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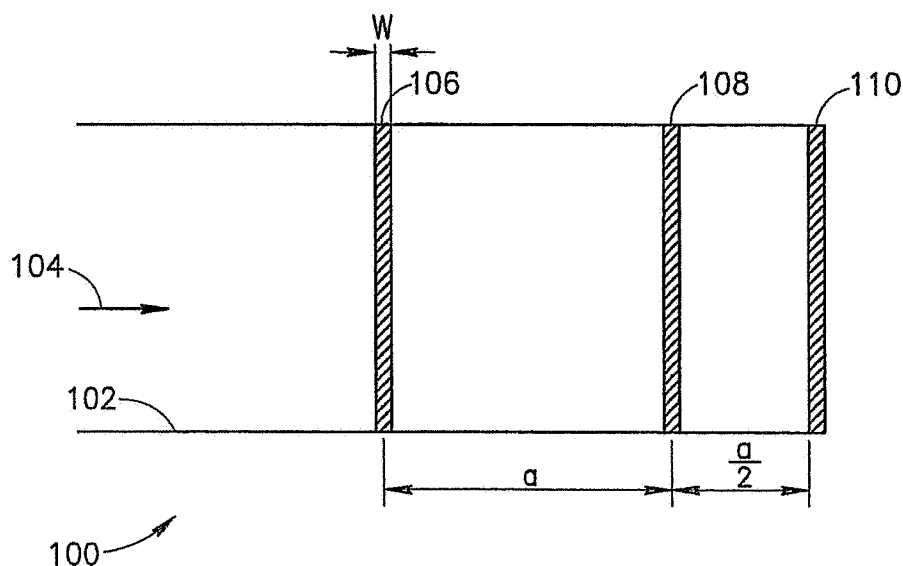
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(54) **Ultrasonic transducer probe**

(57) An acoustic generator, comprising: a source of electro-magnetic radiation; a waveguide coupled to said source; and at least one absorbing region defined in said waveguide, said region being selectively absorbing for portions of said radiation meeting at least one certain criterion and having significantly different absorbing

characteristics for radiation not meeting said criterion, both of said radiation portions being suitable for conveyance through said waveguide, wherein said absorbing region converts said radiation into an ultrasonic acoustic field. Optionally, said region comprises a volumetric absorber. Alternatively or additionally, said region comprises a plurality of regions.



**FIG.1**



## EUROPEAN SEARCH REPORT

Application Number  
EP 06 11 1398

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	DE 24 12 690 A1 (WOLF GMBH RICHARD) 17 October 1974 (1974-10-17)  * page 5, paragraphs 3,4 * * page 6, paragraph 2 * -----	1,2,11, 14,15, 25,26, 28-31, 33, 35-42, 62-66	INV. A61B18/26
X	US 5 944 687 A (BENETT WILLIAM [US] ET AL) 31 August 1999 (1999-08-31)  * column 3, line 33 - line 37 * * column 4, line 66 - column 5, line 2 * * column 6, line 34 - line 37; figure 1 * -----	1,2,11, 14,15, 25,26, 28-31, 33, 35-42, 62-66	
X	WO 00/33913 A2 (STRATEGIC BUSINESS DEV INC [US]) 15 June 2000 (2000-06-15) * page 11, line 25 - line 35 * * page 14, line 34 - page 15, line 6 * -----	43-50	TECHNICAL FIELDS SEARCHED (IPC) A61B G01H A61N
A	WO 91/10403 A1 (CANDELA LASER CORP [US]) 25 July 1991 (1991-07-25) * page 6, line 10 - line 12 * -----	1	
A	US 4 844 585 A (CULSHAW BRIAN [GB] ET AL) 4 July 1989 (1989-07-04) * column 2, line 68 - column 3, line 22; figures 5,6 * -----	1	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 15 September 2010	Examiner Mayer-Martenson, E
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			

 3  
EPO FORM 1503 03.82 (P04C01)



Application Number

EP 06 11 1398

**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:

☐ 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 06 11 1398

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: 1-42, 51-66

acoustic generator with non-uniformly absorbing absorber

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2. claims: 43-50

generator with a plurality of waveguides comprising each an absorber

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

EP 06 11 1398

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.

15-09-2010

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专利名称(译)	超声波换能器探头		
公开(公告)号	<a href="#">EP1665998A3</a>	公开(公告)日	2010-10-20
申请号	EP2006111398	申请日	2002-01-08
[标]申请(专利权)人(译)	BIO SCAN		
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当前申请(专利权)人(译)	BIO SCAN LTD.		
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IPC分类号	A61B18/26 A61B5/107 A61B8/08 A61B8/12 G10K15/04		
CPC分类号	A61B5/1076 A61B5/02007 A61B8/0833 A61B8/0858 A61B8/12 A61B8/4483 A61B18/26 G10K15/046		
优先权	PCT/IL2002/000018 2002-01-08 WO		
其他公开文献	EP1665998A2		
外部链接	<a href="#">Espacenet</a>		

#### 摘要(译)

一种声发生器，包括：电磁辐射源；耦合到所述源的波导；在所述波导中限定的至少一个吸收区域，所述区域选择性地吸收所述辐射的部分，其满足至少一个特定标准并且对于不满足所述标准的辐射具有显著不同的吸收特性，所述两个辐射部分适于通过所述传输通过所述波导，其中所述吸收区域将所述辐射转换成超声声场。任选地，所述区域包括体积吸收器。可选地或另外地，所述区域包括多个区域。

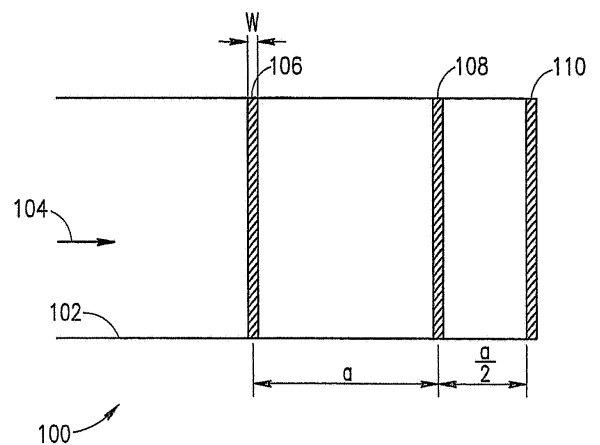


FIG.1