

Señora Jefe
DIVISIÓN DE NUEVAS CREACIONES
SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
Bogotá, D.C.

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
Rad: 04-075591-00002-0000
Fec: 2006-06-07 15:44:27 Dep. 2000 NUECREACIONE
TOL 11 PATENTE/II
EXP 379 FASE NACIONAL II
AL 536 PETICION Folio: 2

Re.: Expediente No. 04 75.591
Fase Nacional Solicitud de Patente PCT
a nombre de
H.B. FULLER LICENSING & FINANCING, INC.
Código 011 - 379 - 538

En relación con la solicitud contenida en el Expediente de la referencia y, en particular, con la publicación del extracto de la misma en la Gaceta de la Propiedad Industrial No. 560 de 31 de Enero de 2006, por medio del presente escrito muy respetuosamente me permito solicitarle se sirva proceder a efectuar el **EXAMEN DE PATENTABILIDAD** de la solicitud aquí contenida.

Para el efecto, acompaño el comprobante de pago por concepto de la tasa correspondiente, Recibo No. 06-42,951

De Usted Atentamente,

GERMAN CASTILLO GRAU
T.P. No. 2.978 del C.S.J.

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

RECIBO OFICIAL DE CAJA : 06 - 42,951
FECHA : JUNIO 7 DE 2006

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
Rad: 04-075591-00002-0000
Fec: 2006-06-07 16:44:27 Dep. 2020 NUECREACIONES
Tta: 11 PATENTEIY
Eje: 379 FASENACIONALI
Act: 588 PETICION Folios: 2

***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
CASTILLO BRAU Y ASOCIADOS	CONSIGNACION	BANCO POPULAR	050-00110-6	54931286	07/06/2006	1,339,800.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-01 SOLICITUDES	114 PTC CAP-II EXAMEN DE PATENTIBILIDAD	194,000.00
		TOTAL 1	194,000.00

SON: CIENTO NOVENTA Y CUATRO MIL PESOS

RESPONSABLE : _____

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

DIVISION DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No. 04-75591

**EL EXTRACTO DE LA PRESENTE SOLICITUD DE PATENTE DE INVENCION -
PCT FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No 560,
DE FECHA 31 DE ENERO DE 2006, EL TERMINO HABIL SEÑALADO POR LA
LEY EXPIRA EL 28 DE ABRIL DE 2006.**

NOTA: Dentro del plazo de los seis (6) meses siguientes a partir de la fecha de publicación en la gaceta de Propiedad Industrial, deberá solicitar y cancelar el examen de patentabilidad so pena de que la solicitud calga en abandono, de acuerdo con lo establecido en el Artículo 44 de la Decisión 486/2000.

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI _____ NO X _____

**SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISIÓN DE NUEVAS CREACIONES**

2020
Bogotá, D. C., 3 de Mayo de 2007

Doctor
GERMAN CASTILLO GRAU
Representante **H. B. FULLER LICENSING & FINANCING INC**

ASUNTO	Radicación No.	04-75591
	Trámite	002
	Evento	001
	Actuación	430
	Oficio	5810
	Folios	025

Como resultado del examen de fondo, realizado con fundamento en el artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le comunica

1) Documentos estudiados:

- a) Para el presente estudio se tendrán en cuenta el capítulo descriptivo, comprendido en los folios 12 a 33 de la solicitud en estudio.
- b) Para el presente estudio se tendrá en cuenta el capítulo reivindicatorio que comprende 15 reivindicaciones en los folios 34 a 36 de la solicitud en estudio.
- c) Conforme lo establece los artículos 9, 10 y 11 de la Decisión 486 de la Comisión de la Comunidad Andina, la presente solicitud en estudio fue presentada el 4 de agosto de 2004, y en el momento de la radicación se presentó como solicitud PCT FASE NACIONAL y donde SI se reclamó prioridad de las primeras solicitudes presentadas en Estados Unidos US10/066935 y US10/274335

2) Objeto de la Invención

- a) Las reivindicaciones 1 a 15 de la solicitud en estudio se refieren a un artículo absorbente que comprende: una red no tejida que comprende fibras de polímero sintético; una primera superficie; una segunda superficie opuesta a la mencionada primera superficie; una primera región que comprende polímero superabsorbente, la cual primera región se extiende dentro de la mencionada hacia el interior de la mencionada red no tejida desde la mencionada primera superficie hacia la mencionada segunda superficie, el cual polímero superabsorbente ha sido formado in situ en la mencionada primera superficie; y una segunda región esencialmente desprovista de polímero superabsorbente, la cual segunda región se extiende hacia el interior de la mencionada red no tejida desde la mencionada segunda superficie hacia la mencionada primera superficie.
- b) El anterior producto busca mejorar las características de los artículos absorbentes desechables.

- c) Según la Clasificación Internacional de Patentes, la codificación para esta solicitud corresponde a: A 61 F 13/15

3) Claridad de la Solicitud

- a) El artículo 28 de la Decisión 486 de la Comisión de la Comunidad Andina de Naciones establece

"La descripción deberá divulgar la invención de manera suficientemente clara y completa para su comprensión y para que una persona capacitada en la materia técnica correspondiente pueda ejecutarla"

La descripción no es clara toda vez que:

- i) La redacción no es la mejor y en ocasiones es incongruente. Por ejemplo, en el folio 19 se lee "0,01 gramos por centímetro cúbico (g/cm^2)". ¿Se trata de gramos por centímetro cúbico o gramos por centímetro cuadrado? ¿es g/cm^2 o g/cm^3 ? Existen varios apartes con estos errores. El solicitante debe revisar toda la solicitud.
 - ii) Los centipoises no son unidades del Sistema Internacional. Debe corregirse.
 - iii) No es claro cual es el compuesto carbonato de circonil amonio que figura en el folio 23
- b) El artículo 30 de la Decisión 486 de la Comisión de la Comunidad Andina establece que

"Las reivindicaciones definirán la materia que se desea proteger mediante la patente. Deben ser claras y concisas y estar enteramente sustentadas por la descripción. Las reivindicaciones podrán ser independientes o dependientes. Una reivindicación será independiente cuando defina la materia que se desea proteger sin referencia a otra reivindicación anterior. Una reivindicación será dependiente cuando defina la materia que se desea proteger refiriéndose a una reivindicación anterior. Una reivindicación será dependiente cuando defina la materia que se desea proteger refiriéndose a una reivindicación anterior.- Una reivindicación que se refiera a dos o más reivindicaciones anteriores se considerará reivindicación dependiente múltiple."

El capítulo reivindicatorio no es claro toda vez que:

- i) No se encuentra correctamente redactado. Por su estructura todas las reivindicaciones deben constar de dos partes. Una primera parte, el preámbulo, sirve para situar el objeto de la invención dentro de un contexto técnico, es lo que se conoce y sobre lo que no se reclama ningún privilegio. La segunda parte, o parte característica, define lo que se considera novedoso y se desea proteger. Estas dos partes están separadas por expresiones como 'caracterizado por' o similares. Debe corregirse todo el capítulo.
- ii) El solicitante caracteriza la reivindicación 7 por el resultado, mas no por la forma en que se llegó a ese resultado. Esto es inadmisibile. Las reivindicaciones deben caracterizar un producto por la forma o

constitución del mismo, las partes que lo componen y todo lo que permita establecer de cómo se llegó a ese resultado. No se aceptan reivindicaciones que caractericen resultados.

- iii) De acuerdo a lo establecido en las reivindicaciones 12 y 13, el solicitante pretende que le sea protegido la aplicación (o uso) de la composición de las primeras reivindicaciones. Lo que se quiere proteger es un uso lo cual no es admitido. Deben eliminarse dichas reivindicaciones.
- iv) Según la reivindicación 14 se pretende proteger un método para fabricar un artículo absorbente, pero no se revela ningún método relacionado con dicho tema. Se relaciona allí un método para preparar una red con polímeros superabsorbentes, pero no un artículo absorbente. Deben corregirse dichas reivindicaciones.

De acuerdo a lo anterior, el capítulo reivindicatorio no cumple con el requisito de claridad de acuerdo a lo establecido en el Art. 30 de la Decisión 486.

4) Determinación del Estado de la Técnica y Evaluación de los requisitos de patentabilidad

El artículo 16 de la Decisión 486 de la Comisión establece:

"El estado de la técnica comprenderá todo lo que haya sido accesible al público por una descripción escrita u oral, utilización, comercialización o cualquier otro medio antes de la fecha de presentación de la solicitud de patente o, en su caso, de la prioridad reconocida."

"Sólo para el efecto de la determinación de la novedad, también se considerará dentro del estado de la técnica, el contenido de una solicitud de patente en trámite ante la oficina nacional competente cuya fecha de presentación o de prioridad fuese anterior a la fecha de presentación o de prioridad de la solicitud de patente que se estuviese examinando, siempre que dicho contenido este incluido en la solicitud de fecha anterior cuando ella se publique o hubiese transcurrido el plazo previsto en el artículo 40."

Consultadas las bases de datos y los archivos con que cuenta la entidad, especialmente bajo las clasificaciones A 61 F 13/15 y las más cercanas a ellas, se encontró que antes del 4 de febrero de 2002 (fecha para determinar el estado de la técnica) habían sido publicados los documentos que se enumeran en la siguiente tabla los cuales se relacionan con redes con superabsorbentes.

De acuerdo con lo establecido en el artículo 16 se determinó el estado de la técnica y se encontró el siguiente antecedente:

Nº	Documento	Fecha de Publicación
D1	EP 0 478 011	1992. 04. 01
D2	US 5 071 681	1991.12. 10
D3	EP 1 023 884	2000. 08. 02
D4	US 5 281 207	1994. 01. 25
D5	EP 1 013 290	2000. 06. 28
D6	EP 0 992 250	2000. 04. 12




Nº	Documento	Fecha de Publicación
D7	EP 0 169 184	1986. 01. 22
D8	EP 0 402 650	1990. 12. 19
D9	EP 0 514 775	1992. 11. 25
D10	WO 95 13778	1995. 05. 26
D11	EP 0 719 531	1996. 07. 03
D12	WO 01 21122	2001. 03. 29
D13	WO 01 41818	2001. 06. 14
D14	WO 00 26458	2000. 05. 11
D15	WO 00 61642	2000. 10. 19
D16	EP 0 702 031	1996. 03. 20
D17	WO 01 34082	2001. 05. 17
D18	WO 01 74282	2001. 10.11
D19	EP 0 359 501	1990.03.21

El artículo 14 de la Decisión 486 de la Comisión de la Comunidad Andina establece:

"Los Países Miembros otorgarán patentes para las invenciones, sean de producto o procedimiento, en todos los campos de la tecnología, siempre que sean nuevas tengan nivel inventivo y sean susceptibles de aplicación industrial".

En cumplimiento con este artículo, se procedió a evaluar los requisitos de novedad, nivel inventivo y aplicación industrial con el fin de establecer la patentabilidad de la invención reivindicada en la solicitud en estudio.

Evaluación de la novedad y el del Nivel Inventivo

El art. 16 de la Decisión 486 de la Comisión de la Comunidad Andina establece:

"Una invención se considerará nueva cuando no está comprendida en el estado de la técnica." "El estado de la técnica comprenderá todo lo que haya sido accesible al público por una descripción escrita u oral, utilización comercialización o cualquier otro medio antes de la fecha de presentación de la solicitud de patente o, en su caso, de la prioridad reconocida."

"Sólo para el efecto de la determinación de la novedad, también se considerará dentro del estado de la técnica, el contenido de una solicitud de patente en trámite ante la oficina nacional competente, cuya fecha de presentación o de prioridad fuese anterior a la fecha de presentación o prioridad de la solicitud de patente que se estuviese examinando, siempre que dicho contenido esté incluido en la solicitud de fechas de prioridad cuando ella se publique o hubiese transcurrido el plazo previsto en el artículo 40."

El art. 18 de la Decisión 486 de la Comisión de la Comunidad Andina establece:

"Se considerará que una invención tiene nivel inventivo, si para una persona del oficio normalmente versada en el arte en la materia técnica correspondiente, esa invención no hubiese resultado obvia ni se hubiese derivado de manera evidente del estado de la técnica".

En una evaluación preliminar se han encontrado los 19 documentos que relacionan artículos absorbentes que comprenden redes no tejidas que incorporan polímeros superabsorbentes. Cuando el solicitante haya corregido el capítulo reivindicatorio y lo haya orientado de forma tal que sea claro lo que quiere le sea protegido, en ese momento esta oficina podrá elaborar una determinación correcta del estado de la técnica y una evaluación correcta de los requisitos de patentabilidad

a) Resumen

En conclusión los requisitos de patentabilidad de la presente solicitud se podrían ver afectados así:

N°	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	EP 0 478 011	1 - 15	Novedad
			Nivel inventivo
D2	US 5 071 681	1 - 15	Novedad
			Nivel inventivo
D3	EP 1 023 884	1 - 15	Novedad
			Nivel inventivo
D4	US 5 281 207	1 - 15	Novedad
			Nivel inventivo
D5	EP 1 013 290	1 - 15	Novedad
			Nivel inventivo
D6	EP 0 992 250	1 - 15	Novedad
			Nivel inventivo
D7	EP 0 169 184	1 - 15	Novedad
			Nivel inventivo
D8	EP 0 402 650	1 - 15	Novedad
			Nivel inventivo
D9	EP 0 514 775	1 - 15	Novedad
			Nivel inventivo
D10	WO 95 13778	1 - 15	Novedad
			Nivel inventivo
D11	EP 0 719 531	1 - 15	Novedad
			Nivel inventivo
D12	WO 01 21122	1 - 15	Novedad
			Nivel inventivo
D13	WO 01 41818	1 - 15	Novedad
			Nivel inventivo
D14	WO 00 26458	1 - 15	Novedad
			Nivel inventivo
D15	WO 00 61642	1 - 15	Novedad
			Nivel inventivo
D16	EP 0 702 031	1 - 15	Novedad
			Nivel inventivo
D17	WO 01 34082	1 - 15	Novedad
			Nivel inventivo
D18	WO 01 74282	1 - 15	Novedad
			Nivel inventivo

N°	Documento	Reivindicaciones afectadas	Requisito que afecta
D19	EP 0 359 501	1 - 15	Novedad
			Nivel inventivo

5) Notificación

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que dentro del término de sesenta días contados a partir de la fecha de la notificación de la presente comunicación debe responder a la notificación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Notifíquese el presente oficio conforme a lo dispuesto por el numeral 5.2, literal e) del capítulo quinto del título primero de la Circular Única N° 10 de 2001


ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe División de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en la lista, de fecha

19 Mayo 2007

Concepto Técnico N°	EXAMINADOR TÉCNICO Código No.	EXAMINADOR JURÍDICO Código No.
693	202003	



Europäisches Patentamt
European Patent Office
Office européen des brevets



Publication number: **0 478 011 A2**

EUROPEAN PATENT APPLICATION

Application number: 91120905.4

Int. CL⁴: A61F 13/15

Date of filing: 19.08.88

This application was filed on 05 - 12 - 1991 as a divisional application to the application mentioned under INID code 60.

Priority: 21.08.85 US 767950

Date of publication of application:
01.04.92 Bulletin 92/14

Publication number of the earlier application in accordance with Art.78 EPC: 9 212 618

Designated Contracting States:
AT BE CH DE FR IT LI LU NL SE

Applicant: **KIMBERLY-CLARK CORPORATION**
401 North Lake Street
Neenah, Wisconsin 54956-0349(US)

Inventor: Kellenberger, Stanley Roy
306 W. Lindbergh Street
Appleton, WI 54911(US)
Inventor: Zenker, David Louis
1410 Ridgeway Court
Neenah, WI 54956(US)

Representative: Diehl, Hermann Dr. et al
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Absorbent article.

An improved absorbent article includes a layer of absorbent material (10) which has a length, a width and a thickness (28). Particles of superabsorbent material (24) are distributed within the absorbent material layer, and these superabsorbent particles are disposed to form a substantially continuous, positive concentration gradient of superabsorbent through at least a portion of the thickness (28) of the absorbent layer. The superabsorbent particles (24) may be of the same dimension or the average particle size may vary throughout the thickness (28) of the layer of absorbent material. The article provides for absorbent structures wherein the superabsorbent produced gel is adequately isolated away from body surfaces of a person using the article while gel blocking is also adequately reduced.

EP 0 478 011 A2

[54] WATER ABSORBENT FIBER WEB

[75] Inventors: James H. Manning, Appleton;
Kambiz B. Makouti, Menasha; David
H. Hollenberg, Neenah, all of Wis.

[73] Assignee: James River Corporation of Virginia,
Richmond, Va.

[21] Appl. No.: 569,216

[22] Filed: Aug. 16, 1990

Related U.S. Application Data

[62] Division of Ser. No. 225,294, Jul. 28, 1988, abandoned.

[51] Int. Cl.³ B05D 3/02

[52] U.S. Cl. 427/392; 427/393;
428/290; 604/374; 604/375

[58] Field of Search 427/389.9, 392, 393;
428/290, 378; 604/375, 378, 368, 374

[56] References Cited

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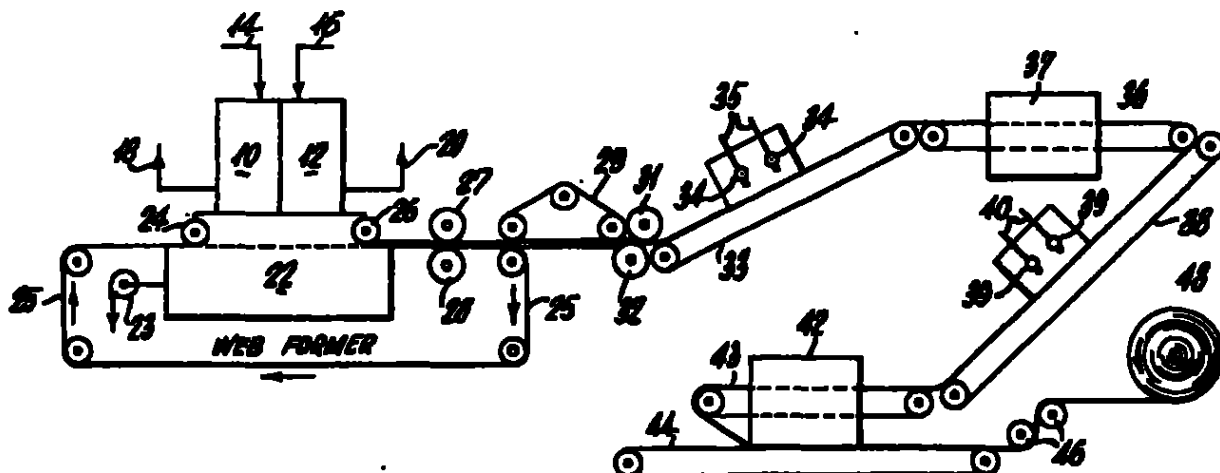
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4,888,238 12/1989 Katz et al. 604/375 X

Primary Examiner—Michael Lusigman
Attorney, Agent, or Firm—Richard J. Gallagher;
Thomas H. Whaley; William A. Aguele

[57] ABSTRACT

A fibrous web having an enhanced capacity for water absorption is produced by impregnating an absorbent fabric with a polymer or copolymer capable of forming by cross-linking an absorbent polymer or copolymer and subsequently heating the treated fabric effecting cross-linking of the polymer to form an absorbent polymer. The product may comprise a non-woven fibrous web or mat having a water-insoluble binder on one surface and a cross-linked hydrophilic polymer or copolymer on its opposite surface.

12 Claims, 2 Drawing Sheets



68
63



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) EP 1 023 884 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
02.08.2000 Bulletin 2000/31

(51) Int. Cl.⁷: A61F 13/15

(21) Application number: 99128811.2

(22) Date of filing: 23.12.1999

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

(72) Inventors:
• Rosenfeld, Leonard G.
East Windsor, NJ 08520 (US)
• Fostich, Lynn
Hillsborough, NJ 08576 (US)

(30) Priority: 23.12.1999 US 220189
10.06.1999 US 308238

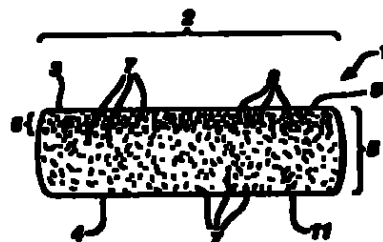
(74) Representative:
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BOEHMERT & BOEHMERT
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(71) Applicant: McNEIL-PPC, INC.
Skillman, New Jersey 08559 (US)

(54) Absorbent article with high absorbency zone

(57) The present invention is directed to an absorbent structure comprising an integral absorbent element with an upper surface and a lower surface defining a thickness therebetween. The thickness has an upper 35% containing a high absorbency zone and a lower 65%. The high absorbency zone has a first surface and a second surface separated by a zone thickness. The zone thickness is less than about 35% of the absorbent element thickness. The high absorbency zone comprises absorbent fibers and superabsorbent polymer particles. The superabsorbent polymer particles are present at a loading of no more than 75 grams per square meter and are separated from one another by the absorbent fibers. The lower 65% of the absorbent element thickness is substantially free of superabsorbent polymer particles.

FIG. 1



EP 1 023 884 A2

[54] **ABSORBENT PRODUCT**
[75] **Inventors:** Harry J. Chmielewski, Auburn; John R. Cook, Tacoma; David G. Unrau, Federal Way, all of Wash.; Migaku Suzuki, Kamakura, Japan
[73] **Assignee:** Paragon Trade Brands, Inc., Federal Way, Wash.
[21] **Appl. No.:** 863,323
[22] **Filed:** Apr. 1, 1992

Related U.S. Application Data
[63] **Continuation of Ser. No. 661,749, Feb. 26, 1991, abandoned.**
[51] **Int. Cl.³** A61F 13/15; A61F 13/20
[52] **U.S. Cl.** 604/378; 604/368
[58] **Field of Search** 604/368, 377, 378; 19/0.35, 0.37, 0.41, 0.43, 301, 302

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0108637 5/1984 European Pat. Off. A61F 13/18
0212618 3/1987 European Pat. Off. A61F 13/00
0254476 1/1988 European Pat. Off. A61F 13/18

Primary Examiner—Randall L. Green
Assistant Examiner—Elizabeth M. Burke
Attorney, Agent, or Firm—Klarquist, Sparkman, Campbell, Leigh & Winston

[57] **ABSTRACT**
An absorbent product, for use in absorbent articles, comprising an absorbent layer and a wicking layer of densified hydrophilic material. The absorbent layer comprises resilient hydrophilic fibers and superabsorbent material. The absorbent layer includes at least one area comprising a bulky fibrous structure having high void regions of low fiber density randomly distributed in the structure.

28 Claims, 1 Drawing Sheet





(11) **EP 1 013 290 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
26.05.2000 Bulletin 2000/20

(51) Int. Cl.⁷: A61L 15/42

(21) Application number: 98310215.1

(22) Date of filing: 17.12.1999

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

- Wergin, Jennifer Nicole
Green Bay, WI 54302 (US)
- Bouchette, Michael Paul
Sherwood, WI 54188 (US)

(30) Priority: 17.12.1999 US 112889
05.12.1999 US 454382

(74) Representative:
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Mullins & Squire
100 Gray's Inn Road
London WC1X 8AL (GB)

(71) Applicant:
FOUR JAMES CORPORATION
Deerfield, IL 60015 (US)

Remarks:

A request for correction has been filed pursuant to Rule 88 EPC. A decision on the request will be taken during the proceedings before the Examining Division (Guidelines for Examination in the EPC, A-V, 2.).

(72) Inventors:
• Schmidt, Bradley Gene
Green Bay, WI 54304 (US)

(54) **Multi-layered absorbent composites having one or more apertured transfer layers**

(57) A multilayer absorbent composite is disclosed. This composite comprises a cover sheet, one or more transfer layers, one or more absorbent core layers, and a barrier back layer. The transfer layer or layers have Z-direction apertures penetrating through the entire layer. The aperture frequency is about 5 to 50 apertures per square inch and each aperture has a diameter of about 0.015 to 0.10 inches. These composites are used as feminine hygiene pads and related applications.

EP 1 013 290 A1

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66

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A2:
19.12.2001 Bulletin 2001/51

(51) Int. Cl.: A61L 15/60, A61L 15/22,
A61L 15/40

(43) Date of publication A2:
12.04.2000 Bulletin 2000/15

(21) Application number: 98307413.7

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(71) Applicant: GEORGIA-PACIFIC CORPORATION
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(30) Priority: 21.09.1998 US 157877
07.09.1999 US 308460

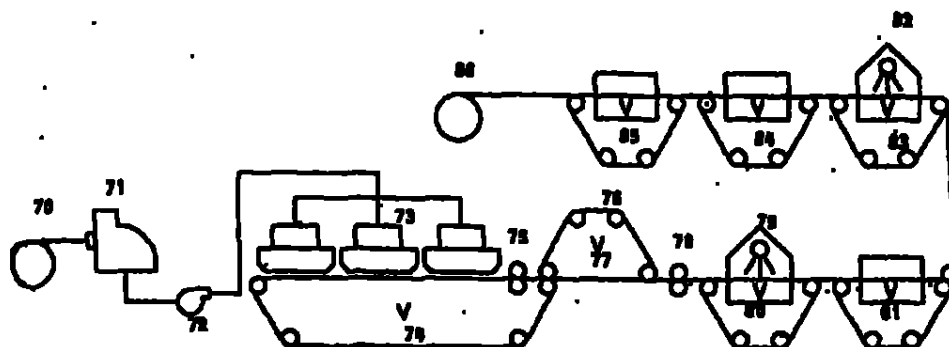
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(54) **Superabsorbent cellulosic natural or synthetic fibers and webs treated with polyelectrolytes and superabsorbent products made therefrom**

(57) A superabsorbent fibrous web is disclosed. This web is formed from wood pulp or cellulosic fibers, natural fibers, synthetic fibers, or any mixture thereof wherein the web is treated with aqueous solutions of su-

perabsorbent polyelectrolytes which produce a fibrous web having substantially increased absorbency rates and absorbent capacity. These webs are useful in the manufacture of towels, diapers, etc.

FIGURE 1



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Europäisches Patentamt
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Office européen des brevets

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EUROPEAN PATENT APPLICATION

① Application number: 89050289.7

② Int. Cl.: D 21 H 5/28, A 41 B 13/02,
A 61 F 13/18

③ Date of filing: 03.07.89

④ Priority: 16.07.84 SE 8403732

⑤ Applicant: MÖLLNLYCKE AB, S-425 02 Götting (SE)

⑥ Date of publication of application: 22.01.90
Bulletin 00/4

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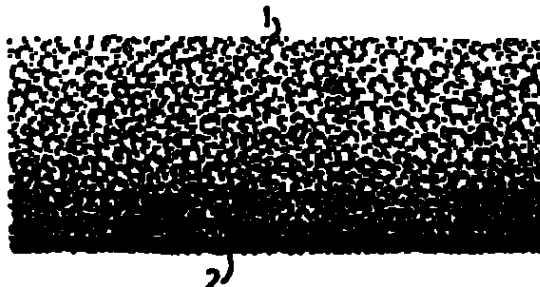
Designated Contracting States: SE DE FR GB IT NL

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⑨ Fibrous absorption body for use in disposable articles and method for the production thereof.

⑩ A fibrous absorption body having a continuous-density gradient in a direction perpendicular to its largest surfaces, to be used in disposable products such as diapers, sanitary napkins or wound dressings, manufactured by air-laying a blend of cellulose fluff pulp and a binder, the latter preferably in the form of fibres, preheating (5) the formed low-density web (8) to at least the binding temperature for the bonding fibres, compressing (10) the web (8), passing the web (8) through a cooling zone (11) and finally achieving the density gradient in the web (8) by compressing it between a pair of rollers (12) of which the upper one (14) is cold and only the lower one (13) is heated to reach the binding temperature of the bonding fibres anew, the web density thereby continuously increasing in the direction from the cold roller (14) towards the hot roller (13).

By using special embossing means disposed at the hot roller (13), the web (8) can be provided with an unbroken surface pattern for increasing the liquid distribution capacity.



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Publication number:

0 402 650
A2

EUROPEAN PATENT APPLICATION

Application number: 90109353.4

Int. Cl. A61L 15/22, A61L 15/60

Date of filing: 17.08.90

Priority: 14.08.89 US 385887

Date of publication of application:
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Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

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Absorbent mixture, method of making same, and absorbent article including same.

AN
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An absorbent mixture, as made from fibers formed into a fibrous web and a polymerizable, cross-linkable material, in a liquid carrier. The material, when polymerized and cross-linked, results in a superabsorbent polymer. The material, in the liquid carrier, is dispersed within the fibrous web, as dispersed inclusions, and is polymerized and cross-linked in situ, within the fibrous web, so as to form a composite web comprising the fibrous web and the superabsorbent polymer, as dispersed particles, at least some of which are bound to fibers from the fibrous web. The composite web is ground, so as to cause some of the superabsorbent polymers to become particulate while fragments of the superabsorbent polymer remain bound to fibers from the fibrous web. Before the composite web is ground, it may be provided with a fibrous layer or fibrous layers in intimate contact therewith, and also compressed.

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⑪ Publication number: **0 514 775 A1**

⑩

EUROPEAN PATENT APPLICATION

⑫ Application number: 92108174.1

⑬ Int. Cl.⁴: C08F 6/00, C08L 33/00

⑭ Date of filing: 14.05.92

⑮ Priority: 20.05.91 US 703076

⑯ Date of publication of application:
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⑰ Designated Contracting States:
BE DE DK ES FR GB IT NL PT SE

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㉑ Process for producing a superabsorbent polymer.

㉒ This invention provides an improved process for producing a superabsorbent polymer with reduced residual monomer content which comprises partially drying a crosslinked, partially neutralized polymer gel, then raising the temperature of the gel using microwave radiation in the absence of circulating air and thereafter completing the drying.

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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6: A61F 13/46	A1	(11) International Publication Number: WO 95/13778 (43) International Publication Date: 26 May 1995 (26.05.95)
(21) International Application Number: PCT/US94/13220 (22) International Filing Date: 16 November 1994 (16.11.94) (30) Priority Data: 08/155,040 18 November 1993 (18.11.93) US (71) Applicant: THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US). (72) Inventors: PHAN, Dam, Van; 6512 Tylers Crossing, West Chester, OH 45069 (US). FORSHEY, Paul, Arden; 3615 Amberson Avenue, Cincinnati, OH 45208 (US). (74) Agents: REED, T. David et al.; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217 (US).	(31) Designated States: AM, AU, BR, BG, BE, BY, CA, CN, CZ, DE, FI, HU, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, NO, NZ, PL, RO, RU, SI, SK, TJ, TT, UA, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, MC, NL, PT, SE), OAPI patent (BF, BI, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ). Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
(54) Title: ABSORBENT STRUCTURE COMPRISING DISCRETE PARTS OF OSMOTIC ABSORBENT MATERIAL DISPOSED ON OR WITHIN A CAPILLARY STRUCTURE (57) Abstract An absorbent structure comprising freestanding osmotic absorbent sites disposed on or within a capillary substrate. The sites extend outwardly normal to the plane of the absorbent structure or fill apertures within the plane of the absorbent structure. Upon imbibing liquids, the sites of osmotic absorbent can expand without constraint from the substrate.		



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(11) EP 0 719 531 A1

(12) EUROPEAN PATENT APPLICATION

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(51) Int. Cl.⁵: A61F 13/15

(21) Application number: 95120875.4

(22) Date of filing: 28.12.1995

(84) Designated Contracting States:
DE EB FR GB IT

(30) Priority: 28.12.1994 JP 328892/94
28.12.1994 JP 328854/94

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(74) Representative: Grünecker, Klinckscky,
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(54) Absorbent sheet and process for producing the same

(57) The absorbent sheet comprising at least hydrophilic fibers and thermally fusible bonding fibers or a strengthening assistant, and a superabsorbent polymer is characterized in that:

the superabsorbent polymer is not present on an absorbent surface of the absorbent sheet for absorbing liquid but distributed inside the absorbent sheet, and is adhered and fixed to the hydrophilic fibers constituting the absorbent sheet;

the superabsorbent polymer is spread at an amount of 5 to 300 g per 1 m² of the absorbent sheet; and
the absorbent sheet has a thickness of 0.3 to 1.5 mm.

FIG. 1A

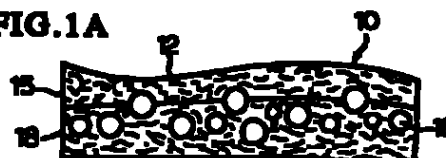
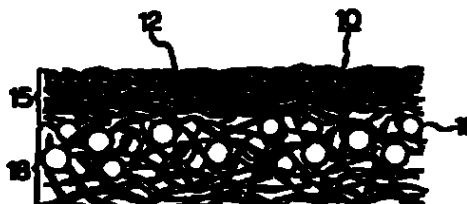


FIG. 1B



(19) World Intellectual Property Organization
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(43) International Publication Date
29 March 2001 (29.03.2001)

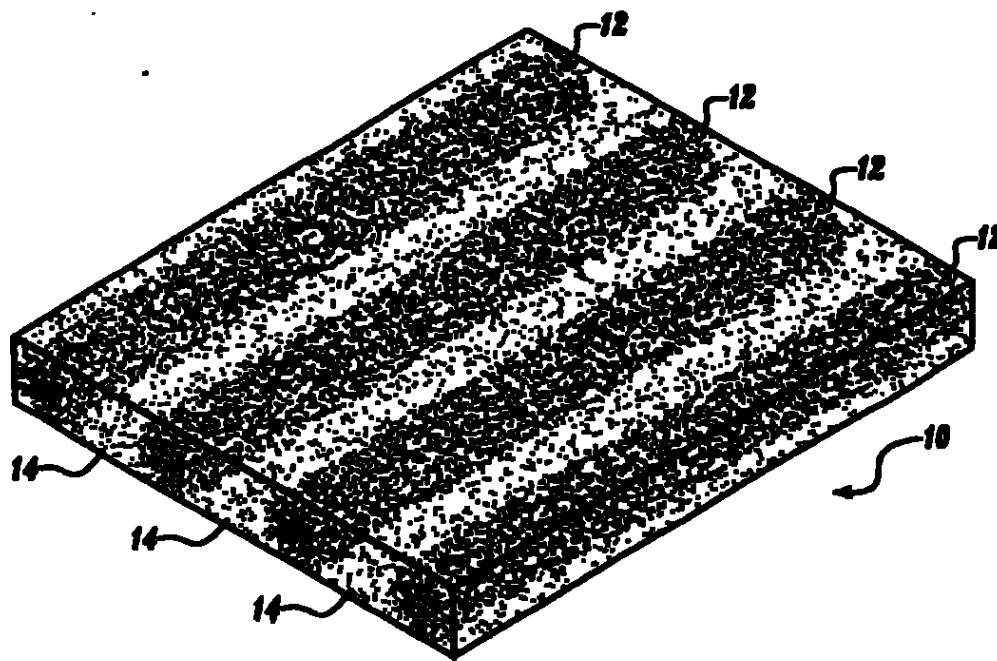
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(10) International Publication Number
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- (51) International Patent Classification²: A61F 13/15, B32B 3/00 (74) Agent: RENZONI, George, E.; Christensen O'Connor Johnson & Kindness PLLC, Suite 2800, 1420 Fifth Avenue, Seattle, WA 98101 (US).
- (21) International Application Number: PCT/US00/26361
- (22) International Filing Date: 20 September 2000 (20.09.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/153,439 21 September 1999 (21.09.1999) US
- (71) Applicant (for all designated States except US): WEYERHAEUSER COMPANY (US/US); 33663 Weyerhaeuser Way South, Federal Way, WA 98003 (US).
- (72) Inventor, and
- (73) Inventor/Applicant (for US only): MARSH, David, G. (US/US); 125 S.W. Campus Drive #3-205, Federal Way, WA 98023 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GH, GM, GR, 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, US, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TO).
- Published:
— With international search report.

[Continued on next page]

(54) Title: FLUTED ABSORBENT COMPOSITE



(57) Abstract: A fibrous absorbent composite containing absorbent material, methods for its formation, and absorbent articles that include the composite are described. The composite (10) is a fibrous structure that includes absorbent material dispersed throughout the composite (14) and in increased concentration in bands (12) that extend along the composite's length.

WO 01/21122 A1

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

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(51) International Patent Classification: A61L 15/00,
B01J 20/26, C08F 8/32, 220/06, 265/04, 251/00, C08L
51/00, 51/02, C08K 5/00

(72) Inventor: WILSON, Larry, R.; 5267 South Martin Road,
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(21) International Application Number: PCT/US00/31487

(74) Agent: HAYHURST, Paul, D.; Intellectual Property, P.O.
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(22) International Filing Date:
16 November 2000 (16.11.2000)

(81) Designated States (national): CN, JP, KR.

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(84) Designated States (regional): European patent (AT, BE,
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NL, PT, SE, TR).

(26) Publication Language: English

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(30) Priority Data:
09455,926 7 December 1999 (07.12.1999) US

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(71) Applicant: THE DOW CHEMICAL COMPANY
[US/US]; 2030 Dow Center, Midland, MI 48674 (US).

WO 01/41818 A1

(54) Title: SUPERABSORBENT POLYMERS HAVING A SLOW RATE OF ABSORPTION

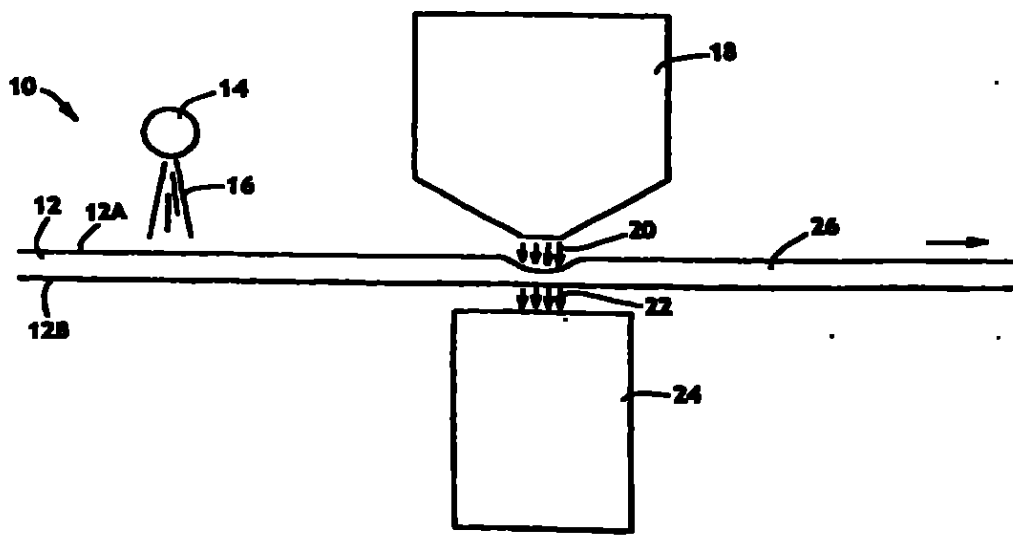
(57) Abstract: Superabsorbent polymers having a slow rate of absorption, and a process for their preparation. The superabsorbent polymer has a slow rate of absorption, is crosslinked with a covalent crosslinking agent and the metal of a polyvalent metal coordination compound, has the metal of the coordination compound distributed essentially homogeneously throughout the polymer, and has an Absorption Rate Index of at least 5 minutes. Prepare water-swellaible, water-insoluble polymer particles having a slow rate of water absorption by polymerizing a monomer in the presence of a covalent crosslinking agent and a polyvalent metal coordination compound under conditions such that there is formed a polymer having reversible cationic crosslinks and such that the metal is distributed essentially homogeneously throughout the polymer particles.

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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification: D06B 5/08		A1	(11) International Publication Number: WO 00/26458 (43) International Publication Date: 11 May 2000 (11.05.00)
(21) International Application Number: PCT/US99/25716 (22) International Filing Date: 28 October 1999 (28.10.99) (30) Priority Data: 60/106,509 30 October 1998 (30.10.98) US 09/416,808 13 October 1999 (13.10.99) US (71) Applicant: KIMBERLY-CLARK WORLDWIDE, INC. [US/US]; 401 North Lake Street, Nacmsh, WI 54956 (US). (72) Inventors: CRBAGAN, Christopher, Cosgrove; 4379 Wood Creek Drive, Marietta, GA 30062 (US). MARMON, Samuel, Edward; 1042 Homewood Avenue, Melbourne, FL 32940-7060 (US). McDOWALL, Debra, Jean; 245 Spearfield Trace, Roswell, GA 30075 (US). NING, Xin; 12431 Crabapple Meadow Way, Alpharetta, GA 30004 (US). WARREN, Philip, Sherman; 205 Hambree Park Terrace, Roswell, GA 30076 (US). (74) Agents: TULLEY, Douglas, H., Jr. et al.; 401 N. Lake St., Nacmsh, WI 54956 (US).			(51) Designated States: AR, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), European patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, EE, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report.
(54) Title: UNIFORMLY TREATED FIBROUS WEBS AND METHODS OF MAKING THE SAME			
			
(57) Abstract A process for treating high-loft porous fabrics with topically applied active agent is provided and includes the steps of applying an active agent (16) to a surface (12A) of the fabric (12) and forcing the active agent (16) through the entirety of the web (12) by directing a focused stream (20) of air or steam, at a rate above 25 meters/second, into and through the web (12) and also applying a vacuum to the opposite side of the web (12) to collect the air, condensate and/or active agent (16) drawn out of the fabric (12). Fabrics having a thickness in excess of 50 mils with densities between 0.2 g/cc and 0.008 g/cc have a topically applied active agent substantially uniformly distributed throughout the entire fabric thickness.			

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(21) International Application Number: PCT/US00/10134 (22) International Filing Date: 13 April 2000 (13.04.00) (30) Priority Data: 60/129,145 14 April 1999 (14.04.99) US Not furnished 13 April 2000 (13.04.00) US (71) Applicant: H.B. FULLER LICENSING & FINANCING, INC. [US/US]; 1200 Willow Lake Boulevard, Box 64683, St. Paul, MN 55164-0683 (US). (72) Inventors: ANDERSON, Stewart, C.; 1200 Willow Lake Boulevard, Box 64683, St. Paul, MN 55164-0683 (US). MILLER, Wayne, P.; 1200 Willow Lake Boulevard, Box 64683, St. Paul, MN 55164-0683 (US). (74) Agents: QUAN, Nancy, N. et al.; 1200 Willow Lake Boulevard, Box 64683, St. Paul, MN 55164-0683 (US).	(51) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, 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, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (OH, OM, KE, LS, MW, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
(54) Title: AQUEOUS SUPERABSORBENT POLYMER AND METHODS OF USE (57) Abstract The present invention relates to a crosslinked aqueous solution polymer composition consisting of about 15 wt-% to about 50 wt-% of at least one water soluble monomer, preferably an alpha, beta-ethylenically unsaturated carboxylic acid monomer and a crosslinking agent. The polymer solution is sufficiently low enough in viscosity such that it can be applied in aqueous form, yet after crosslinking possesses a fast rate of acquisition and is high absorption capacity. The invention also relates to new methods of enhancing the absorbency of various articles, increasing the humectancy and/or absorbency of a fiber or fibrous matrix, improving the water retention of soil and other agricultural methods, and increasing the open time of cement by incorporating or applying an aqueous superabsorbent polymer composition.		

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(12) **EUROPEAN PATENT APPLICATION**

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(51) Int. Cl.⁶: C08F 8/00, A61L 15/00

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(84) Designated Contracting States:
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(30) Priority: 16.09.1994 US 308027
17.01.1995 US 373729

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(74) Representative: Sandmeir, Kurt, Dr. Dr.
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(54) **Liquid absorbent composition for nonwoven binder applications**

(57) An aqueous polymer composition comprising 10 to 40 wt% of a polymer in water, the polymer consisting essentially of 20-90 wt% α,β -ethylenically unsaturated carboxylic acid monomer, 10-80 wt% one or more softening monomers, the aqueous composition being adjusted to pH 4-8 with alkali metal hydroxide or alkaline earth metal hydroxide and further containing 0.1 to 3 wt% zirconium crosslinking salt. Such aqueous compositions can be applied to nonwoven and woven substrates to make superabsorbent products.

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(19) World Intellectual Property Organization
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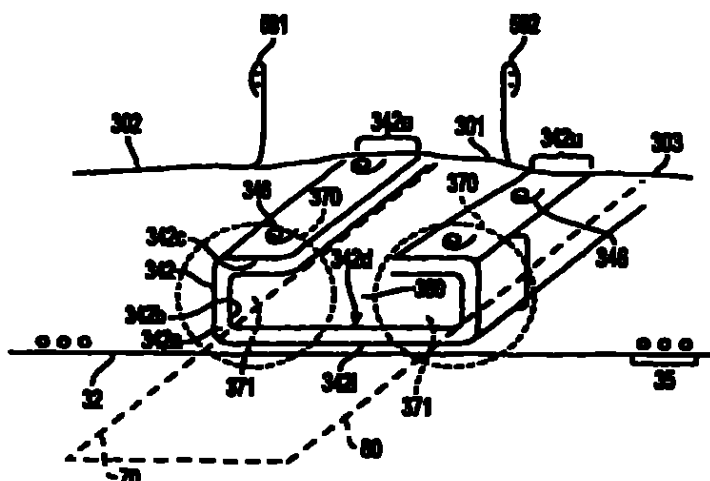
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17 May 2001 (17.05.2001)

PCT

(10) International Publication Number
WO 01/34082 A1

- (51) International Patent Classification: A61F 13/15, 13/20 (74) Agents: CAMPBELL, Christopher, C. et al.; Hutton & Williams, 1900 K Street, N.W., Washington, DC 20006 (US).
- (21) International Application Number: PCT/US00/30325 (52) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GR, GM, HR, HU, ID, IL, IN, IS, JP, KB, 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.
- (22) International Filing Date: 3 November 2000 (03.11.2000) (53) 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).
- (25) Filing Language: English (26) Publication Language: English
- (30) Priority Date: 60/164,135 8 November 1999 (08.11.1999) US
09/685,607 11 October 2000 (11.10.2000) US
- (71) Applicant: PARAGON TRADE BRANDS, INC. (US/US); 180 Technology Parkway, Norcross, GA 30092 (US). Published:
— With international search report.
- (72) Inventor: CHMIELEWSKI, Harry, J.; 5693 Creekside Drive, Norcross, GA 30092 (US). 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: THIN ABSORBENT CORE MADE FROM FOLDED ABSORBENT LAMINATE



(57) Abstract: A disposable absorbent garment (10) comprising a topsheet (30), backsheet (32), and an absorbent core (342) disposed between the topsheet and the backsheet. The absorbent core is formed from a folded laminate comprising three layers, including an upper layer (342b), a lower layer (342c) and a central fibrous layer (342a) including from about 50 to about 95 percent by weight superabsorbent polymer and about 5 to about 50 percent by weight stabilizing additives. The upper and lower layers comprise tissue, airlaid fluff pulp or synthetic non-woven fibrous layers. The central fibrous layer is adhesively bonded to both the upper and lower layers, all layers together acting to maintain the dry and wet integrity of the absorbent core. Folding of the thin absorbent laminate provides an absorbent core that can handle large doses of urine. The folded structure provides a central channel (360) that provides free volume (371) for temporary liquid storage, isolation and containment of bowel movements, and increases the surface area of laminate available for liquid absorption.

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International Bureau



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11 October 2001 (11.10.2001)

(10) International Publication Number
WO 01/74282 A1

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A61L 15/42, 15/60

(74) Agents: REED, T. David et al.; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217-1087 (US).

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(71) Applicant: THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).

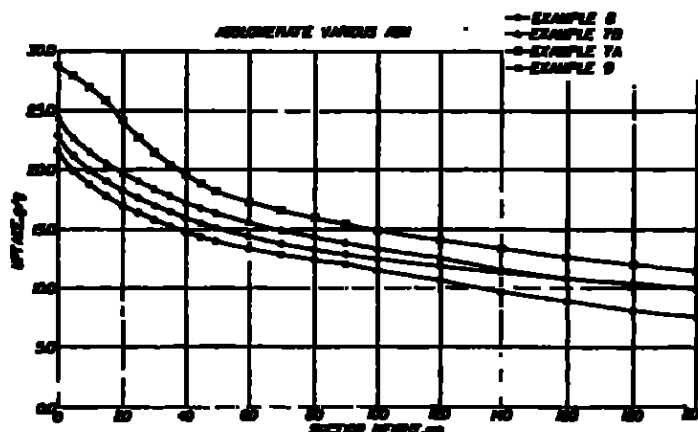
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

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Published:
with international search report

[Continued on next page]

(54) Title: PRODUCT WITH ABSORBENT POLYMER AND PARTICULATE FOAM



(57) Abstract: The present invention is a high capillary section storage absorbent member comprising an agglomerate of particulate hydrogel-forming absorbent polymer and particulate high surface area open-celled hydrophilic foam. In another aspect of the invention the agglomerate of particulate hydrogel-forming absorbent polymer and particulate high surface area open-celled hydrophilic foam is disclosed. The absorbent member is useful in the containment (e.g., storage) of body fluids such as urine. In one embodiment, the storage absorbent member comprises the agglomerate. In another embodiment, the absorbent member comprises the agglomerate adjacent to at least one sheet, strip or piece of high surface area open-celled hydrophilic foam material. In either the storage absorbent member or agglomerate of the invention, the high surface area open-celled hydrophilic foam comprises from about 1 % to about 98 %, preferably from about 15 % to about 85 %, more preferably from about 30 % to about 40 % by weight of the member or agglomerate, respectively. An unique aspect of the agglomerates according to the present invention is that they are formed without the use of a separate bonding substance, such as an adhesive.

WO 01/74282 A1

B79

③

EUROPEAN PATENT APPLICATION

④ Application number: 80309198.0

⑤ Int. Cl.²: A 61 F 13/15

⑥ Date of filing: 11.09.80

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⑧ Date of publication of application:
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⑨ Designated Contracting States:
AT BE CH DE ES FR GB IT LJ LU NL SE

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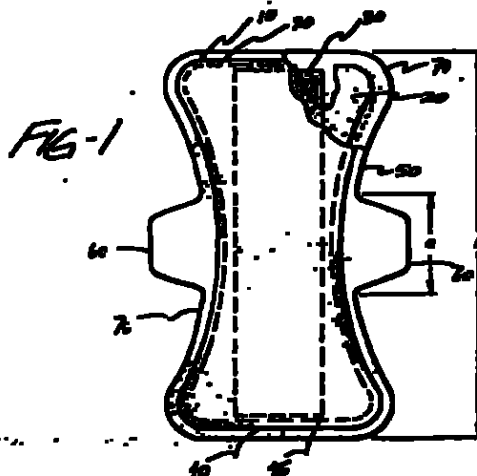
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⑬ Unified auxiliary request.

⑭ This invention relates to a novel absorbent structure and absorbent products containing this absorbent structure. More particularly, the absorbent structure of this invention contains a high-loft, bulky, low-density cover layer, a higher density transfer layer, a very high density, retentive reservoir layer and an impermeable barrier layer. The cover and barrier layers are sealed around their periphery and, preferably, all the layers are bonded to each other to form a unitized structure.



EP 0 359 501 A2

Standardized Sheet

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

(Rationalized Report according to the Notice of the President of the EPO published in the OJ11/2001)

REC'D 28 JAN 2004

WIPO PCT

Applicant's or agent's file reference DA-047-WO-02	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/016)
International application No. PCT/US 03/ 03267	International filing date (day/month/year) 04/02/2003	Priority date (day/month/year) 04/02/2002
International Patent Classification (IPC) or national classification and IPC A61F13/15		
Applicant H.B. FULLER LICENSING & FINANCING, INC.		

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 2 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 issues:

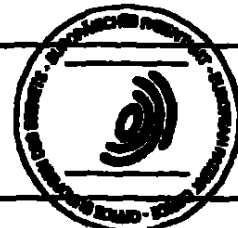
- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

EPO - DG 1

12.03.2004

(36)

Date of submission of the demand 02/09/2003	Date of completion of this report 30/12/2003
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Form PCT/IPEA/009 (cover sheet) P20476 (October 2002)

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US 03/ 03267

I. Basis of the report

The basis of this international preliminary examination is the application as originally filed.

V. Reasoned statement under Rule 68.2(a)(II) with regard to novelty, inventive step or industrial applicability

In light of the documents cited in the international search report, it is considered that the invention as defined in at least some of the claims does not appear to meet the criteria mentioned in Article 33(1) PCT, i.e. does not appear to be novel and/or to involve an inventive step (see international search report, in particular the documents cited X and/or Y and corresponding claim references).

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/US 03/03267

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61F13/15

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)
IPC 7 A61F

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

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

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 281 207 A (SUZUKI MEGAKU ET AL) 25 January 1994 (1994-01-25) column 4, line 2 - column 6, line 28; figure 3	1-14
A	US 4 927 582 A (BRYSON ROBERT E) 22 May 1990 (1990-05-22) figures 4,4a	1,12,14
A	EP 0 478 011 A (KIMBERLY CLARK CO) 1 April 1992 (1992-04-01) figures 1-7	1,12,14
A	WO 95 13778 A (PROCTER & GAMBLE) 26 May 1995 (1995-05-26) the whole document	1-15
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in 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 document but published on or after the international filing date

"L" document which may throw doubts on priority claims or which is cited to establish the publication date of another claim or other special reason (see specification)

"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

"Z" document member of the same patent family

Date of the actual completion of the international search

14 July 2003

Date of mailing of the international search report

22/07/2003

Name and mailing address of the ISA

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Authorized officer

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INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 03/03267

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 169 184 A (MOELNYCKE AB) 22 January 1986 (1986-01-22) claims 1,7; figures	1,14,15
A	EP 0 402 650 A (WEYERHAEUSER CO) 19 December 1990 (1990-12-19) figure 2	1
A	US 5 071 681 A (MAKOUI KAMBIZ B ET AL) 10 December 1991 (1991-12-10) the whole document	1,14
A	EP 0 719 531 A (KAO CORP) 3 July 1996 (1996-07-03) the whole document	1-15
A	EP 0 514 775 A (DOW CHEMICAL CO) 25 November 1992 (1992-11-25) the whole document	1,14,15
A	EP 1 023 884 A (MCNEIL PPC INC) 2 August 2000 (2000-08-02) the whole document	1-15
A	US 5 149 334 A (BERG CHARLES JOHN ET AL) 22 September 1992 (1992-09-22) the whole document	1
A	WO 01 21122 A (MARSH DAVID G ; WEYERHAEUSER CO (US)) 29 March 2001 (2001-03-29) the whole document	1-15

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/17/05 have been fully considered and they are partially persuasive. Applicant argues Chmielewski '620 and Chmielewski '207 do not disclose a single nonwoven web that includes a first region that includes superabsorbent polymer and a second region that is essentially free of superabsorbent polymer. This argument is not persuasive. In response to the argument regarding the single nonwoven web, it is well known in the art that a web can have a single layer or be a multi-layered laminate. For example, Raley USPN 4761322 teaches a laminated fibrous web. The web is a single web comprising multiple layers. As broadly as claimed, Chmielewski '620 and Chmielewski '207 teach a single nonwoven web.

Applicant further argues Chmielewski '620 discloses dispersing superabsorbent polymer particles throughout the absorbent layer and does not teach a first region that includes superabsorbent polymer and a second region that is free of superabsorbent polymer where the first region extends toward the second region. However, as indicated in the Office Action mailed 11/17/04, Chmielewski '620 shows 35 as the absorbent layer, which includes a first region 350, which contains superabsorbent and a second region 350c, which is free of superabsorbent.

With respect to the indication of the first and second surfaces as 12 and 16 of Chmielewski et al '207, and the interpretation of material 34, the arguments are persuasive.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 7, and 10-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Chmielewski USPN 6068620.

As to claims 1-3, 12-17, 19, 20, 21, and 22 Chmielewski discloses an absorbent article, such as a disposable diaper, feminine hygiene product, or adult incontinence product (col. 4, lines 55-63) comprising a topsheet 30 (301, 302, 303), a liquid impervious, breathable backsheet 32 (col. 5, lines 55-56 and col. 6, lines 28-35), and an absorbent core comprising a single nonwoven web 35 disposed between the topsheet and backsheet comprising synthetic polymer fibers (col. 11, lines 47-67);

a first surface 352;

a second surface 348 opposite the first surface;

and a first liquid storage region 350a impregnated with superabsorbent polymer throughout (col. 11, lines 9-28, 47-67; and col. 14, lines 27-34). The first region 350 extends into the nonwoven web from the first surface 352 toward the second surface 348. The limitation of the superabsorbent polymer having been formed in situ is directed to a process of making the article. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product

itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 984, 986 (Fed. Cir. 1985) (citations omitted). MPEP 2113.

The web 35 comprises a second liquid acquisition region 350c, essentially free of superabsorbent polymer (col. 11, lines 29-46) extending into the nonwoven web 35 from the second surface 348 toward the first surface 352 (Figure 4).

As to claim 4, Chmielewski discloses the (synthetic) polymer comprises a fiber from the claimed materials (col. 11, lines 47-67).

As to claim 5, the second region 350c exhibits a property comprising fluid acquisition in that it is a fluid permeable tissue and is thus, capable of acquiring fluid.

As to claim 7, first region 350a is capable of storing fluid (col. 10, lines 11-15).

As to claim 10, the first region 350a comprises fibers comprising a first polymer (col. 11, lines 47-67 where the first region comprises SAP) and the second region comprises fibers comprising a second polymer (col. 11, lines 38-46, where the second region comprises airlaid fluff pulp).