# (19) World Intellectual Property Organization

International Bureau



# 

### (43) International Publication Date 29 January 2009 (29.01.2009)

(51) International Patent Classification: A61B 17/58 (2006.01) A61F 2/44 (2006.01)

(21) International Application Number:

PCT/US2008/008983

(22) International Filing Date: 24 July 2008 (24.07.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

24 July 2007 (24.07.2007) 60/961,741

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

US 12/217,662 (CIP) Filed on 8 July 2008 (08.07.2008)

- (71) Applicant (for all designated States except US): VER-TIFLEX, INC. [US/US]; 1351 Calle Avanzado, San Clemente, CA 92673 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ALTARAC, Moti

# (10) International Publication Number WO 2009/014728 A3

[IL/US]; 67 Coriander, Irvine, CA 92603 (US). TEBBE, Shawn [US/US]; 2022 Estero Street, Oceanside, CA 92054 (US). REGLOS, Joey, Camia [US/US]; 22896 Willard Avenue, Lake Forest, CA 92630 (US). CHENG, Yang [CN/US]; 16 Massier Lane, Foothill Ranch, CA 92610 (US). KADABA, Murali, P. [US/US]; 1288 E. Hillsdale Blvd. Apt. C312, Foster City, CA 94404 (US). KIM, Daniel, H. [US/US]; 227 East Cowan, Houston, CA 77007 (US).

- (74) Agent: LUKAS, Rimas; 1351 Calle Avanzado, San Clemente, CA 92673 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, 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, LY, MA, MD, ME, 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, ST, SV, SY, TJ,

[Continued on next page]

#### (54) Title: INTERSPINOUS SPACER

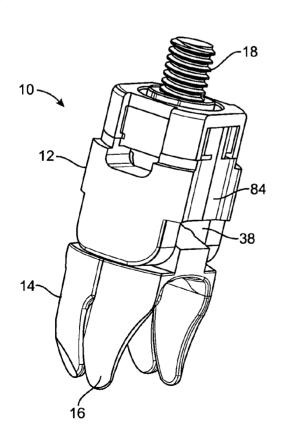


FIG. 1a

(57) Abstract: An implantable spacer for placement between adjacent spinous processes in a spinal motion segment is provided. The spacer includes a body defining a longitudinal axis and passageway. A first arm and a second arm are connected to the body. Each arm has a pair of extensions and a saddle defining a U-shaped configuration for seating a spinous process therein. Each arm has a proximal caming surface and is capable of rotation with respect to the body. An actuator assembly is disposed inside the passageway and connected to the body. When advanced, a threaded shaft of the actuator assembly contacts the caming surfaces of arms to rotate them from an undeployed configuration to a deployed configuration. In the deployed configuration, the distracted adjacent spinous processes are seated in the U-shaped portion of the arms.



# WO 2009/014728 A3



TM, TN, TR, TT, TZ, UA, UG, US (patent), 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL,

NO, 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: 9 April 2009

International application No. **PCT/US2008/008983** 

#### A. CLASSIFICATION OF SUBJECT MATTER

A61B 17/58(2006.01)i, A61F 2/44(2006.01)i

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: A61B 1/32, A61B 17/58, A61F 2/44

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

- Korean Utility models and applications for Utility models since 1975
- Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKIPASS(KIPO internal) & keywords: "spacer", "implant" and "arm"

#### C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| A         | US 2006-0276801 A1 (SCOTT A. YERBY et al.) 07 Dec. 2006<br>The whole documents.    | 1 - 42                |
| A         | US 7179225 B2 (ALAN E. SHLUZAS et al.) 20 Feb. 2007<br>The whole documents.        | 1 - 42                |
| A         | US 6645207 B2 (DIXON, ROBERT A. et al.) 11 Nov. 2003 The whole documents.          | 1 - 42                |
|           |  |                       |
|           |  |                       |

|  | 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
- "E" earlier application or patent but published on or after the international
- 'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other
- "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 mailing of the international search report

Date of the actual completion of the international search

23 FEBRUARY 2009 (23.02.2009)

44 7777711711471474

23 FEBRUARY 2009 (23.02.2009)

Name and mailing address of the ISA/KR



Korean Intellectual Property Office Government Complex-Daejeon, 139 Seonsa-ro, Seogu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

YANG, Seong Ji

Telephone No. 82-42-481-5624



## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

# PCT/US2008/008983

| Patent document cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|--|---------------------|----------------------------|---------------------|
| US 2006-0276801 A1                     | 07.12.2006          | None                       |                     |
| US 7179225 B2                          | 20.02.2007          | EP 1694223 A1              | 30.08.2006          |
|  |                     | EP 1694223 B1              | 18.06.2008          |
|  |                     | EP 1935356 A1              | 25.06.2008          |
|  |                     | EP 1667584 A2              | 14.06.2006          |
|  |                     | US 2005-0273133 A1         | 08.12.2005          |
|  |                     | WO 2005-018466 A2          | 03.03.2005          |
|  |                     | WO 2005-018466 A3          | 16.06.2005          |
|  |                     | WO 2005-046492 A1          | 26.05.2005          |
| US 6645207 B2                          | 11.11.2003          | US 2001-0037111 A1         | 01.11.2001          |