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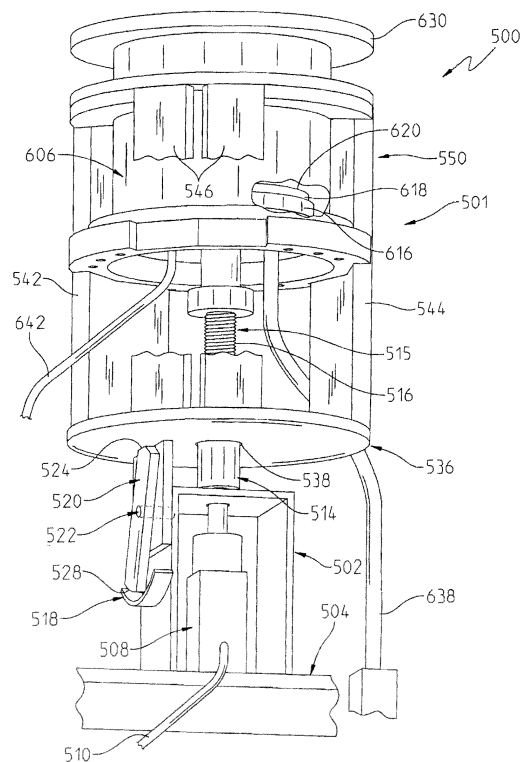
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(54) **Moveable ultrasound element for use in medical diagnostic equipment**

(57) An ultrasound device (500) is provided for diagnosing pathologies in a tissue of interest. The ultrasound device comprises a platform member (501), the platform member (501) including a tissue receiving cup (606), and an array (600) of at least two ultrasound elements (37) positioned to obtain ultrasonic images of a tissue of interest disposed within the tissue receiving cup (606). The array (600) is moveable about the tissue of interest for obtaining images of the tissue from a plurality of different positions. An array mover (508) is also provided that is capable of moving the array (600) of ultrasound elements (37) to change distance between the array (600) and the tissue of interest and to change relative angular position between the array (600) and the tissue of interest.



**FIG. 14**



## EUROPEAN SEARCH REPORT

Application Number  
EP 12 19 5327

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	FR 2 883 982 A1 (CENTRE NAT RECH SCIENT [FR]; UNIV PARIS 7 DENIS DIDEROT [FR]) 6 October 2006 (2006-10-06)	1,2,4	INV. A61B8/08 G10K11/00 G10K11/35 A61B8/12 G01S15/89
Y	* abstract * * page 7, line 28 - page 8, line 1 * * page 9, line 15 - page 111 * * figures 1,2 *	3	
X	US 2004/034307 A1 (JOHNSON STEVEN A [US] ET AL) 19 February 2004 (2004-02-19)	1,2,4	
Y	* abstract * * paragraphs [0053] - [0055] * * figures 1,2 *	3	
Y	US 6 409 668 B1 (WOLLSCHLAEGER HELMUT [DE]) 25 June 2002 (2002-06-25) * figures 1-5 *	3	TECHNICAL FIELDS SEARCHED (IPC)  A61B G10K G01S
A	US 4 231 373 A (WAXMAN ALBERT S ET AL) 4 November 1980 (1980-11-04) * abstract * * column 3, line 59 - column 4, line 15 * * figures 3A,3B *	1-4	
<del>The present search report has been drawn up for all claims</del>			
Place of search <b>Munich</b>		Date of completion of the search <b>21 January 2013</b>	Examiner <b>Willig, Hendrik</b>
CATEGORY OF CITED DOCUMENTS 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		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	

 1  
EPO FORM 1503 03.02 (P04C01)



Application Number

EP 12 19 5327

**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:

1-4

☐ 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  
EP 12 19 5327

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: 1-4

Ultrasound device with a moveable transducer array.

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2. claims: 5-14

Ultrasound device with a transducer array of which each element is moveable about two axes.

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

EP 12 19 5327

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  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

21-01-2013

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
FR 2883982	A1	06-10-2006	EP	1866667 A1	19-12-2007
			FR	2883982 A1	06-10-2006
			JP	4964865 B2	04-07-2012
			JP	2008534198 A	28-08-2008
			US	2009124901 A1	14-05-2009
			WO	2006106213 A1	12-10-2006
-----					
US 2004034307	A1	19-02-2004	US	6005916 A	21-12-1999
			US	2002131551 A1	19-09-2002
			US	2004034307 A1	19-02-2004
			US	2007282200 A1	06-12-2007
-----					
US 6409668	B1	25-06-2002	DE	19818226 C1	10-02-2000
			JP	2002512835 A	08-05-2002
			US	6409668 B1	25-06-2002
			WO	9955234 A1	04-11-1999
-----					
US 4231373	A	04-11-1980	AU	544671 B2	13-06-1985
			AU	4698679 A	24-01-1980
			CA	1127750 A1	13-07-1982
			DE	2928560 A1	07-02-1980
			FR	2431811 A1	15-02-1980
			GB	2027197 A	13-02-1980
			GB	2108267 A	11-05-1983
			JP	S5516687 A	05-02-1980
			NL	7904046 A	22-01-1980
			US	4231373 A	04-11-1980
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专利名称(译)	可移动的超声元件，用于医疗诊断设备		
公开(公告)号	<a href="#">EP2567661A3</a>	公开(公告)日	2013-06-19
申请号	EP2012195327	申请日	2009-04-14
[标]申请(专利权)人(译)	静脉尿路造影成像公司		
申请(专利权)人(译)	静脉尿路造影影像公司		
当前申请(专利权)人(译)	静脉尿路造影影像公司		
[标]发明人	STRIBLING MARK L		
发明人	STRIBLING, MARK, L		
IPC分类号	A61B8/08 G10K11/00 G10K11/35 A61B8/12 G01S15/89		
CPC分类号	A61B8/0825 A61B8/12 A61B8/406 A61B8/445 A61B8/4461 A61B8/4483 A61B8/483 A61B8/523 G01S7/5208 G01S15/8936 G01S15/8993 G10K11/352		
优先权	61/124064 2008-04-14 US 12/422766 2009-04-13 US		
其他公开文献	EP2567661A2		
外部链接	<a href="#">Espacenet</a>		

#### 摘要(译)

提供超声设备（500）用于诊断感兴趣组织中的病理。超声装置包括平台构件（501），平台构件（501），其包括组织接收杯（606），以及至少两个超声元件（37）的阵列（600），其被定位以获得组织的超声图像。设置在组织接收杯（606）内的兴趣。阵列（600）可围绕感兴趣的组织移动，以从多个不同位置获得组织的图像。还提供了阵列移动器（508），其能够移动超声元件（37）的阵列（600）以改变阵列（600）与感兴趣组织之间的距离并改变阵列（600）之间的相对角位置。）和感兴趣的组织。

