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**A61B 18/00<sup>(2006.01)</sup>**

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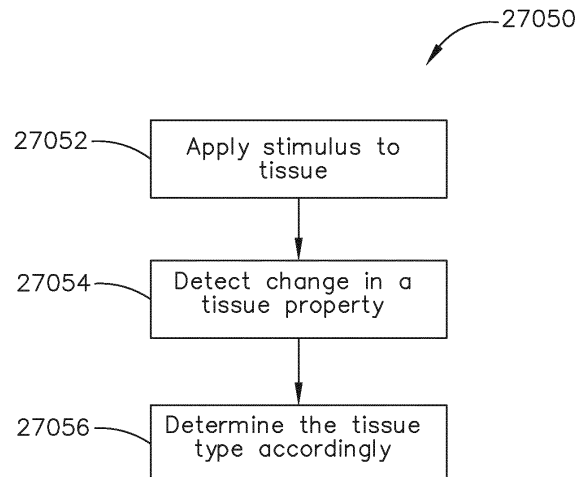
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(30) Priority: **28.12.2017 US 201762611341 P**  
**28.12.2017 US 201762611340 P**  
**28.12.2017 US 201762611339 P**  
**08.03.2018 US 201862640415 P**  
**08.03.2018 US 201862640417 P**  
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**28.06.2018 US 201862691227 P**  
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(54) **SURGICAL INSTRUMENT CARTRIDGE SENSOR ASSEMBLIES**

(57) Various cartridge assemblies for surgical instruments are provided. Cartridge assemblies can include active sensors for applying stimuli to a tissue clamped by an end effector of the surgical instrument and a circuit configured to determine a tissue type of the tissue according to a change in the tissue parameter detected by the sensor resulting from a stimulus from the active element. Cartridge assemblies can also include physical features and/or stored data that identify the cartridge. Surgical instruments further can be configured to resolve conflicts when the physical features and/or stored data are not consistent with each other in their identification of the cartridge type.



**FIG. 90**

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DOCUMENTS CONSIDERED TO BE RELEVANT				
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
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Y	* paragraphs [0120], [0128], [0146],	5,7		
A	[0154], [0156], [0159], [0160] *	2,3		
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A	* paragraphs [0003], [0053], [0527] *	2,3		
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The present search report has been drawn up for all claims				
Place of search Munich		Date of completion of the search 8 August 2019	Examiner Franz, Volker	
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				

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**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing claims for which payment was due.

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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):

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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.

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**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:

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see sheet B

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All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

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As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

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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:

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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:

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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

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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:

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**1. claims: 1-8**

A cartridge for a surgical instrument comprising a circuit. The circuit comprises an active element to stimulate tissue and a sensor to measure a tissue parameter. This group of claims is directed towards solving the technical problem how to detect the tissue type.

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**2. claims: 9-20**

Surgical instrument for use with a cartridge and alternatively a cartridge for a surgical instrument comprising a data-representative feature representing a first cartridge data and a data storage element storing a second cartridge data, the instrument comprising a sensor for taking measurements representative of the first cartridge data, and a control circuit coupled to the sensor which compares first and second cartridge data. This group of claims is directed towards solving the technical problem how to resolve data identification conflicts.

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专利名称(译)	手术器械盒传感器组件		
公开(公告)号	<a href="#">EP3505084A3</a>	公开(公告)日	2019-09-18
申请号	EP2018275247	申请日	2018-12-28
[标]申请(专利权)人(译)	ETHICON , LLC		
申请(专利权)人(译)	ETHICON LLC		
当前申请(专利权)人(译)	ETHICON LLC		
[标]发明人	SHELTON FREDERICK E IV HARRIS JASON L YATES DAVID C		
发明人	SHELTON, FREDERICK E., IV HARRIS, JASON L. YATES, DAVID C.		
IPC分类号	A61B17/072 A61B5/00 A61B18/00		
CPC分类号	A61B1/00011 A61B5/0053 A61B5/01 A61B5/053 A61B5/4848 A61B17/07207 A61B18/085 A61B18/10 A61B18/1206 A61B18/1445 A61B34/20 A61B34/37 A61B90/361 A61B90/37 A61B90/98 A61B2017 /00017 A61B2017/00022 A61B2017/00026 A61B2017/00061 A61B2017/00084 A61B2017/00115 A61B2017/00199 A61B2017/00221 A61B2017/00398 A61B2017/00734 A61B2017/00938 A61B2017 /07214 A61B2017/07257 A61B2017/07271 A61B2017/07285 A61B2017/2927 A61B2018/00601 A61B2018/00607 A61B2018/0063 A61B2018/00642 A61B2018/00702 A61B2018/0072 A61B2018 /00726 A61B2018/00767 A61B2018/00791 A61B2018/00875 A61B2018/00982 A61B2018/00994 A61B2018/1273 A61B2018/1455 A61B2034/2046 A61B2034/2051 A61B2034/2059 A61B2090/061 A61B2090/064 A61B2090/065 A61B2090/066 A61B2090/0807 A61B2090/0811 A61B2090/364 A61B2217/002 A61B2217/005 A61B2217/007 A61B2218/002 A61B2218/008 A61B2562/0247 A61B2562/08 A61F7/00 A61B34/35 A61B34/74 A61B2034/742 A61B2034/743 A61B2034/744 G16H10 /60 G16H20/40 G16H40/63 G16H50/20 A61B17/29 A61B17/320092 A61B90/96 A61B2018/1253 A61B2018/126 A61B2218/006		
审查员(译)	FRANZ , VOLKER		
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其他公开文献	EP3505084A2		
外部链接	<a href="#">Espacenet</a>		
摘要(译)			

提供了用于手术器械的各种药筒组件。盒组件可包括用于将刺激施加到由外科器械的末端执行器夹紧的组织的有源传感器和被配置为根据由来自刺激器的刺激传感器检测到的组织参数的变化来确定组织的组织类型的电路。盒组件还可以包括识别盒的物理特征和/或存储的数据。手术器械还可以被配置为当物理特征和/或存储的数据在其盒类型的识别中彼此不一致时解决冲突。

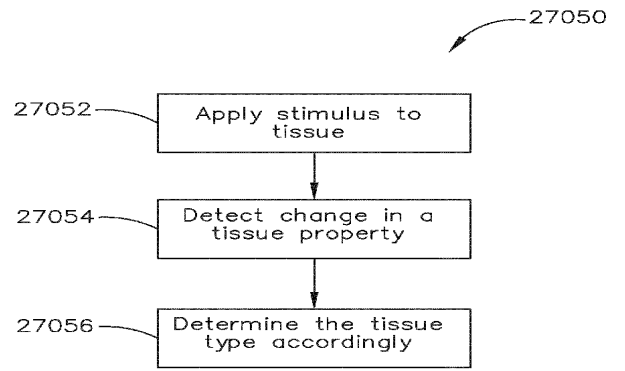


FIG. 90