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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
28 July 2011 (28.07.2011)

PCT

(10) International Publication Number
WO 2011/090986 A3

(51) International Patent Classification:
A61M 1/00 (2006.01) *A61M 39/10* (2006.01)
A61F 13/02 (2006.01) *A61M 27/00* (2006.01)
A61L 15/58 (2006.01)

(21) International Application Number:
PCT/US2011/021652

(22) International Filing Date:
19 January 2011 (19.01.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/296,806 20 January 2010 (20.01.2010) US

(71) Applicant *(for all designated States except US)*: **KCI LICENSING, INC.** [US/US]; P.O. Box 659508, San Antonio, TX 78265 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **LOCKE, Christopher** [GB/GB]; P.O. Box 659508, San Antonio, TX 78265 (US). **HALL, Colin** [GB/GB]; P.O. Box 659508, San Antonio, TX 78265 (US). **TOUT, Aidan, M.** [GB/GB]; P.O. Box 659508, San Antonio, TX 78265 (US). **SLACK, Paul** [CA/US]; P.O. Box 659508, San Antonio, TX 78265 (US). **LAWHORN, Tom** [US/US]; P.O. Box 659508, San Antonio, TX 78265 (US). **ROBINSON, Tim** [GB/GB]; P.O. Box 659508, San Antonio, TX 78265 (US).

(74) Agent: **ROBINSON, Eagle, H.**; Fulbright & Jaworski L.L.P, 600 Congress Ave., Suite 2400, Austin, TX 78701 (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, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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))*

[Continued on next page]

(54) Title: WOUND-CONNECTION PADS FOR FLUID INSTILLATION AND NEGATIVE PRESSURE WOUND THERAPY, AND SYSTEMS AND METHODS

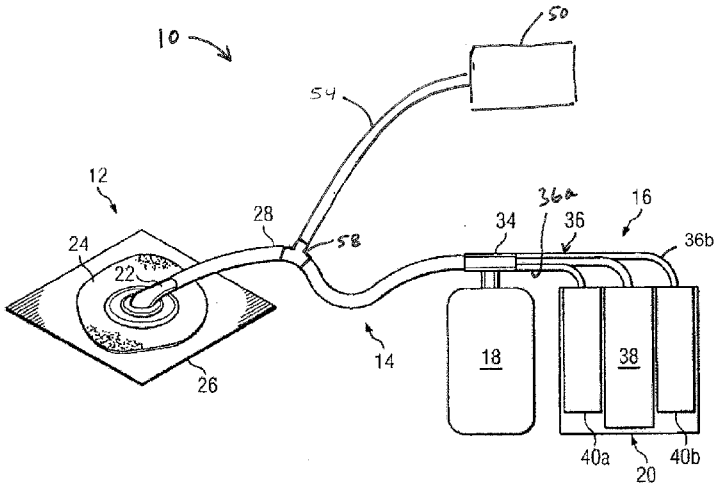

FIG. 1

(57) Abstract: Connection pads for coupling fluid-instillation and negative pressure wound therapy (NPWT) apparatuses to wound dressing, and methods and wound dressings for breaching a drape after coupling a wound dressing to a fluid-instillation and/or NPWT apparatus.

WO 2011/090986 A3

— *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:
17 November 2011

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/021652

A. CLASSIFICATION OF SUBJECT MATTER

A61M 1/00(2006.01)i, A61F 13/02(2006.01)i, A61L 15/58(2006.01)i, A61M 39/10(2006.01)i, A61M 27/00(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)

A61M 1/00; A61F 13/00; A61H 7/00; A61M 27/00

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: wound dressing, pressure sensor, fluid delivery, lumen, cavity and similar terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	US 7520872 B2 (BIGGIE et al.) 21 April 2009 See the abstract, column 5, line 61 - column 6, line 6, column 10, line 62 - column 12, line 5, column 13, lines 16 - 28, column 16, lines 7-23, claims 1-11, and figures 1, 4, 11, 20-21.	29-51 1-28,52-69
Y A	US 2007-0219512 A1 (HEATON et al.) 20 September 2007 See the abstract, claim 11, paragraphs [0045] - [0065], and figures 1-10.	29-51 1-28,52-69
A	US 7316672 B1 (HUNT et al.) 08 January 2008 See the abstract, column 4, lines 1-19, column 5, lines 23-48, claim 1, and figures 1-6.	1-69
A	US 2007-0118096 A1 (SMITH et al.) 24 May 2007 See the abstract, paragraph [0064], claims 1, 25, 27, 38, and figure 4.	1-69

☐ 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 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	Date of mailing of the international search report
09 SEPTEMBER 2011 (09.09.2011)	**09 SEPTEMBER 2011 (09.09.2011)**
Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer HWANG, Yun Koo Telephone No. 82-42-481-5715

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/021652

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.: 70-73
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 70-73 pertain to methods for treatment of human body by surgery or therapy, and thus relate to subject matter which this International Searching Authority is not required to search under Article 17(2)(a)(i) and Rule 39.1(iv) PCT.

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:

1. ☐ As all required addtional 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 fee, this Authority did not invite payment of any additional fee.

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.:

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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/021652

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 7520872 B2	21.04.2009	US 2004-0054338 A1	18.03.2004
		US 2005-0137539 A1	23.06.2005
		US 2005-0261643 A1	24.11.2005
		US 2009-0204085 A1	13.08.2009
		US 6979324 B2	27.12.2005
		US 7731702 B2	08.06.2010
US 2007-0219512 A1	20.09.2007	AU 2007-212480 A1	16.08.2007
		AU 2007-212480 B2	29.04.2010
		AU 2007-225048 A1	20.09.2007
		AU 2007-225049 A1	20.09.2007
		AU 2007-225049 B2	25.11.2010
		AU 2007-225050 A1	20.09.2007
		AU 2007-225051 A1	20.09.2007
		AU 2007-225053 A1	20.09.2007
		AU 2007-225053 B2	23.09.2010
		AU 2009-332991 A1	08.07.2010
		AU 2009-335686 A1	15.07.2010
		AU 2010-204471 A1	19.08.2010
		CA 2635617 A1	16.08.2007
		CA 2644864 A1	20.09.2007
		CA 2644865 A1	20.09.2007
		CA 2644898 A1	20.09.2007
		CA 2644901 A1	20.09.2007
		CA 2646241 A1	20.09.2007
		CN 101378796 A	04.03.2009
		CN 101437472 A	20.05.2009
		CN 101454044 A	10.06.2009
		CN 101460205 A	17.06.2009
		CN 101563067 A	21.10.2009
		CN 101563118 A	21.10.2009
		EP 1986718 A2	05.11.2008
		EP 1993491 A2	26.11.2008
		EP 1993512 A2	26.11.2008
		EP 1993651 A2	26.11.2008
		EP 1993652 A2	26.11.2008
		EP 1993653 A2	26.11.2008
		IL 193142 D0	03.08.2009
		JP 04719278 B2	08.04.2011
		JP 2009-525776 A	16.07.2009
		JP 2009-529969 A	27.08.2009
		JP 2009-529970 A	27.08.2009
		JP 2009-529971 A	27.08.2009
		JP 2009-529972 A	27.08.2009
		JP 2009-532080 A	10.09.2009
		KR 10-1045751 B1	30.06.2011
		KR 10-1057901 B1	19.08.2011
		KR 10-2008-0104054 A	28.11.2008
		KR 10-2008-0111465 A	23.12.2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		KR 10-2009-0007313 A	16.01.2009
		KR 10-2009-0007315 A	16.01.2009
		KR 2008-0094810 A	24.10.2008
		MX 2008009755 A	05.03.2009
		RU 2008128547 A	20.03.2010
		TW 200803940 A	16.01.2008
		TW 200808392 A	16.02.2008
		TW 200808393 A	16.02.2008
		TW 200808394 A	16.02.2008
		TW 200808396 A	16.02.2008
		TW 200836785 A	16.09.2008
		TW 201006513 A	16.02.2010
		TW 201029630 A	16.08.2010
		TW 201029692 A	16.08.2010
		TW 325328 A	01.06.2010
		TW 328460 A	11.08.2010
		US 2007-0218101 A1	20.09.2007
		US 2007-0219471 A1	20.09.2007
		US 2007-0219489 A1	20.09.2007
		US 2007-0219497 A1	20.09.2007
		US 2007-0219585 A1	20.09.2007
		US 2008-0033324 A1	07.02.2008
		US 2009-0157017 A1	18.06.2009
		US 2009-0306631 A1	10.12.2009
		US 2010-0106118 A1	29.04.2010
		US 2010-0168688 A1	01.07.2010
		US 2010-0168691 A1	01.07.2010
		US 7651484 B2	26.01.2010
		WO 2007-092397 A2	16.08.2007
		WO 2007-092397 A3	18.09.2008
		WO 2007-106589 A2	20.09.2007
		WO 2007-106589 A3	20.09.2007
		WO 2007-106590 A2	20.09.2007
		WO 2007-106590 A3	20.09.2007
		WO 2007-106591 A2	20.09.2007
		WO 2007-106591 A3	20.09.2007
		WO 2007-106592 A2	20.09.2007
		WO 2007-106592 A3	20.09.2007
		WO 2007-106594 A2	20.09.2007
		WO 2007-106594 A3	20.09.2007
		WO 2010-078209 A2	08.07.2010
		WO 2010-078209 A3	08.07.2010
		WO 2010-080667 A1	15.07.2010
US 7316672 B1	08.01.2008	AT 203174 T	15.08.2001
		AT 246945 T	15.08.2003
		CA 2237606 A1	22.05.1997
		CA 2237606 C	08.08.2006
		CA 2551340 A1	22.05.1997
		CA 2551340 C	30.10.2007

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/US2011/021652

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		DE 19681649 T0	03.12.1998
		DE 29623482 U1	23.07.1998
		DE 69613997 D1	23.08.2001
		DE 69613997 T2	31.10.2001
		DE 69629507 D1	18.09.2003
		DE 69629507 T2	24.06.2004
		DK 1088569 T3	08.12.2003
		DK 865304 T3	24.09.2001
		EP 0865304 A1	23.09.1998
		EP 0865304 A1	14.03.2001
		EP 0865304 B1	18.07.2001
		EP 1088569 A2	04.04.2001
		EP 1088569 A3	18.04.2001
		EP 1088569 B1	13.08.2003
		ES 2159050 T3	16.09.2001
		ES 2204800 T3	01.05.2004
		GB 0005381 D0	26.04.2000
		GB 2307180 A	21.05.1997
		GB 2307180 B	14.06.2000
		GB 2336546 A	27.10.1999
		GB 2336546 B	14.06.2000
		GB 2344531 A	14.06.2000
		GB 2344531 B	26.07.2000
		GB 9523253 D0	17.01.1996
		GB 9623743 D0	08.01.1997
		GB 9919710 D0	20.10.1999
		GR 3036872 T3	31.01.2002
		HK 1012589 A1	02.03.2001
		HK 1029536 A1	14.12.2001
		JP 03859085 B2	20.12.2006
		JP 2000-500992 A	02.02.2000
		PT 1088569 E	31.12.2003
		PT 865304 E	30.01.2002
		US 06142982A A	07.11.2000
		US 2007-0167927 A1	19.07.2007
		US 2010-0160878 A1	24.06.2010
		US 7186244 WD	06.03.2007
		US 7670323 B2	02.03.2010
		WO 97-18007 A1	22.05.1997
US 2007-0118096 A1	24.05.2007	EP 2010245 A1	07.01.2009
		US 2008-0140029 A1	12.06.2008
		US 2010-0121287 A1	13.05.2010
		US 7648488 B2	19.01.2010
		WO 2007-062024 A1	31.05.2007