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(54) **Laparoscopic training apparatus**

(57) The present invention relates to a laparoscopic apparatus (10). In particular, it relates to an apparatus for the training of medical professionals, particularly those engaged in the field of laparoscopic surgery. The apparatus (10) comprises a housing; a joint (32) in operative association with the housing and adapted to substantially accommodate a laparoscopic tool (42), in use,

through the joint (32), the joint (32) permitting movement of the laparoscopic tool (42), in use; and resistance means in operative association with the joint (32), adapted to adjust resistance to movement of the laparoscopic tool (42), in use. Accordingly, the present invention provides a realistic surgical experience by mimicking the sensation of carrying out surgical techniques on a patient.

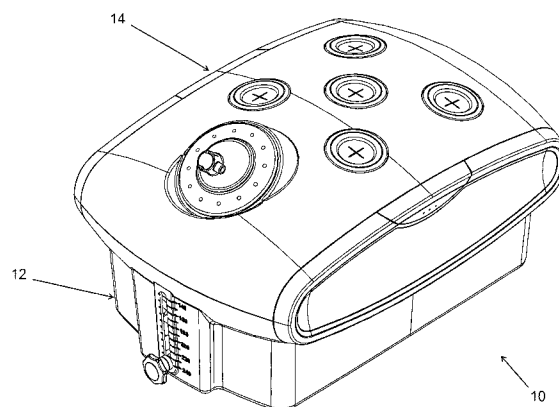


Figure 1



## EUROPEAN SEARCH REPORT

Application Number  
EP 08 02 0955

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	US 2004/024418 A1 (IRION KLAUS M [DE] ET AL) 5 February 2004 (2004-02-05)	1-3	INV. G09B23/28
Y	* figures 1-5 * * paragraphs [0014], [0016], [0073], [0078] *	1-3	ADD. A61B17/00 A61B19/00
X	DE 103 04 736 B3 (KARLSRUHE FORSCHZENT [DE]) 30 September 2004 (2004-09-30)	1-3	
Y	* figures 1,2 *	1-3	
X	US 6 377 011 B1 (BEN-UR ELA [US]) 23 April 2002 (2002-04-23)	1	
	* figures 5-8 *		
Y	US 6 659 776 B1 (AUMANN ROBERT J [US] ET AL) 9 December 2003 (2003-12-09)	1-3	
	* figure 1 *		
			TECHNICAL FIELDS SEARCHED (IPC)
			G09B
<p>1 <del>The present search report has been drawn up for all claims</del></p>			
Place of search Munich		Date of completion of the search 5 February 2010	Examiner Schießl, Werner
<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>			

EPO FORM 1503 03.02 (P04C01)



Application Number

EP 08 02 0955

**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:

1-11

☐ 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 08 02 0955

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: 1-11

A laparoscopic apparatus wherein the resistance means is adjustable by altering the distance between a first and a second section of the socket as defined in claim 4 in order to provide a mechanical resistance means independent of a power supply.

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2. claims: 12-13

A laparoscopic apparatus the internal chamber of the housing has a platform, the position of which being adjustable with respect to an opening in the housing for variable heights of the internal chamber / working space.

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3. claims: 14-15

A laparoscopic apparatus wherein the housing further comprises at least one aperture overlaid by a membrane to provide a realistic experience of the response of human skin to the application of a surgical instrument.

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

EP 08 02 0955

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.

05-02-2010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004024418 A1	05-02-2004	DE 10055294 A1	29-05-2002
		WO 0237451 A2	10-05-2002
		EP 1330809 A2	30-07-2003
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DE 10304736 B3	30-09-2004	NONE	
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US 6377011 B1	23-04-2002	WO 0154587 A1	02-08-2001
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US 6659776 B1	09-12-2003	NONE	
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专利名称(译)	腹腔镜训练器具		
公开(公告)号	<a href="#">EP2068295A3</a>	公开(公告)日	2010-07-14
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[标]申请(专利权)人(译)	ENDOSIM		
申请(专利权)人(译)	ENDOSIM有限公司		
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IPC分类号	G09B23/28 A61B17/00 A61B19/00		
CPC分类号	G09B23/285 A61B34/76 A61B2017/00716		
优先权	2007023329 2007-12-03 EP		
其他公开文献	EP2068295B1 EP2068295A2		
外部链接	<a href="#">Espacenet</a>		

#### 摘要(译)

腹腔镜装置技术领域本发明涉及腹腔镜装置 ( 10 )。特别是, 它涉及一种用于训练医疗专业人员的装置, 特别是那些从事腹腔镜手术领域的医疗专业人员。装置 ( 10 ) 包括壳体;接头 ( 32 ) 与壳体可操作地连接并且适于在使用中通过接头 ( 32 ) 基本上容纳腹腔镜工具 ( 42 ), 接合部 ( 32 ) 允许腹腔镜工具 ( 42 ) 在使用中移动;阻力意味着与关节 ( 32 ) 可操作地关联, 适于在使用中调节对腹腔镜工具 ( 42 ) 的运动的阻力。因此, 本发明通过模仿对患者进行外科手术技术的感觉来提供真实的手术体验。

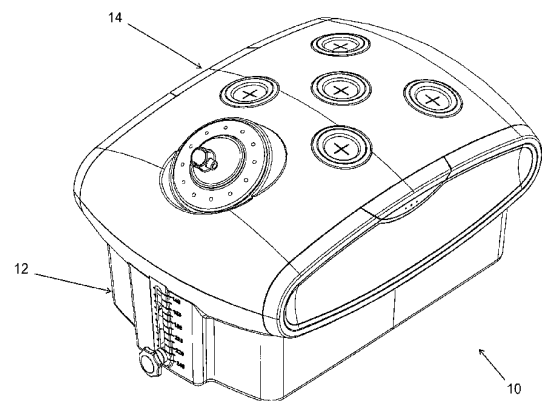


Figure 1