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(74) Agent: **FARBER, Mark**; U.S. Surgical, a division of Tyco Healthcare Group LP, 195 McDermott Road, North Haven, CT 06473 (US).

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(71) Applicant (for all designated States except US): **TYCO HEALTHCARE GROUP LP** [US/US]; 150 Glover Avenue, Norwalk, CT 06856 (US).

(72) Inventors; and

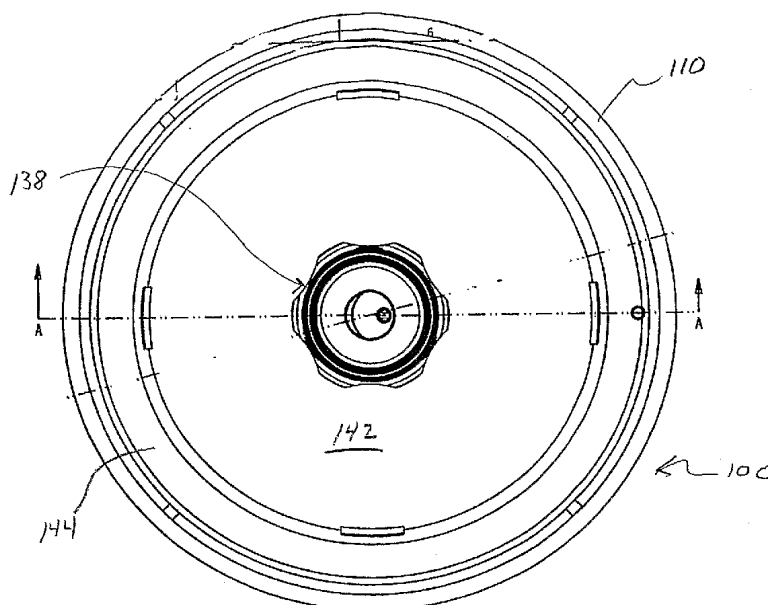
(75) Inventors/Applicants (for US only): **SMITH, Robert, C.** [US/US]; 740 Old Towne Road, Cheshire, CT 06410 (US). **WENCHELL, Thomas** [US/US]; 73 Oak Terrace, Durham, CT 06422 (US).

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[Continued on next page]

(54) Title: SURGICAL HAND ACCESS APPARATUS



(57) Abstract: A surgical access apparatus adaptable to permit the sealed insertion of either the surgeon's hand and/or surgical instruments during laparoscopic and endoscopic surgical procedures includes an access housing defining a central longitudinal axis and having a longitudinal opening extending therethrough for passage of a surgeon's hand, a retractor base mounted to the access housing and having a flexible liner for positioning within the incision to engage tissue portions defining the incision, and a trocar adapter which is releasably mounted to the access housing. The trocar adapted includes a trocar sleeve positioned for reception within the longitudinal opening and a trocar valve adapted to receive a surgical instrument in fluid tight relation therewith. The access housing may include a seal adapted to form a seal about each of the surgeon's arm and the trocar sleeve. The seal is adapted to close in absence of the surgeon's arm or the trocar sleeve.

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A. CLASSIFICATION OF SUBJECT MATTER IPC: A61B 1/32 (2006.01) USPC: 600/208 According to International Patent Classification (IPC) or to both national classification and IPC																										
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 600/208,184,204,207,206 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)																										
C. DOCUMENTS CONSIDERED TO BE RELEVANT <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Category *</th> <th style="width: 70%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width: 20%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">X</td> <td>US 5,514,133 A (GOLUB ET AL) 07 May 1996, see entire document.</td> <td style="text-align: center;">1-6,20-22,24</td> </tr> <tr> <td style="text-align: center;">---</td> <td></td> <td style="text-align: center;">-----</td> </tr> <tr> <td style="text-align: center;">Y</td> <td></td> <td style="text-align: center;">7,23</td> </tr> <tr> <td style="text-align: center;">X</td> <td>US 5,906,577 A (BEANE ET AL) 25 May 1999, see entire document.</td> <td style="text-align: center;">8,9,11-13,16,19</td> </tr> <tr> <td style="text-align: center;">X,E</td> <td>US 2005/0148823 A1 (VAUGH ET AL) 07 July 2005, see entire document.</td> <td style="text-align: center;">1-7,20-24</td> </tr> <tr> <td style="text-align: center;">Y</td> <td>US 2004/0015185 A1 (EWERS ET AL) 22 January 2004, see entire document.</td> <td style="text-align: center;">7,23</td> </tr> <tr> <td style="text-align: center;">A</td> <td>US A 6,077288 A (SHIMOMURA ET AL) 20 June 2000, see entire document.</td> <td style="text-align: center;">1-27</td> </tr> </tbody> </table>			Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 5,514,133 A (GOLUB ET AL) 07 May 1996, see entire document.	1-6,20-22,24	---		-----	Y		7,23	X	US 5,906,577 A (BEANE ET AL) 25 May 1999, see entire document.	8,9,11-13,16,19	X,E	US 2005/0148823 A1 (VAUGH ET AL) 07 July 2005, see entire document.	1-7,20-24	Y	US 2004/0015185 A1 (EWERS ET AL) 22 January 2004, see entire document.	7,23	A	US A 6,077288 A (SHIMOMURA ET AL) 20 June 2000, see entire document.	1-27
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<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex. </div>																										
<table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed </td> <td style="width: 50%; vertical-align: top;"> "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family </td> </tr> </table>			* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family																						
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer Cary E. O'Connor Telephone No. 703-308-0858																								