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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 November 2006 (09.11.2006)

PCT

(10) International Publication Number
WO 2006/118838 A3

(51) International Patent Classification:
*D04H 13/00* (2006.01) *B32B 27/32* (2006.01)
*B32B 5/26* (2006.01) *A61F 13/15* (2006.01)

(21) International Application Number:
PCT/US2006/015353

(22) International Filing Date: 25 April 2006 (25.04.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/119,486 29 April 2005 (29.04.2005) US

(71) Applicant *(for all designated States except US)*: **KIMBERLY-CLARK WORLDWIDE, INC.** [US/US]; 401 N. Lake Street, Neenah, Wisconsin 54956 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **SMITH, Charles, Allen** [US/US]; 7350 Lanier Cove Court, Cumming, Georgia 30041 (US). **CALHOUN, Patricia, Hwang** [US/US]; 10685 Avian Drive, Alpharetta, Georgia 30022 (US). **FITTS, James, Russell, Jr.** [US/US]; 8070 Bailey Mill Road, Gainesville, Georgia 30506 (US). **HUGHES, Janis, Wilson** [US/US]; 10575 Tuxford Drive, Alpharetta, Georgia 30022 (US). **MACE, Tamara, Lee** [CA/US]; 681 Creekwood Drive, Marietta, Georgia 30068 (US). **WALTON, Glynis, Allicia** [US/US]; 115 Southwind Circle, Roswell, Georgia 30076 (US).

(74) Agents: **SHANE, Richard, M.** et al.; KIMBERLY-CLARK WORLDWIDE, INC., 401 N. Lake Street, Neenah, Wisconsin 54956 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

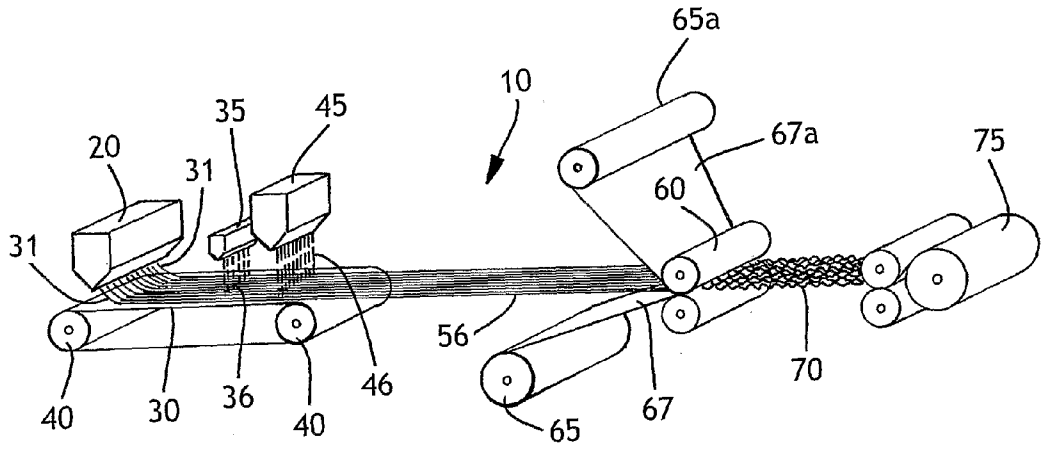
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**
— *with international search report*

(88) Date of publication of the international search report:
1 March 2007

*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: LATENT ELASTIC ARTICLES AND METHODS OF MAKING THEREOF




(57) Abstract: Abstract A composite nonwoven fabric having latent elasticity is provided having a latently elastic core comprising a first component that includes a thermoplastic elastomer and a second component that includes a single site catalyzed polyolefin, and at least one gatherable facing material laminated to the elastic core. The first and second components may be, for example, in the form of alternating filaments of styrenic block copolymer and single site catalyzed polyolefin or in the form of conjugate filaments having a first section of styrenic block copolymer and a second section of single site catalyzed polyolefin. Also disclosed are methods of making the latently elastic stretch bonded laminates and personal care articles containing the latently elastic stretch bonded laminates.

WO 2006/118838 A3

# INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/015353

A. CLASSIFICATION OF SUBJECT MATTER
INV. D04H13/00 B32B5/26 B32B27/32 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)
D04H B32B 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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X | WO 01/87589 A (KIMBERLY-CLARK WORLDWIDE, INC) 22 November 2001 (2001-11-22)<br>page 12, line 20 - page 15, line 15<br>page 10, lines 14-22<br>page 21, line 14 - line 18<br>claim 1; figures 1,1a,2b,6 | 1,2,19, 33 |
| X | WO 01/32116 A (KIMBERLY-CLARK WORLDWIDE, INC) 10 May 2001 (2001-05-10)<br>page 11, line 18 - page 12, line 2<br>page 26, line 30 - page 30, line 11<br>claims 15,41-61 | 1,2,19, 20,33 |
| Y | WO 99/65442 A (KIMBERLY CLARK CO [US])<br>23 December 1999 (1999-12-23)<br>page 17, lines 16-18 | 26,27 |

-/--

[X] Further documents are listed in the continuation of Box C.

[X] 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 document 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 | Date of mailing of the international search report |
|---|---|
| 9 October 2006 | 19/10/2006 |

| Name and mailing address of the ISA/ | Authorized officer |
|---|---|
| European Patent Office, P.B. 5818 Patentlaan 2<br>NL – 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,<br>Fax: (+31-70) 340-3016 | Barathe, Rainier |

Form PCT/ISA/210 (second sheet) (April 2005)

# INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/015353

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| Y | WO 98/29251 A (KIMBERLY-CLARK WORLDWIDE, INC) 9 July 1998 (1998-07-09) page 7, line 14 - page 10, line 18 | 26,27 |
| A | WO 2004/061181 A (KIMBERLY-CLARK WORLDWIDE, INC) 22 July 2004 (2004-07-22) cited in the application the whole document | 1-33 |
| A | US 5 385 775 A (WRIGHT ET AL) 31 January 1995 (1995-01-31) cited in the application the whole document | 1-33 |

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2006/015353

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| WO 0187589 A | 22-11-2001 | AU 5977701 A | 26-11-2001 |
| | | BR PI0110917 A | 07-02-2006 |
| | | EP 1284854 A2 | 26-02-2003 |
| | | MX PA02011154 A | 10-03-2003 |
| | | US 2002119722 A1 | 29-08-2002 |
| WO 0132116 A | 10-05-2001 | AU 772962 B2 | 13-05-2004 |
| | | AU 1241001 A | 14-05-2001 |
| | | BR 0015251 A | 17-09-2002 |
| | | CN 1414843 A | 30-04-2003 |
| | | EP 1225861 A1 | 31-07-2002 |
| | | JP 2003515619 T | 07-05-2003 |
| | | MX PA02004364 A | 07-11-2002 |
| WO 9965442 A | 23-12-1999 | AU 2325499 A | 05-01-2000 |
| | | BR 9911361 A | 13-03-2001 |
| | | DE 19983366 T0 | 10-05-2001 |
| | | GB 2360194 A | 19-09-2001 |
| | | US 6322552 B1 | 27-11-2001 |
| WO 9829251 A | 09-07-1998 | AU 734540 B2 | 14-06-2001 |
| | | AU 5717798 A | 31-07-1998 |
| | | BR 9714298 A | 25-04-2000 |
| | | CA 2273914 A1 | 09-07-1998 |
| | | EP 0954442 A1 | 10-11-1999 |
| WO 2004061181 A | 22-07-2004 | AU 2003270890 A1 | 29-07-2004 |
| | | BR 0317800 A | 29-11-2005 |
| | | CN 1720361 A | 11-01-2006 |
| | | EP 1579047 A1 | 28-09-2005 |
| | | JP 2006512491 T | 13-04-2006 |
| | | MX PA05007223 A | 12-09-2005 |
| | | US 2004127128 A1 | 01-07-2004 |
| US 5385775 A | 31-01-1995 | AU 655081 B2 | 01-12-1994 |
| | | AU 2723492 A | 10-06-1993 |
| | | CA 2071084 A1 | 10-06-1993 |
| | | DE 69231695 D1 | 29-03-2001 |
| | | DE 69231695 T2 | 07-06-2001 |
| | | EP 0548609 A1 | 30-06-1993 |
| | | JP 3242172 B2 | 25-12-2001 |
| | | JP 5272043 A | 19-10-1993 |
| | | KR 255571 B1 | 01-05-2000 |
| | | MX 9206302 A1 | 01-06-1993 |
| | | ZA 9208058 A | 07-05-1993 |