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(54) **Ring contact for rotatable connection of switch assembly for use in a surgical system**

(57) The present invention provides a surgical handpiece having a switch end cap detachably and rotatably connected to the handpiece body. A surgical instrument is inserted within the handpiece body so that a portion thereof extends beyond the handpiece body and is actuated to perform a surgical operation. The switch end cap includes a switch mechanism having one or more switch button members for selectively signaling the level of power to be delivered to the handpiece from a power source. According to one aspect of the present inven-

tion, the switch mechanism within the switch end cap is electrically connected to the handpiece body in such a manner that permits the switch end cap to be freely rotated about the handpiece body, while still maintaining the electrical connection therebetween. This is accomplished by having conductive finger members and complementary conductive members provide the electrical connection between the switch end cap and the handpiece body. This permits a user to position the switch end cap in a desired location relative to the handpiece body and the instrument.

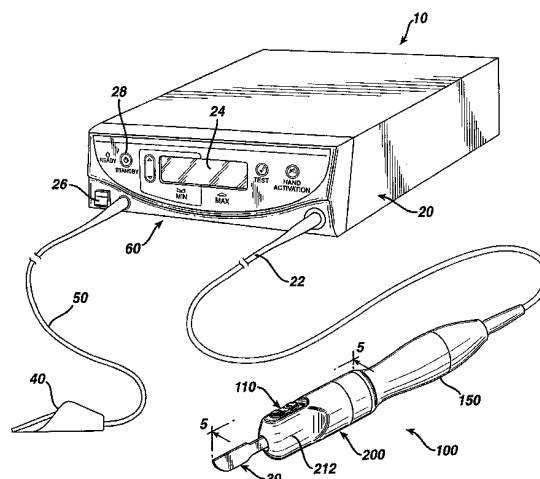


FIG. 1



European Patent
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EUROPEAN SEARCH REPORT

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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 (Int.Cl.7)
A	US 5 468 240 A (GENTELIA ET AL) 21 November 1995 (1995-11-21) * column 2, line 24 - line 36 * * column 3, line 7 - line 32 * * column 3, line 41 - column 4, line 20 * * figures * -----	1-3,11, 12,27, 28, 33-35,38	A61B17/22 A61B17/32 A61B18/14
A	US 5 769 211 A (MANNA ET AL) 23 June 1998 (1998-06-23) * column 5, line 25 - column 7, line 67 * * figures 2a-9B * -----	1,28,38	
A	US 5 997 533 A (KUHN ET AL) 7 December 1999 (1999-12-07) * column 4, line 21 - column 6, line 42 * * figures 1-7 * -----	1,28,38	
A	US 5 098 430 A (FLEENOR ET AL) 24 March 1992 (1992-03-24) * column 3, line 29 - column 4, line 19 * * figures 1,2 * -----	1,16-18	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	US 5 071 418 A (ROSENBAUM ET AL) 10 December 1991 (1991-12-10) * column 2, line 17 - line 41 * * column 3, line 20 - column 4, line 52 * * figures * -----	1	A61B H01H
A	US 4 492 832 A (TAYLOR ET AL) 8 January 1985 (1985-01-08) * column 3, line 37 - column 4, line 47 * * column 5, line 62 - line 66 * * figures * -----	1	
The present search report has been drawn up for all claims			
Place of search Berlin		Date of completion of the search 12 August 2005	Examiner Nistor, L
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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**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
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12-08-2005

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5468240	A	21-11-1995	NONE	
US 5769211	A	23-06-1998	NONE	
US 5997533	A	07-12-1999	NONE	
US 5098430	A	24-03-1992	AU 7571591 A	10-10-1991
			WO 9113593 A1	19-09-1991
			US 5306238 A	26-04-1994
US 5071418	A	10-12-1991	NONE	
US 4492832	A	08-01-1985	NONE	

专利名称(译)	环形触点，用于可旋转地连接开关组件，用于手术系统		
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其他公开文献	EP1199040A2 EP1199040B1		
外部链接	Espacenet		

摘要(译)

本发明提供一种手术手持件，其具有可拆卸且可旋转地连接到手持件主体的开关端盖。将手术器械插入手持件主体内，使得其一部分延伸超出手持件主体并被致动以执行外科手术。开关端盖包括具有一个或多个开关按钮构件的开关机构，用于选择性地发信号通知从电源输送到手持件的功率水平。根据本发明的一个方面，开关端盖内的开关机构以这样的方式电连接到手持件主体，即允许开关端盖绕手持件主体自由旋转，同时仍保持其间的电连接。。这是通过使导电指状构件和互补导电构件在开关端盖和手持件主体之间提供电连接来实现的。这允许用户将开关端盖定位在相对于手持件主体和仪器的期望位置。

