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(54) Title: ENHANCED MEDICAL DEVICE FOR USE IN BODILY CAVITIES, FOR EXAMPLE AN ATRIUM

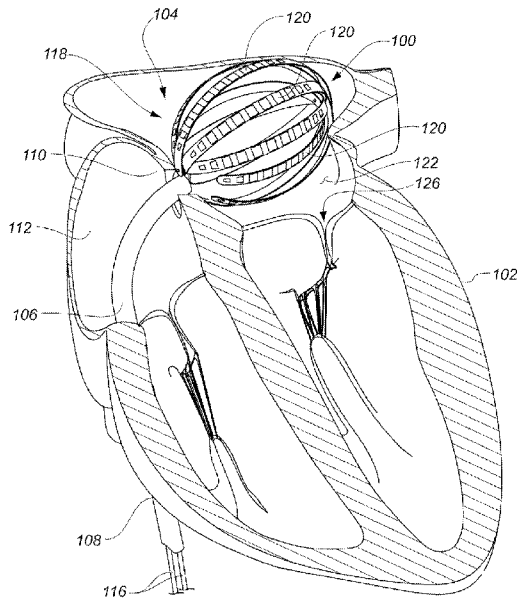


FIG. 1

(57) Abstract: Systems, methods, and devices allow intravascular or percutaneous mapping, orientation or ablation, or combinations thereof in bodily cavities or lumens. A device includes a plurality of elongate members which are moveable between an unexpanded configuration, a bent or coiled stack configuration and an expanded or fanned configuration. The elongate members form a stack arrangement in the unexpanded configuration to fit through a catheter sheath. The elongate members follow respective arcuate or curvilinear paths as advanced from the sheath into the bent or coiled stack configuration, adopting volute, scroll or rho shapes, and may be nested. The elongated members are fanned or radially spaced circumferentially with respect to one another into the expanded or fanned configuration. Transducers carried by elongate members may sense various physiological characteristics of or proximate tissue, for instance temperature, and/or may apply energy to or proximate tissue, for example to perform ablation. The device is retractable.





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DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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**A. CLASSIFICATION OF SUBJECT MATTER***A61B 17/00(2006.01)i, A61B 17/34(2006.01)i, A61M 29/00(2006.01)i, A61B 17/3205(2006.01)i, A61M 25/01(2006.01)i*

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**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

A61B 17/00; A61B 18/04; A61N 1/32; A61F 7/00

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords: heart, expanded, ablation, sensing, mapping, electrodes, coupler, selectively moveable, location, orientation, axis

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A A	US 2001-0021867 A1 (KORDIS, THOMAS F. et al.) 13 September 2001 See abstract; figs. 1, 3-5, 25-28; paragraphs 56-58, 63, 65-70, 77; claims 6, 7, 15.	1-3,5,9,52-54,222 4,6-8,10-51,55-221
A	US 2009-0131930 A1 (GELBART, DANIEL et al.) 21 May 2009 See abstract; figs. 2, 4A-4G, 14; paragraphs 86-88, 94, 165, 167; claims 7, 8, 15.	1-222
A	US 05324284 A (IMRAN, MIR A.) 28 June 1994 See abstract; figs. 1, 2; column 2, lines 33-50; claims 1, 13.	1-222
A	WO 97-17892 A1 (CARDIAC PATHWAYS CORP.) 22 MAY 1997 See abstract; figs. 1, 16, 19, 22, 41, 51; page 4, lines 9, 26; page 13, line 1; page 20, line 31; claims 1, 12, 14.	1-222

 Further documents are listed in the continuation of Box C. See patent family annex.

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