



- (51) **International Patent Classification:**
A61B 17/34 (2006.01) *A61B 17/88* (2006.01)
- (21) **International Application Number:**
PCT/US2013/034852
- (22) **International Filing Date:**
1 April 2013 (01.04.2013)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
61/618,180 30 March 2012 (30.03.2012) US
- (71) **Applicant:** ZIMMER GMBH, INC. [US/US]; 505 Park Avenue, 14th Floor, New York, NY 10022 (US).
- (72) **Inventors; and**
- (71) **Applicants :** HANSON, Shaun, B. [US/US]; 1585 Sundance Drive, West Chester, PA 19380 (US). MANDEEN, Christopher, D. [US/US]; 302 East Marshall Street, Apt. 536, West Chester, PA 19380 (US).
- (74) **Agent:** NGUYEN, Tram, Anh, T.; Monument IP Law Group, 1717 Pennsylvania Ave., N.W., Suite 900, Washington, DC 20006 (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, BN, BR, BW, BY,

BZ, CA, CH, CL, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

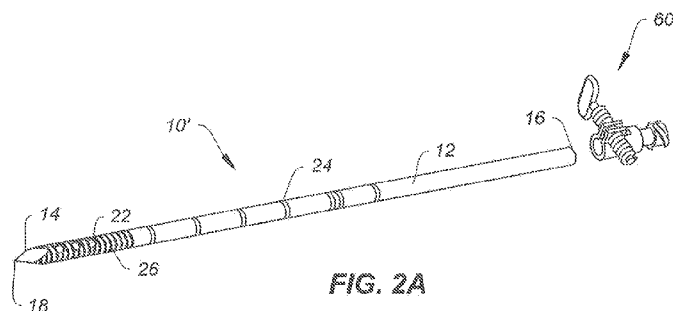
- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

- (88) **Date of publication of the international search report:**
14 November 2013

(54) **Title:** SURGICAL ACCESS SYSTEMS, INSTRUMENTS AND ACCESSORIES



(57) **Abstract:** The present disclosure provides a modular instrument system for accessing a site within a patient's body, such as for example, to inject or remove material. In one exemplary embodiment, an access device is coupled to an adapter and power drilled into a site within a patient. Once the access device is in position, the adapter may be further attached to other instruments, or to an injection or extraction system. The adapter may accommodate various other connectors to make the instrument system compatible with a variety of other surgical instruments and tools.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/034852

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61B17/34 A61B17/88
ADD.

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)
A61B

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)

EP0-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008/287859 A1 (MILLER LARRY J [US] ET AL) 20 November 2008 (2008-11-20) figures 1-3, 5B paragraphs [0033] - [0043], [0046] - [0066], [0071] -----	1,3-5, 16-18, 23-25
X	US 2008/045857 A1 (MILLER LARRY J [US] ET AL) 21 February 2008 (2008-02-21) figures 2-5B paragraphs [0128] - [0146], [0152] - [0159], [0198] - [0224] -----	1,3-5, 16-18, 23-25
X	US 2010/298836 A1 (JORDAN CHRISTOPHER [US]) 25 November 2010 (2010-11-25) figures 1, 4B, 5B, 6B paragraphs [0032] - [0038] ----- -/--	1,2,17

☒ 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 filing date

"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)

"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

"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 the actual completion of the international search

19 June 2013

Date of mailing of the international search report

27/09/2013

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Friedrich, Franz

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/034852

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012/059380 A1 (DEANGELO TERRI [US] ET AL) 8 March 2012 (2012-03-08) figures 1,3,4 paragraphs [0057] - [0072] -----	1,13,14, 16,17
X	US 2005/090852 A1 (LAYNE RICHARD W [US] ET AL) 28 April 2005 (2005-04-28) figures 40-42 paragraphs [0002], [0006], [0120] - [0130] -----	1,15,16

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/034852

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-18, 23-25

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-18, 23-25

An instrument system providing access to a site within a human body comprising an cannulated access device and an adaptor allowing coupling to other instruments or power tools

2. claims: 19-22

A drill instrument for inserting an access device allowing easy removal of the device by a longitudinal slot

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2013/034852

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2008287859 A1	20-11-2008	CN 101720243 A	02-06-2010
		EP 2144662 A2	20-01-2010
		US 2008287859 A1	20-11-2008
		US 2011160781 A1	30-06-2011
		WO 2008144379 A2	27-11-2008

US 2008045857 A1	21-02-2008	EP 2073728 A2	01-07-2009
		US 2008045857 A1	21-02-2008
		WO 2008033872 A2	20-03-2008

US 2010298836 A1	25-11-2010	NONE	

US 2012059380 A1	08-03-2012	AU 2010224135 A1	11-08-2011
		CA 2750494 A1	16-09-2010
		CN 102348421 A	08-02-2012
		EP 2405831 A1	18-01-2012
		KR 20110118719 A	31-10-2011
		SG 174357 A1	28-10-2011
		US 2012059380 A1	08-03-2012
		WO 2010105018 A1	16-09-2010

US 2005090852 A1	28-04-2005	AU 2005262796 A1	19-01-2006
		CA 2567381 A1	19-01-2006
		CN 101384223 A	11-03-2009
		EP 1768737 A2	04-04-2007
		JP 4904271 B2	28-03-2012
		JP 2008504941 A	21-02-2008
		KR 20070023740 A	28-02-2007
		US 2005090852 A1	28-04-2005
		WO 2006007090 A2	19-01-2006
