

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
7 March 2002 (07.03.2002)

PCT

(10) International Publication Number  
WO 02/17842 A3

(51) International Patent Classification<sup>7</sup>: A61F 13/15

(21) International Application Number: PCT/US01/27248

(22) International Filing Date: 30 August 2001 (30.08.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/229,190 30 August 2000 (30.08.2000) US  
09/689,364 12 October 2000 (12.10.2000) US

(71) Applicant: KIMBERLY-CLARK WORLDWIDE, INC. [US/US]; 100 West Lawrence Street, 3rd Floor, Appleton, WI 54911 (US).

(72) Inventor: OBERSTADT, Gregory; E7825 Wieland Road, New London, WI 54961 (US).

(74) Agents: WILHELM LAW SERVICE et al.; 100 West Lawrence Street, Appleton, WI 54911 (US).

(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, EC, 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, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

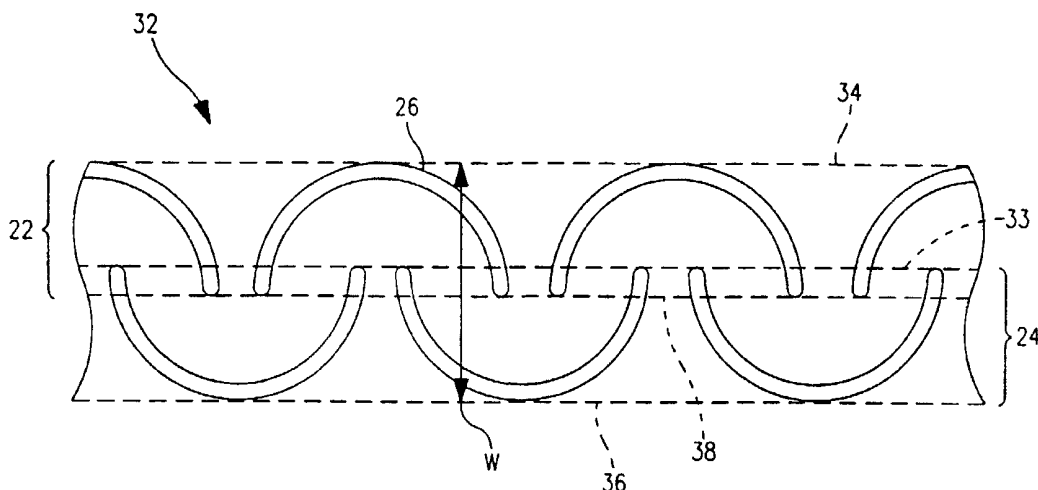
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,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

Published:  
— with international search report

(88) Date of publication of the international search report:  
16 May 2002

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: PATTERN BONDED LAYERS FOR ABSORBENT ARTICLES



(57) Abstract: Bonded composites, and absorbent articles made with such bonded composites. The bonded composite has first and second thin-section elements bonded to each other. The bonds are comprised in an array of separate, distinct, and spaced interlocking arcuate bond elements. Each bond element has spaced first and second ends and corresponding end portions, and an arcuate intermediate portion, at least part of which is disposed toward a respective side edge of the bond pattern. Ends of such bond elements are disposed inwardly of the side edges. A respective bond element can represent a substantial portion of, for example, an ellipse, a circle, or an hyperbola. Intermediate portions of the bond elements can include inflections, and can extend from the first side of the bond pattern to the second side of the bond pattern. Width of the bond pattern can be about 4 to about 14 millimeters, preferably about 5 to about 12 millimeters. Absorbent articles of the present invention can serve a variety of functions including but not limited to feminine hygiene articles, training pants, diapers, or adult incontinence products.



WO 02/17842 A3

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/27248

**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 D04H B32B

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	EP 0 657 153 A (UNI CHARM CORP) 14 June 1995 (1995-06-14)  column 1, line 24-52 column 3, line 5 -column 5, line 6 figures 1-6  ---	1-4, 10-15, 17-21, 23-25, 28, 30, 38-41, 43, 44
X	US 5 451 219 A (SUZUKI MIGAKU ET AL) 19 September 1995 (1995-09-19)  figures 1-23 column 4, line 1-49 column 6, line 60 -column 7, line 20 column 11, line 20-24  ---  -/--	1-15, 17-21, 23-44

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 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.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

15 February 2002

Date of mailing of the international search report

01/03/2002

Name and mailing address of the ISA  
 European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Joly, F

INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 01/27248

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 781 966 A (TAYLOR JACK D) 1 November 1988 (1988-11-01) claims 1,15; figures 1-5 -----	1-28, 31-35, 43
X	WO 99 14039 A (KIMBERLY CLARK CO) 25 March 1999 (1999-03-25)  figures 1-5 page 4, line 31 -page 5, line 22 page 7, line 27,28 -----	1,2, 5-15, 17-21, 23-29, 31-36, 38-44

# INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/US 01/27248

Patent document cited in search report	Publication date	Patent family member(s)	Publication date			
EP 0657153	A	14-06-1995	AU 688399 B2	12-03-1998		
			AU 8022394 A	15-06-1995		
			CA 2137520 A1	11-06-1995		
			CN 2223090 U	27-03-1996		
			DE 69408640 D1	02-04-1998		
			DE 69408640 T2	18-06-1998		
			EP 0657153 A2	14-06-1995		
			ES 2112492 T3	01-04-1998		
			KR 116498 Y1	20-04-1998		
			SG 54186 A1	16-11-1998		
			US 5626574 A	06-05-1997		
			-----			
			US 5451219	A	19-09-1995	NONE
-----						
US 4781966	A	01-11-1988	NONE			
-----						
WO 9914039	A	25-03-1999	US 6096668 A	01-08-2000		
			AU 735677 B2	12-07-2001		
			AU 9390398 A	05-04-1999		
			BR 9812205 A	18-07-2000		
			CN 1270552 T	18-10-2000		
			EP 1015241 A1	05-07-2000		
			WO 9914039 A1	25-03-1999		
			-----			