

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number
WO 2005/076974 A3

(51) International Patent Classification:
A61F 2/44 (2006.01)

(21) International Application Number:
PCT/US2005/003753

(22) International Filing Date: 4 February 2005 (04.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/542,351 6 February 2004 (06.02.2004) US
60/542,350 6 February 2004 (06.02.2004) US
60/542,769 6 February 2004 (06.02.2004) US
10/865,073 10 June 2004 (10.06.2004) US

(71) Applicant (for all designated States except US): **QUANTUM ORTHOPEDICS** [US/US]; 1266 Orcahrd Glen Circle, Encinitas, CA 92024 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BLAIN, Jason** [US/US]; 11662 Corte Guera, San Diego, CA 92128 (US).

(74) Agent: **DELANEY, Karoline, A.**; Knobbe, Martens, Olson & Bear, LLP, 2040 Main Street, 14th Floor, Irvine, CA 92614 (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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, 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, 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, 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).

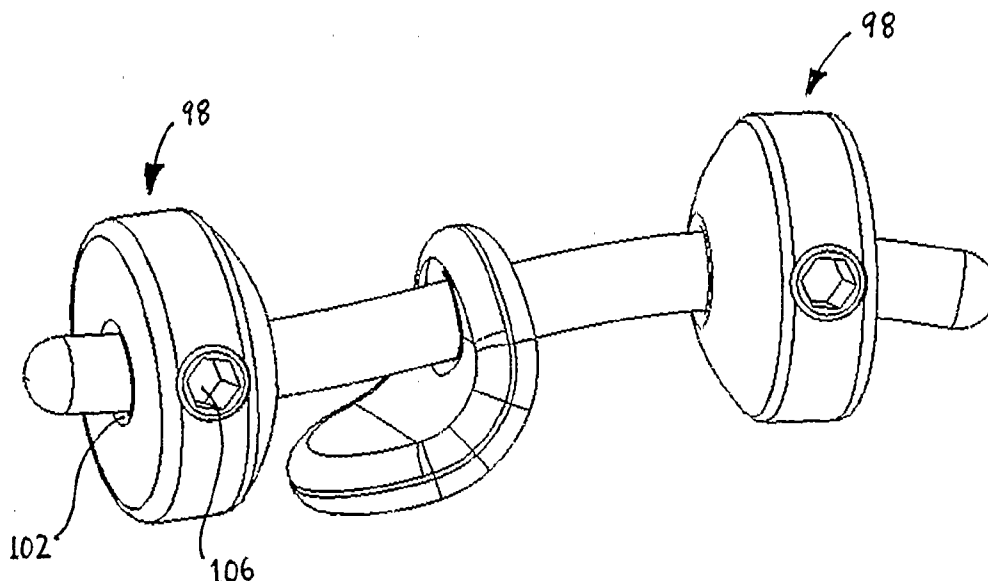
Published:

- 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:
22 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.

(54) Title: VERTEBRAL FACET JOINT PROSTHESIS AND METHOD OF FIXATION



(57) Abstract: Devices and methods for altering the spacing and motion at the facet joints of the vertebral column are provided. One embodiment of the invention comprises a prosthesis 34 with surfaces or faces 46, 48 configured to articulate with the facets 20, 22 of the facet joint 28. A retaining member 72 for anchoring the prosthesis 34 within the facet joint 28 is optionally included. Methods for surgically and less invasively implanting the prosthesis 34 and securing the prosthesis 34 to the articular processes or surrounding soft tissue are also provided.

WO 2005/076974 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/03753

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **A61F 2/44(2006.01)**

USPC: **623/17.11**
 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)
 U.S. : 623/17.11, 17.15, 14.12, 13.11

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,146,422 A (Lawson) 14 November 2000 (14.11.2000), See Figs. 1-3B, col. 3, lines 1-65 and col. 4, lines 15-63.	1-20, 48, 49, 59-67, 71, 74-76 ----- 6 & 7
A	US 5,888,203 A (Goldberg) 30 March 1999 (30.03.1999), See Figs. 8 and 9, see col. 8, lines 23-35; lines 49-67 and col. 9, lines 14-49.	1-80
A	US 6,626,944 B1 (Taylor) 30 September 2003 (30.09.2003), See Figs. 1-5.	1-80
A	US 4,919,667 A (Richmond) 24 April 1990 (24.04.1990), See Figs. 1-11.	1-80
A	US 6,113,637 A (Gill et al) 05 September 2000 (05.11.2000), See Figs. 1 and 1a.	1-80

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	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 03 August 2006 (03.08.2006)	Date of mailing of the international search report 05 DEC 2006
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 Alvin J. Stewart <i>Sharon D. Greene</i> Telephone No. 703-308-0858