

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
6 March 2003 (06.03.2003)

PCT

(10) International Publication Number
WO 03/018112 A3

- (51) International Patent Classification⁷: A61N 1/05, 1/39
- (21) International Application Number: PCT/IB02/03501
- (22) International Filing Date: 26 August 2002 (26.08.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/940,340 27 August 2001 (27.08.2001) US
- (71) Applicant: CAMERON HEALTH, INC. [US/US]; 905
Calle Amanecer, Suite 300, San Clemente, CA 92673 (US).
- (72) Inventors: BARDY, Gust, H.; 2518 Constance Drive
West, Seattle, WA 98199-3017 (US). CAPPATO, Ric-
cardo; Via Fulvio Testi, 22, I-44100 Ferrara (IT).
RISSMAN, William, J.; 6 Mackenzie Lane, Coto de
Caza, CA 92679 (US). SANDERS, Gary, H.; 3 Danta,
Rancho Santa Margarita, CA 92688 (US).

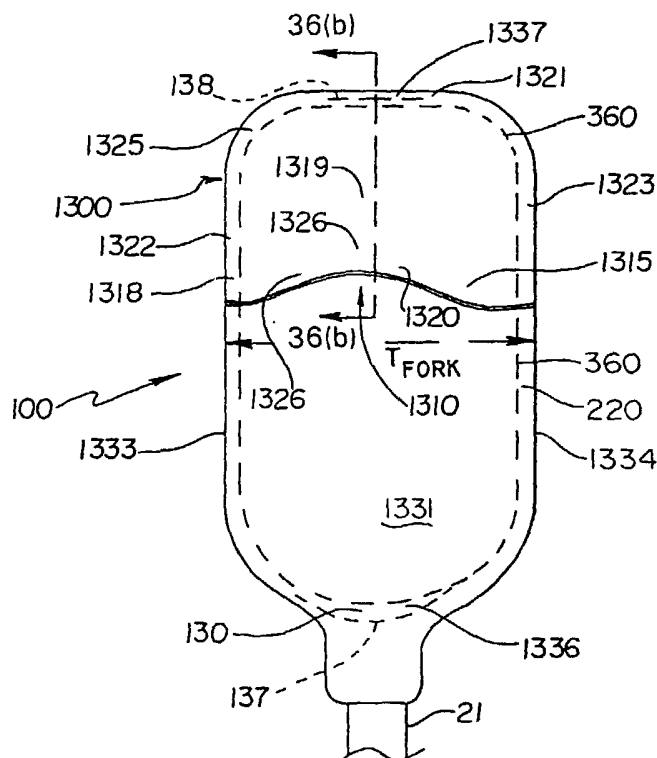
(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

[Continued on next page]

(54) Title: SUBCUTANEOUS ELECTRODE FOR TRANSTHORACIC CONDUCTION WITH LOW-PROFILE INSTALLATION APPENDAGE AND METHOD OF DOING SAME



(57) Abstract: One embodiment of the present invention provides a lead electrode assembly for subcutaneous implantation including an electrode; a riser coupled to the electrode; and a head coupled to the riser.



WO 03/018112 A3



(88) Date of publication of the international search report:
27 November 2003

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.

(15) Information about Corrections:

Previous Corrections:

see PCT Gazette No. 39/2003 of 25 September 2003, Section II

see PCT Gazette No. 23/2003 of 5 June 2003, Section II

INTERNATIONAL SEARCH REPORT

PCT/IB 02/03501

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 A61N1/05 A61N1/39

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 7 A61N

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.
X	US 4 424 818 A (DORING JOHN ET AL) 10 January 1984 (1984-01-10) column 3, line 20 - line 62; figures 3-5 ---	245-263
A	US 5 690 648 A (HOWELL THOMAS A ET AL) 25 November 1997 (1997-11-25) column 4, line 61 -column 5, line 5 ---	1, 62, 123, 184, 274
A	US 4 765 341 A (MOWER MORTON M ET AL) 23 August 1988 (1988-08-23) column 6, line 20 - line 33 ---	1, 62, 123, 184, 274
A	US 5 391 200 A (KENKNIGHT BRUCE H ET AL) 21 February 1995 (1995-02-21) column 4, line 49 - line 65 ---	1, 62, 123, 184, 274
	-/--	

Further documents are listed in the continuation of box C.

Patent family members are listed in 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 document 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.
- *Z* document member of the same patent family

Date of the actual completion of the international search

13 February 2003

Date of mailing of the international search report

20/02/2003

Name and mailing address of the ISA
 European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Petter, E

INTERNATIONAL SEARCH REPORT

PCT/IB 02/03501

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 517 494 A (CARDIAC PACEMAKERS) 9 December 1992 (1992-12-09) abstract -----	1, 62, 123, 184, 274

INTERNATIONAL SEARCH REPORT

PCT/IB 02/03501

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.: 264-273
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
- 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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

- 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 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.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

PCT/IB 02/03501

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4424818	A	10-01-1984	AU 557967 B2	15-01-1987
			AU 1150083 A	25-08-1983
			CA 1200288 A1	04-02-1986
			DE 3363862 D1	10-07-1986
			EP 0087130 A1	31-08-1983
US 5690648	A	25-11-1997	US 5464447 A	07-11-1995
			CA 2117618 A1	29-07-1995
			EP 0665030 A2	02-08-1995
			JP 7213623 A	15-08-1995
			US 5618287 A	08-04-1997
US 4765341	A	23-08-1988	NONE	
US 5391200	A	21-02-1995	AT 176404 T	15-02-1999
			AU 653107 B2	15-09-1994
			AU 4749493 A	28-04-1994
			CA 2107246 A1	31-03-1994
			DE 69323374 D1	18-03-1999
			DE 69323374 T2	10-06-1999
			EP 0590431 A1	06-04-1994
			JP 2744879 B2	28-04-1998
			JP 6277299 A	04-10-1994
			EP 0517494	A
AT 142117 T	15-09-1996			
CA 2070514 A1	08-12-1992			
DE 69213336 D1	10-10-1996			
DE 69213336 T2	24-04-1997			
EP 0517494 A2	09-12-1992			
HK 1007971 A1	30-04-1999			
JP 6339532 A	13-12-1994			