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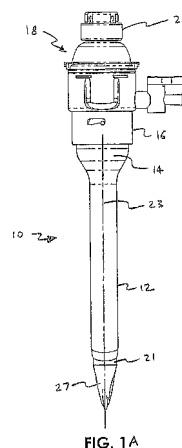
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(54) **Bladeless optical obturator**

(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.



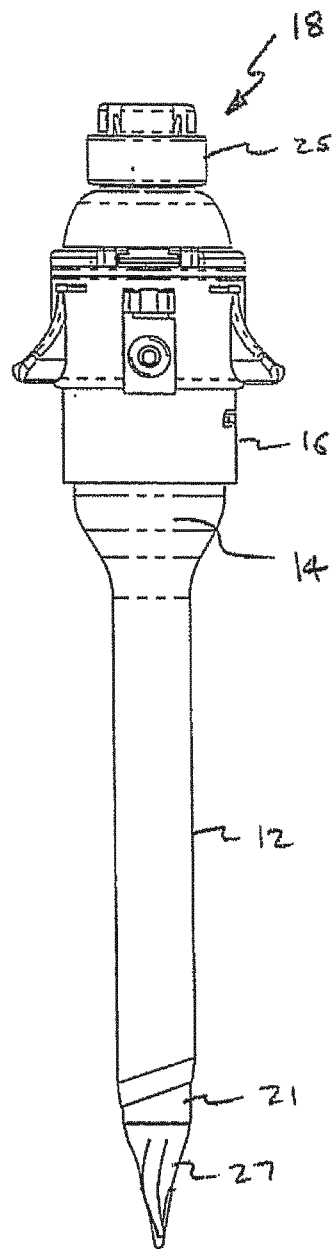


FIG. 1B



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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 25 February 2013	Examiner Assion, Jean-Charles
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EUROPEAN SEARCH REPORT

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专利名称(译)	无叶光学闭孔器		
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[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		
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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。

