

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
16 August 2007 (16.08.2007)

PCT

(10) International Publication Number  
**WO 2007/092869 A3**

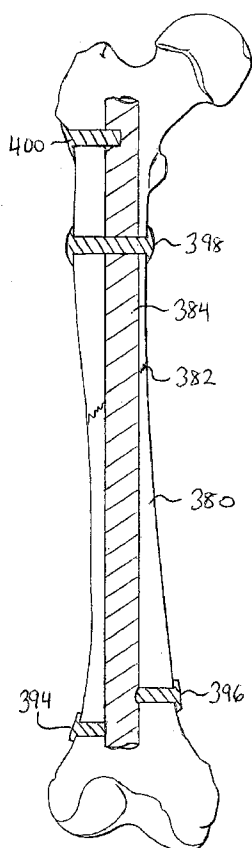
- (51) International Patent Classification:  
*A61B 17/56* (2006.01) *A61F 2/28* (2006.01)
- (21) International Application Number:  
PCT/US2007/061730
- (22) International Filing Date: 7 February 2007 (07.02.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
- |            |                              |    |
|------------|------------------------------|----|
| 60/765,857 | 7 February 2006 (07.02.2006) | US |
| 60/784,186 | 21 March 2006 (21.03.2006)   | US |
| 11/416,618 | 3 May 2006 (03.05.2006)      | US |
| 60/810,080 | 1 June 2006 (01.06.2006)     | US |
| 11/671,556 | 6 February 2007 (06.02.2007) | US |
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- (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,

[Continued on next page]

(54) Title: METHODS AND DEVICES FOR INTRACORPOREAL BONDING OF IMPLANTS WITH THERMAL ENERGY



(57) Abstract: The present invention provides a method for stabilizing a fractured bone. The method includes positioning an elongate rod in the medullary canal of the fractured bone and forming a passageway through the cortex of the bone. The passageway extends from the exterior surface of the bone to the medullary canal of the bone. The method also includes creating a bonding region on the elongate rod. The bonding region is generally aligned with the passageway of the cortex. Furthermore, the method includes positioning a fastener in the passageway of the cortex and on the bonding region of the elongate rod and thermally bonding the fastener to the bonding region of the elongate rod while the fastener is positioned in the passageway of the cortex.



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).

**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:**  
13 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.*

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/61730

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61B 17/56; A61F 2/28

USPC - 606/72; 623/23.62

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) - A61B 17/56; A61F 2/28

-USPC - 606/72; 623/23.62

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

-IPC(8) - A61B 17/56; A61F 2/28

-USPC - 606/72; 623/23.62; 623/23.61; 623/16.11; 623/11.11

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

-USPTO WEST (USPT, PGPUB, EPAB, JPAB);

-Google Scholar; 'methods and devices for intracorporeal bonding of implants with thermal energy'

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,605,090 B1 (TRIEU, H. H., et al.) 12 August 2003 (12.08.2003), [Abstract], col 1, ln 14-17; col 2, ln 23-30; col 2, ln 47-55; col 4, ln 45-62; col 5, ln 58-60; col 5, ln 62-67 - col 6, ln 1-27; col 6, ln 41-43; col 6, ln 58-67 - col 7, ln 1-10; col 7, ln 27-33; col 8, ln 19-50; col 8, ln 59-67; col 9, ln 18-27; col 13, ln 42-67 - col 14, ln 1-16; col 14, ln 8-16; Figs. 7, 8, 17	10-14 ----- 1-9, 15-60
Y	US 2005/0240190 A1 (GALL, K. A., et al.) 27 October 2005 (27.10.2005), [Abstract], para[0033], [0038], [0048], [0049], Figs. 2C, 8	1-9, 15-20, 42-45
Y	US 5,100,405 A (MCLAREN, A. C.) 31 March 1992 (31.03.1992), col 4, ln 51-56; col 5, ln 51-56; col 6, ln 15-21; Figs. 5-7	21-53
Y	US 2006/0009855 A1 (GOBLE, E. M. et al.) 12 January 2006 (12.01.2006), para[0116]	23
Y	US 5,660,225 A (SAFFRAN, B. N.) 26 August 1997 (26.08.1997), [Abstract], col 6, ln 62-67 - col 7, ln 1-12; Fig. 1	54-60
Y	US 2006/0024357 A1 (CARPENTER, K. W., et al.) 02 February 2006 (02.02.2006), para[0005], [0208]	59
Y	US 6,174,324 B1 (EGAN, T. D. et al.) 16 January 2001 (16.01.2001), col 5, ln 23-44; Figs. 3, 7	29-31, 38
Y	US 6,056,751 A (FENTON, JR., P. V.) 02 May 2000 (02.05.2000), Fig. 8	48-50
Y	US 5,487,844 A (FUJITA, S.) 30 January 1996 (30.01.1996), col 6, ln 29-39	57, 60
Y	US 2005/0246021 A1 (RINGEISEN, T. A., et al.) 3 November 2005 (03.11.2005), para[0088]	57

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"&amp;" document member of the same patent family

Date of the actual completion of the international search

19 September 2007 (19.09.2007)

Date of mailing of the international search report

25 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:

Lee W. Young

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774