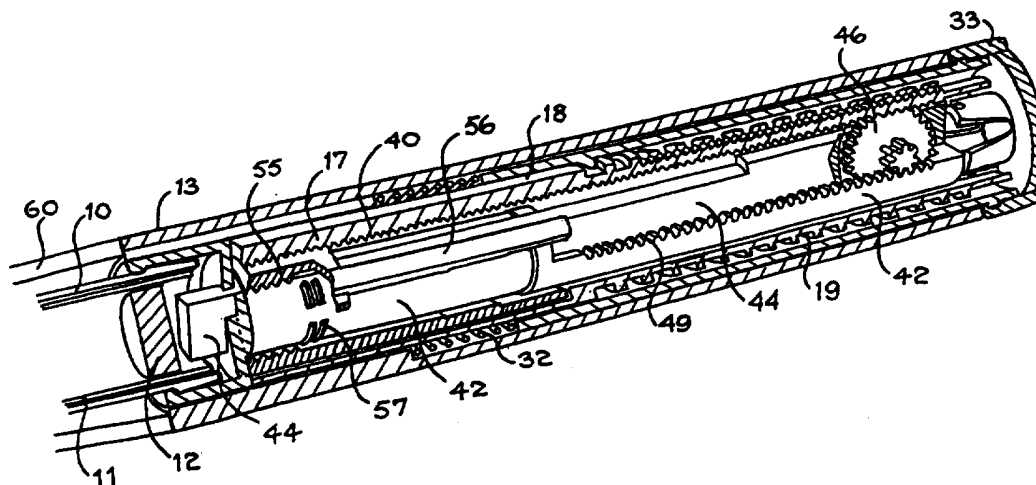




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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## (54) Title: INCREMENTING MECHANISM IN PARTICULAR FOR USE WITH A MEDICAL SYRINGE



## (57) Abstract

A mechanism for accurate dispensing of pre-set quantities of medicament from a syringe has a plunger (17) rotatable within a housing (13), which plunger (17) has a cam surface (19) engaged by a fixed follower (22) such that rotation of the plunger (17) moves the plunger away from the syringe. Internally within the plunger there is a number of parallel racks (40) each of which in turn comes into engagement with a first toothed wheel (47) on rotation of the plunger. The first toothed wheel (47) is connected to a second toothed wheel (48) which runs on a fixed rack (49) extending within the plunger parallel to the axis thereof. The first toothed wheel (47) is coupled to a thrust rod (44) for the piston (12) of the syringe. After pre-setting a required dose by rotation of the plunger (17), the plunger is then pushed towards the syringe, so rotating the first and second toothed wheels (47 and 48). This drives the thrust rod (44) into the syringe but by appropriate selection of the toothed wheel diameters and the tooth pitch thereof, an advantageous velocity ratio between the plunger and thrust rod movements may be obtained.

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# INTERNATIONAL SEARCH REPORT

International Application No  
**PCT/GB 96/00446**

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 6 A61M5/315 A61M5/24

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO,A,91 14467 (SAMS) 3 October 1991 & EP-A-0 474 839 cited in the application see the whole document <p style="text-align: center;">-----</p>	1-15

Further documents are listed in the continuation of box C.

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Date of the actual completion of the international search

**3 September 1996**

Date of mailing of the international search report

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+ 31-70) 340-3016

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Sedy, R

# INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No  
PCT/GB 96/00446

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