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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 December 2016 (22.12.2016)

WIPO | PCT

(10) International Publication Number
WO 2016/205403 A4

(51) International Patent Classification:
A61M 5/155 (2006.01) *A61M 5/20* (2006.01)
A61M 5/168 (2006.01) *A61M 5/32* (2006.01)

(21) International Application Number:
PCT/US2016/037677

(22) International Filing Date:
15 June 2016 (15.06.2016)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/175,755 15 June 2015 (15.06.2015) US

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(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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, 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, 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, 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))*
— *with amended claims (Art. 19(1))*

(88) Date of publication of the international search report:
26 January 2017

Date of publication of the amended claims: 23 March 2017

(54) Title: GAS-PROPELLED AUTOINJECTOR WITH GAS FLOW REGULATOR

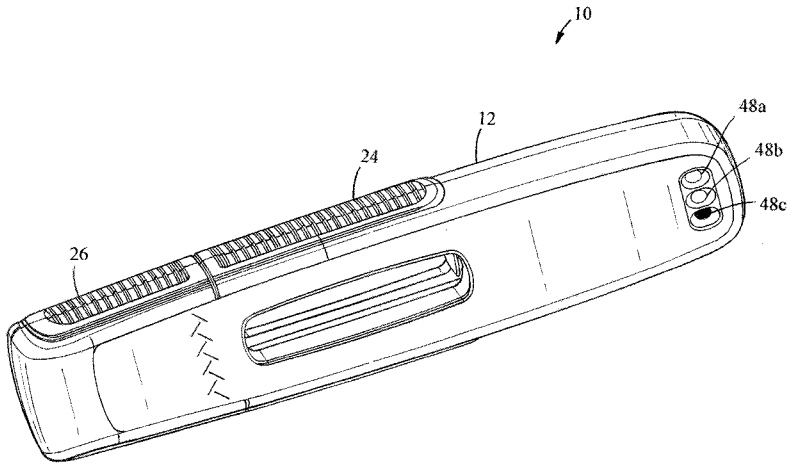

FIG. 1

(57) Abstract: An autoinjector that includes a canister having a liquefied gas, a flow regulator, and an actuator is provided. The flow regulator engages the canister to receive a flow of gas generated by the liquefied gas. The actuator is coupled to the canister and the flow regulator, and includes a passageway for receiving the flow of gas downstream from the flow regulator. The actuator moves relative to the canister between an engaged position whereby the flow regulator is in fluid communication with the canister for receiving the flow of gas and a storage position whereby the flow regulator is spaced from the canister.

WO 2016/205403 A4

AMENDED CLAIMS
received by the International Bureau on 02 February 2017 (02.02.2017)

1. An autoinjector comprising:

a canister having a liquefied gas;

a flow regulator for engaging the canister to receive a flow of gas generated by the liquefied gas;

an actuator coupled to the canister and the flow regulator, wherein the actuator includes a passageway for receiving the flow of gas downstream from the flow regulator, ~~and~~ wherein the actuator moves relative to the canister between an engaged position whereby the flow regulator is in fluid communication with the canister for receiving the flow of gas and a storage position whereby the flow regulator is spaced from the canister; and

an activator coupled to and rotatable relative to the actuator.

2. The autoinjector of claim 1 , wherein actuator further includes an exhaust passageway about a distal end of the actuator.

3. The autoinjector of claim 2, further comprising a seal sealingly engaging the exhaust passageway when the actuator is in both the engaged and storage positions.

4. The autoinjector of claim 1 , further comprising a seal between the canister and the flow regulator.

5. The autoinjector of claim 4, wherein the seal is between the canister and the actuator.

6. The autoinjector of claim 1 , wherein the flow regulator includes a piercing member for engaging the canister.

7. The autoinjector of claim 1 , wherein the flow regulator includes a porous member for receiving the flow of gas.

8. The autoinjector of claim 1 , wherein the flow regulator includes:

a body;

a piercing member extending from the body for piercing the canister;

a passageway through the body for receiving the flow of gas; and a porous member covering the passageway for controlling the flow of gas through the passageway.

9. The autoinjector of claim 1 , wherein the flow regulator includes:

a body having a central through hole;

a porous member extending across the through hole about a proximal end of the body; and

a piercing member extending from the porous member.

10. The autoinjector of claim 1 , wherein the flow regulator includes:

a body;

a piercing member extending from the body for piercing the canister;

a passageway through the body for receiving the flow of gas; and

a porous pellet blocking an end of the passageway for controlling the flow of gas through the passageway.

11 . An autoinjector comprising:

a canister having a liquefied gas for delivering a flow of gas; and

an actuator coupled to the canister, the actuator including:

a housing body,

a through hole through the housing body for receiving the flow of gas, ~~and~~

a flow regulation device adjacent the through hole, wherein the actuator moves relative to the canister between an engaged position whereby the canister engages the actuator to allow fluid communication of the flow of gas with the through hole, and a storage position whereby the canister is disengaged with the

actuator and the through hole is not in fluid communication with the flow of gas, and

an exhaust passageway through the housing body.

12. The autoinjector of claim 11, wherein the actuator includes a hub assembly having a piercing member, and wherein the hub assembly engages the canister in the engaged position and is spaced from the canister in the disengaged position.

13. The autoinjector of claim 11, wherein the flow regulation device includes a porous member for receiving the flow of gas.

14. The autoinjector of claim 13, wherein the porous member is a disc, a pellet or a wall portion.

15. The autoinjector of claim 13, wherein the flow regulation device is formed from a metal.

16. An autoinjector comprising:

a shield housing a syringe moveable relative to the shield; and

an actuator assembly for delivering a driving force that operatively engages the syringe, the actuator assembly including:

an actuator,

an activator circumscribing the actuator and movable relative to the actuator between a first position wherein the activator is stationary with respect to the actuator, a second position circumferentially spaced from the first position, and a third position circumferentially spaced from the first and second positions, and

a biasing member biasing the activator and actuator relative to each other to move one of the activator and actuator between first, second and third positions.

17. The autoinjector of claim 16, wherein the second position is circumferential spaced from the first position in a first direction, and the third position is circumferential spaced from the first position in the first direction and axially spaced from the second position.

18. The autoinjector of claim 16, wherein the second position is axially spaced from the first position.

19. The autoinjector of claim 16, wherein the biasing member biases one of the actuator and activator in both an axial direction and a rotational direction.

20. The autoinjector of claim 16, wherein the activator further includes an activator cam surface,

wherein the shield includes a proximally extending latch member, and

wherein the shield moves between an initial position covering a distal end of the syringe and an injection position, and when moving from the initial position to the injection position the proximally extending latch member engages the activator cam surface to move the activator from the first position to the second position.