

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
30 July 2009 (30.07.2009)

(10) International Publication Number  
**WO 2009/093231 A3**

(51) International Patent Classification:  
A61M 5/172 (2006.01)

(21) International Application Number:

PCT/IL2008/001616

(22) International Filing Date:

17 December 2008 (17.12.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/006,578 22 January 2008 (22.01.2008) US

(71) Applicant (for all designated States except US): **PRO-IV LTD.** [IL/IL]; POB 331, 40200 Kfar Vitkin (IL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SHARVIT, Pierre** [IL/IL]; Moshav Gan Yoshia, 38850 Emeq Hefer (IL). **NUSBACHER, Jacob** [IL/IL]; 38 Ahad Ha'Am St., 43211 Ra'anana (IL). **GOLDENBERG, Gershon** [IL/IL]; P.O.Box 331, 40200 Kfar Vitkin (IL). **DEVIR,**

**Michal** [IL/IL]; 1 HaMezah, 40200 Kfar Vitkin (IL). **KATZMAN, Youval** [IL/IL]; P.O. Box 5271, 9 Yigal Allon St., 43211 Zichron Yaakov (IL).

(74) Agent: **DR. D. GRAESER LTD;** 13 HaSadna St, P.O. Box 2496, 43650 Raanana (IL).

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

[Continued on next page]

(54) Title: DRUG PORT VERIFICATION VALVE

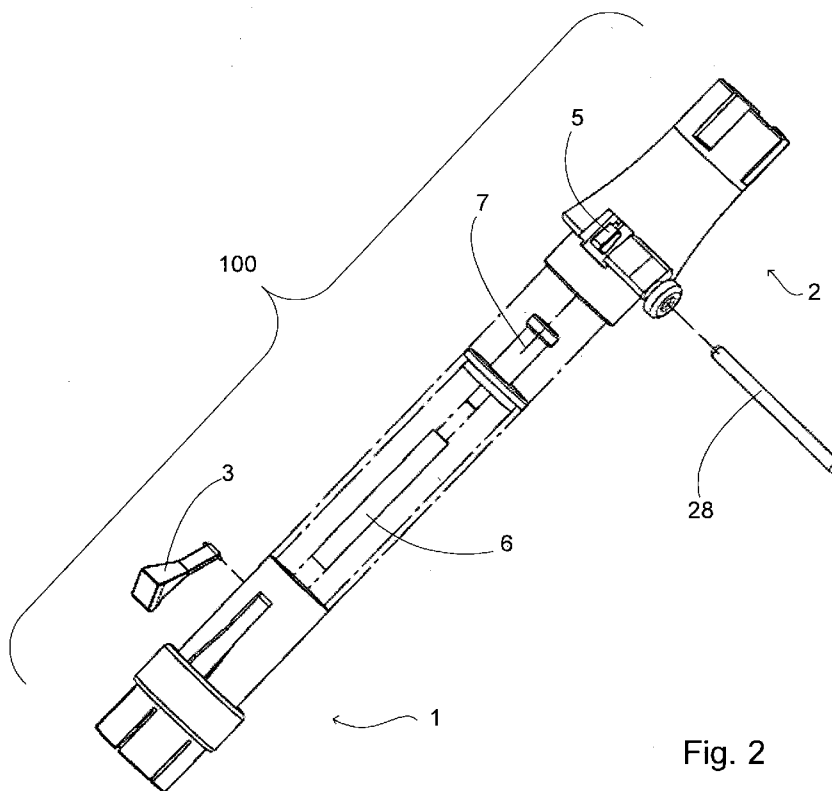


Fig. 2

[Continued on next page]



WO 2009/093231 A3

TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, 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 (Art. 21(3))*

**(88) Date of publication of the international search report:**

7 January 2010

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL 08/01616

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(8) - A61M 5/172 (2009.01) USPC - 604/246 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC(8): A61M 5/172 (2009.01) USPC: 604/246 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC(8): A61M 5/172; A61M 5/14, 5/168, 39/00, 39/02, 39/22; G06F 19/00; G06Q 50/00 (2009.01) USPC: 604/246, 251, 30, 31, 65, 67, 118, 167.01, 167.03, 247, 288.03; 705/2, 3 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPTO WEST (USPT, PGPUB, EPAB, JPAB); drug, port, valve, break\$, lock\$, pin, verification, IV, break\$, shutter, assembly, infus\$, flexible, tube, 'pinch valve', vial, adaptor, adapter, needle, axis, 'x', 'y', 'z', syringe, connect\$ Google Scholar; 'drug port verification valve'		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2006/046242 A2 (SHARVIT, et al.) 04 May 2006 (04.05.2006), [Abstract], para[0004], [0005], [0013], [0017], [0030], [0035], [0036], [0058], Figs. 3-8, 10, 11	1-9
Y	US 2003/0135164 A1 (SIMON) 17 July 2003 (17.07.2003), para[0004], [0005]	1-9
Y	US 5,397,303 A (SANCOFF, et al.) 14 March 1995 (14.03.1995), [Abstract], Figs. 9, 10	2-8
Y	US 6,162,399 A (MARTINELL GISPER-SAUCH) 19 December 2000 (19.12.2000), col 1, ln 55-67 to col 2, ln 1-8	3-8
Y	US 2003/0018308 A1 (TSAI), 23 January 2003 (23.01.2003), [Abstract]	7
Y	US 2003/0233074 A1 (SHIELDS) 18 December 2003 (18.12.2003), [Abstract]	8
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
* 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 but 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		
Date of the actual completion of the international search 08 April 2009 (08.04.2009)		Date of mailing of the international search report <b>29 APR 2009</b>
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: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774