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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
3 February 2011 (03.02.2011)

PCT

(10) International Publication Number
WO 2011/014444 A1

(51) **International Patent Classification**:
A61M 5/34 (2006.01)

(21) **International Application Number**:
PCT/US2010/043200

(22) **International Filing Date**:
26 July 2010 (26.07.2010)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
12/512,532 30 July 2009 (30.07.2009) US

(71) **Applicant** *(for all designated States except US)*: **BECTON, DICKINSON AND COMPANY** [US/US]; 1 Becton Drive, MC 110, Franklin Lakes, New Jersey 07417-1880 (US).

(72) **Inventors; and**

(75) **Inventors/Applicants** *(for US only)*: **LUM, Chee Leong** [MY/US]; 28 Hilton St, Pequannock, New Jersey 07440 (US). **ABID, Waheed** [PK/US]; 1101 Rockaway Avenue, Valley Stream, New York 11581 (US). **DOUGLAS, Peter** [US/US]; 82 Crosley Terrace, Hillsdale, New Jersey 07642 (US). **ZIVKOVIC, Ivan** [RS/US]; 107 Indian Hollow Ct., Mahwah, New Jersey 07430 (US).

(74) **Agents**: **HIGHET, David, W.** et al.; VP & Chief IP Counsel, Becton, Dickinson and Company, (Diehl Servilla LLC), 1 Becton Drive, MC 110, Franklin Lakes, New Jersey 07417-1880 (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).

Published:

— *with international search report (Art. 21(3))*

(54) **Title**: MEDICAL DEVICE ASSEMBLY

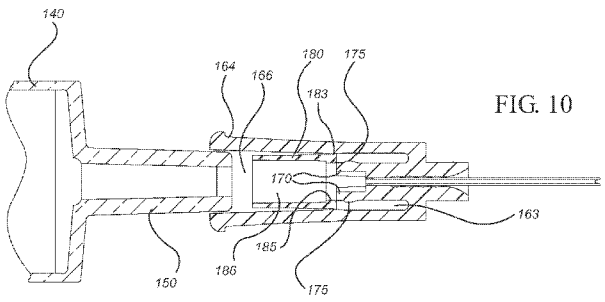


FIG. 10

(57) **Abstract**: Medical device assemblies having a connection mechanism for securely connecting a hub to fluid storage containers in a luer slip relationship are described. An exemplary medical device includes a hub forming a cavity, a second indicating element disposed within the cavity that engages the hub. Additional features of the medical device include a second indicating element contoured to form a line contact with the hub. In a specific configuration, the hub includes a first indicating element attached to the hub and extending proximally into the cavity having a protrusion. In a more specific configuration, the medical device includes a fluid storage container that has an indication system for visually indicating optimal fluid-tight engagement of the hub and the fluid storage container.

WO 2011/014444 A1