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(54) Title: TACKY ALLERGEN TRAP AND FILTER MEDIUM, AND METHOD FOR CONTAINING ALLERGENS

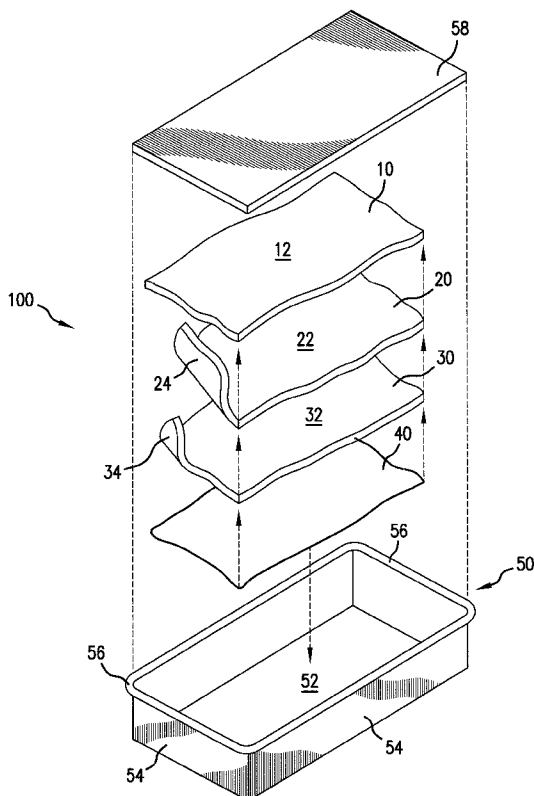


FIG. 1

(57) Abstract: The present invention provides a specific filtration media which includes a substrate having cellulose fibers, bi-component fibers, adhesion fibers, binder, and pressure sensitive adhesive. Also contemplated are fire retardant filtration media containing bi-component fibers and polyester fibers or acrylic fibers, and optionally cellulose fibers. The cellulose fibers of the invention are pretreated with flame retardant, providing a beneficial material for filtration purposes.

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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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER INV. A47C27/00 D04H13/00				
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) A47C D04H G10K A47L				
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 2006/107847 A (BKI HOLDING CORP [US]; GROSS JAMES R [US]; HURLEY JEFFREY S [US]; BOEH) 12 October 2006 (2006-10-12) the whole document	1,2,4-9		
X	WO 00/71790 A (BKI HOLDING CORP [US]; ERSPAMER JOHN [US]; BOEHMER BRIAN E [US]; HURLE) 30 November 2000 (2000-11-30) the whole document	1,2,4,6, 8		
X	EP 1 661 503 A (PROCTER & GAMBLE [US]) 31 May 2006 (2006-05-31) the whole document	1		
X	EP 0 480 724 A (JAMES RIVER CORP [US]) 15 April 1992 (1992-04-15) the whole document	1,6		
	-/--			
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.				
* Special categories of cited documents :				
<table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> *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;"> *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 </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 <p align="center">22 September 2008</p>		Date of mailing of the international search report <p align="center">27/01/2009</p>		
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040. Fax: (+31-70) 340-3016		Authorized officer <p align="center">MacCormick, Duncan</p>		

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2008/070222

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 2002/148047 A1 (CORZANI ITALO [IT] ET AL) 17 October 2002 (2002-10-17) abstract; figures -----	1-41

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/070222

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.:
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:

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:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
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.:

1- 16

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16

A filtration media.

2. claims: 17-26

A fire retardant filtration media.

3. claims: 27-41

A filtration medium.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2008/070222

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2006107847 A	12-10-2006	CA 2603421 A1	12-10-2006
		EP 1877611 A2	16-01-2008
		JP 2008534812 T	28-08-2008
		KR 20080017302 A	26-02-2008
WO 0071790 A	30-11-2000	AR 029638 A1	10-07-2003
		AU 751367 B2	15-08-2002
		AU 5293600 A	12-12-2000
		BR 0011589 A	16-04-2002
		CA 2372937 A1	30-11-2000
		CN 1351683 A	29-05-2002
		EP 1214465 A1	19-06-2002
		JP 2003505267 T	12-02-2003
		TW 499309 B	21-08-2002
		EP 1661503 A	31-05-2006
EP 0480724 A	15-04-1992	CA 2053384 A1	13-04-1992
		US 5246772 A	21-09-1993
US 2002148047 A1	17-10-2002	NONE	