

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
6 September 2013 (06.09.2013)



(10) International Publication Number
WO 2013/130891 A8

(51) International Patent Classification:

A61M 5/315 (2006.01) *A61M 5/31* (2006.01)
A61M 5/34 (2006.01) *A61L 2/18* (2006.01)

(21) International Application Number:

PCT/US2013/028437

(22) International Filing Date:

28 February 2013 (28.02.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/605,095 29 February 2012 (29.02.2012) US

(71) Applicant: **HYPROTEK, INC.** [US/US]; 4219 East 65th Avenue, Spokane, WA 99223 (US).

(72) Inventor: **TENNICAN, Patrick, O.**; 4219 E. 65th Avenue, Spokane, WA 99223 (US).

(74) Agent: **HYTA, Robert, C.**; Wells St. John P.S., 601 W. 1st Avenue, Suite 1300, Spokane, WA 99201 (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, 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, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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.

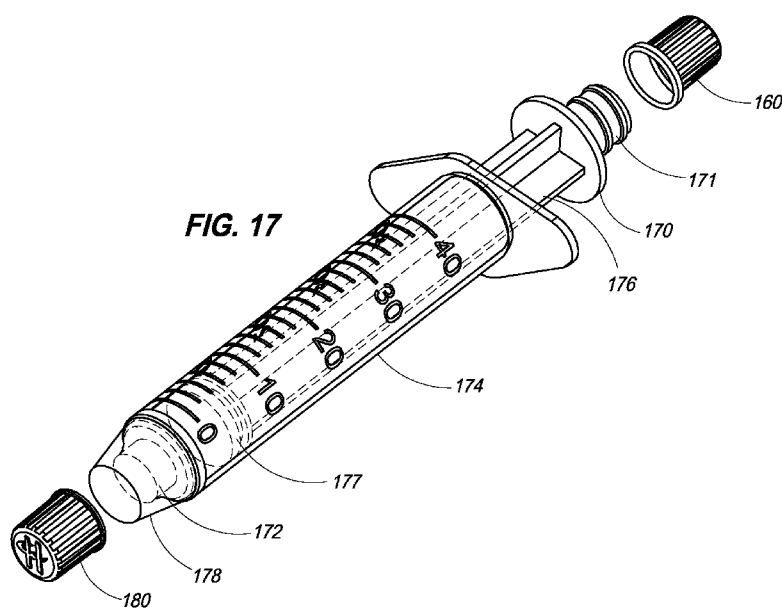
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, 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, 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))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: INTRAVASCULAR LINE AND PORT CLEANING METHODS, METHODS OF ADMINISTERING AN AGENT INTRAVASCULARLY, METHODS OF OBTAINING/TESTING BLOOD, AND DEVICES FOR PERFORMING SUCH METHODS



(57) Abstract: A syringe assembly is provided comprising a syringe cylinder extending from an opening configured to receive a plunger to an end configured to couple with a needle and/or medical tubing, a cap configured to couple to the end, and barrier material at least partially encompassing the cap and the end. A syringe assembly is provided comprising a syringe cylinder extending from an opening configured to receive a plunger to an end configured to couple with a needle and/or medical tubing, a plunger extending from one end to a seal end, and at least one cap configured to couple to the one end. A syringe assembly is provided comprising a syringe cylinder extending from an opening configured to receive a plunger to an end configured to couple with a needle and/or medical tubing, and a plunger extending from one end to a seal end, the one end of the plunger defining a recess configured to receive at least one cap.



— *of inventorship (Rule 4.17(iv))*

(48) Date of publication of this corrected version:

24 April 2014

Published:

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

(15) Information about Correction:

see Notice of 24 April 2014