



(11) **EP 1 894 513 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**23.04.2008 Bulletin 2008/17**

(51) Int Cl.:  
**A61B 1/005** <sup>(2006.01)</sup> **A61B 1/018** <sup>(2006.01)</sup>  
**A61B 8/12** <sup>(2006.01)</sup>

(43) Date of publication A2:  
**05.03.2008 Bulletin 2008/10**

(21) Application number: **07016829.9**

(22) Date of filing: **28.08.2007**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR**

Designated Extension States:  
**AL BA HR MK RS**

(30) Priority: **28.08.2006 US 823669 P**

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(54) **Ultrasonic endoscope, therapeutic system, endoscopic system, t-bar, and t-bar suturing device**

(57) An ultrasonic endoscope (10) includes an insertion section (12), an operation section (14), an optical observation system and an ultrasonic observation system. The insertion section has a distal end and a proximal end. The operation section is disposed on the proximal end of the insertion section. The optical observation system is disposed in the insertion section. The optical observation system has an objective lens (38) on a distal end surface of the insertion section. The ultrasonic ob-

servation system is disposed in the insertion section. The ultrasonic observation system has an ultrasonic transducer (52; 52a; 52c) on the distal end surface of the insertion section or further forward than the distal end thereof. A focal position of the optical observation system and a scanning surface of the ultrasonic transducer are approximately on the same plane.

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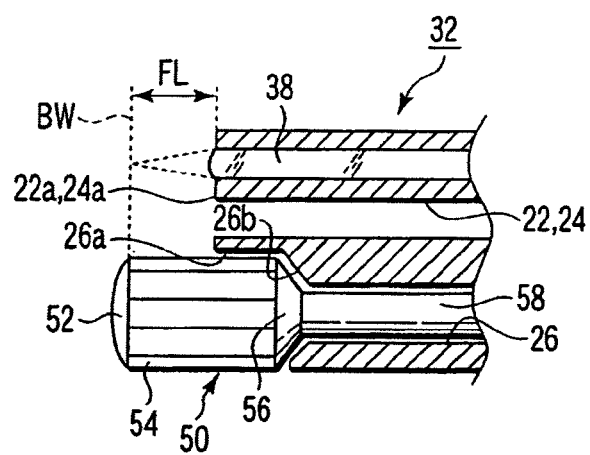


FIG. 2



European Patent  
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# EUROPEAN SEARCH REPORT

Application Number  
EP 07 01 6829

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	JP 2001 292996 A (OLYMPUS OPTICAL CO) 23 October 2001 (2001-10-23) * abstract; figures 1-4 *	1-6,21, 22	INV. A61B1/005 A61B1/018 A61B8/12
X	US 2004/082883 A1 (KOHNO SHINICHI [JP]) 29 April 2004 (2004-04-29) * paragraphs [0036] - [0043] * * figures 1-3 *	1-6	
A	JP 07 116166 A (OLYMPUS OPTICAL CO) 9 May 1995 (1995-05-09) * abstract *	1	
A	US 2006/009681 A1 (TANAKA TOSHIZUMI [JP] ET AL) 12 January 2006 (2006-01-12) * abstract; figures 1-4 *	1	
A	EP 0 269 791 A (MESSERSCHMITT BOELKOW BLOHM [DE]) 8 June 1988 (1988-06-08) * pages 1,3 *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			A61B
<p><del>The present search report has been drawn up for all claims</del></p>			
Place of search		Date of completion of the search	Examiner
Berlin		20 November 2007	Abraham, Volkhard
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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  &amp; : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03.02 (P04-001)



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Application Number

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#### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims 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 the first ten claims.

#### 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:  
see annex
- ☐ 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).



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**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: 1-22

An ultrasonic endoscope wherein the focal position of the optical observation system and a scanning surface of the ultrasonic transducer are approximately on the same plane

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2. claims: 23-25

An ultrasonic endoscope comprising an ultrasonic transducer disposed between the openings of at least a pair of suction channels

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3. claims: 26-30

A therapeutic system comprising a main body case and a plurality of detachable surgical instruments

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4. claims: 31,32

An endoscopic system comprising first and second endoscopes wherein an ultrasonic transducer is disposed at the distal end of the insertion section of each endoscope

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5. claims: 33-41

A T-bar and a T-bar suturing device

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

20-11-2007

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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	超声波内窥镜，治疗系统，内窥镜系统，T形杆和T形杆缝合装置		
公开(公告)号	<a href="#">EP1894513A3</a>	公开(公告)日	2008-04-23
申请号	EP2007016829	申请日	2007-08-28
[标]申请(专利权)人(译)	奥林巴斯医疗株式会社		
申请(专利权)人(译)	奥林巴斯医疗系统股份有限公司.		
当前申请(专利权)人(译)	OLYMPUS CORPORATION		
[标]发明人	SATO MASATOSHI KAJI KUNIHIDE SUZUKI TAKAYUKI SHIONO JUNJI MIKKAICHI TAKAYASU SHINICHI TSUTAKI SHIZUKA TOSHIHIRO NAKAZATO TAKEHARU SATO SUNAO MIZUNUMA AKIKO		
发明人	SATO, MASATOSHI KAJI, KUNIHIDE SUZUKI, TAKAYUKI SHIONO, JUNJI MIKKAICHI, TAKAYASU SHINICHI, TSUTAKI SHIZUKA, TOSHIHIRO NAKAZATO, TAKEHARU SATO, SUNAO MIZUNUMA, AKIKO		
IPC分类号	A61B1/005 A61B1/018 A61B8/12		
CPC分类号	A61B1/0051 A61B1/00039 A61B1/00089 A61B1/00101 A61B1/018 A61B8/12 A61B8/445 A61B17/0401 A61B17/0487 A61B17/3478 A61B2017/0417 A61B2017/0496 A61B2017/06052 A61B2017/306 A61B2090/3929		
优先权	60/823669 2006-08-28 US		
其他公开文献	EP1894513A2 EP1894513B1		
外部链接	<a href="#">Espacenet</a>		

#### 摘要(译)

超声波内窥镜 ( 10 ) 包括插入部 ( 12 ) , 操作部 ( 14 ) , 光学观察系统和超声波观察系统。插入部分具有远端和近端。操作部分设置在插入部分的近端上。光学观察系统设置在插入部分中。光学观察系统在插入部分的远端表面上具有物镜 ( 38 ) 。超声波观察系统设置在插入部分中。超声波观察系统在插入部分的远端表面上或者比其远端更向前具有超声换能器 ( 52; 52a; 52c ) 。光学观察系统的焦点位置和超声波换能器的扫描表面大致在同一平面上。

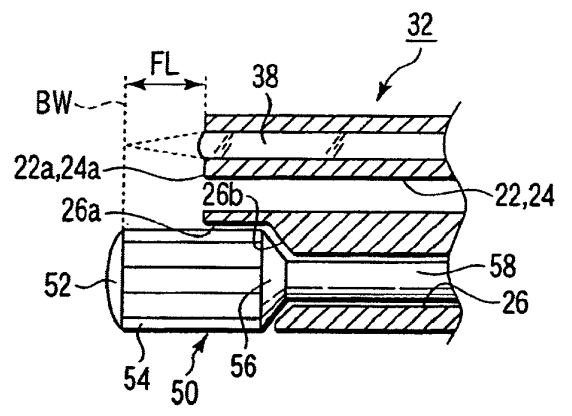


FIG. 2