

Search query (4): [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 of the total ar

Results: 29

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Title: ABSORBENT PRODUCT COMPRISING ODOR CONTROL MATERIAL

Abstract: Hygienic product comprising an odor control material having a longitudinal direction, a transverse direction and a thickness direction, the odor control material including a first carrier material wherein a plurality of odor control particles are bonded to at least one surface of the first carrier material by a binder substance wherein the first carrier material in an unexpanded condition has a plurality of transversal slits, and that the first carrier material in an expanded condition in the longitudinal direction has a plurality of openings, and that the first carrier material is fixed in the expanded condition in the hygienic product whereby the odor control material is in the form of a reticulated structure.

Classifications:

International (ipc 8-9): A61F13/15 A61F13/47 A61F13/51 A61F13/532

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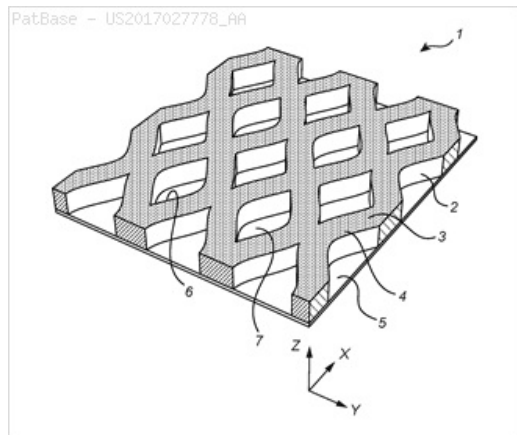
A61F13/47 A61F13/51 A61F13/53 (Advanced/Non-invention)

CPC: A61F13/53747 A61F13/53752 A61F13/8405 A61F2013/530861

A61F2013/8408 A61F2013/842 A61F2013/8423 A61L15/46 A61F13/84

A61F13/15577 A61F13/53743 A61F2013/8411

US: 1/1 604/359



Family:

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Probable Assignee: SCA HYGIENE PRODUCTS AB

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

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

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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

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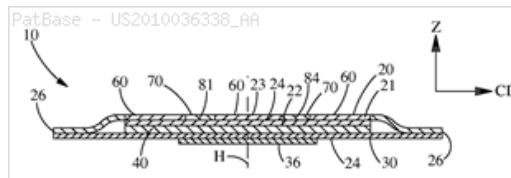
Title: REGIONALIZED TOPSHEET

Abstract: An absorbent article having a liquid pervious topsheet having a first portion and a second portion. The first portion differs in structure from the second portion. The topsheet has a longitudinal centerline and a transverse centerline. The second portion has a first structurally modified zone and a second structurally modified zone. The first structurally modified zone and the second structurally modified zone are on opposing sides of the longitudinal centerline and the first structurally modified zone and the second structurally modified zone are on opposing sides of an axis parallel to the transverse centerline. The first structurally modified zone and the second structurally modified zone are spaced apart from one another. The first structurally modified zone and the second structurally modified zone together make up more than about 10 percent of the area of the topsheet.

Classifications:

International (IPC 8-9): A61F A61F13/00 A61F13/15 A61F13/20
A61F13/42 A61F13/45 A61F13/47 A61F13/472 A61F13/49 A61F13/511

A61F13/512 A61F13/513 A61F13/514 A61F13/53 A61F13/84 B32B27/12
 B32B3/28 B32B3/30 B32B37/00 B32B37/02 B32B37/14 B32B37/20
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 B32B5/00 B32B5/02 B32B5/08 B32B5/14 B32B5/22 B32B5/26 B41F33/00
 B41J11/70 B41M3/00 B41M5/00 D04H1/4374 D04H1/4382 G06F15/16
 G06F17/21 G06F17/30 G06F3/00 G06F9/46 G06F9/54
 G06N5/04 (Advanced/Invention);
 A61F13/511 A61F13/53 A61F13/84 B29C65/48 B32B27/12 B32B38/04
 B32B5/18 B41M3/00 (Advanced/Non-invention);
 A61F13/15 B41F33/00 (Core/Invention);
 A61F (Subclass/Invention)



International (IPC 1-7): A61F13/15

CPC: A61F13/472 A61F13/512 B32B5/00 B41M3/008 D04H1/4382 D04H1/4374 A61F13/15203 A61F13/51305 A61F13/51104
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European: A61F13/153 A61F13/511 A61F13/512 A61F13/513B A61F13/513L A61F13/514D A61F13/84 B32B27/12 B32B38/06
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US: 1/1 101/483 101/483S 156/250 156/263 156/277 156/277S 156/290 156/297 156/77 162/134 162/137 347/101 604/358
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Priority:

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Probable Assignee: PROCTER AND GAMBLE CO

Assignee(s): (std): GONZALEZ LUISA VALERIO ; HAMMONS JOHN LEE ; GONZALEZ LUIS VALERIO ; HOOD LISA JUNE ; IBM ; PROCTER AND GAMBLE ; LARSON SIGNE CHRISTINA ; OETJEN DAVID CHRISTOPHER ; ETZION OPHER ZVI ; FUCHS SYBILLE ; WASSERKRUG SEGEV ELIEZER ; NTERNATIONAL BUSINESS MACHINES CORP

Assignee(s): GAMBLE CO PROCTER AND ; PROCTER AND GAMBLE CO ; PROCTER AND GAMBLE COWORLD SHAVING HEADQUARTERSIP/LEGAL PATENT DEPARTMENT - 3EONE GILLETTE PARKBOSTONMA02127US ; PROCTER AND GAMBLE CO CINCINNATI ; INT BUSINESS MACHINES CORP ; INT BUSINESS MASCHINES CORP ; INTERNATL BUSINESS MACH CORP ; THE PROCTER AND GAMBLE COMPANY ; DZE PROKTER EHND GEHMBL KOMPANI

Inventor(s): (std): FUCHS SYBILLE ; GONZALEZ LUISA VALERIO ; HAMMONS JOHN LEE ; LARSON SIGNE CHRISTINA ; HOOD

LISA JUNE ; OETJEN DAVID CHRISTOPHER ; JOHN LEE HAMMONS ; ETZION OPHER ; ETZION ZVI OPHER ; WASSERKRUG ELIEZER SEGEV ; ETZION OPHER ZVI ; OPHER ETZION ZVI ; SEGEV WASSERKRUG ELIEZER ; WASSERKRUG SEGEV ELIEZER ; GONZALEZ LUISA ; HAMMONS JOHN ; HAMMON JOHN LEE ; VALERIO GONZALEZ LUIS ; LEE HAMMONS JOHN ; SYBILLE FUCHS ; VALERIO GONZALEZ LUISA ; LUISA VALERIO GONZALEZ ; GONZALEZ LUIS VALERIO ; KHAMMONS DZHON LI ; FUSH SIBILL

Inventor(s): HAMMONS JOHN LEEUS ; FUCHS SYBILLEDE ; GONZALEZ LUISA VALERIOUS ; CHIMMANAMANDA, DINESH U. ; SONG, MINGHU ; YING, WEIWEN ; SCHWEIZER, STEFAN ; CHAE, JUNGHYUN ; ZHANG, SHIJIE ; BURLISON, JOSEPH A. ; DAVID CHRISTOPHER OETJEN ; OETJEN DAVID CHRISTOPHER WEST CHESTER ; LUIS VALERIO GONZALEZ

Agent(s): PHILLIPS ORMONDE FITZPATRICK; MBM INTELLECTUAL PROPERTY LAW LLP; KREMER VERONIQUE MARIE JOSEPHINE; BORBACH MARKUS; DE ELZABURU ALBERTO; REINHOLD COHN AND PARTNERS; NAGAI HIROSHI; THE PROCTER AND GAMBLE COMPANY,GLOBAL LEGAL DEPARTMENT - IP; PROCTER AND GAMBLE CO GLOBAL LEGAL DEPARTMENT IP; ANDREW J; GARY J; MEGAN C; GEORGE H; LEAL GEORGE H; THE PROCTER AND GAMBLE COMPANY; EILEEN HUGHETT L; PROCTER AND GAMBLE CO

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 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

3) 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)

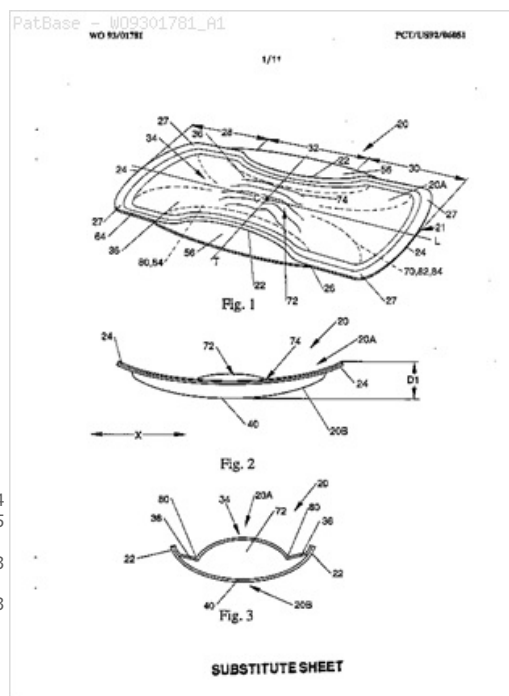
International (IPC 1-7): A61F13/00 A61F13/15 A61F13/16 A61F13/472 A61F13/49 A61F13/56 A61F13/58 A61F5/44

CPC: A61F13/15203 A61F13/15211 A61F13/15707 A61F13/47209 A61F13/47218 A61F13/47227 A61F13/47263 A61F13/47272 A61F13/474 A61F13/49 A61F13/491 A61F13/5126 A61F13/514 A61F13/51464 A61F13/5148 A61F13/515 A61F13/533 A61F13/53409 A61F13/535 A61F13/537 A61F13/53713 A61F13/53747 A61F13/5376 A61F13/5611 A61F13/58 A61F13/62 A61F13/64 A61F2013/15292 A61F2013/15325 A61F2013/15357 A61F2013/15365 A61F2013/15382 A61F2013/1539 A61F2013/15406 A61F2013/15422 A61F2013/15926 A61F2013/4512 A61F2013/455 A61F2013/4562 A61F2013/4708 A61F2013/49023 A61F2013/49031 A61F2013/49044 A61F2013/49046 A61F2013/49057 A61F2013/49063 A61F2013/4908 A61F2013/51007 A61F2013/51009 A61F2013/51011 A61F2013/51023 A61F2013/5103 A61F2013/51033 A61F2013/51066 A61F2013/51069 A61F2013/51409 A61F2013/51411 A61F2013/51429 A61F2013/51433 A61F2013/5147 A61F2013/530007 A61F2013/530036 A61F2013/530051 A61F2013/530058 A61F2013/530094 A61F2013/530102 A61F2013/530109 A61F2013/530131 A61F2013/530145 A61F2013/530153 A61F2013/53016 A61F2013/530167 A61F2013/530175 A61F2013/530255 A61F2013/530299 A61F2013/530335 A61F2013/530343 A61F2013/53035 A61F2013/530357 A61F2013/530372 A61F2013/530445 A61F2013/530459 A61F2013/530481 A61F2013/530547 A61F2013/530583 A61F2013/5307 A61F2013/530802 A61F2013/530875 A61F2013/530934 A61F2013/53445 A61F2013/53721 A61F2013/53726 A61F2013/53739 A61F2013/53791 A61F2013/53908 A61F2013/53916 A61F2013/53925 A61F2013/5395 A61F2013/53966 A61F2013/53975 A61F2013/53983 A61F2013/5688 A61F2013/582 A61F2013/586 A61F2013/8491 D01D5/253

European: A61F13/15J A61F13/15M6 A61F13/472B A61F13/472B1 A61F13/472D A61F13/472E A61F13/474 A61F13/511 A61F13/514 A61F13/514B2 A61F13/515 A61F13/535 A61F13/537B2 A61F13/537C2 A61F13/537D A61F13/56B2 D01D5/253 K61F13/15F2 K61F13/15F5 K61F13/15G K61F13/15H6 K61F13/15J2 K61F13/15J8A K61F13/15J8A4 K61F13/15J8C K61F13/15J8D K61F13/15J8D1A K61F13/15J8D2 K61F13/15J8E K61F13/15J8H K61F13/15M11G K61F13/45C K61F13/45C3A K61F13/45C3C K61F13/472A K61F13/47D K61F13/49 K61F13/491 K61F13/49D2H1A K61F13/49D2H3 K61F13/49D3A K61F13/49D3A1 K61F13/49D3B3 K61F13/49E3 K61F13/49H7A K61F13/511C K61F13/511D1 K61F13/511D6 K61F13/511E1 K61F13/511E1A K61F13/511F2 K61F13/512 K61F13/512C K61F13/513D K61F13/513E K61F13/513G K61F13/513G3 K61F13/513G5 K61F13/513H K61F13/514A4 K61F13/514A4A K61F13/514A4C K61F13/514A4D K61F13/514B4 K61F13/514C2A K61F13/51M2 K61F13/51M3 K61F13/51M3A K61F13/51M6 K61F13/51M6C K61F13/51M6D K61F13/51N2 K61F13/51N2A K61F13/533 K61F13/534B K61F13/534C K61F13/537 K61F13/537B5 K61F13/537B5A K61F13/537B5D K61F13/537G K61F13/539A K61F13/539A1 K61F13/539A2 K61F13/539C K61F13/539E K61F13/539G K61F13/539H K61F13/53L K61F13/53L4 K61F13/53L4B K61F13/53L5 K61F13/53L5B K61F13/53L5B1 K61F13/53L5B2 K61F13/53M K61F13/53M1A K61F13/53M1B K61F13/53M2 K61F13/53M2A K61F13/53M2B K61F13/53M4D K61F13/53M4E K61F13/53M6 K61F13/53M7 K61F13/53M7A K61F13/53M7B K61F13/53M7D K61F13/53P1 K61F13/53P2A K61F13/53Q K61F13/53Q2E K61F13/53Q4 K61F13/53Q6 K61F13/53R K61F13/53S1 K61F13/53S5A K61F13/56G1 K61F13/58 K61F13/58C K61F13/58E K61F13/62 K61F13/64 K61F13/84E1 K61F15/56

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Priority:

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US19920874872	19920428	US19920882738	19920514	AU19920023993	19920723
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WO1992US06053	19920723	WO1992US06056	19920723		

Probable Assignee: PROCTER AND GAMBLE CO

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

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

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

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KAZUKO JP ; KEELER SHERI DEAN US ; LAVASH BRUCE WILLIAM US ; HAMMONS JOHN LEE US ; BAMBER JEFFREY VINCENT US ; DOAK NANCY BECK US ; JR GOODMAN WILLIAM HARRY ; JOHNSON THERESA US ; OLSEN ROBB ERIC US ; OSBORN THOMAS WARD US ; JRGODMAN WILLIAM HARRY

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

4) Family number: 3814195 (US4944735A)

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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:

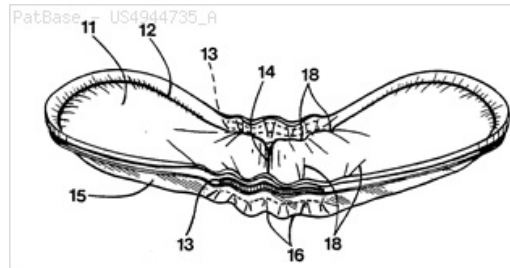
International (IPC 8-9): A61F13/15 A61F13/472 (Advanced/Invention); A61F13/15 (Core/Invention)

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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CA2019455 AA	19911108	CA19902019455	19900620
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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 JO ; MOKRY PATTI J ; PATEI JOO MOKURII ; PATEI JIYOO MOKURII

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

5) Family number: 8486224 (US5397316A)

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Title: Slitted absorbent members for aqueous body fluids formed of expandable absorbent materials

Abstract: This application relates to the use of slitted regions in absorbent members formed of absorbent materials that remain relatively thin until wetted with such fluids. Suitable materials include presently preferred varieties of polymeric foam materials. Single and multi-layered absorbent members incorporating slitted regions are disclosed, as well as the use of pre-formed cup-

shaped slits for enhanced initial fluid acquisition. Such slitted regions in combination with planar expansion properties enable the absorbent members to respond dynamically to various fluid loading conditions to create useful structural features. The slitted regions, in combination with absorbent materials having expansion potential in at least one direction within the plane of the absorbent member, cause the slitted regions to buckle and/or deform out of the plane of the absorbent member, thereby causing the slit surfaces to displace angularly and/or translationally with respect to one another. This more fully exposes the slit surfaces to the incoming fluid for improved acquisition capabilities. The use of pre-formed cup-shaped slits enables the absorbent member to more quickly capture and absorb aqueous body fluids, and is particularly useful for containment and dewatering of moist or runny fecal material and higher viscosity fluids and/or those having a higher concentration of particulate material therein such as blood, menses, or wound fluids.

Classifications:

International (IPC 8-9): A61F13/15 A61F13/49 A61F13/53 A61F5/44

A61L15/16 B01J20/26 E01D19/06 (Advanced/Invention);

A61F13/15 A61F5/44 (Advanced/Non-invention);

A61F13/15 A61F5/44 B01J20/22 (Core/Invention);

A61F13/15 A61L15/16 (Core/Non-invention)

International (IPC 1-7): A61F13/15 A61F13/20 A61F13/46 A61F13/49

A61F13/53 A61F5/44 B01J20/26 E01D19/06

CPC: A61F13/535 A61F13/5376 A61F2013/15325 A61F2013/15357

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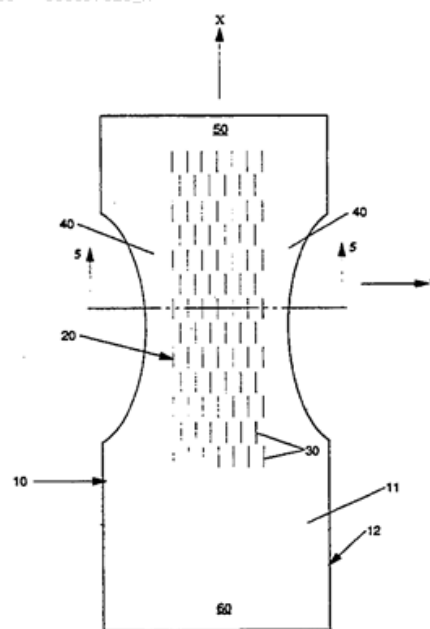
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K61F13/53R5

US: 604/358 604/368 604/369 604/378 604/382 604/385.101

PatBase - US5397316_A



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NO955247 A0	19951222	NO19950005247	19951222
NO955247 L	19960226	NO19950005247	19951222
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PE24595 A1	19950915	PE19940245228	19940623
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RU96101996 A	19980327	RU19960101996	19960125
SG55062 A1	19981221	SG19960004339	19940526
TH16366 A	19950817	TH19941001299	19940624
TR28268 A	19960417	TR19940000679	19940624
TW272122 B	19960311	TW19940106813	19940726
US5397316 A	19950314	US19930082861	19930625

VN1035 A1	19991227	VN19960001692	19960118
WO9500091 A1	19950105	WO1994US05979	19940526

Priority:

US19930082861 19930625 WO1994US05979 19940526 CZ19490002884 19961001
CZ19960002884 19961001

Probable Assignee: PROCTER AND GAMBLE CO

Assignee(s): (std): PROCTER AND GAMBLE ; PROCTER AND GAMBLE CO ; HOGH SOLID

Assignee(s): LAVON GARY DEAN ; ANDES WILLIAM SCOTT ; THE PROCTER AND GAMBLE COMPANY ; THE PROCTER AND GAMBLE COMPANY CINCINNATI ; PROCTER AND GAMBLE CO THE ; THE PROCTER AND GAMBLE CO ; ROE DONALD CARROLL ; TAYLOR GREGORY WADE ; YOUNG GERALD ALFRED ; THE PROCTER AND GAMBLE COUS

Inventor(s): (std): LAVON GARY DEAN ; YOUNG GERALD ALFRED ; TAYLOR GREGORY WADE ; ROE DONALD CARROLL ; ANDES WILLIAM SCOTT ; YOUNG ALFRED ; ANDES SCOTT ; TAYLOR WADE ; ROE CARROLL ; LAVON DEAN ; ROE DONALD CARROLL ; HOGH MIROSLAV ING ; ANDES WILLIAM S ; ROE DONALD C ; TAYLOR GREGORY W ; YOUNG GERALD A ; LAVON GARY D ; WADE TAYLOR GREGORY ; ALFRED YOUNG GERALD ; DEAN LAUON GARY ; YOUNG GERARD ALFRED

Inventor(s): GARY DEAN LAVON ; WILLIAM SCOTT ANDES ; DONALD CARROLL ROE ; GERALD ALFRED YOUNG ; GREGORY WADE TAYLOR ; LAUON GARY DEAN ; ROE DONALD YANDES WILLIAM ; LAVON GARY ; YOUNG GERALD ; TAYLOR GREGORY ; Donald CarrolAndes ; Gary DeanYoung ; Gerald Alfred Taylor ; Gregory WadeRoe ; Lavon ; William Scott ; VON LA GARY D

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

Designated states: AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK ES FI FR GA GB GE GN GR HU IE IT JP KG KP KR KZ LK LU LV MC MD MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SI SK SN TD TG TJ TT UA UZ VN

6) 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);

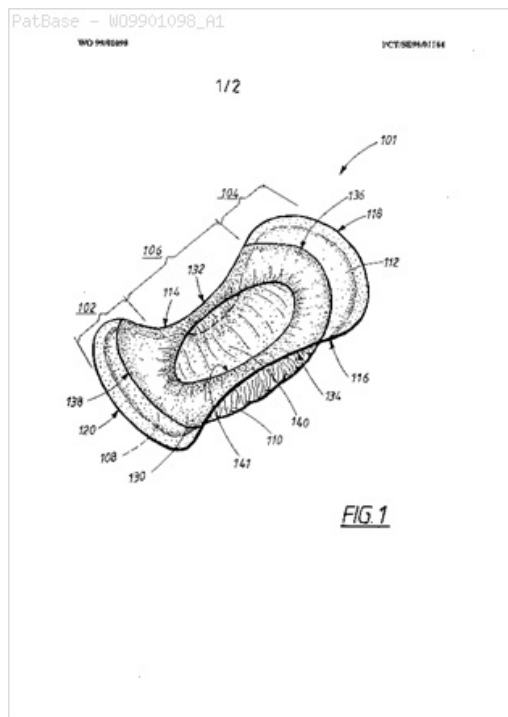
A61F5/44 (Advanced/Non-invention);

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

JP2002510233 T2	20020402	JP19990507004T	19980618
PL337734 A1	20000828	PL19980337734	19980618
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TNSN98128 A1	20001229	TN1998SN00128	19980701
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WO9901098 A1	19990114	WO1998SE01184	19980618

Priority:

SE19970002545 19970702 WO1998SE01184 19980618

Probable Assignee: SCA HYGIENE PROD AB

Assignee(s): (std): GRAENSBO GOERAN ; MOELNLYCKE AB ; SANDIN CECILE ; SCA HYGIENE PROD AB ; SCA MOELNLYCKE AB

Assignee(s): SCA HYGIENE PRODUCTS AB GOETEBORG GOTENBURG ; SCA MOLNLYCKE AB ; SCA HYGIENE PRODUCTS AB

Inventor(s): (std): GORAN GRANSBO ; CECILE SANDIN ; GRAENSBO GOERAN ; GRANSBO GORAN ; SANDIN CECILE

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

7) Family number: 20432281 (US5536264A)

PatBase

Title: Absorbent composites comprising a porous macrostructure of absorbent gelling particles and a substrate

Abstract: An absorbent composite having a porous absorbent macrostructure and a substrate. The porous macrostructure has interconnected absorbent gelling particles that are surface crosslinked with cationic, preferably polymeric, amino-epichlorohydrin adducts. Upon contacting liquids such as water or body exudates (e.g., urine), the porous absorbent macrostructure can swell and imbibe the liquids. The composite is useful in absorbent articles such as diapers, adult incontinence pads, and sanitary napkins are disclosed.

Classifications:

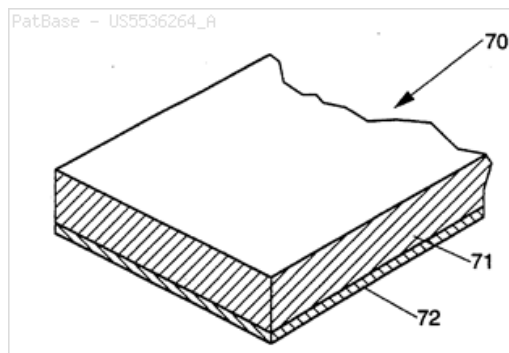
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International (IPC 1-7): A61F13/15 A61F13/20 A61F13/46 A61L15/60 B01J20/26 B01J20/28 B29C55/08 B29C55/14 B29C67/20

CPC: A61F13/15203 A61F13/535 A61F2013/15373 A61F2013/53051 A61F2013/53054 A61F2013/53055 A61F2013/53057 A61F2013/53059 A61F2013/5307 A61F2013/53076 A61F2013/53791 A61F13/15658 A61F13/532 A61F2013/15406 D06M15/11 D06M15/263 D06M15/285 D06M15/31 D06M15/356 D06M23/08 A61F13/15707 A61F13/53708 A61F13/53756 A61F2013/53778 A61F2013/53782

European: A61F13/15J A61F13/15M3G A61F13/15M6 A61F13/532 A61F13/535 A61F13/537B A61F13/537C8 D06M15/11 D06M15/263 D06M15/285 D06M15/31 D06M15/356 D06M23/08 K61F13/15J8D1 K61F13/15J8E K61F13/537E3 K61F13/537E4 K61F13/537G K61F13/53Q2 K61F13/53Q2D K61F13/53Q2E1 K61F13/53Q3A K61F13/53Q4A1 K61F13/53Q6 K61F13/53Q8B3

US: 264/154 264/288.8 264/290.2 502/401 604/365 604/367 604/368 604/369 604/372 604/375 604/378 604/379 604/382



Family:

Publication number	Publication date	Application number	Application date
AT193196 E	20000615	AT19940114176T	19940909
AT325592 E	20060615	AT19940900371T	19941017
AU199481211 A1	19950508	AU19940081211	19941017
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KR970705434 A	19971009	KR19970701538	19970308
MX9701788 A1	19971031	MX19970001788	19950821
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TH20336 A	19960903	TH19951002226	19950907
TW275031 B	19960501	TW19950101645	19950222
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US5713881 A	19980203	US19950550181	19951030
US5868724 A	19990209	US19950550185	19951030
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US5925299 A	19990720	US19970881456	19970624
US5977014 A	19991102	US19970809557	19970310
WO9510995 A1	19950427	WO1994US11854	19941017
WO9607476 A1	19960314	WO1995US10653	19950821
ZA9507576 A	19960417	ZA19950007576	19950908

Priority:

US19930142258	19931022	US19930142259	19931022	US19930142629	19931022
EP19940114176	19940909	WO1994US11854	19941017	WO1995US10653	19950821
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Probable Assignee: PROCTER AND GAMBLE CO

Assignee(s): (std): PROCTER AND GAMBLE ; PLISCHKE MANFRED ; REZAI EBRAHIM ; PROCTER AND GAMBLE CO ; SCHMIDT MATTIAS ; THE PROCTER AND GAMBLE COMPANY ; THE PROCTER AND GAMBLE COMPANY

Assignee(s): THE PROCTER AND GAMBLE CO CINCINNATI ; THE PROCTER AND GAMBLE CO ; TAI YUNG WEI ; THE PROCTER AND GAMBLE COMPANY CINCINNATI ; DIERCKES ALBERT CHARLES JR ; DIERCKES JR ALBERT C ; HSUEH KESYIN ; KOLODESH MICHAEL S ; NAGA KYOKO ; PROCTER AND GAMBLE COMPANY THE ; KOLODESH MICHAEL SULTA ; PROCTER AND GAMBLE GMBH ; PROCTOR AND GAMBLE CO

Inventor(s): (std): KOLODESH MICHAEL S ; DIERCKES JR ALBERT C ; PLISCHKE MANFRED ; SCHMIDT MATTIAS ; REZAI EBRAHIM ; PLISCHKE MANFRED DR ; SCHMIDT MATTIAS DR ; MANFRED PLISCHKE ; KYOKO NAGA ; YUNG WEI TAI ; EBRAHIM REZAI ; MATTIAS SCHMIDT ; ALBERT CHARLES DIERCKES JR ; MICHAEL SULTA KOLODESH ; KESYIN HSUEH ; SCHMIDT DR ; HAYNES NANCY A ; HSUEH KESYIN RENE ; KOLODESH MICHAEL ; NAGA KYOKO ; DIERCKES ALBERT CHARLES JR ; KOLODESH MICHAEL SULTA ; TAI YUNG WEI ; HSUEH KESYIN

Inventor(s): Yung-WeiKolodesh ; Michael SulyaDierches ; Kyoko ; KesyinRezai ; Jr.Naga ; Hsueh ; EbrahimTai ; Albert Charles ; TAI

Agent(s): SIM AND MCBURNEY

Designated states: AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GH GN GR HU IE IS IT JP KE KG KP KR KZ LI LK LR LT LU LV MC MD MG ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SN SZ TD TG TJ TM TT UA UG US UZ VN ZW

8) Family number: 43649293 (US2011004176A)

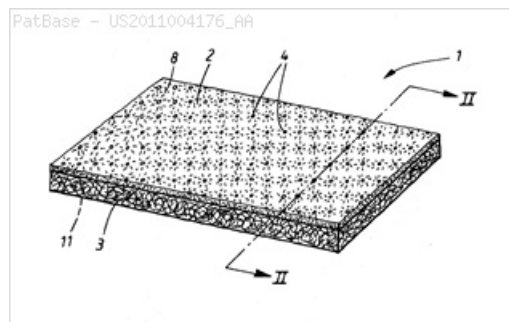
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Title: MATERIAL WEB FOR USE IN AN ABSORBENT ARTICLE

Abstract: A material web includes at least one fibrous material layer and has a first and a second surface. The material web comprises recesses in the first surface, which recesses have a diminishing cross-sectional area along at least a part of their extension in a direction towards the second surface. The material web further comprises recesses in the second surface, which recesses have a diminishing cross-sectional area along at least a part of their extension in a direction towards the first surface, and which form pairs with opposite recesses in the first surface. The recesses in at least some of the pairs are connected to each other via at least one hole. A method for producing such a material web and an article comprising such a material web is also provided.

Classifications:

International (IPC 8-9): A61F13/45 A61F13/512 B29C65/08 B32B3/24 B32B3/30 B32B38/04 B32B5/22 B32B7/02 D04H1/54 D04H1/544 D04H1/549 D04H1/55 D04H1/555 D04H1/559 (Advanced/Invention)
CPC: Y10T428/24281 B32B5/26 A61F13/512 A61F13/5146 A61F13/51478 A61F13/533 A61F13/536 A61F13/53708 A61F13/53756 A61F2013/15504 A61F2013/53782 B32B3/06 D04H1/54 D04H1/544 D04H1/549 D04H1/55 D04H1/555 D04H1/559 B32B3/30 B32B5/022 B32B2262/0253 B32B2262/0261 B32B2262/0276 B32B2307/726 B32B2307/734 B32B2555/00
European: A61F13/512 A61F13/514B1A A61F13/514C2 A61F13/533 A61F13/536 A61F13/537B A61F13/537C8 B32B3/06 B32B5/26 D04H1/54 D04H1/544 D04H1/549 D04H1/55 D04H1/555 D04H1/559 K61F13/15J8P2 K61F13/537E4
US: 156/73.1 156/73.100S 428/132 428/132S 604/378 604/378P



Family:

Publication number	Publication date	Application number	Application date
AU2008350981 AA	20090827	AU20080350981	20080219
BRPI0822366 A2	20150616	BR2008PI22366	20080219
CN102006847 A	20110406	CN200880128672	20080219
CO6251230 A2	20110221	CO20100112111	20100910

EP2273960 A1	20110119	EP20080712823	20080219
US2011004176 AA	20110106	US20080865743	20080219
WO09105000 A1	20090827	WO2008SE50193	20080219

Priority:

WO2008SE50193 20080219 CO20100112111 20100910

Probable Assignee: SCA HYGIENE PRODUCTS AB

Assignee(s): (std): ANDERSSON PATRIK ; PERSSON ANDERS ; SCA HYGIENE PROD AB

Assignee(s): SCA HYGIENE PRODUCTS AB

Inventor(s): (std): ANDERS ; PATRIK ; PERSSON ; ANDERSSON ; PATRIK ANDERSSON ; ANDERS PERSSON ; PERSSON ANDERS ; ANDERSSON PATRIK

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; LUZ CLEMENCIA DE PAEZ; VALEA AB; BUCHANAN INGERSOLL AND ROONEY PC; ROMARE ANETTE

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 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 PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

9) Family number: 55312333 (US2015119837A)

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Title: ABSORBENT ARTICLE COMPRISING POLYMERIC FOAM WITH SUPERABSORBENT AND INTERMEDIATES

Abstract: Absorbent articles are described comprising an absorbent composite. The absorbent composite comprises a first absorbent layer comprising a polymeric foam having an average cell size of at least 100 microns and discrete pieces of superabsorbent polymer dispersed within the polymeric foam; and a second absorbent layer in fluid communication with the first absorbent layer. Favored articles include disposable diapers, feminine hygiene articles, and adult incontinence articles. Also described is a polyurethane foam is described having an average cell size of at least 100 microns. The polyurethane foam is the reaction product of a polyether polyol having polyethylene oxide units and at least one polymeric polyisocyanate that lacks urethane linkages. The polyurethane foam comprises at least 5 wt- percent of discrete pieces of superabsorbent polymer. Also described are various composites comprising the polyurethane foam described herein in combination with another substrate such as a second absorbent layer, a fluid impervious backsheet, and/or a fluid pervious topsheet.

Classifications:

International (IPC 8-9): A61F13/15 A61F13/49 A61F13/53 A61F13/537

A61L15/22 A61L15/24 A61L15/42 A61L15/60 B01J20/26

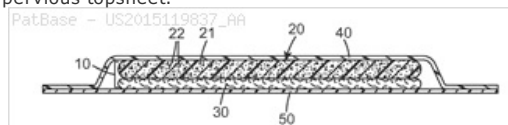
B01J20/28 (Advanced/Invention)

CPC: A61L15/60 A61F13/53713 A61F13/15203 B01J20/262 B01J20/261

B01J20/28085 A61L15/225 A61F2013/15121 A61F2013/15463

A61F2013/5307 B01J2220/445 B01J2220/68 A61L15/26 A61L15/425 A61F2013/530649

US: 502/402 604/369 604/378



Family:

Publication number	Publication date	Application number	Application date
BR112014029516 A2	20170627	BR20141129516	20130513
CN104411340 A	20150311	CN201380027394	20130513
CN104411340 B	20160907	CN201380027394	20130513
EP2854879 A1	20150408	EP20130726920	20130513
IN08625CN2014 A	20160701	IN2014CN08625	20141127
JP2015517874 T2	20150625	JP20150515020T	20130513
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WO13180937 A1	20131205	WO2013US40725	20130513

Priority:

US20120652408P 20120529 US20130787957P 20130315 US20130394106 20130513

WO2013US40725 20130513

Probable Assignee: 3M CO

Assignee(s): (std): 3M CO ; 3M INNOVATIVE PROPERTIES CO ; ROWAN ROBERT L ; THOMPSON DELTON R JR

Inventor(s): (std): ROWAN ROBERT L ; THOMPSON DELTON R JR ; THOMPSON JR DELTON R ; DELTON R THOMPSON JR ; ROBERT L ROWAN

Agent(s): VOSSIUS AND PARTNER; AOKI ATSUSHI; KOGA TETSUJI; ISHIDA TAKASHI; FISCHER CAROLYN A ET AL

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

10) Family number: 42816341 (US6175056B)

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Title: DISPOSABLE ABSORBENT ARTICLE HAVING AN EXPANDING TOPSHEET AND BEING CAPABLE OF SELF-SHAPING IN USE

Abstract: A disposable absorbent article is provided which is substantially flat prior to use for wearing adjacent a body discharge area having a longitudinal centerline and a lateral centerline orthogonal thereto, and defining longitudinal and lateral directions respectively. The disposable absorbent article includes a liquid pervious top sheet, a back sheet joined to the top sheet, and an absorbent core intermediate the back sheet and the top sheet. The absorbent core includes an expanding member for expanding the article into a tridimensional structure while being worn by a user. The expanding member is activated by body fluids. The top sheet is capable of expanding as the absorbent article expands upon activation by body fluids.

Classifications:

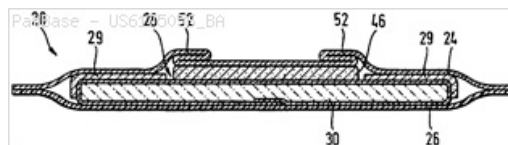
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International (IPC 1-7): A61F13/00 A61F13/15 A61F13/20 A61F13/45 A61F13/46 A61F13/534 A61F13/54 A61F5/44

CPC: A61F13/47218 A61F13/513 A61F13/8405 A61Q19/00 A61F13/47227 A61F13/47263 A61F13/4752 A61F13/535 A61F2013/1539 A61K8/602 A61Q5/02 A61K8/042 A61F13/511 A61F2013/15365 A61F2013/53765 A61F2013/53782

European: A61F13/472B A61F13/472B1 A61F13/472D A61F13/475A1 A61F13/511 A61F13/535 A61K8/04A A61K8/60A A61Q19/00 A61Q5/02 K61F13/1538D2

US: 604/369 604/374 604/375 604/379 604/385.01



Family:

Publication number	Publication date	Application number	Application date
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