(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 29 December 2004 (29.12.2004)

PCT

US

(10) International Publication Number WO 2004/112866 A3

(51) International Patent Classification⁷: F16K 51/00, F16L 29/00, 37/28, A61M 5/00

(21) International Application Number:

PCT/US2004/019641

(22) International Filing Date: 17 June 2004 (17.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 60/479,403 17 June 2003 (17.06.2003)

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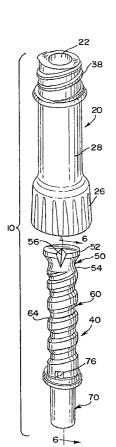
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,

[Continued on next page]

(54) Title: FLUID HANDLING DEVICE AND METHOD OF MAKING SAME



(57) Abstract: A fluid handling device, such as a needlefree access device, includes a housing having an inlet and an inlet channel; and a flow control member comprising a combination outlet, biasing and piston member. The flow control member includes a piston section moveable between a closed position in which the piston section is inside the housing below the inlet channel but allows fluid to flow through the inlet channel; a biasing section connected to the piston section that normally biases the piston section into the inlet channel; and an outlet section connected to the biasing section having an outlet fitting in fluid communication with the inside of the housing.

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MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, IT, LU, 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).

Published:

with international search report

(88) Date of publication of the international search report: 14 April 2005

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/US04/19641

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : F16K 51/00; F16L 29/00, 37/28; A61M 5/00 US CL : 251/149, 149.1, 149.3, 149.6, 149.7; 604/246, 249, 256, 537, 538, 905; 137/854 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.: 251/149, 149.1, 149.3, 149.6, 149.7; 604/246, 249, 256, 537, 538, 905; 137/854					
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.	
Х	US 5,549,566 A (ELIAS et al.) 27 August 1996 (27.08.1996), See figure 1.			13-19, 22, 23, 30-32, 35-37, 56-58, 61, 63-65, 76, 80, 81, 92	
			-	89-91	
Y	Y US 6,168,137 B1 (PARADIS) 02 January 2001 (02.01.2001), See Figure 4.			89-91	
A US 4,946,448 A (RICHMOND) 07 August 1990 (07.08.1990), Se), See figure 2.	1-111	
Further	documents are listed in the continuation of Box C.		See patent family annex.		
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Date of the actual completion of the international search		Date of mailing of the international search report 25 JAN 2005			
03 January 2005 (03.01.2005)			7		
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US			Authorized officer faron M. Breine for Edward K. Look Sharon M.		
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