

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 May 2007 (10.05.2007)

PCT

(10) International Publication Number
WO 2007/053566 A3

(51) International Patent Classification:
A61B 17/56 (2006.01)

(21) International Application Number:

PCT/US2006/042351

(22) International Filing Date: 31 October 2006 (31.10.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/732,265 31 October 2005 (31.10.2005) US

11/589,512 30 October 2006 (30.10.2006) US

11/589,648 30 October 2006 (30.10.2006) US

(71) Applicant (for all designated States except US):
STRYKER SPINE [FR/FR]; Z.i. De Marticot, F-33610
Cestas (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): GERBEC, Daniel,
E. [US/US]; 1755 Country Club Drive, Logan, UT 84321
(US). FALLIN, Wade, T. [US/US]; 210 East 200 South,
Hyde Park, UT 84318 (US).

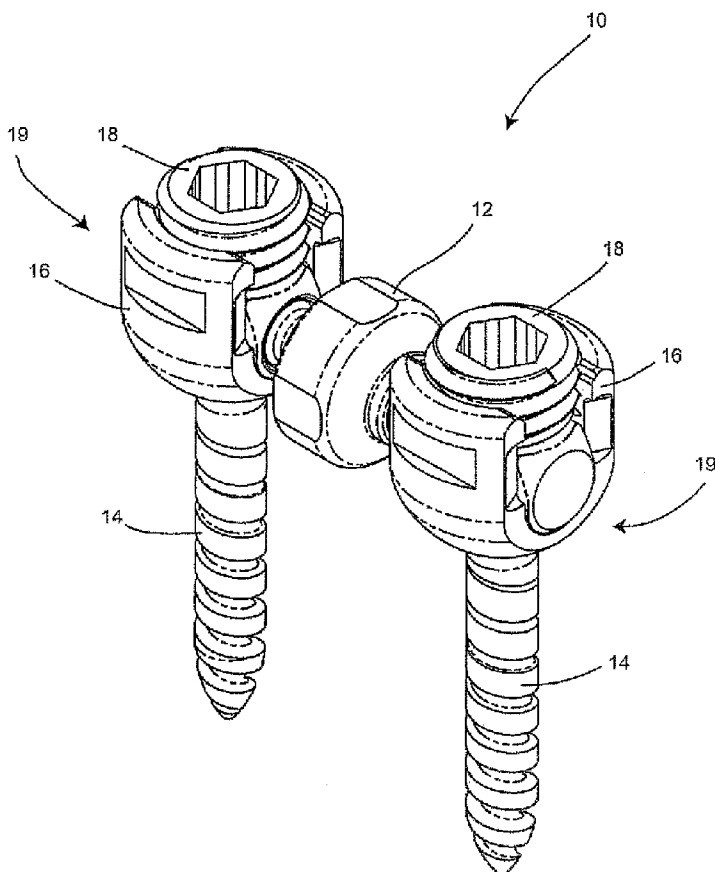
(74) Agents: KOCUN, Kevin, M. et al.; Lerner, David, Litten-
berg, Krumholz & Mentlik, LLP, 600 South Avenue West,
Westfield, NJ 07090 (US).

(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, GT, 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, MY,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
RU, SC, SD, SE, SG, SK, SL, SM, SV, 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,

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR DYNAMIC VERTEBRAL STABILIZATION



(57) Abstract: The intervertebral stabilization
device (12, 170) preferably includes a planar
spring (20, 180) enclosed within a housing (22,
172). The housing (122, 172) is joined to an
articulation component (24, 25, 174, 175) at
either end, and the articulation components
(24, 25, 174, 175) have couplings (28, 178)
connectable to anchoring components (19)
which are securable to adjacent vertebrae. The
planar spring (20, 180) can flex and retract
providing relative motion between the adjacent
vertebrae. The articulation components (24,
25, 174, 175) are ball and socket joints which
allow the entire assembly to flexibly follow
the curvature of the spine. A fusion rod (162)
with articulation components and couplings
(164) at either end may be substituted for
the spring device. The couplings enable
interchangeability between a fusion rod (162)
assembly and spring assembly (12, 170).

WO 2007/053566 A3



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*

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

30 October 2008

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/42351

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **A61B 17/56**(2006.01)

USPC: 606/264

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. : 606/264

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.
Y	US 2005/0171543 A1 (TIMM et al) 04 August 2005 (04.08.2005), see whole document.	1-42
Y	WO 2005/030066 A1 (HARTMANN et al) 07 April 2005 (07.04.2005), see whole document.	1-42

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

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"&"	document member of the same patent family
"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		

Date of the actual completion of the international search 23 May 2008 (23.05.2008)	Date of mailing of the international search report 08 JUL 2008
---	--

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 C. Robert <i>Eduardo C. Robert</i> Telephone No. (571) 272-4719 <i>ER</i>
---	--