

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
21 October 2021 (21.10.2021)



(10) International Publication Number
WO 2021/211673 A1

- (51) **International Patent Classification:**
A61M 39/16 (2006.01) *A61M 39/20* (2006.01)
- (21) **International Application Number:**
PCT/US2021/027218
- (22) **International Filing Date:**
14 April 2021 (14.04.2021)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/011,356 17 April 2020 (17.04.2020) US
17/229,157 13 April 2021 (13.04.2021) US
- (71) **Applicant: BECTON, DICKINSON AND COMPANY**
[US/US]; 1 Becton Drive, MC 110, Franklin Lakes, New Jersey 07417-1880 (US).
- (72) **Inventors: JIANG, Chang;** 42 Marion Ave., Butler, New Jersey 07405 (US). **HARANDI, Amir;** 3121 Avalon Way, Bloomington, New Jersey 07403 (US). **LIU, Jiayu;** 111 Waterfall Ct., Bloomington, New Jersey 07403 (US).
- (74) **Agent: SERVILLA, Scott S.;** SERVILLA WHITNEY LLC, 33 Wood Avenue South, Suite 830, Iselin, New Jersey 08830 (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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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).

Published:
— with international search report (Art. 21(3))

(54) **Title:** DISINFECTION CAP

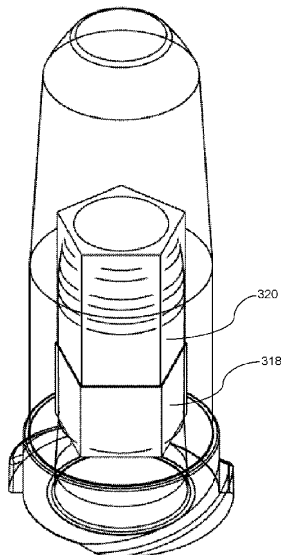


FIG. 7

(57) **Abstract:** A disinfection cap is described for connection to a medical connector, the disinfection cap includes a housing having a top wall and sidewall forming a cavity, an open cell foam structure disposed within the cavity and a closed cell foam structure disposed against the open cell foam structure, the closed cell foam structure having an interference fit between the closed cell foam structure and the inner surface of the housing. The closed cell foam structure may have a polygonal or star shape, wherein fluid can flow through a gap formed between the closed cell foam structure and the inner surface of the cavity. The open cell foam structure may be impregnated with disinfectant, whereby compression of the open cell foam structure causes excretion of the disinfectant upon insertion of a luer connector.

WO 2021/211673 A1