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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 December 2006 (14.12.2006)

PCT

(10) International Publication Number
WO 2006/133390 A3

(51) International Patent Classification:
B31F 1/07 (2006.01)

(21) International Application Number:
PCT/US2006/022398

(22) International Filing Date: 7 June 2006 (07.06.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/147,903	8 June 2005 (08.06.2005)	US
11/147,774	8 June 2005 (08.06.2005)	US
11/147,873	8 June 2005 (08.06.2005)	US

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

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **BOATMAN, Donn, Nathan** [US/US]; 3302 Beaver Road, Union, KY 41091 (US). **MCNEIL, Kevin, Benson** [US/US]; 9736 Aspenknoll Court, Loveland, OH 45140 (US). **RASCH, David, Mark** [US/US]; 566 Forest Ridge Court, Cincinnati, OH 45244 (US). **WIWI, Kevin, Mitchell** [US/US]; 7266 Wetherington Drive, West Chester, OH 45069 (US). **FISHER, Wayne, Robert** [US/US]; 932 Springbrook Drive, Cincinnati, OH 45224 (US).

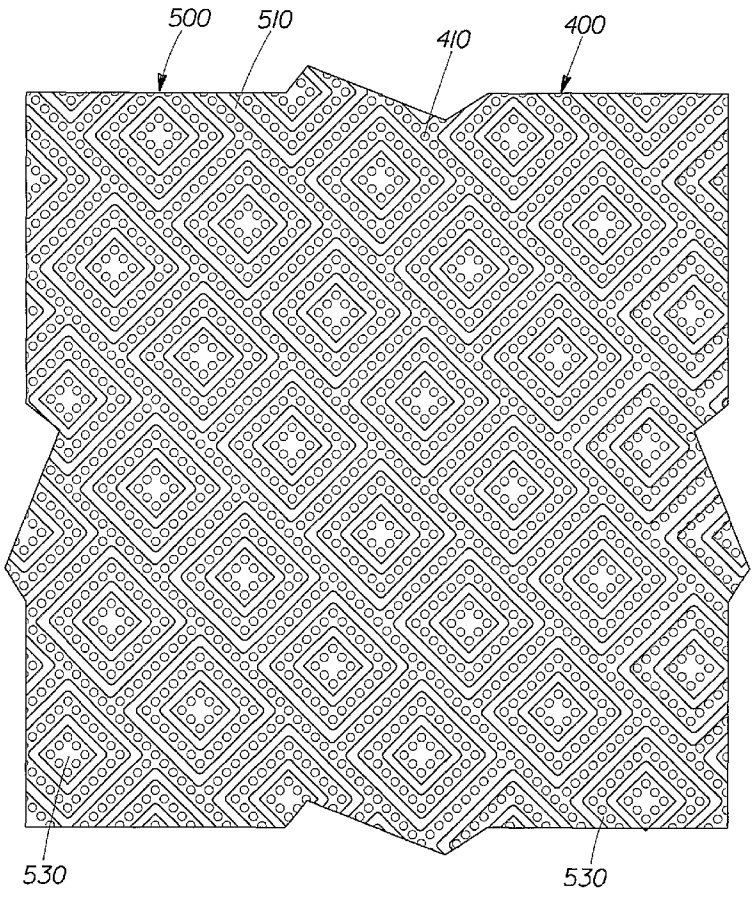
(74) Common Representative: **HUGHETT, Eileen, L.**; The Procter & Gamble Company, Winton Hill Business Center, 6110 Center Hill Road, Cincinnati, OH 45224 (US).

(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,

[Continued on next page]

(54) Title: EMBOSSED PRODUCT INCLUDING DISCRETE AND LINEAR EMBOSSEMENTS , METHOD ANDAPPARATUS FOR MAKING THE SAME



(57) Abstract: An apparatus and method for producing an embossed product, the apparatus including a first embossing member (20) and a second embossing member (30) . The first embossing member has a plurality of discrete embossing elements (410) disposed in a first pattern (400) . The second embossing member has a plurality of second embossing elements (510) including at least one linear embossing element. The second embossing elements are disposed in a second pattern (500) such the first pattern and the second pattern nest together. The present invention also includes an embossed web including at least one discrete embossment and at least one linear embossment.

WO 2006/133390 A3

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*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
1 February 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.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/022398

A. CLASSIFICATION OF SUBJECT MATTER
INV. B31F1/07

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)
B31F

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A X	WO 99/54547 A (PROCTER & GAMBLE [US]) 28 October 1999 (1999-10-28) page 14, line 19 - page 15, line 13 figures 1-9; example 1	1,9,10, 23-25 33
A	GB 2 166 690 A (KIMBERLY CLARK CO) 14 May 1986 (1986-05-14) page 1, line 119 - page 2, line 82; figures 1-4	1,9,10, 23-25,33
A	WO 00/73053 A (PROCTER & GAMBLE [US]; KOTANI TAEKO [JP]; LEW KOK HIN [JP]) 7 December 2000 (2000-12-07) abstract; figures 1-10	1,9,10, 23-25,33

☐ 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 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
17 November 2006	05/12/2006

Name and mailing address of the ISA/	Authorized officer
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	Farizon, Pascal

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2006/022398

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 9954547	A	28-10-1999	AT	243278 T	15-07-2003
			AU	748123 B2	30-05-2002
			AU	2952199 A	08-11-1999
			BR	9909682 A	19-12-2000
			CA	2328255 A1	28-10-1999
			CN	1296538 A	23-05-2001
			DE	69908927 D1	24-07-2003
			DE	69908927 T2	11-12-2003
			EP	1071849 A1	31-01-2001
			ES	2196787 T3	16-12-2003
			JP	2002512319 T	23-04-2002
			US	6458447 B1	01-10-2002
			ZA	200005200 A	02-01-2002
GB 2166690	A	14-05-1986	AU	562754 B2	18-06-1987
			AU	2217483 A	28-06-1984
			BR	8306949 A	24-07-1984
			CA	1243233 A1	18-10-1988
			DE	3345886 A1	20-06-1984
			FR	2537920 A1	22-06-1984
			GB	2132141 A	04-07-1984
			JP	59116500 A	05-07-1984
			KR	9200755 B1	21-01-1992
			MX	157490 A	25-11-1988
			PH	25916 A	19-12-1991
			ZA	8309109 A	30-01-1985
WO 0073053	A	07-12-2000	AU	4101199 A	18-12-2000