



- (51) International Patent Classification:
A61M 39/06 (2006.01)
- (21) International Application Number:
PCT/EP2015/050262
- (22) International Filing Date:
8 January 2015 (08.01.2015)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/924,865 8 January 2014 (08.01.2014) US
- (71) Applicant: **B. BRAUN MELSUNGEN AG** [DE/DE];
Carl-Braun-Str. 1, 34212 Melsungen (DE).
- (72) Inventor: **TEOH, Hui Kuun**; Bayan Lepas Free Industrial
Zone, Penang, 10810 (MY).
- (74) Agents: **KINKELDEY, Daniela** et al.; Maximiliansplatz
22, 80333 München (DE).
- (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, BN, 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, IR, IS, JP, KE, KG, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG,
MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,
PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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, RW, SD, SL, ST, SZ,
TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, KM, 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(ii))*

[Continued on next page]

- (54) Title: CATHETER DEVICES WITH VALVES AND RELATED METHODS

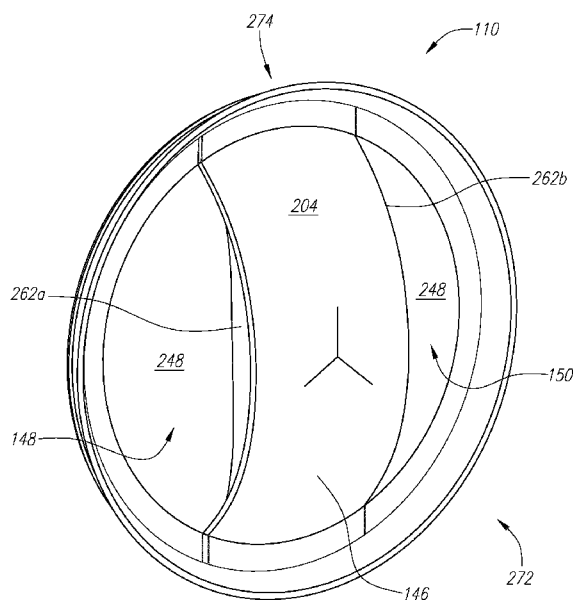


FIG. 5A

- (57) Abstract: Needle assemblies and related methods are disclosed having a needle hub with a needle, a catheter tube with a catheter hub and having the needle extending through the catheter tube; and a valve positioned in an interior cavity of the catheter hub, the valve having a first section with a first chord, a second chord, and a plurality of slits defining a plurality of flaps, a second section attached to the first section, and a third section attached to the first section; an inside edge formed on the second section and pressed against the first section; an inside edge formed on the third section and pressed against the first section; and wherein a first flow path is provided adjacent the first chord and a second flow path is provided adjacent the second chord.



-
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
- Published:**
- *with international search report (Art. 21(3))*