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(54) **MEDICAL DEVICE**

(57) A medical device (1000) comprises a laparoscopic shaft (226, 1110, 1130) having proximal and distal ends and defining a shaft axis, a surgical end effector (1002, 1020, 1030, 1040) at the distal end of the shaft (226, 1110, 1130), a locking device (120, 1120) operable to selectively unlock the end effector (1002, 1020, 1030, 1040) when actuated, and a rotating knob (1100) at the proximal end of the shaft (226, 1110, 1130). The rotating knob (1100) comprises a bias device that imparts a biasing force on the rotating knob (1100) in a distal direction, the rotating knob (1100) rotating the end effector (1002, 1020, 1030, 1040) with respect to the shaft (226, 1110, 1130) about the shaft axis when rotated, and actuating the locking device (120, 1120) when slid in a proximal direction to overcome the biasing force.

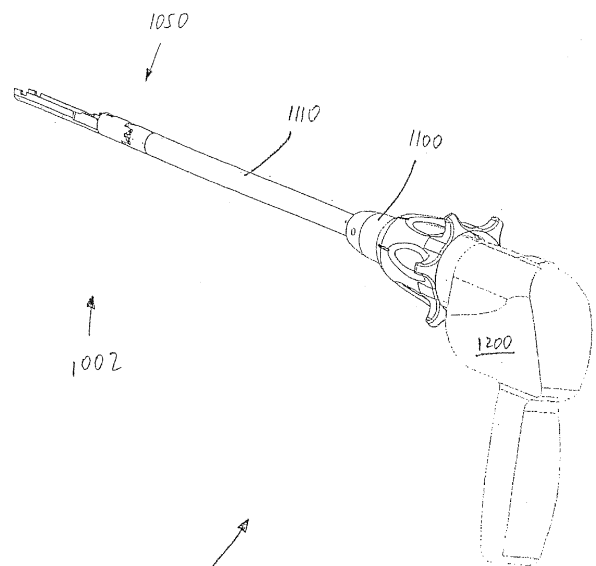


FIG. 31

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EUROPEAN SEARCH REPORT

Application Number
EP 17 15 4820

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A,D	US 5 797 537 A (OBERLIN JEFFREY R [US] ET AL) 25 August 1998 (1998-08-25) * figures 1,3 * * column 7, lines 35-65 *	1-11	
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A	US 5 810 811 A (YATES DAVID C [US] ET AL) 22 September 1998 (1998-09-22) * column 7, lines 46-50 * * figures 1,2 *	1-11	TECHNICAL FIELDS SEARCHED (IPC) A61B
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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 11 September 2017	Examiner Erbel, Stephan
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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专利名称(译)	医疗装置		
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申请号	EP2017154820	申请日	2006-07-25
[标]申请(专利权)人(译)	伊西康内外科公司		
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IPC分类号	A61B17/072 A61B17/29		
CPC分类号	A61B17/07207 A61B2017/00389 A61B2017/07271 A61B2017/2927 A61B2017/2931 A61B2017/320052 A61B17/00234 A61B17/068 A61B17/072 A61B17/115 A61B2017/003 A61B2017/07214 A61B2017/07285		
审查员(译)	ERBEL, STEPHAN		
优先权	60/702643 2005-07-26 US 60/760000 2006-01-18 US 60/811950 2006-06-08 US 11/491626 2006-07-24 US PCT/US2006/028752 2006-07-25 WO		
其他公开文献	EP3189793B1 EP3189793A2		
外部链接	Espacenet		

摘要(译)

医疗装置 (1000) 包括腹腔镜轴 (226,1110,1130) , 其具有近端和远端并限定轴轴线, 在轴的远端处的外科端部执行器 (1002,1020,1030,1040) (226) , 1110,1130) , 锁定装置 (120,1120) , 其可操作以在致动时选择性地解锁末端执行器 (1002,1020,1030,1040) , 并且在轴的近端处旋转旋钮 (1100) (226 , 1110,1130) 。 旋钮 (1100) 包括偏置装置, 该偏置装置在远侧方向上在旋转旋钮 (1100) 上施加偏置力, 旋转旋钮 (1100) 使末端执行器 (1002,1020,1030,1040) 相对于旋转旋钮 (1100) 旋转。 轴 (226,1110,1130) 在旋转时绕轴轴线旋转, 并且当沿近侧方向滑动时致动锁定装置 (120,1120) 以克服偏置力。

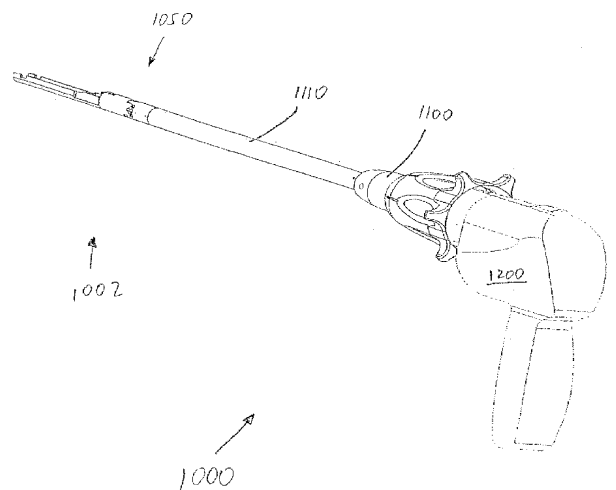


FIG. 31