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(12) **United States Patent**  
**Giambattista et al.**

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(54) **LOW-COST MEDICATION DELIVERY PEN**

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\* cited by examiner

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(21) Appl. No.: **09/027,607**

(57) **ABSTRACT**

(22) Filed: **Feb. 23, 1998**

A medication delivery pen having very few parts allowing it to be manufactured at a very low-cost. The medication delivery pen also includes an automatic release mechanism to allow the user to easily reset the dose on the medication delivery pen and a mechanism for allowing the lead screw to easily retract back into the body of the medication delivery pen when the vial retainer has been removed to receive a new vial.

(51) **Int. Cl.**<sup>7</sup> ..... **A61M 5/00**

(52) **U.S. Cl.** ..... **604/207**

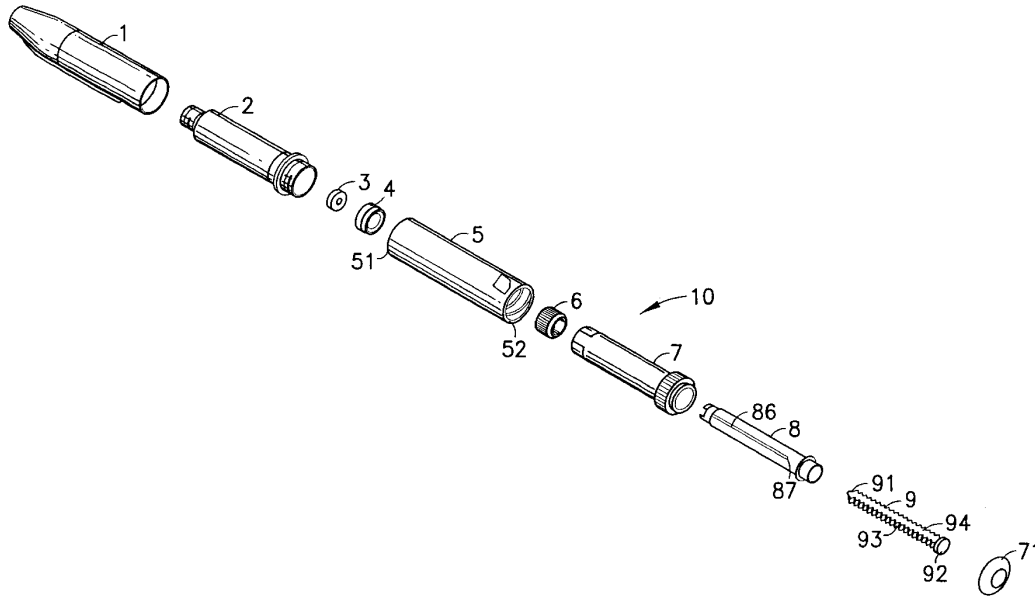
(58) **Field of Search** ..... 604/207, 208, 604/209, 210, 211, 187, 218, 224; 222/32, 637

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**7 Claims, 4 Drawing Sheets**



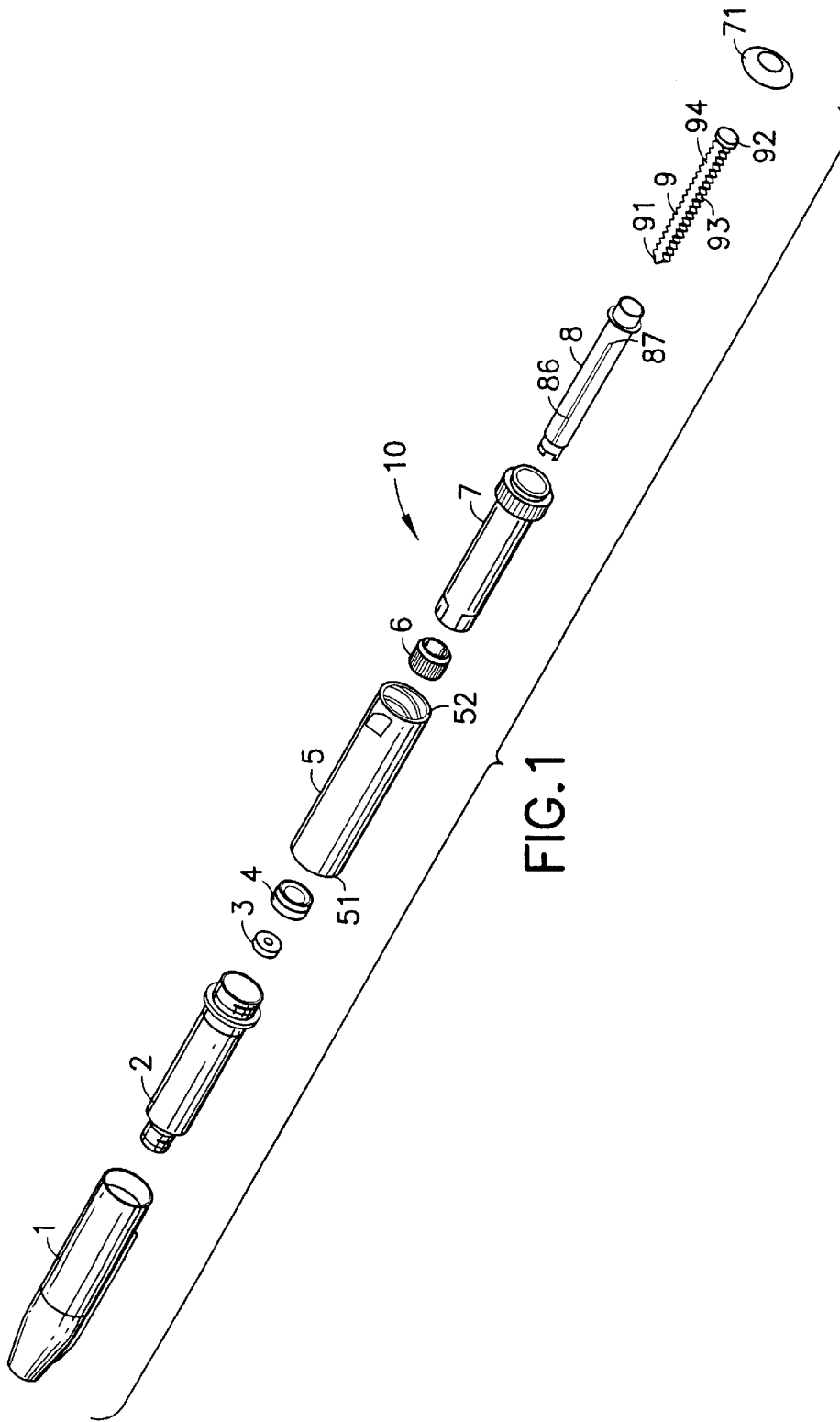


FIG. 1

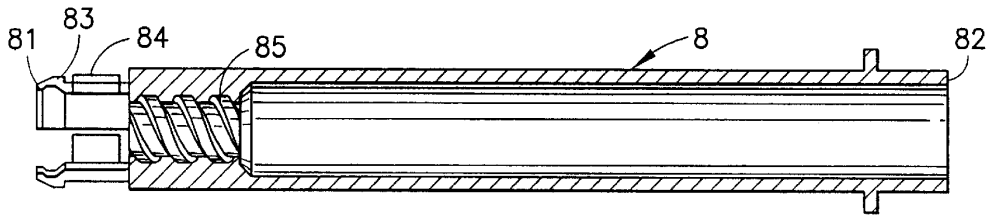


FIG. 2

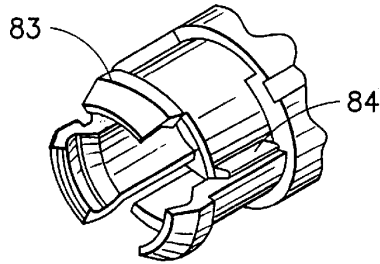


FIG. 3

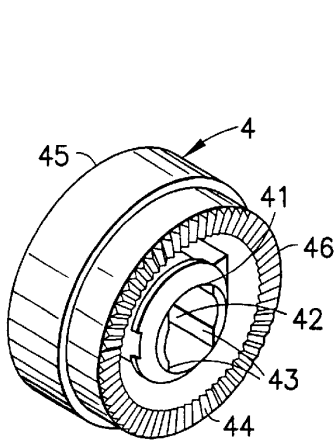


FIG. 4

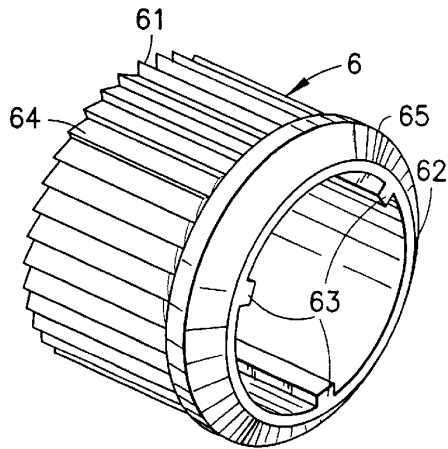


FIG. 5

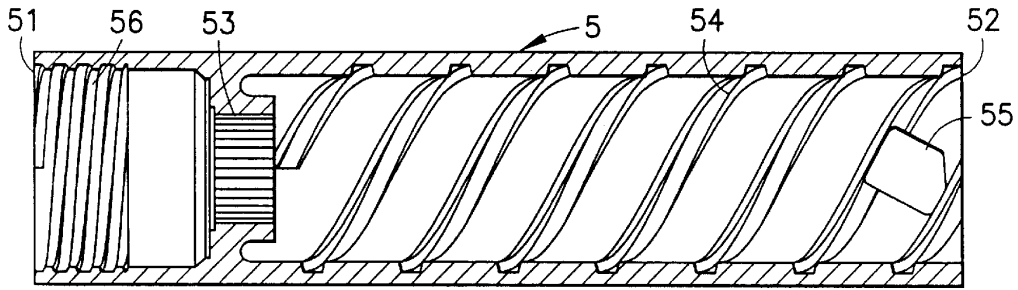


FIG. 6

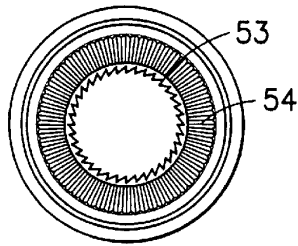


FIG. 7

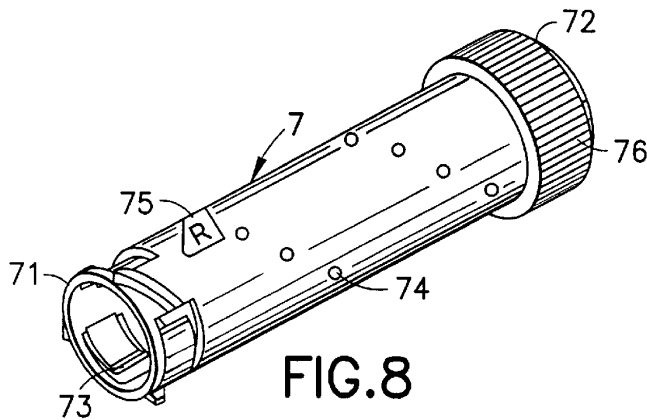


FIG. 8

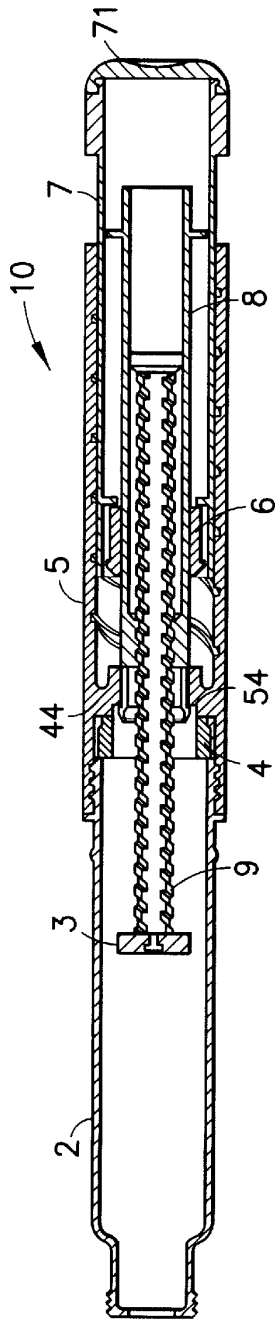


FIG. 9

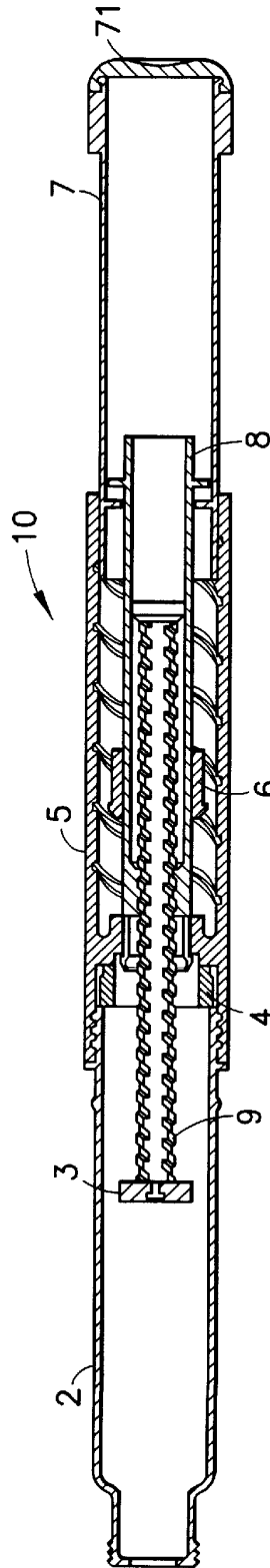


FIG. 10

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