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(54) Bladeless optical obturator

(57) The invention is directed to a bladeless trocar obturator to separate or divaricate body tissue during insertion through a body wall. In one aspect, the obturator of the invention comprises a shaft extending along an axis between a proximal end and a distal end; and a bladeless tip disposed at the distal end of the shaft and having a generally tapered configuration with an outer surface, the outer surface extending distally to a blunt point with a pair of side sections having a common shape and being separated by at least one intermediate section, wherein each of the side sections extends from the blunt point radially outwardly with progressive positions proximally along the axis, and the shaft is sized and configured to receive an optical instrument having a distal end to receive an image of the body tissue. With this aspect, the tapered configuration facilitates separation of different layers of the body tissue and provides proper alignment of the tip between the layers. The side sections include a distal portion and a proximal portion, the distal portion of the side sections being twisted radially with respect to the proximal portion of the side sections. The intermediate section includes a distal portion and a proximal portion, the distal portion of the intermediate section being twisted in a first radial direction and the proximal portion of the intermediate section being twisted in a second radial direction opposite the first radial direction.

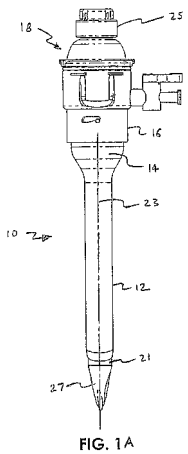

FIG. 1A

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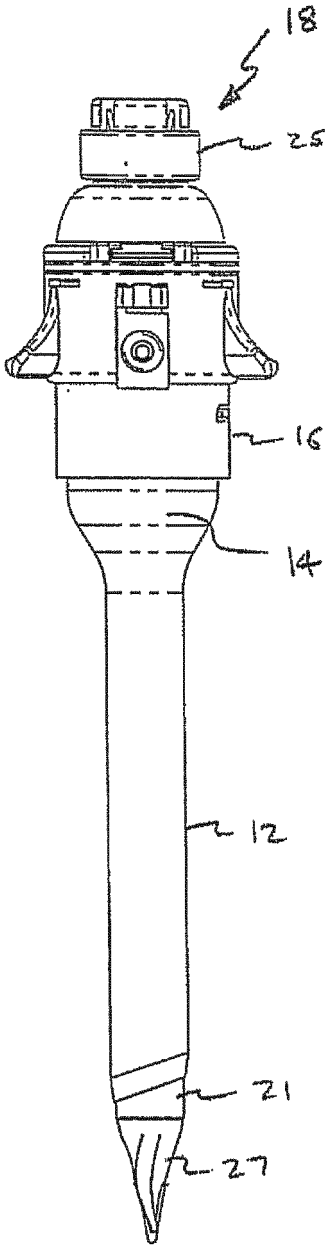

FIG. 1B

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EUROPEAN SEARCH REPORT

Application Number
EP 12 18 6722

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	5 March 2013	Assion, Jean-Charles

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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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
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& : member of the same patent family, corresponding document

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EUROPEAN SEARCH REPORT

Application Number
EP 12 18 6722

DOCUMENTS CONSIDERED TO BE RELEVANT

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	5 March 2013	Assion, Jean-Charles

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X : particularly relevant if taken alone
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专利名称(译)	无叶光学闭孔器		
公开(公告)号	EP2545864A3	公开(公告)日	2013-04-17
申请号	EP2012186722	申请日	2004-10-01
[标]申请(专利权)人(译)	应用医疗资源		
申请(专利权)人(译)	应用医疗资源CORPORATION		
当前申请(专利权)人(译)	应用医疗资源CORPORATION		
[标]发明人	KAHLE HENRY STROKOSZ ARKADIUSZ A MCGINLEY KIMBALL B TAYLOR SCOTT V JOHNSON GARY M BRUSTAD JOHN R		
发明人	KAHLE, HENRY STROKOSZ, ARKADIUSZ A MCGINLEY, KIMBALL B TAYLOR, SCOTT V JOHNSON, GARY M BRUSTAD, JOHN R		
IPC分类号	A61B17/32 A61B17/34 A61B19/00 A61B A61B17/00		
CPC分类号	A61B17/3417 A61B17/3462 A61B17/3474 A61B17/3478 A61B17/3496 A61B90/361 A61B90/92 A61B2017/0046 A61B2017/00477 A61B2017/00907 A61B2017/320044 A61B2017/3456 A61B2017/346 A61B2017/3464 A61B2017/347 A61B2090/3937 A61B1/3132 A61B17/3415 A61B17/3421 A61B17/3423 A61B17/3468 A61B2017/3425 A61B2017/3445		
优先权	60/508390 2003-10-03 US		
其他公开文献	EP2545864B1 EP2545864A2		
外部链接	Espacenet		

摘要(译)

本发明涉及一种无刀片套管针闭塞器，用于在穿过体壁插入期间分离或分叉身体组织。在一个方面，本发明的填塞器包括沿近端和远端之间的轴线延伸的轴;无刀片尖端设置在轴的远端并且具有带有外表面的大致锥形构造，外表面向远侧延伸到钝点，其中一对侧部具有共同的形状并且被至少一个中间件分开该部分，其中每个侧面部分从钝点径向向外延伸，沿着轴向近侧具有渐进位置，并且轴的尺寸和构造适于接收具有远端的光学仪器以接收身体组织的图像。在这方面，锥形构造有利于身体组织的不同层的分离，并提供层之间的尖端的适当对准。侧部包括远端部分和近端部分，侧部的远端部分相对于侧部的近端部分径向扭转。中间区段包括远侧部分和近侧部分，中间区段的远侧部分沿第一径向方向扭转，并且中间区段的近侧部分沿与第一径向方向相反的第二径向方向扭转。

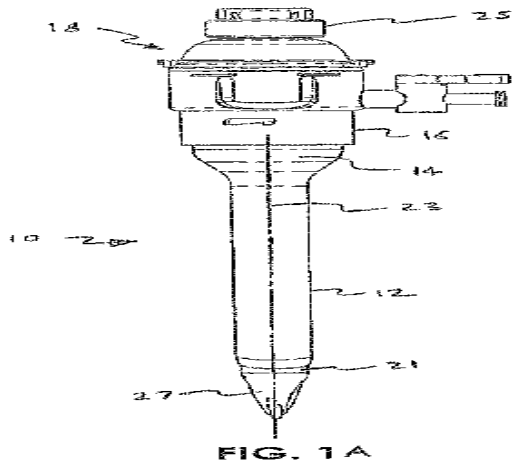

FIG. 1A