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**11191187.1 / 2 428 173**
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## (54) Bladeless obturator

(57) The invention is directed towards a bladeless obturator (18) for wedging through muscle fiber layers (41, 43, 45) to safely cut through to the abdominal cavity (32) in order to apply a cannula (12). The invention comprises a bladeless obturator (18) having a rectangular tip (27j) with a conical surface (75j) between two cylindrical surfaces (95j, 99j). At least one ridge (93j) extends radially outwards from the conical surface and from the distal one of the two cylindrical surfaces.

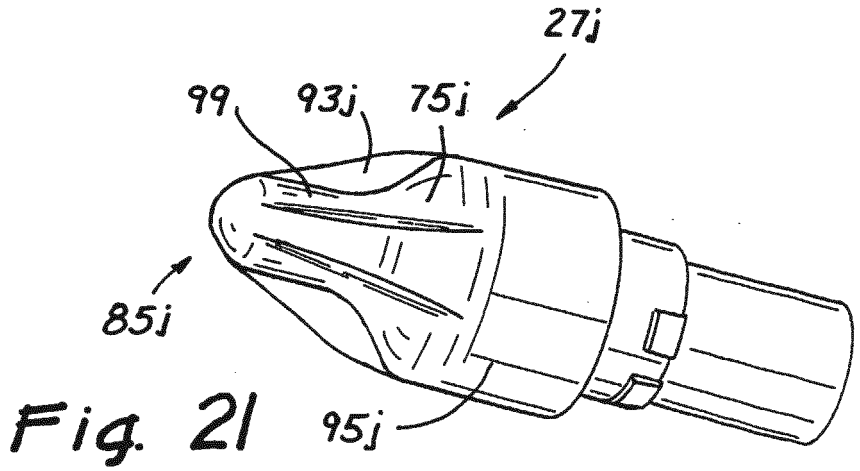


Fig. 21

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# EUROPEAN SEARCH REPORT

Application Number
EP 14 16 9569

## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (IPC) |
|---|---|---|---|
| A | US 5 817 061 A (GOODWIN MATTHEW S [US] ET AL) 6 October 1998 (1998-10-06)<br>* figures 2,5 *<br>* column 2, line 28 - line 36 *<br>* column 2, line 53 - line 65 *<br>* column 4, line 34 - line 39 *<br>* column 5, line 30 - line 41 *<br>----- | 1-13 | INV.<br>A61B17/00<br>A61B17/34 |
| | | | TECHNICAL FIELDS SEARCHED (IPC) |
| | | | A61B |

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| Berlin | 23 September 2014 | Nice, Philip |

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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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. EP 14 16 9569

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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23-09-2014

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| US 5817061 A | 06-10-1998 | NONE | |

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

| | | | |
|---|---|---|---|
| 专利名称(译) | 无叶闭孔器 | | |
| 公开(公告)号 | EP2769683A3 | 公开(公告)日 | 2014-10-29 |
| 申请号 | EP2014169569 | 申请日 | 2002-03-04 |
| [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 | PINGLETON EDWARD D<br>WIXEY MATTHEW A<br>KAHLE HANK | | |
| 发明人 | PINGLETON, EDWARD D<br>WIXEY, MATTHEW A<br>KAHLE, HANK | | |
| IPC分类号 | A61B17/00 A61B17/34 A61B17/32 | | |
| CPC分类号 | A61B17/02 A61B17/3417 A61B17/3478 A61B2017/320044 A61B2017/3456 A61B2017/346 | | |
| 优先权 | 60/324613 2001-09-24 US | | |
| 其他公开文献 | EP2769683B1<br>EP2769683A2 | | |
| 外部链接 | Espacenet | | |


摘要(译)

本发明涉及一种无刀片填塞器（18），用于楔入肌纤维层（41,43,45）以安全地切入腹腔（32），以便应用套管（12）。本发明包括无刀片填塞器（18），其具有矩形尖端（27j），在两个圆柱形表面（95j，99j）之间具有锥形表面（75j）。至少一个脊（93j）从锥形表面和两个圆柱形表面中的远端之一径向向外延伸。


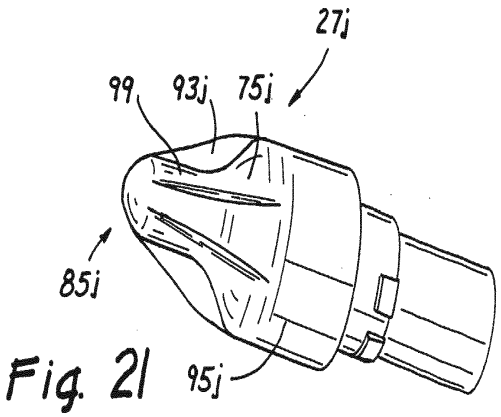

Fig. 21