

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 January 2011 (20.01.2011)

PCT

(10) International Publication Number
WO 2011/009004 A3

- (51) **International Patent Classification:**
A61M 5/307 (2006.01) *A61M 39/22* (2006.01)
A61M 1/00 (2006.01)
- (21) **International Application Number:**
PCT/US20 10/042 196
- (22) **International Filing Date:**
15 July 2010 (15.07.2010)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
61/226,204 16 July 2009 (16.07.2009) US
- (71) **Applicant (for all designated States except US):** **B. BRAUN MELSUNGEN AG** [DE/DE]; Carl-Braun-Strasse 1, 34212 Melsungen (DE).
- (71) **Applicant (for MW only):** **B. BRAUN MEDICAL INC.** [US/US]; 824 Twelfth Avenue, Bethlehem, Pennsylvania 18018 (US).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **BONNAL, Olivier** [DE/DE]; Am Hopfenort 28, 34212 Melsungen (DE). **FUCHS, Juergen** [DE/DE]; Wolfhager Strasse 45, 34308 Bad Emstal (DE). **KATERKAMP, Andreas** [DE/DE]; Dessauerstr. 12, 34212 Melsungen (DE). **CLOBES, Christian** [DE/DE]; Unterer Erlenbach 29, 36211 Alheim (DE). **EBERT, Mario** [DE/DE]; Memeler Strasse 3, 34587 Felsberg (DE).
- (74) **Agents:** **DAO, Tom H.** et al; Suite 725, 18200 Von Karman Avenue, Irvine, California 92612 (US).
- (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, CL, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(H))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(Hi))

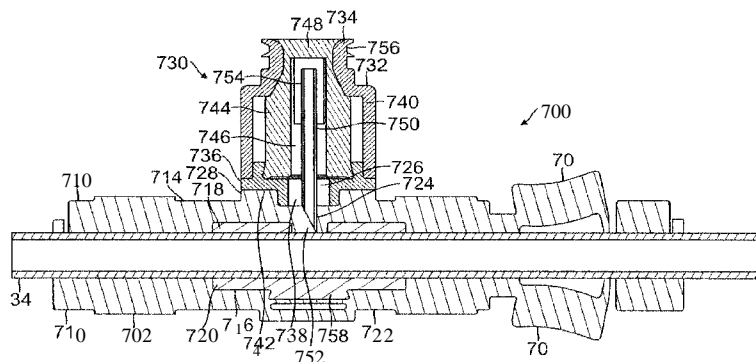
Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) **Date of publication of the international search report:**
19 May 2011

(54) **Title:** APPARATUS FOR SELECTIVELY ESTABLISHING A NEEDLELESS INJECTION PORT ON IV TUBING, AND ASSOCIATED METHODS

FIG. 1B





(57) **Abstract:** Apparatus enables one or more needleless injection ports to be established on IV tubing as needed. An IV tubing-engaging portion secures the apparatus about the tubing. A puncturing member establishes fluid communication between the IV line and a sealing member on the apparatus. Connecting a syringe to the sealing member establishes fluid communication between the IV line and the syringe, enabling an injection to be made. When the syringe is withdrawn, the sealing member reseals to prevent fluid leakage from the IV line.

WO 2011/009004 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US20 10/042 196

| A. CLASSIFICATION OF SUBJECT MATTER | | |
|--|---|--|
| <i>A61M 5/307(2006.01)i, A61M 1/00(2006.01)I, A61M 39/22(2006.01)I</i> | | |
| 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) A61M 5/307; A61M 39/02; A61M 39/22; A61M 25/00; A61M 37/00 | | |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models Japanese utility models and applications for utility models | | |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: IV tubing, valve, piston, puctur* and needless | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | |
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | US 6524304 B1 (PICOU, GREG et al.) 25 February 2003 See Abstract, Figs. 5-7,9, Columns 1,2,4, Claims 1,8,13,14 | 1-25 |
| A | US 4998927 A1 (VAILLANCOURT, VINCENT L.) 12 March 1991 See Abstract, Figs. 3-7, Columns 1,5, Claims 1,2,8 | 1-25 |
| A | US 2006-0111694 A1 (FUKAI, AKITOSHI et al.) 25 May 2006 See Abstract, Figs. 1a, 1b, Paragraphs 0001-0054, Claims 1,4,7 | 1-25 |
| A | US 5230706 A1 (DUQUETTE, IRENE A.) 27 July 1993 See Abstract, Figs. 1,2, Columns 1,3,4-6, Claims 1,5,9 | 1-25 |
| A | US 2008-0262465 A1 (ZINGER, FREDDY et al.) 23 October 2008 See Abstract, Figs. 2C.3B, Paragraphs 0002,0006,0018,0019, Claims 1-3 | 1-25 |
| <input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex. | | |
| * 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 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 28 MARCH 2011 (28.03.2011) | | Date of mailing of the international search report 29 MARCH 2011 (29.03.2011) |
| Name and mailing address of the ISA/KR  Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsu-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140 | | Authorized officer Kang, Mm Ku Telephone No. 82-42-481-5609  |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US20 10/042 196

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|------------------|--|--|
| US 6524304 B1 | 25.02.2003 | None | |
| US 4998927 A1 | 12.03.1991 | None | |
| US 2006-01 11694 A1 | 25.05.2006 | CA 2512775 A1 EP 1584346 A1 EP 1584346 A4 EP 2016971 A2 EP 2016971 A3 JP 04-000125 B2 JP 04-064422 B2 JP 2004-195 180 A JP 2004-195 18 1 A JP 2004-209278 A JP 2004-275665 A JP W020-040627 2 1A1 W0 2004-06272 1 A1 | 29.07.2004 12.10.2005 30.07.2008 21.01.2009 25.03.2009 31.10.2007 19.03.2008 15.07.2004 15.07.2004 29.07.2004 07.10.2004 29.07.2004 29.07.2004 |
| US 5230706 A1 | 27.07.1993 | None | |
| US 2008-0262465 A1 | 23.10.2008 | CA 2625824 A1 CN 101299983 A CN 101299983 CO EP 1957028 A1 IL190904D0 JP 2009-513294 A JP 2009-513294 T wo 2007-052252 A1 | 10.05.2007 05.11.2008 05.11.2008 20.08.2008 03.11.2008 02.04.2009 02.04.2009 10.05.2007 |