

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
27 November 2008 (27.11.2008)

PCT

(10) International Publication Number  
**WO 2008/144447 A3**

(51) International Patent Classification:

A61M 39/10 (2006.01) A61M 39/26 (2006.01)  
A61M 39/14 (2006.01)

(21) International Application Number:

PCT/US2008/063797

(22) International Filing Date: 15 May 2008 (15.05.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/938,428 16 May 2007 (16.05.2007) US  
60/978,697 9 October 2007 (09.10.2007) US  
61/042,016 3 April 2008 (03.04.2008) US  
12/117,568 8 May 2008 (08.05.2008) US

(71) Applicant (for all designated States except US): **ICU MEDICAL, INC.** [US/US]; 951 Calle Amanecer, San Clemente, CA 92673 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **FANGROW, Thomas, F.** [US/US]; 24595 Alcoba Drive, Mission

Viejo, CA 92691 (US). **LOPEZ, George, A.** [US/US]; 66 Emerald Bay, Laguna Beach, CA 92651 (US).

(74) Agent: **DELANEY, Karoline**; Knobbe Martens Olson & Bear, LLP, Fourteenth Floor, 2040 Main Street, Irvine, CA 92614 (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, 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, 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).

[Continued on next page]

(54) Title: MEDICAL CONNECTOR WITH CLOSEABLE MALE LUER

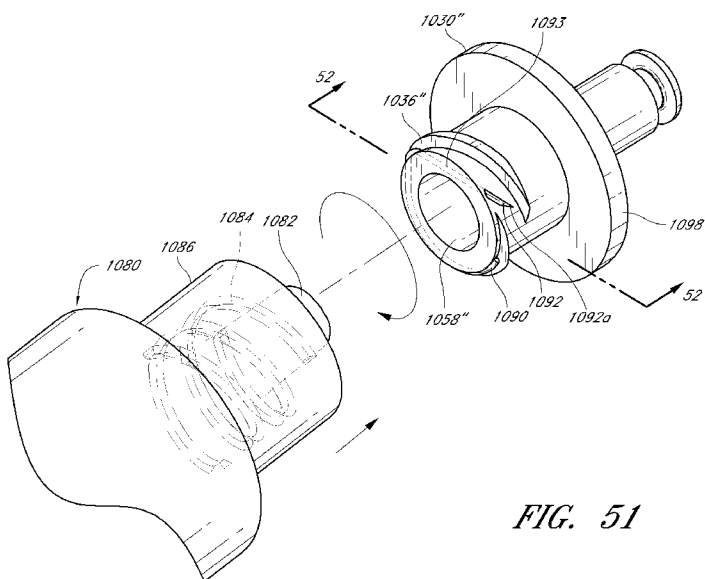


FIG. 51

(57) Abstract: A luer connector including a rigid housing having a first end and a second end. The housing further including a rigid tubular male portion at the first end, a rigid tubular female portion at the second end, and a longitudinal opening therethrough. The male portion is configured to be engageable with a female connector. The female portion is configured to be engageable with a male connector and to prevent the disengagement of the male connector from the female portion. In some embodiments, the female portion is configured to maintain a fixed rotational position when the male connector is being threaded therewith, but to rotate with the male connector once the male connector has become fully engaged with the female portion so as to prevent the male connector from becoming unthreaded from the female portion.

WO 2008/144447 A3



**Declaration under Rule 4.17:**

— *of inventorship (Rule 4.17(iv))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

**Published:**

— *with international search report*

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

26 February 2009

# INTERNATIONAL SEARCH REPORT

International application No PCT/US2008/063797
---

**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. A61M39/10 A61M39/14 A61M39/26

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

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 practical, search terms used)  
 EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2007/008511 A (ICU MEDICAL INC [US]; FANGROW THOMAS F [US]) 18 January 2007 (2007-01-18) abstract	1-3, 8-15,21
Y	US 2006/157984 A1 (ROME GUY T [US] ET AL) 20 July 2006 (2006-07-20) abstract figures 3a-4b paragraph [0075] - paragraph [0079]	1-3, 8-15,21
A	US 2006/149213 A1 (RAYBUCK JOHN [US]) 6 July 2006 (2006-07-06) abstract	1
A	US 2002/082586 A1 (FINLEY MICHAEL J [US] ET AL) 27 June 2002 (2002-06-27) abstract	1
	----- -/--	

Further documents are listed in the continuation of Box C.       See patent family annex.

\* Special categories of cited documents :

<p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*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)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p>	<p>*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</p> <p>*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</p> <p>*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.</p> <p>*Z* document member of the same patent family</p>
--	--

Date of the actual completion of the international search  18 December 2008	Date of mailing of the international search report  30/12/2008
---	--

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  Guidoïn, M
--	--------------------------------------

## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2008/063797

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02/056946 A (TECHNOFLEX SA [FR]; CURUTCHARRY JEAN [FR]) 25 July 2002 (2002-07-25) abstract figures 2-6 page 4, line 3 - page 5, line 19 -----	1,8-14, 21
A	US 4 538 836 A (KRUETTEN VIKTOR [DE]) 3 September 1985 (1985-09-03) the whole document -----	1,8-14, 21
A	GB 2 353 078 A (NMT GROUP PLC [GB]) 14 February 2001 (2001-02-14) the whole document -----	1,8-14, 21
A	US 4 150 845 A (KOPACZ BERNARD F [US] ET AL) 24 April 1979 (1979-04-24) abstract figures 6,7 column 3, line 58 - column 4, line 8 -----	1,8-14, 21
A	WO 94/22520 A (MEDRAD INC [US]) 13 October 1994 (1994-10-13) abstract figures 1-5 page 6, line 2 - page 9, line 21 -----	16,22
A,P	EP 1 917 996 A (CODAN HOLDING GMBH [DE]) 7 May 2008 (2008-05-07) abstract -----	16,22

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2008/063797

## 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 allsearchable 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.:

### 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: 1-15,21

A luer connector comprising a first end portion comprising a male member and a second end portion comprising a female member, the female member configured to define at least one arrangement wherein the female member allows a male connector to rotate in both directions and a second arrangement wherein the female member prevents the male connector to rotate in the first or second direction, the female member being configured to change from the first to the second arrangement when the male connector is substantially fully engaged with the female connector.

---

2. claims: 16-20,22

A luer connector comprising a tubular male member at the first end portion of the housing and a tubular female member at the second end of the housing, the female member having two members connected through an engaging surface, and for which either of the engaging surface of the first or second member is configured to break away when a predetermined amount of manual torque is applied to the first member relative to the second member.

---

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/063797

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007008511 A	18-01-2007	US 2007088292 A1	19-04-2007
		US 2007088293 A1	19-04-2007
		US 2007088324 A1	19-04-2007
		US 2007088325 A1	19-04-2007
		US 2007088294 A1	19-04-2007
		US 2007017583 A1	25-01-2007
US 2006157984 A1	20-07-2006	US 2008150281 A1	26-06-2008
US 2006149213 A1	06-07-2006	AT 413901 T	15-11-2008
		AU 2005323127 A1	13-07-2006
		CA 2593373 A1	13-07-2006
		EP 1835961 A1	26-09-2007
		JP 2008526308 T	24-07-2008
		NO 20073869 B	24-09-2007
WO 2006073778 A1	13-07-2006		
US 2002082586 A1	27-06-2002	NONE	
WO 02056946 A	25-07-2002	AT 279226 T	15-10-2004
		DE 60201575 D1	18-11-2004
		DE 60201575 T2	16-02-2006
		EP 1351727 A1	15-10-2003
		FR 2819418 A1	19-07-2002
		US 2004116891 A1	17-06-2004
US 4538836 A	03-09-1985	DE 3114937 A1	28-10-1982
		EP 0063333 A2	27-10-1982
		JP 1636662 C	31-01-1992
		JP 2060884 B	18-12-1990
		JP 58013216 A	25-01-1983
GB 2353078 A	14-02-2001	NONE	
US 4150845 A	24-04-1979	NONE	
WO 9422520 A	13-10-1994	US 5591143 A	07-01-1997
EP 1917996 A	07-05-2008	AU 2007229375 A1	15-05-2008
		CA 2606834 A1	30-04-2008
		NZ 562659 A	31-07-2008
		US 2008103485 A1	01-05-2008