



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁵ : A61F 13/15, 13/56	A3	(11) International Publication Number: WO 92/03999 (43) International Publication Date: 19 March 1992 (19.03.92)
(21) International Application Number: PCT/CA91/00316 (22) International Filing Date: 6 September 1991 (06.09.91) (30) Priority data: 9019619.7 7 September 1990 (07.09.90) GB 650,543 5 February 1991 (05.02.91) US (71)(72) Applicants and Inventors: GILLIES, Suzanne [CA/CA]; GILLIES, John [CA/CA]; RR #3, King City, Ontario L0G 1K0 (CA). (74) Agent: IMAI, T., Jeffrey; Gowling, Strathy & Henderson, Suite 3800, Commerce Court West, Toronto, Ontario M5L 1J3 (CA).		(81) Designated States: AT, AT (European patent), AU, BB, BE (European patent), BF (OAPI patent), BG, BJ (OAPI patent), BR, CA, CF (OAPI patent), CG (OAPI patent), CH, CH (European patent), CI (OAPI patent), CM (OAPI patent), CS, DE, DE (European patent), DK, DK (European patent), ES, ES (European patent), FI, FR (European patent), GA (OAPI patent), GB, GB (European patent), GN (OAPI patent), GR (European patent), HU, IT (European patent), JP, KP, KR, LK, LU, LU (European patent), MC, MG, ML (OAPI patent), MR (OAPI patent), MW, NL, NL (European patent), NO, RO, SD, SE, SE (European patent), SN (OAPI patent), SU ⁺ , TD (OAPI patent), TG (OAPI patent). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 14 May 1992 (14.05.92)
(54) Title: REUSABLE DIAPER COMPOSITION AND FASTENER (57) Abstract A reusable pad (10) for the absorption, dispersion and retention of a liquid is disclosed. The pad comprises an interior layer (12) of hydrophobic material for receiving the liquid, a median layer (14) consisting of a non-woven web of carded and cross-laid viscose rayon fibres and an outer layer (16) of substantially waterproof polyurethane film. The fibres of the median layer have a cross-section of substantially rigid multilimbed configuration. The webs are stitchbonded to form a cohesive layer for dispersing and absorbing the liquid. The webs are stitchbonded with a thread under medium tension whereby uniform absorption characteristics are retained throughout said web. The interior layer (12), median layer (14) and outer layer (16) are joined to form a pad of unitary construction and capable of being washed for reuse.		

+ DESIGNATIONS OF "SU"

Any designation of "SU" has effect in the Russian Federation. It is not yet known whether any such designation has effect in other States of the former Soviet Union.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	ES	Spain	MG	Madagascar
AU	Australia	FI	Finland	ML	Mali
BB	Barbados	FR	France	MN	Mongolia
BE	Belgium	GA	Gabon	MR	Mauritania
BF	Burkina Faso	GB	United Kingdom	MW	Malawi
BG	Bulgaria	GN	Guinea	NL	Netherlands
BJ	Benin	GR	Greece	NO	Norway
BR	Brazil	HU	Hungary	PL	Poland
CA	Canada	IT	Italy	RO	Romania
CF	Central African Republic	JP	Japan	SD	Sudan
CG	Congo	KP	Democratic People's Republic of Korea	SE	Sweden
CH	Switzerland	KR	Republic of Korea	SN	Senegal
CI	Côte d'Ivoire	LI	Liechtenstein	SU ⁺	Soviet Union
CM	Cameroon	LK	Sri Lanka	TD	Chad
CS	Czechoslovakia	LU	Luxembourg	TG	Togo
DE	Germany	MC	Monaco	US	United States of America
DK	Denmark				

INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 91/00316

I. CLASSIFICATION OF SUBJECT MATTER (If several classification symbols apply, indicate all) ⁶		
According to International Patent Classification (IPC) or to both National Classification and IPC Int.Cl.5 A 61 F 13/15 A 61 F 13/56		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
Int.Cl.5	A 61 F D 01 D	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸		
III. DOCUMENTS CONSIDERED TO BE RELEVANT⁹		
Category ^o	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
A	AU,A, 71181 (NICHOLAS PROPRIETARY) 15 January 1976 ---	
A	GB,A,2219809 (TITAN FABRICS) 20 December 1989 ---	
A	GB,A,1239911 (GLAZEBROOK STEEL) 21 July 1971 ---	
A	EP,A,0301874 (COURTAULDS) 1 February 1989 ---	
A	DD,A, 215347 (FORSCHUNGSINSTITUT FUR TEXTILTECHNOLOGIE) 7 November 1984 -----	
^o Special categories of cited documents : ¹⁰ "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 "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. "A" document member of the same patent family		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search		Date of Mailing of this International Search Report
09-12-1991		0 5 MAR 1992
International Searching Authority		Signature of Authorized Officer
EUROPEAN PATENT OFFICE		Mme N. KUIPER

FURTHER INFORMATION CONTINUED FROM THE SECOND SHEET

V. ☐ OBSERVATION WHERE CERTAIN CLAIMS WERE FOUND UNSEARCHABLE ¹

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

1. ☐ Claim numbers _____ because they relate to subject matter not required to be searched by this Authority, namely: _____
2. ☐ Claim numbers _____ 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. ☐ Claim numbers _____ because they are dependent claims and are not drafted in accordance with the second and third sentences of PCT Rule 6.4(a).

VI. ☒ OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING ²

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

1. Claims 1-11,14-20: Reusable absorbent mat or pad
2. Claims 12-13 : Diaper fastener

Please refer to Form PCT/ISA/206 dated 20th December 1991

1. ☐ As all required additional search fees were timely paid by the applicant, this International search report covers all searchable claims of the International application
2. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims of the International application for which fees were paid, specifically claims: _____
3. ☒ 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 claim numbers: 1-11,14-20
4. ☐ As all searchable claims could be searched without effort justifying an additional fee, the International Searching Authority did not invite payment of any additional fee.

Remark on Protest

- ☐ The additional search fees were accompanied by applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO.**

CA 9100316

SA 50905

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 24/02/92
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
AU-A- 71181		None	
GB-A- 2219809	20-12-89	EP-A- 0352887	31-01-90
GB-A- 1239911	21-07-71	None	
EP-A- 0301874	01-02-89	GB-A- 2208277	22-03-89
		AU-B- 613934	15-08-91
		AU-A- 2018488	02-02-89
		WO-A- 8901062	09-02-89
		JP-A- 1045811	20-02-89
DD-A- 215347		None	