

US009457154B2

(12) United States Patent Moller et al.

(54) INJECTION DEVICE WITH AN END OF DOSE FEEDBACK MECHANISM

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(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 615 days.

(21) Appl. No.: 11/813,389

(22) PCT Filed: Jan. 20, 2006

(86) PCT No.: **PCT/EP2006/000486**

§ 371 (c)(1),

(2), (4) Date: Jul. 9, 2008

(87) PCT Pub. No.: WO2006/079481

PCT Pub. Date: Aug. 3, 2006

(65) **Prior Publication Data**

US 2009/0012479 A1 Jan. 8, 2009

Related U.S. Application Data

(60) Provisional application No. 60/647,491, filed on Jan. 27, 2005.

(30) Foreign Application Priority Data

Jan. 25, 2005 (EP) 05075187

(51) Int. Cl.

 A61M 5/315
 (2006.01)

 A61M 5/24
 (2006.01)

 A61M 5/20
 (2006.01)

(52) U.S. Cl.

CPC *A61M 5/3157* (2013.01); *A61M 5/3155* (2013.01); *A61M 5/20* (2013.01);

(Continued)

(58) Field of Classification Search

CPC .. A61M 5/24; A61M 5/31551; A61M 5/315; A61M 5/31541; A61M 5/3155; A61M (10) Patent No.: US 9,457,154 B2

(45) **Date of Patent:** Oct. 4, 2016

5/31593; A61M 5/31535; A61M 2205/582; A61M 2205/583; A61M 5/3157; A61M 5/20; A61M 5/31561; A61M 5/31585; A51M 2205/581

USPC 604/118, 186, 189, 207–211, 232, 246, 604/260

See application file for complete search history.

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(57) ABSTRACT

An injection device with a dose delivering mechanism being adapted to provide a non-visual, e.g. audible and/or tactile, feedback signal when a set dose has been at least substantially injected. A first and a second part of the injection device are adapted to perform a relative rotational movement with respect to each other. The relative rotational movement causes at least two parts of the injection device to abut or engage, and this abutment or engagement causes the non-visual feedback signal to be generated. A very distinct and precise feedback is provided as compared to prior art axial solutions because the generation of the feedback signal is initiated by the relative rotational movement. Feedback signal may be generated by a change in a rotational velocity of at least one part, e.g. by changing the pitch of a threaded portion or by engaging a non-rotating part and a rotating part, thereby causing the non-rotating part to start rotating. May alternatively be generated by building up and releasing a tension. The injection device is suitable for injecting insulin.

17 Claims, 14 Drawing Sheets

