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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
13 December 2007 (13.12.2007)

PCT

(10) International Publication Number
WO 2007/140610 A1

(51) International Patent Classification:
A61M 5/30 (2006.01) *A61M 5/307* (2006.01)

(21) International Application Number:
PCT/CA2007/001007

(22) International Filing Date: 7 June 2007 (07.06.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/811,414 7 June 2006 (07.06.2006) US

(71) Applicant *(for all designated States except US)*: **ACUSHOT INC.** [CA/CA]; 75 Henlow Bay, Winnipeg, Manitoba R3Y 1G4 (CA).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **TOLES, Warren L.** [CA/CA]; P.O. Box 148, Clearwater Bay, Ontario P0X 1S0 (CA). **TOLES, Kevin** [CA/CA]; 11 Pine Valley Drive, Winnipeg, Manitoba R3K 1X7 (CA). **POIRON, Jules** [CA/CA]; Box 291, Somerset, Manitoba R0G 2L0 (CA).

(74) Agents: **OSLER, HOSKIN & HARCOURT, LLP** et al.; Suite 1500, 50 O'Connor Street, Ottawa, Ontario K1P 6L2 (CA).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, 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, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

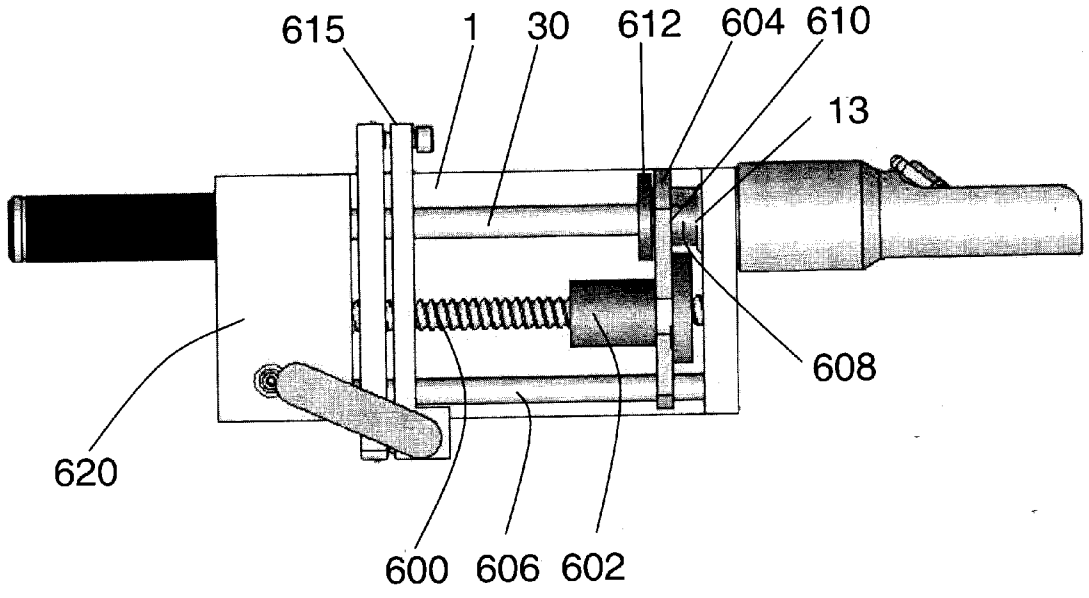
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:
— *with international search report*
— *with amended claims*

[Continued on next page]

(54) Title: CHARGING MECHANISM FOR A NEEDLE-FREE INJECTOR



(57) Abstract: The present invention provides a needle-free injector for delivering a medicament under pressure into an animal or human, the injector having a charging mechanism comprising a threaded shaft/nut member combination. The injection device is of the type that includes an actuating device comprising: a gas tight chamber; a piston and rod assembly slidably received in the chamber and movable between a forward position and a rearward position; a gas charge in the chamber for urging the piston and rod assembly to the forward position; a mechanism for moving said piston and rod assembly against said gas charge into the rearward position; and a trigger for releasably retaining the piston and rod assembly in the rearward position. Also provided is a method and kit for using the device including the charging mechanism to administer a liquid through the skin of an animal or human.

WO 2007/140610 A1

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.