



(51) International Patent Classification:

A61M 5/142 (2006.01) A61J 15/00 (2006.01)

A61M 5/14 (2006.01) A61J 1/05 (2006.01)

(21) International Application Number:

PCT/US2020/021533

(22) International Filing Date:

06 March 2020 (06.03.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/814,989 07 March 2019 (07.03.2019) US

16/686,002 15 November 2019 (15.11.2019) US

(71) Applicant: KPR U.S., LLC [US/US]; 777 West Street, Mansfield, Massachusetts 02048 (US).

(72) Inventors: BREITWEISER, Kenneth M.; 1725 Fosterberg Rd., Brighton, Illinois 62012 (US). SCHNEIDER, Kurt; 508 Oak Street, Webster Groves, Missouri 63119 (US). GAINES, Robert B.; 1010 Marions Cove Drive, Lake Saint Louis, Missouri 63367 (US). LEWIS, Thomas G.; 1403 DeSoto Drive, O'Fallon, Illinois 62269 (US). BUCKLES, Emma C.; 444 James S. McDonnell Boulevard, Hazelwood, Missouri 63042 (US). DORSEY,

Michael C.; 6049 State Route 159, Edwardsville, Illinois 62025 (US). KNAUPER, Christopher A.; 5852 Hidden Creek Drive, St. Charles, Missouri 63304 (US). BRYANT, Ashanti; 4401 Charlie Dooley Drive, St. Louis, Missouri 63121 (US). FOX, Meghan; 4367 Laclede Ave. #G, St. Louis, Missouri 63108 (US). MILLER, Jessica Watts; 2006 Lafayette Ave., St. Louis, Missouri 63104 (US).

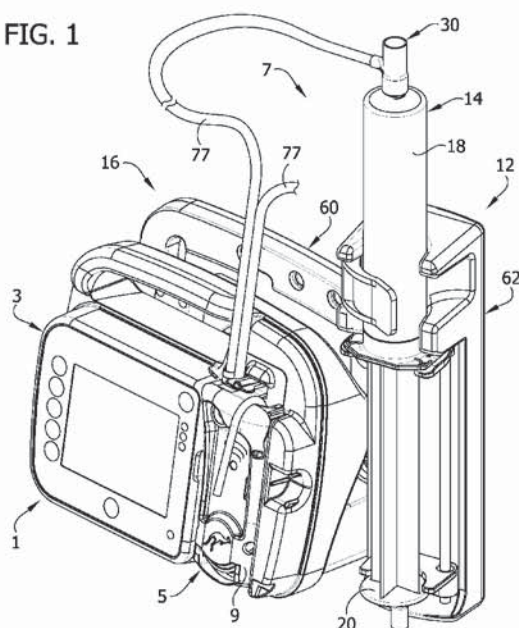
(74) Agent: CHESSER, Wilburn L. et al.; Arent Fox, LLP, 1717 K Street, N.W., Washington, District of Columbia 20006-5344 (US).

(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,

(54) Title: DELIVERY OF FLUID FROM A SYRINGE

FIG. 1



(57) Abstract: An apparatus and method for delivering fluid from a syringe to a subject using a pumping device of a flow control apparatus. The method includes locating the flow control apparatus on a horizontal support surface. Providing the syringe with a volume of fluid including a total amount of preferred nutrient and an amount of non-preferred nutrient liquid. Mounting the syringe relative to the flow control apparatus whereby the syringe is oriented in a generally vertical orientation such that an outlet of the syringe faces upward. Initiating operation of the pumping device to draw the fluid from the syringe for a duration of time to preferentially deliver at least a portion of the total amount of preferred nutrient in the fluid to the subject.

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))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*