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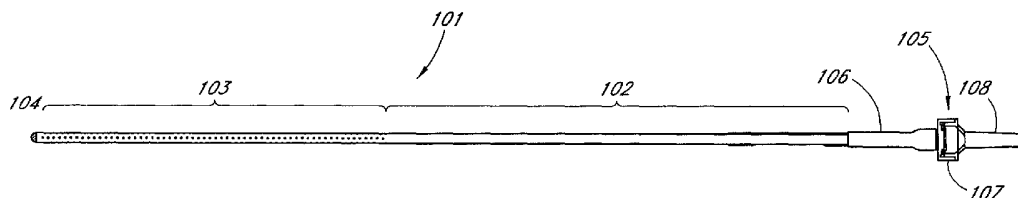
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- (74) Agent: DELANEY, Karoline, A.; Knobbe, Martens, Olson And Bear, LLP, 2040 Main Street, Fourteenth Floor, Irvine, CA 92614 (US). For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM FOR EFFICIENT DRAINAGE OF BODY CAVITY



(57) Abstract: A system for efficient drainage of a body cavity includes application of vacuum at very high pressure, preferably in the range of approximately 50-500 torr or higher. The system includes the use of a drainage tube (101) having a plurality of holes (111) formed into the wall of a portion (103) of the tube (101) to be inserted in the body cavity. The area of each of the holes (111) is preferably selected to ensure that the suction force communicated by each of the holes (111) to areas within the body cavity is insufficient to injure the tissues exposed in the body cavity. A one-way valve (107) maintains unidirectional flow of drained fluids and gases away from the body cavity. A vacuum relief valve (104) prevents application of dangerous levels of vacuum pressure by opening to admit atmospheric air when vacuum pressure exceeds a predetermined threshold. A vacuum chamber (201) separates drained fluids from drained gases.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/18505

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61M 31/00

US CL : 604/48

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. : 604/48, 500, 506, 514

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

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,352,525 B1 (WAKABAYASHI) 05 March 2002 (05.03.2002), column 1, lines 57-65, column 7, line 58 to column 8, line 13, column 10, lines 8-25.	1-29
A	US 6,299,593 B1 (WAKABAYASHI) 09 October 2001 (09.10.2001), Abstract, column 1, lines 26-34, column 4, lines 6-25.	1-29
A	US 4,883,474 A (SHERIDAN et al) 28 November 1989 (28.11.1989), Abstract.	1-29
A	US 5,141,503 A (SEWELL, JR.) 25 August 1992 (25.08.1992), Abstract.	1-29



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:		"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
"A"	document defining the general state of the art which is not considered to be of particular relevance	"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
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"P"	document published prior to the international filing date but later than the priority date claimed		

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