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(54) **MEDICAMENT DISPENSER**

(56) **References Cited**

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U.S. PATENT DOCUMENTS

3,269,389 A	8/1966	Meurer et al.	
4,735,358 A *	4/1988	Morita et al.	239/1
4,811,731 A	3/1989	Newell et al.	
4,860,419 A *	8/1989	Hekman	29/888.09
4,940,966 A	7/1990	Pettigrew et al.	
5,002,048 A	3/1991	Makiej, Jr.	
5,007,419 A	4/1991	Weinstein et al.	

(Continued)

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

DE 1461280 2/1969

(Continued)

OTHER PUBLICATIONS

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See application file for complete search history.

(57) **ABSTRACT**

There is provided a medicament dispenser for containing plural elongate form medicament carriers, each having multiple distinct medicament dose portions carried thereby, the dispenser having a housing of generally non-circular form, and within said housing a dispensing mechanism for dispensing the distinct medicament dose portions carried by each of said plural medicament carriers. The mechanism comprises at least one receiving station for receiving each of the plural medicament carriers; a release for releasing in combination a distinct medicament dose portion from each of the plural medicament carriers on receipt thereof by said receiving station; an outlet, positioned to be in communication with the distinct medicament dose portions releasable by said release; and at least one indexer for individually indexing the distinct medicament dose portions of each of the plural medicament carriers. The dispenser contains plural elongate form medicament carriers, each having multiple distinct dose portions carried thereby. At least one of said medicament carriers has the form of a continuous loop.

16 Claims, 19 Drawing Sheets

