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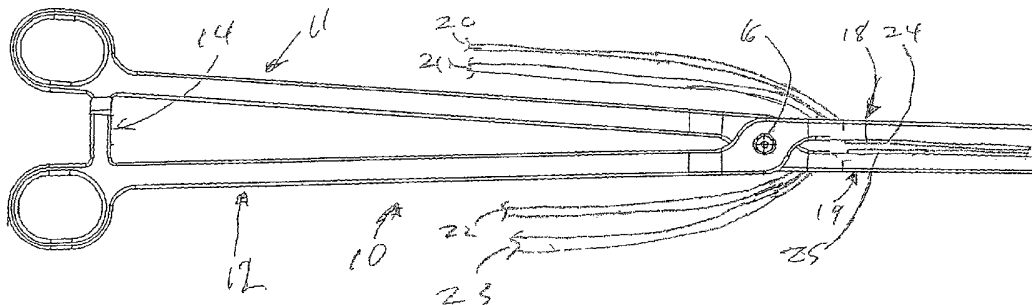
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- (21) International Application Number: PCT/US02/13166 (74) Agents: **LATHAM, Daniel, W.** et al.; 710 Medtronic Parkway NE, Minneapolis, MN 55432-5601 (US).
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- (71) Applicant: **MEDTRONIC, INC.** [US/US]; LC 340, 710 Medtronic Parkway, Minneapolis, MN 55432 (US). (88) Date of publication of the international search report: 6 March 2003
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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: ABLATION SYSTEM AND METHOD OF USE



(57) Abstract: A system and method for creating lesions and assessing their completeness or transmural. Assessment of transmural of a lesion is accomplished by monitoring the impedance of the tissue to be ablated. Rather than attempting to detect a desired drop or a desired increase impedance, completeness of a lesion is detected in response to the measured impedance remaining at a stable level for a desired period of time, referred to as an impedance plateau. The mechanism for determining transmural of lesions adjacent individual electrodes or pairs may be used to deactivate individual electrodes or electrode pairs, when the lesions in tissue adjacent these individual electrodes or electrode pairs are complete, to create an essentially uniform lesion along the line of electrodes or electrode pairs, regardless of differences in tissue thickness adjacent the individual electrodes or electrode pairs.



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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/13166

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 A61B18/14 A61B18/12

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 A61B

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	US 6 183 468 B1 (PANESCU DORIN ET AL) 6 February 2001 (2001-02-06) column 7, line 26 - line 39; figure 1	1-14
Y	US 6 096 037 A (HOEY MICHAEL F ET AL) 1 August 2000 (2000-08-01) cited in the application the whole document	1-14
A	US 5 897 552 A (STERN ROGER A ET AL) 27 April 1999 (1999-04-27) column 5, line 63 -column 6, line 62; figure 4	1-14
A	US 5 558 671 A (YATES DAVID C) 24 September 1996 (1996-09-24) cited in the application abstract; figure 12	1-14

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
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- *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

8 November 2002

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 02/13166

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.: 15-28
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

International Application No

PCT/US 02/13166

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6183468	B1	WO 0015130 A2	23-03-2000
US 6096037	A	US 6440130 B1 US 6443952 B1	27-08-2002 03-09-2002
US 5897552	A	US 5688266 A US 5755715 A US 5702386 A US 5906614 A US 5456682 A AU 3067292 A CA 2106410 A1 EP 0566725 A1 JP 8503381 T WO 9308755 A1 US 5651780 A US 5743903 A US 5383874 A	18-11-1997 26-05-1998 30-12-1997 25-05-1999 10-10-1995 07-06-1993 09-05-1993 27-10-1993 16-04-1996 13-05-1993 29-07-1997 28-04-1998 24-01-1995
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