

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 January 2007 (25.01.2007)

PCT

(10) International Publication Number
WO 2007/011779 A3

- (51) International Patent Classification:
A61B 17/70 (2006.01)
- (21) International Application Number:
PCT/US2006/027487
- (22) International Filing Date: 14 July 2006 (14.07.2006)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
11/181,657 14 July 2005 (14.07.2005) US
- (71) Applicant (for all designated States except US): **MEDICAL DEVICE CONCEPTS, LLC** [US/US]; 280 North Midland Avenue, Saddle Brook, NJ 07663 (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.

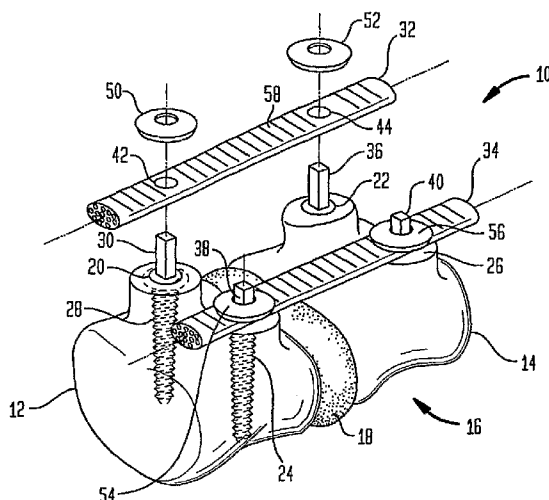
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, 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).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **DINELLO, Alexandre, M.** [US/US]; 55 Forsythe Court, Cotuit, MA 02635 (US). **MARTINEZ, Jaime** [US/US]; 17 Rochambeau Road, Pompton Plains, NJ 07444 (US).
- (74) Agents: **RUDNICK, Robert E.** et al.; Gibbons, Del Deo, Dolan, Griffinger & Vecchione, One Riverfront Plaza, Newark, NJ 07102 (US).

Published:
— with international search report
(88) Date of publication of the international search report:
21 December 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: DYNAMIC SPINAL STABILIZATION SYSTEM



(57) Abstract: A spinal stabilization system for installation to the posterior of the spinal column that includes a pair of anchoring members affixed to adjacent vertebrae and which may have screw threads to carry out that affixation. The anchoring members each have external head ends for the attachment of a flexible shaft that thus spans between the vertebrae and allows motion between those adjacent vertebrae. The flexible shaft is made of a monolithic body having no moving components that could generate debris and fail mechanically. Exemplary flexible shafts suitable for use in this system includes one having at least one slot that may be a spiral slot, a shaft having pairs of oppositely disposed slots formed in the body with adjacent pairs angularly displaced apart or a flexible shaft having a serpentine slot formed therein. The flexible shaft is controlled to have a desired flexibility.

WO 2007/011779 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/27487

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **A61B 17/70(2006.01)**

 USPC: 606/61
 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. : 606/61

 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	US 4,697,582 A (WILLIAM) 06 October 1987 (06.10.1987), see whole document.	1-13 and 21-27
X	US 5,417,690 A (SENNETT et al) 23 May 1995 (23.05.1995), see whole document.	14-20 and 39-44
X	US 4,719,905 A (STEFFEE) 19 January 1988 (19.01.1988), see whole document.	28-38
A, P	US 2005/0261686 A1 (PAUL) 24 November 2005 (24.11.2005), see whole document.	1-3, 5-9, 21-23, 26, 27

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	"T"
"A" document defining the general state of the art which is not considered to be of particular relevance	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 04 September 2007 (04.09.2007)	Date of mailing of the international search report 04 OCT 2007
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 Eduardo Robert Telephone No. (571) 272-4719