

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
23 July 2020 (23.07.2020)



(10) International Publication Number
WO 2020/150498 A1

(51) International Patent Classification:

A61M 5/158 (2006.01) *B29C 48/30* (2019.01)
B29C 48/03 (2019.01) *A61B 5/15* (2006.01)

(21) International Application Number:

PCT/US2020/013918

(22) International Filing Date:

16 January 2020 (16.01.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/794,431 18 January 2019 (18.01.2019) US
16/741,931 14 January 2020 (14.01.2020) US

(71) Applicant: **BECTON, DICKINSON AND COMPANY**
[US/US]; 1 Becton Drive, Franklin Lakes, New Jersey
07417 (US).

(72) Inventors: **ISAACSON, S. Ray**; 671 S. 850 W., Layton,
Utah 84041 (US). **WEIMER, Marc**; 10894 S. Saddlebrook
Circle, South Jordan, Utah 84095 (US). **FARINELLA, An-**
drew C.; 989 Oradell Avenue, Oradell, New Jersey 07417
(US). **BURKHOLZ, Jonathan Karl**; 1971 S. Wasatch Drive,
Salt Lake City, Utah 84108 (US).

(74) Agent: **METCALF, Craig**; Kirton McConkie, 36 S. State
Street, Suite 1900, Salt Lake City, Utah 84111 (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, 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).

Declarations under Rule 4.17:

— *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))*

(54) Title: CURVED NEEDLE AND CURVED CATHETER

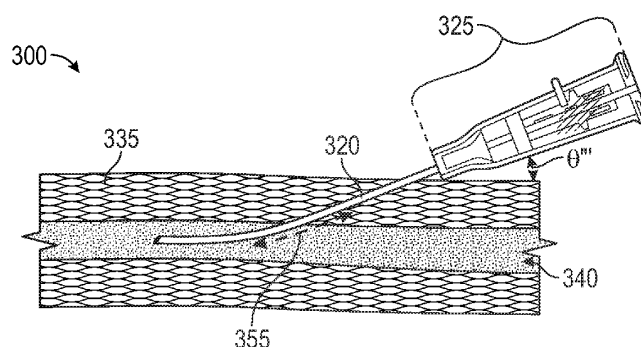


FIG. 9

(57) Abstract: An intravenous therapy system may include a curved needle; and a curved catheter formed around the outside surface of the curved needle; wherein, upon insertion of a first length of the curved needle and curved catheter into a patient's body, a curvature angle of the curved needle and curved catheter causes the curved needle and curved catheter to intersect axially with a blood vessel in the patient's body.



WO 2020/150498 A1