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(54) **DUAL-FUNCTION SENSORS FOR A BASKET CATHETER**

(57) Described embodiments include a catheter, which includes a plurality of splines at a distal end of the catheter, and a plurality of helical conducting elements disposed on the splines. Other embodiments are also described.

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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	US 2015/250424 A1 (GOVARI ASSAF [IL] ET AL) 10 September 2015 (2015-09-10) * paragraphs [0029], [0033], [0036], [0039]; figures 1-3 *	1,2,5,6	INV. A61B5/00 A61B5/042 A61B5/06
X	US 5 411 025 A (WEBSTER JR WILTON W [US]) 2 May 1995 (1995-05-02) * column 4, lines 42-48; figures 1-3 *	1,2,5,6	
X	EP 2 682 157 A1 (PETER OSYPKA STIFTUNG [DE]) 8 January 2014 (2014-01-08) * paragraphs [0007], [0008]; figures 1-4 *	1,2,5,6	
X	US 2015/119670 A1 (MADJAROV JEKO METODIEV [US] ET AL) 30 April 2015 (2015-04-30) * figures 2,2A *	1,2,5,6	
X	US 2015/057519 A1 (BEN-DAVID MATAN [IL] ET AL) 26 February 2015 (2015-02-26) * paragraphs [0240], [0249]; figures 2,3,9-11B *	1-4	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC) A61B
Place of search	Date of completion of the search	Examiner	
The Hague	13 October 2017	Lommel, André	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-6

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-6

A catheter and constructional details concerning the
conductive elements.

2. claims: 7-12

An apparatus comprising circuitry and a processor configured
to generate an anatomical map based on an ECG signal and
magnetic field signal detected by a conducting element.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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		WO 2013136337 A1	19-09-2013

专利名称(译)	用于篮式导管的双功能传感器		
公开(公告)号	EP3254613A3	公开(公告)日	2018-03-07
申请号	EP2017174936	申请日	2017-06-08
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IPC分类号	A61B5/00 A61B5/042 A61B5/06		
CPC分类号	A61B5/0402 A61B5/042 A61B5/6858 A61B5/6869 A61B2562/0209 A61B5/0422 A61B5/062 A61B5/6853 A61B5/7445		
优先权	15/177775 2016-06-09 US		
其他公开文献	EP3254613A2		
外部链接	Espacenet		

摘要(译)

所描述的实施例包括导管，其包括位于导管的远端处的多个花键以及设置在花键上的多个螺旋导电元件。还描述了其他实施例。

		EUROPEAN SEARCH REPORT		Application Number EP 17 17 4936
DOCUMENTS CONSIDERED TO BE RELEVANT				
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE DISCLOSURE (IPC)	
X	US 2015/250424 A1 (GOVARI ASSAF [IL] ET AL) 10 September 2015 (2015-09-10) * paragraphs [0029], [0033], [0036], [0039]; figures 1-3 * -----	1, 2, 5, 6	INV. A61B5/06 A61B5/042 A61B5/06	
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X	US 2015/119670 A1 (MADJAROV JEKO HETODIEV [US] ET AL) 30 April 2015 (2015-04-30) * figures 2, 2A * -----	1, 2, 5, 6		
X	US 2015/057519 A1 (BEN-DAVID MATAN [IL] ET AL) 26 February 2015 (2015-02-26) * paragraphs [0240], [0249]; figures 2, 3, 9-11B * -----	1-4	TECHNICAL FIELD SEARCHED (IPC) A61B	
1. The present search report has been drawn up for all claims.				
Name of applicant The Hague		Date of completion of the search 13 October 2017		Examiner Lomme1, André
CATEGORY OF CITED DOCUMENTS A : particularly relevant if taken alone B : particularly relevant if considered with another document of the same category C : document cited for background information D : intermediate document				
E : theory or principle underlying the invention F : prior art document, but published on, or after, the filing date of the application G : document cited for other reasons H : member of the same patent family, corresponding document				