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(12) United States Patent

Steenfeldt-Jensen et al.

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(54) INJECTION SYRINGE

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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 0 days.

604/210, 211, 218, 187, 232

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Related U.S. Application Data

(63) Continuation of application No. 09/238,849, filed on Jan. 28, 1999, now Pat. No. 6,004,297.

(60) Provisional application No. 60/073,820, filed on Feb. 5, 1998.

(30) Foreign Application Priority Data

Jan.	30, 1998 (D	K) 1998 00130
(51)	Int. Cl. ⁷	A61M 5/00
(52)	U.S. Cl	604/207 ; 604/211
(58)	Field of Sear	ch

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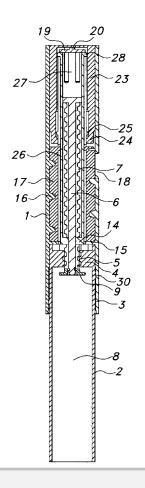
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Primary Examiner—John D. Yasko (74) Attorney, Agent, or Firm—Steve T. Zelson, Esq

(57) ABSTRACT

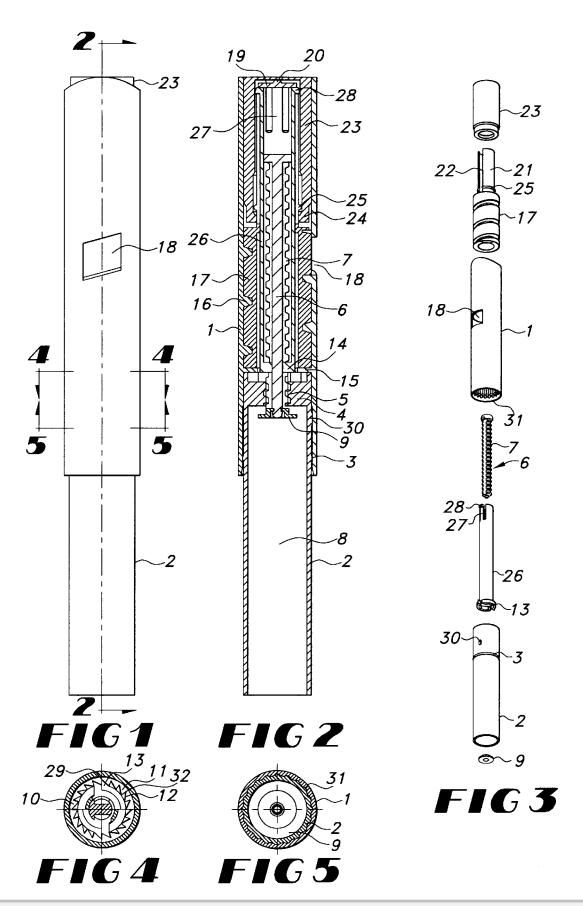
The present invention provides an injection syringe comprises a housing including a holder for containing a cartridge of medicine, a piston rod with a non-circular cross-section having an outer thread, a piston rod drive, a one way coupling having an annular ring of internal ratchet notches, which annular ring can be integral with the housing, and a pawl having at least a pair of resilient arms each having a free end.

11 Claims, 5 Drawing Sheets

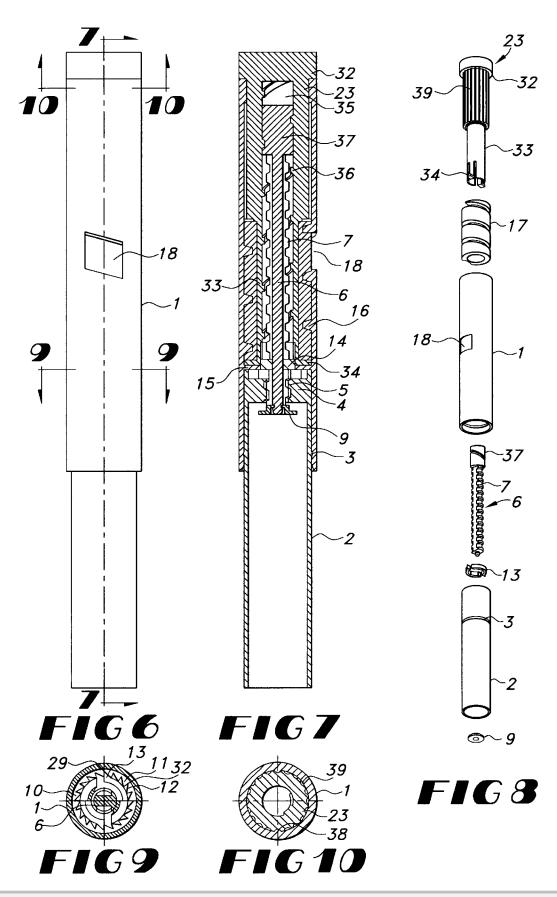




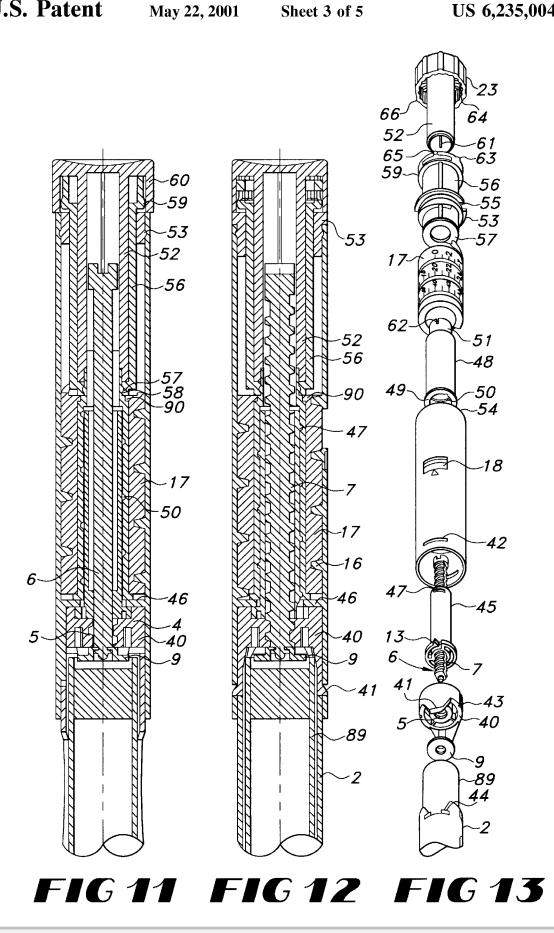
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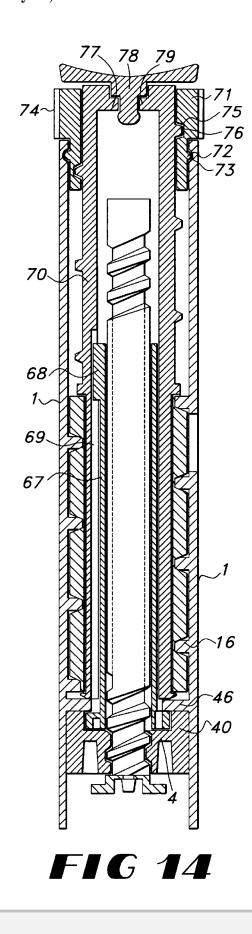
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