

Search query (3): [SP]: cross-reference to prior application[0001] this application is a 371 national stage application of pct international application no. pct/se2015/050671 filed jun. 10, 2015, which is incorporated herein in its entirety.technical field[0002] the present disclosure relates to an absorbent product including a liquid pervious topsheet, a liquid impervious backsheet and an absorbent core enclosed between the liquid pervious topsheet and liquid impervious backsheet. the absorbent product has in its longitudinal direction a crotch region and two end regions wherein at least the crotch region includes an inlet material having a plurality of openings.background[0003] for absorbent products such as incontinence shields there are high requirements that they are discreet, soft and comfortable to wear and at the same time have a reliable security against leakage.[0004] incontinence shields have to be sized and configured to fit in the limited space available in the crotch portion of the underwear so the products are by necessity designed with a relatively small width. for this reason, a particular problem with such products is that they may leak at the side edges, before the full absorption capacity of the product has been utilized.[0005] side leakage may occur as a consequence of absorbed fluid being dispersed equally fast in all directions from the point where the fluid enters the product. this will lead to the fluid escaping the product at the side edges before being distributed to the end portions. another cause of side leakage may be when the intake capacity of the product is insufficient to allow all fluid that is exuded onto the product to directly enter inside the product. instead, the fluid will flow on the top sheet and out over the side edges where it can leak out and soil the wearer's clothing.[0006] the urine fluid is normally not exuded in a steady flow but as sudden gushes of relatively large volume under high pressure and during a very short time period.[0007] accordingly, it would be desirable if the incontinence shield was able to receive and contain the emitted fluid with corresponding speed.[0008] although the prior art liquid inlet material may alleviate the side leakage problem to some extent, there is still a need for further improvements of the side leakage security for the kind of absorbent article that is worn in the crotch portion of an undergarment.detailed description of particular embodiments[0009] in accordance with the disclosure, there is provided an absorbent product having improved leakage security and fit.[0010] the absorbent product including a liquid pervious topsheet, a liquid impervious backsheet and an absorbent core enclosed between the liquid pervious topsheet and liquid impervious backsheet. the absorbent product has in its longitudinal direction a crotch part and two end parts wherein the absorbent product at least in its crotch part includes an inlet material having a plurality of openings. the plurality of openings in the inlet material is formed from slits extending in the transversal direction of the absorbent product that have been expanded in the longitudinal direction of the absorbent product. the liquid inlet material has in the transversal direction of the absorbent product a central region and two edge regions. the openings are located in the central region so that the central region of the material with the plurality of openings has a lesser degree of elasticity than the edge regions.[0011] an effect of having a central region of the material with slits and edge regions of the material without slits will, after the material has been extended so that openings have been formed from the slits, lead to different elasticity in different regions of the material. the openings in the central region of the inlet material will give the material in this region a lower degree of elasticity than the edge regions free from openings. a greater degree of elasticity of the edge regions than in the central region of the crotch part is advantageous since the edge region of the inlet material will function as leg elastics and has a greater elasticity than the central part of the inlet material. the absorbent product may also obtain a bowl shape in the crotch region as a result of an elastic contraction of the edge regions of the inlet material having a greater elasticity than the central region of the inlet material.[0012] another advantage with edge regions without openings is that the edges may function also as liquid edge barriers decreasing the risk for side leakage.[0013] one advantage with openings in the central region of the inlet material is that the liquid inlet into the product is improved. an alternative way of creating openings in a material would be to punch/perforate. however, a slitting method is advantageous over punching/perforating since no material is cut out from the web. this saves money due to less waste of material and also improves the handling in the production process by avoiding having a lot of small pieces cut out from the material that may otherwise contaminate both the process equipment and the final product. [0014] the inlet material has to be able to absorb sudden gushes of relatively large volume during a very short time period and with the present disclosure it is possible to provide an inlet material with a plurality of openings and leg elastic material, of the same continuous material sheet.[0015] since the edge regions extending in the longitudinal direction of the absorbent product will function as leg elastics and support in creating a bowl shape in the crotch area, there is no need for a separate material sheet/element to create the leg elastics. the inlet material and the material for the leg elastics are the same continuous material sheet.[0016] the inlet material may be located between the top sheet and the absorbent core or the inlet material may be the liquid permeable top sheet or part thereof.[0017] the inlet material may have a greater width than the absorbent core. if the absorbent core includes more than one layer, the inlet material may have a greater width than at least one of the layer in the absorbent core.[0018] the central region of the inlet material may have a greater width, at least in the crotch part of the absorbent product, than the absorbent core. an advantage by having a greater width of the central region of the inlet material than the absorbent core, is that the plurality of openings extends over the absorbent core and also a part outside the absorbent core in the transversal direction of the product so there will be a part of the absorbent product located in the transversal direction between the absorbent core and the leg elastic region which is the edge region, with not so much material (no absorbent core and an inlet material with a plurality of openings), and this part will, due to a hinge effect, make it easier for the edge region with greater elasticity to retract the absorbent product into a bowl shaped product.[0019] the inlet material has in the transversal direction of the absorbent product two edge regions and a central region between the edge regions and the edge region may be at least 5 mm along the whole side edge of the product. otherwise, it will be more difficult for the edge regions to function as leg elastics and retract the absorbent product into a bowl shape in the crotch region.[0020] the width of the opening in the longitudinal direction of the absorbent product may be 0.2 to 3.0, or 0.5 to 1.0 of the length of the opening in the transversal direction.[0021] the inlet material may have been extended 30 percent to 200 percent from the original length of the unexpanded inlet material.[0022] the inlet material may be hydrophobic. an advantage with a hydrophobic material is that hydrophobic edge regions free of openings will function as liquid barriers and will decrease the risk for edge leakage. also, a hydrophobic inlet material can be preferred from a skin care view since a dry surface close to the user's skin may decrease the risk for bacterial growth and skin irritations.[0023] the liquid inlet material may be of a foam material. an advantage to have a foam material as liquid inlet material is that such a product is experienced as soft and is also aesthetically pleasing for many users. the ability of a foam material to spring back, to return to substantially its original form after having been exposed to outer loading is also an important property. since the foam material has a continuous structure, it exhibits good pliability and also ability to spring back following outer loading.[0024] foam material may have an open cell structure or a closed cell structure. foam used as a liquid-receiving foam layer in an absorbent product, is often foam with open cells so that the liquid easily enters the foam and also the absorbent core below. however, with the slit openings it is possible also to use foam having closed cells. an advantage with foam including closed cells is that the liquid will not easily enter the foam structure itself, and therefore the foam material will be kept in a more dry condition than foam with open pore cells that are connected with each other.[0025] the inlet material may also be a fibrous material, for example a nonwoven or laminate thereof.[0026] the distance between the openings in the liquid inlet material may be 1.5 to 5.0 mm, or 1.5 to 2.5 mm. an advantage with a rather short distance between the openings is that the total open area will be high and the inlet rate will be fast.[0027] the total open area of the openings in the horizontal plane of the inlet material in the central region is 40 to 70 percent

Results: 12

Search history

Search FT=(absorbent product and inlet material and openings) (Results 6)

1:

Search [SP]: 1. an absorbent product having in its longitudinal direction a crotch part and two end parts comprising: a liquid pervious topsheet a liquid impervious backsheet an absorbent core enclosed between the liquid pervious topsheet and liquid impervious backsheet and an inlet material having a plurality of openings located in at least the crotch part, wherein the plurality of openings in the inlet material are formed from a plurality of slits extending in the transversal direction of the absorbent product by expanding the continuous inlet material in the longitudinal direction of the absorbent product, and wherein the liquid inlet material in the transversal direction of the absorbent product has a central region and two edge regions and the plurality of openings are located in the central region so that the central region of the inlet material with the plurality of openings has a lesser degree of elasticity than the edge regions. 2. the absorbent product according to claim 1, wherein the edge regions of the inlet material has a greater elasticity than the central region of the inlet material. 3. the absorbent product according to claim 2, wherein the crotch part has a bowl shape. 4. the absorbent product according to claim 1, wherein the inlet material is located in the crotch part only. 5. the absorbent product according to claim 1, wherein the inlet material is located between the top sheet and the absorbent core. 6. the absorbent product according to claim 1, wherein the inlet material is the liquid permeable top sheet or part thereof. 7. the absorbent product according to claim 5, wherein the inlet material, at least in the crotch part, has a greater width than the absorbent core. 8. the absorbent product according to claim 7, wherein the central region of the inlet material, at least in the crotch part, also has a greater width than the absorbent core. 9. the absorbent product according to claim 5, wherein the liquid pervious topsheet and the liquid impervious backsheet have substantially same or greater width in the crotch part than the inlet material. 10. the absorbent product according to claim 1, wherein the edge regions have a width that is of least 5.0 mm. 11. the absorbent product according to claim 1, wherein the length of the openings in the transversal direction of the absorbent product are 5.0 to 20.0 mm. 12. the absorbent product according to claim 1, wherein the width of the openings in the longitudinal direction of the absorbent product is 0.2 to 3.0 of the length of the opening in the transversal direction. 13. the absorbent product according to claim 1, wherein the inlet material has been extended 30 percent to 200 percent from the original length of the unexpanded inlet material. 14. the absorbent product according to claim 1, wherein the inlet material is hydrophobic. 15. the absorbent product according to claim 1, wherein the inlet material is a foam material. 16. the absorbent product according to claim 1, wherein the inlet material is a nonwoven. 17. the absorbent

product according to claim 1, wherein the distance between the openings are 1.5 to 5.0 mm. 18. the absorbent product according to claim 1, wherein the total open area in the horizontal plane of the product formed by the plurality openings in the central region is 40 percent to 70 percent of the total area in the horizontal plane in the central region. 19. the absorbent product according to claim 1, wherein the inlet material and the layer directly below the inlet material have different colors. 20. an incontinence shield comprises the absorbent product according to claim 1. 21. the incontinence shield according to claim 20, wherein the length of the inlet material in the longitudinal direction of the incontinence shield is 20 to 80 percent of the total length of the incontinence shield in the longitudinal direction. 22. the incontinence shield according to claim 20, wherein the incontinence shield is less than 50 cm in its longitudinal direction. (Results 0)

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and the inlet rate will be fast.[0027] the total open area of the openings in the horizontal plane of the inlet material in the central region is 40 to 70 percent (Results 12)

1) Family number: 33376156 (WO9301781A1)

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Title: CURVED, SHAPED ABSORBENT ARTICLE

Abstract: An absorbent article, such as a sanitary napkin is provided. The sanitary napkin of the present invention has a curved, body-conforming configuration. The sanitary napkin has a curved longitudinal profile in which the ends of the sanitary napkin are displaced upward. The sanitary napkin also has a hump formed by the tuft of capillary channel fibers on its body-facing side. The sanitary napkin also has a curved transverse profile.

Classifications:

International (IPC 8-9): A61F13/00 A61F13/15 A61F13/472 A61F13/49 A61F13/511 A61F13/514 A61F13/56 A61F13/58 A61F5/44 D01D5/253 (Advanced/Invention); A61F13/00 A61F13/56 A61F5/44 (Advanced/Non-invention); A61F13/00 A61F13/15 A61F13/56 A61F5/44 D01D5/00 (Core/Invention); A61F (Subclass/Invention)

International (IPC 1-7): A61F13/00 A61F13/15 A61F13/16 A61F13/472

A61F13/49 A61F13/56 A61F13/58 A61F5/44

CPC: A61F13/5126 D01D5/253 A61F13/15203 A61F13/15211

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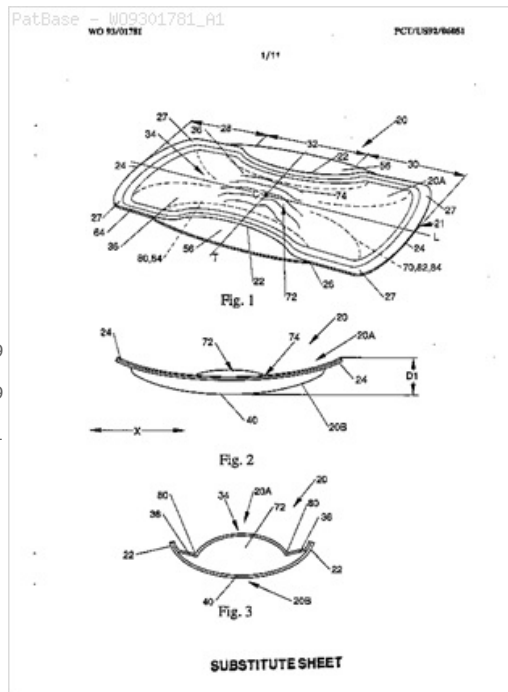
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Family:

Publication number	Publication date	Application number	Application date
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SG99305 A1	20031027	SG19920092672	19920723
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Priority:

US19910734392	19910723	US19910734404	19910723	US19910734405	19910723
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WO1992US06053	19920723	WO1992US06056	19920723		

Probable Assignee: PROCTER AND GAMBLE CO

Assignee(s): (std): THE PROCTOR AND GAMBLE COMPANY ; THE PROCTER AND GAMBLE COMPANY ; PROCTER AND GAMBLE ; PROCTER AND GAMBLE CO

Assignee(s): PROCTOR AND GAMBLE CO ; PROCTER AND GAMBLE CO THE ; PROCTER AND GAMBLE COMPANY THE ; THE PROCTER AND GAMBLE CO ; THE PROCTER AND GAMBLE CO US ; SUGAHARA KAZUKO ; CHARRIER JACQUELINE WATSON ; HINES LETHA MARGIE ; JOHNSON THERESA LOUISE ; OLSEN ROBB ERIC ; OSBORN THOMAS WARD III

Inventor(s): (std): BAMBER JEFFERY B ; BAMBER JEFFREY V ; BAMBER JEFFREY VINCENT ; BRUCE W LAVASH ; BRUCE WILLIAM LAVASH ; CHAPPEL CHARLES ; CHAPPELL CHARLES ; CHARLES CHAPPELL ; CHARRIER JACQUELINE W ; CHARRIER JACQUELINE WATSON ; DOAK NANCY B ; DOAK NANCY BECK ; EUGENE ROBERT SORESENSEN ; GOODMAN WILLIAM HARRY ; GOODMAN WILLIAM HARRY JR ; KATHERINE LOUISE MAYER ; KAZUKO SUGAHARA ; KEELER SHERI D ; KEELER SHERI D ; KEELER SHERI DEAN ; LAVASH BRUCE W ; LAVASH BRUCE WILLIAM ; LAVEHS BRUCE WILLIAM ; LETHA M HINES ; LETHA MARGIE HINES ; MAYER KATHERINE LOUISE ; NANCY B DOAK ; NANCY BECK DOAK ; OLSEN ROBB E ; OLSEN ROBB ERIC ; OSBORN THOMAS W ; OSBORN THOMAS W III ; OSBORN THOMAS WARD III ; ROBB E OLSEN ; SHERI D KEELER ; SHERI DEAN KEELER ; SORESENSEN EUGENE ROBERT ; HAMMONS JOHN L ; HINES LETHA M ; HINES LETHA MARGIE ; HINES LETHE MARGIE ; JACQUELINE WATSON CHARRIER ; JEFFREY V BAMBER ; JEFFREY VINCENT BAMBER ; JOHN L HAMMONS ; JOHNSON THERESA ; JOHNSON THERESA L ; JOHNSON THERESA LOUISE ; SUGAHARA KAZUKO ; SUGAWARA KAZUKO ; THERESA L JOHNSON ; THOMAS W OSBORN III ; THOMAS WARD OSBORN III ; WILLIAM HARRY GOODMAN JR ; OSBORN THOMAS WARD ; HAMMONS JOHN LEE ; CHAPPELL CHARLES WILBUR ; CHAPPELL CHARLES PO BOX

Inventor(s): OSBORN THOMAS WARD US ; DOAK NANCY BECK US ; BAMBER JEFFREY VINCENT US ; JOHNSON THERESA US ; OLSEN ROBB ERIC US ; LAVASH BRUCE WILLIAM US ; KEELER SHERI DEAN US ; HAMMONS JOHN LEE US ; SUGAHARA KAZUKO JP ; MAYER KATHERINE LOUISE US ; HINES LETHA MARGIE US ; CHARRIER JACQUELINE WATSON US ; CHAPPELL CHARLES WILBUR US ; JR GOODMAN WILLIAM HARRY ; JRGODMAN WILLIAM HARRY ; SORESENSEN EUGENE ROBERT US ; GOODMAN WILLIAM HARRY US

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; SIM AND MCBURNEY; NAGAI HIROSHI

Designated states: AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CS DE DK ES FI FR GA GB GN GR HU IT JP KP KR LK LU MC MG ML MN MR MW NL NO PL RO RU SD SE SN TD TG

2) Family number: 3814195 (US4944735A)

© PatBase

Title: SHAPED NAPKIN WITH ELASTICIZED EDGES

Abstract: A sanitary napkin is provided with inwardly arcuate sides and elastic positioned centrally longitudinally along each of the sides and outward from the seal which attaches a fluid permeable cover directly to a fluid impermeable baffle. The elastic constricts the sides of the napkin to provide a cup-shaped profile with the bottom of the profile corresponding generally to the perineal area of the wearer.

Classifications:

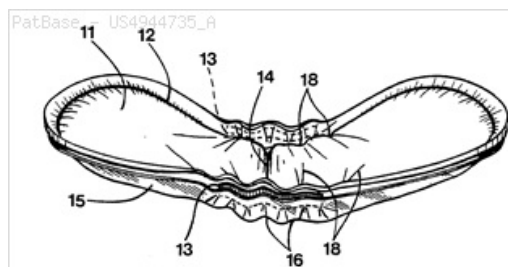
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International (IPC 1-7): A41B13/02 A61F13/15 A61F13/16 A61F13/18 A61F13/20

CPC: A61F13/511 A61F13/515 A61F13/472 A61F13/471 A61F13/47263 A61F13/47272 A61F13/49009 A61F13/534 A61F2013/51409 A61F2013/53445

European: A61F13/472 A61F13/472D A61F13/472E K61F13/471 K61F13/49D2 K61F13/511F K61F13/514A4 K61F13/534 K61F13/534C

US: 604/366 604/385.2 604/385.26



Family:

Publication number	Publication date	Application number	Application date
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AU198538945 A1	19850829	AU19850038945	19850219
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CA2019455 AA	19911108	CA19902019455	19900620
DE3574823 D1	19900125	DE19853574823	19850218
EP0155515 A1	19850925	EP19850101777	19850218
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GB2156681 A1	19851016	GB19850004493	19850221
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HK82892 A	19921106	HK19920000828	19921029
IE56338 B	19910619	IE19850000426	19850221
IE850426 L	19850821	IE19850000426	19850221
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JP60193461 A2	19851001	JP19850033616	19850221
KR19850006318 A	19851005	KR19850001050	19850219
KR920003407 B1	19920430	KR19850001050	19850219
MX162804 A	19910626	MX19850204321	19850213
US4944735 A	19900731	US19860843332	19860324
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ZA8501030 A	19850925	ZA19850001030	19850211

Priority:

US19840581945 19840221 CA19850473920 19850208 US19860843332 19860324
US19900521857 19900508 CA19902019455 19900620

Probable Assignee: KIMBERLY CLARK CORP

Assignee(s): (std): KIMBERLY CLARK CO

Assignee(s): KIMBERLY CLARK CORP ; KIMBERLY CLARK CORP NEENAH WIS US ; KIMBERLY CLARK WORLDWIDE INC ; MOKRY PATTI J ; KIMBERLEY CLARK CORP

Inventor(s): (std): MOKRY PATTI J ; PATEI JIYOO MOKURII ; PATEI JOO MOKURII ; MOKRY PATTI JO

Inventor(s): PATTI JO MOKRY

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; BORDEN LADNER GERVAIS LLP

Designated states: BE CH DE FR LI LU NL

3) Family number: 10627272 (WO9901098A1)

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Title: ABSORBENT ARTICLE AND METHOD FOR PRODUCING SAME

Abstract: A disposable product used as an absorbent article, such as an incontinence protector, sanitary towel or a diaper, comprising a liquid-permeable surface layer (112) directed towards the user during use, a liquid-impermeable surface layer (110) directed away from the user during use, and an absorbent body (108) arranged between the layers, and also having an essentially stable cup shape, and a method for producing such an article. The article is distinguished by the fact that it comprises at least one heat-shrinkable material (130) which has been heat-treated after application to the article, as a result of which the material has been made to shrink in one or more directions by means of the article being exposed to heat, the article having an essentially stable cup shape.

Classifications:

International (IPC 8-9): A61F13/00 A61F13/15 A61F13/472 A61F13/49 A61F13/494 A61F13/511 A61F13/514 A61F5/44 A61F5/452 (Advanced/Invention);

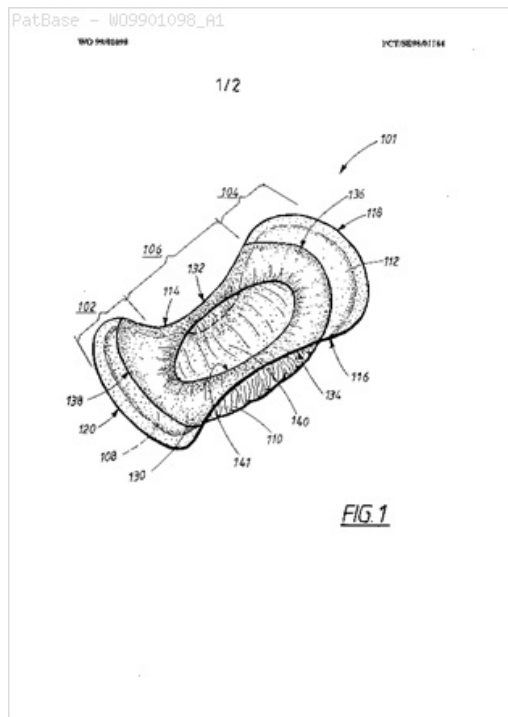
A61F5/44 (Advanced/Non-invention);

A61F13/15 A61F5/44 A61F5/451 (Core/Invention)

International (IPC 1-7): A61F13/00 A61F13/15 A61F13/472 A61F13/49 A61F13/494 A61F13/511 A61F13/514 A61F5/44 A61F5/452

CPC: A61F13/47 A61F13/49009 A61F13/495

European: A61F13/47 A61F13/495 A61F13/49D2 K61F13/15M2C



Family:

Publication number	Publication date	Application number	Application date
AU199882497 A1	19990125	AU19980082497	19980618
CO5060492 A1	20010730	CO19980037147	19980701
DE69818822 D1	20031113	DE19986018822	19980618
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DE69818822 T2	20040729	DE19986018822T	19980618
EP0993291 A1	20000419	EP19980932672	19980618
EP0993291 B1	20031008	EP19980932672	19980618
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SE9702545 L	19990201	SE19970002545	19970702
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TW406016 B	20000921	TW19980110080	19980623
WO9901098 A1	19990114	WO1998SE01184	19980618

Priority:

SE19970002545 19970702 WO1998SE01184 19980618

Probable Assignee: SCA HYGIENE PROD AB**Assignee(s):** (std): GRAENSBO GOERAN ; MOELNYCKE AB ; SANDIN CECILE ; SCA HYGIENE PROD AB ; SCA MOELNYCKE AB**Assignee(s):** SCA HYGIENE PRODUCTS AB GOETEBORG GOTENBURG ; SCA MOLNYCKE AB ; SCA HYGIENE PRODUCTS AB**Inventor(s):** (std): SANDIN CECILE ; GRANSBO GORAN ; GRAENSBO GOERAN ; GORAN GRANSBO ; CECILE SANDIN**Inventor(s):** GOERAN GRAENSBO**Agent(s):** ERNESTO CAVELIER**Designated states:** AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HU ID IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW**4) Family number: 40968362 (US2008156417A)**

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Title: PROCESS AND EQUIPMENT FOR MANUFACTURING THREE DIMENSIONALLY SHAPED OR BELTED ARTICLES, SUCH AS GARMENTS OR ABSORBENT ARTICLES**Abstract:** The present invention is a process and the respective equipment for the manufacture of shaped articles, such as disposable absorbent articles, which have a three dimensional shape, or which comprise closed belt-like structures such as hoops in the leg and/or waist opening. The articles can be produced at high production speeds out of conventional web materials (100, 1010), and can be designed to a wide variety of designs for improved dynamic fit, leakage performance and wearer's comfort.**Classifications:****International (IPC 8-9):** A41D27/04 A61F13/15 A61F13/47 A61F13/475 A61F13/476 A61F13/49 A61F13/494 A61F13/72 A61F13/74 A61F13/84 B29C65/78 B65B61/00 B65B61/08 B65H20/00 B65H20/06 B65H20/32 B65H37/04 B65H37/06 B65H45/00 B65H45/28 B65H5/00 B65H69/00 D21F13/00 (Advanced/Invention);

A61F13/15 A61F13/49 (Advanced/Non-invention);

A41D27/02 A61F13/15 A61F13/56 B29C65/78 B65B61/00 B65B61/04 B65H20/00 B65H20/30 B65H45/00 B65H5/00 B65H69/00

D21F13/00 (Core/Invention);

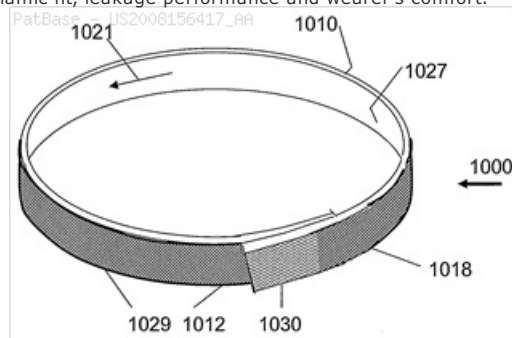
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European: A61F13/15M10 A61F13/15M6F A61F13/15M7 A61F13/15M8 A61F13/475A1 A61F13/494A1 B65H20/08 B65H20/32 B65H45/14

L65H301/4491 L65H344/910 L65H406/321 L65H801/57

US: 156/158 156/510 156/510S 156/538 156/538S 162/122 162/122S 2/46 2/46S 226/1 226/102 226/102S 226/1P 270/52.07 270/52.08 604/385.01 604/385.010S 604/385.06 604/385.060P**Family:**

Publication number	Publication date	Application number	Application date
AT478819 E	20100915	AT20060723316T	20060309
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US2008172020 AA	20080717	US20060908494	20060309
US2008197164 AA	20080821	US20050908493	20050329
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WO06102973 A1	20061005	WO2006EP02165	20060309
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Priority:

EP20050718323 20050329 WO2005IB00845 20050329 RU20070138877 20050329
EP20060723317 20060309 WO2006EP02166 20060309 WO2006EP02165 20060309

Probable Assignee: CONCEPTS FOR SUCCESS

Assignee(s): (std): CONCEPTS FOR SUCCES ; CONCEPTS FOR SUCCESS ; KONSEPTS FO SAKSES ; SCHMITZ CHRISTOPH ; SUCCESS CONCEPT COMPANY

Inventor(s): (std): SCHMITZ CHRISTOPH ; SHMITTS KRISTOF ; CHRISTOPH SCHMITZ

Agent(s): MACPHERSON LESLIE AND TYERMAN LLP; Plischke Manfred; PLISCHKE MANFRED; DAVID A GUERRA INT PATENT GROUP LLC; DAVID A

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

5) Family number: 48873364 (US2011130736A)

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Title: DISPOSABLE ABSORBENT ARTICLE WITH PROFILED ABSORBENT CORE

Abstract: A disposable absorbent article has a central body defining a first waist end region including a first end edge, a second waist end region spaced longitudinally from the first waist end region and including a second end edge, and a crotch region positioned therebetween. An absorbent core is situated between the end edges, and includes a plurality of elastics incorporated therewith such that the core is substantially laterally contracted in a narrowed region about the elastics. The absorbent core includes at least one end region that is substantially non-elasticized and has a lateral width substantially wider than that of the narrowed region.

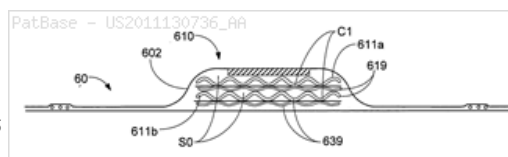
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A61F13/535 A61F13/539 (Advanced/Invention);
A61F13/15 (Core/Invention)

CPC: A61F13/5323 A61F13/49017 A61F13/49426 A61F13/533 A61F13/535
A61F2013/5355 A61F13/539 A61F13/49058 A61F13/49019 A61F13/496
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European: A61F13/494A1B A61F13/49D2E

US: 604/378 604/378P 604/385.01 604/385.16 604/385.21



Family:

Publication number	Publication date	Application number	Application date
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AU2010315930 BB	20160331	AU20100315930	20101028
AU2016203780 AA	20160630	AU20160203780	20160607
AU2018229518 AA	20181011	AU20180229518	20180913
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MX2012005032 A1	20120803	MX20120005032	20101028
MY161858 A	20170515	MY20120700233	20101028

SG10201407001T A1	20141127	SG20141007001	20101028
SG10201804504S A1	20180730	SG20181004504	20101028
TH120479 A	20130128	TH20121001980	20101028
US2011130736 AA	20110602	US20100925765	20101028
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US2017224548 AA	20170810	US20170435991	20170217
US8702671 BB	20140422	US20100925765	20101028
US9603754 BB	20170328	US20140163763	20140124
WO11056205 A1	20110512	WO2010US02858	20101028

Priority:

US20090279923P	20091028	AU20100315930	20101028	CN201080060445	20101028
US20100925765	20101028	WO2010US02858	20101028	HK20130103496	20130320
US20140163763	20140124	AU20160203780	20160607	US20170435991	20170217
AU20180229518	20180913				

Probable Assignee: DSG TECHNOLOGY HOLDINGS LTD

Assignee(s): (std): DSG TECH HOLDINGS LTD ; DSG TECHNOLOGY HOLDINGS LTD ; SMID ANNE ; TSANG PATRICK KING YU ; WRIGHT ANDREW C ; VARONA EUGENIO ; VARONA EUGENIO G

Inventor(s): (std): SMID ANNE ; TSANG PATRICK KING YU ; WRIGHT ANDREW C ; VARONA EUGENIO ; VARONA EUGENIO G ; PATRICK KING YU TSANG ; EUGENIO VARONA ; ANDREW C WRIGHT ; ANNE SMID ; YU TSANG PATRICK KING ; EUGENIO GO VARONA ; TSANG PATRICK ; WRIGHT ANDREW

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; BORDEN LADNER GERVAIS LLP; PRICE NIGEL JOHN KING; SHANGHAI INTELLECTUAL PROPERTY OFFICE; NANYANG LAW LLC; AMATONG LAW FIRM PLLC; ALBERTO Q; AMATONG MCCOY LLC; AMATONG ALBERTO Q JR

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

6) Family number: 49612549 (US2013012898A)

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Title: METHOD FOR PRODUCING A WEB OF A LAMINATE MATERIAL FOR RETAINING FAECES AND METHOD FOR PRODUCING AN ABSORBENT ARTICLE

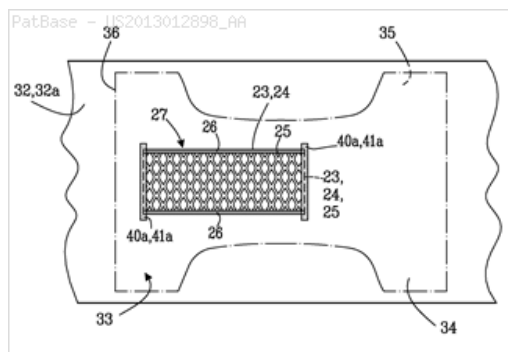
Abstract: A method for producing a web of a laminate material for retaining faeces including laminating first and second webs to form an intermediate laminate web, providing transversal slits in the intermediate laminate web and expanding the intermediate laminate web such that the slits are opened to openings. An expanded intermediate laminate web is formed by the expansion. The expanded web is laminated to a third web in order to fix the expanded web in an expanded state, whereby the laminate material web is formed. Also, a method of producing an absorbent article including producing the laminate material web according to the method above.

Classifications:

International (IPC 8-9): A61F13/15 A61F13/49 A61F13/511 A61F13/512 B32B37/02 B32B37/06 B32B37/14 B32B37/20 B32B38/00 B32B38/04 (Advanced/Invention); B32B37/00 B32B37/12 B32B37/20 (Advanced/Non-invention) **CPC:** A61F13/15804 A61F13/15593 A61F13/15699 A61F13/5123 B32B37/0084 B32B37/12 B32B37/1292 B32B37/144 B32B2037/1215 B32B2037/1276 B32B2038/045 B32B2310/028 B32B2555/02 A61F13/15585 A61F13/15747 Y10T156/101 Y10T156/1015 Y10T156/1026 Y10T156/1062 Y10T156/1051 Y10T156/1056

European: A61F13/15M10 A61F13/15M2B A61F13/15M5 A61F13/512B B32B37/12 L32B310/02F L32B37/00D2 L32B37/12B2 L32B37/12C6 L32B37/12D2 L32B38/04B L32B555/02

US: 1/1 156/227 156/252 156/73.4 604/365



Family:

Publication number	Publication date	Application number	Application date
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DE602010039069 D1	20170216	DE201060039069T	20100318
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US2013012898 AA	20130110	US20100635058	20100318
US9345626 BB	20160524	US20100635058	20100318
WO11115537 A1	20110922	WO2010SE50302	20100318

Priority:

EP20100848077	20100318	WO2010SE50302	20100318
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Probable Assignee: SCA HYGIENE PRODUCTS AB

Assignee(s): (std): SCA HYGIENE PROD AB ; KLINTE OLSSON ANNA ; LAGERGREN NIKLAS ; PERNEBORN ROBERT ; BERGENDAHL MAGNUS

Assignee(s): ESSITY HYGIENE AND HEALTH AKTIEBOLAG ; SCA HYGIENE PRODUCTS AB

Inventor(s): (std): BERGENDAHL MAGNUS ; KLINTE OLSSON ANNA ; LAGERGREN NIKLAS ; PERNEBORN ROBERT ; ROBERT PERNEBORN ; NIKLAS LAGERGREN ; MAGNUS BERGENDAHL ; ANNA KLINTE OLSSON

Agent(s): Valea AB; VALEA AB; DRINKER BIDDLE AND REATH LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

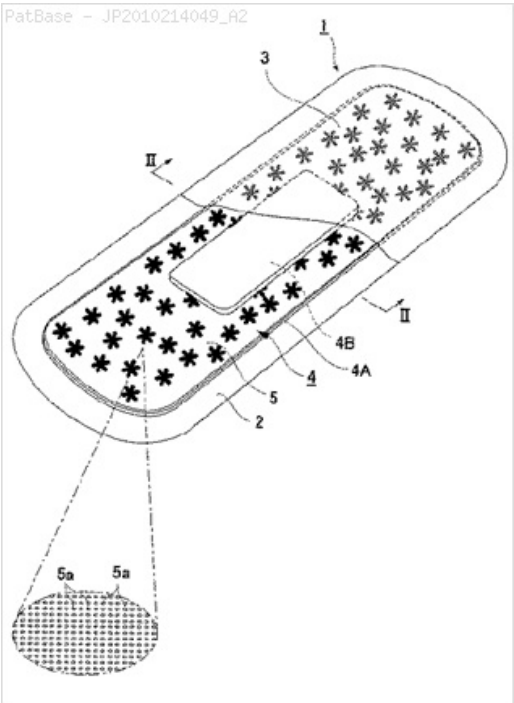
7) Family number: 47181775 (JP2010214049A) © PatBase

Title: ABSORBENT ARTICLE

Abstract: PROBLEM TO BE SOLVED: To provide an absorbent article which reduces a depressed feeling during menstruation or in slight incontinence and camouflages menstrual blood or urine, etc., and also allows an absorbed body fluid to be visually recognized to thereby help a person who manages a body condition with the color of the body fluid and prevents the back-flow of the absorbed body fluid. SOLUTION: The absorbent article includes an absorbent body 4 which is held between a liquid-permeable front surface sheet 3 and a rear surface sheet 2. The absorbent body 4 has a double-layer structure with a lower layer absorbent body 4A and an upper layer absorbent body 4B, wherein the upper layer absorbent body 4B has a smaller area than the lower layer absorbent body 4A and is arranged in a part corresponding to a body fluid discharge part. A colored and/or designed porous plastic sheet 5 is arranged between the lower layer absorbent body 4A and the upper layer absorbent body 4B and also on the upper surface of the lower layer absorbent body 4A so as to cover the substantially whole surface of the lower layer absorbent body 4A.

Classifications:

International (IPC 8-9): A61F13/15 A61F13/472
A61F13/534 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
JP2010214049 A2	20100930	JP20090067573	20090319
JP5420943 B2	20140219	JP20090067573	20090319

Priority:

JP20090067573 20090319

Probable Assignee: DAIO SEISHI KK

Assignee(s): (std): DAIO PAPER CORP ; DAIO SEISHI KK

Inventor(s): (std): SATO MICHIKO

8) Family number: 19196821 (GB2055586A) © PatBase

Title: Sanitary towels and other absorbent elements

Abstract: A sanitary towel, baby nappy, bandage or other absorbent element comprises an absorbent material (9, 10) enclosed within an envelope including a layer of non-woven material (6) to contact the skin of the user. A layer (11) of a flexible material which has been expanded in a manner analogous to "expanded metal" by slitting and stretching perpendicular to the direction of the parallel lines of slits is included in the envelope with the absorbent material either as a flexible reinforcement or to facilitate passage of body liquids from the non-woven material (6) to the absorbent material (9, 10).

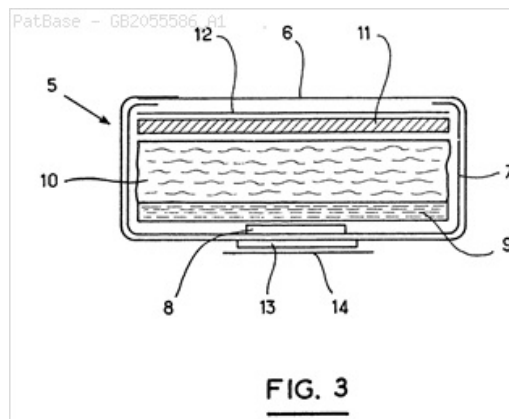
Classifications:

International (IPC 8-9): A61F13/00 A61F13/15
B01J20/28 (Advanced/Invention);
A61F13/00 A61F13/15 B01J20/28 (Core/Invention)

International (IPC 1-7): A41B13/02 A61F13/18 A61G7/04 A61L15/00 B01J20/28

CPC: A61F13/4702 A61F13/00008 A61F13/537 A61F2013/00744 A61F2013/15048 A61F2013/53782 A61F2013/530481

European: A61F13/00 A61F13/00A2 A61F13/47A A61F13/537 K61F13/00L5A6 K61F13/15A11 K61F13/537E4 K61F13/53Q



Family:

Publication number	Publication date	Application number	Application date
BE884699 A	19810209	BE19800201691	19800808
DE3030096 A1	19810226	DE19803030096	19800808
DK342280 A	19810211	DK19800003422	19800808
ES260303 U	19820516	ES19800260303U	19800808
FR2462902 A1	19810220	FR19790020438	19790810
FR2462902 B1	19831202	FR19790020438	19790810
GB2055586 A1	19810311	GB19800024779	19800729
GB2055586 B2	19830427	GB19800024779	19800729
IE49972 B	19860122	IE19800001673	19800808
IE801673 L	19810210	IE19800001673	19800808
IT1129240 A	19860604	IT19800068276	19800808
IT8068276 A0	19800808	IT19800068276	19800808
NL8004404 A	19810212	NL19800004404	19800731
NL8004404 A1	19810212	NL19800004404	19800731

Priority:

FR19790020438 19790810

Probable Assignee: LOREAL SA

Assignee(s): (std): L OREAL ; L OREAL SOC ANONYME TE PARIJS ; LOREAL ; OREAL ; LOREAL SA

Assignee(s): L OREAL SOCIETE ANONYME TE PARIJS

Inventor(s): (std): BOITEAU C ; BOITEAU CLAUDE

Inventor(s): C BOITEAU ; CLAUDE BOITEAU

9) Family number: 64383831 (US2018161218A)

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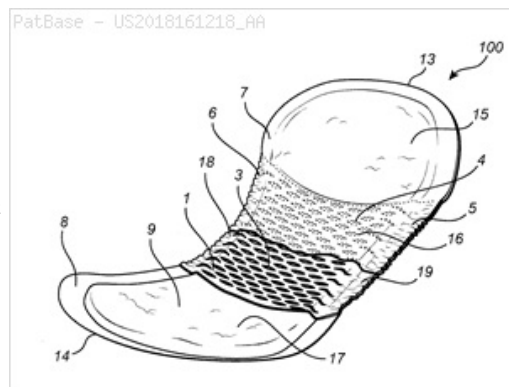
Title: ABSORBENT PRODUCT COMPRISING INLET MATERIAL

Abstract: An absorbent product includes a liquid pervious topsheet, a liquid impervious backsheet and an absorbent core enclosed between the liquid pervious topsheet and liquid impervious backsheet. The absorbent product has in its longitudinal direction a crotch part and two end parts. The absorbent product includes at least in its crotch part an inlet material having a plurality of openings. The plurality of openings in the inlet material are formed from a plurality of slits extending in the transversal direction of the absorbent product by expanding the continuous inlet material in the longitudinal direction of the absorbent product. The liquid inlet material has in its transversal direction of the absorbent product a central region and two edge regions. The openings are located in the central region so that the central region of the material with the plurality of openings has a lesser degree of elasticity than the edge regions.

Classifications:

International (IPC 8-9): A61F13/472 A61F13/475 A61F13/476 A61F13/511 A61F13/512 A61F13/513 A61F13/53 A61F13/535 A61F13/537 B32B3/10 B32B3/26 B32B37/14 B32B5/02 B32B5/04 B32B5/18 B32B5/24 (Advanced/Invention); B32B37/14 B32B5/24 (Advanced/Non-invention)

CPC: A61F2013/4708 B32B5/18 B32B5/022 B32B5/245 B32B3/266 A61F2013/4587 B32B2307/726 B32B2307/7265 B32B2307/73 B32B2555/02 A61F13/53713 A61F13/4755 A61F13/476 A61F13/537 A61F13/4704 A61F13/49017 B32B3/10 B32B5/04 B32B5/24 B32B37/1292 B32B2437/02



Family:

Publication number	Publication date	Application number	Application date
BR112017023424 A2	20180724	BR20171123424	20150610

CN107613934 A	20180119	CN201580080346	20150610
CO20170012395 A2	20180328	CO20170012395	20171130
EP3307221 A1	20180418	EP20150895076	20150610
EP3307221 A4	20190206	EP20150895076	20150610
JP2018516707 T2	20180628	JP20170563992T	20150610
MX2017015026 A1	20180413	MX20170015026	20150610
RU2667580 C1	20180921	RU20170146838	20150610
US2018161218 AA	20180614	US20150580883	20150610
WO16200300 A1	20161215	WO2015SE50671	20150610

Priority:

WO2015SE50671 20150610

Probable Assignee: ESSITY HYGIENE AND HEALTH AKTIEBOLAG

Assignee(s): (std): ESSITY HYGIENE AND HEALTH AB ; SCA HYGIENE PROD AB

Assignee(s): SCA HYGIENE PRODUCTS AB ; ESSITY HYGIENE AND HEALTH AKTIEBOLAG

Inventor(s): (std): ANDERSSON SUSANNE ; ASA JOENEGREN ; EDRUD SUSANNA ; HANSSON MORGAN ; JOENEGREN AASA ; JOENEGREN ASA ; KALENTUN PIA ; MORGAN HANSSON ; PIA KALENTUN ; SUSANNA EDRUD ; SUSANNE ANDERSSON ; JONEGREN ASA

Agent(s): JOSE ANDRES RINCON USCATEGUI; ZACCO SWEDEN AB; YURIDICHESKAYA GORODISSKIJ I PARTNER Y OOO FA; SCA HYGIENE PRODUCTS AB

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

10) Family number: 20719927 (ZA9701612A)

© PatBase

Title: A LIQUID PERMEABLE SURFACE MATERIAL FOR AN ABSORBING PRODUCT, AND A METHOD FOR ITS MANUFACTURE.

Abstract: A liquid-permeable surface material for an absorbent article such as a diaper, an incontinence protector, a sanitary napkin, or the like, comprising a flexible, skin friendly material layer (1), and having at least one penetrating opening (3'). The opening (3') is formed by a slit (3) in the material layer (1) whereby the slit (3) has two longitudinal edges. Elongate elastic means (2) are pretensioned and arranged on both sides of the slit (3), substantially perpendicular to the edges of the slit (3), and act contractingly on the material on both sides of the slit (3) so that the edges of the slit (3) are pulled apart and the contracted material exhibits wrinkles (24) running substantially parallel to the slit (3). In a method of manufacturing a surface material, a plurality of parallel elongate elastic means (2) are stretched out, applied and affixed to a flexible, skin friendly material layer (1) which is kept stretched to a planar condition during the application of the elastic means (2), whereafter slits (3) are pierced through the material layer (1) substantially perpendicularly across the elastic means (2). In this manner, the elastic means (2) are parted at the slits (3), whereafter the stretching of the material layer (1) is terminated and the parts (5) of the elastic means (2) between the slits (3) are allowed to contract so that the material layer (1) is wrinkled and the slits (3) are widened.

Classifications:

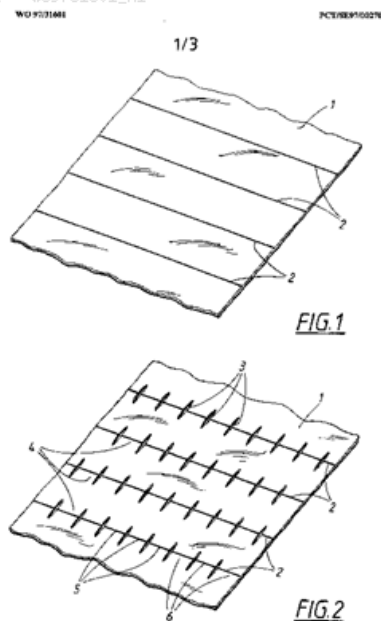
International (IPC 8-9): A61F13/15 A61F13/49 A61F13/511 A61F5/44 B23B1/00 (Advanced/Invention); A61F5/44 (Advanced/Non-invention); A61F13/15 A61F5/44 (Core/Invention)

International (IPC 1-7): A61F13/15 A61F13/53 A61F5/44

CPC: A61F13/512

European: A61F13/512

PatBase - W09731601_R1



Family:

Publication number	Publication date	Application number	Application date
AU199721080 A1	19970916	AU19970021080	19970219
CO4810378 A1	19990630	CO19970010014	19970225
EP0884992 A1	19981223	EP19970906366	19970219
GB2310606 A1	19970903	GB19970003476	19970219

GB2310606 B2	19990929	GB19970003476	19970219
GB9703476 A0	19970409	GB19970003476	19970219
HK1002550 A1	20000428	HK19980101589	19980228
JP2000505339 T2	20000509	JP19970530444T	19970219
NZ330970 A	19990528	NZ19970330970	19970219
PE59198 A1	19981005	PE19970000135	19970225
SE9600765 A	19970829	SE19960000765	19960228
SE9600765 A0	19960228	SE19960000765	19960228
SE9600765 L	19970829	SE19960000765	19960228
TNSN97041 A1	20000901	TN1997SN00041	19970226
TNSN97041 A1	19991231	TN1997SN00041	19970226
TR9801632 T2	19981123	TR19980001632T	19970219
TW332149 B	19980521	TW19970102329	19970226
WO9731601 A1	19970904	WO1997SE00270	19970219
ZA9701612 A	19970829	ZA19970001612	19970225

Priority:

SE19960000765 19960228 WO1997SE00270 19970219

Probable Assignee: MOELNLYCKE AB

Assignee(s): (std): HANSSON ROY ; MOELNLYCKE AB ; SCA MOELNLYCKE AB ; SCA M LNLCKE AB

Assignee(s): SCA MOLINE LECTRA ; SCA M 247 LNLCKE AB ; SCA MOLNLYCKE AB

Inventor(s): (std): HANSSON ROY ; ROY HANSSON

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; ERNESTO CAVELIER

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CN CU CZ DE DK EE ES FI FR GB GE GR HU IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US UZ VN

11) Family number: 31806942 (US5611790A)

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Title: STRETCHABLE ABSORBENT ARTICLES

Abstract: The present invention relates to absorbent articles such as sanitary napkins worn by women. More particularly, the present invention relates to absorbent articles, such as thin sanitary napkins, that are stretchable, especially in the longitudinal direction.

Classifications:

International (IPC 8-9): A61F13/15 A61F13/42 A61F13/53 A61F13/538

A61F13/56 D01D5/253 (Advanced/Invention)

International (IPC 1-7): A61F13/15

CPC: A61F13/51466 A61F13/15211 A61F13/472 A61F13/47209

A61F13/47218 A61F13/47227 A61F13/47236 A61F13/47263

A61F13/47272 A61F13/474 A61F13/476 A61F13/49 A61F13/491

A61F13/51 A61F13/513 A61F13/514 A61F13/51464 A61F13/51478

A61F13/5148 A61F13/51484 A61F13/515 A61F13/53 A61F13/531

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A61F2013/15382 A61F2013/1539 A61F2013/15926 A61F2013/4512

A61F2013/4562 A61F2013/4568 A61F2013/4575 A61F2013/4708

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A61F2013/49074 A61F2013/51007 A61F2013/51009 A61F2013/51011

A61F2013/51023 A61F2013/5103 A61F2013/51033 A61F2013/51066

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A61F2013/51441 A61F2013/51472 A61F2013/530007 A61F2013/530131

A61F2013/530226 A61F2013/530328 A61F2013/530335 A61F2013/530481

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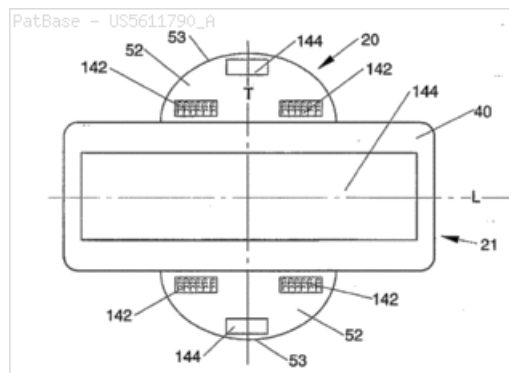
US: 604/373 604/385.2 604/385.22 604/391

Family:

Publication number	Publication date	Application number	Application date
US5611790 A	19970318	US19950476238	19950607

Priority:

US19900539779 19900618	US19900605583 19901029	US19900630451 19901219
US19910637090 19910103	US19910637571 19910103	US19910734392 19910723
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Probable Assignee: PROCTER AND GAMBLE CO

Assignee(s): (std): PROCTER AND GAMBLE

Assignee(s): PROCTER AND GAMBLE CO ; THE PROCTER AND GAMBLE COMPANY

Inventor(s): (std): SUGAHARA KAZUKO ; OSBORN III THOMAS W ; MAYER KATHERINE L ; LAVASH BRUCE W ; HINES LETHA M ; CHAPPELL CHARLES W

12) Family number: 56664981 (US2015313766A)

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Title: ABSORBENT ARTICLE WITH A MULTI-LAYERED TOPSHEET

Abstract: An absorbent article (100-1200) is capable of providing comfort to the wearer and can maintain dryness and inhibit the leakage of fluid. The absorbent article (100-1200) includes a multi-layered topsheet (138). The multi-layered topsheet (138) includes a first topsheet layer (106) having an opening (148) and a second topsheet layer (108) disposed under the first topsheet layer (106). The first topsheet layer (106) and the second topsheet layer (108) are joined together by a seal that, in one embodiment, generally corresponds with the shape of the opening (148). Further, a first sub-topsheet layer (116) is situated beneath the multi-layered topsheet (138) and has an opening (150) that is smaller than the first topsheet layer opening (148). This combination of openings (148, 150) situated one below the other provides for an absorbent article (100-1200) that can maintain a high level of dryness and its ability to conform to the wearer's body, and inhibit the leakage of bodily fluids due to a funnel-like effect.

Classifications:

International (IPC 8-9): A61F13/475 A61F13/494 A61F13/51 A61F13/511

A61F13/512 A61F13/513 (Advanced/Invention);

A61F13/51 (Advanced/Non-invention)

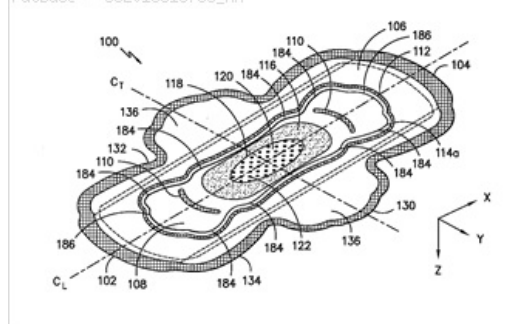
CPC: A61F13/5125 A61F13/513 A61F2013/5127 A61F2013/51078

A61F2013/51092 A61F2013/51186 A61F13/475 A61F13/51104

A61F13/5116 A61F13/512

US: 604/385.101

PatBase - US2015313766_AA



Family:

Publication number	Publication date	Application number	Application date
AU2012396080 AA	20140612	AU20120396080	20121204
AU2012396080 BB	20170928	AU20120396080	20121204
BR112015011504 A2	20170711	BR20151111504	20121204
CN104780883 A	20150715	CN201280077088	20121204
EP2928433 A1	20151014	EP20120889415	20121204
EP2928433 A4	20160817	EP20120889415	20121204
KR20150093712 A	20150818	KR20157016578	20121204
RU2015123826 A	20170110	RU20150123826	20121204
RU2608806 C2	20170124	RU20150123826	20121204
US2015313766 AA	20151105	US20120646398	20121204
US10213347 BB	20190226	US20120646398	20121204
WO14085974 A1	20140612	WO2012CN085812	20121204

Priority:

WO2012CN085812 20121204

Probable Assignee: KIMBERLY CLARK CORP

Assignee(s): (std): KIMBERLY CLARK CO ; MIAO LIN ; KIMBERLY CLARK WORLDWIDE INC ; PU CHUN LEI ; KIMBERLY CLARK CORP ; HAO XUEEN GEORGE ; KIMBERLI KLARK VORLDDVAJD INK

Assignee(s): KIMBERLY CLARK CHINA CO LTD

Inventor(s): (std): CHUN LEI PU ; HAO XUEEN GEORGE ; LIN MIAO ; MIAO LIN ; PU CHUN LEI ; XUEEN GEORGE HAO ; PU CHUNLEI ; PU CHUN LEJ ; MYAO LIN ; KHAO SYUEEN DZHORDZH ; HAO XUEEN

Agent(s): MADDERNS PATENT AND TRADE MARK ATTORNEYS; SPRUSON AND FERGUSON; DAVIES CHRISTOPHER ROBERT; DORITY AND MANNING PA; PANAWELL AND PARTNERS LLC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW