# (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization

International Bureau





(10) International Publication Number WO 2013/009756 A3

(43) International Publication Date 17 January 2013 (17.01.2013)

(51) International Patent Classification: *A61B 17/285* (2006.01) *A61B 17/3211* (2006.01)

(21) International Application Number:

PCT/US2012/046083

(22) International Filing Date:

10 July 2012 (10.07.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 13/180,018

11 July 2011 (11.07.2011)

US

(71) Applicant (for all designated States except US): COVIDIEN LP [US/US]; 15 Hampshire Street, Mansfield, Massachusetts 02048 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): COLLINGS, Chase [US/US]; 10573 Friar Drive, 1A, Hayden, Idaho 83835 (US). SIMS, Grant T. [US/US]; 8 Holly Oak, Littleton, Colorado 80127 (US). TOWNSEND, Jeffrey R. [US/US]; 3434 Cheetah Drive, Loveland, Colorado 80537 (US).

- (74) Agent: BEATON, Thomas A.; Attn: IP Legal, 5920 Longbow Dr., Boulder, Colorado 80301 (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, 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, 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).

[Continued on next page]

(54) Title: SURGICAL FORCEPS

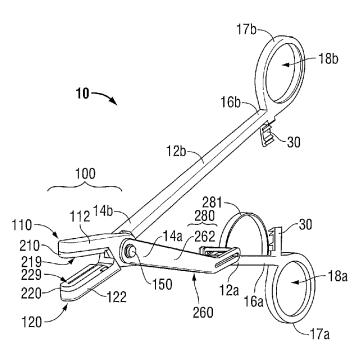


FIG. 1

(57) Abstract: A forceps includes a pair of shafts each having a jaw member disposed at a distal end thereof. One (or both) of the shafts is moveable relative to the other about a pivot pin between a spaced-apart position and an approximated position to move the jaw members between an open position and a closed position. A knife assembly includes a knife blade mechanically keyed to the pivot pin and moveable between an initial position, wherein the knife blade is disposed within one of the jaw members, and an extended position, wherein the knife blade extends between the jaw members. An actuator arm(s) is mechanically keyed to the pivot pin and extends therefrom. The actuator arm(s) is moveable between an un-actuated position and an actuated position to rotate the pivot pin relative to the jaw members to move the knife blade between the initial position and the extended position.





Published:

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

25 April 2013

with international search report (Art. 21(3))

International application No. PCT/US2012/046083

### A. CLASSIFICATION OF SUBJECT MATTER

# A61B 17/285(2006.01)i, A61B 17/3211(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) A61B 17/285; A61B 18/14; A61B 17/22; A61B 17/44; A61B 17/32; A61B 18/18; A61D 1/02

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

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: FORCEP, BLADE, KNIFE, PIVOT and SPRING

# C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	US 2009-0112246 A1 (DIETER WEISSHAUPT et al.) 30 April 2009 See abstract, paragraphs [0062] - [0084] and figures 1 - 4	1,7-15,18-19 2-3 4-6,16-17,20
Y A	US 2002-0058965 A1 (EMMET JOSEPH HOWARD PETER ANDREWS) 16 May 2002 See abstract, paragraphs [0043] - [0047] and figures 1 - 13	2-3 1,4-20
X A	US 2011-0004208 A1 (CSABA TRUCKAI et al.) 6 January 2011 See abstract, paragraphs [0043] - [0087] and figures 1 - 22	18 1-17, 19-20
A	WO 95-22943 A1 (MEDL, MAXIMILIAN, J.) 31 August 1995 See abstract, page 9, line 9 - page 14, line 24 and figures 1 - 4	1-20
A	US 6174309 B1 (THOMAS A. WRUBLEWSKI et al.) 16 January 2001 See abstract, column 3, line 15 - column 8, line 36 and figures 1 - 7	1-20

		Further	documents	are	listed	in	the	conti	nuatior	ιof	`Box	C.
--	--	---------	-----------	-----	--------	----	-----	-------	---------	-----	------	----

 $\boxtimes$ 

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 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
28 JANUARY 2013 (28.01.2013)

Date of mailing of the international search report

31 JANUARY 2013 (31.01.2013)

Name and mailing address of the ISA/KR



Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

Hong, Young Uk

Telephone No. 82-42-481-8465



# INTERNATIONAL SEARCH REPORT

International application No.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009-0112246 A1	30.04.2009	DE 102007053359 B3 US 8177804 B2	04.06.2009 15.05.2012
US 2002-0058965 A1	16.05.2002	AT 236580 T AU 2000-46063 A1 AU 2000-46063 B2 CA 2373528 A1 DE 60002059 D1 DE 60002059 T2 EP 1175179 A1 EP 1175179 B1 ES 2197095 T3 JP 2002-543869 A JP 2002-543869 T JP 2002-543869 U US 7153321 B2 WO 00-67649 A1	15.04.2003 21.11.2000 05.06.2003 16.11.2000 15.05.2003 19.02.2004 30.01.2002 09.04.2003 01.01.2004 24.12.2002 24.12.2002 24.12.2002 26.12.2006 16.11.2000
US 2011-0004208 A1	06.01.2011	US 2005-0159745 A1 US 7632269 B2	21.07.2005 15.12.2009
WO 95-22943 A1	31.08.1995	CA 2161248 A1 DE 4406045 C1 EP 0695151 A1 EP 0695151 A1 WO 95-22943 A1	31.08.1995 31.08.1995 11.03.1998 07.02.1996 31.08.1995
US 6174309 B1	16.01.2001	WO 00-47124 A1	17.08.2000