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(71) Applicant (for all designated States except US): **NUVASIVE, INC.** [US/US]; 4545 Towne Centre Court, San Diego, CA 92121 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MCLEOD, Alan, Rory, Mor** [GB/GB]; c/o Nuvasive, UK, Tancred Street, Taunton, Somerset, TA1 1RY (GB). **REAH, Christopher** [GB/GB]; c/o Nuvasive, UK, Tancred Street, Taunton, Somerset TA1 1RY (GB). **ROSS, Raymond** [GB/GB]; 87 Palatine Road, West Didsbury, Manchester M20 3JQ (GB). **JACKOWSKI, Andre** [GB/GB]; 16 Chad Road, Edgbaston, Birmingham B15 3ER (GB).

(74) Agent: **SPANGLER, Jonathan**; Nuvasive, Inc., 4545 Towne Centre Court, San Diego, CA 92121 (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, 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, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

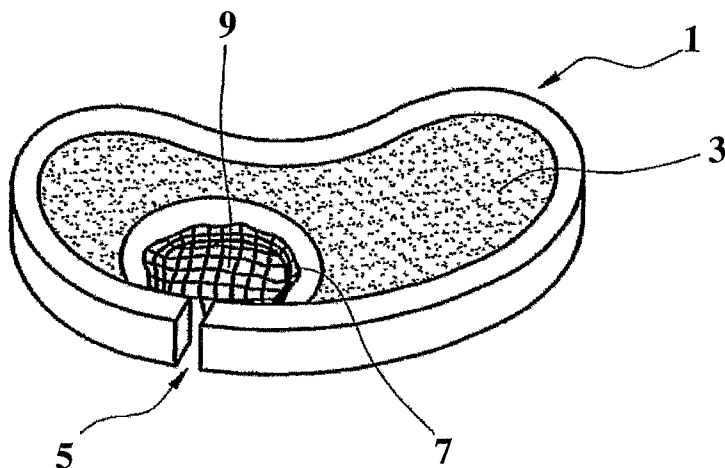
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

29 March 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: IMPROVEMENTS IN AND RELATING TO IMPLANTS



(57) Abstract: Disc prostheses, particularly for use in the lumbar region of the spine are provided. The disc prosthesis includes an outer component manufactured at least in part from fibre and at least one filling element introduced into the outer component in situ.

WO 2007/012070 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 06/28411

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.: 18 and 20
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 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.:

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

International application No.

PCT/US 06/28411

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61F 2/44 (2007.01)

USPC - 623/17.12

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) - A61F 2/44 (2007.01)

USPC - 623/17.12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

IPC(8) - A61F 2/44 (2007.01)

USPC - 623/17.11 through 17.16

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Google Web; Google Scholar; USPTO (EPO; PAJ) Search Terms: implant or prosthesis and fabric, top or bottom, round or hexagon, or octagon or ellipse, fiber and fill, ingrowth, thread or fiber, pore or opening, flange or anchor

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,746,485 B1 (Zucherman et al.) 08 June 2004 (08.06.2004) entire document	1-5, 8, 10, 14, 17 and 19
Y		6, 7, 9, 11-13, 15, 16
Y	US 5,571,189 B1 (Kuslich) 5 November 1996 (05.11.1996) col 7, ln 8-20.	12
Y	US 6,712,853 B2 (Kuslich) 30 March 2004 (30.03.2004) col 10, ln 3-17; col 11, ln 27-57.	6, 7, 11, 15, 16
Y	US 6,893,466 B2 (Trieu) 17 May 2005 (17.05.2005) col 7, ln 38-47	13
Y	US 4,904,260 B1 (Ray et al.) 27 February 1990 (27.02.1990) col 1, ln 7-19	9

Further documents are listed in the continuation of Box C.

* 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 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

29 December 2006 (29.12.2006)

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Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774