### (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 6 November 2003 (06.11.2003)

**PCT** 

# (10) International Publication Number WO 2003/091608 A3

(51) International Patent Classification<sup>7</sup>: 5/178

A61M 5/14,

(21) International Application Number:

PCT/US2003/013182

(22) International Filing Date: 28 April 2003 (28.04.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 60/376,033 26 April 2002 (26.04.2002) US

- (71) Applicant: TAUT, INC. [US/US]; 2571 Kaneville Road, Geneva, IL 60134 (US).
- (72) Inventor: MCFARLANE, Richard, H.; 1190 Singer Drive, Singer Island, FL 33404 (US).
- (74) Agents: MALLOY, Jennie, S. et al.; Malloy & Malloy, P.A., 2800 S.W. Third Avenue, Miami, FL 33129 (US).

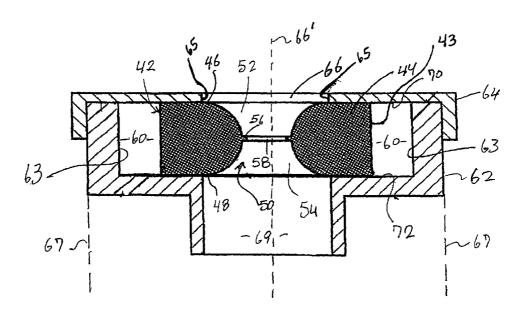
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### **Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: FLOATING SEAL ASSEMBLY FOR A TROCAR



(57) Abstract: A seal assembly (40) used in combination with a trocar assembly to maintain sealing engagement with the exterior surface of medical instrument, which may have different size diameters, introduced into the trocar assembly so as to maintain adequate insufflation pressure within a body cavity accessed by the trocar assembly. The seal assembly (40) includes a seal member (42) and is structured to permit free movement of the seal member at least radially within a chamber (60) of a seal housing (62) which may be attached to or part of the trocar housing (12). The seal member (42) and the chamber (60) are cooperatively dimensioned to maintain at least the periphery of an outer surface of the seal member in surrounding relation to an inlet port of the chamber and thereby maintain seal engagement between corresponding interior surfaces of the chamber and the corresponding outer surfaces of the seal member.

# WO 2003/091608 A3



(88) Date of publication of the international search report: 25 November 2004

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.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/13182

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : A61M 5/14, 5/178			
US CL : 604/167.06, 256; 277/626			
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.: 604/167.06, 256; 277/626			
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) east: trocar, seal, sealing, coating, etc.			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where a	ppropriate, of the relevant passages	Relevant to claim No.
X 	US 5,456,284 A (RYAN et al) 10 October 1995 (19	0.10.1995), see entire document	1, 2, 5-8, 12, 13, 18- 21, and 23
Y			3, 4, 17
X, P	ł		1, 2, 6-16, 18-22
Y	US 5,540,661 A (TOMISAKA et al.) 30 July 1996 (30.07.1996), column 2, lines 54-66.		2, 3, 17
X, P	US 6,482,181 B1 (RACENET, et al.) 19 November 2002 (19.11.2002), see entire document.		1-8, 12, 13, 17, 18-21, 23
Y, P			9-11, 22
Further documents are listed in the continuation of Box C. See patent family annex.			
* Special categories of cited documents: "T		"T" later document published after the in priority date and not in conflict with	
"A" document defining the general state of the art which is not considered to be of particular relevance		understand the principle or theory un	derlying the invention
"E" earlier ap date	plication or patent published on or after the international filing	"X" document of particular relevance; the considered novel or cannot be considered when the document is taken alon	ered to involve an inventive
"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)		"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	
"O" document referring to an oral disclosure, use, exhibition or other means		"&" document member of the same patent	
"P" document published prior to the international filing date but later than the		•	
Date of the actual completion of the international search		Date of mailing of the international search report	
23 July 2004 (23.07.2004)		0.5 OCT 200A	
Name and mailing address of the ISA/US		Authorized officer	
Mail Stop PCT, Aun: ISA/US Commissioner for Patents		Authorized officer  Alison K. Pickard V   \( \lambda \) will get	
P.O. Box 1450		Telephone No. 308-1113	
Alexandria, Virginia 22313-1450 Telephone No. 308-1113 Facsimile No. (703) 305-3230			

Form PCT/ISA/210 (second sheet) (July 1998)