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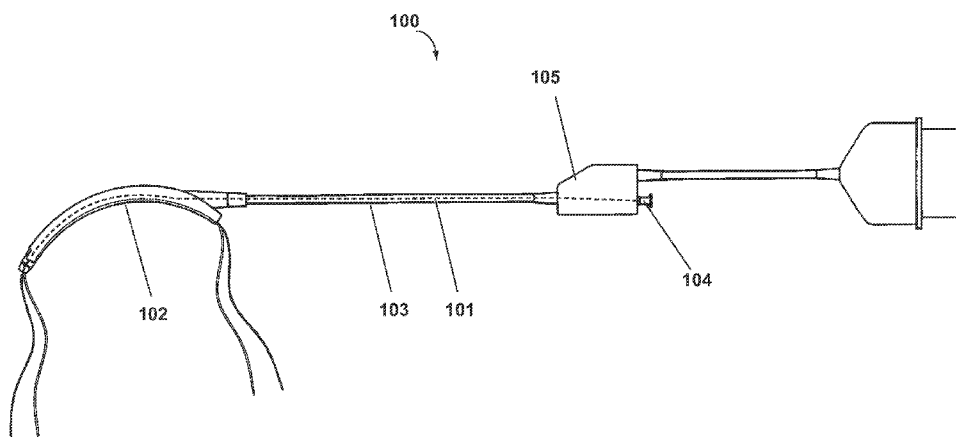
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(54) Title: MEDICAL DEVICE HAVING A BIMATERIAL VALVE



(57) Abstract: Medical devices using fluid or cooling fluids having one or more bimaterial valves positioned at each point of flow control to control the flow of a fluid in response to temperature changes. In particular, devices for ablating tissue having multiple ablation elements or cells include one or more bimaterial valves positioned within or near the ablation cells. The bimaterial valves respond to temperature changes by adjusting the flow rate of a fluid through the valve.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/88424

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61B 18/04 (2008.04)

USPC - 606/27

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): A61B 18/04 (2008.04)

USPC: 606/27

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

IPC(8): A61B 18/04; A61B 18/00; A61M 25/00, 39/00, 39/22 (2008.04)

USPC: 606/27

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

USPTO WEST (USPT, PGPUB, EPAB); ablat\$, tissue, valve, flow, rate, temperature, increase\$, cell, 'first material', 'second material', 'thermal expansion coefficient', catheter, seal\$, 'third material', 'fourth material', membrane, fluid, chamber, lumen, plurality, snap\$
Google Scholar; 'bimaterial valve catheter'

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,017,338 A (BRUCKER, et al.) 25 January 2000 (25.01.2000), [Abstract], col 6, ln 50-65; col 7, ln 48-58; col 7, ln 63-67; col 9, ln 43-52; Fig. 1	1-52
Y	US US 5,899,218 A (DUGAN) 04 May 1999 (04.05.1999), col 5, ln 42-50; col 6, ln 10-20; col 8, ln 15-31; Figs. 7, 8	1-52
Y	US 2005/0000577 A1 (ALMAN, et al.) 06 January 2005 (06.01.2005), Claims 1, 7	7, 8, 31, 45, 46, 51
Y	US 2006/0084966 A1 (MAGUIRE, et al.) 20 April 2006 (20.04.2006), para[0026], [0049], [0212], [0226], Figs. 6B, 15	12-16, 23-27, 42
Y	US 6,425,853 B1 (EDWARDS) 30 July 2002 (30.07.2002), col 6, ln 15-38; Fig. 1	16, 27
Y	US 2006/0184121 A1 (BROCKMAN, et al.) 17 August 2006 (17.08.2006), para[0154], [0155], [0157]	47

☐ Further documents are listed in the continuation of Box C.

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