

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
15 May 2003 (15.05.2003)

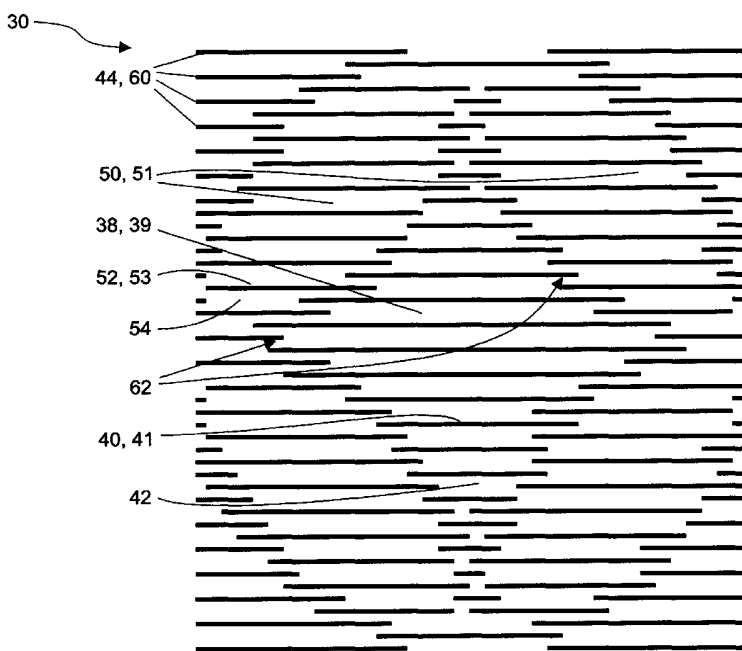
PCT

(10) International Publication Number  
WO 2003/040450 A3

- (51) International Patent Classification<sup>7</sup>: D21F 11/00, 1/00
  - (21) International Application Number: PCT/US2002/033225
  - (22) International Filing Date: 17 October 2002 (17.10.2002)
  - (25) Filing Language: English
  - (26) Publication Language: English
  - (30) Priority Data:
    - 10/015,838 2 November 2001 (02.11.2001) US
    - 10/015,858 2 November 2001 (02.11.2001) US
  - (71) Applicant: KIMBERLY-CLARK WORLDWIDE, INC. [US/US]; 401 N. Lake Street, Neenah, WI 54956 (US).
  - (72) Inventors: BURAZIN, Mark, Alan; 11 Stoney Beach Road, Oshkosh, WI 54902 (US). CHIU, Kai, F.; 4229 95th Avenue, Bellevue, WA 98004 (US). LINDSAY, Jeffrey, D.; 20 Diane Lane, Appleton, WI 54915 (US).
  - (74) Agents: CHARLIER, Patricia, A. et al.; Kimberly-Clark Worldwide, Inc., 401 N. Lake St., Neenah, WI 54956 (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, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
  - (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declarations under Rule 4.17:**  
 — as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations

[Continued on next page]

(54) Title: FABRIC FOR USE IN THE MANUFACTURE OF TISSUE PRODUCTS HAVING VISUALLY DISCERNABLE BACKGROUND TEXTURE REGIONS BORDERED BY CURVILINEAR DECORATIVE ELEMENTS



(57) Abstract: The present invention is a woven sculpted fabric for the manufacture of a tissue web having a tissue contacting surface and a method for making such a woven sculpted fabric. The tissue contacting surface of the woven sculpted fabric includes at least a first group of strands and a second group of strands wherein the first group of strands extend in a first direction and the second group of strands extend in a second direction. The first group of strands are adapted to produce elevated floats and depressed sinkers thereby defining a three-dimensional fabric surface comprising; a first background region having a set of substantially parallel first elevated floats separated by a set of substantially parallel first depressed sinkers, comprising first depressed sinkers positioned between adjacent first elevated floats and comprising first elevated floats positioned between adjacent first depressed sinkers; a second background region having a set of substantially parallel second elevated floats separated by a set of substantially parallel

second depressed sinkers, comprising second depressed sinkers positioned between adjacent second elevated floats and comprising second elevated floats positioned between adjacent second depressed sinkers; and, a transition region positioned between the first and second background regions, wherein the first elevated floats of the first background region descend to become the second depressed sinkers of the second background region and the second elevated floats of the second background region descend to become the first depressed sinkers of the first background region.

WO 2003/040450 A3



- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

**Published:**

- *with international search report*

**(88) Date of publication of the international search report:**  
11 March 2004

*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.*

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 02/33225

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 D21F11/00 D21F1/00				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b>				
Minimum documentation searched (classification system followed by classification symbols) IPC 7 D21F				
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)				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	DE 199 17 869 A (SCA HYGIENE PRODUCTS GMBH) 26 October 2000 (2000-10-26)	1, 4, 6, 20, 21, 30, 36, 39, 40, 45, 47, 62, 63, 71, 73, 89		
A	figures 34, 35, 44	2, 37		
A	WO 97 32081 A (ASTEN) 4 September 1997 (1997-09-04)	1, 3, 4, 6, 20, 21, 30, 36, 38-40, 44, 45, 47, 62, 63, 73		
	the whole document			
---				
-/--				
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.				
<input checked="" type="checkbox"/> Patent family members are listed in annex.				
° Special categories of cited documents :				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;">                     *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                 </td> <td style="width: 50%; border: none; vertical-align: top;">                     *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.                      *&amp;* document member of the same patent family                 </td> </tr> </table>			*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
*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			
24 April 2003	07/05/2003			
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  De Rijck, F			

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 02/33225

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 4 161 195 A (KHAN) 17 July 1979 (1979-07-17)  the whole document ----	1, 3, 4, 6, 20, 21, 29, 36, 44, 45, 47, 62, 63, 72
A	WO 99 66124 A (THE PROCTOR & GAMBLE CIE) 23 December 1999 (1999-12-23)  the whole document ----	2, 4, 6, 20, 21, 30, 37, 45, 47, 62, 63
A	WO 00 12818 A (SCAPA) 9 March 2000 (2000-03-09)  the whole document ----	2, 4, 6, 20, 21, 30, 37, 45, 47, 62, 63
A	WO 00 39393 A (KIMBERLY CLARK WORLDWIDE INC.) 6 July 2000 (2000-07-06) the whole document ----	36-42, 71, 74, 79
A	EP 0 677 612 A (KIMBERLY-CLARK CORP.) 18 October 1995 (1995-10-18) the whole document -----	36-42, 71, 73, 79

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/33225

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
DE 19917869	A	26-10-2000	DE 19917869 A1	26-10-2000
			AU 4401000 A	02-11-2000
			BR 0009683 A	15-01-2002
			CN 1347472 T	01-05-2002
			CZ 20013716 A3	13-03-2002
			WO 0063490 A1	26-10-2000
			EP 1173640 A1	23-01-2002
			HU 0200786 A2	29-07-2002
			JP 2002542407 T	10-12-2002
			TW 479082 B	11-03-2002
			US 2002056536 A1	16-05-2002
WO 9732081	A	04-09-1997	US 5853547 A	29-12-1998
			AU 705815 B2	03-06-1999
			AU 1981197 A	16-09-1997
			BR 9707793 A	04-01-2000
			CA 2218156 A1	04-09-1997
			EP 0891441 A1	20-01-1999
			JP 11511518 T	05-10-1999
			NO 983922 A	27-10-1998
			WO 9732081 A1	04-09-1997
			US 4161195	A
AU 4419279 A	23-08-1979			
BR 7900944 A	11-09-1979			
CA 1096274 A1	24-02-1981			
MX 149687 A	13-12-1983			
NZ 189560 A	23-03-1982			
ZA 7900714 A	26-03-1980			
WO 9966124	A	23-12-1999	AU 749725 B2	04-07-2002
			AU 4338599 A	05-01-2000
			BR 9911359 A	08-05-2001
			CA 2331357 A1	23-12-1999
			CN 1305550 T	25-07-2001
			EP 1105568 A1	13-06-2001
			JP 2002518607 T	25-06-2002
			WO 9966124 A1	23-12-1999
WO 0012818	A	09-03-2000	EP 1108086 A1	20-06-2001
			WO 0012818 A1	09-03-2000
WO 0039393	A	06-07-2000	AU 2597600 A	31-07-2000
			WO 0039393 A1	06-07-2000
EP 677612	A	18-10-1995	US 5672248 A	30-09-1997
			AU 690960 B2	07-05-1998
			AU 1641295 A	19-10-1995
			AU 722580 B2	10-08-2000
			AU 3499099 A	19-08-1999
			AU 705757 B2	03-06-1999
			AU 7743998 A	08-10-1998
			BR 9501524 A	14-11-1995
			CA 2134594 A1	13-10-1995
			CA 2142805 A1	13-10-1995
			CN 1306122 A	01-08-2001
			CN 1120616 A ,B	17-04-1996
			DE 69518784 D1	19-10-2000

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/33225

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 677612	A	DE 69518784 T2	12-04-2001
		EP 0677612 A2	18-10-1995
		ES 2149290 T3	01-11-2000
		FR 2718470 A1	13-10-1995
		FR 2735155 A1	13-12-1996
		GB 2288614 A ,B	25-10-1995
		GB 2319537 A ,B	27-05-1998
		GB 2319538 A ,B	27-05-1998
		GB 2319539 A ,B	27-05-1998
		GB 2324314 A ,B	21-10-1998
		GB 2324315 A ,B	21-10-1998
		GB 2324316 A ,B	21-10-1998
		GB 2324317 A ,B	21-10-1998
		JP 8003890 A	09-01-1996
		US 5746887 A	05-05-1998
		US 6017417 A	25-01-2000
		ZA 9502942 A	20-12-1995

---