### (19) World Intellectual Property Organization International Bureau





(43) International Publication Date 23 February 2006 (23.02.2006)

(10) International Publication Number WO 2006/020696 A3

(51) International Patent Classification':

A61B 18/18

(21) International Application Number:

PCT/US2005/028392

(22) International Filing Date: 10 August 2005 (10.08.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

10/915,310 10 August 2004 (10.08.2004)

- (71) Applicant (for all designated States except US): MEDTRONIC, INC. [US/US]; MS LC340, Medtronic Parkway, Minneapolis, Minnesota 55432
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SWOYER, John, M. [US/US]; 15876 Ilex Street Northwest, Andover, Minnesota 55304 (US). CHRISTOPHERSON, Mark, A. [US/US]; 4100 Reiland Lane, Shoreview, Minnesota 55126 (US). TROPSHA, Yelena, G. [US/US]; 3240 Olive Lane North, Plymouth, Minnesota 55447 (US). WOESSNER, Julie, M. [US/US]; 445 Wacouta Street Number 305, St. Paul, Minnesota 55101 (US).

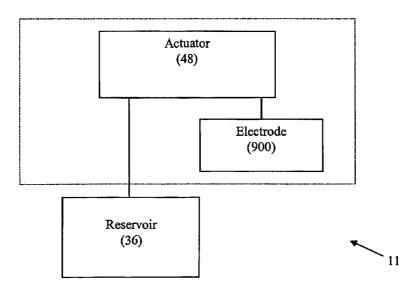
- (74) Agent: NELSON, Anna, M.; MS LC340, 710 Medtronic Parkway, Minneapolis, Minnesota 55432, (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, 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).

#### **Declarations under Rule 4.17:**

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: TUNA DEVICE WITH INTEGRATED SALINE RESERVOIR



(57) Abstract: Methods and apparatus for ablating a target tissue are discussed. Such methods and apparatus include those that simplify tissue ablation. For example, a tissue ablation device having an actuator, such as a trigger mechanism, coupled to a power source and an electrode is discussed. A single step of engaging the actuator causes the electrode to be introduced into the target tissue and causes energy to be delivered from the power supply to the tissue via the electrode. Devices that include an electrode actuator for causing the electrode to be introduced into the target tissue and a fluid actuator for causing the fluid to flow to the target tissue are also discussed. Methods of causing the electrode to be introduced into the target tissue and fluid to flow to the target tissue with a single step and more than one step are also discussed.



# WO 2006/020696 A3



— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

### Published:

— with international search report

(88) Date of publication of the international search report: 4 May 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.

## INTERNATIONAL SEARCH REPORT

International application No. PCT/US05/28392

A. CLASSIFICATION OF SUBJECT MATTER IPC(7): A61B 18/18 US: 606/41; 607/104 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) US: 606/39-41, 607/99, 607/104; IPC8: A61B 18/18			
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)  MicroPatent; DialogPro;			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where a	appropriate, of the relevant passages	Relevant to claim No.
<u>x</u>   u	JS 5,334,193 A (NARDELLA) 02 August 1994 (02.08	3.1994) entire document	61, 62, 66-80, 98-112
Y			1-12, 17-44, 48-53, 57- 60, 63-65, 81-93, 97-112
Υ υ	US 5,370,675 A (EDWARDS) 06 December 1994 (06.12.1994) entire document		18-42
A U	US 6,328,393 B1 (Lin et al.) 29 May 2001 (29.05.2001) entire document		23-41
A   W	WO 03/005918 A1 (GOETZ) 23 January 2003 (23.01.2003) entire document		1-43
Y U	US 5,762,626 A (LUNDQUIST) 9 June 1998 (09.06.1998) See entire document		1-13, 17, 32, 42-44, 48- 53, 57-60, 81-93, 97
Y US 2002/0058933 A1 (CHRISTOPHERSON) 16 May 2002 (16.05.2002) entire document			63-65
Further documents are listed in the continuation of Box C.		See patent family annex.	
<ul> <li>Special categories of cited documents:</li> <li>"A" document defining the general state of the art which is not considered to be of particular relevance</li> </ul>		"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	
"E" earlier appl filing date	lication or patent but published on or after the international	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive	
"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)		"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is	
"O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than		combined with one or more other such documents, such combination being obvious to a person skilled in the art	
the priority date claimed		& document member of the same patent family	
Date of the actual completion of the international search 06 December 2005		Date of mailing of the international search report	
		08FEB 2006	
Name and mailing address of the ISA/US lail Stop PCT, Attn: ISA/US, Commissioner for Patents		Authorized officer:	
.O. Box 1450, Alexandria, Virginia 22313-1450 Pacsimile No. 571-273-3201		Blaine R. Copenheaver Telephone No. 571-272-7774	