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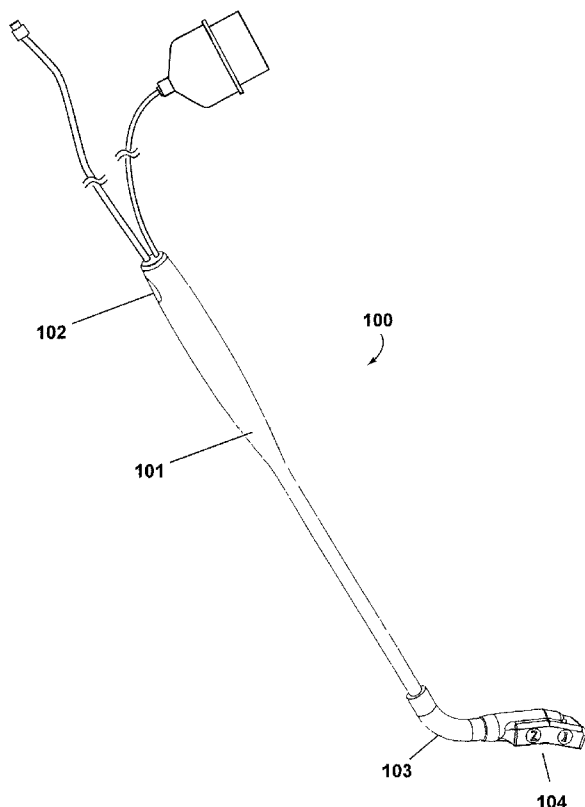
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[Continued on next page]

(54) **Title:** DEVICES AND METHODS FOR ABLATING NEAR AV GROOVE



(57) **Abstract:** The invention encompasses a device, system and methods for ablating tissue, where a ablating device includes an elongated shaft having a flexible distal end, and at least one ablation element and at least one electrode detecting electrical signals of the heart, such that a user can assess whether the at least one ablation element is located on a tissue of the atrioventricular (AV) groove of a patient's heart.

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<p>A CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61 B 18/1 8(2008.04) USPC - 606/49, 606/41 According to International Patent Classification (IPC) or to both national classification and IPC</p>																				
<p>B FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) USPC - 606/49, 606/41</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC - 606/47, 606/21, 606/50, 606/51, 606/52, 604/93 01, 607/101, 128/898</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WEST(PGPB ,USPT ,USOC ,EPAB ,JPAB), Dialog Classic Files 654, 652, 351, 349, 315, 2, 6, 155, 35, 65, Google Patents, USPTO Web Page, Google Scholar epicardial ablation, pacing electrode, meausuring electrode, signal, generator, mapping, AV groove, momtomng, focused ultrasound, axial array, controller, analyze</p>																				
<p>C DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No</th> </tr> </thead> <tbody> <tr> <td>X -- Y</td> <td>US 2004/0054363 A1 (VASKA et al) 18 Mar 2004 (18 03 2004) para [0003], [0007], [0008], [0011], [0012], [0014], [0017], [0019], [0022], [0033], [0035], [0048], [0052], [0154], [0160], [0163], [0177], [0178], [0185], [0197], [0198], [0201], [0278], Fig 4, 28, 87, 88</td> <td>10, 14-16 ----- 1-9, 11-13, 17-23</td> </tr> <tr> <td>Y</td> <td>US 2006/0015165 A1 (BERTALERO et al) 19 Jan 2006 (19 01 2006), para [0002], [0012], [0050], [0137]</td> <td>1-9, 11, 13, 17-20, 22, 23</td> </tr> <tr> <td>Y</td> <td>US 6,049,732 A (PANESCU et al) 11 Apr 2000 (11 04 2000), col 1, ln 46-49, col 2, ln 2-6, ln 20-22, col 5, ln 66 to col 6, ln 2, col 6, ln 42-46</td> <td>12</td> </tr> <tr> <td>Y</td> <td>US 2003/0171743 A1 (TASTO et al) 11 Sep 2003 (11 09 2003), para [0014], [0016], [0102], Fig 6</td> <td>1-9, 20-23</td> </tr> <tr> <td>Y</td> <td>US 5,860,920 A (McGEE et al) 19 Jan 1999 (19 01 1999), col 6, ln 48-55</td> <td>19, 21-23</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No	X -- Y	US 2004/0054363 A1 (VASKA et al) 18 Mar 2004 (18 03 2004) para [0003], [0007], [0008], [0011], [0012], [0014], [0017], [0019], [0022], [0033], [0035], [0048], [0052], [0154], [0160], [0163], [0177], [0178], [0185], [0197], [0198], [0201], [0278], Fig 4, 28, 87, 88	10, 14-16 ----- 1-9, 11-13, 17-23	Y	US 2006/0015165 A1 (BERTALERO et al) 19 Jan 2006 (19 01 2006), para [0002], [0012], [0050], [0137]	1-9, 11, 13, 17-20, 22, 23	Y	US 6,049,732 A (PANESCU et al) 11 Apr 2000 (11 04 2000), col 1, ln 46-49, col 2, ln 2-6, ln 20-22, col 5, ln 66 to col 6, ln 2, col 6, ln 42-46	12	Y	US 2003/0171743 A1 (TASTO et al) 11 Sep 2003 (11 09 2003), para [0014], [0016], [0102], Fig 6	1-9, 20-23	Y	US 5,860,920 A (McGEE et al) 19 Jan 1999 (19 01 1999), col 6, ln 48-55	19, 21-23
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<p>* Special categories of cited documents</p> <table border="0"> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"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</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"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</td> </tr> <tr> <td>"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)</td> <td>"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</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance	"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 application or patent but published on or after the international filing date	"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	"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 combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed									
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<p>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</p>		<p>Authorized officer Lee W Young PCT Helpdesk 571-272-4300 PCT OSP 571 272-7774</p>																		