

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 September 2007 (07.09.2007)

PCT

(10) International Publication Number
WO 2007/100501 A3

- (51) International Patent Classification:
B01J 13/02 (2006.01)
- (21) International Application Number:
PCT/US2007/003930
- (22) International Filing Date:
15 February 2007 (15.02.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/777,629 28 February 2006 (28.02.2006) US
60/834,582 1 August 2006 (01.08.2006) US
- (71) Applicant (for all designated States except US): **APPLETON PAPERS INC.** [US/US]; 825 E. Wisconsin Avenue, P. O. Box 359, Appleton, WI 54912-0359 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **FOSSUM, Renae, Dianna** [US/US]; 501 South Main Street, Middletown, OH 45044 (US). **DIHORA, Jiten, Odjavji** [US/US]; 4521 Randall Drive, Hamilton, OH 45011 (US). **SANDS, Peggy, Dorothy** [US/US]; 5909 Cliff Drive, Appleton, WI 54915 (US). **YORK, David, William** [GB/GB]; 10 Ladywell Way, New Castle (GB). **LANG, Matthew, Henry** [US/US]; 2594 Aspen Court, Appleton, WI 54915 (US). **GUINEBRETIERE, Sandra, Jacqueline** [FR/US]; 1620 N. Mccarthy Road, F-54913 Appleton WI (FR).
- (74) Common Representative: **APPLETON PAPERS INC.**;
Law Department, P O Box 359, Appleton, WI 54912-0359 (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, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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
— 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:
18 October 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: BENEFIT AGENT CONTAINING DELIVERY PARTICLE

(57) Abstract: The present invention relates to benefit agent containing delivery particles, compositions comprising said particles, and processes for making and using the aforementioned particles and compositions. When employed in compositions, for example, cleaning or fabric care compositions, such particles increase the efficiency of benefit agent delivery, there by allowing reduced amounts of benefit agents to be employed. In addition to allowing the amount of benefit agent to be reduced, such particles allow a broad range of benefit agents to be employed.



WO 2007/100501 A3

A. CLASSIFICATION OF SUBJECT MATTER***B01J 13/02(2006.01)i***

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 8 B01J 13/02, B32B 15/02

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 practicable, search terms used)

eKIPOPSS (KIPO Internal)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6989195 B2 (ANDERSON et al.) 24 January 2006 See whole pages.	1 - 12, 15 - 16
X	US 6592990 B2 (SCHWANTES) 15 July 2003 See whole pages.	1 - 10
A	US 4018688 A (PRACHT et al.) 19 April 1977 See whole pages.	1 - 12, 15 - 16
A	US 6375968 B1 (QUONG) 23 April 2002 See whole pages.	1 - 10
A	US 6544926 B1 (BODMER et al.) 8 April 2003 See whole pages.	1 - 10

 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 application or patent 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 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

28 AUGUST 2007 (28.08.2007)

Date of mailing of the international search report

28 AUGUST 2007 (28.08.2007)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

LEE, Dong Won

Telephone No. 82-42-481-5564



Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: 13, 17
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

Claim 13 is unclear and claim 17 is too broad to make meaningful search possible.

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2007/003930

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6989195 B2	24.01.2006.	None	
US 6592990 B2	15.07.2003.	None	
US 4018688 A	19.04.1977	CA 1080407 A1 DE 2632318 A1 FR 2318973 A1 GB 1551142 A JP 52051015 A2 NL 7608065 A	01.07.1980 17.02.1977 18.02.1977 22.08.1979 23.04.1977 25.01.1977
US 6375968 B1	23.04.2002	AR 026190 A1 AU 200110780 A1 CA 2386887 AA DE 60007650 C0 EP 01221841 A1 JP 15512395 A WO 0130146 A1	29.01.2003 08.05.2001 03.05.2001 12.02.2004 17.07.2002 02.04.2003 03.05.2001
US 6544926 B1	08.04.2003	CA 2447002 AA EP 01441911 A2 JP 17505443 A WO 03031192 A2	17.04.2003 04.08.2004 24.02.2005 17.04.2003