

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number
EP 15 86 1529

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 A	US 2002/156373 A1 (WAKABAYASHI KATSUHIRO [JP] ET AL) 24 October 2002 (2002-10-24) * abstract; figures 11-13 * * paragraphs [0143] - [0147] *	1-9,11, 12 10	INV. A61B8/12 B06B1/06
A	WO 2012/075153 A2 (RES TRIANGLE INST [US]; DAUSCH DAVID [US]; CARLSON JAMES [US]; GILCHRI) 7 June 2012 (2012-06-07) * abstract; claim 1; figures 6,16 * * page 9, line 32 - page 10, line 16 * * page 14, lines 12-14 * * page 17, line 30 - page 18, line 2 *	1-12	
A	EP 2 740 411 A1 (OLYMPUS MEDICAL SYSTEMS CORP [JP]) 11 June 2014 (2014-06-11) * abstract; claim 1; figures 1,3,6 * * paragraphs [0018], [0019] *	1-12	
			TECHNICAL FIELDS SEARCHED (IPC)
			B06B A61B
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search The Hague		Date of completion of the search 9 February 2018	Examiner Fernandes, Paulo
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	

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

EP 15 86 1529

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.

09-02-2018

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002156373 A1	24-10-2002	US 2002156373 A1	24-10-2002
		US 2003187356 A1	02-10-2003

WO 2012075153 A2	07-06-2012	CA 2819644 A1	07-06-2012
		CN 103348539 A	09-10-2013
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		JP 2013545556 A	26-12-2013
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		US 2013267853 A1	10-10-2013
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		EP 2740411 A1	11-06-2014
		WO 2014034191 A1	06-03-2014

专利名称(译)	超声波振动器和超声波内窥镜		
公开(公告)号	EP3165169A4	公开(公告)日	2018-03-28
申请号	EP2015861529	申请日	2015-10-15
[标]申请(专利权)人(译)	奥林巴斯株式会社		
申请(专利权)人(译)	OLYMPUS CORPORATION		
当前申请(专利权)人(译)	OLYMPUS CORPORATION		
[标]发明人	FUJIMURA TAKANAO		
发明人	FUJIMURA TAKANAO		
IPC分类号	A61B8/12		
CPC分类号	B06B1/0622 A61B8/12 B06B2201/20 B06B2201/55 B06B2201/76		
审查员(译)	费尔南德斯, PAULO		
优先权	2014236901 2014-11-21 JP		
其他公开文献	EP3165169A1		
外部链接	Espacenet		

摘要(译)

超声波换能器包括：以预定曲率弯曲的声匹配层2；配置在声匹配层2的曲率中心C侧的内表面2n上的多个压电元件3，使得多个压电元件3弯曲；包括分别电连接到多个压电元件3的相应一端的多个布线9；基板5，多条布线9的各另一端电连接到该基板5；以及设置在多个压电元件3与基板5之间的多个配线9的途中的保持部件4，该保持部件4构成为以多个配线9以等于或等于小于多个压电元件3的排列间距W1。


 International
Commission on
Missing Persons
ICMP

SUPPLEMENTARY
EUROPEAN SEARCH REPORT

Application Number
EP 15 86 1529

DOCUMENTS CONSIDERED TO BE RELEVANT		CLASSIFICATION OF THE APPLICATION (ECS)	
Category	Citation of documents with indication, where appropriate, of relevant passages	Relevant to claim	
X	US 2002/156373 A1 (WAKABAYASHI KATSUHIRO [10] ET AL.) 24 October 2002 (2002-10-24)	1-9, 11-12	INV.
A	* abstract; figures 11-13 * paragraphs [0143] - [0147] *	10	A618B/12 B06B1/06
A	WO 2012/075153 A2 (RES TRAINING INST [US]; 1-12 DAUSCH DAVID [US]; CARLSON JAMES [US]; GILCHRIST 7 June 2012 (2012-06-07) * abstract; claim 1; figures 6, 16 * * page 9, line 32 - page 10, line 16 * * page 14, lines 18-19 * * page 17, line 30 - page 18, line 2 *		
A	EP 2 740 411 A1 (OLYMPUS MEDICAL SYSTEMS CORP [JP]) 1 June 2002 (2002-06-01) * abstract; claim 1; figures 1, 3, 6, 4 * paragraphs [0016], [0019] -----	1-12	
		TECHNICAL FIELD of the Invention (IPC)	
		B65B A618	
The supplementary search report has been based on the last valid and available at the start of the preparation of the search			
Date of search The Hague		Examiner 9 February 2018 Fernandes, Paulo	
CATEGORY OF THE DOCUMENTS			
a) particularly relevant to claim shown b) particularly relevant to claim shown with another c) particularly relevant to claim shown with another d) particularly relevant to claim shown with another		e) having no particular relevance f) having no particular relevance, but published on or g) after the date of application h) having no particular relevance, but published on or i) after the date of application j) member of the same patent family, corresponding	

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