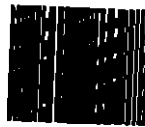


**Industria y Comercio**

SUPERINTENDENCIA 02 092075 00

**PETITORIO**

SUPERINDUSTRIA Y COMERCIO

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Trámite: 011 PCT-PATENT 379 FASE NACI 411 PRESENTAC

Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

**FORMULARIO UNICO DE SOLICITUD DE PATENTE
PCT
ENTRADA EN FASE NACIONAL**

1

SOLICITUD DE:



Patente de Invención.



Patente de Modelo de Utilidad.



Capítulo I.



Capítulo II.

2

**SOLICITANTE
(71)**Nombre: **SCA HYGIENE PRODUCTS AB**
sociedad constituida y existente bajo las
leyes de Suecia.Dirección: S-405 03 Göteborg
Suecia

Domicilio: Göteborg, Suecia.

IDENTIFICACIÓN

C.C.



NIT



C.E.



Otro



Cual

Número:

3

**REPRESENTANTE
O APODERADO**Nombre: **EMILIO FERRERO**

Dirección: Carrera 4ª. No. 72-35

Teléfono: 347 36 11

Fax: 217 92 11

E-mail: clientes@camvp.com.

Domicilio: Bogotá, Colombia.

IDENTIFICACION

C.C.



NIT



C.E.



Otro



Cual

Número: 438.019 T.P. 31.929

4

**AGENTOR (ES)
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Suecia

5

PCT (86)Solicitud Internacional No. PCT/SE01/00723Fecha: 3 de abril de 2001Publicación Internacional No. WO 01/78636 A1Fecha: - 25 de octubre de 2001

6

Título (54) TOALLA SANITARIA

7

Clasificación Internacional (51) A61F 013/045

8

PrioridadSI ☒NO ☐

(33) País de Origen

SE.

(32) Fecha

13 de abril de 2000

(31) Número de Solicitud

001377-1

00001/18636

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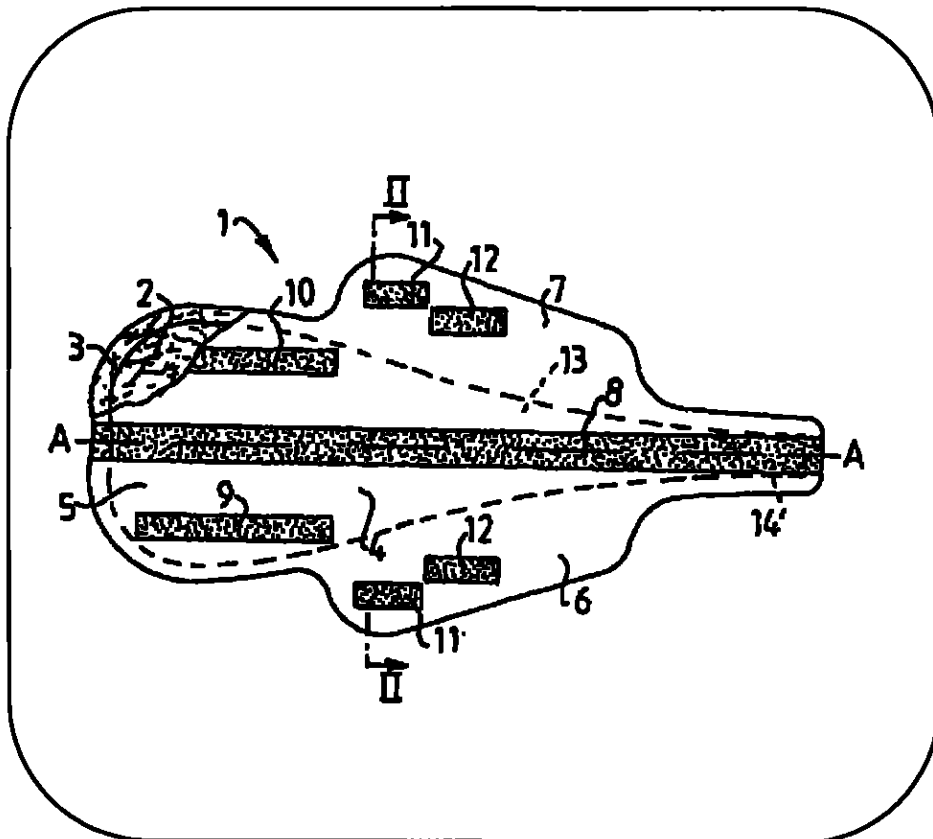
Comprobante de pago No.: 02-67.585 Fecha: 08 de octubre de 2002

10

Anexos:

- ☒ Comprobante de pago de la tasa de presentación de la solicitud por 378.000.00.
- ☐ Comprobante de pago por reivindicación de prioridad.
- ☒ Documento que acredita la existencia y representación legal cuando el solicitante sea persona jurídica.
- ☒ Poderes, si fuere el caso.
- ☐ Documento de cesión del inventor al solicitante o a su causante.
- ☐ Declaraciones.
- ☒ Copia de la solicitud Internacional. (Resumen, descripción, reivindicaciones, dibujos)
- ☒ Traducción de la solicitud internacional al castellano. (Resumen, descripción, reivindicaciones, dibujos)
- ☒ Copia del examen preliminar efectuado por la IPEA.
- ☐ Traducción del examen preliminar efectuado por la IPEA.
- ☐ De ser el caso, copia del contrato de acceso.
- ☐ De ser el caso, documento que acredite la licencia o autorización de uso de conocimientos tradicionales de las comunidades indígenas.
- ☐ De ser el caso, certificado de depósito del material biológico.
- ☐ Arte final 12x12
- ☐ De ser el caso, información sobre otras solicitudes de patente o títulos obtenidos en el extranjero por el mismo titular o su causante, relacionadas parcial o totalmente con la invención de esta solicitud.
- ☐ Otros

11

FIGURA CARACTERISTICA:

12

Solicito la concesión de la patente,

NOMBRE: EMILIO FERRERO

FIRMA: 

C.C. 438.019 de Usaquén T.P. 31.929

JBP/mrm-ld-642

REPRESENTACION Y PODER

For patents, utility models, industrial designs,
trademarks, commercial names, trade emblems,
slogans.

Para patentes, modelos de utilidad, diseños
industriales, marcas de fábrica, nombres
comerciales, enseñas, lemas comerciales.

REPRESENTATION AND
POWER OF ATTORNEY

11256
C. 131

I (we), the undersigned/Yo (nosotros), abajo firmado (s)
SCA HYGIENE PRODUCTS AB

of/domiciliado (s) en 405 03 Goteborg,
SWEDEN

por el presente nombramos a EMILIO FERRERO, tpa. 31929; GONZALO PERDOMO, tpa. 831; LUZ CLEMENCIA DE PAEZ, tpa. 23555 y GERMAN CAVELIER, tpa. 832, domiciliados en la Carrera 4ª N° 72-35, Bogotá, Colombia, en obediencia a lo dispuesto en el parágrafo 1º del Artículo 543 del Código de Comercio, el primero como principal y los demás como suplentes, en su orden, como mis (nuestros) representantes en todos los asuntos de propiedad industrial con facultad para recibir notificaciones y nombrar apoderados judiciales o extrajudiciales. El primer representante suplente reemplazará al principal en caso de ausencia o impedimento temporal o definitivo de aquél. La misma regla se aplicará cuando el segundo representante suplente haya de reemplazar al primero, o el tercero al segundo. En tales casos, el representante principal, o el primero, o segundo suplente, en su caso, o ambos, declararán su intención de no ejercer la representación mediante declaración autenticada por Notario Público en Colombia, o por Notario u otro Funcionario Público, o Cónsul de Colombia, en el extranjero; y si se tratare de impedimento, con el certificado respectivo. Si alguno de los nombrados faltare definitivamente, el siguiente tomará su lugar. Cuando cesare la ausencia o impedimento del representante principal, o de su primero o segundo suplentes, en su caso, podrán ejercer la representación, en su orden, uno u otros según el caso, asumiéndola por el solo hecho de ejercerla, cesando en ese momento el ejercicio de la representación por el primero, segundo o tercer suplente en su caso.

Además, confiero (conferimos) poder a los abogados arriba nombrados, para obtener la protección de mi (nuestra) propiedad industrial y contra la competencia desleal, a cuyo efecto autorizo (amos) a los dichos apoderados para que me (nos) representen ante cualesquiera entidades o personas, ejerzan o no jurisdicción, especialmente ante las del orden administrativo, contencioso-administrativo y judicial, así como los tribunales de arbitramento, en todo lo concerniente a los siguientes asuntos: a) Obtención de patentes de invención, modelos de utilidad, y diseños industriales; el registro de marcas de fábrica, colectivas, defensivas, de servicio, lemas comerciales, nombres comerciales, enseñas, variedades vegetales y denominaciones de origen; su renovación, traspaso, cambio de nombre o domicilio, cancelación voluntaria; y el registro de licencias de uso de esos derechos; b) Las acciones de competencia desleal, protección del consumidor, oposiciones u observaciones, cancelación administrativa y judicial, nulidad, medidas cautelares, concesión de licencias, la tutela, la protección de secretos industriales, y en general los juicios civiles, penales, administrativos o contencioso-administrativos relacionados con estos derechos; acciones y procesos que promovamos o se nos promuevan. Y para que en todos los asuntos arriba determinados, puedan sustituir este mandato, transigir, conciliar, admitir los hechos del proceso, desistirse, cancelar, recibir, renunciar, y ratificar los actos de agentes oficiosos.

In due compliance with the terms of paragraph 1st. of article 543 of the Commercial Code, do hereby appoint EMILIO FERRERO, tpa. 31929; GONZALO PERDOMO, tpa. 831; LUZ CLEMENCIA DE PAEZ, tpa. 23555 and GERMAN CAVELIER, tpa. 832, domiciled at Carrera 4ª N° 72-35, Bogotá, Colombia, the first as principal and the others as alternates, in the order of their appointment, as our representatives for all industrial property matters with faculty to receive notifications and to appoint attorneys in and out of Court. The first alternate shall replace the principal in case of his absence or of temporal or definitive impediment. The same rule will apply when the second alternate representative is to replace the first one, or when the third is to replace the first or second alternates in their turn, or both of them, second. In such cases, the principal representative, or the first or second alternates in their turn, or both of them, shall state their intention not to act as representatives through a declaration given before a Notary Public in Colombia, or before a Notary or another Public Official or a Colombian Consul abroad; and in case of impediment, the appropriate certificate shall suffice. If any of the appointees were to be definitely absent, the following alternate shall take his place. When the absence or impediment of the principal representative, or of the first or second alternate in their turn ceases, the representation can be taken again in their sequence, by the principal, the first or second alternate depending on case, and the mere fact or its exercise will suffice. The exercise of the representation by the first, second or third alternates in their turn shall end at such time.

In addition, we grant a Power of Attorney in favor of the above-named attorneys to obtain the protection of my (our) industrial property against the unfair competition, for which purpose I (we) authorize the said attorneys to represent me (us) before any and all persons, with or without jurisdiction, specially, before administrative, administrative contentious and judicial, as well as before Arbitration Courts, in all matters concerning the following: a) Obtainment of patents, utility models and industrial designs; the registration of trademarks, collective, defensive and service marks, slogans, commercial names, trade emblems, vegetal varieties and denominations of origin; its renewal, assignment, change of name or domicile, voluntary cancellation; and the registration of licenses of use of the above rights; b) Actions of unfair competition, protection to the consumer, oppositions or observations, administrative or Court cancellation, nullity, infringement, granting of licenses, the action for writ mandamus, the protection of trade secrets, and in general the civil, penal, and administrative suits relating to those rights; actions and suits instituted by me (us) or against me (us). And that in all the above matters they may substitute this Power of Attorney, compromise, conciliate, admit the facts of the case, desist, cancel, receive, resign, and ratify acts done by representatives without a power of attorney.

Given and signed this/Dado y firmado hoy

Gothenburg 19 February 1999

In/en

Signature

Bengt Forshult

Head of Patent Department

Firma

SCA Hygiene Products AB

TRADUCCION No: 1707199

MARIA ELVIRA MARTELO

Traductora e Interprete Oficial

Inglés - Español - Inglés

Res. No. 2879 Min. Justicia

LEGALIZACION.

El Señor Cónsul de Colombia debe expedir un certificado consular sobre (1) la existencia legal de la compañía que otorga el poder, (2) que ésta ejerce su objeto social, y (3) que las personas que otorgan el poder están autorizadas para darlo. A este efecto les solicitamos que muestren al Señor Cónsul las pruebas que acreditan esos hechos (1), (2) y (3).

LEGALIZATION

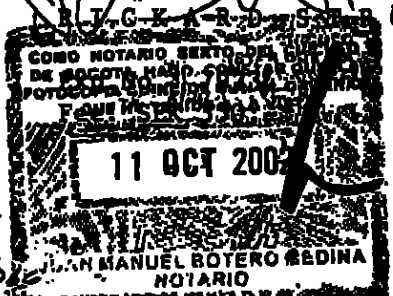
The Colombia Consul must issue a consular certificate, on (1) the legal existence of the company which grants the Power-of-Attorney, (2) that it is in actual exercise of its company purposes, and (3) that the persons who execute the Power of Attorney is authorized to do so. To this effect, please show the Consul the evidence to prove the above facts (1), (2) and (3).

TRADUCCION No. 1707199
MARIA ELVIRA MARQUEL
Traductora e Interprete Oficial
Inglés - Español - Inglés
Res. No. 2879 Min. Justicia

HO SE ASUME
RESPONSABILIDAD
2000 FEB 14 A 11:50
DE LEGALIZACIONES
1707199

MINISTERIO DE RELACIONES
EXTERIORES

Manuel Boyero Medina
1999



NO. 3012
The Ministry for Foreign
Affairs in Stockholm, hereby
certifies that
Mr *Rickard Ström*
Notary Public of
Gothenburg
has issued and signed the
foregoing attestation in his
official capacity

Fee Stockholm this 2nd day of March
Kr 120/- PAID 1977

Kjell Höglund

MARIA SMITH RUEDA
Encargada de las Funciones Consulares
Maria Smith Rueda

Fecha 1999-03-05

No. 022

quien figura el documento en el cual se
ejercía por
Representante
de la Sociedad SCA Hygiene Products
Aktiebolag
que existe
según se ha comprobado a la vista de los
tuve a la vista

PAGADO
Impuesto de Timbre
dólares US\$ 7
Cien

QUEL
Bengt Forsholt

NOTA PARA EL SEÑOR CONSUL DE COLOMBIA: Según los artículos 65 del C. de P.C. y 480 del C. de Co., si el poderdante es una sociedad, el Señor Cónsul debe certificar que tuvo a la vista las pruebas de su existencia, que ejerce su objeto social y que quien confiere el poder es su representante:



COMO NOTARIO BENTO DEL CIRCULO DE BOGOTA, HAGO CONSTAR QUE LA FOTOCOPIA CONCIDE CON EL ORIGINAL QUE HE TENIDO A LA VISTA

11 OCT 2002

JUAN MANUEL BOTERO MADINA
NOTARIO

MINISTERIO DE RELACIONES
EXTERIORES

202 013 32
Cuyo firma aparece en el
DOCUMENTO DESINPEÑA
LAS FUNCIONES INDICADAS

NO SE ASUME
RESPONSABILIDAD DEL TEXTO

079530

ANULADO

JEFE DE LEGALIZACIONES
SANTAFE DE BOGOTA D.C.

CUYA FIRMA APARECE EN EL
DOCUMENTO DESEMPEÑA
LAS FUNCIONES INDICADAS

TRADUCCION No: 1707/99

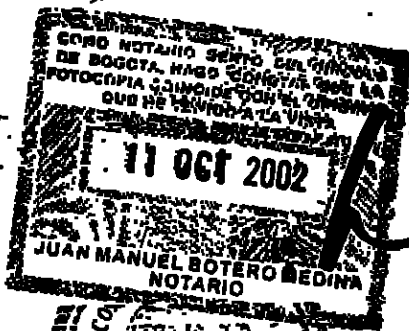
MARIA ELVIRA MARTINELO

Traductora e interprete Oficial

Inglés - Español - Inglés

Res. No. 2879 Min. Justicia

JEFE
S.A.



EL CONSULADO DE COLOMBIA EN
ESTOCOLMO, SUECIA

Fecha.....1999-07-01..... No:.....J01329
Previa la confrontación correspondiente DA
FE de que la firma que aparece en este docu-
mento es similar a la REGISTRADA aquí por
Inger Höglberg, Min. Relaciones
Exteriores, Suecia

M. Smith
MARIA SMITH RUEDA
Encargada de las Funciones Consulares



PAGADO	
Impuesto de Timbre	<u>Diez</u> dólares US\$ <u>7</u>
Derechos Consulares	<u>Quince</u> dólares US\$ <u>15</u>



TRADUCCION No: 1709199
MARIA ELVIRA MARTINELO
Traductora u Interprete Oficial
Inglés - Español - Inglés
Res. No. 2879 Min. Justicia

6

TRADUCCIÓN OFICIAL No. 17.07/99 preparada por María Elvira Martelo, Traductora Oficial aprobada por el Ministerio de Justicia por Resolución 2879 de 1995 y reconocida por el Ministerio de Relaciones Exteriores.

(A continuación se traducen los sellos y legalizaciones de un documento escrito en inglés y español, por el cual SCA HYGIENE PRODUCTS AB otorga poder a EMILIO FERRERO, GONZALO PERDOMO, LUZ CLEMENCIA DE PAEZ Y GERMAN CAVELIER). Dado y firmado el 19 de febrero de 1999 en Gothenburg. (Firma ilegible) Bengt Forshult, Jefe del Departamento de Patentes.

Yo, el abajo firmante RICKARD STRÖM, de Gothenburg, Suecia, por el presente certifico,  que Bengt Forshult ha firmado personalmente el documento anterior y que de acuerdo con el poder de fecha 1998-08-11, firmado por GUNNAR ANDERSSON y SVEN-ERIK WINLÖF, quienes están debidamente autorizados para firmar conjuntamente por y a nombre de SCA HYGIENE PRODUCTS AKTIEBOLAG - Org. No. 556007-2356, según Certificado de Registro Sueco de fecha 1998-07-20, Bengt Forshult está debidamente autorizado para firmar dicho documento a nombre de la compañía. Gothenburg, 25 de febrero de 1999.

Ex officio: (Firma ilegible), RICKARD STRÖM (Sello notarial).

Exp. No.: 79234

Derechos: SEK 350:--

No. 3066

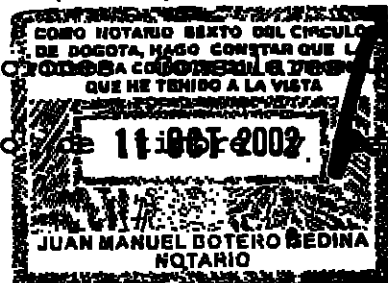
El Ministerio de Relaciones Exteriores en Estocolmo por el presente certifica que el Sr. Rickard Ström, Notario Público de Goteborg, ha expedido y firmado la declaración anterior en su capacidad oficial.

Derechos Estocolmo, 25 de marzo

Kr. 120 PAGADOS de 1999

(Firma ilegible) Inger Högberg. (Sello en tinta) Ministerio de Relaciones Exteriores.

(En español) Certificación de la capacidad legal de Bengt Forshult y de la existencia legal de SCA HYGIENE PRODUCTS AKTIEBOLAG expedida el 5 de marzo 1999 por el Consulado de Colombia en Estocolmo bajo el No. 022. (Firma) M. Smith. MARÍA SMITH RUEDA, Encargada de las Funciones Consulares. Sello consular en tinta. Pagados impuestos de 11.000.000 de pesos colombianos. Derechos consulares.



(En español) Certificación de la firma de Inger Högberg, Ministerio de Relaciones Exteriores, Suecia, expedida el 01 de julio de 1999 por el Consulado de Colombia en Estocolmo bajo el No. 001329. (Firma) M. Smith. MARÍA SMITH RUEDA, Encargada de las Funciones Consulares. Sello consular en tinta. Pagados impuesto de timbre y derechos consulares.

(Al anverso) Legalización de la firma que antecede expedida por

8

el MINISTERIO DE RELACIONES EXTERIORES bajo el No. 119916 del 14
de febrero del 2000, firmado por el Jefe de Legalizaciones.

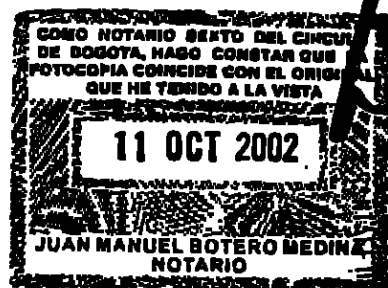
Es traducción fiel y completa de la cual se deja copia en esta
oficina para su confrontación.

COLO 11256-801-014-7

Id. 108

Feb. 15/00

Maria Elvira Martelo
TRADUCCION No. 170799
MARIA ELVIRA MARTELO
Traductora e interprete Oficial
Inglés - Español - Inglés
Res. No. 2879 Min. Justicia



COMO NOTARIO SEXTO DEL CIRCULO DE SANTAFÉ DE
 BOGOTÁ, HAGO CONSTAR QUE LA FIRMA DE
[Firma]
 CONCIERDE CON LA FIRMA REGISTRADA POR
 EL (SILLO) EN ESTA NOTARÍA
 SANTAFÉ DE BOGOTÁ
 16 FEB 2000



COMO NOTARIO SEXTO DEL CIRCULO
 DE BOGOTÁ, HAGO CONSTAR QUE LA
 FOTOCOPIA CONCIERDE CON EL ORIGINAL
 QUE SE TIENIO A LA VISTA
 1 OCT 2002
 JUAN MANUEL BOTERO MEDINA
 NOTARIO

BOGOTÁ
 16 FEB 2000
 1 OCT 2002

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

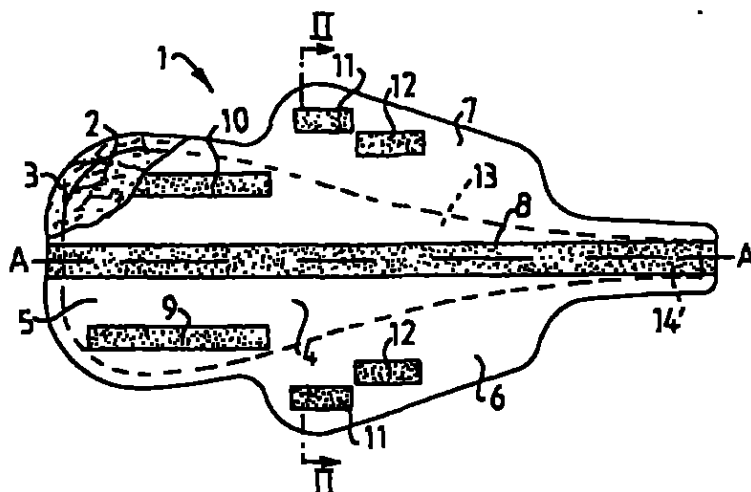
(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
25 October 2001 (25.10.2001)

PCT

(10) International Publication Number
WO 01/78636 A1

- (51) International Patent Classification⁷: A61F 13/45 (81) Designated States (*national*): AR, AG, AI, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KL, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (21) International Application Number: PCT/SE01/00723
- (22) International Filing Date: 3 April 2001 (03.04.2001)
- (25) Filing Language: Swedish
- (26) Publication Language: English
- (30) Priority Data:
0001377-1 13 April 2000 (13.04.2000) SE
- (71) Applicant: SCA HYGIENE PRODUCTS AB [SE/SE];
S-405 03 Göteborg (SE).
- (72) Inventor: DREVIL, Solgun; Halebäcksvägen 16, S-435
35 Mölnlycke (SE).
- (74) Agents: HYLTER, Jan-Olof et al.; Albihns Stockholm
AB, Box 5581, Linnégatan 2, S-114 85 Stockholm (SE).
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SANITARY NAPKIN



(57) Abstract: The present invention relates to an absorbent article (1) in the form of a sanitary napkin, a panty liner or an incontinence protector for women comprising an absorbent body (2) which is sandwiched between a liquid-permeable outer sheet (3) and a liquid-impermeable inner sheet (4), said article having a front part (5), which is intended to face forwards when the article is worn, and a rear part, wherein the absorbent body has a length of 140-260 mm and tapers rearwardly from a section of greatest width situated in the front part of the article to the end of the rear part of said article. According to the invention, the absorbent body (2) has a widest width of 60-80 mm in its front part, and a smallest width of 5-20 mm in its rear end, and includes a layer (13) of dry-formed cellulose fibres having a density of at least 250 g/dm³ and extending over essentially the whole surface of the absorbent body, out to the front and side edges of said body.

WO 01/78636 A1

SUMMARY OF THE INVENTION

This object is achieved with an absorbent article in the form of a sanitary napkin, a panty liner or an incontinence protector for women that includes an absorbent body enclosed between a liquid-permeable outer sheet and a liquid-impermeable outer sheet, said article having a front part which is intended to face forwards when the article is worn, and a rear part, wherein the absorbent body has a length of 140-260 mm and tapers rearwardly from a section of greatest width situated in the front part of the napkin to the end of the rear part thereof, and wherein the article is characterised in that the absorbent body has a greatest width of 60-80 mm in its front part, and a smallest width of 5-20 mm in its rear part, and includes a layer of dry-formed cellulose fibre having a density of at least 250 g/m³ and extending over substantially the whole of the absorbent body, right out to its front and side edges. Because the layer of dry-formed fibres extends over substantially the entire absorbent body, the absorbent properties of said material can be fully utilised, and because the layer has been given a high density, and therewith has fine capillaries, the layer is able to effectively disperse discharged liquid in the layer. This enables the absorbent body to be made thin. Furthermore, the dimensions of the article together with the physical properties of the absorbent layer enable the article to be worn comfortably.

In one preferred embodiment of the invention, the layer of dry-formed cellulose fibres has a weight per unit area of 200-600 g/m² and the absorbent body also includes a layer of material that has good liquid acquisition properties and that extends over the whole of the layer of dry-formed cellulose fibres and beyond said layer to the rear end-part of the absorbent body. The material having good liquid acquisition properties may be comprised of a fibre wadding of cellulose

the widest part of the front portion 5 of the napkin to its rear end. The outer sheets 3, 4 form outwardly projecting flaps 6, 7, or wings, which are intended to be folded around the edges of a string panty and fastened to the outside thereof. The flaps 6, 7 extend longitudinally outwardly of the edges of the absorbent body with essentially the same widths, and the longitudinal edges of the flaps therewith converge towards each other in the rearward direction. In the case of the illustrated embodiment, the length of the flaps corresponds to about half the length of the napkin and the flaps are placed at a slightly greater distance from the front end of the napkin than from its rear end.

The napkin has a length of 140-260 mm. The absorbent body has a greatest width of 60-80 mm, preferably about 70 mm, and a smallest width at its rear end of 5-20 mm, preferably about 10 mm. The flaps extend beyond the edges of the absorbent body through a distance of about 25-30 mm, with the greatest distance in the front parts of the flaps. The front edges of the flaps are located about 60 mm from the front edge of the napkin, and the rear edges of the flaps are located about 50 mm from the rear end of said napkin. It will be understood that the aforesaid flap measurements have merely been given to provide a qualitative understanding of a suitable flap design on a sanitary napkin intended for string panties and in no way limit the scope of the invention.

The liquid-permeable outer sheet 3 is comprised of a soft, skin-friendly material. This outer sheet may comprise a sheet of different types of nonwoven fibre material. Other materials that can be used are perforated plastic film, plastic net, knitted, crocheted or woven textiles, and combinations and laminations of the aforesaid types of material. The plastic may be a thermoplastic, e.g. polyethylene (PE). The nonwoven material may comprise natural fibres, such as cellulose or cotton, although it may

in a direction parallel with the longitudinal symmetry axis A-A of the napkin 1.

The sanitary napkin 1 is also provided with two adhesive strings 11, 12 on each flap 6, 7. These adhesive strings 11, 12 are relatively short and extend in directions parallel with the longitudinal symmetry axis A-A of the napkin when the napkin is flat. The adhesive strings 11, 12 on each flap 6, 7 are mutually spaced both longitudinally and laterally, wherewith the foremost string 11 is located furthest from the longitudinal symmetry axis A-A. The length of each adhesive string 11, 12 is suitably shorter than about 30 mm, preferably in the range of 10-20 mm. Each adhesive string will suitably have a width of between 2-15 mm.

Although only two adhesive strings 11, 12 are provided on each flap 6, 7 in the embodiment shown in Figure 1, it will be understood that the flaps may be provided with more adhesive strings if so desired.

The adhesive in the adhesive strings consists of a pressure-sensitive hotmelt glue, e.g. Ecomelt Hi45 from Collano, Switzerland. Other commercially available pressure-sensitive adhesives can be used, including adhesives that are pressure-sensitive in a cold state, such as acrylate glue, normally combined with stickiness-enhancing additives, such as polyuterpen, or hotmelt glue, such as styrene and butadiene co-polymers.

In the packaged state of the sanitary napkin, the adhesive strings are covered with a protective layer, e.g. with so-called release paper that consists of a silicone-coated paper and functions to protect the adhesive strings against contaminants, such as dust and the like, and also to prevent the adhesive from drying-out prior to use. The napkin 1 is conveniently provided with a central protective layer that is

napkin, i.e. within the so-called wetting area. Thus, in order to fully utilise the capacity of the absorbent body, it is necessary to be able to transport the liquid discharged by the wearer from the wetting area to the remainder of the absorbent body. This means that the absorbent body must have an effective liquid dispersion capacity. Moreover, the absorbent body for use in a string panty must be thin for reasons of discretion. In order to fulfil these criteria, the absorbent material in the absorbent body 2 is comprised of a layer 13 of dry-formed cellulose fibre material that has been compressed to a density of at least 250 g/dm^3 , preferably to a density of $300\text{-}400 \text{ g/dm}^3$, without subsequent defibring and fluffing of the material. Such material is known from WO 94/10956, to which reference is made for further information concerning methods of production and the properties of such material. It is pointed out, however, that such material also has good liquid retention properties. The layer 13 has a weight per unit area of $200\text{-}600 \text{ g/m}^2$, preferably $250\text{-}400 \text{ g/m}^2$, meaning that the layer will not have a thickness greater than 1.5 mm. The layer 13 of dry-formed cellulose fibre material may include so-called superabsorbent material, for instance present in a particle form. The superabsorbents may be incorporated in the layer 13 in different ways. For instance, they may be mixed with the fibre material, placed in layers within the layer of fibre material, or disposed therein in some other way. Superabsorbents may be introduced in conjunction with the production of the dry-formed material, although such introduction may take place during other parts of the napkin manufacturing process.

The illustrated embodiment of the absorbent body also includes a layer 14 of material that has good liquid acquisition properties, e.g. a wadding of cellulose fibres, synthetic fibres or mixtures thereof. The presence of such a layer reduces the risk of discharged liquid running on the surface of the napkin and reaching the edge thereof and then

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It will be understood that the described embodiment can be modified within the scope of the invention. For instance, the absorbent body may include a central outwardly projecting part on that side of the absorbent body that lies proximal to the liquid-permeable outer sheet, so as to increase the contact between absorbent body and labia. Furthermore, the glue pattern on that part of the napkin which includes the absorbent body may be formed differently, for instance the central adhesive string need not extend over the whole of the forward part of the napkin, and the three adhesive strings disposed in the front part of the napkin may be replaced with a single glue string that extends over the major part of the front part of the diaper. That part of the napkin which includes the absorbent body may also be provided with more than three adhesive strings. The adhesive strings within the region of the absorbent body may conceivably be replaced with friction coverings or similar devices. Moreover, adhesive strings may be provided on solely one flap, in which case the flaps must be dimensioned so as to overlap one another when folded-in towards the underside of the string panty after having been folded around the edges thereof. Fastener means other than adhesive may be used to fasten the napkin to a pair of panties, e.g. hook elements of the touch-and-close fastener type, said hooks coacting with panties made from textile-like material. The scope of the invention is therefore limited solely by the contents of the accompanying Claims.

5. An absorbent article according to Claim 3 or 4, characterised in that the material that has good liquid acquisition properties is a fibre wadding of cellulose fibres, synthetic fibres or mixtures thereof.

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6. An absorbent article according to Claim 1, 2, 3, 4 or 5, characterised in that the article includes flexible, outwardly projecting flaps (6, 7) which extend on respective sides of the absorbent body (2) outwardly of said body and
10 along a part of its tapering portion.

7. An absorbent article according to Claim 6, characterised in that the flaps (6, 7) are integral parts of the outer sheets.

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8. An absorbent article according to Claim 7, characterised in that at least one fastener means (8-12) for fastening the article to a pair of panties is provided on that part of the article (1) which includes the absorbent body (2) and also on
20 at least one flap (6, 7).

9. An absorbent article (1) according to Claim 8, characterised in that the fastener means comprises strings of pressure-sensitive glue.

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10. An absorbent article (1) according to Claim 9, characterised in that the pressure-sensitive glue is a hotmelt glue.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 01/00723

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A61F 13/45

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (names of data base and, where practicable, search terms used)

WPI, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5713886 A (DAVID P. STURINO), 3 February 1998 (03.02.98), column 2, line 33 - line 41, figures 1-3 --	1-10
Y	WO 9410956 A1 (MÖLNLYCKE AB), 26 May 1994 (26.05.94), figure 11, page 6, paragraph 4 --	1-10
Y	WO 9409737 A1 (THE PROCTER & GAMBLE COMPANY), 11 May 1994 (11.05.94), figures 5-6, claim 1 --	5
Y,P	WO 0030585 A1 (SCA HYGIENE PRODUCTS AB), 2 June 2000 (02.06.00), figures 3-5, page 8, paragraph 2 - page 9, paragraph 1 --	1-10

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"B" earlier application or patent but published on or after the international filing date

"L" document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to underpin the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other cited documents, such combination being obvious to a person skilled in the art

"A" document member of the same patent family

Date of the actual completion of the international search

24 April 2001

Date of mailing of the international search report

3.0 -04- 2001

Name and mailing address of the ISA/
Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM
Facsimile No. +46 8 666 02 86

Authorized officer

Beata Slusarczyk/Els
Telephone No. +46 8 782 25 00

Information on parent family members

International application No.

Patent document cited in search report	Publication date	Patent family number(s)	Publication date
US 5713886 A	03/02/98	NONE	

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INTERNATIONAL SEARCH REPORT

Information on patent family members

02/04/01

International application No.

PCT/SE 01/00723

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO	9410956 A1	26/05/94	
		NO	951893 A 12/05/95
		NO	951894 A 12/05/95
		NO	951915 A 15/05/95
		NO	951931 A 16/05/95
		NZ	257926 A 25/09/96
		NZ	258251 A 28/10/96
		NZ	258252 A 28/10/96
		NZ	258253 A 28/10/96
		PL	172704 B 28/11/97
		PL	172980 B 30/01/98
		PL	174363 B 31/07/98
		PL	309006 A 18/09/95
		PL	309007 A 18/09/95
		PL	309008 A 18/09/95
		PL	309035 A 18/09/95
		PT	773766 T 31/07/00
		SE	508961 C 23/11/98
		SE	9203445 A 18/05/94
		SK	64295 A 08/11/95
		SK	64995 A 05/02/97
		SK	65195 A 08/11/95
		SK	65395 A 08/11/95
		US	5728085 A 17/03/98
		US	5730737 A 24/03/98
		US	5814034 A 29/09/98
		US	5817085 A 06/10/98
		WO	9410953 A 26/05/94
		WO	9410954 A 26/05/94
		WO	9410955 A 26/05/94
		ZA	9308240 A 08/06/94

INTERNATIONAL SEARCH REPORT

Information on patent family members

02/04/01

International application No.

PCT/SE 01/00723

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5797894 A	25/08/98	AT 114959 T	15/12/94
		AU 647987 B	31/03/94
		AU 3536193 A	15/07/93
		AU 4114189 A	15/03/90
		BR 8904593 A	24/04/90
		CA 1335470 A	09/05/95
		CN 1023189 B	22/12/93
		CN 1042069 A	16/05/90
		DE 68919779 D,T	04/05/95
		DK 446989 A	13/03/90
		EG 19845 A	31/03/96
		EP 0359501 A,B	21/03/90
		SE 0359501 T3	
		ES 2064451 T	01/02/95
		FI 97274 B,C	15/08/96
		FI 894279 A	13/03/90
		GR 1000582 B	26/08/92
		GR 89100579 A	31/10/90
		HK 32995 A	17/03/95
		IE 66585 B	24/01/96
		JP 2168949 A	29/06/90
		MX 172434 B	16/12/93
		NZ 245616 A	26/03/96
		PT 91691 A,B	30/03/90
		SG 32395 G	18/08/95
		US 5466232 A	14/11/95
		ZA 8906921 A	29/05/91
		ZM 3389 A	30/04/91
		ZW 11089 A	12/06/91
		US 5374260 A	20/12/94
DE 29513548 U1	01/02/96	NONE	

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- PCT REQUEST

59881-63366

Original (for SUBMISSION) - printed on 03.04.2001 09:11:20 AM

0	For receiving Office use only	
0-1	International Application No.	
0-2	International Filing Date	
0-3	Name of receiving Office and "PCT International Application"	
0-4	Form - PCT/ROH01 PCT Request	
0-4-1	Prepared using	PCT-EASY Version 2.91 (updated 01.01.2001)
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	Swedish Patent Office (RO/SE)
0-7	Applicant's or agent's file reference	59881-63366
I	Title of Invention	SANITARY NAPKIN
II	Applicant	
II-1	This person is:	applicant only
II-2	Applicant for	all designated States
II-4	Name	SCA HYGIENE PRODUCTS AB
II-5	Address:	S-405 03 Göteborg Sweden
II-6	State of nationality	SE
II-7	State of residence	SE
III-1	Applicant and/or Inventor	
III-1-1	This person is:	inventor only
III-1-4	Name (LAST, First)	DREVIK, Solgun
III-1-5	Address:	Hulebäcksvägen 16 S-435 35 Mölnlycke Sweden
IV-1	Agent or common representative; or address for correspondence The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
IV-1-1	Name	ALBIHNS STOCKHOLM AB
IV-1-2	Address:	Box 5581 Linnégatan 2 S-114 85 Stockholm Sweden
IV-1-3	Telephone No.	+46 8 59887200
IV-1-4	Facsimile No.	+46 8 59887300

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PCT REQUEST

59881-83366

Original (for SUBMISSION) - printed on 03.04.2001 09:11:20 AM

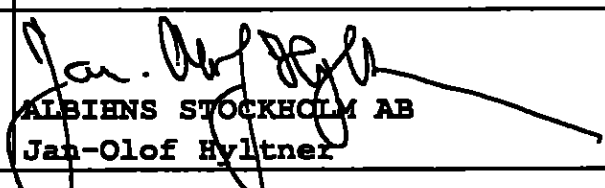
IV-2	Additional agent(s)	additional agent(s) with same address as first named agent
IV-2-1	Name(s)	HYLTNER, Jan-Olof; STEIN, Jan; HAMMAR, Ernst; BROLIN, Tommy
V	Designation of States	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AP: GH GM KE LS MW MZ SD SL SZ TZ UG ZW and any other State which is a Contracting State of the Harare Protocol and of the PCT EA: AM AZ BY KG KZ MD RU TJ TM and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT EP: AT BE CH&LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR and any other State which is a Contracting State of the European Patent Convention and of the PCT OA: BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG and any other State which is a member State of OAPI and a Contracting State of the PCT
V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH&LI CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
V-3	National Patent (States which have become party to the PCT after the issuance of this version of EASY)	CO
V-5	Precautionary Designation Statement In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.	
V-6	Exclusion(s) from precautionary designations	NONE

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PCT REQUEST

59881-63366

Original (for SUBMISSION) - printed on 03.04.2001 09:11:20 AM

VI-1	Priority claim of earlier national application		
VI-1-1	Filing date	13 April 2000 (13.04.2000)	
VI-1-2	Number	0001377-1	
VI-1-3	Country	SE	
VI-2	Priority document request The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1	
VII-1	International Searching Authority Chosen	Swedish Patent Office (ISA/SE)	
VII-2	Request to use results of earlier search; reference to that search		
VII-2-1	Date	13 April 2000 (13.04.2000)	
VII-2-2	Number	SE 00/00425	
VII-2-3	Country (or regional Office)	SE	
VIII	Check list	number of sheets	electronic file(s) attached
VIII-1	Request	4	-
VIII-2	Description	9	-
VIII-3	Claims	2	-
VIII-4	Abstract	1	EZABST00.TXT
VIII-5	Drawings	1	-
VIII-7	TOTAL	17	
	Accompanying Items	paper document(s) attached	electronic file(s) attached
VIII-8	Fee calculation sheet	✓	-
VIII-13	Translation of international application into:	English	
VIII-16	PCT-EASY diskette	-	diskette
VIII-17	Other (specified):	copy of ITS-report and Official Action	-
VIII-18	Figure of the drawings which should accompany the abstract	1	
VIII-19	Language of filing of the international application	Swedish	
IX-1	Signature of applicant or agent		
IX-1-1	Name	ALBIENS STOCKHOLM AB	
IX-1-2	Name of signatory	Jan-Olof Hyltner	

FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	
10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	

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PCT REQUEST

59881-63388

Original (for SUBMISSION) - printed on 03 04 2001 09 11 20 AM

10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/SE
10-6	Transmittal of search copy delayed until search fee is paid	

FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by the International Bureau	
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PCT (ANNEX - FEE CALCULATION SHEET)

59881-83366

Original (for SUBMISSION) - printed on 03 04 2001 09 11 20 AM

(This sheet is not part of and does not count as a sheet of the international application)

0	For receiving Office use only		
0-1	International Application No		
0-2	Date stamp of the receiving Office		
0-4	Form - PCT/RO/101 (Annex) PCT Fee Calculation Sheet		
0-4-1	Prepared using	PCT-EASY Version 2 91 (updated 01 01 2001)	
0-9	Applicant's or agent's file reference	59881-63366	
2	Applicant	SCA HYGIENE PRODUCTS AB	
12	Calculation of prescribed fees	fee amount/multiplier	total amounts (SEK)
12-1	Transmittal fee T	⇒	1 000
12-2	Search fee S	⇒	8 690
12-3	International fee		
	Basic fee (first 30 sheets) b1	3 540	
12-4	Remaining sheets	0	
12-5	Additional amount (X)	80	
12-6	Total additional amount b2	0	
12-7	b1 + b2 = B	3 540	
12-8	Designation fees		
	Number of designations contained in international application	87	
12-9	Number of designation fees payable (maximum 6)	6	
12-10	Amount of designation fee (X)	760	
12-11	Total designation fees D	4 560	
12-12	PCT-EASY fee reduction R	-1 090	
12-13	Total international fee (B+D-R) I	⇒	7 010
12-14	Fee for priority document		
	Number of priority documents requested	1	
12-15	Fee per document (X)	0	
12-16	Total priority document fee P	⇒	0
12-17	TOTAL FEES PAYABLE (T+S+I+P)	⇒	16 700
12-19	Mode of payment	cheque	

VALIDATION LOG AND REMARKS

13-2-1	Validation messages Request	Green? A translation of the international application into English will have to be prepared under the responsibility of the ISA selected
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		Green? Please note that the entire request (including the title of invention) must be in English
13-2-2	Validation messages States	Green? More designations could be made. The following States have not been designated US Please verify
		Yellow! Additional national designation added Obtain updated maintenance tables rather than using this field
13-2-3	Validation messages Names	Yellow Applicant 1 Street address missing
		Green? Applicant 1 Telephone No missing
		Green? Applicant 1 Facsimile No missing
13-2-6	Validation messages Contents	Yellow! The power of attorney or a copy of the general power of attorney will need to be furnished unless all applicants sign the request form
13-2-9	Validation messages Annotate	Green? The name of the person signing the request or/and the capacity in which the person signs has/have not been indicated Please be informed that some receiving Offices require that this information be present along with the signature

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF RECEIPT OF
RECORD COPY

(PCT Rule 24 2(a))

From the INTERNATIONAL BUREAU

To

ALBIHNS STOCKHOLM AB
Box 5581
Linnégatan 2
S-114 85 Stockholm
SUÈDE

E-3 *allas*

Date of mailing (day/month/year)

08 May 2001 (08 05 01)

IMPORTANT NOTIFICATION

Applicant's or agent's file reference

59881-63366 *70H*

International application No

PCT/SE01/00723

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below

Name(s) of the applicant(s) and State(s) for which they are applicants

SCA HYGIENE PRODUCTS AB (all designated States)

International filing date

03 April 2001 (03 04 01)

Priority date(s) claimed

13 April 2000 (13 04 00)

Date of receipt of the record copy
by the International Bureau

19 April 2001 (19 04 01)

List of designated Offices

AP GH,GM,KE,LS,MW,MZ,SD,SL,SZ,TZ,UG,ZW
EA AM,AZ,BY,KG,KZ,MD,RU,TJ,TM
EP AT,BE,CH,CY,DE,DK,ES,FI,FR,GB,GR,IE,IT,LU,MC,NL,PT,SE,TR
OA BF,BJ,CF,CG,CI,CM,GA,GN,GW,ML,MR,NE,SN,TD,TG
National AE,AG,AL,AM,AT,AU,AZ,BA,BB,BG,BR,BY,BZ,CA,CH,CN,CO,CR,CU,CZ,DE,DK,DM,DZ,
EE,ES,FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KP,KR,KZ,LC,LK,LR,LS,LT,LU,LV,
MA,MD,MG,MK,MN,MW,MX,MZ,NO,NZ,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,
UZ,VN,YU,ZA,ZW

ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to

☒ time limits for entry into the national phase

☒ confirmation of precautionary designations

☐ requirements regarding priority documents

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority

The International Bureau of WIPO
34 chemin des Colombettes
1211 Geneva 20 Switzerland

Authorized officer

David Lopez-Ramirez
David Lopez-Ramirez

Facsimile No (41 22) 740 14 35

Telephone No (41 22) 338 83 38

INFORMATION ON TIME LIMITS FOR ENTERING THE NATIONAL PHASE

The applicant is reminded that the "national phase" must be entered before each of the designated Offices indicated in the Notification of Receipt of Record Copy (Form PCT/IB/301) by paying national fees and furnishing translations as prescribed by the applicable national laws

The time limit for performing these procedural acts is 20 MONTHS from the priority date or, for those designated States which the applicant elects in a demand for international preliminary examination or in a later election 30 MONTHS from the priority date, provided that the election is made before the expiration of 18 months from the priority date. Some designated (or elected) Offices have fixed time limits which expire even later than 20 or 30 months from the priority date. In other Offices an extension of time or grace period, in some cases upon payment of an additional fee, is available.

In addition to these procedural acts, the applicant may also have to comply with other special requirements applicable in certain Offices. It is the applicant's responsibility to ensure that the necessary steps to enter the national phase are taken in a timely fashion. Most designated Offices do not issue reminders to applicants in connection with the entry into the national phase.

For detailed information about the procedural acts to be performed to enter the national phase before each designated Office, the applicable time limits and possible extensions of time or grace periods, and any other requirements, see the relevant Chapters of Volume II of the PCT Applicant's Guide. Information about the requirements for filing a demand for international preliminary examination is set out in Chapter IX of Volume I of the PCT Applicant's Guide.

GR and ES became bound by PCT Chapter II on 7 September 1998 and 6 September 1997, respectively, and may therefore, be elected in a demand or a later election filed on or after 7 September 1998 and 6 September 1997, respectively, regardless of the filing date of the international application. (See second paragraph above.)

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

CONFIRMATION OF PRECAUTIONARY DESIGNATIONS

This notification lists only specific designations made under Rule 4.8(a) in the request. It is important to check that these designations are correct. Errors in designations can be corrected where precautionary designations have been made under Rule 4.8(b). The applicant is hereby reminded that any precautionary designations may be confirmed according to Rule 4.8(c) before the expiration of 15 months from the priority date. If it is not confirmed, it will automatically be regarded as withdrawn by the applicant. There will be no reminder and no invitation. Confirmation of a designation consists of the filing of a notice specifying the designated State concerned (with an indication of the kind of protection or treatment desired) and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15 month time limit.

REQUIREMENTS REGARDING PRIORITY DOCUMENTS

For applicants who have not yet complied with the requirements regarding priority documents, the following is recalled:

Where the priority of an earlier national, regional or international application is claimed, the applicant must submit a copy of the said earlier application, certified by the authority with which it was filed ("the priority document") to the receiving Office (which will transmit it to the International Bureau) or directly to the International Bureau, before the expiration of 18 months from the priority date, provided that any such priority document may still be submitted to the International Bureau before that date of international publication of the international application, in which case that document will be considered to have been received by the International Bureau on the last day of the 18 month time limit (Rule 17.1(a)).

Where the priority document is issued by the receiving Office, the applicant may, instead of submitting the priority document, request the receiving Office to prepare and transmit the priority document to the International Bureau. Such request must be made before the expiration of the 18-month time limit and may be subjected by the receiving Office to the payment of a fee (Rule 17.1(b)).

If the priority document concerned is not submitted to the International Bureau or if the request to the receiving Office to prepare and transmit the priority document has not been made (and the corresponding fee, if any, paid) within the applicable time limit indicated under the preceding paragraphs, any designated State may disregard the priority claim, provided that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity to furnish the priority document within a time limit which is reasonable under the circumstances.

Where several priorities are claimed, the priority date to be considered for the purposes of computing the 18 month time limit is the filing date of the earliest application whose priority is claimed.

PATENT COOPERATION TREATY

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From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING SUBMISSION OR TRANSMITTAL OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

ALBIHNS STOCKHOLM AB
Box 5581
Linnégatan 2
S-114 85 Stockholm
SUÈDE

Date of mailing (day/month/year) 08 May 2001 (08.05.01)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 59881-63366	
International application No. PCT/SE01/00723	International filing date (day/month/year) 03 April 2001 (03.04.01)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 13 April 2000 (13.04.00)
Applicant SCA HYGIENE PRODUCTS AB	

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An asterisk(*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
13 April 2000 (13.04.00)	0001377-1	SE	19 April 2001 (19.04.01)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  David Lopez-Ramirez
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Jan-Olof Hytner
ALBIHNS PATENTBYRA STOCKHOLM AB
Box 5581
S-114 85 STOCKHOLM AB
SUEDE

CE 04 02

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

JOH 2/4
BME

Date of mailing
(day/month/year)

26.03.2002

Applicant's or agent's file reference
59881-63366

IMPORTANT NOTIFICATION

International application No.
PCT/SE01/00723

International filing date (day/month/year)
03/04/2001

Priority date (day/month/year)
13/04/2000

Applicant

SCA HYGIENE PRODUCTS AB

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

 European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523856 epmu d
Fax: +49 89 2399 - 4485

Authorized officer

Jacobus Prues, S

Tel. +49 89 2399-8113



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 59881-63366		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SE01/00723	International filing date (day/month/year) 03/04/2001	Priority date (day/month/year) 13/04/2000	
International Patent Classification (IPC) or national classification and IPC A61F13/45			
Applicant SCA HYGIENE PRODUCTS AB			
1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 5 sheets, including this cover sheet. ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of sheets.			
3. This report contains indications relating to the following items: - I ☒ Basis of the report - II ☐ Priority - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability - IV ☐ Lack of unity of invention - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement - VI ☐ Certain documents cited - VII ☐ Certain defects in the international application - VIII ☐ Certain observations on the international application			
Date of submission of the demand 27/08/2001		Date of completion of this report 26.03.2002	
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523856 epmu d Fax: +49 89 2399 - 4465		Authorized officer Boccignone, M Telephone No. +49 89 2399 2643 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/SE01/00723

I. Basis of the report

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-10 as published

Claims, No.:

1-10 as published

Drawings, sheets:

1/1 as published

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/SE01/00723

- ☐ the drawings, sheets:
5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or Industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-10
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-10
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-10
	No:	Claims	

2. Citations and explanations
see separate sheet

Reference is made to the following documents:

D1: US-A-5 713 886

D2: WO-A-94/10956

D3: WO-A-94/09737

D4: WO-A-00/30585

Document D1 discloses (see col. 2, lines 6 to 64 and the drawings) an absorbent article (10) in the form of a panty liner that includes an absorbent body (12) sandwiched between a liquid-permeable outer sheet (14) and a liquid-impermeable outer sheet (16) and which has a front part, which is intended to face forwards when the article is worn, and a rear part, wherein the absorbent body has a length from 140- 260 mm and tapers rearwardly from a section of greatest width at the front part of the article to the rear part thereof,

The problem to be solved by the current invention (see page 1, lines 22 to 33) is to provide an absorbent article which is suitable to be worn with string panties, has good absorbency and is thin.

This is solved by having an absorbent body which has a greatest width of 60-80 mm in its front part and a smallest width of 5-20 mm at its rear end, and includes a layer of dry-formed cellulose fibres that has a density of at least 250 g/dm^3 and extends over essentially the whole of the surface of the absorbent body out to the front and side edges of said body.

Although these problems have been addressed to by D1 (see col. 1, lines 30 to 39), they are solved by having an article whose smallest and greatest widths are bigger than those of the claimed product (see col. 2, lines 37 to 39). Furthermore, the use of a layer having a density of at least 250 g/dm^3 is not contemplated by D1.

The problems of having a highly absorbent and thin article have been addressed to by D2 (see page 2, third paragraph) and solved by using a material (see page 3, last paragraph) which has the above mentioned density. However, D2 is not directed to an absorbent article to be worn with a string panty: no such widths have been disclosed therein.

Although document D3 discloses a material having such density, it neither addresses the above problems nor discloses such widths.

Document D4 (P-Doc.) discloses such widths, but does not disclose either the length of the article or the use of a material having such density.

The remaining documents cited reflect a more remote state of the art.

Thus, the subject-matter of claim 1 appears to be novel and inventive with respect to the cited prior art (Article 33(1) PCT).

Dependent claims 2 to 10 define further features of the absorbent article according to claim 1 and, thus, also appear to relate to novel and inventive subject-matter. The possibility of industrial application is obvious.

IPEA/ EPO

PCT

CHAPTER II

DEMAND

under Article 31 of the Patent Cooperation Treaty:

The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

For International Preliminary Examination Authority use only

Identification of IPEA

Date of receipt of DEMAND

Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION

Applicant's or agents file reference

59881-63366

International application No.

International filing date (day/month/year)

(Earliest) Priority date (day/month/year)

PCT/SE01/00723

03 April 2001

13 April 2000

Title of invention

Sanitary napkin

Box No. II APPLICANT(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

Telephone No.:

SCA HYGIENE PRODUCTS AB

Facsimile No.:

S-405 03 GÖTEBORG

Sweden

Teleprinter No.:

State (i.e. country) of nationality:

State (i.e. country) of residence:

SE

SE

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

State (i.e. country) of nationality:

State (i.e. country) of residence:

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of the country.)

State (i.e. country) of nationality:

State (i.e. country) of residence:

☐ Further applicants are indicated on a continuation sheet.

Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCEThe following person is ☒ agent ☐ common representativeand ☒ has been appointed earlier and represents the applicant(s) also for international preliminary examination,☐ is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.☐ is hereby appointed, specifically for the procedure before the International Preliminary Examination Authority, in addition to the agent(s)/common representative appointed earlier.

Name and address: (Family name followed by given name; for a legal entity; full official designation. The address must include postal code and name of the country.)

Jan-Olof Hyltner
 Albihs Stockholm AB
 Box 5581
 S-114 85 Stockholm
 Sweden

Telephone No.:

+46 8 59 88 72 00

Facsimile No.:

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Teleprinter No.:

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.**Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION****Statement concerning amendments:***

1. The applicant wishes the international preliminary examination to start on the basis of:

☒ the international application as originally filed.

the description ☐ as originally filed
☐ as amended under Article 34

the claims ☐ as originally filed
☐ as amended under Article 19 (together with any accompanying statement)
☐ as amended under Article 34

the drawings ☐ as originally filed
☐ as amended under Article 34

2. ☐ The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.3. ☐ The applicant wishes the start of the international preliminary examination to be postponed until the expiration of 20 months from the priority date unless the International Preliminary Examination Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). (This check-box may be marked only where the time limit under Article 19 has not yet expired).

* Where no check-box is marked, international preliminary examination will start on basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examination Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: ... English

☐ which is the language in which the international application was filed.☒ which is the language of a translation furnished for the purposes of international search.☐ which is the language of publication of the international application.☐ which is the language of the translation (to be) furnished for the purposes of international preliminary examination**Box No. V ELECTION OF STATES**

The applicant hereby elects all eligible States (that is, all States which have been designated and which are bound by Chapter II of the PCT)

excluding the following States which the applicant wishes not to elect:

Box No. VI CHECK LIST

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- | | | | |
|----|---|---|--------|
| 1. | translation of international application | : | sheets |
| 2. | amendments under Article 34 | : | sheets |
| 3. | copy (or, where required, translation) of amendments under Article 19 | : | sheets |
| 4. | copy (or, where required, translation) of statement under Article 19 | : | sheets |
| 5. | letter | : | sheets |
| 6. | other (specify) | : | sheets |

For International Preliminary Examination Authority use only

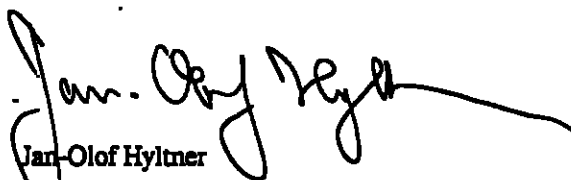
- | received | not received |
|--------------------------|--------------------------|
| ☐ | ☐ |
| ☐ | ☐ |
| ☐ | ☐ |
| ☐ | ☐ |
| ☐ | ☐ |
| ☐ | ☐ |

The demand is also accompanied by the item(s) marked below:

- | | |
|--|---|
| 1. ☒ fee calculation sheet. | 4. ☐ statement explaining lack of signature |
| 2. ☐ separate signed power of attorney | 5. ☐ nucleotide and or amino acid sequence listing in computer readable form |
| 3. ☐ copy of general power of attorney; reference number, if any. | 6. ☐ other (specify): |

Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand)


Jan-Olof Hyltner

For International Preliminary Examining Authority use only

1. Date of actual receipt of DEMAND:

2. Adjusted date of receipt of demand due to CORRECTIONS under rule 60.1(b):

- | | |
|--|---|
| 3. ☐ The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply. | ☐ The applicant has been informed accordingly. |
| 4. ☐ The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of rule 80.5. | |
| 5. ☐ Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82. | |

For International Bureau use only

Demand received from IPEA on:

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 59881-63366	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/SE 01/00723	International filing date (day/month/year) 3 April 2001	(Earliest) Priority Date (day/month/year) 13 April 2000
Applicant SCA Hygiene Products AB		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.

☐ None of the figures.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 01/00723

39

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A61F 13/45

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5713886 A (DAVID P. STURINO), 3 February 1998 (03.02.98), column 2, line 33 - line 41, figures 1-3 --	1-10
Y	WO 9410956 A1 (MÖLNLYCKE AB), 26 May 1994 (26.05.94), figure 11, page 6, paragraph 4 --	1-10
Y	WO 9409737 A1 (THE PROCTER & GAMBLE COMPANY), 11 May 1994 (11.05.94), figures 5-6, claim 1 --	5
Y,P	WO 0030585 A1 (SCA HYGIENE PRODUCTS AB), 2 June 2000 (02.06.00), figures 3-5, page 8, paragraph 2 - page 9, paragraph 1 --	1-10

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

24 April 2001

Date of mailing of the international search report

30 -04- 2001

Name and mailing address of the ISA/

Swedish Patent Office

Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Authorized officer

Beata Slusarczyk/Els

Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 01/00723

Y0

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5683373 A (KAMELA J. DARBY), 4 November 1997 (04.11.97), page 8, line 22 - page 9, line 25, figure 7 ---	1-10
A	US 5797894 A (SERGE CADIEUX ET AL), 25 August 1998 (25.08.98), figures 1,3, abstract --	1-10
A	DE 29513548 U1 (AURISCH, GABRIELE), 1 February 1996 (01.02.96), figure 2, description of figure 2 --	1-10
A	US 5454804 A (URBAN WIDLUND), 3 October 1995 (03.10.95), figures 4-5, abstract -- -----	1-10

Y/

International application No.
PCT/SE 01/00723

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5713886 A	03/02/98	NONE	

INTERNATIONAL SEARCH REPORT
Information on patent family members

02/04/01

International application No.

PCT/SE 01/00723

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
WO	9410956	A1	26/05/94	AT	188867	T	15/02/00
				AT	188868	T	15/02/00
				AT	189595	T	15/02/00
				AT	192324	T	15/05/00
				AU	674041	B	05/12/96
				AU	677804	B	08/05/97
				AU	5535994	A	08/06/94
				AU	5580794	A	08/06/94
				AU	5580894	A	08/06/94
				AU	5580994	A	08/06/94
				CA	2149028	A	26/05/94
				CZ	283404	B	15/04/98
				CZ	9501223	A	17/01/96
				CZ	9501249	A	18/10/95
				CZ	9501278	A	18/10/95
				CZ	9501285	A	18/10/95
				DE	69327673	D,T	31/05/00
				DE	69327674	D,T	29/06/00
				DE	69327855	D,T	15/06/00
				DE	69328574	D,T	14/09/00
				DK	773766	T	15/05/00
				DK	773767	T	25/04/00
				DK	773768	T	08/05/00
				EP	0773764	A,B	21/05/97
				SE	0773764	T3	
				EP	0773766	A,B	21/05/97
				SE	0773766	T3	
				EP	0773767	A,B	21/05/97
				SE	0773767	T3	
				EP	0773768	A,B	21/05/97
				SE	0773768	T3	
				ES	2142395	T	16/04/00
				ES	2144045	T	01/06/00
				ES	2147779	T	01/10/00
				FI	952407	A	17/05/95
				FI	952408	A	17/05/95
				FI	952410	A	17/05/95
				FI	952411	A	17/05/95
				GB	2272916	A,B	01/06/94
				GB	9322991	D	00/00/00
				GR	3032642	T	30/06/00
				HU	71657	A	29/01/96
				HU	71662	A	29/01/96
				HU	72249	A	29/04/96
				HU	72386	A	29/04/96
				HU	218555	B	28/10/00
				HU	9501423	D	00/00/00
				HU	9501424	D	00/00/00
				HU	9501449	D	00/00/00
				HU	9501450	D	00/00/00
				JP	8503393	T	16/04/96
				JP	8503394	T	16/04/96
				JP	8503395	T	16/04/96
				JP	8503396	T	16/04/96
				NO	305683	B	12/07/99

V3

INTERNATIONAL SEARCH REPORT
Information on patent family members

02/04/01

International application No.

PCT/SE 01/00723

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
WO	9410956	A1	26/05/94	NO	951893 A	12/05/95
				NO	951894 A	12/05/95
				NO	951915 A	15/05/95
				NO	951931 A	16/05/95
				NZ	257926 A	25/09/96
				NZ	258251 A	28/10/96
				NZ	258252 A	28/10/96
				NZ	258253 A	28/10/96
				PL	172704 B	28/11/97
				PL	172980 B	30/01/98
				PL	174363 B	31/07/98
				PL	309006 A	18/09/95
				PL	309007 A	18/09/95
				PL	309008 A	18/09/95
				PL	309035 A	18/09/95
				PT	773766 T	31/07/00
				SE	508961 C	23/11/98
				SE	9203445 A	18/05/94
				SK	64295 A	08/11/95
				SK	64995 A	05/02/97
				SK	65195 A	08/11/95
				SK	65395 A	08/11/95
				US	5728085 A	17/03/98
				US	5730737 A	24/03/98
				US	5814034 A	29/09/98
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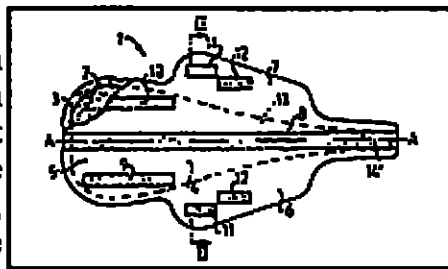
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(21) International Application Number PCT/SE01/00723 (22) International Filing Date 03 April 2001 (03.04.2001) (30) Priority Data 0001377-1 13 April 2000 (13.04.2000) SE (71) Applicant: SCA HYGIENE PRODUCTS AB S-405 03 Göteborg; (SE). [SE/SE]. (72) Inventor DREVIK, Solgun Hulebäcksvägen 16, S-435 35 Mölnlycke; (SE). (74) Agent HYLTNER, Jan-Olof Albihns Stockholm AB, Box 5581, Linnégatan 2, S-114 85 Stockholm; (SE).	(81) Designated States (national) AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW (84) Designated States (regional) ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG) <u>For information on time limits for entry into the national phase please click here</u> Published with international search report	

(54) Title

SANITARY NAPKIN

(57) Abstract

The present invention relates to an absorbent article (1) in the form of a sanitary napkin, a panty liner or an incontinence protector for women comprising an absorbent body (2) which is sandwiched between a liquid-permeable outer sheet (3) and a liquid-impermeable outer sheet (4), said article having a front part (5), which is intended to face forwards when the article is worn, and a rear part, wherein



the absorbent body has a length of 140-260 mm and tapers rearwardly from a section of greatest width situated in the front part of the article to the end of the rear part of said article. According to the invention, the absorbent body (2) has a widest width of 60-80 mm in its front part, and a smallest width of 5-20 mm in its rear end, and includes a layer (13) of dry-formed cellulose fibres having a density of at least 250 g/dm³ and extending over essentially the whole surface of the absorbent body, out to the front and side edges of said body.



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1 of 1

TOALLA SANITARIA

CAMPO DE LA INVENCION

La presente invención se relaciona con un artículo absorbente en la forma de una toalla sanitaria, un recubrimiento de pantaloncito o un protector de incontinencia para mujeres, que comprende un cuerpo absorbente que se encuentra en "sandwich" entre una lámina exterior permeable a los líquidos y una impermeable a los líquidos, y que tiene una parte frontal que está destinada a mirar hacia delante cuando el artículo es vestido, y una parte posterior, en donde el cuerpo absorbente tiene una longitud de 140-260 mm y se inclina hacia la parte de atrás desde una sección de amplitud mayor situada en la parte frontal de la toalla sanitaria hacia abajo del extremo de dicha parte posterior.

ANTECEDENTES DE LA INVENCION

Una toalla sanitaria de esta clase está destinada a ser vestida en los así llamados pantaloncitos de hilo, la

porción posterior de la parte de entrepierna de la cual es extremadamente angosta. Los pantaloncitos de hilo son primariamente vestidos por razones estéticas y son prácticamente invisibles aún cuando se vistan por debajo de prendas fuertemente ajustadas. Naturalmente, la alta demanda hecha sobre las toallas sanitarias que serán vestidas con pantaloncitos de hilo, cuyas toallas deben tener una porción posterior muy estrecha y también deben ser muy delgadas de tal forma que puedan ser discretamente vestidas. Tales toallas también llenan los requisitos relacionados con propiedades de absorción efectiva y serán confortables para vestirse.

El objeto de la presente invención es suministrar un artículo absorbente de la clase anteriormente descrita que llene los requisitos de discreción sin apartarse de las propiedades de absorción y comodidad del artículo.

RESUMEN DE LA INVENCION

Este objeto se logra con un artículo absorbente en la forma de una toalla sanitaria, un recubrimiento de pantaloncito o un protector de incontinencia para mujeres que incluye un cuerpo absorbente incluido entre una

lámina exterior impermeable a los líquidos y una lámina exterior impermeable a los líquidos, dicho artículo tiene una parte frontal que está destinada a mirar hacia delante cuando el artículo se viste, y una parte posterior, en donde el cuerpo absorbente tiene una longitud de 140-260 mm y se inclina hacia la parte de atrás desde una sección de mayor amplitud situada en la parte frontal de la toalla hacia el extremo de la parte posterior de esta, y en donde el artículo se caracteriza porque el cuerpo absorbente tiene una amplitud mayor de 60-80 mm en su parte frontal y una amplitud más pequeña de 5-20 mm en su parte posterior, e incluye una capa de fibra de celulosa formada en seco que tiene una densidad de al menos 250 g/m^3 y que se extiende sobre sustancialmente la totalidad del cuerpo absorbente, derecho a sus bordes frontal y lateral. En razón a que las capas de fibras formadas en seco se extienden sobre sustancialmente la totalidad del cuerpo absorbente, las propiedades absorbentes de dicho material se pueden utilizar completamente, y porque la capa le ha sido dada una alta densidad, y por esto tiene capilares finos, la capa es capaz de dispersar efectivamente líquidos descargado en la capa. Esto le posibilita al cuerpo absorbente ser delgado. Adicionalmente, las dimensiones

del artículo junto con las propiedades físicas de la capa absorbente le posibilitan al artículo ser vestido confortablemente.

En una modalidad preferida de la invención, la capa de las fibras de celulosa formadas en seco tienen un peso por unidad de área de 200 - 600 g/m² y el cuerpo absorbente también incluye una capa de material que tiene buenas propiedades de adquisición de líquido y que se extiende sobre el total de la capa de fibras de celulosa formadas en seco y más allá de dicha capa a la parte final posterior del cuerpo absorbente. El material tiene buenas propiedades de adquisición de líquido puede estar comprendido de una almohadilla de fibra de celulosa, fibras sintéticas o mezclas de estos. El artículo también incluirá preferiblemente aletas proyectantes flexibles que se extienden hacia fuera del cuerpo absorbente sobre los lados respectivos de esta, junto con una parte de una porción inclinada de dicho cuerpo. Las aletas pueden formar parte integral de al menos una de las láminas exteriores. El artículo también incluye al menos unos medios aseguradores sobre aquella parte de la toalla que incluye el cuerpo absorbente y al menos una aleta para asegurar el artículo al pantalón. Los medios de

aseguramiento pueden comprender convenientemente cuerdas o goma sensible a la presión, por ejemplo goma fundida en calor.

BREVE DESCRIPCIÓN DE LOS DIBUOJS

La presente invención será ahora descrita con referencia a los dibujos que la acompañan en los cuales la figura 1 ilustra esquemáticamente en una vista en planta en corte parcial una primer modalidad de la toalla sanitaria de la invención, con la lámina exterior impermeable a los líquidos mirando hacia el observador; y

La figura 2 es una vista en sección tomada sobre la línea II - II en la figura 1, con la lámina exterior permeable a los líquidos mirando hacia la parte de arriba.

DESCRIPCIÓN DE LAS MODALIDADES

La toalla sanitaria ilustrada en el dibujo típicamente incluye un cuerpo absorbente 2 incluido entre la lámina exterior permeable a los líquidos 3 y la lámina exterior impermeable a los líquidos 4. Las láminas

exteriores 3, 4 se unen juntas en partes localizadas hacia el exterior del cuerpo absorbente en alguna forma adecuada, por ejemplo, mediante engomado o soldado con ultrasonido o soldado con calor.

La toalla sanitaria 1 está destinada a ser vestida en un pantaloncito de hilo y el cuerpo absorbente 2 de acuerdo con la inclinación hacia atrás desde la parte más ancha de la porción frontal 5 de la toalla a su extremo posterior. Las láminas exteriores 3, 4 forman aletas proyectantes hacia fuera 6, 7 o alas, están destinadas a ser dobladas alrededor de los bordes de un pantaloncito de hilo y aseguradas al exterior de este. Las aletas 6, 7 se extienden longitudinalmente hacia fuera de los bordes del cuerpo absorbente con esencialmente la misma anchuras, y, los bordes longitudinales de las aletas convergen con estos uno hacia el otro en la dirección hacia atrás. En el caso de la modalidad ilustrada, la longitud de las aletas corresponde a aproximadamente la mitad de la longitud de la toalla y las aletas son ubicadas a una distancia ligeramente mayor del extremo frontal de la toalla que de su extremo posterior.

La toalla tiene una longitud de 140 - 260 mm. El cuerpo absorbente tiene una anchura mayor de 60 - 80 mm, preferiblemente aproximadamente 70 mm, y una anchura más pequeña en su extremo posterior 5 - 20 mm, preferiblemente aproximadamente 10 mm. Las aletas se extienden más allá de los bordes del cuerpo absorbente a través de una distancia de aproximadamente 25 - 30 mm, con la distancia mayor en las partes frontales de las aletas. Los bordes frontales de las aletas se localizan aproximadamente 60 mm desde el borde frontal de la toalla, y los bordes posteriores de las aletas se localizan aproximadamente a 50 mm del extremo posterior de dicha toalla. Se entenderá que las medidas de las aletas anteriormente dichas les ha sido simplemente dado proporcionar un entendimiento cualitativo de un diseño de una aleta adecuada sobre una toalla sanitaria destinada para pantaloncitos de hilo y de ninguna manera limitar el alcance de la invención.

La lámina superior permeable a los líquidos 3 está comprendida de un material amigable con la piel suave. Esta lámina superior puede comprender una lámina de diferentes tipos de material de fibra no tejida. Otros materiales que se pueden utilizar son película plástica

perforada, red de plástico, tejido de punto, textiles en croché tejidos y combinaciones y laminaciones de los tipos anteriormente mencionados de material. El plástico puede ser un termoplástico, por ejemplo polietileno (P). el material no tejido debe comprender fibras naturales, tales como celulosa o algodón, aunque este alternativamente puede comprender fibras sintéticas, tales como polietileno (P), polipropileno (PP), poliuretano (PU) y un poliéster nylon o celulosa regenerada, o una mezcla de fibras diferentes. Todos los materiales que son usados para producir láminas exteriores permeables a los líquidos para artículos absorbentes, tales como toallas sanitarias, cubiertas de pantaloncitos o protectores de incontinencia, se pueden utilizar para la lámina exterior permeable a los líquidos 3, y se entenderá que los materiales anteriormente dichos han sido simplemente dados por vía de ejemplo.

La lámina exterior impermeable a los líquidos 4 puede comprender un material flexible, preferiblemente una película plástica delgada de poliuretano (P), polipropileno (PP), o un poliéster, aunque dicho material puede comprender alternativamente una material permeable a los líquidos, tal como un material no tejido, laminado

con material impermeable a los líquidos. Todos los materiales que son utilizados para producir láminas exteriores impermeables a los líquidos para artículos absorbentes pueden ser utilizados. La lámina exterior 4 puede ser convenientemente permeable al aire.

En la modalidad ilustrada, las aletas 6, 7 comprenden partes que se extienden lateralmente de la lámina exterior 3, 4, aunque dichas aletas pueden comprender alternativamente partes extendidas de solamente una de dichas láminas exteriores. Las aletas pueden aún comprender piezas separadas de material asegurado a los lados del lado inferior de la toalla 1.

En la región del cuerpo absorbente 2, la toalla 1 se suministra con tres cuerdas adhesivas 8, 9, 10 sobre la lámina exterior impermeable a los líquidos 4, estas cuerdas adhesivas son una cuerda adhesiva central 8 que se extiende a lo largo del eje simétrico longitudinal A-A de la toalla a lo largo de la longitud total de esta, y dos cuerdas adhesivas más cortas 9, 10 que se extienden sobre los lados respectivos de la cuerda adhesiva central 8, en la parte frontal 5 de la toalla. Estas cuerdas adhesivas 8, 9, 10 están destinadas para asegurar la

toalla 1 al interior del pantaloncito de hilo. Cada una de las cuerdas adhesivas 8, 9, 10 se extienden en una dirección paralela con el eje de simetría longitudinal A-A de la toalla 1.

La toalla sanitaria 1 también está provista con dos cuerdas adhesivas 11, 12 sobre cada aleta 6, 7. Estas cuerdas adhesivas 11, 12 son relativamente cortas y se extienden en direcciones paralelas con el eje de simetría longitudinal A-A de la toalla cuando la toalla es plana. Las cuerdas adhesivas 11, 12 sobre cada aleta 6, 7 son mutuamente espaciadas tanto longitudinal como lateralmente, con lo que la cuerda más delantera 11 se localiza más allá del eje de simetría longitudinal A-A. La longitud de cada cuerda adhesiva 11, 12 es adecuadamente más corta de aproximadamente 300 mm, preferiblemente en el rango de 10-20 mm. Cada cuerda adhesiva tendrá adecuadamente una anchura de entre 2 - 15 mm.

Aunque solo dos cuerdas adhesivas 11, 12 se suministran sobre cada aleta 6, 7 de la modalidad mostrada en la figura 1, se entenderá que las aletas

deben ser provistas con más cuerdas adhesivas si así se desea.

El adhesivo de las cuerdas adhesivas consiste de goma fundida al calor sensible a la presión, por ejemplo, Ecomelt H145 de Collano, Suiza. Otros adhesivos sensibles a la presión disponibles comercialmente se pueden utilizar, que son sensibles a la presión en estado frío, tales como goma diacrilato, normalmente combinada con aditivos que mejoran la pegajosidad, tales como politerpeno, o goma fundida en calor, tales como copolímeros de estireno y butadineo. En la etapa empacada de la toalla sanitaria, las toallas adhesivas se cubren con capa protectora, por ejemplo, con el así llamado papel de liberación que consiste de un papel recubierto con silicona que funciona para proteger las cuerdas adhesivas

En la etapa de empacado de la toalla sanitaria, las cuerdas adhesivas se cubren con capa protectora, por ejemplo, con el así llamado papel de liberación que consiste de un papel recubierto con silicona que funciona para proteger las cuerdas adhesivas contra los contaminantes, tales como polvo y similares, y también

para evitar que el adhesivo se seque antes de usarse. La toalla 1 está convenientemente provista con una capa protectora central que no se remueve hasta que la toalla se asegura al interior del pantaloncito de hilo y también con la capa protectora sobre cada aleta, esta capa se remueve antes de doblar la aleta alrededor de los bordes de un pantaloncito de hilo y asegura la toalla al exterior de este. Estas capas protectoras no se muestran en las figuras por motivos de claridad.

Las toallas sanitarias 1 se elaboran en producción longitudinal en una línea de producción continua, por medio de la cual se quiere significar que la dirección de la máquina coincide con el eje longitudinal de los blancos de la toalla, al ubicar los cuerpos absorbentes sobre una red de viaje del material de lámina exterior y ubicar luego de esto la otra red de material de lámina exterior con la red compuesta comprendida de una primer lámina exterior y dichos cuerpos absorbentes. Las cuerdas adhesivas y las capas protectoras pueden estar montadas subsecuentemente para haber suministrado una lámina exterior y cuerpos absorbentes con la línea de producción, o las cuerdas adhesivas y las capas protectoras se pueden montar sobre la lámina exterior

impermeable a los líquidos antes de dicha lámina con los cuerpos absorbentes en la lámina exterior permeable a los líquidos. Las toallas sanitarias individuales son cortadas de la red resultante de blancos de toalla sanitaria en la etapa final del proceso de elaboración.

Las cuerdas adhesivas pueden ser aplicadas a las capas protectoras antes de que dichas capas sean aplicadas a la lámina exterior impermeable a los líquidos, o aplicadas a la lámina exterior impermeable a los líquidos antes de aplicar dicha capa protectora.

La parte posterior de la toalla sanitaria se debe hacer extremadamente estrecha con el fin de ajustarse al pantaloncito de hilo mientras que la parte frontal de la toalla puede ser hecha relativamente amplia sin sobresalir más allá de los bordes del pantaloncito de hilo en cuya parte de entrepierna se ubica la toalla sanitaria.

La parte mayor de la capacidad de absorción del cuerpo absorbente descansará, por lo tanto, en la parte frontal de la toalla sanitaria. El líquido, o el fluido, se descarga dentro de un área relativamente limitada de

la toalla, por ejemplo, dentro de llamada área húmeda. Así, con el fin de utilizar completamente la capacidad del cuerpo absorbente, es necesario que sea capaz de transportar el descargado por el usuario desde el área húmeda al resto del cuerpo absorbente. Esto significa que el cuerpo absorbente debe tener una capacidad de dispersión de líquido efectiva. De otra parte, el cuerpo absorbente para uso en un interior tipo hilo debe ser delgado por razones de discreción. Con el fin de completar estos criterios, el material absorbente en el cuerpo absorbente 2 se comprime de una capa 13 de un material de fibra celulosa formado en seco que ha sido comprimido a una densidad de al menos 250 g/dm^3 , preferiblemente a una densidad de $300/400 \text{ g/dm}^3$, sin la subsecuente desfibrización y motoseado del material. Se sabe que tales materiales de la WO94/10956 a los cuales se hace referencia para información adicional concierne a métodos de producción y las propiedades de tales materiales. Se destaca, sin embargo, que tales materiales también tienen buenas propiedades de retención de líquido. La capa 13 tiene un peso por unidad de área de $200-600 \text{ g/m}^2$, preferiblemente $250-400 \text{ g/m}^2$ significa que la capa no tendrá un espesor superior a 1,5 mm. La capa 13 de material de fibra de celulosa formada en seco puede

incluir materiales también llamados súper absorbentes, por ejemplo en la forma de una partícula. Los súper absorbentes pueden ser incorporados en la capa 13 en diferentes formas. Por ejemplo, ellos pueden ser mezclados con material de fibra, colocados en capas dentro de la capa del material de fibra, o dispuestas dentro en alguna otra forma. Los súper absorbentes pueden ser introducidos en conjunto con la producción con el material formado en seco, aunque tal introducción puede tener lugar durante otras partes del proceso de fabricación de la toalla.

La modalidad ilustrada del cuerpo absorbente incluye una capa 14 de material que tiene buenas propiedades de adquisición de líquido, por ejemplo, un fieltro de fibras de celulosa, fibras sintéticas o mezclas de estas. La presencia de tal capa reduce el riesgo de corrimiento de líquido descargado sobre la superficie de la toalla y alcanzando el borde de esta y luego manchado de los interiores u algún otra prenda aunque la capa 13 tiene propiedades de adquisición de líquido efectivas esto puede ser adecuado suministrar una capa de adquisición de líquido separada, y entonces particularmente en la parte delgada de la toalla.

La capa 13 de fibras de celulosa formadas en seco son relativamente duras y por lo tanto se espera que la toalla descrita se sienta inconfortable cuando se usa, debido a que la capa 13 posiblemente irrita y presiona contra el interior de los muslos del usuario. Ensayos han mostrado, sin embargo, que no ocurre irritación. Una posible explicación de esta confortabilidad inesperada de la toalla es que la rigidez flexionante de la capa 13 causa que la capa sea deformada en su parte adelgazada mediante una unión alrededor del eje longitudinal cuando la parte trasera del interior tipo hilo, y con eso la parte angosta del cuerpo absorbente es insertada dentro de los muslos del usuario. La fuerza de sujeción realizada por los muslos del portador la mantendrán arriba por la curvatura del cuerpo absorbente. Las fuerzas de reacción contra los muslos del usuario resultantes de esta curvatura del cuerpo absorbente son pequeñas, lo cual es posible por lo que describió de la toalla sanitaria al sentirse confortable cuando se uso. Tal curvatura del cuerpo absorbente también es benéfica desde el aspecto de absorción, debido a que la toalla por lo tanto es presionada dentro del refuerzo del muslo con el cuerpo del portador dentro del área húmeda. La

configuración y dimensiones de la toalla sanitaria facilita así la suavidad de la capa 13 absorbente a ser usada para dar ventajas con respecto a la función y el confort. Cuando la toalla es portada, la parte frontal del cuerpo absorbente se curva alrededor de los labios del usuario con lo cual se previene que los bordes de la parte frontal de la toalla irriten la piel del usuario. Con el fin de asegurar que el borde trasero de la capa 13 no irrite la piel del usuario la capa 14 se extenderá preferiblemente más allá de la capa 13 en el extremo trasero del cuerpo absorbente ilustrado a través de una distancia de 20 a 30 mm.

Se entenderá que la modalidad descrita puede ser modificada dentro del alcance de la invención. Por ejemplo, el cuerpo absorbente puede incluir medios aseguradores en la parte central sobre el lado del cuerpo absorbente que descansa próximo a la capa exterior permeable a los líquidos para incrementar el contacto entre el cuerpo absorbente y los labios. Adicionalmente el patrón de pegado sobre la parte de la toalla que incluye el cuerpo absorbente puede ser usado diferentemente la tira adhesiva central no necesita extenderse sobre la parte delantera completa de la

toalla, y las 3 tiras adhesivas dispuestas sobre la parte frontal de la toalla pueden ser remplazadas con una tira pegada que se extiende sobre la mayor parte de la parte frontal del pañal. Esa parte de la toalla que incluye el cuerpo absorbente puede también ser suministrada con más de 3 tiras adhesivas. Las tiras adhesivas dentro de la región del cuerpo absorbente pueden ser convenientemente remplazada con cubiertas de fricción o dispositivos similares más aun, las tiras adhesivas pueden ser suministradas sobre únicamente una aleta, en cuyo caso las aletas deben ser dimensionadas para sobreponer una a la otra cuando se doblen hacia el interior del panti de tipo hilo después de haber sido doblada alrededor de los bordes de esta. Otros medios de sujeción diferentes al adhesivo pueden ser usados para sujetar la toalla a un par de interiores, por ejemplo ganchos de toque y cierre rápido, dichos ganchos cubiertos con los pantis hechos de material textil. El alcance de la invención es hasta entonces limitado únicamente por el contenido de las reivindicaciones siguientes.

REIVINDICACIONES

1. Un artículo absorbente (1) en la forma de una toalla sanitaria, un recubrimiento de pantaloncito o un protector de incontinencia para mujer que comprende un cuerpo absorbente (2) que se encuentra en "sandwich" entre una lámina exterior permeable a los líquidos (3) y una capa impermeable a los líquidos (4), y que tiene una parte frontal (5), que está destinada a mirar hacia delante cuando el artículo es vestido, y una parte posterior, en donde el cuerpo absorbente tiene una longitud de 140-260 mm y se inclina hacia la parte de atrás desde una sección de amplitud mayor situada en la parte frontal del artículo hasta la parte trasera del mismo, caracterizado que el cuerpo absorbente (2) tiene una amplitud mayor de 60-80 mm en su parte frontal y una amplitud menor de 5-20 mm en su extremo trasero e incluye una capa 13 de fibras de celulosa formadas en seco que tiene una densidad de al menos 250 g/dm³ y se extiende

sobre esencialmente la totalidad de la superficie del cuerpo absorbente fuera de frete y los bordes laterales de dicho cuerpo.

2. Un artículo absorbente (1) de acuerdo con la reivindicación 1 caracterizado en que la capa (13) de fibras de celulosa formadas en seco tienen un peso por unidad de área de 200-600 g/m².
3. Un artículo absorbente (1) de acuerdo con la reivindicación 1, o 2, caracterizado en que el cuerpo absorbente (19) también incluye una capa (14) de material que tiene buenas propiedades de adquisición de líquido y que se extiende sobre la totalidad de la capa (13) de las fibras de celulosa formadas en seco.
4. Un artículo absorbente (1) de acuerdo con la reivindicación 3, caracterizado que la capa (14) de material tiene buenas propiedades de adquisición de líquidos se extienden más allá de la capa (13) de fibras de celulosa formadas en el extremo de la parte trasera del cuerpo absorbente

5. Un artículo absorbente de acuerdo con la reivindicación 3 o 4, caracterizado que el material que tiene buenas propiedades de adquisición de líquido es una almohadilla de fibra de celulosa, fibras sintéticas o mezclas de ellas.
6. Un artículo absorbente de acuerdo con la reivindicación 1,2,3,4 o 5, caracterizado en que el artículo incluye aletas proyectantes flexibles (6,7) que se extienden sobre los bordes respectivos del cuerpo absorbente (2) de dicho cuerpo y a lo largo de una parte de su porción inclinada.
7. Un artículo absorbente de acuerdo a la reivindicación 6, caracterizado en que las aletas (6,7) son partes integrales de las láminas exteriores.
8. Un artículo absorbente de acuerdo a la reivindicación 7, caracterizado en que al menos uno de los medios de sujeción (8-12) para sujetar el artículo a un par de interiores se suministran sobre una parte del artículo (1) que incluye el cuerpo

absorbente (2) y también sobre al menos una aleta (6,7).

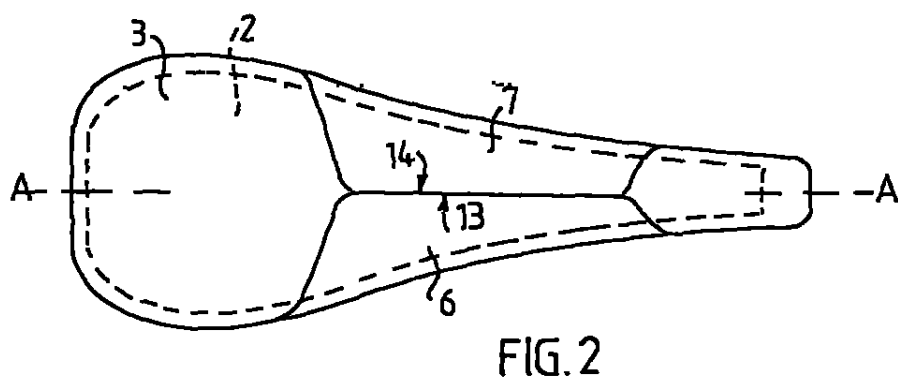
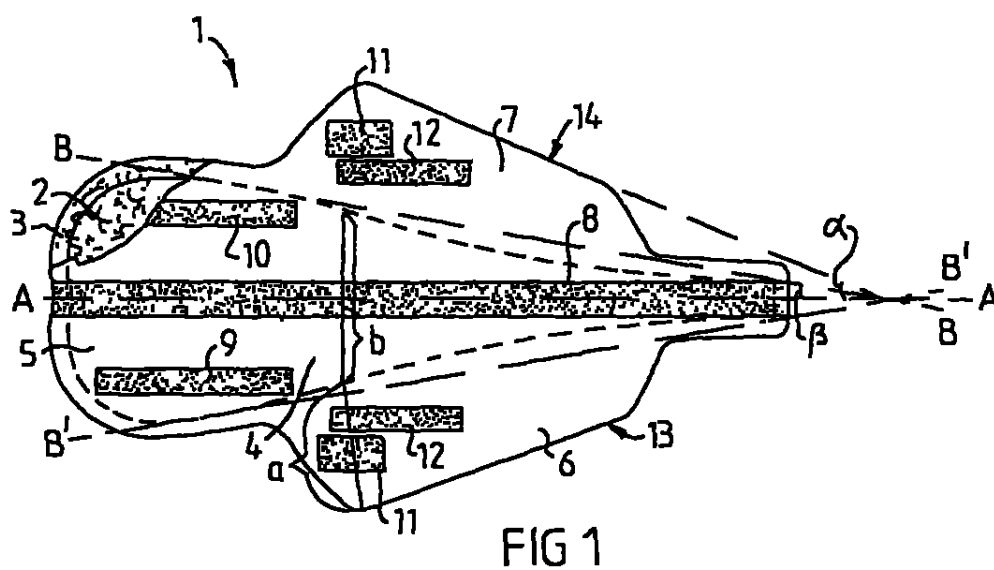
9. Un artículo absorbente (1) de acuerdo con la reivindicación 8, caracterizado en que los medios de sujeción comprenden tiras de adhesivo sensibles a la presión.
10. Un artículo absorbente (1) de acuerdo a la reivindicación 9, caracterizado en que el adhesivo sensible a la presión es un adhesivo de fusión térmica

TOALLA SANITARIA**RESUMEN**

La presente invención se relaciona con un artículo absorbente (1) en la forma de una toalla sanitaria, una cubierta de pantaloncito o un protector de guarda de incontienencia para mujer que comprende un cuerpo absorbente (2) que está en "sandwich" entre la lámina exterior permeable a los líquidos (3) y la lámina exterior impermeable a los líquidos (4), dicho artículo tiene una parte frontal (5), que está destinada a mirar hacia delante cuando el artículo es vestido, y una parte posterior, en donde el cuerpo absorbente tiene una longitud de 140 - 260 mm y se inclina hacia la parte de atrás desde una sección de amplitud mayor situada en la parte frontal del artículo hacia el extremo de la parte posterior de dicho artículo. De acuerdo con la invención, el cuerpo absorbente (2) tiene una anchura más amplia de 60 - 80 mm en su parte frontal, y su anchura más pequeña de 5 - 20 mm en su extremo posterior, e incluye una capa (13) de fibras de celulosa formadas en seco que tiene una densidad de al menos 250 g/cm³ y que se extiende sobre

esencialmente la totalidad de la superficie del cuerpo absorbente fuera de los bordes frontal y lateral de dicho cuerpo.

1 / 1





FORMATO DE DIGITALIZACION
RELACION DE ANEXOS



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CAVELIER ABOGADOS	CONSIGNACION	BANCO POPULAR	050-00110-6	3136961	08/10/2002	37,036,000.00

***** CONCEPTO *****

CANT. HISTORICO	CONCEPTO	TOTAL CONCEPTO
2003-01-01 SOLICITUDES	1 TRAMITES DE SOL. DE PATENTE DE IN	378,000.00
	TOTAL :	\$ 378,000.00

SON: TRESCIENTOS SETENTA Y OCHO MIL PESOS

RESPONSABLE : 

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REQUISITOS NECESARIOS PARA PRESENTACION Y AGILIZACION DEL TRAMITE

	USUARIO	RADICADOR
PATENTE DE INVENCION ☒	()	(☒)
- Indicación de que se solicita la concesión de una patente.	()	(☒)
- Datos de identificación del solicitante o de la persona que se presenta la solicitud.	()	(☒)
- Descripción de la invención.	()	(☒)
- Dibujos de ser estos pertinentes.	()	(☒)
- Comprobante de Pago de las tasas establecidas.	()	(☒)
COMPLETA ☒	INCOMPLETA ()	()
DISEÑO INDUSTRIAL ()		
- Indicación de que se solicita el registro de Diseño Industrial	()	()
- Datos de identificación del solicitante o de la persona que presenta la solicitud.	()	()
- Representación gráfica y fotográfica del Diseño Industrial o muestra del Material que incorpora el diseño.	()	()
- Comprobante de pago de las tasas establecidas	()	()
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- Datos de identificación del solicitante o de la persona que presenta La solicitud.	()	()
- Representación gráfica del esquema de trazado	()	()
- Comprobante de pago de las tasas establecidas.	()	()
COMPLETA ()	INCOMPLETA ()	()

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