward beyond said side edges (30) of said absorbent article (20) in said one waist region; c) selectively cutting said continuous web (80) into discrete absorbent articles (20); d) folding each of said discrete absorbent articles (20) about a fold line (92) extending in a lateral direction through said crotch region (26) of said article (20) thereby positioning said waist regions (24) in a facing relationship; and e) securing said side portions (70) of said side panels (28) to said side edges (30) of said absorbent article (20) in said opposite waist region (22, 24) to provide said prefastened absorbent article (20), wherein said side panels (28) are releasably attached to said one waist region (22, 24) before said side portions (70) of said side panels (28) are secured to said opposite waist region (22, 24).

Object of invention

(EP1089690)

In particular, the present invention provides a method of attaching prefastened side panels to and folding a disposable absorbent articles in a reliable and consistent manner.

In one aspect, the present invention provides a method of making a prefastened disposable absorbent article as claimed in claim 1.

In one aspect, the present invention provides a method of making a prefastened disposable absorbent article as claimed in claim 1.

The present invention relates to disposable absorbent articles which are adapted to contain body exudates.

More particularly, the present invention relates to methods of making absorbent articles having prefastened side panels and absorbent articles made by the same.

The present invention relates to disposable absorbent articles which are adapted to contain body exudates.

In particular, the present invention provides a method of attaching prefastened side panels to and folding a disposable absorbent articles in a reliable and consistent manner.

In one aspect, the present invention provides a method of making a prefastened disposable absorbent article as claimed in claim 1.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/56

Family 152/200 - FAMPAT - ©Questel

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WOUS2018/059348
WOUS2018/059350
US16/181,649
US16/181,621
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US16/181,635

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WO2019/090291
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WO2019/090294
US20190133835
US20190133842
US20190133843
US20190133847

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WO2019/090291	A1	2019-05-09	WO201990291
WO2019/090292	A1	2019-05-09	WO201990292
WO2019/090293	A1	2019-05-09	WO201990293
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US20190133842	A1	2019-05-09	US20190133842
US20190133843	A1	2019-05-09	US20190133843
US20190133847	A1	2019-05-09	US20190133847

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Title

(WO201990291)

Absorbent article with conforming features

Abstract

(WO2019/090291)

A disposable absorbent article has a topsheet; a backsheet; an absorbent core disposed between the topsheet and the backsheet; and a first plurality of conforming features in at least the absorbent core or a combination of the absorbent core and the topsheet. At least a portion of the are depressions, wherein the depressions have a depression centerline bisecting a length and/or width of the depression. A first strut forms a first sidewall of the depression opposite a second sidewall of

the depression formed by a second strut, wherein neither of the first strut nor the second strut extend longitudinally and/or laterally beyond the depression centerline by more than 0.75 mm.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(WO2019/090291)

A hydrophobic topsheet may provide better rewet performance; however, fluid acquisition times will likely increase due to the hydrophobic nature of the topsheet.

As such, it would be beneficial to have an improved absorbent article which addresses the tradeoff of comfortable conformance and resiliency as well as one that provided good fluid kinetics.

While some articles may be created which provide great conformity to the intricate female anatomy, such conformity can reduce the structural integrity of the absorbent article.

And, it would be beneficial to provide a method for creating such articles without sacrificing leakage performance of the absorbent article.

Again, the melt stabilized locations 722 may be limited to a central region of modified web 335.

The CD tensioning force placed on the weakened precursor web 100' is adjusted such that it causes the weakened, melt-stabilized locations 202 to at least partially, or fully, rupture thereby creating a plurality of partially formed, or formed apertures 204 coincident with the weakened melt- stabilized locations 202 in the modified web 335.

However, the bonds of the weakened precursor web 100' (in the non-overbonded areas) may be strong enough such that many do not rupture during tensioning, thereby maintaining the weakened precursor web 100' in a coherent condition even as the weakened, melt- stabilized locations rupture.

Independent claims

(WO2019/090291)

1. A disposable absorbent article (1510, 1700) having a longitudinal centerline and a lateral centerline, the disposable absorbent article further comprising: a topsheet (1217, 1317, 1714, 1924); a backsheet (1716, 1925); an absorbent core (1219, 1319, 1718, 1928) disposed between the topsheet and the backsheet; a first plurality of conforming features (1215, 1315, 1415, 1615) in at least the absorbent core or a combination of the absorbent core and the topsheet, at least a portion of the conforming features comprising a depression, wherein the depression comprises a depression centerline (1511) bisecting a length and/or width of the depression, a first strut (1513 A) forming a first sidewall of the depression opposite a second sidewall of the depression formed by a second strut (1513B), wherein neither of the first strut or second strut extend longitudinally and/or laterally beyond the depression centerline by more than 0.75 mm, more preferably less than 0.5 mm, most preferably less than 0.25 mm.

Object of invention

(WO2019/090291)

The processes of the present disclosure can provide an absorbent article having regions of intimate contact between / among components of the absorbent article which can improve acquisition speed along with a reduction in the likelihood of leakage.

This present disclosure relates to absorbent articles with improved fluid transfer kinetics between layers and unexpectedly improved mechanical fit and comfortable conformation to the body and methods of making the same.

This present disclosure relates to absorbent articles with improved fluid transfer kinetics between layers and unexpectedly improved mechanical fit and comfortable conformation to the body and methods of making the same.

The present invention pertains to an absorbent article with conforming features and methods of creating the conforming feature in an absorbent article.

The processes of the present disclosure can provide an absorbent article having regions of intimate contact between /

among components of the absorbent article which can improve acquisition speed along with a reduction in the likelihood of leakage.

The present invention pertains to an absorbent article with conforming features and methods of creating the conforming feature in an absorbent article.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/472; A61F-013/49; A61F-013/511; A61F-013/512; A61F-013/513; A61F-013/53; A61F-013/536; A61F-013/537; B32B-005/02; B32B-037/20; B32B-038/00; B32B-038/06; D04H-001/04; D04H-001/425; D04H-001/732; D04H-003/015; D04H-011/00

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CN201480070417
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WOJP2014/084507

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EP3087961
CN105828760
US20170027765
EP3087961
JP6033765
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KR20160102423
CN105828760
JP2015123163
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Family publication details

EP3087961	B1	2019-06-19	EP3087961
CN105828760	B	2017-12-08	CN105828760B
US20170027765	A1	2017-02-02	US20170027765
EP3087961	A4	2016-12-07	EP3087961
JP6033765	B2	2016-11-04	JP6033765
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KR20160102423	A	2016-08-30	KR20160102423
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JP2015123163	A	2015-07-06	JP2015123163
WO2015/099121	A1	2015-07-02	WO201599121



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2016-11-04
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2016-08-30
2016-08-03
2015-07-06
2015-07-02

Grant dates

(EP3087961)
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2016-11-04
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2017-12-08

Title

(EP3087961)
Method for producing absorbent article

Abstract

(EP3087961)
To easily process a concave groove, properly form the concave groove, not worsen fittability, and improve diffusion of body fluid. A method of manufacturing an absorbent article in which an absorbent body (4) is provided between a liquid permeable topsheet (3) and a backsheet (2), an absorbent body concave portion (20), which is a concave groove or a slit, being formed at a skin-contacting side including a body fluid expelling area (H) along a longitudinal direction of the absorbent body without using compression, and an embossed portion (21) being formed in the absorbent body concave portion (20) along the absorbent body concave portion (20) by embossing from a top surface side of the liquid permeable topsheet. The method includes a first step of forming the absorbent body (4) provided with the absorbent body concave portion (20); a second step of forming core embosses (23) at least on both sides of the absorbent body concave portion (20) by compressing the absorbent body from the skin-contacting side of the absorbent body (4); and a third step of stacking the liquid permeable topsheet (3) on a top surface side of the absorbent body (4) and forming the embossed portion (21).

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP3087961)
The main problem to be solved by the present invention is to provide a method of manufacturing an absorbent article by which a concave groove can be easily processed, the concave groove can be properly formed, fittability is not worsened, and diffusion of body fluid is improved.
Uniform products cannot be manufactured due to problems such as (1) the absorbent body is clipped between rollers and

the side walls of the open portion are fallen down inside while line transferring the absorbent body and the fallen absorbent body is also compressed when the topsheet is pressed, (2) a part of the absorbent body around the open portion is compressed because shifts in a front and rear direction and a left and right direction in transferring occur while line transferring the absorbent body and aligning the open portion with the pressing position becomes difficult.

Independent claims

(EP3087961)

1. A method of manufacturing an absorbent article in which an absorbent body is provided between a liquid permeable topsheet and a backsheet, an absorbent body concave portion, which is a concave groove or a slit, being formed at a skin-contacting side including a body fluid expelling area along a longitudinal direction of the absorbent body without using compression, and an embossed portion being formed in the absorbent body concave portion along the absorbent body concave portion by embossing from a top surface side of the liquid permeable topsheet, the method comprising: a first step of forming the absorbent body provided with the absorbent body concave portion; a second step of forming core embosses at least on both sides of the absorbent body concave portion by compressing the absorbent body from the skin-contacting side of the absorbent body; and a third step of stacking the liquid permeable topsheet on a top surface side of the absorbent body and forming the embossed portion.

Object of invention

(EP3087961)

As the invention of claim 2, there is provided the method of manufacturing the absorbent article according to claim 1, wherein each of the core embosses is formed at a distance range from an edge portion of the absorbent body concave portion that is greater than or equal to 10 mm and less than or equal to 30 mm.

As the invention of claim 1 to solve the above described problem, there is provided a method of manufacturing an absorbent article in which an absorbent body is provided between a liquid permeable topsheet and a backsheet, an absorbent body concave portion, which is a concave groove or a slit, being formed at a skin-contacting side including a body fluid expelling area along a longitudinal direction of the absorbent body without using compression, and an embossed portion being formed in the absorbent body concave portion along the absorbent body concave portion by embossing from a top surface side of the liquid permeable topsheet, the method including a first step of forming the absorbent body provided with the absorbent body concave portion; a second step of forming core embosses at least on both sides of the absorbent body concave portion by compressing the absorbent body from the skin-contacting side of the absorbent body; and a third step of stacking the liquid permeable topsheet on a top surface side of the absorbent body and forming the embossed portion.

The invention of claim 1 is a method of manufacturing an absorbent article in which an absorbent body is provided between a liquid permeable topsheet and a backsheet, an absorbent body concave portion, which is a concave groove or a slit, being formed at a skin-contacting side including a body fluid expelling area along a longitudinal direction of the absorbent body without using compression, and an embossed portion being formed in the absorbent body concave portion along the absorbent body concave portion by embossing from a top surface side of the liquid permeable topsheet.

The present invention mainly relates to a method of manufacturing an absorbent article used in incontinence pads, sanitary napkins, panty liners, medical pads, toiletries, disposal diapers and the like, and a method of manufacturing an absorbent article including an absorbent body having a concave groove formed at a top surface thereof along a longitudinal direction thereof.

IPC - International classification

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ES10843194T

JP2011549904
AU2010342024
DK10843194T
EP10843194
TW100101171
US13/521,491
CN201080061382
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AU2010342024
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TW201134505	A	2011-10-16	TW201134505
WO2011/086841	A1	2011-07-21	WO201186841
JPWO2011086841	A1	2011-07-21	JP2011086841W

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(ES2539727)
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2017-03-27

Title

(EP2524678)
Water-absorbable sheet structure

Abstract

(EP2524678)
A water-absorbent sheet structure comprises a structure in which an absorbent layer containing a water-absorbent resin and an adhesive is sandwiched with nonwoven fabrics from an upper side and a lower side of the absorbent layer, wherein the water-absorbent resin is contained in an amount of from 100 to 1,000 g/m 2 , and wherein the water-absorbent resin

has a water-retention capacity of saline solution of from 15 to 50 g/g, and wherein the water-absorbent sheet structure has a peeling strength of from 0.05 to 3.0 N/7 cm. The water-absorbent sheet structure of the present invention exhibits some effects that a water-absorbent sheet structure has excellent shape retaining ability even when the structure is thin, so that the water-absorbent sheet structure does not undergo deformation of the form before liquid absorption or after the absorption, and is capable of sufficiently exhibiting absorbent properties.

Current assignees

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Inventors

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UEDA KOJI

Advantages / Previous drawbacks

(EP2524678)

In order to avoid these disadvantages, it is preferable to use a water-absorbent resin having an appropriate average particle size and a fast water-absorption rate in a secondary absorbent layer.

In order to try to avoid such phenomena, a ratio of hydrophilic fibers and a water-absorbent resin would be limited, thereby posing limitations in the thinning of an absorbent article.

However, when distribution or diffusion of a liquid upon actually using in an absorbent article such as disposable diapers is considered, there is a disadvantage that if a large amount of the water-absorbent resin is formed into a soft gel-like state by absorption of the liquid, a so-called "gel-blocking phenomenon" takes place, whereby liquid diffusibility is markedly lowered and a liquid permeation rate of the absorbent material is slowed down.

When adhesive strength of an absorbent laminate is weakened in order to improve liquid absorbent properties of the abovementioned absorbent laminate, not only a large amount of the absorbent resin is detached upon working on the laminate, thereby making unfavorable economically, but also the laminate is exfoliated due to deficiency in adhesive strength, so that there are some possibilities of loss of commercial values.

Independent claims

(EP2524678)

1. A water-absorbent sheet structure comprising a structure in which an absorbent layer comprising a water-absorbent resin and an adhesive is sandwiched with nonwoven fabrics from an upper side and a lower side of the absorbent layer, wherein the water-absorbent resin is contained in an amount of from 100 to 1,000 g/m2, and wherein the water-absorbent resin has a water-retention capacity of saline solution of from 15 to 50 g/g, and wherein the water-absorbent sheet structure has a peeling strength of from 0.05 to 3.0 N/7 cm.

Object of invention

(EP2524678)

The present invention relates to a water-absorbent sheet structure which can be used in the fields of hygienic materials and the like.

More specifically, the present invention relates to a water-absorbent sheet structure which is thin and can be suitably used in absorbent articles, such as disposable diapers.

In addition, the present invention relates to an absorbent article such as disposable diapers using the water-absorbent sheet structure.

In view of the above, an object of the present invention is to provide a water-absorbent sheet structure which is capable of avoiding the gel blocking phenomenon even when the water-absorbent sheet structure contains a very small amount of pulps, so that the water-absorbent sheet structure has excellent fundamental properties (fast liquid permeation rate, sufficient water-retention capacity, small amount of liquid rewet, small liquid leakage, and shape retaining ability), and is capable of accomplishing thinning.

The present invention relates to a water-absorbent sheet structure which can be used in the fields of hygienic materials and the like.

IPC - International classification

A61F-013/49; A61F-013/49; A61F-013/53; A61F-013/53; A61F-013/534; A61F-013/534; A61F-013/537; A61L-015/22; B32B-005/26; B32B-005/28; B32B-007/12

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BR112018001106
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CN107847360	B	2019-07-30	CN107847360B
EP3326594	B1	2019-03-20	EP3326594
EA031628	B1	2019-01-31	EA--31628
BR112018001106	A2	2018-09-11	BR112018001106
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EA201800116	A1	2018-05-31	EA201800116
EP3326594	A1	2018-05-30	EP3326594
EP3326594	A4	2018-05-30	EP3326594
VN57215	A	2018-04-26	VN--57215
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2019-07-30

Title

(EP3326594)
Production apparatus for bifolded member for absorbent articles and production method

Abstract

(EP3326594)

A manufacturing apparatus of a two-folded member associated with an absorbent article, the manufacturing apparatus manufacturing two-folded members continuous in a continuous direction by folding at a folding portion a continuous member including a plurality of portions serving as absorbent articles aligned in the continuous direction so that the continuous member is folded in two in an intersecting direction, the folding portion being a predetermined portion in the intersecting direction intersecting with the continuous direction, the manufacturing apparatus including a guiding member configured to guide the folding portion in such a manner that the guiding member abuts against the continuous member to be folded from a valley side of the folding portion so as to restrict a movement of the folding portion in the intersecting direction while allowing a movement of the folding portion in the direction of conveyance, an endless movable guiding member as the guiding member being disposed, the endless movable guiding member moving downstream in the direction of conveyance while abutting against the continuous member from the valley side of the folding portion.

Current assignees

UNICHARM

Inventors

MAITANI MITSUO

HAMADA AKIRA

Advantages / Previous drawbacks

(EP3326594)

This can suppress the adhesive that possibly exudes from the continuous member when pressed from attaching to the outer peripheral surface of this endless belt, and as a result, the problems such as contaminations of the endless belt and attachment of the continuous member to this belt can be effectively prevented.

Accordingly, the problems such as a slack of the movable guiding member that possibly occurs when the length of each movable guiding member is long can be effectively prevented, and as a result, each movable guiding member can more certainly guide the folding portion of the continuous member.

That is, one of the plurality of the pulleys 86, 86 ... is a drive pulley 86D that obtains a rotation force from a driving source such as a servomotor (not illustrated) to be driven to rotate, and this causes the round belt 85 to be driven to go around.

Independent claims

(EP3326594)

1. A manufacturing apparatus of a two-folded member associated with an absorbent article, the manufacturing apparatus manufacturing two-folded members continuous in a continuous direction by folding at a folding portion a continuous member including a plurality of portions serving as absorbent articles aligned in the continuous direction so that the continuous member is folded in two in an intersecting direction, the folding portion being a predetermined portion in the intersecting direction intersecting with the continuous direction, the manufacturing apparatus comprising: a folding mechanism configured to fold the continuous member at the folding portion so as to place one end portion on another end portion of the continuous member in the intersecting direction, the continuous member being conveyed in the continuous direction as a direction of conveyance; a holding mechanism configured to hold the one end portion of the continuous member so that the one end portion is positioned at a proper position in the intersecting direction; a guiding member configured to guide the folding portion in such a manner that the guiding member abuts against the continuous member to be folded from a valley side of the folding portion so as to restrict a movement of the folding portion in the intersecting direction while allowing a movement of the folding portion in the direction of conveyance; and a position adjustment mechanism configured to adjust a position of the other end portion in such a manner that the position adjustment mechanism imparts an external force in the intersecting direction at a predetermined position in the direction of conveyance to the other end portion of the continuous member to be folded so as to position the other end portion at a target position in the intersecting direction, an endless movable guiding member as the guiding member being disposed at least at the predetermined position in the direction of conveyance to which the external force is imparted, the endless movable guiding member moving downstream in the direction of conveyance while abutting against the continuous member from the valley side of the folding portion.

11. A manufacturing method of a two-folded member associated with absorbent article, the manufacturing method manufacturing two-folded members continuous in a continuous direction by folding at a folding portion a continuous member including a plurality of portions serving as absorbent articles aligned in the continuous direction so that the

continuous member is folded in two in an intersecting direction, the folding portion being a predetermined portion in the intersecting direction intersecting with the continuous direction, the manufacturing method comprising: placing one end portion on another end portion of the continuous member in the intersecting direction by allowing a folding mechanism to fold the continuous member at the folding portion, the continuous member being conveyed in the continuous direction as a direction of conveyance; holding the one end portion of the continuous member by a holding mechanism so that the one end portion is positioned at a proper position in the intersecting direction; guiding the folding portion in such a manner that a guiding member abuts against the continuous member to be folded from a valley side of the folding portion so as to restrict a movement of the folding portion in the intersecting direction while allowing a movement of the folding portion in the direction of conveyance; and adjusting a position of the other end portion in such a manner that a position adjustment mechanism imparts an external force in the intersecting direction at a predetermined position in the direction of conveyance to the other end portion of the continuous member to be folded so as to position the other end portion at a target position in the intersecting direction, at least at the predetermined position in the direction of conveyance to which the external force is imparted, an endless movable guiding member as the guiding member moving downstream in the direction of conveyance while abutting against the continuous member from the valley side of the folding portion.

Object of invention

(EP3326594)

The present invention relates to a manufacturing apparatus of a two-folded member associated with an absorbent article such as a disposable diaper, and a method for manufacturing the two-folded member associated with the absorbent article. Further, another main aspect of the invention for achieving the above objective is a manufacturing method of a two-folded member associated with absorbent article, the manufacturing method manufacturing two-folded members continuous in a continuous direction by folding at a folding portion a continuous member including a plurality of portions serving as absorbent articles aligned in the continuous direction so that the continuous member is folded in two in an intersecting direction, the folding portion being a predetermined portion in the intersecting direction intersecting with the continuous direction, the manufacturing method including: placing one end portion on another end portion of the continuous member in the intersecting direction by allowing a folding mechanism to fold the continuous member at the folding portion, the continuous member being conveyed in the continuous direction as a direction of conveyance; holding the one end portion of the continuous member by a holding mechanism so that the one end portion is positioned at a proper position in the intersecting direction; guiding the folding portion in such a manner that a guiding member abuts against the continuous member to be folded from a valley side of the folding portion so as to restrict a movement of the folding portion in the intersecting direction while allowing a movement of the folding portion in the direction of conveyance; and adjusting a position of the other end portion in such a manner that a position adjustment mechanism imparts an external force in the intersecting direction at a predetermined position in the direction of conveyance to the other end portion of the continuous member to be folded so as to position the other end portion at a target position in the intersecting direction, at least at the predetermined position in the direction of conveyance to which the external force is imparted, an endless movable guiding member as the guiding member moving downstream in the direction of conveyance while abutting against the continuous member from the valley side of the folding portion.

The present invention relates to a manufacturing apparatus of a two-folded member associated with an absorbent article such as a disposable diaper, and a method for manufacturing the two-folded member associated with the absorbent article. An object of the present invention is to reduce increase in sliding resistance between a folding portion and a guiding member, the sliding resistance possibly occurring in accordance with an adjustment of a position of an end portion of a continuous member in the intersecting direction so that the end portion is positioned at a target position when the continuous member is folded in two in the intersecting direction.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/496; B65H-045/22

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CN100591311
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KR101164271	B1	2012-07-09	KR101164271
CN100591311	C	2010-02-24	CN100591311C
US7396349	B2	2008-07-08	US7396349
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CN101031272	A	2007-09-05	CN101031272
KR20070072508	A	2007-07-04	KR20070072508
EP1793784	A2	2007-06-13	EP1793784
TWI270366	B	2007-01-11	TWI270366
WO2006/104502	A3	2006-12-14	WO2006104502
WO2006/104502	A2	2006-10-05	WO2006104502
TW200614970	A	2006-05-16	TW200614970
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Title

(EP1793784)
Wrapped absorbent core

Abstract

(EP1793784)
In an absorbent structure for an absorbent article, a non-woven absorbent core extends from one longitudinal end region of the absorbent structure through a central region thereof to an opposite longitudinal end region of the absorbent structure. The absorbent core has a first face, a second face opposite the first face, and laterally opposite side edges. A liquid permeable wrapsheet is wrapped about the first face, the laterally opposite side edges and at least a portion of the second face of the absorbent core to define a wrapped configuration of the wrapsheet. The wrapsheet is constructed of a non-woven material and is secured in its wrapped configuration about the absorbent core at least one securement region having a length substantially less than the length of the absorbent structure.

Current assignees

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KIMBERLY CLARK WORLDWIDE

Inventors

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LANCASTER MARK SCOTT
VENTURINO MICHAEL BARTH

Advantages / Previous drawbacks

(EP1793784)
To accomplish this, absorbent articles must be thinner, softer and more conformable to the wearer's body than currently available products.

Independent claims

(EP1793784)

1. An absorbent structure (53) for an absorbent article, the absorbent structure (53) having longitudinal end regions (105,107) and a central region (109) extending longitudinally between and interconnecting the longitudinal end regions (105,107), said absorbent structure (53) comprising: a nonwoven absorbent core (91) extending from one longitudinal end region (105,107) of the absorbent structure (53) through the central region (109) thereof to the opposite longitudinal end region (107,105) of said absorbent structure (53), the absorbent core (91) having a first face (111), a second face (113) opposite the first face (111), and laterally opposite side edges (115); characterised by a liquid permeable wrapsheet (93) wrapped about said first face (111), said laterally opposite side edges (115) and at least a portion of said second face (113) of the absorbent core (91) to define a wrapped configuration of the wrapsheet (93), said wrapsheet (93) being constructed at least in part of a nonwoven material and being secured in its wrapped configuration about the absorbent core (91) at at least one securement region (121,123;131), said securement region having a length substantially less than the length of the absorbent structure (53); wherein the absorbent core (91) has a width that varies as the core (91) extends longitudinally from one longitudinal end (105,107) of the absorbent structure (53) to the opposite longitudinal end (107,105) of said absorbent structure (53), the wrapsheet (93) being wrapped about the first face (111) of the absorbent core (91), a first longitudinally extending portion of said wrapsheet (93) also being wrapped about the lateral side edges (115) of the absorbent core (91) and at least a portion of the second face (113) of the absorbent core (91), a second longitudinally extending portion of said wrapsheet (93) separate from said first portion of said wrapsheet (93) also being wrapped over upon itself free of any intervening absorbent structure (53) generally laterally outward of the lateral side edges (115) of the absorbent core (91).

Object of invention

(EP1793784)

The present invention relates generally to absorbent articles intended for personal wear, more particularly to an absorbent structure for a personal wear absorbent article used to take-in and retain body exudates released by a wearer of the article, and even more particularly to such an absorbent article in which the absorbent structure comprises an absorbent core that is wrapped by a liquid permeable wrapsheet to maintain the integrity of the absorbent core when wet and to inhibit migration of absorbent core materials.

In general, the present invention provides an absorbent structure, as set forth in claim 1.

In a particular aspect of the invention, the containment flaps 75 extend the entire length of the diaper 21 to better contain the body exudates.

In general, the present invention provides an absorbent structure, as set forth in claim 1.

The present invention relates generally to absorbent articles intended for personal wear, more particularly to an absorbent structure for a personal wear absorbent article used to take-in and retain body exudates released by a wearer of the article, and even more particularly to such an absorbent article in which the absorbent structure comprises an absorbent core that is wrapped by a liquid permeable wrapsheet to maintain the integrity of the absorbent core when wet and to inhibit migration of absorbent core materials.

IPC - International classification

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AT84305522T
EP84305522
MY8700289
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AU3190284
ES292532U
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HK99386
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BRPI8404038
MY8700289
NZ209139
AU565232
ES292532
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GB2145126
EP0137644
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Family publication details

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FI84018	B	1991-06-28	FI--84018
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IE55605	B1	1990-11-21	IE--55605
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1991-05-24
(FI--84018)
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(NO-169044)
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(MX-172130)
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Title

(EP-137644)
Corrugated web structure

Abstract

(EP0137644)
An absorbent product comprising a corrugated fibrous and superabsorbent in an amount of at least 10 percent by weight associated with the web. The corrugated web is stabilized to retain its transverse folds when wet.

Current assignees

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PERSONAL PRODUCTS

Inventors

HOLTMAN, DENNIS C.

Advantages / Previous drawbacks

(EP0137644)
It has been found that using a corrugated web as the provider of void volume to contain body fluids has many advantages.
Corrugating of the web provides the highly desirable resilience in the product that is required to initially accept and hold a high volume of fluid.
It is desirable to place a superabsorbent somewhat evenly throughout the fibrous web.
However, these containers have been substantially rigid, do not stay in place, and are quite uncomfortable.
A primary reason for this lack of acceptance of superabsorbents is failure to develop a product capable of economically utilizing the highly increased absorptive capacity of the superabsorbent material.
To date, none of these products has met with any substantial commercial success.

Independent claims

(EP0137644)
1. An absorbent product comprising a corrugated fibrous web containing at least 10% by weight of said web of superabsorbent, said corrugated web being stabilised to retain its transverse folds when wet.
10. An absorbent product comprising a first fibrous web layer and a second layer discrete from but united to said first layer, said second layer having a higher capillary pressure than said first layer to provide preferential attraction and wick ing of liquid in said second layer, said layers being transversely folded to provide a corrugated structure, said corrugated web being stabilised to retain its transverse folds when wet.

Object of invention

(EP0137644)

This patent discloses an absorbent dressing comprising an absorbent layer sandwiched between a permeable facing and an impermeable backing sheet.

The present invention provides a new and improved absorbent product which possesses a large storage capacity, which is soft and comfortable, which can be designed so as not to be apparent through normal clothing, and which, if desired, utilizes a substantial portion of the absorptive capacity of superabsorbent materials.

This patent discloses an absorbent dressing comprising an absorbent layer sandwiched between a permeable facing and an impermeable backing sheet.

The present invention provides a new and improved absorbent product which possesses a large storage capacity, which is soft and comfortable, which can be designed so as not to be apparent through normal clothing, and which, if desired, utilizes a substantial portion of the absorptive capacity of superabsorbent materials.

The present invention relates to new and improved corrugated web structures and in addition to new and improved absorbent corrugated web structures incorporating therein superabsorbent.

IPC - International classification

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Title

(WO2018118614)

Absorbent article with absorbent core

Abstract

(WO2018/118614)

An absorbent article includes a first waist region, a second waist region, and a crotch region disposed between the first and second waist regions; and a chassis comprising a topsheet, a backsheet and an absorbent core. The article also includes a waist feature joined to the chassis a waist region and having a portion extending longitudinally outboard of the chassis in said waist region. The backsheet has a barrier layer having a maximum length, LBS. The absorbent core has absorbent material and a maximum length, LCW, and wherein LCW is substantially the same as LBS. The absorbent material is

disposed in an absorbent material deposition area. The absorbent material deposition area has a maximum length, LAB, wherein LAB is about 90% or greater of LBS. The first absorbent area lateral edge is disposed a longitudinal distance, D1, from the first barrier lateral edge, wherein D1 is 5% or less of LBS.

Current assignees

PROCTER & GAMBLE

Inventors

ZINK RONALD

NISHIKAWA MASAHARU

LAVON GARY

Advantages / Previous drawbacks

(WO2018/118614)

In addition, there is a need for an article that has desirable absorbency while also providing comfort and/or fit.

This may provide for example better wearing comfort.

Among other benefits, it is believed that when at least a portion of the absorbent core is substantially cellulose free, this portion of the absorbent core is significantly thinner and more flexible than a similar absorbent core that includes more than 10% by weight of cellulosic fibers.

Therefore, there is a need for an article that efficiently utilizes the available space.

Likewise, article made according to the teachings herein may have reduced excess backsheet materials, such as barrier layer material; excess materials often indicate product failure, a lack of a secure fit to consumers, and/or may cause excess noise which can be undesirable for wearers, especially wearers of adult incontinence articles.

Independent claims

(WO2018/118614)

1. An absorbent article (10) comprising: a first waist region (14), a second waist region (18), and a crotch region (16) disposed between the first and second waist regions; a longitudinal centerline (100) and a lateral centerline (110); a chassis (20) comprising a topsheet (24), a backsheet (26) and an absorbent core (28) disposed between the topsheet and the backsheet; and a waist feature (32) joined to the chassis in the first and/or second waist region and a portion extending longitudinally outboard of the chassis in said first and/or second waist region to form a free portion (330); wherein: the backsheet comprises a barrier layer (262) having a maximum length, LBS, extending between a first barrier lateral edge (263) and a second barrier lateral edge (264); the absorbent core comprises absorbent material (280) enclosed in a core wrap (282) having a maximum length, Lew, and wherein Lew is substantially the same as LBS; and the absorbent material is disposed in an absorbent material deposition area (284), the absorbent material deposition area having a maximum length, LAB, extending between a first absorbent area lateral edge (294) and a second absorbent area lateral edge (295).

Object of invention

(WO2018/118614)

This invention relates to absorbent articles, in particular absorbent articles having absorbent cores.

This invention relates to absorbent articles, in particular absorbent articles having absorbent cores.

IPC - International classification

A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/495; A61F-013/496; A61F-013/496; A61F-013/512; A61F-013/534; A61F-013/64

Family 159/200 - FAMPAT - ©Questel

Earliest priority number

EP16167638

Application number

CN201780021542

WOUS2017/024890

US15/499,958

EP16167638

Publication numbers

CN108883020
WO2017/189151
US20170312146
EP3238677

Questel unique family ID (FAN)

77610817

Family publication details

CN108883020	A	2018-11-23	CN108883020
WO2017/189151	A1	2017-11-02	WO2017189151
US20170312146	A1	2017-11-02	US20170312146
EP3238677	A1	2017-11-01	EP3238677

Earliest priority date

2016-04-29

Application dates

2016-04-29
2017-03-30
2017-03-30
2017-04-28

Publication dates

2018-11-23
2017-11-02
2017-11-02
2017-11-01

Title

(EP3238677)
Absorbent core with profiled distribution of absorbent material

Abstract

(EP3238677)
An absorbent core (28) for absorbent articles (20) such as diapers. The core comprises a core wrap (16, 16') comprising a top side (288) and a bottom side (290), an absorbent material (60) between the top side and the bottom side, a first and second longitudinally-extending channel-forming areas (26a, b) disposed on opposite sides of the longitudinal axis (80) and substantially free of absorbent material preferably through which the top side of the core wrap is attached to the bottom side of the core wrap. The core has a central absorbent zone (62) between the first and the second channel-forming areas and a first and second lateral absorbent zones (61, 63) disposed laterally outwardly. The average basis weight of the absorbent material in the central absorbent zone is lower than the average basis weight of the absorbent material in the lateral absorbent zones.

Current assignees

PROCTER & GAMBLE

Inventors

BIANCHI ERNESTO GABRIEL
EHRNSPERGER BRUNO JOHANNES
ENDRES JOERG
GARCIA JULIEN RENÉ

Advantages / Previous drawbacks

(EP3238677)
Typically the absorbent material 60 of the core may be advantageously distributed in somewhat higher amount towards the front edge than towards the back edge as more absorbency is typically required towards the front half of the article.
If the absorbent core is made according to this process, it may further advantageously comprise a fibrous thermoplastic

adhesive 74, 74' to further immobilize the absorbent material.

These transversal sections S4, S4' are however advantageously not completely free of absorbent material so as not to compromise the absorbency of the core by creating routes for a fluid to escape towards the periphery of the core.

The sections of minimum basis weight forming the folding lines may be advantageously relatively narrow (for example having a length of from 5 mm to 30 mm, e.g. as represented in Fig. 6 of about 15 mm) and can serve as hinges for the absorbent core, especially when the core has swollen.

Independent claims

(EP3238677)

1. An absorbent core (28) extending in a longitudinal direction parallel to a longitudinal axis (80) and a transversal direction perpendicular to the longitudinal direction, wherein the absorbent core comprises: - a core wrap (16, 16') comprising a topside (288) and a bottom side (290); - an absorbent material (60) between the topside and the bottom side of the core wrap; - a first and second longitudinally-extending channel-forming areas (26a, b) substantially free of absorbent material through which the topside of the core wrap is attached to the bottom side of the core wrap, and wherein the first channel-forming area (26a) is disposed on one side of the longitudinal axis and the second channel-forming area (26b) on the other side of the longitudinal axis; - a central absorbent zone (62) disposed between the first and the second channel-forming areas and comprising an absorbent material at an average central zone basis weight; and - a first lateral absorbent zone (61) and a second lateral absorbent zone (63) respectively disposed laterally outwardly of the first channel-forming area (26a) and the second channel-forming area (26b) and comprising an absorbent material at an average lateral zones basis weight; characterized in that: the average lateral zones basis weight is at least 25% higher than the average central zone basis weight.

Object of invention

(EP3238677)

The present invention addresses all these problems.

The invention is directed to an improved absorbent core and absorbent article containing this absorbent core, as indicated in the claims.

In a first aspect, the absorbent core comprises: a core wrap having a topside and a bottom side; an absorbent material between the topside and bottom side of the core wrap; a first and second longitudinally-extending channel-forming areas substantially free of absorbent material, preferably through which the topside of the core wrap is attached to the bottom side of the core wrap, and wherein the first channel-forming area is disposed on one side of the longitudinal axis and the second channel-forming area on the other side of the longitudinal axis; a central absorbent zone disposed between the first and the second channel-forming areas and comprising an absorbent material at an average central zone basis weight; and a first lateral absorbent zone and a second lateral absorbent zone disposed laterally outwardly of the first and second channel-forming areas respectively and comprising an absorbent material at an average lateral zones basis weight.

The present invention addresses all these problems.

The invention relates to absorbent cores for use in absorbent articles such as, but not limited to, baby diapers, training pants, feminine pads or adult incontinence products.

IPC - International classification

A61F-013/15; A61F-013/45; A61F-013/49; A61F-013/53; A61F-013/532; A61F-013/534; A61F-013/534; A61F-013/539

Family 160/200 - FAMPAT - ©Questel

Earliest priority number

JP2014039997

Application number

JP2014039997

TH20161004904

CN201580008713

WOJP2015/052149

Publication numbers

JP6359292

TH160957
CN106029025
JP2015164476
WO2015/129367

Questel unique family ID (FAN)

70756138

Family publication details

JP6359292	B2	2018-07-18	JP6359292
TH160957	A	2017-03-23	TH-160957
CN106029025	A	2016-10-12	CN106029025
JP2015164476	A	2015-09-17	JP2015164476
WO2015/129367	A1	2015-09-03	WO2015129367

Earliest priority date

2014-02-28

Application dates

2014-02-28
2015-01-27
2015-01-27
2015-01-27

Publication dates

2018-07-18
2017-03-23
2016-10-12
2015-09-17
2015-09-03

Grant dates

(JP6359292)
2018-07-18

Title

(WO2015129367)
Production method for absorbent body

Abstract

(WO2015/129367)
A method for producing an absorbent body (4) having slits (43, 45) as a result of having an absorbent body precursor (4a) being conveyed in a direction (R) and cuts being inserted in the thickness direction. The method has a step in which the absorbent body precursor (4a) is pressed between a cutter roll (61) having cutting blades (63, 64) on the peripheral surface thereof and an anvil roll (62), and slits (43, 45) are formed. A compressed section that sometimes forms around the slits is made flexible by winding and deforming the absorbent body precursor (4') having the slits (43, 45) formed therein on to a winding section (71) of a bending means (70).

Current assignees

KAO

Inventors

OKU SHOGO
MATSUNAGA RYUJI
NAKANO YASUHIRO
ISHIKAWA TAKEHIRO

Advantages / Previous drawbacks

(WO2015/129367)

Incidentally, the first roll of the second 71-73 3 is 1 -, the servo motor itself (not shown) a driving means such as a driving roller may be, does not have a free roll drive may be used.

Is an object of the present invention therefore, has the disadvantage that the conventional technology described above to solve for the manufacturing method and manufacturing device of the absorbent body.

Independent claims

(WO2015/129367)

Absorber precursor in a single direction while carrying the object, the absorber toward the thickness direction of the precursor into a cut, a slit having a method to produce an absorption body, the cutting blade and the cutter roll having a circumferential surface, to receive the cutting blade of the cutter roll and anvil roll for compressing the absorber precursor, the cutting blade in the thickness direction of the absorber precursor along the absorber precursor by propylethylamine, wherein the absorber precursor having a compressing portion around the slit forming step of forming the slit, the slit is formed in the absorbent body precursors, and wound around the winding portion of the bending means so as to deform the flexible portion to said flexible ADD_S orthelike step, the manufacturing method of the absorber.

Object of invention

(WO2015/129367)

Which is an object of the present invention is of such an absorbent body is not limited to, other forms, for example the product of pulp fibers and the water-absorbing polymer may be a deposited body of the fiber.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/53; A61F-013/535

Family 161/200 - FAMPAT - ©Questel

Earliest priority number

JP2004275066

Application number

EP12184207
EP05785211
JP2004275066
CN200580031917
US11/663,504
WOJP2005/017382

Publication numbers

EP2540271
EP1795163
EP1795163
JP4458996
CN100563611
US20080249493
CN101027025
EP1795163
JP2006087568
WO2006/033350

Questel unique family ID (FAN)

6394292

Family publication details

EP2540271	A1	2013-01-02	EP2540271
EP1795163	B1	2012-11-14	EP1795163
EP1795163	A4	2011-09-07	EP1795163
JP4458996	B2	2010-02-19	JP4458996
CN100563611	C	2009-12-02	CN100563611C

US20080249493	A1	2008-10-09	US20080249493
CN101027025	A	2007-08-29	CN101027025
EP1795163	A1	2007-06-13	EP1795163
JP2006087568	A	2006-04-06	JP2006087568
WO2006/033350	A1	2006-03-30	WO200633350

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2004-09-22

Application dates

2004-09-22
2005-09-21
2005-09-21
2005-09-21
2005-09-21
2005-09-21

Publication dates

2013-01-02
2012-11-14
2011-09-07
2010-02-19
2009-12-02
2008-10-09
2007-08-29
2007-06-13
2006-04-06
2006-03-30

Grant dates

(EP1795163)
2012-11-14
(JP4458996)
2010-02-19
(CN100563611C)
2009-12-02

Title

(EP2540271)
Absorbent article

Abstract

(EP2540271)

An absorbent article 10 having an absorbent body 17 including a liquid permeable topsheet 15, a liquid impermeable leak-preventive sheet, and a liquid retentive absorbent member 16 and an exterior material 14 including a rear portion B, a front portion A, and a crotch portion C. The absorbent article 10 has both side edge portions 18b of the rear portion B and both side edge portions 18a of the front portion A joined via respective mechanical fasteners 13 to take on the shape of pants. The male member 19 is attached to the inner side of the side edge portion 18b of the rear portions B. The female member 20 is a strip-shaped sheet attached by its outer edge portion 20a to the inner side of the side edge portion 18a of the front portion A, with the portion inward of the outer edge portion 20a left free as a flap 20b. The male member 19 engages the flap 20b of the female member 20 to join each side edge portion 18b of the rear portion B and each side edge portion 18a of the front portion A.

Current assignees

KAO

Inventors

KOBAYASHI KENJI

ANDO KENJI

YANASHIMA TAKUO

ENDO MASANORI

Advantages / Previous drawbacks

(EP2540271)

The female member 20 of the mechanical fastener 13 is required from a functional aspect to show necessary engagement strength against the male member 19 while the absorbent articles are shipped as final products and to maintain the engagement strength till the end of use.

However, the operation of making the inner side of the side edge portion 73b face the outer side of the other side edge portion 73a is a complex process in the continuous production of absorbent articles.

Independent claims

(EP2540271)

1. An absorbent article comprising a liquid permeable topsheet, a liquid impermeable leak-preventive backsheet, a liquid retentive absorbent member intermediate between the topsheet and the backsheet, and an exterior material extending laterally outward of both rear and front portions of the absorbent member, the absorbent article having a side edge portion of the rear portion thereof and a side edge portion of the front portion thereof joined to each other via a mechanical fastener comprising a male member and a female member to take on the shape of a pair of pants, the side edge portion of one of the rear portion and the front portion having a male member base sheet adhered to the inner side thereof, the male member base sheet being adhered on the reverse side of its outer edge portion, with the portion of the male member base sheet inward of the outer edge portion being left free as a flap, the male member being disposed on the surface of the flap, the female member being provided on the inner side of the side edge portion of the other of the rear portion and the front portion, and the male member engaging the female member to join the side edge portion of the rear portion and the side edge portion of the front portion with each other, the absorbent article further comprising waist elastic members and below-waist elastic members, the waist elastic members and below-waist elastic members having no contracting function in the site where the male member is attached and/or the site where the female member is provided.

Object of invention

(EP2540271)

The present invention provides an absorbent article having a liquid permeable topsheet, a liquid impermeable leak-preventive sheet, a liquid retentive absorbent member intermediate between the sheets, and an exterior material extending laterally outward of both rear and front portions of the absorbent member.

The present invention relates to an absorbent article and a method of producing the absorbent article.

The present invention also provides a method of producing the above-described absorbent article.

The present invention provides an absorbent article having a liquid permeable topsheet, a liquid impermeable leak-preventive sheet, a liquid retentive absorbent member intermediate between the sheets, and an exterior material extending laterally outward of both rear and front portions of the absorbent member.

The present invention relates to an absorbent article and a method of producing the absorbent article.

IPC - International classification

A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/51; A61F-013/56; A61F-013/62; B23P-011/00; B26D-007/27

Family 162/200 - FAMPAT - ©Questel

Earliest priority number

WOSE2014/051275

Application number

PL14905008T

EP14905008

MX2017005443

RU2017118333
US15/515,455
BR112017006579
JP2017523407
CN201480082996
AU2014410322
TW104133250
WOSE2014/051275

Publication numbers

PL3212143
EP3212143
MX358622
RU2660049
US9956124
EP3212143
BR112017006579
JP2017536877
EP3212143
CN107072844
US20170216105
MX2017005443
AU2014410322
BR112017006579
AU2014410322
TW201627159
WO2016/068764

Questel unique family ID (FAN)

72824021

Family publication details

PL3212143	T3	2019-04-30	PL3212143
EP3212143	B1	2018-12-19	EP3212143
MX358622	B	2018-08-28	MX-358622
RU2660049	C1	2018-07-04	RU2660049
US9956124	B2	2018-05-01	US9956124
EP3212143	A4	2018-04-11	EP3212143
BR112017006579	A2	2018-01-16	BR112017006579
JP2017536877	A	2017-12-14	JP2017536877
EP3212143	A1	2017-09-06	EP3212143
CN107072844	A	2017-08-18	CN107072844
US20170216105	A1	2017-08-03	US20170216105
MX2017005443	A	2017-06-29	MX2017005443
AU2014410322	B2	2017-04-13	AU2014410322
BR112017006579	A1	2017-04-11	BR112017006579
AU2014410322	A1	2017-03-02	AU2014410322
TW201627159	A	2016-08-01	TW201627159
WO2016/068764	A1	2016-05-06	WO201668764

Earliest priority date

2014-10-29

Application dates

2014-10-29
2014-10-29
2014-10-29
2014-10-29
2014-10-29
2014-10-29
2014-10-29
2014-10-29
2014-10-29
2014-10-29
2015-10-08

Publication dates

2019-04-30
2018-12-19
2018-08-28
2018-07-04
2018-05-01
2018-04-11
2018-01-16
2017-12-14
2017-09-06
2017-08-18
2017-08-03
2017-06-29
2017-04-13
2017-04-11
2017-03-02
2016-08-01
2016-05-06

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(US9956124)
2018-05-01
(RU2660049)
2018-07-04
(AU2014410322)
2017-04-13
(MX-358622)
2018-08-28
(PL3212143)
2019-04-30

Title

(EP3212143)
A pant-type absorbent article comprising an elastic laminate

Abstract

(EP3212143)
The invention refers to a pant-type absorbent article such as a pant diaper, a sanitary pant or incontinence pant comprising

a front portion (5) and a back portion (6) joined to each other along longitudinally extending side seams (13, 14) and further comprising a connecting portion (19) between the front and back portions. The connecting portion (19) forms a crotch region (19a) and leg openings (16, 17). At least part of the front portion, back portion and the connecting portion is composed of an elastic laminate extending transversely across the width of the front, back and connecting portions. Elongated leg elastic members (27-30, 39, 40) extend along the leg openings in at least part of the connecting portion (19) and terminate at a distance from the respective side seam (13, 14) thus leaving an area corresponding to a peripheral length (p) of at least 50 mm along the respective leg opening where the leg elastic members are absent and wherein the connecting portion (19) in said area where the leg elastic members are absent is composed of said elastic laminate in at least 90% of said peripheral length (p).

Current assignees

ESSITY HYGIENE & HEALTH

ESSITY HYGIENE & HEALTH AKTIEBOLAG

SCA HYGIENE PRODUCTS

Inventors

BÄCK LUCAS

LINDLÖF STINA

NILSSON LENNART

Advantages / Previous drawbacks

(EP3212143)

It is advantageous that the outer fibrous layers are chosen so that they, in combination with the inner elastic film layer, give the material high resistance to puncture.

It is further desirable that the articles are capable of being pulled up and down over the hips of the wearer to allow the wearer or caregiver to easily put on and remove the article when it has been soiled.

A mixture of polyethylene and polypropylene polymers has proved to provide good results in this respect.

Independent claims

(EP3212143)

1. A pant type absorbent article such as a pant diaper, a sanitary pant or incontinence pant, said article having a longitudinal (y) and a transverse direction (x) and comprises a chassis comprising a front portion (5) having a front transverse end edge (7) and first and second longitudinal side edges (8, 9), a back portion (6) having a back transverse end edge (10) and first and second longitudinal side edges (11, 12), wherein the front and back portions are joined to each other along their respective first and second longitudinal side edges to form side seams (13, 14) and define a waist opening (15), said chassis further comprising a connecting portion (19) between said front and back portion (5, 6) forming a crotch region (19a) and first and second leg openings (16, 17), said article further comprising an absorbent core (2) located at least in the connecting portion (19) of the article, said absorbent core being arranged between a backsheet (25) and a topsheet (26), wherein at least part of said front portion (5), said back portion (6) and said connecting portion (19) are composed of an elastic laminate (20), said elastic laminate (20) comprising first and second layers of fibrous material (21, 22; 36, 38) and an elastic film layer (23; 37) located there between, said elastic laminate (20) extends transversely across the width of the front portion (5) between the first and second longitudinal side edges (8, 9), transversely across the width of the back portion (6) between the first and second side edges (11, 12) and transversely across the width of the connecting portion (19) between the first and second leg openings (16, 17) and wherein elongated leg elastic members (27-30; 39,40) extend along the first and second leg openings (16, 17) in at least part of the connecting portion (19), charact erized in that said elongated leg elastic members (27-30; 39,40) terminate at a distance from the respective sideseam (13, 14) in both front and back portions (5, 6), thus leaving an area (31, 32) corresponding to a peripheral length (p) of at least 50 mm along the respective leg opening (16, 17) where the leg elastic members (27-30; 39,40) are absent and wherein the connecting portion (19) in said area (31, 32) where the leg elastic members are absent is composed of said elastic laminate (20) in at least 80% of said peripheral length (p).

Object of invention

(EP3212143)

The present invention refers to a pant-type absorbent article such as a pant diaper, a sanitary pant or incontinence pant.

One object of the invention is to provide a pant-type absorbent article of the kind referred to above, which is discrete to wear and fits snugly in the leg opening area providing security against leakage.

The invention mainly refers to disposable absorbent articles, which means articles that are not intended to be laundered or otherwise restored or reused as an absorbent article after use.

The invention refers to pant-type absorbent articles such as a pant diapers, sanitary pants and incontinence pants and especially pant-type absorbent articles intended for adult wearers.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/476; A61F-013/49; A61F-013/494; A61F-013/496; A61F-013/496; A61F-013/51; A61F-013/514; B32B-027/12

Family 163/200 - FAMPAT - ©Questel

Earliest priority number

US61/904,670P

Application number

MX2016006182
CN201480062098
US14/713,253
WOUS2014/065684
US14/541,718

Publication numbers

MX2016006182
CN105744920
US20150245952
WO2015/073812
US20150141947

Questel unique family ID (FAN)

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Family publication details

MX2016006182	A	2016-08-19	MX2016006182
CN105744920	A	2016-07-06	CN105744920
US20150245952	A1	2015-09-03	US20150245952
WO2015/073812	A1	2015-05-21	WO201573812
US20150141947	A1	2015-05-21	US20150141947

Earliest priority date

2013-11-15

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2014-11-14
2014-11-14
2014-11-14
2014-11-14
2015-05-15

Publication dates

2016-08-19
2016-07-06
2015-09-03
2015-05-21
2015-05-21

Title

(WO201573812)

Folded core absorbent article and related method

Abstract

(WO2015/073812)

A liquid absorbent article includes an absorbent core including a liquid absorbent member and a unitary liquid distribution sheet disposed against a surface of the liquid absorbent member. The liquid absorbent member includes a first absorbent layer surface, a second absorbent layer surface, a third absorbent layer surface in contact with the second absorbent layer surface, and a fourth absorbent layer surface. The unitary liquid distribution sheet includes a first distribution layer surface in contact with the first absorbent layer surface of the liquid absorbent member and a second distribution layer surface in contact with the fourth absorbent layer surface of the liquid absorbent member.

Current assignees

COVIDIEN

Inventors

GAHAN RICHARD

Independent claims

(WO2015/073812)

CLAIMS 1. A liquid absorbent article (100) comprising an absorbent core (114) comprising a liquid absorbent member (118) and a unitary liquid distribution sheet (120) disposed against a surface of the liquid absorbent member, wherein the absorbent core has an inner section (126) comprised of a first portion of the unitary liquid distribution sheet having a first distribution layer surface (120a), a first portion of the unitary absorbent member having a first absorbent layer surface (118a) in contact with the first distribution layer surface and a second absorbent layer surface (118b), a second portion of the unitary absorbent member having a third absorbent layer surface (118c) in contact with the second absorbent layer surface, and a fourth absorbent layer surface (118d) in contact with a second distribution layer surface (120b).

7. A disposable article having a waist opening and a pair of leg openings, comprising a chassis with a front portion (102), a back portion (104), and a crotch portion (106) between the back portion and the front portion, and a liquid absorbent core (114) at least partially disposed in the crotch portion, and comprising a unitary liquid distribution sheet (120) on a unitary absorbent member (118), the liquid absorbent core having an unfolded section (C) and a first folded section (A) comprising a first portion of the unitary absorbent member and a first portion of the unitary liquid distribution sheet, wherein the first folded section is disposed on at least a portion of the unfolded section

12. A method of fabricating an absorbent article (100) comprising: providing a liquid absorbent member (118) including a layer of superabsorbent particles; disposing a liquid distribution sheet (120) on the liquid absorbent member to produce a laminate (130); creating a first partial cut (132) from a first edge (134) toward a central portion (136) of the laminate; creating a second partial cut (138) from the first edge of the laminate to form a first laminate flap (A); creating a third partial cut (140) from a second edge (142) toward the central portion of the laminate; creating a fourth partial cut (144) from the second edge of the laminate to form a second laminate flap (B); and folding the first laminate flap and the second laminate flap onto the central portion of the laminate to produce an absorbent core (114) of the absorbent article.

Object of invention

(WO2015/073812)

[0001] The present disclosure generally pertains to absorbent articles such as incontinence care articles, and in particular embodiments, relates to adult briefs, diapers, training pants and youth pants having a fluff-free absorbent core with an integrated liquid acquisition distribution layer wrapped around a central portion thereof as well as related methods thereto.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/515; A61F-013/532; A61F-013/534; A61F-013/534

Family 164/200 - FAMPAT - ©Questel

Earliest priority number

JP2012077889

Application number

EA201491236

MYPI2014002001

TH20141004055
AU2013241347
TW102109859
EP13768188
IN6484/CHENP/2014
US14/385,438
CN201380003512
VN2014002858
KR20147030094
JP2013047366
WOJP2013/058915

Publication numbers

EA029603
MY165220
TH56141
AU2013241347
TWI573580
EP2832327
IN6484/CHENP/2014
US9375363
TH147369
EP2832327
EA201491236
EP2832327
US20150032072
CN103889380
VN40371
KR20140140106
AU2013241347
CN103889380
TW201400100
JP2013226392
WO2013/146839
JP5303689

Questel unique family ID (FAN)

46166294

Family publication details

EA029603	B1	2018-04-30	EA--29603
MY165220	A	2018-03-09	MY-165220
TH56141	B	2017-07-21	TH--56141B
AU2013241347	B2	2017-04-06	AU2013241347
TWI573580	B	2017-03-11	TWI573580
EP2832327	B1	2016-12-28	EP2832327
IN6484/CHENP/2014	A	2016-07-01	IN2014CN06484
US9375363	B2	2016-06-28	US9375363
TH147369	A	2016-03-04	TH-147369
EP2832327	A4	2015-11-11	EP2832327
EA201491236	A1	2015-05-29	EA201491236

EP2832327	A1	2015-02-04	EP2832327
US20150032072	A1	2015-01-29	US20150032072
CN103889380	B	2015-01-28	CN103889380B
VN40371	A	2014-12-25	VN--40371
KR20140140106	A	2014-12-08	KR20140140106
AU2013241347	A1	2014-07-31	AU2013241347
CN103889380	A	2014-06-25	CN103889380
TW201400100	A	2014-01-01	TW201400100
JP2013226392	A	2013-11-07	JP2013226392
WO2013/146839	A1	2013-10-03	WO2013146839
JP5303689	B1	2013-06-28	JP5303689

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2012-03-29

Application dates

2013-03-08
2013-03-20
2013-03-27
2013-03-27
2013-03-27
2013-03-27
2013-03-27
2013-03-27
2013-03-27
2013-03-27
2013-03-27
2014-08-26
2014-08-28

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2017-04-06
2017-03-11
2016-12-28
2016-07-01
2016-06-28
2016-03-04
2015-11-11
2015-05-29
2015-02-04
2015-01-29
2015-01-28
2014-12-25
2014-12-08
2014-07-31
2014-06-25
2014-01-01
2013-11-07

2013-10-03

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2016-12-28

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(CN103889380B)

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(TWI573580)

2017-03-11

(AU2013241347)

2017-04-06

(TH--56141B)

2017-07-21

(MY-165220)

2018-03-09

(EA--29603)

2018-04-30

Title

(EP2832327)

Disposable undergarment

Abstract

(EP2832327)

A disposable wearing article adapted to prevent the buttocks from being exposed externally during use of the article and to ensure a desired fit of the leg-openings' peripheries to the wearer's body so as to prevent leakage of body exudates. A disposable wearing article including an annular elastic waist panel composed of a front waist panel and a rear waist panel joined to each other and a crotch panel provided with an absorbent structure and connected to the elastic waist panels wherein respective inner end edges of the front and rear waist panels cooperate with lateral edges of the crotch panel extending in a longitudinal direction to form a pair of leg-openings' peripheries, wherein the crotch panel includes a pair of leg sheets connected to both lateral edges of the absorbent structure wherein the respective leg sheets include inner regions adj oining to the absorbent structure and outer regions adjoining the inner regions so that the inner regions rise above the absorbent structure along both lateral edges of the absorbent structure to define the leg-openings' peripheries and the outer regions are bent outwardly in the transverse direction so as to define the leg-openings' peripheries.

Current assignees

UNICHARM

Inventors

HASHIMOTO TATSUYA

OTSUBO TOSHIFUMI

OKUBO TETSUO

Advantages / Previous drawbacks

(EP2832327)

The elongation ratio of the leg elastics kept at a relatively low level in this manner advantageously prevents the elastic region 57b from rising up (upwardly from the crotch region 16 toward the front and rear waist regions 14, 15).

In consequence, it is difficult for this pull-on wearing article to cover the wearer's buttocks so as to prevent body exudates from leaking out.

In addition, while it is possible for the rear belt segment to cover the wearer's buttocks, it is difficult to prevent exposure of

the buttocks perfectly and reliably.

If this ratio is lower than about 10%, the fourth elastics 34 do not intersect with the leg elastics 50 at all, it will be impossible to form a virtual elastic belt sufficiently pressed against the wearer's thighs to prevent leakage of body exudates and, in consequence, body exudates might leak out.

If the dimension of the respective inelastic regions 57a is less than 10mm, the contraction of the inner leg elastics 50A will be difficult due to the stiffness of the absorbent structure 11 and it will be difficult for the inelastic regions 57a to rise above the absorbent structure 11.

is difficult for this pull-on wearing article to cover the wearer's buttocks so as to prevent body exudates from leaking out.

Independent claims

(EP2832327)

1. A disposable wearing article having a longitudinal direction and a transverse direction, including: a front waist region; a rear waist region; a crotch region extending between the front and rear waist regions; an annular elastic waist panel including a front waist panel and a rear waist panel joined to each other so as to define the front and rear waist region; a crotch panel joined to the elastic waist panel so as to define the crotch region; an absorbent structure joined to the front and rear waist panels and the crotch panel; and a pair of leg-openings' peripheries lying on both sides in the transverse direction of the crotch region, wherein, in a state that the wearing article is opened out in a flat state after the front and rear waist panels have been disjoined from each other, the front and rear waist panels have inner end edges and outer end edges respectively spaced apart from and opposed to each other in the longitudinal direction and extending in the transverse direction, the inner end edges of the front and rear waist panels lie closer to the crotch region than the outer end edges of the front and rear waist panels, and the inner end edges of the front and rear waist panels cooperate with lateral edges of the crotch panel extending in the longitudinal direction to define the pair of leg-openings' peripheries, wherein: the crotch panel has a pair of leg sheets extending in the longitudinal direction along the lateral edges of the absorbent structure; the pair of the leg sheets respectively have inner regions adjoining to the absorbent structure and extending in the longitudinal direction and outer regions on the opposite sides to the inner regions and extending in the longitudinal direction; in a state that the front and rear waist panels are joined to each other, the inner regions rise above the absorbent structure along the lateral edges of the absorbent structure in a thickness direction of the absorbent structure, and the outer regions are bent outwardly in the transverse direction so as to define the leg-openings' peripheries.

Object of invention

(EP2832327)

An object of the present invention is to provide a disposable wearing article adapted to prevent the buttocks from being exposed externally during use of the article and to ensure a desired fit of the leg-openings' peripheries to the wearer's body to prevent leakage of body exudates.

The present invention relates to disposable wearing articles and, more specifically, to disposable wearing articles such as pant-type disposable diapers, disposable toilet-training pants and disposable incontinent pants each provided with waist elastics.

The present invention relates to disposable wearing articles and, more specifically, to disposable wearing articles such as pant-type disposable diapers, disposable toilet-training pants and disposable incontinent pants each provided with waist elastics.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/496; A61F-013/496

Family 165/200 - FAMPAT - ©Questel

Earliest priority number

US61/061,140P

Application number

BRPI0914962

CN200980122201

JP2011513581

CA2727424

EP09763311
MX2010013787
WOUS2009/046205

Publication numbers

BRPI0914962
CN102065815
JP5442724
CA2727424
EP2285331
JP2011523887
CN102065815
EP2285331
MX2010013787
WO2009/152020
CA2727424

Questel unique family ID (FAN)

4177156

Family publication details

BRPI0914962	A2	2015-10-20	BR200914962	
CN102065815	B	2015-07-15	CN102065815B	
JP5442724	B2	2013-12-27	JP5442724	
CA2727424	C	2013-11-12	CA2727424	
EP2285331	B1	2012-09-05	EP2285331	
JP2011523887	A	2011-08-25	JP2011523887	
CN102065815	A	2011-05-18	CN102065815	
EP2285331	A1	2011-02-23	EP2285331	
MX2010013787	A	2010-12-21	MX2010013787	
WO2009/152020	A1	2009-12-17	WO2009152020	
CA2727424	A1	2009-12-17	CA2727424	

Earliest priority date

2008-06-13

Application dates

2009-06-04
2009-06-04
2009-06-04
2009-06-04
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2009-06-04
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Publication dates

2015-10-20
2015-07-15
2013-12-27
2013-11-12
2012-09-05
2011-08-25
2011-05-18
2011-02-23

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2009-12-17

2009-12-17

Grant dates

(EP2285331)

2012-09-05

(JP5442724)

2013-12-27

(CA2727424)

2013-11-12

(CN102065815B)

2015-07-15

Title

(EP2285331)

Disposable absorbent article with elastically contractible cuffs for better containment of liquid exudates

Abstract

(EP2285331)

A disposable absorbent article includes an absorbent core, a liquid permeable topsheet, a liquid impermeable backsheet, and a pair of elastically contractible cuffs, each of which is constructed of a continuous cuff material and has a standing cuff portion which includes one or more elastic members. Each elastically contractible cuff to secured the topsheet about a longitudinal edge of the topsheet by an assembly bond, with a standing cuff portion laterally offset away from a longitudinal edge of the absorbent core and with one or more elastic members located outboard of the assembly bond.

Current assignees

PROCTER & GAMBLE

Inventors

ASHTON GREGORY

NISHIKAWA MASAHARU

Advantages / Previous drawbacks

(EP2285331)

Accordingly, it would be desirable to increase the liquid volume holding capacity of the absorbent article to retain the free liquid exudate before and during absorption by the absorbent core.

In addition, it would be desirable to maintain or enhance the liquid volume holding capacity of a thin, flexible absorbent article with minimum bulk and/or a narrow crotch for improved comfort.

The combination of a core substantially cellulose free and an outboard cuff advantageously may provide the disposable absorbent article with improved softness, flexibility, and conformity to a wearer's body for greater comfort without increasing the likelihood of leakage from the disposable absorbent article.

By having a standing cuff portion laterally offset away from the longitudinal edge of the absorbent core, the Effective Cuff Height advantageously may be increased without increasing the height of the standing cuff portion.

In one embodiment, the continuous cuff material 34 may be constructed of a lesser-water-permeable material (e.g., a spun bound material which is inexpensive) with a more-water-permeable material (e.g., melt blown material which is more expensive) placed inside said lesser-water-permeable material.

One common mode of failure for such absorbent article products occurs when body exudates leak out of product through gaps between the article and the wearer's torso or legs when the liquid exudate is not immediately absorbed within the article.

Independent claims

(EP2285331)

1. A disposable absorbent article (10) comprising: an absorbent core (24) having a garment surface and an opposed body surface, which surfaces most along a pair of longitudinal edges (25) and a pair of end edges; a liquid permeable topsheet (12) positioned adjacent the body surface of the absorbent core and having a pair of opposed longitudinal edges (13); a

liquid impermeable backsheet (28) positioned adjacent the garment surface of the absorbent core (24); and a pair of elastically contractible cuffs (14), each of which is constructed of a continuous cuff material (34) and has a standing cuff portion (17) which comprises one or more elastic members (36, 38, 42 and 44), wherein each elastically contractible cuff (14) is secured about one of said longitudinal edges (13) of the topsheet (12) by an assembly bond (32), with the standing cuff portion (17) being laterally offset away from the longitudinal edge (25) of the absorbent core (24) and with the one or more elastic members being located outboard of the assembly bond (32), and each cuff including one or more cuff folds and a cuff fold bond (46) and a cuff end bond (40).

Object of invention

(EP2285331)

The present invention addresses one or more of the foregoing technical problems and provides a disposable absorbent article which comprises an absorbent core having a garment surface and an opposed body surface, which surfaces meet along a pair of longitudinal edges and a pair of end edges; a liquid permeable topsheet positioned adjacent the body surface of the absorbent core and having a pair of opposed longitudinal edges; a liquid impermeable backsheet positioned adjacent the garment surface of the absorbent core; and a pair of elastically contractible cuffs, each of which is constructed of a continuous cuff material and has a standing cuff portion which comprises one or more elastic members, wherein each elastically contractible cuff is secured about one of the longitudinal edges of the topsheet by an assembly bond, with the standing cuff portion being laterally offset away from the longitudinal edge of the absorbent core and with the one or more elastic members being located outboard of the assembly bond.

The present invention generally relates to an absorbent article, and more particularly to a disposable absorbent garment, such as a taped diaper or training pant.

It has been found that, for most absorbent articles such as diapers, the liquid discharge occurs predominately in the front half of the diaper.

The present invention generally relates to an absorbent article, and more particularly to a disposable absorbent garment, such as a taped diaper or training pant.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/494; A61F-013/494

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Earliest priority number

JP2014065255

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US15/128,553
EP14887206
JP2014065255
WOJP2014/077494

Publication numbers

US10064760
US20180168886
EP3123990
EP3123990
EP3123990
JP2015186549
WO2015/145839
JP5760111

Questel unique family ID (FAN)

70543598

Family publication details

US10064760	B2	2018-09-04	US10064760
US20180168886	A1	2018-06-21	US20180168886

EP3123990	B1	2018-04-04	EP3123990
EP3123990	A4	2017-03-22	EP3123990
EP3123990	A1	2017-02-01	EP3123990
JP2015186549	A	2015-10-29	JP2015186549
WO2015/145839	A1	2015-10-01	WO2015145839
JP5760111	B1	2015-06-12	JP5760111

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2017-02-01
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2015-10-01
2015-06-12

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2018-04-04
(US10064760)
2018-09-04
(JP2015186549)
2015-06-12

Title

(EP3123990)
Manufacturing apparatus and manufacturing method for manufacturing absorbent article

Abstract

(EP3123990)
A manufacturing apparatus for manufacturing an absorbent article, the manufacturing apparatus including: an upstream transport mechanism and a downstream transport mechanism that transports a stretchable sheet-like member along a transporting direction, the stretchable sheet-like member continuing along the transporting direction; an extension-ratio adjustment mechanism that is located between the upstream transport mechanism and the downstream transport mechanism, and that adjusts an extension ratio at which the stretchable sheet-like member extends in the transporting direction; and a processing apparatus that performs the certain process to the stretchable sheet-like member that is being transported by the downstream transport mechanism. When the upstream transport mechanism transports a first stretchable sheet-like member in which parts to be the absorbent article are lined up at a first pitch in the transporting direction, the extension-ratio adjustment mechanism adjusts an extension ratio of the first stretchable sheet-like member so that the parts to be the absorbent article are lined up at a predetermined pitch. When the upstream transport mechanism transports a second stretchable sheet-like member in which the parts to be the absorbent article are lined up at a second pitch in the transporting direction, the second pitch being different from the first pitch, the extension-ratio adjustment mechanism adjusts an extension ratio of the second stretchable sheet-like member so that the parts to be the absorbent article are lined up at the predetermined pitch.

Current assignees

UNICHARM

Inventors

YAMAMOTO HIROKI

MATSUMOTO YOSHIHIKO

Advantages / Previous drawbacks

(EP3123990)

This makes it possible to manufacture an absorbent article with which a wearer is less likely to feel uncomfortable.

This makes it possible to share the processing apparatus, regardless of the size of the absorbent article to be manufactured.

This makes it possible to finish each absorbent article with higher precision.

This causes not only a problem of facilities-cost increase, and also causes a problem of decrease of capacity utilization.

The low-extensible sheet 9a which is extended and tightened is in a so-called fully-extended state in which a sheet having a low extensibility is difficult to further extend.

This may cause a problem such as facilities-cost increase.

problem such as facilities-cost increase.

difficult to

Independent claims

(EP3123990)

1. A manufacturing apparatus for manufacturing an absorbent article by per forming a certain process to a stretchable sheet-like member associated with the absorbent article, the stretchable sheet-like member continuing along a transporting direction, the apparatus comprising: an upstream transport mechanism that transports the stretchable sheet-like member along the transporting direction; a downstream transport mechanism that is located downstream in the transporting direction from the upstream transport mechanism, and that transports the stretchable sheet-like member along the transporting direction; an extension-ratio adjustment mechanism that is located between the upstream transport mechanism and the downstream transport mechanism, and that adjusts an extension ratio at which the stretchable sheet-like member extends in the transporting direction; and a processing apparatus that performs the certain process to the stretchable sheet-like member that is being transported by the downstream transport mechanism, when the upstream transport mechanism transports a first stretchable sheet-like member in which parts to be the absorbent article are lined up at a first pitch in the transporting direction, the extension-ratio adjustment mechanism adjusting an extension ratio of the first stretchable sheet-like member so that the parts to be the absorbent article are lined up at a predetermined pitch, and the extension-ratio adjustment mechanism transferring the first stretchable sheet-like member to the downstream transport mechanism, and when the upstream transport mechanism transports a second stretchable sheet-like member in which the parts to be the absorbent article are lined up at a second pitch in the transporting direction, the second pitch being different from the first pitch, the extension-ratio adjustment mechanism adjusting an extension ratio of the second stretchable sheet-like member so that the parts to be the absorbent article are lined up at the predetermined pitch, and the extension-ratio adjustment mechanism transferring the second stretchable sheet-like member to the downstream transport mechanism.

11. A manufacturing method for manufacturing an absorbent article by per forming a certain process to a stretchable sheet-like member associated with the absorbent article, the stretchable sheet-like member continuing along a transporting direction, the method comprising: transporting the stretchable sheet-like member by an upstream transport mechanism along the transporting direction; transporting the stretchable sheet-like member by a downstream transport mechanism along the transporting direction, the downstream transport mechanism being located downstream in the transporting direction from the upstream transport mechanism; adjusting by an extension-ratio adjustment mechanism an extension ratio at which the stretchable sheet-like member extends in the transporting direction, the extension-ratio adjustment mechanism being located between the upstream transport mechanism and the downstream transport mechanism; and per forming the certain process by a processing apparatus to the stretchable sheet-like member that is being transported by the downstream transport mechanism, wherein when the upstream transport mechanism transports a first stretchable sheet-like member in which parts to be the absorbent article are lined up at a first pitch in the transporting direction, in the adjusting, an extension ratio of the first stretchable sheet-like member is adjusted sot that the parts to be the absorbent

article are lined up at a predetermined pitch, and the first stretchable sheet-like member is transferred to the downstream transport mechanism, and when the upstream transport mechanism transports a second stretchable sheet-like member in which parts to be the absorbent article are lined up at a second pitch in the transporting direction, the second pitch being different from the first pitch, in the adjusting, an extension ratio of the second stretchable sheet-like member is adjusted sot that the parts to be the absorbent article are lined up at the predetermined pitch, and the second stretchable sheet-like member is transferred to the downstream transport mechanism.

Object of invention

(EP3123990)

An aspect of the invention to achieve the above advantage is a manufacturing apparatus for manufacturing the absorbent article by per forming a certain process to a stretchable sheet-like member associated with the absorbent article, the stretchable sheet-like member continuing along a transporting direction, the apparatus including: an upstream transport mechanism that transports the stretchable sheet-like member along the transporting direction; a downstream transport mechanism that is located downstream in the transporting direction from the upstream transport mechanism, and that transports the stretchable sheet-like member along the transporting direction; an extension-ratio adjustment mechanism that is located between the upstream transport mechanism and the downstream transport mechanism, and that adjusts an extension ratio at which the stretchable sheet-like member extends in the transporting direction; and a processing apparatus that performs the certain process to the stretchable sheet-like member that is being transported by the downstream transport mechanism, when the upstream transport mechanism transports a first stretchable sheet-like member in which parts to be the absorbent article are lined up at a first pitch in the transporting direction, the extension-ratio adjustment mechanism adjusting an extension ratio of the first stretchable sheet-like member so that the parts to be the absorbent article are lined up at a predetermined pitch, and the extension-ratio adjustment mechanism transferring the first stretchable sheet-like member to the downstream transport mechanism, and when the upstream transport mechanism transports a second stretchable sheet-like member in which the parts to be the absorbent article are lined up at a second pitch in the transporting direction, the second pitch being different from the first pitch, the extension-ratio adjustment mechanism adjusting an extension ratio of the second stretchable sheet-like member so that the parts to be the absorbent article are lined up at the predetermined pitch, and the extension-ratio adjustment mechanism transferring the second stretchable sheet-like member to the downstream transport mechanism.

In this example, the unit signal is a rotational angle signal having a rotational angle value of 0 to 360 .

The invention relates to a manufacturing apparatus and a manufacturing method for an absorbent article such as a disposable diaper.

In this example, the unit signal is a rotational angle signal having a rotational angle value of 0 to 360 .

IPC - International classification

A61F-013/00; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/496

Family 167/200 - FAMPAT - ©Questel

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JP2011162129

Application number

EP12818281

TH20141000378

JP2011162129

CN201280036694

IN833CHN2014

US14/235,295

WOJP2012/068287

Publication numbers

EP2737885

TH51197

JP5897837

CN103702648
TH142734
IN833CHN2014
EP2737885
US20140221185
EP2737885
CN103702648
JP2013022369
WO2013/015183

Questel unique family ID (FAN)

33662439

Family publication details

EP2737885	B1	2018-11-21	EP2737885	
TH51197	B	2016-09-09	TH--51197B	
JP5897837	B2	2016-03-11	JP5897837	
CN103702648	B	2016-02-10	CN103702648B	
TH142734	A	2015-08-27	TH-142734	
IN833CHN2014	A	2015-04-03	IN2014CN00833	
EP2737885	A4	2015-04-01	EP2737885	
US20140221185	A1	2014-08-07	US20140221185	
EP2737885	A1	2014-06-04	EP2737885	
CN103702648	A	2014-04-02	CN103702648	
JP2013022369	A	2013-02-04	JP2013022369	
WO2013/015183	A1	2013-01-31	WO201315183	

Earliest priority date

2011-07-25

Application dates

2011-07-25
2012-07-19
2012-07-19
2012-07-19
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2012-07-19
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2016-09-09
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2015-04-03
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2014-08-07
2014-06-04
2014-04-02
2013-02-04
2013-01-31

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2018-11-21
(JP5897837)
2016-03-11
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2016-02-10
(TH--51197B)
2016-09-09

Title

(EP2737885)
Absorbent article production equipment

Abstract

(EP2737885)
The absorbent article production equipment comprises: a forming mechanism for forming the absorbent articles; a conveyance mechanism for conveying the absorbent articles formed by the forming mechanism; and a counting mechanism for counting the absorbent articles supplied from the conveyance mechanism. The counting mechanism comprises: multiple guide members (92) for holding the absorbent articles; a movement member (91) for moving the guide members in a horizontal direction; and a support member (93) disposed below the guide members in the vertical direction. The guide members protrude from the outer circumferential surface of the movement member in the horizontal direction. Opposing surfaces of the guide members that face each other are vertical surfaces which hold an absorbent article therebetween. The conveyance mechanism places the absorbent articles from above the guide members in the vertical direction between the guide members and parallel to the opposing surfaces.

Current assignees

UNICHARM

Inventors

YAMAMOTO HIROKI

Advantages / Previous drawbacks

(EP2737885)
It will be appreciated that the drawings are schematically shown and the ratio and the like of each dimension are different from the real ones.

Independent claims

(EP2737885)
1. A device for manufacturing an absorbent article comprising: a forming mechanism of forming a plurality of absorbent articles including a front waistline region, a back waistline region, and a crotch region positioned between the front waistline region and the back waistline region, by arranging an absorber on a web in which the components configuring the absorbent articles are in continuity, followed by folding the web along a conveyance direction, and then cutting the web along the side surfaces in a width wise direction of the absorbent articles positioned at a side of the front waistline region and at a side of the back waistline region; and a conveyance mechanism of continuously conveying the absorbent articles formed by the forming mechanism; and a counting mechanism of counting the absorbent articles supplied in continuation from the conveyance mechanism, wherein the counting mechanism includes a plurality of guide members configured to retain the absorbent articles, a movement member configured to move the guide members in a direction along a horizontal direction, and support members arranged on a lower side of the guide members in a vertical direction, and is configured to move the absorbent articles supplied from the conveyance mechanism while being sandwiched by the guide members, and then count the absorbent articles, and the guide members protrude out from the outer circumference surface of the movement member along the horizontal direction, and are arranged adjacent to each other along the horizontal direction, and opposing surfaces opposing each other in the guide members are the surfaces that sandwich the absorbent articles, and are arranged along the vertical direction, and the conveyance mechanism is configured to feed the absorbent articles along the opposing surfaces, from the upper side of the guide members in the vertical direction towards the space between the guide members.

Object of invention

(EP2737885)

The present invention relates to a device for manufacturing an absorbent article having a counting mechanism for counting the absorbent articles supplied in continuation.

The present invention relates to a device for manufacturing an absorbent article having a counting mechanism for counting the absorbent articles supplied in continuation.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49

Family 168/200 - FAMPAT - ©Questel

Earliest priority number

US07/891,361

Application number

DE69330076
EP93108691
CN93106570
CA2079140
BR9301770
KR930005047
TW83204626U
PH46034
AU2727895
PL29910593
US08/255,840
AU3877393
JP12654093
ZA9303128
MX9206654

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DE69330076
EP0572033
CN1138510
CA2079140
DE69330076
BRPI9301770
DE69330076
EP0572033
KR100253110
TW354889
PH31296
AU686399
PL172233
US5609588
AU2727895
AU660365
EP0572033
JP06054879
KR930023022
PL299105

CN1079140
BR9301770
AU3877393
EP0572033
CA2079140
ZA9303128
MX9206654
BRPI9301770

Questel unique family ID (FAN)

1194181

Family publication details

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EP0572033	B2	2007-01-24	EP-572033
CN1138510	C	2004-02-18	CN1138510C
CA2079140	C	2002-05-14	CA2079140
DE69330076	T2	2001-11-22	DE69330076
BRPI9301770	B1	2001-07-24	BR9301770
DE69330076	D1	2001-05-10	DE69330076
EP0572033	B1	2001-04-04	EP-572033
KR100253110	B1	2000-04-15	KR100253110
TW354889	U	1999-03-21	TW-354889U
PH31296	A	1998-07-06	PH--31296
AU686399	B2	1998-02-05	AU-686399
PL172233	B1	1997-08-29	PL-172233
US5609588	A	1997-03-11	US5609588
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BRPI9301770	A1	1993-06-08	BR9301770

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2007-01-24
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2001-04-04
(US5609588)
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(ZA9303128)
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(KR100253110)
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(BR9301770)
2001-07-24
(CA2079140)
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(CN1138510C)
2004-02-18

Title

(EP-572033)
Absorbent article

Abstract

(EP0572033)
An absorbent article(15) is described, such as a sanitary napkin, which has an absorbent means(20) and a substantially non-absorbent resilient layer(19) adjacent to the absorbent means. The absorbent means(20) is sufficiently stiff to resist twisting of the absorbent article during use. The resilient layer(19) is sufficiently resilient to resist bunching during use. As a result, the absorbent article(15) resists both twisting and bunching. The absorbent article(15) has zones which vary in caliper, stiffness and absorbency. A central absorbent zone is thickest in caliper, more absorbent than the other zones and is stiffer than the other zones. An adjacent zone is less thick in caliper, less absorbent and less stiff. A peripheral zone, located near the outer side edges, is least thick in caliper, least absorbent and least stiff.

Current assignees

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Advantages / Previous drawbacks

(EP0572033)
Superabsorbents are very good at retaining body fluids.
The cover layer 22 may also be treated with a surfactant to make it more hydrophilic.
It is desirable to use a layer of foam that is 3.175 mm (1/8 inch) thick or less.
The roping effect is detrimental because the napkin is unable to absorb body fluid that contacts its upper surface.
Such bunching and twisting is more of a problem in thin sanitary napkins than in thicker napkins.
If the resilient layer 19 is too thick or too stiff, or both, such thickness or stiffness may interfere with comfort to the wearer.

Independent claims

(EP0572033)
1. An absorbent article(15;40;50;80) adapted to receive and absorb body fluid and having a central longitudinal axis(y-y), said absorbent article comprising: a. an absorbent means(20;60) having a central longitudinal axis substantially aligned along the central longitudinal axis(y-y) of said absorbent article(15;40;50;80), said absorbent means(20;60) capable of

absorbing at least 10 grams of the body fluid deposited on said absorbent article(15;40;50;80); and b) a substantially nonabsorbent, substantially resilient member(19;58) adjacent to the absorbent means(20;60), said resilient layer(19;58) having a width greater than the width of said absorbent means(20;60), and adapted to prevent bunching of said absorbent article(15;40;50;80).

16. An absorbent article(15;40;50;80) having a central longitudinal axis(y-y), a caliper of less than about 5 millimeters, and a total width spanning the width of the labia majora of the user, said absorbent article comprising: a) an absorbent means(20;60) having a central longitudinal axis substantially aligned along the central longitudinal axis of said absorbent article, said absorbent means having the capacity to absorb at least 10 grams of body fluid; and b) a substantially resilient member(19;58) having a width within the range of from 60% to 100% of the total width of said absorbent article(15;40;50;80) and being sufficiently resilient to resist bunching of the absorbent article during use.

17. An absorbent article(15;40;50;80) having a central longitudinal axis(y-y), a caliper of less than about 5 millimeters, and a total width spanning the width of the labia majora of the user, said absorbent article comprising: a) a liquid pervious cover sheet(22); b) an absorbent means(20;60) having a central longitudinal axis substantially aligned along the central longitudinal axis of said absorbent article, said absorbent means being sufficiently stiff to resist twisting of the absorbent article during use; and c) a substantially resilient layer(19;58) having a width within the range of from 60% to 100% of the total width of said absorbent article and being sufficiently resilient to resist bunching of the absorbent article during use, and said absorbent means is disposed between said cover sheet(22) and said substantially resilient layer(19;58).

31. A sanitary napkin(15;40;50;80) having a garment-facing side, a caliper of less than about 5 millimeters, and a central longitudinal axis (y-y), said sanitary napkin comprising: a) a liquid-impermeable baffle(18) disposed on said garment-facing side of said sanitary napkin, said baffle(18) having a body-facing side; b) a substantially nonabsorbent, resilient layer(19;58) disposed on said body-facing side of said baffle(18), said resilient layer(19;58) adapted to prevent bunching, said resilient layer having a body-facing side; and c) an absorbent means(20;60) disposed adjacent to said body-facing side of said resilient layer(19;58), said absorbent means(20;60) having a central longitudinal axis substantially aligned along the central longitudinal axis of said napkin, said absorbent means adapted to resist twisting and capable of absorbing at least 10 grams of body fluid deposited on said napkin.

37. A sanitary napkin(15;40;50;80) having a central longitudinal axis(y-y), a body-facing side and a total width transverse to said longitudinal axis(y-y) defined by the distance from one outer side edge of the body-facing side of the sanitary napkin to the opposite outer side edge of the sanitary napkin, said sanitary napkin comprising: a. a liquid pervious cover sheet(22); b. an absorbent means(20;60); c. a stiffening means having a longitudinal central axis substantially aligned along the longitudinal central axis of said sanitary napkin, said stiffening means being sufficiently stiff to resist twisting of the sanitary napkin during use; and d. a substantially resilient member(19;58) having a width within the range of from 60% to 100% of the total width of said body-facing side of the sanitary napkin and being sufficiently resilient to resist bunching of the sanitary napkin during use.

43. A sanitary napkin(15;40) having a garment-facing side, and a central longitudinal axis(y-y), said sanitary napkin comprising: a) a liquid-impermeable baffle(18) disposed on said garment-facing side of said sanitary napkin, said baffle(18) having a garment-facing side and a body-facing side; b) garment adhesive(36;38) disposed on at least a portion of said garment-facing side of said baffle(18); c) a peel strip(39) disposed on said garment adhesive(36;38) and adapted to be removed before use to expose said garment adhesive(36;38) on at least a portion of said garment-facing side of said baffle means(18), thereby making said garment adhesive(36;38) available to contact a garment of the user; d) a substantially nonabsorbent, non-wick ing, resilient foam layer disposed on said body-facing side of said baffle, said foam layer adapted to prevent bunching, said foam layer having a body-facing side; e) an absorbent means(20) disposed adjacent to said body-facing side of said foam layer, said absorbent means having a central longitudinal axis substantially aligned along the central longitudinal axis of said napkin, said absorbent means capable of absorbing at least 10 grams of body fluid deposited on said napkin, said means having a body-facing side; f) at least one tissue layer(28;30) disposed between at least a portion of said central absorbent means(20) and at least a portion of said foam layer; g) a transfer layer(24) disposed on said body-facing side of said absorbent means(20), said transfer layer(24) having a body-facing side; h) a cover(22) disposed on said body-facing side of said transfer layer, said cover(22) being joined along at least part of its peripheral edges to at least part of the peripheral edges of said baffle means(18), i) said foam layer having a width greater than the width of the absorbent means(20), the width of the foam layer extending adjacent to and within the joined

peripheral portions of said cover(22) and said baffle means(18); and j) said napkin having a caliper less than about 5 millimeters, a central absorbent zone(102) that is thicker in caliper, more absorbent and stiffer than any other zone, a peripheral zone(106) that is located at an outer side edge of the napkin and is less absorbent and less stiff than said absorbent zone(102), and an adjacent zone(104) located between said absorbent zone(102) and said peripheral zone(106), said adjacent zone(104) being less thick in caliper, less absorbent and less stiff than said absorbent zone(102); said adjacent zone(104) being thicker in caliper, more absorbent and stiffer than said peripheral zone(106).

44. A sanitary napkin(15;40;50;80) having a central, longitudinal axis(y-y), said napkin comprising: a) central zone substantially aligned with the central, longitudinal axis of said napkin; b) a peripheral zone parallel to the central, longitudinal axis of said napkin and disposed along a side edge of said napkin; c) an adjacent zone disposed between said central zone and said peripheral zone; d) each of said zones having a length equal to at least 60% of the length of said napkin; e) said central zone being thicker, more absorbent and stiffer than said adjacent zone and said peripheral zone, said central zone adapted to resist twisting of said napkin; f) said adjacent zone being less thick, less absorbent and less stiff than said central zone and thicker, more absorbent and stiffer than said peripheral zone; g) said peripheral zone being thinner, less absorbent and less stiff than said adjacent zone and said central zone; h) said napkin further comprising a substantially resilient layer disposed within said central zone and said adjacent zone, said substantially resilient layer adapted to resist bunching of said napkin.

45. A method for achieving improved performance in a sanitary napkin having a central, longitudinal axis, said method comprising the steps of: a) providing a substantially resilient layer substantially aligned along the central, longitudinal axis of said napkin to resist bunching; b) providing a stiffening means substantially aligned along said central, longitudinal axis of said napkin and adapted to resist twisting of said napkin; c) arranging said substantially resilient layer so that its width extends across at least 60% of the total width of said napkin; and d) selecting for the stiffening means a material having comparatively high absorbent capacity and adapted to absorb fluid adjacent to the central, longitudinal axis of said napkin to thereby reduce flow of fluid toward the outer side edges of said napkin to reduce leakage of fluid at the outer side edges of said napkin.

Object of invention

(EP0572033)

This invention relates to an absorbent article which has a substantially nonabsorbent, substantially resilient layer to resist bunching during use.

This invention relates to an absorbent article, such as a sanitary napkin.

This invention relates to an absorbent article, such as a sanitary napkin.

This invention relates to an absorbent article which has a substantially nonabsorbent, substantially resilient layer to resist bunching during use.

This invention provides an absorbent article such as a sanitary napkin which has a central longitudinal axis.

It is therefore the object of the present invention to provide an absorbent article which overcomes the drawbacks of the prior art products.

IPC - International classification

A41B-009/12; A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/534; A61F-013/56

Family 169/200 - FAMPAT - ©Questel

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JP2017534495

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CA2995459

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CN107847364
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WO2017/026530	A1	2017-02-16	WO201726530
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Title

(EP3335682)
Manufacturing method for absorbing body

Abstract

(EP3335682)
A method for manufacturing an absorbent body according to the present invention includes a first step of successively introducing an aggregate of absorbent fibers and a water-absorbent resin into a gap that is formed between a first surface and a second surface and is smaller than a thickness of the aggregate of the absorbent fibers, recesses and protrusions being formed on at least one of the first surface and the second surface, a second step of applying a shearing force to the

aggregate of the absorbent fibers by moving the first surface relative to and parallel to the second surface in order to mix the absorbent fibers and the water-absorbent resin, and a third step of causing the absorbent fibers and the water-absorbent resin that were mixed to fall, and stacking the absorbent fibers and the water-absorbent resin by suctioning the absorbent fibers and the water-absorbent resin into a recessed portion having a predetermined shape.

Current assignees

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Advantages / Previous drawbacks

(EP3335682)

That is, even if the amount of the water-absorbent resin is not sufficient to be used in manufacture in an actual plant, if there are several tens of grams of the water-absorbent resin or several hundreds of grams of the water-absorbent resin that can be manufactured in the laboratory, use of the manufacturing apparatus according to the present working example makes it possible to evaluate the water-absorbent resin as the absorbent body.

There is no particular limitation on the content of the water-absorbent resin in the absorbent body, but from the viewpoint of obtaining a sufficient liquid absorption property also when the absorbent body according to the present invention is used in an absorbent article such as a diaper, the content of the water-absorbent resin is preferably 10 to 1000 g per square meter of the absorbent body (that is, 10 to 1000 g/m2), more preferably 20 to 900 g/m2, and even more preferably 30 to 700 g/m2.

There is no particular limitation on the size of an absorbent body that can be produced in the present invention, and when an absorbent body is evaluated as the absorbent body of a disposable diaper, the absorbent body may have a size of about 15 cm 10 cm to 80 cm 30 cm, for example, but the size thereof is not limited to this size.

In general, the above-described water-absorbent resin is commercially available in a powder form, there is no particular limitation on the shape thereof, and examples of the shape include a spherical shape, an irregular crushed shape, a granular shape, a scaly shape, a short rod shape, and agglomerates thereof.

Independent claims

(EP3335682)

1. A method for manufacturing an absorbent body, comprising: a first step of successively introducing an aggregate of absorbent fibers and a water-absorbent resin into a gap that is formed between a first surface and a second surface and is smaller than a thickness of the aggregate of the absorbent fibers, recesses and protrusions being formed on at least one of the first surface and the second surface; a second step of applying a shearing force to the aggregate of the absorbent fibers by moving the first surface relative to and parallel to the second surface in order to mix the absorbent fibers and the water-absorbent resin; and a third step of causing the absorbent fibers and the water-absorbent resin that were mixed to fall, and stacking the absorbent fibers and the water-absorbent resin by suctioning the absorbent fibers and the water-absorbent resin into a recessed portion having a predetermined shape.

Object of invention

(EP3335682)

The present invention relates to a method for manufacturing an absorbent body.

The present invention relates to a method for manufacturing an absorbent body.

Also, as described later, this conveying unit 2 is provided with a guide portion 7 that guides the material body 100 conveyed by the conveying belt 23 to the mixing unit 3.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/53; A61F-013/539

Family 170/200 - FAMPAT - ©Questel

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CN201480027241
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VN41321	A	2015-03-25	VN--41321
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CN104093388	A	2014-10-08	CN104093388
JP5579337	B1	2014-07-18	JP5579337

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(TWI609680)
2018-01-01
(AU2014279395)
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(MY-167656)
2018-09-21
(CN105208986B)
2019-03-01

Title

(EP3000449)
Absorbent body and absorbent article containing said absorbent body

Abstract

(EP3000449)
An object of the present disclosure is to provide an absorbent body that is both soft and resistant to twisting. The absorbent body of the present disclosure is as follows. An absorbent body 3 for an absorbent article includes thermoplastic resin fibers 6 and cellulose-based water-absorbing fibers 7, at least some of the thermoplastic resin fibers 6 have a first section 6' exposed on a surface 8 of the liquid-permeable layer side of the absorbent body 3, a second section 6'' exposed on a surface 9 of the liquid-impermeable layer side of the absorbent body 3 and a joint section 6''' connecting the first section 6' and second section 6'', and the tensile strength in a thickness direction of the absorbent body 3 is 100 Pa or greater.

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Advantages / Previous drawbacks

(EP3000449)
For explanation in Fig. 2, the thermoplastic resin fibers 6 are drawn thick and the cellulose-based water-absorbing fibers 7 are drawn thinner and shorter than the thermoplastic resin fibers 6, but this does not reflect the actual thicknesses and lengths of the fibers.
There is no particular limitation to an embossed section as described below.
difficult to
If the spacing is longer than 2.0 times the mean fiber length of the thermoplastic resin fibers, thermoplastic resin fibers anchored to different embossed sections will not become entangled and it will be difficult to increase the strength of the absorbent body.

Independent claims

(EP3000449)
1. An absorbent body for an absorbent article comprising a liquid-permeable layer, a liquid-impermeable layer and an absorbent body provided between the liquid-permeable layer and the liquid-impermeable layer, wherein the absorbent body includes thermoplastic resin fibers and cellulose-based water-absorbing fibers, at least some of the thermoplastic resin fibers have a first section exposed on a surface of the liquid-permeable layer side of the absorbent body, a second section

exposed on a surface of the liquid-impermeable layer side of the absorbent body and a joint section connecting the first section and second section, and the tensile strength in a thickness direction of the absorbent body is 100 Pa or greater.
17. An absorbent body for an absorbent article comprising a liquid-permeable layer, a liquid-impermeable layer and an absorbent body provided between the liquid-permeable layer and the liquid-impermeable layer, wherein the absorbent body includes thermoplastic resin fibers and cellulose-based water-absorbing fibers, the thermoplastic resin fibers have mean fiber lengths of 6-70 mm, and the tensile strength in the thickness direction of the absorbent body is 100 Pa or greater.

Object of invention

(EP3000449)

The present invention relates to an absorbent body and to an absorbent article comprising the absorbent body.

It is therefore an object of the present invention to provide an absorbent body that is both soft and resistant to twisting.

The present inventors have discovered an absorbent body for an absorbent article comprising a liquid-permeable layer, a liquid-impermeable layer and an absorbent body provided between the liquid-permeable layer and the liquid-impermeable layer, wherein the absorbent body includes thermoplastic resin fibers and cellulose-based water-absorbing fibers, at least some of the thermoplastic resin fibers have a first section exposed on a surface of the liquid-permeable layer side of the absorbent body, a second section exposed on a surface of the liquid-impermeable layer side of the absorbent body and a joint section connecting the first section and second section, and the tensile strength in a thickness direction of the absorbent body is 100 Pa or greater.

The present disclosure relates to the following J1 to J17.

The present disclosure relates to the following J1 to J17.

The present invention relates to an absorbent body and to an absorbent article comprising the absorbent body.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/47; A61F-013/47; A61F-013/472; A61F-013/49; A61F-013/511; A61F-013/53; A61F-013/53; A61F-013/533; A61F-013/534; A61F-013/535; A61F-013/536; A61F-013/539; A61L-015/22; A61L-015/28

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BR9911284
KR20007014372
HK02100709
CN99807568
RU2001101872
AU2235799
JP2000554319
ARP990100510
CO99006837
US09/100,574
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JP2002518095
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US6287287
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EP1087739	B1	2013-07-17	EP1087739
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KR100623138	B1	2006-09-12	KR100623138
HK1038875	A1	2005-04-29	HK1038875
CN1160034	C	2004-08-04	CN1160034C
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AR018072	A1	2001-10-31	AR--18072
CO5080824	A1	2001-09-25	CO5080824A1
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CN1308515	A	2001-08-15	CN1308515
KR20010052980	A	2001-06-25	KR20010052980
EP1087739	A1	2001-04-04	EP1087739
BR9911284	A	2001-03-06	BR9911284
BRPI9911284	A1	2001-03-06	BRPI9911284
AU2235799	A	2000-01-05	AU9922357
WO99/65438	A1	1999-12-23	WO9965438

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1999-01-19
1999-01-19
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2001-04-04
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2000-01-05
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2001-09-11
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2004-01-20
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2002-10-17
(CN1160034C)
2004-08-04
(HK1038875)
2005-04-29
(KR100623138)
2006-09-12
(BR9911284)
2007-02-13

Title

(EP1087739)
Disposable absorbent articles having passive side bonds and adjustable fastening systems

Abstract

(EP1087739)
A prefastened disposable absorbent article includes a pair of primary fasteners which are located on the opposed side edges in one the waist regions of the article. The primary fasteners overlap and releasably engage the opposite waist region of the absorbent article to provide the prefastened absorbent article. The prefastened disposable absorbent article further includes a pair of passive side bonds which are located inward of the primary fasteners on the one waist region. The passive side bonds releasably connect the overlapped portion of the one waist region to the opposite waist region to assist in maintaining the prefastened absorbent article in a prefastened condition. The side bonds also prevent shifting of the waist regions of the article relative to each other during use. The article may also include at least one secondary fastener

which is located in one of the waist regions of the absorbent article. The secondary fastener is configured to releasably engage the opposite waist region of the absorbent article to conform the waist regions of the article to a wearer's body after the article has been pulled on over the hips of the wearer.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP1087739)

Moreover, there is a need for disposable absorbent articles which include waist sections which are releasably prefastened such that the article can be reliably pulled on over the wearers legs and hips.

Moreover, it is desirable that such absorbent articles, after being soiled, can be removed from the wearer in a convenient and clean manner without undesirably soiling the caregiver or surrounding area such as the clothes of the wearer.

The present invention advantageously provides a prefastened disposable absorbent article which includes the combination of passive side bonds and an adjustable fastening system for improved fit and performance.

For example, the side panels have been difficult to tear when attempting to remove the article from the waist of the wearer instead of pulling the article down over the hips of the wearer.

For example, upon the initial fastening about the wearer, the primary fasteners 62 may be difficult to locate correctly due to the activity of the wearer.

difficult to

In response to the difficulties and problems discussed above, a new prefastened disposable absorbent article which has passive side bonds and an adjustable fastening system has been discovered.

Independent claims

(EP1087739)

1. A prefastened disposable absorbent article (20) which defines an absorbent, a front waist region (22), a backwaist region (24), a crotch region (26) which extends between and connects said waist regions (22,24) and a pair of opposed side edges (30), wherein said prefastened absorbent article (20) comprises: a pair of primary fasteners (62) which are located on said opposed side edges (30) in one of said waist regions (22,24) and which overlap and releasably engage said opposite waist region (22,24) of said absorbent article (20) to provide said prefastened absorbent article (20); and a pair of passive side bonds (80,82) which are located inward of said primary fasteners (62) on said one waist region (22,24) and which releasably connect an overlapped portion (84) of said one waist region (22,24) to said opposite waist region (22,24) to assist in maintaining said prefastened absorbent article (20) in a prefastened condition; characterised in that said passive side bonds (80,82) connect an interior surface (34) of said absorbent article (20) in said one waist region (22,24) to either an outer surface (36) or an interior surface (34) of said absorbent article (20) in said opposite waist region (22,24).

Object of invention

(EP1087739)

The present invention relates to disposable absorbent articles which are adapted to contain body exudates.

More particularly, the present invention relates to prefastened disposable absorbent articles which have passive side bonds and adjustable fastening systems to maintain the articles about the waist of the wearer.

In are embodiment the present invention concerns a prefastened disposable absorbent article which defines an absorbent, a front waist region, a backwaist region, a crotch region which extends between and connects the waist regions and a pair of opposed ear regions on one of the waist regions which overlap the opposite waist region.

In one aspect, the present invention concerns a prefastened disposable absorbent artide as claimed in claim 1.

In one aspect, the present invention concerns a prefastened disposable absorbent artide as claimed in claim 1.

The present invention relates to disposable absorbent articles which are adapted to contain body exudates.

In one aspect, the present invention concerns a prefastened disposable absorbent artide as claimed in claim 1.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/56; A61F-013/62

Family 172/200 - FAMPAT - ©Questel

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DE3886874
ES88309179T
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EP88309179
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US07/103,872

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JP2941290
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ES2047555
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AT99506
EP0311333
CA1303794
EP0311333
JP01162807
EP0311333
US4808177

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59938000

Family publication details

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ES2047555	T3	1994-03-01	ES2047555
DE3886874	D1	1994-02-17	DE3886874
AT99506	T	1994-01-15	ATE099506
EP0311333	B1	1994-01-05	EP-311333
CA1303794	C	1992-06-23	CA1303794
EP0311333	A3	1990-01-31	EP-311333
JP01162807	A	1989-06-27	JP01162807
EP0311333	A2	1989-04-12	EP-311333
US4808177	A	1989-02-28	US4808177

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1988-10-03
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1989-02-28
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1999-08-25
(CA1303794)
1992-06-23
(ATE099506)
1994-01-15
(ES2047555)
1994-03-01

Title

(EP-311333)
Absorbent article having floating inner cuffs.

Abstract

(EP0311333)
An integral disposable absorbent article such as a diaper (20) having an absorbent core (44), a backsheet (42), a continuous topsheet (38), an elastically contractible leg cuff (56) along each longitudinal edge, and a pair of floating inner cuffs (64) extending longitudinally along the absorbent article in at least the crotch region. The floating inner cuffs (64) provide enhanced containment of body exudates and enhanced fit. The floating inner cuffs (64) each preferably comprise a cuff layer (66), a base layer (67) underlaying the cuff layer, a first seam (68) that affixes a portion of the cuff layer to the base layer (67), a central seam (70) that affixes another portion of the cuff layer (14) to the base layer (67), an unadhered stand-up portion (72) of the cuff layer (66) between the first seam (68) and the central seam (70), and a central elastic member (74) having a pair of affixed portions (76) and an unaffixed portion (78) between the pair of affixed portions. The gathering action of the central elastic member (74) causes both the unaffixed portion (78) and the unadhered stand-up portion (72) of the cuff layer (66) to stand-up and be spaced away from the base layer (67) to provide a ridge (88) that contains body exudates. Since the unaffixed portion (78) of the central elastic member (74) is not affixed to the cuff layer (66) or the base layer (67), the central elastic member (74) if free to move or float within the floating inner cuff so that it may seek and be positioned adjacent the leg crease of the wearer to optimize fit and enhance containment.

Current assignees

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Inventors

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SIEGFRIED ROBERT HARRIS

Advantages / Previous drawbacks

(EP0311333)

The central elastic members 74 are operatively associated in the floating inner cuff 64 in an elastically contractible condition so that in a normally unrestrained configuration, the central elastic members 74 effectively contract or gather the unadhered stand-up portion 72 of the cuff layer 66, preferably the topsheet 38, so as to provide a ridge 88 and to be floating to provide a better fit.

The most common mode of failure for such products occurs when body exudates leak out of the gaps between the absorbent article and the wearer's leg or waist to adjacent clothing because they are not immediately absorbed within the article.

This is most evident with loose fecal material which is not easily absorbed by the absorbent article and tends to "ride" on the top surface of the absorbent article.

Independent claims

(EP0311333)

1. An integral disposable absorbent article having a front waist region, a backwaist region and a crotch region disposed between the front waist region and the backwaist region; an absorbent core having a garment facing surface, a body facing surface and a pair of side edges; a backsheet associated with said absorbent core on said garment on said garment facing surface; a continuous topsheet associated with said absorbent core on said body facing surface of said absorbent core; a side flap extending outwardly from and along each side edge of said absorbent core in at least the crotch region, said side flap being preferably formed from the extension of said backsheet and said topsheet beyond the side edges of the absorbent core; and one or more flap elastic members, operatively associated with each of said side flaps in an elastically contractible condition; characterized in that a floating inner cuff longitudinally extends along the absorbent article in at least the crotch region in each side of the absorbent article, each of said floating inner cuffs comprising: a cuff layer, preferably being formed by a portion of said topsheet; a base layer underlaying said cuff layer; a first seam for securing a portion of said cuff layer to said base layer; a central seam spaced inboard from said first seam for securing a portion of said cuff layer to said base layer; said cuff layer having a stand-up portion, positioned between said first seam and said central seam, that is unadhered to said base layer; and a central elastic member, operatively associated with said floating inner cuff in an elastically contractible condition, said central elastic member having a pair of affixed portions and an unaffixed portion between said pair of affixed portions, said pair of affixed portions being affixed to said floating inner cuff and said unaffixed portion being unaffixed to at least said base layer so that said central elastic member may float in the crotch region of the absorbent article, wherein said unaffixed portion is positioned, in at least the crotch region of the absorbent article, to cause said stand-up portion of said cuff layer to stand-up and be spaced away from said base layer.

Object of invention

(EP0311333)

Basically, without intending to limit the present invention, the present invention is an absorbent article that is especially leakage resistant against both urine and loose fecal material.

Therefore, it is an object of the present invention to provide an absorbent article which has improved containment characteristics.

It is an additional object of the present invention to provide an absorbent article having a pair of central elastic members which act to enhance the containment of body exudates.

It is also an object of the present invention to provide an absorbent article having floating inner cuffs that are free standing to provide a raised surface on the topsheet when the absorbent article is fitted on the wearer such that a ridge is formed which contains and hold body exudates within the absorbent article.

It is a further object of the present invention to provide an absorbent article having elastically contractible leg cuffs and a pair of floating inner cuffs formed from the central elastic members so as to provide a dual restraint against the leakage of body exudates, thereby improving the containment characteristics of the absorbent article.

It is a still further object of the present invention to provide an absorbent article have improved positioning of the topsheet relative to the genital area of the wearer.

It is an even further object of the present invention to provide an absorbent article having improved fit by providing central elastic members that are floating such that they "seek" the leg crease of the wearer to provide a sustained tighter fit on the

wearer since the central elastic members are free to move and adapt to the wearer's body.

The present invention relates to absorbent articles such as disposable diapers, and more particularly, to absorbent articles having elastically contractible leg cuffs and a pair of floating inner cuffs positioned inboard of the leg cuffs to provide improved containment characteristics.

IPC - International classification

A41B-013/04; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/514; A61F-013/56

Family 173/200 - FAMPAT - ©Questel

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RU2018112258
EP15903703
AU2015408538
JP2018512625
BR112018003435
US15/744,120
MX2018002934
CN201580083854
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EP3346963
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JP2018530376
BR112018003435
US20180200121
EP3346963
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BR112018003435
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RU2692881	C1	2019-06-28	RU2692881
EP3346963	A4	2019-05-08	EP3346963
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JP2018530376	A	2018-10-18	JP2018530376
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MX2018002934	A	2018-06-18	MX2018002934
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BR112018003435	A1	2018-04-03	BR112018003435

AU2015408538	A1	2018-03-08	AU2015408538
WO2017/044022	A1	2017-03-16	WO201744022

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Title

(EP3346963)
A disposable pant-type absorbent article with a leg cuff

Abstract

(EP3346963)
The disclosure concerns a disposable pant-type absorbent article (1) such as a pant diaper, a sanitary pant or incontinence pant. The article comprises a chassis (2) and an absorbent body (5). The chassis (2) has a front portion (3) and a back portion (4) and each of the front and back portions (3, 4) has a waist edge (7, 8), a pair of leg edges (9, 10, 13, 14) and a pair of side edges (11, 12, 15, 16). The front and back portions (3, 4) are joined to each other at opposite side edges (11, 12, 15, 16) to at least partly define a waist-opening (18) and a pair of leg-openings (19). The absorbent body (5) is located mainly in a crotch portion (22) of the article (1). An elastic leg feature (17, 20) is fastened to the chassis (2) at least partly along leg edges (9, 10, 13, 14), and the article (1) has a longitudinal direction (y)and a transverse direction (x). The elastic leg feature (17, 20) extends from the associated side edge (11, 12, 15, 16) towards a centre line (28) in the longitudinal direction (y) of the article (1). A portion of the leg elastic feature (17, 20) having a first length (L1), in which a distance (D)

between any point of each leg edge (9, 10, 13, 4) to the nearest part of the elastic leg feature (17, 20), in a longitudinal direction, is less than 6 millimetres, specifically less than 5 millimetres, and more specifically less than 4 millimetres. The first length (L1) is at least 55% of a maximal length (L2) of the leg opening (19) in the transverse direction (x), as measured in an extended state of the absorbent article (1). The disclosure also relates to a corresponding method of manufacturing a pant-type absorbent article, as well as an array of gender-specific, disposable, absorbent articles.

Current assignees

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Advantages / Previous drawbacks

(WO2017/044022)

A relatively small deviation of the direction of orientation of the elastic leg feature allows a use of cost-efficient and high-speed manufacturing process.

An elastic waist features renders the absorbent article more undergarment-like and results in improved comfort and fit.

It is thus desirable to provide an elasticised leg edge of the front and/or back portion that has a more cuff-like appearance, thereby providing the disposable absorbent article with an appearance and comfort more similar to cloth underwear.

Fastening of elastic leg feature 17 close to an edge of a web material, such as closed to the leg edge 9, 10, 13, 14 of the chassis 2, is difficult due to the manufacturing tolerances of the production line.

Unintended cutting or damaging of the elastic leg feature may impair the functionality of the elastic leg feature, and mounting of the elastic leg feature outside the surface of the web material may result in that adhesive of the elastic leg feature comes into contact with the manufacturing line, such that manufacturing line must be halted and cleaned.

Independent claims

(WO2017/044022)

CLAIMS 1 . A disposable pant-type absorbent article (1) such as a pant diaper, a sanitary pant or incontinence pant, said article comprises: a chassis (2); an absorbent body (5); wherein the chassis (2) has a front portion (3) and a back portion (4), each of the front and back portions (3, 4) has a waist edge (7, 8), a pair of leg edges (9, 10, 13, 14) and a pair of side edges (1 1 , 12, 15, 16); wherein the front and back portions (3, 4) are joined to each other at opposite side edges (1 1 , 12, 15, 16) to at least partly define a waist- opening (18) and a pair of leg-openings (19), wherein the absorbent body (5) is located mainly in a crotch portion (22) of the article (1), wherein an elastic leg feature (17, 20) is fastened to the chassis (2) at least partly along leg edges (9, 10, 13, 14), and wherein said article (1) has a longitudinal direction (y) and a transverse direction (x), characterised in that the elastic leg feature (17, 20) extends from the associated side edge (1 1 , 12, 15, 16) towards a centre line (28) in the longitudinal direction (y) of the article (1), wherein a portion of the leg elastic feature (17, 20) starting from the side edge (1 1 , 12, 15, 16) has a first length (L1), in which a distance (D) between any point of each leg edge (9, 10, 13, 14) to the nearest part of the elastic leg feature (17, 20), in a longitudinal direction, is less than 6 millimetres, specifically less than 5 millimetres, and more specifically less than 4 millimetres, and wherein the first length (L1) is at least 55% of a maximal length (L2) of the leg opening (19) in the transverse direction (x), as measured in an extended state of the absorbent article (1). The pant-type absorbent article (1) according to claim 1 , characterised in that the first length (L1) is at least 5 centimetres, specifically at least 10 centimetres, and more specifically at least 15 centimetres in the transverse direction (x), starting from the side edge (1 1 , 12, 15, 16), as measured in an extended state of the absorbent article (1).

Object of invention

(WO2017/044022)

An object of the present disclosure is to provide a disposable pant-type absorbent article with increased comfort and fit and that provides the user with confidence with respect to its leakage protection.

The disclosure also relates to a method for manufacturing such a disposable pant-type absorbent articles, as well as an

array of gender-specific, disposable, absorbent articles.

This disclosure relates to a disposable pant-type absorbent article, such as a pant diaper, a sanitary pant or incontinence pant.

IPC - International classification

A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/539

Family 174/200 - FAMPAT - ©Questel

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DE69519303
CN95194859
KR19970701267
CZ58897
BR9508657
EP95927351
JP50874596
AU3140595
US08/630,659
WOUS95/009244

Publication numbers

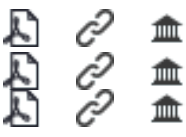
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AU3140595
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CA2197494

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Family publication details

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EP0778763	B1	2000-11-02	EP-778763
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BRPI9508657	A1	1997-08-12	BRPI9508657
US5649916	A	1997-07-22	US5649916
EP0778763	A2	1997-06-18	EP-778763
CZ58897	A3	1997-06-11	CZ9700588
WO96/06591	A3	1996-05-30	WO9606591
AU3140595	A	1996-03-22	AU9531405
WO96/06591	A2	1996-03-07	WO9606591
CA2197494	A1	1996-03-07	CA2197494

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(BR9508657)
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(CZ-288257)
2001-05-16
(KR100382178)
2003-08-19
(CN1144574C)
2004-04-07
(CA2197494)
2006-09-12

Title

(EP-778763)
Thin absorbent article having wicking and crush resistant properties

Abstract

(EP0778763)
An absorbent article having a cover, a baffle and an absorbent core is disclosed. The absorbent core is constructed of at least three absorbent members vertically arranged with each absorbent member having an increasing wicking capacity along an x and y-axes, relative to the preceding absorbent member. The improved absorbent core exhibits a crush resistance of greater than about 250 grams and having a caliper of less than about 5 mm.

Current assignees

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Inventors

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BIRTWELL R JOHN

Advantages / Previous drawbacks

(EP0778763)
This construction allows a greater utilization of the absorbent members 18, 20 and 22 and also the absorbent core 16.
This action provides a good post-use visual signal to the user that the fluid is staying in the bottom of the sanitary napkin 10, thereby reinforcing the in-use visual signal conveyed to the user.

It is therefore, desirable to construct an absorbent article which has the capacity to rapidly wick body fluids in the x-y plane to a large portion of the absorbent so as to prevent premature side leakage.

It is also desirable to construct an absorbent article having a resistance to roping and bunching of the napkin during use. This roping effect is detrimental because the napkin is unable to absorb fluid that contacts its upper surface.

Independent claims

(EP0778763)

1. An absorbent article (10) comprising a liquid-permeable cover (12), a liquid-impermeable baffle (14) and an absorbent core (16) therebetween, said absorbent core having at least three absorbent members (18, 20, 22) vertically arranged wherein said cover (12) and said baffle (14) are positioned adjacent to said first (18) and third absorbent members (22) respectively, each of said absorbent members has a fluid wick ing capacity for 3 milliliters of dyed distilled water along an x-axis and y-axis, said second absorbent member (20) having a wick ing capacity along said x and y-axes greater than said first absorbent member (18), and said third absorbent member (22) having a wick ing capacity along said x and y-axes greater than said second absorbent member (20), characterized in that said absorbent article (10) has a wet resiliency greater than about 250 grams and a caliper of less than about 5 millimeters.

Object of invention

(EP0778763)

The general object of this invention is to provide an absorbent article for absorbing body fluids, especially menses and blood.

A more specific object of this invention is to provide a thin sanitary napkin having at least three absorbent members with increasing wick ing capacities.

Still, another object of this invention is to provide a thin sanitary napkin which will resist twisting and bunching during use.

This invention relates to an absorbent article for absorbing body fluid, especially menses and blood.

More specifically, this invention relates to a thin sanitary napkin, having a caliper less than about 5 millimeters and having an absorbent core constructed of at least three absorbent members, each having a pre-determined wick ing capacity along the x and y-directions.

Briefly, this invention relates to an absorbent article having a caliper of less than about 5 mm.

Briefly, this invention relates to an absorbent article having a caliper of less than about 5 mm.

This invention relates to an absorbent article for absorbing body fluid, especially menses and blood.

IPC - International classification

A61F-013/15; A61F-013/45; A61F-013/49; A61F-013/53; A61F-013/53; A61F-013/534; A61F-013/534; A61F-013/537

Family 175/200 - FAMPAT - ©Questel

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US14/201,992

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EP2968022

US9636263

JP2016513499

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CN105025856

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US20140274646

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CN105025856	B	2018-12-14	CN105025856B
JP6275752	B2	2018-02-07	JP6275752
EP2968022	B1	2017-06-21	EP2968022
US9636263	B2	2017-05-02	US9636263
JP2016513499	A	2016-05-16	JP2016513499
EP2968022	A1	2016-01-20	EP2968022
CN105025856	A	2015-11-04	CN105025856
WO2014/150105	A1	2014-09-25	WO2014150105
US20140274646	A1	2014-09-18	US20140274646

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(CN105025856B)
2018-12-14

Title

(EP2968022)
Method and apparatus for assembling refastenable absorbent articles

Abstract

(EP2968022)
A method for assembling pre-fastened refastenable absorbent articles includes advancing discrete chassis in a machine direction such that the lateral axis is parallel with the machine direction. The chassis defines a first waist region and a longitudinally opposed second waist region separated by a central region. A first web advances in the machine direction

and is combined with a discrete fastener component having a refastenable element. The discrete chassis are combined with the first web in the first waist region of the chassis. The second waist region of the discrete chassis is combined with a second web advancing in the machine direction. The chassis are folded and the first and second webs are joined together. The discrete fastener component is permanently connected with the second web. The absorbent article is cut along the discrete fastener component to create discrete, pre-fastened refastenable absorbent articles.

Current assignees

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Inventors

SCHNEIDER UWE

Advantages / Previous drawbacks

(EP2968022)

While it is to be appreciated that the methods and apparatuses disclosed herein may be used to assemble prefastened, refastenable pants, it is to be appreciated that the methods and apparatuses disclosed herein may be used to manufacture various types of absorbent articles.

It is to be appreciated that the first and second fastener elements 186 and 188 may be configured to refastenably connect with the second waist belt 108 and/or the first waist belt 106.

It is to be appreciated that the first and second discrete fastener components 186 and 188 may be connected with the first and second waist belts 106 and 108 in various ways.

It is to be appreciated that the first and second discrete fastener components 186 and 188 may be connected with the first waist belt 106 in various configurations, such as adhesives, cohesives, thermal bonding, ultrasonic bonding, mechanical bonding, and mechanical fastening e.g. hook and loop type fasteners, tape tab fasteners, and the like.

Therefore, it would be beneficial to provide a method and apparatus for controlling the discrete fastener component prior to folding the discrete chassis.

Additionally, it would be beneficial to provide a method and apparatus for forming prefastened refastenable diaper pants without using adhesive to join the discrete fastener component to the second waist belt.

In some instances, it may be more convenient to apply the absorbent article like a traditional tape style diaper when away from home or when it is inconvenient to remove the clothing and/or shoes.

Because it is difficult to predict when a change will be necessary and therefore when a particular mode of application will be needed, it is beneficial to have a disposable pant that is adaptable to being applied either as a traditional tape style diaper or as a disposable pant, pull-on.

Independent claims

(EP2968022)

1. A method for assembling refastenable absorbent articles (101), each absorbent article comprises a chassis (102) having a topsheet (138), backsheet (136), and an absorbent core (142) disposed between the topsheet and the backsheet, wherein the chassis defines a first waist region (116) longitudinally opposed to a second waist region (118), and having a longitudinal axis and a lateral axis, each absorbent article further comprises a first waist belt (106) connected with the first waist region and a second waist belt (108) connected with the second waist region, wherein a first discrete fastener component (186) joins first end regions (106a) of the first and second waist belts and a second discrete fastener component (188) joins second end regions (108b) of the first and second waist belts, wherein the first and second discrete fastener components are refastenably connected with the first waist belt and permanently connected with the second waist belt, the method comprising the steps of: advancing discrete chassis in a machine direction; advancing discrete fastener components in the machine direction, wherein each discrete fastener defines a first surface and a second surface, and a first end region (186a) and an opposing second end region (186b) separated by a central region (186c), wherein a first fastener element (204) is located in the first end region and a second fastener element (204) is located in the second end region; advancing a first waist belt web (230) in the machine direction, wherein the first waist belt web defines a first surface and a second surface; advancing a second waist belt web (232) in the machine direction, wherein the second waist belt web defines a first surface and a second surface; orienting each discrete chassis such that the lateral axis is parallel with the machine direction; combining the first waist region of the chassis intermittently along the first surface of the first waist belt web and combining the second waist region of the chassis intermittently along the first surface of the second

waist belt web; combining the first surface of the discrete fastener component with the first surface of the second waist belt web, wherein the discrete fastener component is positioned between adjacent chassis; folding the chassis to position the first waist region of the chassis into a face-to-face relationship with the second waist region of the chassis using a folding apparatus, wherein the second surface of the discrete fastener component is in a face-to-face relationship with the folding apparatus; bonding the second surface of the discrete fastener component to the first waist belt web; and cutting the first and second waist belt webs in a cross direction along the central region of the discrete fastener component to form a first absorbent article having a first discrete fastener component and a second absorbent article having a second discrete fastener component, wherein the first discrete fastener component comprises the first fastener element and the second discrete fastener component comprises the second fastener element.

10. An apparatus (200) for forming a refastenable absorbent article (101), the apparatus comprising: a frame (252) rotatable about an axis of rotation (254); a transfer member (256) connected with the frame and extending radially outward from the frame, wherein: the transfer member is rotatable about a second axis of rotation (258) that is orthogonal to the first axis of rotation; the transfer member comprises a first portion (260) and a second portion (262), wherein the portion defines a first end region (260a) and a second end region (260b) separated by a central region (260c), wherein the second portion comprises a proximal region (262a) and a distal region (262b), wherein the proximal region of the second portion is connected with the first end region of the first portion such that the second portion forms an arm extending from the first portion of the transfer member, and the transfer member defines an outer surface (264) located at the farthest radially outward surface of the transfer member, wherein the first and second portions each have an outer surface that forms the outer surface of the transfer member.

Object of invention

(EP2968022)

The present disclosure relates to methods and apparatuses for manufacturing absorbent articles, and in particular, methods for assembling prefastened refastenable pants.

The present disclosure relates to methods and apparatuses for assembling disposable absorbent articles, and more particularly, to methods and apparatuses for assembling prefastened refastenable disposable absorbent articles.

The present disclosure relates to methods and apparatuses for assembling disposable absorbent articles, and more particularly, to methods and apparatuses for assembling prefastened refastenable disposable absorbent articles.

The present disclosure relates to methods and apparatuses for manufacturing absorbent articles, and in particular, methods for assembling prefastened refastenable pants.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/56

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US15/088,197

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CA2873408

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RU2014141120

CN201710025684

BR112014028360
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MX2014013737
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IN9012DEN2014
CL2014003100
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CN104540487
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CN106974767
BR112014028360
JP2017051628
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CN106236389
MX344063
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JP5992609
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US20160235599
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US20160220426
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US9333119
RU2014141121
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JP2015519950
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IN9010DEN2014
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CL2014003100
CN104540487
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JP2018134435	A	2018-08-30	JP2018134435
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IN9011DEN2014	A	2015-05-22	IN2014DN09011
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CL2014003100	A1	2015-05-08	CL3100201400
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CL2014003099	A1	2015-03-06	CL3099201400
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CN104284644	A	2015-01-14	CN104284644
CN104284645	A	2015-01-14	CN104284645
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WO2013/173310	A1	2013-11-21	WO2013173310
US20130306226	A1	2013-11-21	US20130306226
US20130310796	A1	2013-11-21	US20130310796
US20130310797	A1	2013-11-21	US20130310797
CA2873223	A1	2013-11-21	CA2873223
CA2873408	A1	2013-11-21	CA2873408

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2018-08-30
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(CN104302261B)
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(CN104540487B)
2017-10-20
(CA2873408)
2018-01-02
(CA2873223)
2018-01-02

Title

(EP2849697)
Absorbent articles having a belt portion with a texture zone having a texture ratio

Abstract

(EP2849697)
The present disclosure is directed, in part, to an absorbent article comprising a chassis comprising a topsheet, a backsheet, and a core disposed at least partially intermediate the topsheet and the backsheet. The absorbent article comprises a belt portion extending from the chassis. The belt portion comprises a first substrate, a second substrate joined to the first substrate, and a plurality of elongate elastic elements disposed at least partially intermediate the first substrate and the second substrate. The belt portion comprises a texture zone having a texture ratio of greater than about 5.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(WO2013/173289)
It is to be appreciated that the leg cuffs 156 may be and are sometimes also referred to as leg bands, side flaps, barrier cuffs, elastic cuffs or gasketing cuffs.
It is to be appreciated that the side flaps 160 may be formed in various ways, such as for example, by folding portions of

the chassis 102 laterally inward (i.e., toward the longitudinal axis 124) to form both the respective side flaps 160 and the side edges 128 and 130 of the chassis 102.

It would be desirable to provide absorbent articles that provide an improved fit and comfortable feel, have an aesthetically pleasing appearance, and more closely resemble clothing or underwear without adding cost, or significant cost, to absorbent article manufacturing.

In some instances, it may be more convenient to apply the absorbent article like a traditional tape style diaper when away from home or when it is inconvenient to remove the clothing and/or shoes.

Because it is difficult to predict when a change will be necessary and therefore when a particular mode of application will be needed, it is beneficial to have a disposable pant diaper that is adaptable to being applied either as a traditional tape style diaper or as a disposable pant diaper, pull-on.

The non-engagement zone may comprise a film, coating, or other material that does not attach to or engage with the fastening components 162 and 164.

Independent claims

(WO2013/173289)

1. An absorbent article comprising: a chassis comprising: a topsheet; a backsheet; and a core disposed at least partially intermediate the topsheet and the backsheet; and a belt portion extending from the chassis, the belt portion comprising: a first substrate; a second substrate; one or more elastic elements disposed at least partially intermediate the first substrate and the second substrate, wherein portions of the elastic elements are joined to the first substrate, and wherein the second substrate is joined to the first substrate or to portions of the elastic elements; a first texture zone comprising a plurality of rugosities formed in the first substrate, wherein the plurality of the rugosities have a first frequency range, and wherein the first texture zone forms a background pattern in the belt portion; and a second texture zone comprising a plurality of rugosities formed in the first substrate, wherein the plurality of the rugosities have a second, different frequency range, and wherein the second texture zone forms a macro pattern in the belt portion.

Object of invention

(WO2013/173289)

In accordance with one aspect of the present disclosure, the permanent side edge seams 178 and 180 may be joined by a predetermined pattern of heat/pressure or ultrasonic welds which withstands the forces and stresses exacted onto the side edge seams 178 and 180 during application and wear of the pant 100P.

The present disclosure generally relates to absorbent articles having texture zones forming patterns, and more particularly, relates to absorbent articles having texture zones forming background patterns and macro patterns.

The present disclosure provides for alteration of the local stiffness (e.g., densified regions) of a substrate or laminate of substrates to better define buckling or pleating points in interstitial areas between the elastic members, thereby controlling the resulting textures.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/493; A61F-013/496; A61F-013/51; A61F-013/514; A61F-013/515; A61F-013/56; A61F-013/64; A61F-013/68; A61F-013/72; B32B-003/08; B32B-003/30; B32B-005/02; B32B-005/26; B32B-007/12; D06N-001/00

Family 177/200 - FAMPAT - ©Questel

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JP2001342184
US10/288,339

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JP2003135523
US20030088226

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Family publication details

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US20030088226	A1	2003-05-08	US20030088226	

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2008-08-20
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Title

(EP1310224)
Absorbent product

Abstract

(EP1310224)

In disposable diaper (10), an absorbent product is composed of fluffed pulp, synthetic fibres, a super absorbent material, and the like, and includes elastic means (4) disposed adjacent both sides of the absorbent core (3) so as longitudinally to traverse the absorbent core (3) extending from the back to the stomach through the crotch when the disposable diaper is applied to the human body. Thus, when urine, faeces, body fluids, and the like are discharged, even if the weight of the absorbent core (3) is increased by absorbing the substances, the leakage of the substances can be prevented because the shape retention property of the disposable diaper can be maintained by the tension of the elastic materials (4) longitudinally traversing the absorbent core (3). Accordingly, there can be provided a disposable diaper which is not only excellent in fitting property when it is applied to the human body but also excellent in a leakage protection property because the shape retention property of the absorbent core (3) can be maintained even if the amount of the substances absorbed thereby is increased and thus can give a worry-free feeling to a wearer. <IMAGE>

Current assignees

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MITSUYO

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TERADA SADAYOSHI

YAMAZAKI RIE

Advantages / Previous drawbacks

(JP2003135523)

That is, with a good fit at the time of mounting, to seal around the leg to prevent the leakage of a Leg elastic gather for the body, for sealing the West gather the waist, and further the like as well as loose stools to the inside of the leg gathers is effective for both ends of the absorbent body is disposed in the longitudinal direction of the leg called the standing gathers (JP-6-93901, 2561675 patent) which is adapted to be attached.

[The problems to be solved] however, is configured as described above a conventional disposable paper diaper, the leakage prevention property and the fit by the leg or Leg Hellas Tech gather function is improved, and loose stools or the like from adhering to the urine absorbent body, is absorbed by the absorbing amount increases with the lapse of time due to an increase of the weight of the crotch beneath the gap, the leg gathers and the leg becomes insufficient and the seal, or the leakage from the space between these had odor problem.

Independent claims

(EP1310224)

1. An absorbent product including: a liquid pervious inner surface sheet (1); a liquid impervious backsheet (2) positioned on an outside surface; and an absorbent core (3) interposed between the inner surface sheet (1) and the backsheet (2), wherein elastic materials (4) are disposed adjacent both sides of the absorbent core (3) so as longitudinally to traverse the absorbent core (3) extending substantially from the back to the stomach through the crotch when the absorbent product is applied to the human body.

10. A method of manufacturing an absorbent product including the steps of: placing a superabsorbent material (64) mixed in an air stream on a tissue web where a continuous web is formed just before fluff pulp (31) as a material of an absorbent core is mixed with air and blown onto a suction drum (35); holding the tissue web on the upper surface thereof by a folding device (65) in a process in which the tissue web is transported by a conveyer; introducing the tissue web to press rolls (39) through belt presses (38); forming a continuous absorbent sheet (3) by pressing the tissue web to a predetermined density by the press rolls; cutting off the absorbent sheet (3) with a mat cutter (41) after passing it through an emboss roll press (40); joining a liquid pervious inner surface sheet (42) and a liquid impervious backsheet (43) having binders (46, 47) previously applied to one of the upper and lower surfaces thereof to the cut-off absorbent cores; and positioning a nonwoven fabric sheet, to which a binder is applied, on the backsheet (43) positioned on the lower surface of the absorbent core together with a number of string-like elastic means (44) such that the elastic materials are sandwiched between the absorbent sheet (3) and the nonwoven fabric sheet (45) and disposed adjacent both sides of the absorbent core in a state in which the elastic materials (44) are applied with tension such that the expansion ratio of the elastic materials (44) is sequentially increased laterally from the centre to the external portions thereof and attached between the absorbent sheet

(3) and the nonwoven fabric sheet (45).

Object of invention

(EP1310224)

The present invention relates to an absorbent product such as an absorbent core of a disposable diaper and absorbent product excellent in fitting property and shape retention property, in the preferred embodiment for a disposable diaper; including a method of manufacturing the absorbent product.

In another embodiment, there is provided an absorbent product which includes wing type disposable diapers 10C, 10D, and 10E and T-type disposable diapers 10F, 10G, and 10H as well as sanitary napkins 10A provided with a pants or a belt holder, and similar goods, each including the absorbent product.

The present invention seeks to provide an improved absorbent product.

According to an aspect of the present invention, there is provided an absorbent product as specified in claim 1.

According to another aspect of the present invention, there is provided a method of manufacturing an absorbent product as specified in claim 9.

The present invention seeks to provide an improved absorbent product.

The present invention relates to an absorbent product such as an absorbent core of a disposable diaper and absorbent product excellent in fitting property and shape retention property, in the preferred embodiment for a disposable diaper; including a method of manufacturing the absorbent product.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/514; A61F-013/53; A61F-013/539; A61F-013/56

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BR9910262
JP2000546720
MYPI9901505
KR20007012320
DE69925589T
EP99921554
ZA200005878
CO99026956
ARP990102083
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AU3774099
WOUS99/009406
WOUS99/009405

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JP4242562
MY133391
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DE69925589
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EP1076542
JP2002513637
ZA200005878
CO5121074
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AU3873899
WO99/56688

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DE69925589	D1	2005-07-07	DE69925589
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EP1076542	A1	2001-02-21	EP1076542
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BRPI9910262	A1	2001-01-02	BRPI9910262
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AU3774099	A	2000-08-29	AU9937740

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AU3873899	A	1999-11-23	AU9938738
WO99/56688	A1	1999-11-11	WO9956688



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(KR100609373)
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(MY-133391)
2007-11-30

Title

(EP1076542)
A disposable absorbent article having barriers with expandable attachment to an absorbent

Abstract

(EP1076542)
An integral absorbent article (10) has a longitudinal article length (26) and a lateral article width (24). An absorbent composite (32) has first and second longitudinally opposed end regions (78 and 79), and has laterally opposed side regions (80). The absorbent composite also includes a first longitudinally terminal end edge (82). The absorbent composite (32) includes a substantially liquid-impermeable backsheet layer (30), a substantially liquid permeable topsheet layer (28), and a retention portion (48) which is sandwiched between the backsheet and topsheet layers. The article includes at least one first body panel (52) having a body side surface (54), an outward surface (56), and a panel length (58) which is less than the article length (26). The first body panel (52) also includes a first outboard terminal end edge (60), and a second relatively inboard terminal end edge (62). In desired configurations, the first outboard terminal end edge (60) can be substantially coterminous with a first terminal end edge of the article. An expandable attachment section (90) is joined along at least a portion of each side region (80) of the absorbent composite (32) in the first end region (78) of the absorbent composite.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP1076542)

As a result, the article of the invention can advantageously provide improved absorbency with reduced leakage.

The various aspects of the present invention (individually and in combination) can advantageously help to provide an article having improved fit, improved absorbency and improved resistance to leakage.

During the conditions of ordinary use, the expandable attachment sections 90 can advantageously allow and provide for a control led expansion of the volume of the absorbent composite 32, especially after the absorbent composite has started absorbing liquids.

Independent claims

(EP1076542)

1. An integral absorbent article (10) having a longitudinal article length (26) and a lateral article width (24), said article comprising: an absorbent composite (32) having first and second longitudinally opposed end regions (78, 79), laterally opposed side regions (80), and a first, longitudinally terminal, end edge (82), said absorbent composite including a substantially liquid-impermeable backsheet layer (30), a substantially liquid permeable topsheet layer (28), and a retention portion (48)sandwiched between said backsheet and topsheet layers; and a first body panel (52) having a body side surface (54), an outward surface (56), a panel length (58) which is less than said article length (26), an outboard terminal end edge (60), and . a relatively inboard terminal end edge (62); characterised in that the article further comprises an expandable attachment section (90) joined along at least a portion of each side region (80) of said absorbent composite in said first end region of the absorbent composite, each expandable attachment section extendible in length at least outwardly, and each expandable attachment section configured to secure its correspondingly joined side edge region (80)of the absorbent composite to said outward surface (56) of said first body panel, and in that the first body panel is a separately provided member.

Object of invention

(EP1076542)

The present invention relates to garment articles.

Generally stated, the present invention provides an absorbent article as claimed in claim 1.

Generally stated, the present invention provides an absorbent article as claimed in claim 1.

The present invention relates to garment articles.

More particularly, the present invention relates to absorbent articles, desirably disposable absorbent articles, which are assembled and integrated to form a unitary structure.

For the purposes of the present invention, it is contemplated that selected blends of the various types of fibers mentioned above may also be employed.

IPC - International classification

A61F; A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/49; A61F-013/56

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CN108348382	A	2018-07-31	CN108348382
WO2017/087158	A1	2017-05-26	WO201787158
US20170135870	A1	2017-05-18	US20170135870
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Title

(EP3167858)

Absorbent cores having material free areas

Abstract

(EP3167858)

An absorbent core for use in an absorbent article is provided and comprises a core wrap enclosing an absorbent material, the absorbent material comprising superabsorbent polymer particles. The core wrap comprises a top side and a bottom side. The absorbent core comprises one or more area(s) substantially free of absorbent material through which the top side of the core wrap is attached to the bottom side of the core wrap (i.e. core wrap bond(s)), so that when the absorbent material swells, the core wrap forms one or more channel(s) along the area(s) substantially free of absorbent material. The superabsorbent polymer particles have a value of Effective Capacity (EFFC) of at least 27 g/g. The Effective Capacity (EFFC) is calculated via the formula below: EFFC = (CRC+AAP)/2. The Centrifuge Retention Capacity (CRC) is measured according to the Centrifuge Retention Capacity (CRC) test method and the Absorption Against Pressure (AAP) is measured according to the Absorption Against Pressure (AAP) test method. The superabsorbent polymer particles have a bulk density of at least 0.5 g/ml according to the Bulk Density Test Method.

Current assignees

PROCTER & GAMBLE

Inventors

KAMPHUS JULIANE

Advantages / Previous drawbacks

(EP3167858)

In these tapered area(s), there is a need to provide a certain absorbent capacity per area in order to have leakage protection.

Thereby, having a superabsorbent polymer particles with a relatively high bulk density combined with a relatively high value of Effective Capacity (EFFC) enable to reduce the thickness of the absorbent core and enable to provide good performance of the absorbent core comprising absorbent material.

Therefore, there is a need for absorbent core having superabsorbent polymer particles that have special performance in order to overcome the potentially negative consequences of the creation of channels.

It has now been found that the creation of channels by bonding the core wrap may affect the performance of the absorbent core comprising superabsorbent polymer particles.

Independent claims

(EP3167858)

1. An absorbent core (28) for use in an absorbent article comprising: a core wrap (16, 16') enclosing an absorbent material (60), the absorbent material comprising superabsorbent polymer particles, wherein the core wrap comprises a topside (16) and a bottom side (16'), wherein the absorbent core comprises one or more area(s) (26) substantially free of absorbent material through which the topside of the core wrap is attached to the bottom side of the core wrap, so that when the absorbent material swells the core wrap forms one or more channel(s) (26') along the area(s) substantially free of absorbent material, characterized in that the superabsorbent polymer particles have a value of Effective Capacity (EFFC) of at least 27 g/g; wherein The Effective Capacity (EFFC) is calculated via the formula below: EFFC=CRC+AAP/2; wherein the Centrifuge Retention Capacity (CRC) is measured according to the Centrifuge Retention Capacity (CRC) test method and the Absorption Against Pressure (AAP) is measured according to the Absorption Against Pressure (AAP) test method; and wherein the superabsorbent polymer particles have a bulk density of at least 0.5 g/ml according to the Bulk Density Test Method.

Object of invention

(EP3167858)

The invention also relates to an absorbent article for personal hygiene comprising a liquid permeable topsheet, a liquid impermeable backsheet,optionally an acquisition and/or distribution layer, and an absorbent core as described herein between the topsheet and backsheet.

The invention provides absorbent cores for use in absorbent hygiene articles such as, but not limited to baby diapers, training pants, feminine hygiene sanitary pads and adult incontinence products.

It has been found that when the superabsorbent polymer particles have a relatively high bulk density, the superabsorbent polymer particles are more densely packed.

IPC - International classification

A61F-013/15; A61F-013/496; A61F-013/53; A61F-013/532; A61F-013/534; A61F-013/534; A61F-013/539; A61F-013/551; A61L-015/60

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US16/014,122
US15/133,476
GB201322167
JP2017020493
MX2013014784
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US20120323195
CA2839714
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Family publication details

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CA2839714	A1	2012-12-20	CA2839714
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2012-06-13
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2016-01-27
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Title

(EP2535027)
Absorbent article having improved absorption properties

Abstract

(EP2535027)
An absorbent article such as disposable diaper, training pant, and adult incontinence undergarment comprising superabsorbent polymer particles able to absorb and contain body exudates having improved absorption properties and therefore reduce leakage, especially at the first gush, i.e. when the article starts to be wetted.

Current assignees

PROCTER & GAMBLE

Inventors

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PERI ANDREA
THOMANN MAIKE

Advantages / Previous drawbacks

(EP2535027)

High energy pretreatment typically temporarily increases the surface energy of a low surface energy surface (such as PP) and thus enables better wetting of a nonwoven by the nanoparticle dispersion in water.

Of course, while the thermoplastic adhesive materials disclosed herein provide an improved wet immobilization (i.e., immobilization of absorbent material when the article is at least partially loaded), these thermoplastic adhesive materials may also provide a very good immobilization of absorbent material when the absorbent core is dry.

The absorbent article 10 may also include such other features as are known in the art including front and rear ear panels, waist cap features, elastics and the like to provide better fit, containment and aesthetic characteristics.

Independent claims

(EP2535027)

1. An absorbent article comprising an absorbent core, the absorbent article being divided into three portions: a front portion, a back portion and a crotch portion disposed between the front portion and the back portion, the absorbent core having a dry thickness at the crotch point of the article of from 0.2 to 5 mm, wherein the absorbent core comprises at least 90% of superabsorbent polymer particles, wherein the superabsorbent polymer particles comprised by the absorbent core in the front portion or the crotch portion of the article or by the whole absorbent core require a time to reach an uptake of 20 g/g (T20) of less than 240 s as measured according to the K(t) test method.

Object of invention

(EP2535027)

The present invention is directed to absorbent articles such as disposable diapers, training pants and adult incontinence undergarments comprising superabsorbent polymer particles.

The present invention is directed to absorbent articles such as disposable diapers, training pants and adult incontinence undergarments comprising superabsorbent polymer particles.

The present invention therefore provides an absorbent article having improved absorption properties and therefore reduced leakage, especially at the first gush, i.e. when the article starts to be wetted.

The present invention relates to an absorbent article comprising an absorbent core.

It has been found that superior superabsorbent polymer particles can be described in terms of the time it takes for dry superabsorbent polymer particles to reach a certain liquid uptake when absorbing against a confining pressure.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/513; A61F-013/53; A61F-013/53; A61F-013/532; A61F-013/534; A61F-013/535; A61F-013/536; A61F-013/537

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CN201080027188
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CN102470050
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US20110005670	A1	2011-01-13	US20110005670

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2011-01-13

Grant dates

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2014-04-15

(ZA201109124)

2013-05-29

(CN102470050B)

2014-05-28

Title

(WO201104270)

Simplified absorbent article construction

Abstract

(WO2011/004270)

A method includes moving an absorbent composite in a machine direction, severing the composite at a first cut oriented in

a direction that is non-parallel and non-perpendicular with the machine direction, severing the composite at a second cut oriented in a direction that is non-parallel and non-perpendicular with the machine direction, severing the composite at a third cut oriented in a direction that is perpendicular to the machine direction, and separating the composite along the first cut, the second cut, and the third cut into discrete absorbent articles.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(WO2011/004270)

While these advances and sophisticated absorbent articles are welcomed in many segments of society, there is also a need for a more simplified absorbent article to meet the basic needs of lower income consumers in various markets around the world.

[015] As discussed above, there exists a need to provide a more simplified absorbent article and a more simplified method for constructing absorbent articles.

For example, in some embodiments, the first cut 112 and/or the second cut 116 and/or the third cut 122 may include perforations, scores, or other lines of weakness such that discrete absorbent articles 126 are defined by the cuts and/or lines of weakness but separation of any one or more discrete absorbent articles 126 from another absorbent article 126 requires an additional force to be applied.

For example, in one embodiment, the first cut 112 may completely sever the absorbent composite 102 and the third cut 122 may completely sever the absorbent composite 102 whereas the second cut 116 may produce a line of weakness that is later torn by a user to separate the two attached absorbent articles into discrete absorbent articles 126.

In some embodiments, the third cut 122 may completely sever the absorbent composite 102 whereas the first cut 112 and the second cut 116 may produce lines of weakness adapted to be torn into discrete articles at some future time.

embodiments, the first cut 28 and/or the second cut 32 may include perforations, scores, or other lines of weakness such that four discrete absorbent articles are defined by the cuts and/or lines of weakness but separation of one or more article from another article requires an additional force to be applied.

For example, in one embodiment, the first cut 28 may completely sever the absorbent composite 26 whereas the second cut 32 may produce a line of weakness that is later torn by a user to separate the two attached absorbent articles into discrete absorbent articles.

In some embodiments, the first cut 28 and the second cut 32 may both produce lines of weakness adapted to be torn into discrete articles at some future time.

Independent claims

(WO2011/004270)

CLAIMS: 1. A method for making multiple absorbent articles comprising, providing a rectangular liquid-impermeable layer having a first length and a first width, providing an absorbent layer having a second length and a second width, joining the absorbent layer and the liquid-impermeable layer in facing relation to define an absorbent composite, severing the absorbent composite at a first cut oriented in a first direction, wherein the first direction is non-parallel with the first width or the first length, and severing the absorbent composite at a second cut oriented in a second direction, wherein the second direction is non-parallel with the first width or the first length, and wherein the second cut intersects the first cut.

11. A method for making multiple absorbent articles comprising, moving a web of absorbent composite material in a machine direction, the absorbent composite material comprising a liquid-impermeable layer joined in facing relation with an absorbent material layer to define an overlap region, severing the absorbent composite at a first cut oriented in a first direction, wherein the first direction is non-parallel and non-perpendicular with the machine direction, severing the absorbent composite at a second cut oriented in a second direction, wherein the second direction is non-parallel and non-perpendicular with the machine direction and wherein the second cut intersects the first cut at a single intersection, severing the liquid-impermeable layer and the absorbent layer at a third cut oriented in a third direction, wherein the third

direction is perpendicular to the machine direction, and separating the composite along the first cut, the second cut, and the third cut into discrete absorbent articles.

16. A method for making multiple absorbent articles comprising, moving a web of absorbent composite material in a machine direction, the absorbent composite material comprising a liquid-impermeable layer joined in facing relation with an absorbent material layer to define an overlap region, removing a first cut out, a second cut out, a third cut out, and a fourth cut out from the overlap region of the absorbent composite to define a first opening, a second opening, a third opening, and a fourth opening, severing the liquid-impermeable layer and the absorbent layer at a first cut oriented in a first direction, wherein the first direction is non-parallel and non- perpendicular with the machine direction and wherein the first cut completely severs both the absorbent layer and the liquid-impermeable layer, and wherein two of the first opening, the second opening, the third opening, and the fourth opening span only the first cut, severing the liquid-impermeable layer and the absorbent layer at a second cut oriented in a second direction, wherein the second direction is non-parallel and non-perpendicular with the machine direction and wherein the second cut intersects the first cut and wherein two of the first opening, the second opening, the third opening, and the fourth opening span only the second cut, severing the liquid-impermeable layer and the absorbent layer at a third cut oriented in a third direction, wherein the third direction is perpendicular to the machine direction, and separating the composite along the first cut, the second cut, and the third cut into discrete absorbent articles.

Object of invention

(WO2011/004270)

The present invention provides said article and method.

[007] In another aspect, the present invention provides a method for making multiple absorbent articles.

[011] In another aspect, the present invention provides a method for making multiple absorbent articles.

IPC - International classification

A61F; A61F-013/15; A61F-013/15; A61F-013/496; B26F-001/00

Family 182/200 - FAMPAT - ©Questel

Earliest priority number

WOSE2005/000309

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EP05711164
CA2595425
JP2007557956
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(MY-162100)
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Title

(EP1858462)
A pant-type absorbent article and method for its manufacture

Abstract

(EP1858462)
A pant-type absorbent article having a core region (3) and a front (5) and a back panel (6) comprising an elastic web material (10) constituting the sole component of at least part of the front and/or back panels, said article further having an elastic waistband (7) joined to the elastic web material (10. The waistband comprises a first and a second ply (20, 21) of non-elastic web material (22) enclosing between them at least one elongate elastic member (14), wherein the first ply (20) is secured to one side of the elastic web material (10) and the second ply (21) of is secured to the opposite side of the elastic web material just opposite the first ply. The first and second plies are secured to the elastic web material (10) while this is in a stretched condition so as to form gathers (29) along the waistband seam (16) when the elastic web material (10) is in a relaxed position.

Current assignees

ESSITY HYGIENE & HEALTH AKTIEBOLAG
SCA HYGIENE PRODUCTS

Inventors

NORRBY NICLAS

Advantages / Previous drawbacks

(EP1858462)
This is best illustrated in Fig. 5.
A mixture of polyethylene and polypropylene polymers has proved to provide good results in this respect.

Independent claims

(EP1858462)
1. A pant-type absorbent article (1) such as a pant diaper, a sanitary pant or incontinence pant, said article having a core region (3) comprising an absorbent core (2) and a chassis (4), said chassis comprising a front panel (5), a backpanel (6) and an elastic waistband (7), each of the front and back panels having a waist edge (5a, 6a), a crotch edge (5b,6b) and a pair of side edges (5c,6c;5d,6d), wherein the front and back panels being joined to each other along two opposite side edges to define a waist-opening and a pair of leg-openings, at least one of the front and back panels (5;6) comprises an elastic web material (10) constituting the sole component of at least part of the front and/or back panels, the elastic waistband (7) being joined to the waist edge (5a;6a) of at least one of the front and back panels (5;6), wherein the elastic waistband (7) comprises a first and a second ply (20,21) of substantially nonelastic web material (22) enclosing between them at least one elongate elastic member (14), said article having a longitudinal (y) and a transverse direction (x), characterized in that said first ply (20) of substantially nonelastic web material being secured to one side of said elastic web material (10) at the waist edge (5a;6a) of at least one of the front and back panels (5;6) and that said second ply (21) of substantially nonelastic web material is secured to the opposite side of said elastic web material just opposite said first ply (20), the first and second plies being secured to the elastic web material (10) while this is in a stretched condition, the first and second plies (20,21) of substantially nonelastic web material (22) with said elastic web material (10) held there between forming a waistband seam (16), wherein the first and second plies of substantially nonelastic material form

gathers (29) along said waistband seam (16) when said elastic web material (10) is in a relaxed position.

Object of invention

(EP1858462)

In one aspect of the invention the elastic web material constitutes the sole component of the chassis in at least 20% of the total surface area of the article.

The present invention refers to a pant-type absorbent article such as a pant diaper, a sanitary pant or incontinence garment, said article comprising an elastic web material.

The invention further refers to a method for joining a separate elastic waistband to a pant-type absorbent article.

The present invention refers to a pant-type absorbent article such as a pant diaper, a sanitary pant or incontinence garment, said article comprising an elastic web material.

An object of the present invention is to provide a pant-type absorbent article having a core region and a front and a backpanel comprising an elastic web material constituting the sole component of at least part of the front and/or back panels, said article further having an elastic waistband being joined to the elastic web material in such a way so as to provide an excellent fit and appearance around the waist opening.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/72

Family 183/200 - FAMPAT - ©Questel

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2013-04-30

Title

(EP1578335)
Absorbent article with containment flaps

Abstract

(EP1578335)
A pant-like absorbent article, such as a child's training pant, includes laterally extending front and back ear portions defined at opposed lateral sides of the front and back waist regions. A laterally inwardly directed leg contour is defined in each of the lateral sides between the respective front and back ear portions. An absorbent body structure extends longitudinally along the crotch region from the front waist region to the back waist region, the absorbent body structure including laterally extending wing portions that extend laterally along the front and back ear portions. Longitudinally extending leak guards are provided having a free laterally inward side and a laterally outward side with a contour corresponding generally to that of the article lateral sides and leg contours. The laterally outward sides of the guards are attached to the lateral sides of the front and back ear portions and along the leg contours laterally outward of the absorbent body structure so as to define a containment pocket along the leg contours and front and back ear portions.

Current assignees

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KIMBERLY CLARK WORLDWIDE

Inventors

WEBER SHIRLEE A

Advantages / Previous drawbacks

(EP1578335)
This configuration may be desirable particularly if the chassis 20, is stretchable in the transverse direction X, particularly across the front and backwaist regions 14, 12.
With conventional articles, the absorbent body does not extend across the abdomen and buttocks and the containment flaps are insufficient to prevent leakage around the upper and back sides of the absorbent body.
For example, the ear portions may be bonded at the side seams such that the wearer must pull the article on much like underwear.

Independent claims

(EP1578335)
1. A pant-like absorbent article (10) having a longitudinal direction (Y) and longitudinal ends, and a lateral direction and lateral sides, said article comprising: a front waist region (14) at a first longitudinal end, a backwaist region (12) at an opposite longitudinal end, and a crotch region (16) extending longitudinally between said front and backwaist regions (14,12); laterally extending front and back ear portions (50,52) defined at opposed lateral sides (29) of said front and backwaist regions (14,12); a laterally inwardly directed leg contour (18) defined in each said lateral side (29) between respective said front and back ear portions (50,52); an absorbent body structure (32) extending longitudinally along said crotch region (16) generally from said front waist region (14) to said backwaist region (12), said absorbent body structure (32) including laterally extending wing portions (32a) that extend laterally along at least one of said front and back ear

portions (50,52); wherein upon folding said article (10) about a transverse fold line at a longitudinal midpoint thereof to form a pant structure, lateral sides (29) of said front and back ear portions(50,52) join at side seams (26) of said article (10) such that said leg contours (18) define respective leg openings (22); and longitudinally extending leak guards (58), each said guard having a free laterally inward side (60) and a laterally outward side (62) with a contour corresponding generally to that of said article lateral sides (29) and said leg contours (18), said laterally outward side attached to the lateral sides (29) of said front and back ear portions (50,52) and along said leg contours (18) laterally outward of said absorbent body structure (32) so as to define a containment pocket along said leg contours (18) and said front and back ear portions (50,52).

15. An absorbent article (10), comprising: an elastomeric absorbent chassis comprising a body side liner (28), an outer cover (30) bonded to said body side liner (28), and an absorbent structure (32) disposed between said body side liner (28) and said outer cover (30), said absorbent chassis defining a front waist region (14), a backwaist region (12), and a crotch region (16) extending between said front and backwaist regions (14,12); said front and backwaist regions (14,12) further comprising laterally extending ear portions (50,52), said ear portions (50,52) defining leg contours (18) with said crotch region (16) along opposite lateral sides (29) of said chassis; said absorbent structure (32) further comprising a central longitudinally extending portion and elastomeric wing portions (32a) that extend laterally into said front and back ear portions (50,52); elastomeric leak guards (58) having laterally outward sides (62) attached adjacent to laterally outward sides of said chassis such that said leak guards (58) define a containment pocket along said leg contours (18) and at said front and back ear portions (50,52); and wherein upon forming said chassis into a pant structure with said front and back ear portions (50,52) joined at side seams (26) of said article (10), said absorbent structure elastomeric wing portions (32a) and said leak guards (58) provide leakage protection to a wearer generally completely around the front and backwaist regions (14,12); wherein said laterally outward sides (62) of said leak guards (58) are attached outwardly of said absorbent body structure (32) and have a shape and contour corresponding generally to that of said front and back ear portions (50,52) such that said leak guards (58) extend laterally beyond said wing portions (32a) of said absorbent structure (32).

Object of invention

(EP1578335)

In general, the present invention provides an improved absorbent article that protects against leakage around the upper and back sides of the article.

The present invention relates generally to the field of absorbent articles and garments, such as disposable diapers, child's training pants and incontinence articles, which incorporate containment flaps along their side edges.

The present invention provides an improved absorbent body and containment flap configuration that will help minimize the occurrence of side area leaks, particularly in training pant articles.

The present invention provides an improved absorbent body and containment flap configuration that will help minimize the occurrence of side area leaks, particularly in training pant articles.

In general, the present invention provides an improved absorbent article that protects against leakage around the upper and back sides of the article.

The present invention relates generally to the field of absorbent articles and garments, such as disposable diapers, child's training pants and incontinence articles, which incorporate containment flaps along their side edges.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/494; A61F-013/494; A61F-013/496; A61F-013/496

Family 184/200 - FAMPAT - ©Questel

Earliest priority number

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JP50928893

HU9401355

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KR19940701698

SK58594

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(CN1066324C)
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(HU-221285)
2002-09-28

Title

(EP-613363)
Elasticized disposable training pant and method of making the same

Abstract

(EP0613363)
A unitary disposable garment, such as disposable training pants, having a high degree of stretch in the cross-machine direction and fitting a broad range of wearer sizes. The unitary disposable garment is manufactured from a chassis and has a waist opening, two leg openings and a pair of side seams which join the front portion of the chassis to the rear portion of the chassis. The unitary disposable garment preferably has an absorbent assembly, i.e. an absorbent insert, secured to the inner layer of the chassis. The chassis from which the unitary disposable garment is manufactured, has four elasticized ear flaps; each ear flap is elasticized by securing an elastomeric element thereto and mechanically stretching the ear flap and the elastomeric element such that the ear flap is elastically extensible in the direction of initial stretching. The front portion of the chassis is then joined to the rear portion of the chassis on each side of the disposable garment by a seam.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP0613363)
The vacuum ports 822 on the lowermost rolls 821 are preferably covered by a porous material, such as 0.090 inch mesh honeycomb 844, to provide support to the portions of the chassis web 810 acted upon by the vacuum and to provide a good gripping surface against the web so as to substantially prevent lateral slippage or movement of the web across the honeycomb surface whenever the web is acted upon by the vacuum.
Therefore, it is desired to make sure this reduction in wearing forces over time doesn't fall below a minimum for wearing stability.
Although training pants made according to this method will also allow the absorbent articles to fit slight variations in size, a

training pant made according to this particular method is limited in its range of fit sizes because the fixed sides are formed by securing discrete stretchable members to the side edges of the main body of the garment which results in nonfunctional attachment zones, i.e. the area where the main body and the discrete stretchable members overlap forms an area that is not elongatable and is not absorbent.

A training pant made according to this particular method is also limited in its range of fit sizes because the discrete stretchable members which make up the side panels of the garment do not have a high degree of stretch.

are limited in their range of fit sizes because the elastic elements do not have a high degree of stretch, and because the fixed sides are not elastically extensible.

Although training pants made according to these methods will allow the absorbent articles to fit slight variations in waist size and slight variations in leg size, training pants made according to these particular methods are limited in their range of fit sizes because the elastic elements do not have a high degree of stretch, and because the fixed sides are not elastically extensible.

This is particularly true with respect to those "zero strain" stretch laminate web embodiments employing substantially continuous bonding between the plies in question, since relatively close adherence of the plies to one another after incremental stretching renders such ply damage difficult to detect by the end user of the disposable garment.

this particular method is limited in its range of fit sizes because the fixed sides are formed by securing discrete stretchable members to the side edges of the main body of the garment which results in nonfunctional attachment zones, i.e. the area where the main body and the discrete stretchable members overlap forms an area that is not elongatable and is not absorbent.

such ply damage difficult to detect by the end user of the disposable garment.

Independent claims

(EP0613363)

1. An elasticized disposable garment (20) comprising a chassis (14) comprising a front portion (56) having an end edge (64), longitudinal side edges, leg edges (106), a central region (68), ear flaps (72), and a waistband (34), each said ear flap extending laterally outwardly from said central region and extending longitudinally along said central region from said end edge to said leg edge; a rear portion (58) opposed to said front portion, said rear portion having an end edge (64), longitudinal side edges, leg edges (106), a central region (68), ear flaps (72), and a waistband (34); each said ear flap extending laterally outwardly from said central region (68) and extending longitudinally along said central region from said end edge (64) to said leg edge (106); a crotch portion (57) between said front portion (56) and said rear portion (58); and seams (10) joining said front portion to said rear portion so as to form two leg openings and a waist opening substantially encircled by said end edges; said ear flaps (70) each having an elastic ear flap member (90) operatively associated therewith to form an elastomeric laminate; characterized in that each said ear flap is an elasticized ear flap (30) formed by mechanically stretching each said elastomeric laminate such that each said ear flap is permanently elongated and each said elastomeric laminate is elastically extensible in the direction of initial stretching, once the initial stretching forces are removed from said elastomeric laminate.

Object of invention

(EP0613363)

The present invention relates more particularly to disposable absorbent articles such as training pants, incontinent garments (panties or briefs), and the like, having elasticized ear flaps.

It is, therefore, an object of the present invention to provide a method of making an elasticized disposable garment with a high degree of stretch such that the disposable garment will comfortably fit wearers in a broad range of sizes.

The present invention relates to disposable garments having fixed sides, which are placed in position on the wearer by inserting the wearer's legs into the leg openings and sliding the disposable garment into position about the wearer's lower torso.

The present invention relates more particularly to disposable absorbent articles such as training pants, incontinent garments (panties or briefs), and the like, having elasticized ear flaps.

The present invention relates to disposable garments having fixed sides, which are placed in position on the wearer by inserting the wearer's legs into the leg openings and sliding the disposable garment into position about the wearer's lower torso.

IPC - International classification

A41B-013/04; A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/72; B29C-065/08

Family 185/200 - FAMPAT - ©Questel

Earliest priority number

US62/438,253P

Application number

KR10-2019-7018619
AU2017382456
US15/853,701
WOUS2017/068364

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KR10-2019-0098158
AU2017382456
US20180185204
WO2018/119472

Questel unique family ID (FAN)

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KR10-2019-0098158	A	2019-08-21	KR20190098158
AU2017382456	A1	2019-07-11	AU2017382456
US20180185204	A1	2018-07-05	US20180185204
WO2018/119472	A1	2018-06-28	WO2018119472

Earliest priority date

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Application dates

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2019-08-21
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2018-07-05
2018-06-28

Title

(WO2018119472)
Disposable floating absorbent core and disposable absorbent assembly including same, and method of making same

Abstract

(WO2018/119472)
An absorbent article is disclosed. The absorbent article includes a core and a chassis. One or more discrete bonding zones bond the core to the chassis, and one or more unbonded zones of the core are not bonded to the chassis, forming a floating core. The core is not elastically coupled with the chassis. A method of making the absorbent article may include selectively bonding the chassis to the core at discrete bonding zones.

Current assignees

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Advantages / Previous drawbacks

(WO2018/119472)

As such, by configuring the bonding pattern between absorbent core 14 and the underlying outer chassis of absorbent article 17, the design of absorbent article 10 may be optimized to advantageously combine the features and benefits of the floating absorbent core 14 with the features and benefits of a void space 500 defined by a particular bonding pattern (e.g. , enhancements to the fluid retention and/or fluid distribution and/or ventilation properties).

Independent claims

(WO2018/119472)

1. An absorbent article comprising: an absorbent core composite including an absorbent core and an elasticated chassis, wherein the core composite is bonded to the chassis via at least one discrete bonding zone that bonds the core with the chassis and imparts elasticity thereto, and wherein the core composite includes at least one unbonded zone that is unbonded with the chassis, wherein said bonded zone comprises from 5% to 40% of the surface area of a bottom surface of the core composite that is bonded with the chassis, and wherein said unbonded zone comprises from 60% to 95% of the surface area of the bottom surface of the core that is unbonded with the chassis.

40. An absorbent article comprising: an absorbent core; and an elasticated chassis imparting elasticity to the core at one or more bonding zones; and a void space formed between the elasticated chassis and the absorbent core, the void space coincident with unbonded zones of the core where the core is unbonded to the chassis.

42. The absorbent article of 40 57, wherein the void space is a dynamic void space that is responsive to stretching and contraction of elastics of the elasticated chassis.

43. A method of making an absorbent article comprising: bonding an absorbent core to an elasticated chassis to at one or more discrete boding zones, such that the absorbent core is unbonded from the chassis at one or more unbonded zones that are unbonded with the chassis; wherein from 5% to 40% of the surface area of a bottom surface of the core is bonded with the chassis, and wherein from 60% to 95% of the surface area of the bottom surface of the core is unbonded with the chassis.

Object of invention

(WO2018/119472)

[002] The present disclosure relates to disposable absorbent articles that include an elasticated chassis and an absorbent core, as well as to method of making the same.

[0020] Certain aspects of the present disclosure provide for a method of making an absorbent article.

[002] The present disclosure relates to disposable absorbent articles that include an elasticated chassis and an absorbent core, as well as to method of making the same.

The disclosure is also directed to a disposable absorbent article or garment including the disposable absorbent core and chassis.

IPC - International classification

A61F-013/49; A61F-013/49; A61F-013/539

Family 186/200 - FAMPAT - ©Questel

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JP2016016492

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PH12018550107
VN2018003798
EP16888010
CN201680080363
KR20187022547
IN201827025234
TW105137479
WOJP2016/054680

JP2016016492

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PH12018550107
VN60433
EP3381424
CN108697539
KR101910783
IN201827025234
EP3381424
KR20180097747
TWI601518
WO2017/130424
JP2017131568
TW201726088
JP5948516

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PH12018550107	A1	2019-07-15	PH12018550107
VN60433	A	2018-11-26	VN--60433
EP3381424	A4	2018-11-21	EP3381424
CN108697539	A	2018-10-23	CN108697539
KR101910783	B1	2018-10-22	KR101910783
IN201827025234	A	2018-10-05	IN201827025234
EP3381424	A1	2018-10-03	EP3381424
KR20180097747	A	2018-08-31	KR20180097747
TWI601518	B	2017-10-11	TWI601518
WO2017/130424	A1	2017-08-03	WO2017130424
JP2017131568	A	2017-08-03	JP2017131568
TW201726088	A	2017-08-01	TW201726088
JP5948516	B1	2016-06-10	JP5948516

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2017-08-03
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2017-08-01
2016-06-10

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2016-06-10
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(KR101910783)
2018-10-22

Title

(EP3381424)
Absorbent article

Abstract

(EP3381424)
Included are: an absorbent main body (10) including an absorbent core (11); and leak-proof walls (50) in a pair that have elastic members (55) stretchable in a longitudinal direction and are provided on both sides in a lateral direction of the absorbent main body (10), the absorbent core (11) including a concave portion (11c) that is concave inward in the lateral direction in the central portion in the longitudinal direction, the leak-proof walls (50) each including a joining part (61) where portions of a surface of each of the leak-proof walls (50) are joined to each other on one side in a thickness direction, in at least a part of a region corresponding to the concave portion (11c) in the longitudinal direction , he leak-proof walls (50) each including a non-joining part (62) in at least one of a region on one end side and a region on the other end side in the longitudinal direction with respect to the joining part (61)), the non-joining part (62) being where portions of a surface of each of the leak-proof walls are not joined to each other on the one side in a thickness direction.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP3381424)
Further, in the region, a problem such as drooping of the absorbent core is not likely to occur, and thus there is less necessity for forming the joining part.
According to such an absorbent article, the joining parts are pulled obliquely upward with respect to the absorbent article by virtue of a stretching force of the curved parts of the leg-circumference elastic members, so that a portion (fold part) obtained by joining by the joining part is further firmly pressed against the wearer's skin side so that a space is not easily created in the leg circumferential portions.
is difficult to sufficiently suppress creation of such a space.
In such an occasion, in the conventional diaper as described in PTL 1, leak-proof walls deviate in position in association with drooping of the absorbent main body, and thus it is difficult to sufficiently suppress creation of such a space.

Independent claims

(EP3381424)

1. An absorbent article, comprising: an absorbent main body including an absorbent core having a longitudinal direction and a lateral direction intersecting each other; and leak-proof walls in a pair respectively provided on both sides in the lateral direction of the absorbent main body, the leak-proof walls including elastic members that are stretchable in the longitudinal direction, the absorbent core including a concave portion that is concave inward in the lateral direction in the central portion in the longitudinal direction, the leak-proof walls each including a joining part where portions of a surface of each of the leak-proof walls are joined to each other on one side in a thickness direction, in at least a part of a region corresponding to the concave portion in the longitudinal direction, the leak-proof walls each including a non-joining part in at least one of a region on one end side and a region on another end side in the longitudinal direction with respect to the joining part, the non-joining part being where portions of a surface of each of the leak-proof walls are not joined to each other on the one side in a thickness direction.

Object of invention

(EP3381424)

A primary aspect of the disclosure is an absorbent article, comprising: an absorbent main body including an absorbent core having a longitudinal direction and a lateral direction intersecting each other; and leak-proof walls in a pair respectively provided on both sides in the lateral direction of the absorbent main body, the leak-proof walls including elastic members that are stretchable in the longitudinal direction, the absorbent core including a concave portion that is concave inward in the lateral direction in the central portion in the longitudinal direction, the leak-proof walls each including a joining part where portions of a surface of each of the leak-proof walls are joined to each other on one side in a thickness direction, in at least a part of a region corresponding to the concave portion in the longitudinal direction, the leak-proof walls each including a non-joining part in at least one of a region on one end side and a region on another end side in the longitudinal direction with respect to the joining part, the non-joining part being where portions of a surface of each of the leak-proof walls are not joined to each other on the one side in a thickness direction.

The present disclosure relates to an absorbent article.

The present disclosure relates to an absorbent article.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/496; H04W-072/04

Family 187/200 - FAMPAT - ©Questel

Earliest priority number

US62/210,014P

Application number

US16/256,264
US14/844,343
RU2017106027
RU2017107761
BR112017004936
BR112017004941
CL2017000596
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JP2017512985
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JP2017512962
CN201580048738
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IN201717008308
MX2017003258
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EP15763769
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US14/844,018
US14/844,026
US14/844,043
US14/844,047
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CA2961190

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US20190151162
US10226385
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BR112017004936
BR112017004941
CL2017000596
CL2017000598
JP2017530753
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CN107106379
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IN201717008308
MX2017003258
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EP3191042
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IN201717007305
CN106794097
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GB2544690
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CN106687083
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BR112017004936
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US20160074258
US20160074259
US20160074238
CA2961173
CA2961190

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US20190151162	A1	2019-05-23	US20190151162
US10226385	B2	2019-03-12	US10226385
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RU2017107761	A3	2018-10-15	RU2017107761
BR112017004936	A2	2017-12-05	BR112017004936
BR112017004941	A2	2017-12-05	BR112017004941
CL2017000596	A1	2017-12-01	CL0596201700
CL2017000598	A1	2017-12-01	CL0598201700
JP2017530753	A	2017-10-19	JP2017530753
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JP2017529915	A	2017-10-12	JP2017529915
JP2017527371	A	2017-09-21	JP2017527371
JP2017526449	A	2017-09-14	JP2017526449
JP2017526459	A	2017-09-14	JP2017526459
CN107106379	A	2017-08-29	CN107106379
CN106999306	A	2017-08-01	CN106999306
IN201717008308	A	2017-07-21	IN201717008308
MX2017003258	A	2017-07-20	MX2017003258
MX2017003259	A	2017-07-20	MX2017003259
EP3191042	A1	2017-07-19	EP3191042
EP3191050	A1	2017-07-19	EP3191050
EP3191051	A1	2017-07-19	EP3191051
EP3191054	A1	2017-07-19	EP3191054
CN106794100	A8	2017-07-14	CN106794100
CN106687083	A8	2017-07-11	CN106687083
IN201717007305	A	2017-06-30	IN201717007305
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GB2544691	A	2017-05-24	GB2544691
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GB201703715	D0	2017-04-19	GB201703715
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BR112017004941	A1	2017-03-21	BR112017004941
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US20160074240	A1	2016-03-17	US20160074240
US20160074241	A1	2016-03-17	US20160074241
US20160074245	A1	2016-03-17	US20160074245

US20160074246	A1	2016-03-17	US20160074246
US20160074247	A1	2016-03-17	US20160074247
US20160074248	A1	2016-03-17	US20160074248
US20160074249	A1	2016-03-17	US20160074249
US20160074250	A1	2016-03-17	US20160074250
US20160074257	A1	2016-03-17	US20160074257
US20160074258	A1	2016-03-17	US20160074258
US20160074259	A1	2016-03-17	US20160074259
US20160074238	A1	2016-03-17	US20160074238
CA2961173	A1	2016-03-17	CA2961173
CA2961190	A1	2016-03-17	CA2961190

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Application dates

2015-09-03
2015-09-03
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2018-10-16
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2018-10-15
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(US10226385)
2019-03-12

Title

(EP3191042)
Process for making an absorbent article comprising a topsheet/acquisition layer laminate

Abstract

(EP3191042)
A process of making an absorbent article comprising the steps of providing a liquid permeable topsheet web extending substantially continuously in a machine direction, the topsheet web having a first and second surface, a liquid impermeable backsheet web extending substantially continuously in the machine direction and an acquisition layer having a first and second surface The process comprises the step of aligning the topsheet web and the acquisition layer in a face to face relationship such that the second surface of the topsheet in in contact with the first surface of the acquisition layer. The process comprises the step of simultaneously mechanically deforming and combining the topsheet web together with the acquisition layer. The topsheet web and acquisition layer are nested together such that a majority of the three-dimensional protrusions formed in the topsheet web coincide with and fit together with a majority of the three-dimensional protrusions formed in the acquisition layer to provide a topsheet/acquisition layer laminate web having three-dimensional protrusions.

Current assignees

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Inventors

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GRENIER ADRIEN

KNAPMEYER JAMES T

CHATTERJEE ANIRUDDHA

Advantages / Previous drawbacks

(WO2016/040091)

It is desirable as well that the skin facing layer shall provide a softness/cushiness feeling for the caregiver and the wearer.

It may be desirable that a material is capable of undergoing an apparent elongation of equal to or greater than at least 100% or 110% or 120% or 130% up to 200% in the machine and/or cross-machine directions at or before reaching the breaking force according to the Test Method as set out above.

The words "typically", "normally", "advantageously" and the likes also qualify features which are not intended to limit the scope of the claims unless specifically indicated to do so.

In other words, the topsheet 24 is not pushed through the acquisition layer 52 such that the topsheet 24 does not interpenetrate through the acquisition layer 52.

Independent claims

(WO2016/040091)

1. A process of making an absorbent article comprising the steps of: (a) providing a liquid permeable topsheet web extending substantially continuously in a machine direction, the topsheet web having a first and second surface, a liquid impermeable backsheet web extending substantially continuously in the machine direction and an acquisition layer having a first and second surface; wherein the topsheet web and the acquisition layer comprise fibers; (b) aligning the topsheet web and the acquisition layer in a face to face relationship such that the second surface of the topsheet web is in contact with the first surface of the acquisition layer; (c) simultaneously mechanically deforming and combining the topsheet web together with the acquisition layer whereby the topsheet web and acquisition layer are nested together such that a majority of the three-dimensional protrusions formed in the topsheet web coincide with and fit together with a majority of the three-dimensional protrusions formed in the acquisition layer to provide a topsheet/acquisition layer laminate web having three-dimensional protrusions, wherein a width of the acquisition layer is less than a width of the topsheet web in a cross direction; the topsheet/acquisition layer laminate web having a first surface comprising the second surface of the acquisition layer; and (e) joining a portion of the backsheet web to a portion of the topsheet web of the topsheet/acquisition layer laminate web such that the first surface of the topsheet/acquisition layer laminate web is facing towards the backsheet web.

3. A process of making an absorbent article comprising the steps of: (a) providing a liquid permeable topsheet web extending substantially continuously in a machine direction, the topsheet web having a first and second surface, a liquid impermeable backsheet web extending substantially continuously in the machine direction, an acquisition layer having a first and second surface, a dry-laid fibrous structure and a carrier layer web having a first and second surface, wherein the topsheet web and the acquisition layer comprise fibers; (b) aligning the topsheet web and the acquisition layer in a face to face relationship such that the second surface of the topsheet web is in contact with the first surface of the acquisition layer; (c) simultaneously mechanically deforming and combining the topsheet web together with the acquisition layer whereby the topsheet web and acquisition layer are nested together such that a majority of the three-dimensional protrusions formed in the topsheet web coincide with and fit together with a majority of the three-dimensional protrusions formed in the acquisition layer to provide a topsheet/acquisition layer laminate web having three- dimensional protrusions, wherein a width of the acquisition layer is less than a width of the topsheet web in a cross direction; the topsheet/acquisition layer laminate web having a first surface comprising the second surface of the acquisition layer; (d) depositing the dry-laid fibrous structure on the first surface of the carrier layer web; and (e) joining a portion of the backsheet web to a portion of the topsheet web of the topsheet/acquisition layer laminate web wherein the second surface of the carrier layer web is facing the topsheet/acquisition layer laminate web or the backsheet web.

Object of invention

(WO2016/040107)

The present disclosure relates to absorbent articles, and more particularly relates to absorbent articles having substantially airfelt-free cores or airfelt-free cores in combination with three- dimensional nonwoven materials.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/42; A61F-013/45; A61F-013/51; A61F-013/511; A61F-013/512; A61F-013/513; A61F-013/53; A61F-013/53; A61F-013/532; A61F-013/534; A61F-013/535; A61F-013/536; A61F-013/537; A61F-013/538; A61F-013/539; A61F-013/551; A61F-013/84

Family 188/200 - FAMPAT - ©Questel

Earliest priority number

JP2014096354

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IN201617041150
VN2016004253
PH12016502096
JP2014096354
WOJP2015/063220

Publication numbers

IN201617041150
VN50856
PH12016502096
PH12016502096
JP5931119
JP2015213543
WO2015/170712

Questel unique family ID (FAN)

71292356

Family publication details

IN201617041150	A	2017-03-03	IN201617041150
VN50856	A	2017-02-27	VN--50856
PH12016502096	A1	2017-01-09	PH12016502096
PH12016502096	B1	2017-01-09	PH12016502096
JP5931119	B2	2016-05-13	JP5931119
JP2015213543	A	2015-12-03	JP2015213543
WO2015/170712	A1	2015-11-12	WO2015170712

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2014-05-07
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2016-10-20
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2016-12-01

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2017-01-09
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2015-11-12

Grant dates

(JP5931119)

2016-05-13

(PH12016502096)

2017-01-09

Title

(WO2015170712)

Absorbent article

Abstract

(WO2015/170712)

The purpose of the present invention is to obtain an absorbent article that has stable absorbability when worn and is more comfortable to use by preventing liquid leakage and stuffiness, the absorbent article enabling the natural absorbability of an absorption core to be fully exhibited and the leakage of liquid such as excreted liquid and stuffiness when worn to be stably suppressed. More specifically, an absorber (13) is configured to be provided with an absorption core (15) which extends in the length direction of the absorber (13) and absorbs and holds liquid, and a covering sheet (16) which has liquid permeability and is wrapped around the outer peripheral surface of the absorption core (15) about the axis in the length direction of the absorption core (15), the covering sheet (16) has extension parts (18) each of which extends from an end in the width direction of the absorption core (15) and the inner peripheral surface side of each of which is not in contact with a liquid permeable sheet (11)-side surface and a liquid impermeable sheet (12)-side surface of the absorption core (15), and an absorbent material (19) having liquid absorbability is bonded to the inner peripheral surface side of each of the extension parts (18) by a bonding agent.

Current assignees

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Inventors

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KAWAKAMI YUSUKE

Advantages / Previous drawbacks

(WO2015/170712)

In addition, the wearer of the disposable diaper when the sweat to outwit, for the space, the absorbent core does not exist, because it is almost impossible to absorb the perspiration, wherein an increase in humidity in the inside of the disposable diaper may be in contact.

In order to solve the problems above, the absorbent article of the present invention, the liquid-permeable sheet, a liquid permeable sheet disposed on one side of a liquid-impermeable sheet, the liquid-permeable sheet and a liquid impermeable sheet disposed between the absorbent body and extending in one direction of the absorbent article, the absorber includes, extending in the longitudinal direction of the absorbent, the liquid, the absorbent core and retain, the outer peripheral surface of the absorbent core wherein the absorbent core around the axial line of the length of the wound, and a liquid-permeable sheet provided with a coating, the coated sheet, the absorbent core and extends from the end portion in the width direction of said absorbent core in the inner peripheral surface of the liquid-permeable sheet side of the liquid impermeable surface and the side surface of the extending portion not in contact with each other and have, on an inner surface side of an extension-out unit, a liquid-absorbent absorbent material is bonded by an adhesive in.

Independent claims

(WO2015/170712)

And the liquid-permeable sheet, a liquid permeable sheet disposed on one surface side of the liquid-impermeable sheet, and the liquid-permeable sheet of liquid impermeable sheet disposed between the absorbent body and elongated in one direction of the absorbent article, the absorber includes, extending across the length of the absorbent, liquid absorbent, the absorbent core and holding, wherein the outer peripheral surface of the absorbent core in the direction of the length of the absorbent core about the axis of the wound, and having a liquid-permeable sheet provided with a coating, the coated sheet, said absorbent core extending from the end in the width direction of the absorbent core and the inner circumferential surface side of the liquid-permeable sheet in said liquid-impermeable sheet and the surface of the side surface of the side not in contact with each other and have an extension portion, an extension to an inner surface side of the draw-out portion, having a liquid absorbing absorbent material is adhered by an adhesive agent, the absorbent article.

Object of invention

(JP2015213543)

The present invention relates to, and absorbent articles, particularly disposable diapers suitable for use as an absorbent article.

The present invention relates to, and absorbent articles, particularly disposable diapers suitable for use as an absorbent article.

An aspect of the present invention, original absorption power of the absorbent core can be fully exerted, or the leakage of the liquid in the liquid or the like excretion and, upon wearing can be prevented stably becoming humid, and force absorption of stability of the wearer, by preventing liquid leakage or stuffy feeling good absorbent article which serves both to provide.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/496; A61F-013/496; A61F-013/53; A61F-013/535

Family 189/200 - FAMPAT - ©Questel

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US10/017,762

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EP02805048
KR20047008115
ARP020104574
US10/017,762
MXPA04005060
WOUS02/029051
AU2002333606

Publication numbers

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EP1453449
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US20030114810

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2786

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EP1453449	B8	2008-04-16	EP1453449
DE60225176	D1	2008-04-03	DE60225176
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AR037453	A1	2004-11-10	AR--37453
US6793650	B2	2004-09-21	US6793650
EP1453449	A2	2004-09-08	EP1453449
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AU2002333606	A1	2003-06-30	AU2002333606
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WO03/051247	A2	2003-06-26	WO200351247
US20030114810	A1	2003-06-19	US20030114810

Earliest priority date

2001-12-14

Application dates

2001-12-14
2002-09-12
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Publication dates

2012-04-12
2011-10-12
2009-08-20
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2008-04-16
2008-04-03
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2003-06-19

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2008-02-20
(US6793650)

2004-09-21

(DE60225176)

2008-04-03

(KR100912979)

2009-08-20

Title

(EP1453449)

Disposable training pant designed specifically for late stage toilet training

Abstract

(EP1453449)

A pant-like absorbent garment having an absorbent pad attached to a front region and a back region of an outer cover, wherein the absorbent pad is at least partially suspended therebetween to provide a close or customized fit for the wearer. The pant-like absorbent garment is suitable as a low capacity training pant for late stage toilet training.

Current assignees

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KIMBERLY CLARK WORLDWIDE

Inventors

WEBER SHIRLEE ANN

Advantages / Previous drawbacks

(EP1453449)

In contrast to the loop type fasteners which desirably include a flexible fabric, the hook material advantageously includes a resilient material to minimize unintentional disengagement of the fastener components as a result of the hook material becoming deformed and catching on clothing or other items.

Independent claims

(EP1453449)

1. A low capacity disposable training pant comprising: an outer cover (40) defining a front region (22), a back region (24) and a crotch region (26) interconnecting the front region (22) and the back region (24); and an absorbent pad (44) joined at a first end portion (91) to the front region (22) and joined at a second end portion (92) to the back region (24), wherein the absorbent pad (44) is at least partially suspended between the front region (22) and the back region (24), and wherein the absorbent pad (44) includes a matrix of hydrophilic fibers mixed with particles of superabsorbent material, characterised in that the absorbent pad (44) has an overall absorbent capacity of 60 to 200 grams.

Object of invention

(EP1453449)

The present invention is directed to a training part as claimed in claim 1.

The present invention is directed to a low capacity training pant 20 having an absorbent pad 44 operatively attached to an absorbent chassis 32 of the training pant 20.

This invention is directed to a low capacity disposable training pant for late stage toilet training having an absorbent pad suspended from a front and backwaist region of an absorbent chassis to provide a close or customized fit against the wearer's body.

The present invention is directed to a low capacity training pant 20 having an absorbent pad 44 operatively attached to an absorbent chassis 32 of the training pant 20.

This invention is directed to a low capacity disposable training pant for late stage toilet training having an absorbent pad suspended from a front and backwaist region of an absorbent chassis to provide a close or customized fit against the wearer's body.

The present invention is directed to a training part as claimed in claim 1.

IPC - International classification

A41B-013/04; A61F-013/00; A61F-013/15; A61F-013/15; A61F-013/496; A61F-013/496

Family 190/200 - FAMPAT - ©Questel

Earliest priority number

EP93305150

Application number

MYPI9401701
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JP50358095
DE69328723
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HK98114481
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PT93309614T
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DK93309614T
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EP0640330
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PE24395
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WO95/01146
WO95/01147
CA2165292
EP0631768

Questel unique family ID (FAN)

490879

Family publication details

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JP3320733	B2	2002-09-03	JP3320733
DE69328723	T2	2002-07-25	DE69328723
BRPI9406990	B1	2002-04-30	BR9406990
HU220441	B	2002-01-28	HU-220441
HU220315	B	2001-12-28	HU-220315
CZ288504	B6	2001-07-11	CZ-288504
BRPI9406942	B1	2001-03-20	BR9406942
HK1013238	A1	2001-03-16	HK1013238
RU2158572	C2	2000-11-10	RU2158572
PT640330	E	2000-10-31	PT-640330
GR3033504	T3	2000-09-29	GR3033504
CZ286999	B6	2000-08-16	CZ-286999
DK0640330	T3	2000-08-07	DK-640330T
ES2145763	T3	2000-07-16	ES2145763
DE69328723	D1	2000-06-29	DE69328723
AT193199	T	2000-06-15	ATE193199
EP0640330	B1	2000-05-24	EP-640330
CA2166053	C	2000-02-29	CA2166053
RU2145204	C1	2000-02-10	RU2145204
CA2165292	C	1999-10-12	CA2165292
VN0000967	B	1999-09-25	VN----967B
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EG20579	A	1999-08-30	EG--20579
AU707284	B2	1999-07-08	AU-707284
HK1010043	A1	1999-06-11	HK1010043
SG64914	A1	1999-05-25	SG--64914
VN0000854	B	1999-05-25	VN----854B
SG64360	A1	1999-04-27	SG--64360
US5836929	A	1998-11-17	US5836929
AU7742698	A	1998-10-01	AU9877426
AU696231	B2	1998-09-03	AU-696231
GR3026491	T3	1998-07-31	GR3026491
DE69317769	T2	1998-07-30	DE69317769
US5762641	A	1998-06-09	US5762641
DK0631768	T3	1998-06-02	DK-631768T
NZ268535	A	1998-05-27	NZ-268535
ES2114006	T3	1998-05-16	ES2114006
DE69317769	D1	1998-05-07	DE69317769
AT164511	T	1998-04-15	ATE164511
EP0631768	B1	1998-04-01	EP-631768
NZ268534	A	1998-02-26	NZ-268534
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BR9406990	A	1996-09-10	BR9406990
BRPI9406990	A1	1996-09-10	BRPI9406990
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CN1129901	A	1996-08-28	CN1129901
KR19967003331	A	1996-08-17	KR19967003331
KR19967003332	A	1996-08-17	KR19967003332
KR960703331	A	1996-08-17	KR19960703331
KR960703332	A	1996-08-17	KR19960703332
BR9406942	A	1996-08-06	BR9406942
BRPI9406942	A1	1996-08-06	BRPI9406942
CZ351595	A3	1996-05-15	CZ9503515
CZ351695	A3	1996-05-15	CZ9503516
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TR28301	A	1996-04-09	TR--28301
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HU9503975	D0	1996-03-28	HU9503975
FI956337	A	1996-02-28	FI9506337
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EP0640330	A1	1995-03-01	EP-640330
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WO95/01146	A1	1995-01-12	WO9501146
WO95/01147	A1	1995-01-12	WO9501147
CA2165292	A1	1995-01-12	CA2165292
EP0631768	A1	1995-01-04	EP-631768

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1993-06-30

Application dates

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(HU-220441)
1997-06-30
(BR9406990)
2002-04-30
(MY-130120)
2007-06-29

Title

(EP-631768)

Absorbent core having improved fluid handling properties

Abstract

(EP0631768)

An absorbent core comprises, in sequence through its thickness, a first structure comprising an upper layer comprising a first fibrous material (3) having a wet compressibility of at least 5 cm<3>g<-><1> and a drip capacity of at least 10g g<-><1>, the structure also comprising a first superabsorbent material (5) having a substantially non-decreasing dynamic swelling rate and a second structure comprising a second fibrous material (6) and a second superabsorbent material (7) having a dynamic swelling rate of at least 0.2g g<-><1> s<-><1> and an absorption against pressure of at least 15g g<-><1> at 50g cm<-><2> (0.7psi), wherein the dynamic swelling rate of the first superabsorbent material is not greater than 2/3 of the dynamic swelling rate of the second superabsorbent material. The absorbent core allows improved fluid handling of body discharges throughout the core and in the subsequent efficient storage of these discharges.

Current assignees

PROCTER & GAMBLE

Inventors

PLISCHKE MANFRED

SCHMIDT MATTIAS

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Advantages / Previous drawbacks

(EP0631768)

The pathway is thought to be necessary to allow body discharges to travel through an upper storage layer that may be subject to "gel blocking" and therefore have a reduced discharge uptake or transportation, to an underlying pair of acquisition/distribution and storage layers.

The absorbent core of the invention has the advantage that it allows improved flow control or fluid handling of body discharges throughout the core and in the subsequent efficient storage of these discharges.

The present invention is intended to improve upon some of the problems of the prior art with regard to the fluid handling and absorption properties.

However, the first structure should not be too open as this could lead to a higher risk of gel-blocking of the superabsorbent material in the second structure, thereby under-utilising the absorbent capacity in that structure.

The absorbent core of the invention can comprise in some or all of its layers tissue laminates or other nonwoven structures (which can have superabsorbent material included in them) provided that these do not detract from the performance of the material.

The absorbent article disclosed in WO92/11831 has the disadvantage that it is a relatively complex structure because of the need to provide pathways between the upper storage layers and the layers underlying those storage layers.

Independent claims

(EP0631768)

1. An absorbent core characterised in that it comprises, in sequence through its thickness, a first structure comprising an upper layer comprising a first fibrous material (3) having a wet compressibility of at least 5 cm g and a drip capacity of at least 10g g , the structure also comprising a first superabsorbent material (5) having a substantially nondecreasing dynamic swelling rate and a second structure comprising a second fibrous material (6) and a second superabsorbent material (7) having a dynamic swelling rate of at least 0.2g g s and an absorption against pressure of at least 15g g at 50g cm (0.7psi), wherein the dynamic swelling rate of the first superabsorbent material is not greater than 2/3 of the dynamic swelling rate of the second superabsorbent material.

Object of invention

(EP0631768)

The second structure has properties that allow it to effectively influence the flow of discharges through the first structure.

The present invention relates to an absorbent core for use in articles such as disposable diapers, incontinence articles, sanitary towels, training pants and the like, having improved fluid handling properties.

According to a further aspect of the invention an absorbent article comprises a liquid pervious topsheet, a liquid impervious backsheet, and an absorbent core as described above interposed between the topsheet and the backsheet with the first structure positioned towards the topsheet and the backsheet is positioned towards the second structure.

The present invention relates to an absorbent core for use in articles such as disposable diapers, incontinence articles, sanitary towels, training pants and the like, having improved fluid handling properties.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/49; A61F-013/53; A61F-013/53; A61F-013/534; A61F-013/537; B32B-005/16; B32B-027/00; D04H-001/58

Family 191/200 - FAMPAT - ©Questel

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Application number

BR112014027200
US15/415,030
CN201380023098
US13/873,603
JP2015510405
EP13721881
WOUS2013/038984
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BR112014027200
US20170128280
CN104271095
US9585797
JP6092369
JP2015516866
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CN104271095
BR112014027200
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BR112014027200	A2	2017-06-27	BR112014027200
US20170128280	A1	2017-05-11	US20170128280
CN104271095	B	2017-03-15	CN104271095B
US9585797	B2	2017-03-07	US9585797
JP6092369	B2	2017-02-17	JP6092369
JP2015516866	A	2015-06-18	JP2015516866
EP2844204	A1	2015-03-11	EP2844204
CN104271095	A	2015-01-07	CN104271095
BR112014027200	A1	2014-12-02	BR112014027200
WO2013/166094	A1	2013-11-07	WO2013166094
US20130296149	A1	2013-11-07	US20130296149
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2013-11-07

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2017-03-07
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2017-02-17
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2017-03-15

Title

(EP2844204)
Method for transferring absorbent articles and rejecting defective absorbent articles

Abstract

(EP2844204)
The present disclosure relates to methods and apparatuses for rejecting defective absorbent articles from a converting line. At a downstream portion of a converting process, a continuous length of absorbent articles may be subjected to a final knife and cut to create discrete absorbent articles advancing on a first carrier. From the first carrier, the discrete absorbent articles may be transferred to a transfer apparatus, which in turn, transfers the discrete absorbent articles to a second carrier. The transfer apparatus may include carrier members that orbit around an axis of rotation and may be adapted to receive the absorbent articles from the first carrier and transfer the absorbent articles to the second carrier. Defective absorbent articles may be detected by an inspection system, which may be operably connected with the transfer apparatus and/or the first carrier to remove the defective absorbent articles from the converting process.

Current assignees

INTERSCOPE MANUFACTURING
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Inventors

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CEDRONE LOUIS J

Advantages / Previous drawbacks

(WO2013/166094)

Consequently, it would be beneficial to provide a relatively less complex and less spacious system for high speed selective redirecting and/or rejecting of absorbent articles.

It is to be appreciated that although the methods and apparatuses herein may be configured to reject various types of products, the methods and apparatuses herein are discussed below in the context of manufacturing absorbent articles. It is to be appreciated that with respect to the transfer apparatus, the first orientation and the second orientation may be described in various ways.

Thus, space consumption is a disadvantage to the mechanical switch method.

Independent claims

(WO2013/166094)

1. A method for rejecting defective absorbent articles from a web converting manufacturing process, the method comprising the steps of: converting a substrate and component parts into a continuous length of absorbent articles (400); inspecting the substrate or component parts with a sensor (602); communicating inspection parameters (1002) from the sensor (602) to a controller (604); cutting the continuous length of absorbent articles (400) into discrete absorbent articles (100); identifying defective discrete absorbent articles (100R) based on the inspection parameters (1002); advancing the discrete absorbent articles (100) in a machine direction on a first carrier (316); transferring discrete absorbent articles (100) from the first carrier (316) onto carrier members (324) at a first position (332) proximate the first carrier (316); applying a vacuum pressure to the carrier members (324) to hold the discrete absorbent articles (100) on the carrier members (324); moving carrier members (324) from the first position (332) proximate the first carrier (316) to a second position proximate (334) a second carrier (322); and transferring discrete absorbent articles (100) from the carrier members (324) to the second carrier (322); and rejecting defective discrete absorbent articles (100R) before the defective absorbent articles are transferred to the second carrier (322).

Object of invention

(WO2013/166094)

The present disclosure relates to methods and apparatuses for manufacturing absorbent articles, and more particularly, systems and methods for detecting and rejecting defective absorbent articles from a converting line.

The present disclosure relates to methods and apparatuses for rejecting defective absorbent articles from a converting line.

The present disclosure relates to systems and methods for manufacturing disposable absorbent articles, and more particularly, systems and methods for detecting and rejecting defective absorbent articles from a converting line.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; B65G-047/24; B65G-047/84

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2017-11-21

Title

(CN107361924)

Body-adaptive leakage-proof absorption product and method for preparing same

Abstract

(CN107361924)

The invention relates to a body-adaptive leakage-proof absorption product which comprises a liquid-permeable surface layer, a light-tight bottom layer and a dumbbell-shaped absorption core. A left leakage-proof separation edge and a right leakage-proof separation edge are arranged on two sides of the body-adaptive leakage-proof absorption product in the width direction, each leakage-proof separation edge comprises a base, a free portion and an expansion portion, the expansion portions are connected to the free portions and are positioned at the upper ends of the free portions, elastic bodies are arranged in the expansion portions, and accordingly the leakage-proof separation edges have elastic expansion properties in the longitudinal directions. The body-adaptive leakage-proof absorption product is characterized in that each leakage-proof separation edge further comprises a body-adaptive connecting portion, the body-adaptive connecting portions are arranged between the bases and the free portions and are arranged at two longitudinal side edge of a crotch of the dumbbell-shaped absorption core, stereoscopic arc-shaped leakage-proof separation edges can be formed by the body-adaptive connecting portions at the leakage-proof separation edges after the body-adaptive leakage-proof absorption product is in a natural loose stereoscopic state and then the leakage-proof separation edges positioned at joints between the free portions and the body-adaptive connecting portions are inwardly contracted along the width direction of the crotch of the dumbbell-shaped absorption core.

Current assignees

BARON

Inventors

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ZHANG QIANG

SU LIWEI

Advantages / Previous drawbacks

(CN107361924)

The beneficial effects of the present invention implemented: ensuring the diaper on the basis of the leakage preventing dry, to provide a ratio according to the size of the baby, a dumbbell-shaped absorbent core crotch width of the anti-leak through the edge shrinking inward direction, so that the inside of a baby is not subjected to pressure, on-body effect is good, makes them more fitness of absorbent articles, baby more comfortable to be worn about the body assembly, activity is more convenient, free.

The object of the present invention is to provide for a technical problem, on the basis of dry diaper to assure a leak-proof, to provide a ratio according to the size of the baby, the anti-leak through the edge of the absorbent core is contracted inwardly in the width direction of the crotch dumbbell shape, so that the inside of a baby is not subjected to pressure, on-body effect is good, makes them more fitness of the absorbent article, a baby more comfortable to be worn about the body assembly, activity is more convenient, free.

Through accurate cut crotch radians, forming a two lobed golden ratio, is not subjected to pressure to the inside of a baby,

a baby wearing about the body more comfortable fit, activity is more convenient, free; ensuring the diaper on the basis of the leakage preventing dry and also, that the diaper is lighter, the gas-permeable, continuous inner core layer, we can not afford to lump, beneficial for healthy growth of the baby.

A seal impervious body 15 is based on the action of the absorbent liquid during absorption due to malabsorption, leak-barrier cuffs and the liquid-impermeable bottom layer result in urine by the gap between the bleed-out laterally, further urine oozing out from the leg side, pose a serious leakage problem, it loses the sense of use of the absorbent article, the reason, this is a high water-absorbent resin particles as soon as the urine flow touch surface, i.e. the highly water-absorbent resin particles receive, at the same time, highly water-absorbent resin particles absorb urine that swells after, after expansion to the colloid surface tackiness of a high water-absorbent resin gel, gel blocking phenomenon tends to occur, resulting in a subsequent urine it is difficult to permeate the absorbent as core ordinary straight type absorbent core, a dumbbell-shaped re-spread out within the absorbent core, so that the lateral width of the urine in the absorbent core with the liquid-impermeable bottom layer leak-barrier cuffs in a direction from the space between the bleed-out.

A seal impervious body with the urine in the leak-proof barrier cuffs 15 effectively prevent the gap between the liquid-impermeable bottom layer to the two side lateral diffusion, bleeding, prevent urine from the leg side bleeding, reduce the likelihood of side leakage, a problem with the prior art is solved.

By using a conventional process causes the diaper according to Comparative heavy, inconvenient to the infant activity, and long-term use and easily from lump, tomographic, it is easy to press the crotch of the infant, causing inconvenience to the infant activity, and also present a hazard to the health of the baby, affect the healthy growth of the baby.

Independent claims

(CN107361924)

1. One fitness leak-proof absorbent article, comprising a liquid pervious top sheet, and a liquid impermeable bottom layer disposed on the liquid-permeable top sheet, a liquid impermeable bottom layer between the absorbent core dumbbell shape, the absorbent article of the width-direction sides extending in the longitudinal direction of the barrier cuffs are provided respectively with left leakproof barrier cuffs right leak-proof, leak-proof barrier cuffs each comprise a base portion of each, connected to the base and located in the upper end of the free portion of the base, and is connected to the free portion and the upper end of the telescopic part is located on a free portion, the telescoping section is provided with an elastomer, such that the barrier cuffs has elastic extensibility in the longitudinal direction leak-proof, characterized in: each edge includes a fitness leak-proof barrier connecting part, connected to the fitness member is disposed on both longitudinal sides of the crotch edge position dumbbell-shaped absorbent core, the absorbent article is in a natural relaxed fitness connecting portion of the three-dimensional state, so that the free portion is located at the connection between the connecting portion with the fitness are placed along the width direction of the absorbent core crotch region interposed there between leak proof after shrinking inward dumbbell shape, each of the absorbent article in the width direction to form a leak-proof barrier cuffs three-dimensional arcuate edge leak-proof barrier.

Object of invention

(CN107361924)

In order to achieve the object, the present invention is implemented through the following technical scheme: fitness leak-proof absorbent article, comprising a liquid pervious top sheet, a liquid-impermeable back sheet and placed in a liquid pervious top sheet, a liquid impermeable bottom layer of the dumbbell-shaped absorbent core, the absorbent article in the width direction are respectively provided on both sides of the left leakproof barrier cuffs extending in the longitudinal direction to the right a leak-proof barrier cuffs, each of the leak-proof barrier cuffs includes a base, the base is connected to the base and the free portion of the upper end, and connected to the free portion and is located at the upper end of the free part the telescopic part, in the telescopic part is provided with a elastic body, so that the leak-barrier cuffs having elastic extensibility in the longitudinal direction, each of the leak-proof partition edge includes a connecting portion provided on the base and the fitness between the free portion, a crotch section provided in the longitudinal direction of the fitness with the dumbbell-shaped absorbent core is connected to both side edge position, in a naturally relaxed fitness connecting portion in an absorbent article of the three-dimensional state, so that the free portion and the connecting portion of the joint between fitness is located at the edges of the crotch portion through a leak-proof contract inward in the width direction after a dumbbell-shaped absorbent core, each of the leak-barrier cuffs in the width direction of the absorbent article leak-proof barrier to form a three-dimensional arc-shaped edge.

The present invention relates to a fitness leak-proof absorbent article, comprising a liquid pervious top sheet, a liquid-impermeable back sheet and absorbent core dumbbell shape, both sides in the width direction of the absorbent article left leakproof barrier cuffs and right leak-proof barrier cuffs are provided, each of the leak-proof barrier cuffs includes a base, a free portion, and a free portion connected to the free portion and is located at the upper end of the telescopic part, in the telescopic part is provided with an elastomer, so that a leak-proof barrier cuffs having elastic extensibility in the longitudinal direction, characterized in: each leak-proof barrier is provided between the ends of the base and the free edge includes a fitness connecting portion, are installed at the rear end portion of the absorbent core fitness connecting portions of both longitudinal side edge position dumbbell shape, the absorbent article is in a natural relaxed fitness connecting portion of the three-dimensional state, so that a free portion and the fitness of the joint between the connecting portion is located at the edges of the absorbent core crotch width direction of the leak-shrunk inward dumbbell, each leak-proof barrier cuffs to form a three-dimensional curved in the width direction of the absorbent article through a leak-proof edge.

The present invention relates to the technical field of disposable hygiene articles, in particular to a fitness and a manufacturing method of a leakage preventing the absorbent article.

IPC - International classification

A61F-013/15; A61F-013/494; A61F-013/496; A61F-013/496

Family 193/200 - FAMPAT - ©Questel

Earliest priority number

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JP2017508545
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US9980857
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CN106604708
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US20160058625

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US9980857	B2	2018-05-29	US9980857
JP2017523879	A	2017-08-24	JP2017523879
EP3185835	A1	2017-07-05	EP3185835
CN106604708	A	2017-04-26	CN106604708
WO2016/029369	A1	2016-03-03	WO201629369
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(US9980857)
2018-05-29

Title

(EP3185835)
Absorbent article with leg cuffs

Abstract

(EP3185835)
Disclosed is an absorbent article (20) comprising: 1) a water permeable topsheet (58); 2) a water impermeable backsheet (60); 3) an absorbent core (62); 4) an outer cover layer (42); and 5) a pair of outer cuffs (66) for providing leg gasketing function, each outer cuff comprising : a) a cuff sealing (76) located transversely between the absorbent core and the longitudinal side edge of the backsheet, b) a first cuff elastic element (72) located transversely inward of the longitudinal side edge of the backsheet, and no more transversely inward than 3mm from the cuff sealing; c) a second cuff elastic element (74) located transversely outward of the longitudinal side edge of the backsheet; wherein the tensile force of each elastic body of the second cuff elastic element is no more than 70% of the tensile force of any elastic body of the first cuff elastic element; d) a cuff gap (70) located between the of the first cuff elastic element and the second cuff elastic element, the cuff gap having a transverse width of at least 3mm; and e) a cuff fringe (78) located transversely outward the second cuff elastic element, the cuff fringe having a transverse width of at least 5mm; wherein the cuff sealing (76) bonds all of the materials existing in the thickness direction of the article where the cuff sealing is located.

Current assignees

PROCTER & GAMBLE

Inventors

MORIMOTO KOICHI
TAMEISHI KAZUAKI

Advantages / Previous drawbacks

(WO2016/029369)
Among other benefits, it is believed that when at least a portion of the absorbent core is substantially cellulose free, this portion of the absorbent core is significantly thinner and more flexible than a similar absorbent core that includes more than 10% by weight of cellulosic fibers.
Based on the foregoing, there is a need for an absorbent article having leg cuffs that have improved tactile and perceived softness, while maintaining the performance of leakage protection.
Such cuff fringe 78 may connote softness at the edge, and provide good leakage protection.
Although an absorbent core 62 generally includes absorbent materials in particulate form having a high retention capacity such as, for example absorbent polymers, these materials do not need to be present along the entire length of the absorbent core 62.
In another, this may interfere with the softness of this area.

Independent claims

(WO2016/029369)

1. An absorbent article having a skin facing side, a garment facing side, a longitudinal axis, and a transverse axis, the absorbent article comprising: 1) a water permeable topsheet extending in the longitudinal direction and the transverse direction; 2) a water impermeable backsheet extending in the longitudinal direction and the transverse direction, and having a pair of longitudinal side edges; 3) an absorbent core disposed between the topsheet and the backsheet, the backsheet extending beyond the absorbent core in both the longitudinal direction and the transverse direction; 4) an outer cover layer disposed on the garment facing side of the backsheet, the outer cover layer at least coextensive with the backsheet; and 5) a pair of outer cuffs for providing leg gasketing function, each outer cuff comprising: a) a cuff sealing disposed in a longitudinally extending manner, the cuff sealing located transversely between the absorbent core and the longitudinal side edge of the backsheet, b) a first cuff elastic element comprising at least one elastic body disposed in a longitudinally extending manner, the first cuff elastic element located transversely inward of the longitudinal side edge of the backsheet, and no more transversely inward than 3mm from the cuff sealing; c) a second cuff elastic element comprising at least one elastic body disposed in a longitudinally extending manner, the second cuff elastic element located transversely outward of the longitudinal side edge of the backsheet; wherein the tensile force of each elastic body of the second cuff elastic element is no more than 70% of the tensile force of any elastic body of the first cuff elastic element; d) a cuff gap located between the of the first cuff elastic element and the second cuff elastic element, the cuff gap having a transverse width of at least 3mm; and e) a cuff fringe disposed in a longitudinally extending manner, the cuff fringe located transversely outward the second cuff elastic element, the cuff fringe having a transverse width of at least 5mm; wherein the cuff sealing bonds all of the materials existing in the thickness direction of the article where the cuff sealing is located.

Object of invention

(WO2016/029369)

The present invention relates to an absorbent article having a skin facing side, a garment facing side, a longitudinal axis, and a transverse axis, the absorbent article comprising:

This invention relates to absorbent articles such as diapers having leg cuffs with improved softness.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/20; A61F-013/475; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/494; A61F-013/496

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TH20111002484
KR20177015226
VN2011002368
TW99110174
CN201080014832
JP2009091501
EP10758626
NZ59551610
EA201101448
US13/259,483
KR20117024352
SG2011063906
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KR20170066701
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BRPI1006785
TH114897
EA201101448
US20120073760
VN29076
CN102378607
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KR20120011851
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BRPI1006785	A2	2018-03-13	BR201006785
TH60139	B	2018-01-18	TH--60139B
KR101778497	B1	2017-09-13	KR101778497
KR20170066701	A	2017-06-14	KR20170066701
VN0015172	B	2016-03-25	VN--15172B
TWI473602	B	2015-02-21	TWI473602
CN102378607	B	2014-12-17	CN102378607B
JP5396132	B2	2013-10-25	JP5396132
EP2415433	A4	2013-07-17	EP2415433
NZ595516	A	2013-01-25	NZ-595516
BRPI1006785	A1	2012-11-20	BR201006785
TH114897	A	2012-07-11	TH-114897
EA201101448	A1	2012-05-30	EA201101448
US20120073760	A1	2012-03-29	US20120073760
VN29076	A	2012-03-26	VN--29076
CN102378607	A	2012-03-14	CN102378607
EP2415433	A1	2012-02-08	EP2415433
KR20120011851	A	2012-02-08	KR20120011851
SG174256	A1	2011-10-28	SG-174256
AU2010231716	A1	2011-10-27	AU2010231716
AR076033	A1	2011-05-11	AR--76033

TW201103505	A	2011-02-01	TW201103505
JP2010240110	A	2010-10-28	JP2010240110
WO2010/113855	A1	2010-10-07	WO2010113855

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2009-04-03

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2010-03-29
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2013-01-25
2012-11-20
2012-07-11
2012-05-30
2012-03-29
2012-03-26
2012-03-14
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2012-02-08
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2016-03-25
(KR101778497)
2017-09-13
(TH--60139B)
2018-01-18

Title

(EP2415433)
Device for producing absorbent article and method for producing absorbent article

Abstract

(EP2415433)
An apparatus for manufacturing an absorbent article, the absorbent article including an absorbent core and a sheet whereon the absorbent core is placed, including: (A) a transportation section transporting in a transport direction the sheet whereon the absorbent core is placed; and (B) a bending section bending the sheet, in an intersecting direction that intersects the transport direction, while the transportation section is transporting the sheet, (C) a first part of the sheet, positioned in a bending point where the bending section bends in the intersecting direction the sheet, is distant in the intersecting direction from the absorbent core, (D) a second part of the sheet positioned on an opposite side of the first part from the absorbent core, in the intersecting direction, collapses onto a third part positioned on the absorbent core side from the first part, in the intersecting direction, by the bending section bending the sheet at the bending point, (E) the bending section further including a regulation section regulating an approach of the first part to the absorbent core, in the intersecting direction, when the bending section is bending the sheet.

Current assignees

UNICHARM

Inventors

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OONISHI HIDETOSHI
ISHIKAWA YASUYUKI

Advantages / Previous drawbacks

(EP2415433)
In the exterior sheet 8, each of the stretchable member 11 forming the gathered part in leg circumference 12, and the stretchable member 11 forming the three-dimensional gathered part 13 is bonded to a predetermined bonding position, and the exterior sheet 8 is charged into the complex manufacturing process in such state.
In other words, the width direction of the exterior sheet 8 and the other components of the complex 22 intersects (is orthogonal to) the transport direction.
By going through the above processes, the complex 22 becomes a continuous body 18 of the absorbent main bodies 2 and thereafter, moves along the continuous direction thereof and is transported to the subsequent transfer process.

Independent claims

(EP2415433)
1. An apparatus for manufacturing an absorbent article, the absorbent article including an absorbent core and a sheet whereon the absorbent core is placed, comprising: a transportation section transporting in a transport direction the sheet whereon the absorbent core is placed; and a bending section bending the sheet, in an intersecting direction that intersects the transport direction, while the transportation section is transporting the sheet; wherein a first part of the sheet, positioned in a bending point where the bending section bends in the intersecting direction the sheet, is distant in the intersecting

direction from the absorbent core, a second part of the sheet positioned on an opposite side of the first part from the absorbent core, in the intersecting direction, collapses onto a third part positioned on the absorbent core side from the first part, in the intersecting direction, by the bending section bending the sheet at the bending point, the bending section further including a regulation section regulating an approach of the first part to the absorbent core, in the intersecting direction, when the bending section is bending the sheet.

6. A method for manufacturing an absorbent article, the absorbent article including an absorbent core and a sheet whereon the absorbent core is placed, comprising: transporting in a transport direction the sheet whereon the absorbent core is placed; and bending the sheet, in an intersecting direction that intersects the transport direction, while transporting the sheet; wherein a first part of the sheet, positioned in a bending point when bending the sheet in the intersecting direction, is distant in the intersecting direction from the absorbent core, the sheet is bent at the bending point so that a second part positioned on an opposite side of the first part from the absorbent core, in the intersecting direction, collapses onto a third part positioned on the absorbent core side from the first part, in the intersecting direction, when bending the sheet, and an approach of the first part to the absorbent core, in the intersecting direction, is regulated when bending the sheet.

Object of invention

(EP2415433)

A main aspect of the invention for solving the foregoing issue is An apparatus for manufacturing an absorbent article, the absorbent article including an absorbent core and a sheet whereon the absorbent core is placed, including: (A) a transportation section transporting in a transport direction the sheet whereon the absorbent core is placed ; and (B) a bending section bending the sheet, in an intersecting direction that intersects the transport direction, while the transportation section is transporting the sheet , (C) wherein a first part of the sheet, positioned in a bending point where the bending section bends in the intersecting direction the sheet, is distant in the intersecting direction from the absorbent core, (D) a second part of the sheet positioned on an opposite side of the first part from the absorbent core, in the intersecting direction, collapses onto a third part positioned on the absorbent core side from the first part, in the intersecting direction, by the bending section bending the sheet at the bending point, (E) the bending section further including a regulation section regulating an approach of the first part to the absorbent core, in the intersecting direction, when the bending section is bending the sheet.

The present invention relates to an apparatus and a method for manufacturing an absorbent article.

The present invention relates to an apparatus and a method for manufacturing an absorbent article.

Particularly, the present invention relates to an apparatus and a method for manufacturing an absorbent article, in which the absorbent article includes an absorbent core and a sheet whereon the absorbent core is placed.

First, the present invention is an apparatus for manufacturing an absorbent article, the absorbent article including an absorbent core and a sheet whereon the absorbent core is placed, including: (A) a transportation section transporting in a transport direction the sheet whereon the absorbent core is placed ; and (B) a bending section bending the sheet, in an intersecting direction that intersects the transport direction, while the transportation section is transporting the sheet , (C) wherein a first part of the sheet, positioned in a bending point where the bending section bends in the intersecting direction the sheet, is distant in the intersecting direction from the absorbent core, (D) a second part of the sheet positioned on an opposite side of the first part from the absorbent core, in the intersecting direction, collapses onto a third part positioned on the absorbent core side from the first part, in the intersecting direction, by the bending section bending the sheet at the bending point, (E) the bending section further including: a regulation section regulating an approach of the first part to the absorbent core, in the intersecting direction, when the bending section is bending the sheet.

IPC - International classification

A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; B29C-063/02

Family 195/200 - FAMPAT - ©Questel

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Title

(EP-376022)

Absorbent article having unitary waistcap and waistband

Abstract

(EP0376022)

An integral disposable absorbent article such as a diaper is provided with an absorbent core (44); a liquid impervious backsheet (42); a liquid pervious topsheet (38); an elasticized waistband to enhance the fit of the diaper about the wearer; and a waistcap which presents a barrier to prevent the leakage of body exudates from the diaper. A single piece of elastomeric material serves as both the waistband and the waistcap (78).

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP0376022)

Such an embodiment is especially easy to manufacture since only one wide line of adhesive is required to form both the elasticized waistband and the proximal edge 84 of the waist cap.

While this is a preferred construction, the present invention is useful in designs wherein the outward portion 80 extends across only a portion of the lateral width of the absorbent core 44, preferably at least between the second edges 66 of the barrier cuffs 62, or across a major portion of the lateral width or the entire lateral width of the diaper 20.

A common mode of failure for such products occurs when body exudates leak out of the gaps between the article and the wearer's waist to adjacent clothing because they are not immediately absorbed within the article.

This is most evident with loose fecal material which is not easily absorbed by the absorbent article and tends to "float" on the liquid-receiving surface of the absorbent article.

Independent claims

(EP0376022)

1. An integral disposable absorbent article having longitudinal edges and end edges, the absorbent article comprising an absorbent core having a garment surface and a body surface; a liquid impervious backsheet positioned adjacent said garment surface of said absorbent core; a liquid pervious topsheet positioned adjacent said body surface of said absorbent core; characterized in that a unitary waist cap/waistband is disposed adjacent at least one of the end edges of the absorbent article, said unitary waist cap/waistband comprising an elastomeric material having an outward portion operatively associated with the absorbent article adjacent said end edge so as to form an elasticized waistband, and an inward portion contiguous with said outward portion, said inward portion having a proximal edge a distal edge, and ends, said proximal edge being joined to the absorbent article and said distal edge spaced inboard from said proximal edge, said distal edge being operatively associated with the absorbent article adjacent said ends of said inward portion, at least a portion of said distal edge being unsecured to the underlying portion of the absorbent article between said ends so that said distal edge is spaced away from the liquid-receiving surface of the absorbent article so as to form a waist cap.

Object of invention

(EP0376022)

Therefore, it is an object of the present invention to provide an absorbent article which has improved containment characteristics.

It is also an object of the present invention to provide an absorbent article having a waist cap wherein the distal edge is raised above the liquid-receiving surface of the absorbent article when the article is fitted on the wearer such that a channel is formed to restrain, contain and hold body exudates within the absorbent article.

It is an additional object of the present invention to provide an absorbent article having a unitary waist cap and waistband which act as a restraint against the leakage of body exudates.

The present invention relates to absorbent articles such as disposable diapers, incontinent briefs, training pants, and the like, and more particularly, to absorbent articles having at least one unitary waist cap and waistband.

The present invention relates to absorbent articles such as disposable diapers, incontinent briefs, training pants, and the

like, and more particularly, to absorbent articles having at least one unitary waist cap and waistband.

IPC - International classification

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Title

(EP2441418)
Absorbent structure

Abstract

(EP2441418)
The present invention relates to an absorbent structure, preferably for use in an absorbent product. The present invention also relates to an absorbent article comprising such absorbent structure and to a method of manufacturing the absorbent structure. Uses of the absorbent structure for providing absorption of liquids in an absorbent article are also provided. The absorbent structure according to an embodiment of the invention comprises a carrier layer, an auxiliary layer and an absorbent material there between wherein primary attachments and/or secondary attachments join the carrier layer and auxiliary layer together, whereby absorbent material inhomogeneously swells to form a liquid-managing surface structure as a result of exposing the absorbent structure to liquid. The present invention foresees in the need for improved flexible, thin, lightweight absorbent structures which overcome the absorbency problems of the prior art during absorption, distribution and retention of liquids with optimal fit.

Current assignees

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Inventors

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Advantages / Previous drawbacks

(EP2441418)
It is desirable to be able to create thin absorbent structures with a high liquid uptake capacity and a high resistance against leakage which provide improved fluid distribution and acquisition performance, especially with respect to multiple and successive fluid discharges.
Furthermore there is also a need for a method to produce such absorbent structures at low energy and raw material consumption.
Notwithstanding the existence of absorbent articles of the type described above, there is a need to identify further improved configurations for absorbent structures.
The problem mentioned above typically arises in absorbent articles, such as disposable baby diapers, where the absorbent substance is an absorbent polymer material, which is substantially homogeneously and continuously distributed over a narrow crotch width.
Failing to obtain such functional and/or structural integrity would result in loss of product coherence, loss of absorption, distribution and retention performance and/or might result in product failure re lated to but not limited to for instance

leakages, high rewet values, etc.

However, it is equally important not to excessively constrict the swelling and expansion of the absorbent material during the absorption of liquid, as this would also have detrimental impact on the absorption and retention performance of the product. The occurrence of gel blocking and hydro-gelling can lead to too slow or limited liquid uptake, distribution and/or retention resulting in leakage during usage of the absorbent article.To remedy this problem, absorbent article designers have and typically use additional side cuffs, leakage barriers and/or acquisition and distribution layers which are expensive, inefficient and can only partly remedy these problems and limitations.

Independent claims

(EP2441418)

1. An absorbent structure comprising: a) a carrier layer; b) an auxiliary layer; and c) an absorbent material there between, characterized in that the absorbent material inhomogeneously swells to form a liquid-managing surface structure as a result of exposing the absorbent structure to liquid.

17. A method for the manufacturing of an absorbent structure for use in an absorbent article comprising the steps of: - providing a carrier layer; - covering the carrier layer with an absorbent material wherein said absorbent material comprises i) an absorbent polymer material, and ii) from zero to an amount less than about 40 weight percent absorbent fibrous material, based on the weight of absorbent polymer material; - covering the absorbent material with an auxiliary layer which is joinable to the carrier layer; and - in at least one position substantially permanently joining the auxiliary layer to the carrier layer, thereby providing permanent primary attachments and - in at least one position substantially detachably joining the auxiliary layer to the carrier layer, thereby providing detachable secondary attachments, and by means of the primary attachments and secondary attachments defining compartments wherein the absorbent material is held, - selecting the positions of the primary attachments and secondary attachments and the absorbent material held in the compartments such that in a dry state the compartments are of substantially equal thickness, and in a wet state, by means of the partial or full detachment of detachable attachment means and/or differential swelling of the absorbent material in the compartments, the absorbent structure provides a liquid-managing surface structure.

Object of invention

(EP2441418)

The present invention relates to an absorbent structure with integrated fluid management.

Accordingly, the present invention aims to provide improved absorbent structures, and elements for use therein, as well as absorbent articles utilizing such structures, utilizing an integrated fluid management structure in or upon the absorbent core that effectively and efficiently acquires the wearer's discharged body fluids upon initial and successive discharges, distributes and transports acquired fluid, from both initial and successive discharges over a relatively large proportion of the absorbent structure surface area, and allows for such discharged fluids to be effectively and efficiently stored.

The present invention relates to an absorbent structure with integrated fluid management.

The present invention also relates to an absorbent article, uses of the absorbent structure in absorbent articles such as a feminine hygiene garment, baby diaper, baby pants and adult incontinence garment and to a method of manufacturing the absorbent structure.

The present invention relates to an absorbent structure, preferably for use in an absorbent product.

The present invention also relates to an absorbent article comprising such absorbent structure and to a method of manufacturing the absorbent structure.

The present invention relates to an absorbent structure, preferably for use in an absorbent product.

IPC - International classification

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VN0016092	B	2016-11-25	VN--16092B
EA023727	B1	2016-07-29	EA--23727
EG27154	A	2015-08-16	EG--27154
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US8585670	B2	2013-11-19	US8585670
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EA018634	B1	2013-09-30	EA--18634
CN101820841	B	2013-06-12	CN101820841B
JP5225637	B2	2013-03-22	JP5225637
EP2186494	A4	2012-11-28	EP2186494
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WO2009/031592	A1	2009-03-12	WO200931592
AU2008294256	A1	2009-03-12	AU2008294256

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2009-03-12

Grant dates

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2013-11-19
(JP5225637)
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(MA--31883)
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(ZA201007316)
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(AU2008294256)
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(EG--27155)
2015-08-16
(EA--23727)
2016-07-29
(VN--16092B)
2016-11-25
(MY-159540)
2017-01-13
(TH--54488B)
2017-03-30
(MX-351304)
2017-10-09

Title

(EP2186494)
Disposable bodily fluid absorptive wearing article of pants type

Abstract

(EP2186494)
The present invention aims to improve the pants-type wearing article of prior art so that leak of body fluids otherwise occurring beyond the leg-openings can be reliably prevented even if the waist region of the wearing article slip down after the diaper has been put on the wearer's body. In a disposable pants-type wearing article 1, a body fluid absorbent panel 3 provided in a crotch region extends in a longitudinal direction A and is fixed to a sheet member 11 defining inner surfaces of front and rear waist regions. The body fluid absorbent panel 3 is formed along its opposite side edges with flaps 24 and free edges 40b of the respective flaps 24 are provided with crotch region elastic members 43 attached under tension thereto. The front and rear waist regions are provided along peripheral edges of leg-openings with lower elastic members 15b attached under tension thereto. Regions of the side flaps 24 in which the free edges 40b of the flaps 24 developed in a transverse direction overlap the associated lower elastic members 15b are affixed to respective inner surfaces of the front and rear waist regions.

Current assignees

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Inventors

TAKINO SHUNSUKE

Advantages / Previous drawbacks

(EP2186494)
As will be seen in Fig. 2, some of the intermediate elastic members 15c intersect with the side edges 33a of the core 33

and the other thereof do not intersect with the side edge 33a of the core 33.

Independent claims

(EP2186494)

1. A disposable pants-type body fluid absorbent wearing article having a longitudinal direction, a transverse direction and a vertical direction being orthogonal one to another, comprising front and rear waist regions and a crotch region combined to define a pants-like shape having a waist-opening and a pair of leg-openings, wherein a body fluid absorbent panel provided in said front waist region extends in said longitudinal direction and is affixed to sheet members defining respective inner surfaces of said front and rear waist regions and wherein said front and rear waist regions are elasticized along a peripheral edge of said waist-opening and respective peripheral edges of said leg-openings, said disposable pants-type body fluid absorbent wearing article being characterized in that: said body fluid absorbent panel comprises a body fluid absorbent core, a liquid-pervious sheet used to wrap said core, a body fluid absorbent pad extending in said longitudinal direction and bonded to respective said inner surfaces of said front and rear waist regions and flaps formed along side edges of said body fluid absorbent pad opposed in said transverse direction, said flaps respectively comprising proximal edges being contiguous to said side edges of said body fluid absorbent pad and extending in said longitudinal direction and free edges, each at a distance from said body fluid absorbent pad in said transverse direction, extending in parallel to said proximal edges wherein said free edges are provided with first elastic members attached under tension thereto; and said front and rear waist regions are provided along said peripheral edges of said leg-openings with second elastic members attached under tension thereto so as to intersect said side edges of said body fluid absorbent pad and regions of said flaps in which said free edges of said flaps developed outward in said transverse direction overlap said second elastic members are affixed to said inner surfaces of said front and rear waist regions.

Object of invention

(EP2186494)

The present invention relates generally to a disposable pants-type body fluid absorbent wearing article suitable to be used as a disposable diaper, disposable pants for incontinent patient or the like.

The present invention relates generally to a disposable pants-type body fluid absorbent wearing article suitable to be used as a disposable diaper, disposable pants for incontinent patient or the like.

IPC - International classification

A61F; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/494; A61F-013/496; A61F-013/496

Family 198/200 - FAMPAT - ©Questel

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DE69735681
EP01120699
KR19997001813
DE69720018
ES97934190T
EP97934190
BR9714999
JP51263698
ARP970104079
AU3730697
IL12843797
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CA2263162
ZA9706960

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DE69735681
EP1175880
DE69735681
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EP1175880
KR100499290
EP1175880
DE69720018
ES2191188
DE69720018
EP0932381
EP1175880
BR9714999
BRPI9714999
JP2001500402
KR20000068444
AR009552
AU718914
IL128437
EP0932381
US5833677
AU3730697
WO98/09592
CA2263162
ZA9706960

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59903553

Family publication details

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DE69735681	T2	2006-10-26	DE69735681
DE69735681	D1	2006-05-24	DE69735681
EP1175880	B1	2006-04-12	EP1175880
KR100499290	B1	2005-07-07	KR100499290
EP1175880	A3	2004-02-11	EP1175880
DE69720018	T2	2003-09-25	DE69720018
ES2191188	T3	2003-09-01	ES2191188
DE69720018	D1	2003-04-24	DE69720018
EP0932381	B1	2003-03-19	EP-932381
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BRPI9714999	A1	2001-09-18	BRPI9714999
JP2001500402	A	2001-01-16	JP2001500402
KR20000068444	A	2000-11-25	KR20000068444
AR009552	A1	2000-04-26	AR---9552
AU718914	B2	2000-04-20	AU-718914
IL128437	A	2000-01-31	IL-128437
EP0932381	A1	1999-08-04	EP-932381

US5833677	A	1998-11-10	US5833677
AU3730697	A	1998-03-26	AU9737306
WO98/09592	A1	1998-03-12	WO9809592
CA2263162	A1	1998-03-12	CA2263162
ZA9706960	B	1998-02-19	ZA9706960



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1996-09-05
1997-07-09
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1998-11-10
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1998-02-19

(AU-718914)

2000-04-20

(ES2191188)

2003-09-01

(KR100499290)

2005-07-07

Title

(EP-932381)

Absorbent article having a containment dam

Abstract

(EP0932381)

An absorbent article (20) includes a compression resistant containment dam (60) which is configured to inhibit the longitudinal flow of fecal material along the bodyfacing surface of the absorbent article. The containment dam is positioned in a laterally extending direction (38) and is located on the bodyfacing surface of the absorbent article such that, when the absorbent article is being worn by a wearer sitting on a flat surface, the containment dam is positioned along a line where the wearer's buttocks depart from the flat surface. The containment dam defines a relatively high resistance to compression for improved performance.

Current assignees

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Inventors

SAUER BARBARA OAKLEY

Advantages / Previous drawbacks

(EP0932381)

As a result, the absorbent article of the present invention has reduced leakage when compared to conventional absorbent articles which results in improved consumer preference.

If it is desired to present the backsheet with a more cloth like feeling, the backsheet 32 may comprise a polyolefin film having a nonwoven web laminated to the outer surface thereof, such as a spun bond web of polyolefin fibers.

The present invention can advantageously provide an absorbent article which effectively absorbs and contains body exudates.

In response to the difficulties and problems discussed above, a new disposable absorbent article which has a containment dam for containing and stopping the longitudinal flow of faecal material has been discovered.

The leakage of faecal exudates from the rear waist section 24 of conventional diapers has been a difficult problem to overcome and has been particularly undesirable to the consumer.

The width 62 of the containment dam 60 provides stability to the dam 60 such that it does not fold over or bend during use.

Independent claims

(EP0932381)

1. A disposable absorbent article (20) which defines a longitudinal direction (38), a lateral direction (40), and a total length characterised in that said absorbent article comprises a laterally extending, compression resistant containment dam (60) defining a width (62), a length (64) and a height (66) which is configured to inhibit a longitudinal flow of faecal material along a body facing surface of said absorbent article; and said containment dam is located between an end edge (30) of a rear waist section (24) of said absorbent article and a lateral centerline (58) of said absorbent article inwardly from said end edge (30) of said absorbent article at a distance (72) which is from 10 percent to 45 percent of the total length of said absorbent article; and said containment dam has a compression resistance of at least 85 percent as determined according to the Compression Resistance Test described herein.

Object of invention

(EP0932381)

The present invention relates to an absorbent article for absorbing body fluids and exudates, such as urine and faecal material.

More particularly, the present invention relates to absorbent garments, such as disposable diapers and adult incontinence garments which are configured to collect and contain faecal material and avoid leakage.

In one aspect of the invention, the tissue wrapsheet can be configured to provide a wick ing layer which helps to rapidly distribute liquid over the mass of absorbent fibers comprising the absorbent body.

In another aspect of the invention, the wrapsheet material on one side of the absorbent fibrous mass may be bonded to the wrapsheet located on the opposite side of the fibrous mass.

The present invention relates to a disposable absorbent article which defines a longitudinal direction, a lateral direction and a total length and includes a laterally extending, compression resistant containment dam.

The present invention relates to a disposable absorbent article which defines a longitudinal direction, a lateral direction and a total length and includes a laterally extending, compression resistant containment dam.

The present invention relates to an absorbent article for absorbing body fluids and exudates, such as urine and faecal material.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/15; A61F-013/49; A61F-013/494; A61F-013/494

Family 199/200 - FAMPAT - ©Questel

Earliest priority number

US61/091,799P

Application number

IN1168/DELNP/2011
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US14/549,573
US13/477,131
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CN200980133385
EP13185906
CA2735532
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BRPI0917994
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IN301604
US20180078426
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6840195

Family publication details

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JP2012500669	A	2012-01-12	JP2012500669
IN1168/DELNP/2011	A	2011-12-09	IN2011DN01168
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CL2011000417	A1	2011-08-05	CL0417201100
CN102137647	A	2011-07-27	CN102137647
EP2317963	A2	2011-05-11	EP2317963
MX2011001979	A	2011-04-05	MX2011001979
AR074179	A1	2010-12-29	AR--74179
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2008-08-26

Application dates

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(CN102137647B)
2014-07-16
(ZA201100806)
2014-07-30
(IN-301604)
2018-09-28

Title

(EP2317963)
Method and apparatus for making disposable absorbent article having discontinuously distributed absorbent particulate polymer material and article made therewith

Abstract

(EP2317963)
A method for making a disposable absorbent core comprises depositing absorbent particulate polymer material from a plurality of reservoirs in a printing roll onto a substrate disposed on a grid of a support which includes a plurality of cross bars extending substantially parallel to and spaced from one another so as to form channels extending between the plurality of cross bars. The plurality of reservoirs in the first peripheral surface are arranged in an array comprising rows extending substantially parallel to and spaced from one another. The support and printing roll are arranged such that the plurality of cross bars are substantially parallel to the rows of the plurality of reservoirs and the absorbent particulate

polymer material is deposited on the substrate in a pattern such that the absorbent particulate polymer material collects in rows on the first substrate formed between the first plurality of cross bars. A thermoplastic adhesive material is deposited on the absorbent particulate polymer material and the substrate to cover the absorbent particulate polymer material on the substrate and form an absorbent layer. An apparatus for making an absorbent article is also disclosed.

Current assignees

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Inventors

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BERUDA HOLGER
BLESSING HORST
DZIEZOK PETER
KRAUSE AXEL
SCHMIDT MATTIAS
STELZIG LUTZ

Advantages / Previous drawbacks

(EP2684548)

High energy pretreatment typically temporarily increases the surface energy of a low surface energy surface (such as PP) and thus enables better wetting of a nonwoven by the nanoparticle dispersion in water.

The diaper 20 may also include such other features as are known in the art including front and rear ear panels, waist cap features, elastics and the like to provide better fit, containment and aesthetic characteristics.

Thus, it may be desirable for absorbent particulate polymer material to remain in its intended location in an absorbent article and absorbent particulate polymer material, therefore, is desirably immobilized in the absorbent article such that the absorbent particulate polymer material remains immobilized when the absorbent article is dry and when it is wet.

Independent claims

(EP2684548)

1. A method of making a disposable absorbent article comprising: providing a first support comprising a first grid including a first plurality of cross bars extending substantially parallel to and spaced from one another so as to form channels extending between the first plurality of cross bars; providing a first printing roll having a first peripheral surface and a first plurality of reservoirs in the first peripheral surface arranged in an array comprising rows extending substantially parallel to and spaced from one another; depositing absorbent particulate polymer material from the first plurality of reservoirs onto a first substrate disposed on the first grid, while the first support and first printing roll are arranged such that the first plurality of cross bars are substantially parallel to the rows of the first plurality of reservoirs, the absorbent particulate polymer material being deposited on the first substrate in a first pattern such that the absorbent particulate polymer material collects in rows on the first substrate formed between the first plurality of cross bars.

9. An apparatus for making a disposable absorbent article comprising: a first absorbent particulate polymer material feeder; a first support comprising a first grid including a first plurality of cross bars extending substantially parallel to and spaced from one another so as to form channels extending between the first plurality of cross bars; a first printing roll for receiving absorbent particulate polymer material from the first absorbent particulate polymer material feeder having a first peripheral surface and a first plurality of reservoirs in the first peripheral surface arranged in an array comprising rows extending substantially parallel to and spaced from one another, the first support and first printing roll arranged such that the first plurality of cross bars are substantially parallel to the rows of the first plurality of reservoirs in the first peripheral surface, so that, when the first printing roll rotates, the first plurality of reservoirs roll receive absorbent particulate polymer material from the first absorbent particulate polymer material feeder and deposit the absorbent particulate polymer material on the first substrate in a first pattern such that the absorbent particulate polymer material collects in rows on the first substrate formed between the first plurality of cross bars.

Object of invention

(EP2684548)

The present invention generally relates to an absorbent article and a method and apparatus for making an absorbent

article, and more particularly to a method and apparatus for making a disposable absorbent article with absorbent particulate polymer material, such as a diaper.

According to another aspect of this invention, an apparatus for making a disposable absorbent article may comprise an absorbent particulate polymer material feeder, a support comprising a grid, and a printing roll.

The present invention generally relates to an absorbent article and a method and apparatus for making an absorbent article, and more particularly to a method and apparatus for making a disposable absorbent article with absorbent particulate polymer material, such as a diaper.

According to another aspect of this invention, an apparatus for making a disposable absorbent article may comprise an absorbent particulate polymer material feeder, a support comprising a grid, and a printing roll.

The present invention addresses one or more technical problems described above and provides a method for making a disposable absorbent article which may comprise depositing absorbent particulate polymer material from a plurality of reservoirs in a printing roll onto a substrate disposed on a grid of a support which includes a plurality of cross bars extending substantially parallel to and spaced from one another so as to form channels extending between the plurality of cross bars.

IPC - International classification

A61F; A61F-013/15; A61F-013/15; A61F-013/472; A61F-013/49; A61F-013/53; A61F-013/532; A61F-013/535; A61F-013/539; B05C-019/00; B29C-065/52; B32B-005/30; B32B-037/12; B32B-037/24

Family 200/200 - FAMPAT - ©Questel

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DE10196884T
JP2002543999
KR20037006124
GB0312105
WOUS01/046267
MXPA03003766
US09/706,150
AU4158002

Publication numbers

DE10196884
JP4139683
KR100738793
GB2385772
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DE10196884
WO02/41816
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US6508797
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1396920

Family publication details

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KR100738793	B1	2007-07-12	KR100738793
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JP2004520869	A	2004-07-15	JP2004520869
DE10196884	T5	2004-04-15	DE10196884
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KR20030044069	A	2003-06-02	KR20030044069
US6508797	B1	2003-01-21	US6508797
AU4158002	A	2002-06-03	AU200241580
WO02/41816	A2	2002-05-30	WO200241816

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2000-11-03

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2001-11-01
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2003-05-02

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2008-06-13
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2007-07-12

Title

(WO200241816)

Pant-like disposable absorbent articles with a releasable line of weakness and a fastener

Abstract

(WO02/41816)

A pant-like, disposable absorbent article includes an absorbent chassis, a pair of opposed side panels, at least one line of weakness and at least one fastener. The absorbent chassis defines a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges. The side panels extend between the side edges of the absorbent chassis to define a waist opening and a pair of leg openings in the pant-like disposable absorbent article. Each of the opposed side panels defines a first side margin which is permanently attached to the side edge of the absorbent chassis in one waist region of the absorbent article to provide a front permanent joint. The opposed side panels further define a second side margin opposite the first side margin which is permanently attached to the side edge of the absorbent chassis in the other waist region of the absorbent article to provide a back permanent joint. The fastener and the line of weakness are located in one of the side panels, with the line of weakness separating the fastener from one of the permanent joints. The fastener is configured to be released and used to refastenably engage the at least one side panel to the opposite waist region of the absorbent article after the line of weakness is broken.

Current assignees

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Advantages / Previous drawbacks

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Moreover, it is desirable that such absorbent articles, after being soiled, can be removed from the wearer in a convenient and clean manner without undesirably soiling the caregiver or surrounding area such as the clothes of the wearer.

That is, there remains a need for absorbent articles which conform to the wearer to effectively contain bodily exudates, which are capable of being pulled up and down over the hips and buttocks of the wearer without opening, which are readily secured about and removed from the wearer in a convenient and clean manner and which allow easy inspection by the care giver to assist in determining whether the article is soiled.

Moreover, there is a need that such pant-like disposable absorbent articles are also capable of being applied in the manner of a conventional diaper, to a wearer lying in a prone position.

The present invention advantageously provides pant-like, disposable absorbent articles which include a fastener and a line of weakness.

For example, the side panels have been difficult to tear when attempting to remove the article from the waist of the wearer instead of pulling the article down over the hips of the wearer.

Finally, most of these conventional training pants do not provide the option of being applied as a conventional diaper.

Still further, the pant-like disposable absorbent articles of the present invention provide a line of weakness, which eases the opening and removal of the pant-like disposable absorbent article.

in response to the difficulties and problems discussed above, new pant-like disposable absorbent articles which have at least one line of weakness and at least one fastener have been discovered.

Independent claims

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We claim: 1. A pant-like, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects said waist regions, a longitudinal direction and a lateral direction, said absorbent article comprising: a) an absorbent chassis which defines an absorbent core, an exterior surface, an interior surface opposite said exterior surface, a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges; b) a pair of opposed side panels which extend laterally outward from said side edges of said absorbent chassis and connect said front waist region to said back waist region to define a waist opening and a pair of leg openings in said pant-like disposable absorbent article, wherein each of said opposed side panels defines a first side margin which is permanently attached to said side edge of said absorbent chassis in said front waist region to provide a pair of front permanent joints and a second side margin which is permanently attached to said side edge of said absorbent chassis in said back waist region to provide a pair of back permanent joints; c) a fastener located in one of said side panels; and d) a line of weakness located in said side panel separating said fastener from one of said front or said back permanent joints, wherein said fastener is released only after said line of weakness is broken, and wherein said fastener is configured to refastenably engage said at least one side panel of said absorbent article to said exterior surface of said absorbent chassis in one of said front waist region or said back waist region of said absorbent article.

15. A pant-like, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects said waist regions, a longitudinal direction and a lateral direction, said absorbent article comprising: a) an absorbent chassis which defines an absorbent core, an exterior surface, an interior surface opposite said exterior surface, a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges; b) a pair of laterally opposed, extensible back panels which are permanently attached to said side edges of said absorbent chassis in said back waist region of said absorbent article to provide a pair of back permanent joints; c) a pair of laterally opposed, extensible front panels which are permanently attached to said side edges of said absorbent chassis in said front waist region of said absorbent article to provide a pair of front permanent joints wherein said front panel and said back panel on each side edge of said absorbent chassis are permanently connected together at a side seam to provide a pair of side permanent joints and to define a waist opening and a pair of leg openings to provide said pant-like, disposable absorbent article; d) a fastener located in each of said front panels; and e) a line of weakness located in each of said front panels and separating said fasteners from said front permanent joints wherein said fasteners are released only after said lines of weakness are broken and wherein said fasteners are configured to refastenably engage said front panels to said exterior surface of said absorbent chassis in said front waist region of said absorbent article.

24. A pant-like, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects said waist regions, a longitudinal direction and a lateral direction, said absorbent article comprising: a) an absorbent chassis which defines an absorbent core, an exterior surface, an interior surface opposite said exterior surface, a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges; b) a pair of laterally opposed, extensible back panels which are permanently attached to said side edges of said absorbent chassis in said back waist region of said absorbent article to provide a pair of back permanent joints; c) a pair of laterally opposed, extensible front panels which are permanently attached to said side edges of said absorbent chassis in said front waist region of said absorbent article to provide a pair of front permanent joints wherein said front panel and said back panel on each side edge of said absorbent chassis are permanently connected together at a side seam to provide a pair of side permanent joints and to define a waist opening and a pair of leg openings to provide said pant-like, disposable absorbent article; d) a fastener located in each of said back panels adjacent said side permanent joints; and e) a line of weakness located in each of said back panels and separating said fasteners from said side permanent joints wherein said fasteners are released only after said lines of weakness are broken and wherein said fasteners are configured to refastenably engage said back panels to said exterior surface of said absorbent chassis in said front waist region of said absorbent article.

Object of invention

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In another aspect, the present invention concerns a pant-like, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects the waist regions, a longitudinal direction and a lateral direction.

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back waist region, a crotch region which extends between and connects the waist regions, a longitudinal direction and a lateral direction.

The present invention relates to disposable absorbent articles which are adapted to contain body exudates.

More particularly, the present invention relates to pant-like disposable absorbent articles having at least one line of weakness and a fastener.

IPC - International classification

A61F-005/44; A61F-013/15; A61F-013/49; A61F-013/49; A61F-013/496; A61F-013/496; A61F-013/514; A61F-013/56