(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 15 March 2007 (15.03.2007)

PCT

(10) International Publication Number WO 2007/030388 A3

(51) International Patent Classification: *A61M 1/00* (2006.01)

(21) International Application Number:

PCT/US2006/034254

(22) International Filing Date:

1 September 2006 (01.09.2006)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

11/220.874

6 September 2005 (06.09.2005) US

(71) Applicant (for all designated States except US): FOX HOLLOW TECHNOLOGIES, INC. [US/US]; 740 Bay Road, Redwood City, CA 94063 (US).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): GOFF, Thomas, G. [US/US]; 214 Oak Court, Menlo Park, CA 94025 (US). ORTH, Michael, J. [US/US]; 15875 Walter Breton Drive, Morgan Hill, CA 95037 (US). YANG, Mark, C. [US/US]; 141 3rd Avenue, San Francisco, CA 94118 (US). HA, Hung [US/US]; 2974 Delancey Court, San Jose, CA 94086 (US).
- (74) Agents: HESLIN, James, M. et al.; TOWNSEND AND TOWNSEND AND CREW LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834 (US).

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

Declaration under Rule 4.17:

 as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

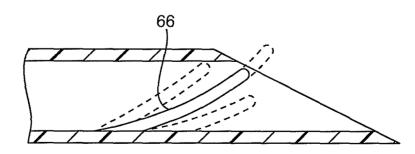
Published:

with international search report

(88) Date of publication of the international search report: 14 June 2007

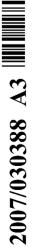
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS AND APPARATUS FOR ASSISTED ASPIRATION



(57) Abstract: An aspiration catheter comprises a catheter body having an aspiration lumen therethrough. The distal opening of the aspiration lumen can be modified in various ways or can have the addition of structure in order to disrupt sealing between the port and material being aspirated. Examples of modifications include slots, castellations, zig-zag features, and other geometries which resist sealing of aspirated material. Blades, rollers, vibrating elements, and other structures may be provided within or around the distal end of the aspiration lumen in order to dislodge and disrupt aspirated material which can seal against the opening.





INTERNATIONAL SEARCH REPORT

International application No. PCT/US06/34254

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61M 5/32 (2007.01) USPC - 604/266 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) IPC(8) - A61M 5/32 (2007.01) USPC - 604/266, 606/159			
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)			
MicroPatent, IP.com, DialogPro			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.
Х	US 5,882,329 A (PATTERSON et al) 16 March 1999 (16.03.1999) entire document	1-2, 24-28
- Y			3-23, 29-32
Υ	US 5,147,332 A (MOOREHEAD) 15 September 1992 (15.09.1992) entire document	3-23, 30-32
Y	US 6,596,011 B2 (JOHNSON et al) 22 July 2003 (22.07.2003) entire document		11-15, 29
Α	A US 6,491,660 B2 (GUO et al) 10 December 2002 (10.12.2002) entire document		1-32
Α	US 6,579,298 B1 (BRUNEAU et al) 17 June 2003 (17.06.2003) entire document		1-32
	·		
Further documents are listed in the continuation of Box C.			
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "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			
"E" earlier application or patent but published on or after the international filing date		"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	
"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)		` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	
means	neans being obvious to a person skilled in the art		
"P" document published prior to the international filing date but later than "&" document member of the same patent family the priority date claimed			
Date of the actual completion of the international search 24 January 2007 Date of mailing of the international search 20 FEB 2007			ch report
Name and mailing address of the ISA/US Authorized officer:			
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450		Blaine R. Copenheaver	
1	Facsimile No. 571-273-3201 PCT Helpdesk: 571-272-4300		