

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 May 2006 (26.05.2006)

PCT

(10) International Publication Number
WO 2006/055745 A3

- (51) International Patent Classification:
A61M 1/10 (2006.01)
- (21) International Application Number:
PCT/US2005/041743
- (22) International Filing Date:
16 November 2005 (16.11.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/522,874 16 November 2004 (16.11.2004) US
- (71) Applicant (for all designated States except US): **MICROMED CARDIOVASCULAR, INC.** [US/US]; 8965 Interchange Drive, Houston, TX 77054 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **MORELLO, Gino** [US/US]; MICROMED CARDIOVASCULAR, 8965 Interchange Drive, Houston, TX 77054 (US).
- (74) Agent: **GLEASON, Mark; LOCKE LIDDELL & SAPP**, 600 Travis, Houston, TX 77002 (US).

(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, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

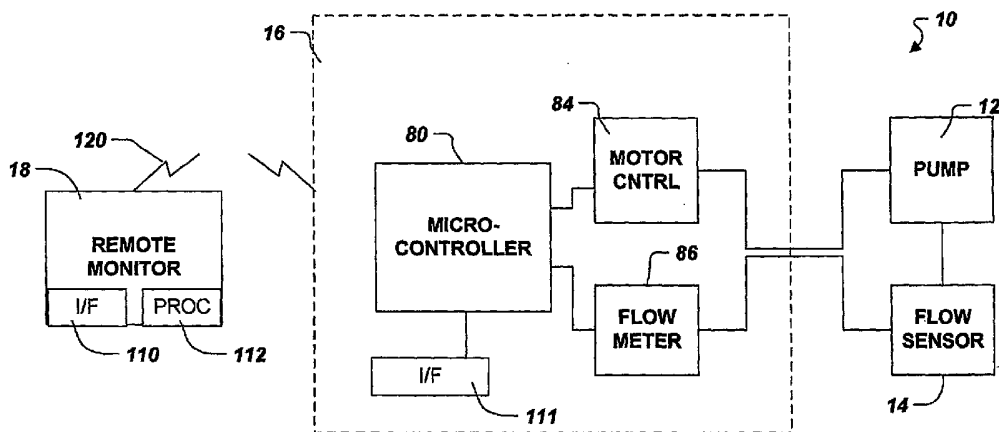
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, 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

(88) Date of publication of the international search report:
31 August 2006

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.

(54) Title: REMOTE DATA MONITOR FOR HEART PUMP SYSTEM



(57) Abstract: A pump control system includes a controller module for controlling a pump, such as an implantable blood pump. A remote monitor is adapted to communicate with the controller module via a wireless communications medium, such as a low-power radio s frequency link. The remote monitor provides a user interface similar or identical to the controller module, providing a user the ability to remotely monitor the pump's performance and to respond to alarms.

WO 2006/055745 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/41743

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - (2006.01) A61M 1/10

USPC - 623/3.1

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) - (2006.01) A61N 1/362, 1/36; A61M 1/10

USPC - 600/16,17; 623 / 3.1

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)

USPTO EAST System (US, USPG-PUB, EPO, JPO, DERWENT), MicroPatent, DialogPro

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,149,683 A (LANCISI et al) 21 November 2000 (21.11.2000) entire document	1, 4, 5, 7-10, 12, 13, 15
Y		2, 6, 11, 14
Y	US 2003/0069465 A1 (BENKOWSKI et al) 10 April 2003 (10.04.2003) entire document	2, 6, 11, 14
A	US 2004/0039243 A1 (BEARNSON et al) 26 February 2004 (26.02.2004) entire document	1, 2, 4-15
A	US 4,370,983 A (LICHTENSTEIN) 01 February 1983 (01.02.1983) columns 2-4	1, 2, 4-15
A	US 3,955,557 A (TAKAGI) 11 May 1976 (11.05.1976), see columns 1-4	1, 2, 4-15

 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

28 February 2006 (28.02.2006)

Date of mailing of the international search report

12 JUN 2006

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

Telephone No. 571-272-7774