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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 December 2010 (09.12.2010)

PCT

(10) International Publication Number
WO 2010/139645 A1

(51) International Patent Classification:
A61M 5/315 (2006.01)

(21) International Application Number:
PCT/EP2010/057495

(22) International Filing Date:
28 May 2010 (28.05.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/182,822 1 June 2009 (01.06.2009) US
09009056.4 10 July 2009 (10.07.2009) EP

(71) Applicant *(for all designated States except US)*:
SANOFI-AVENTIS DEUTSCHLAND GMBH [DE/DE]; Brüningstraße 50, 65929 Frankfurt (DE).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **PLUMPTRE, David** [GB/GB]; 36 Shire Way, Droitwich Spa, Worcestershire WR9 7RQ (GB).

(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, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

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

(54) **Title**: DOSE SETTING MECHANISM FOR A DRUG DELIVERY DEVICE

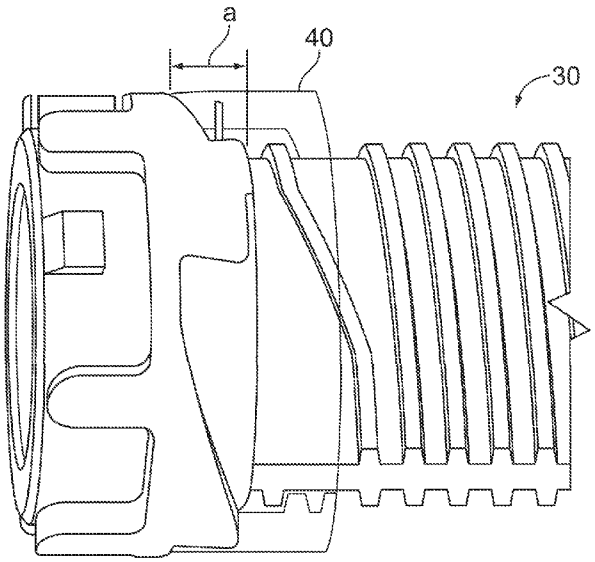


FIG. 11

(57) **Abstract**: The invention relates to a dose setting mechanism (4), which is operable to be coupled to a medication cartridge (25) and which comprises means that prevent the user from setting a dose greater than the remaining medication in the cartridge (25). The dose setting mechanism comprises a shaft (30). A helical groove (32) having a first pitch is provided along a first portion (32) of the shaft (30). The dose setting mechanism (4) further comprises a nut member (40) disposed on the helical groove (32) of said shaft (30). During dose setting, the shaft (30) is rotated relative to the nut member (40) while the nut member (40) traverses along the groove (32) from a distal end (38) of the shaft (30) towards a proximal end (39) of the shaft (30). The mechanism further comprises means preventing a user of said dose setting mechanism (4) from setting a dose of said medication that is greater than said remaining medication in said cartridge (25), said means comprising a second pitch provided along a second portion (36) of said shaft (30), wherein said first pitch is different from said second pitch, wherein said second pitch is preferably greater than said first pitch.

WO 2010/139645 A1