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- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

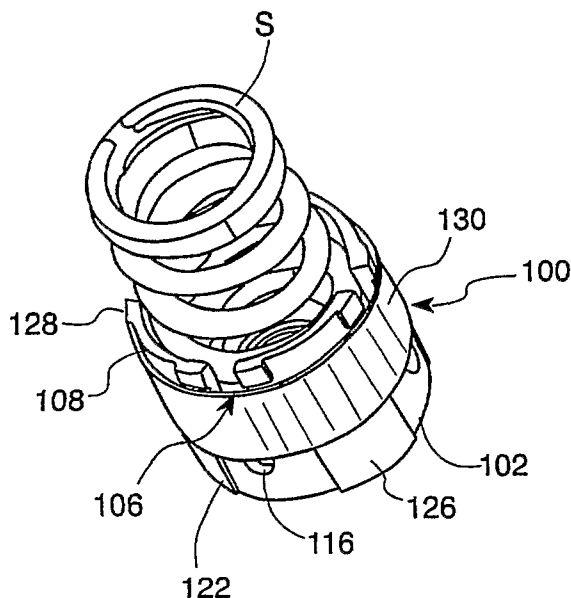
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(54) Title: SPRING DAMPER



(57) Abstract: A damper is shown for damping the movements of a valve spring in an engine. The valve spring can be housed within the damper or the damper may be located inside of the valve spring. The damper is made from a suitable polymer and has one or more slots located radially to a central axis and one or more rings or bands. The slots can be parallel to the central axis or cut at an angle or curve in the wall of the damper. The rings or bands are located on the outer surface of the damper where the valve spring is located within the damper. The purpose of the slots cut into the polymer damper is to enable the polymer to deflect and conform to the shape of the spring under a radial force provided by a separate circular spring element such as a band, ring, garter spring and others. The rings or bands are located on the inner surface of the damper where the valve spring surrounds the damper. The cross section, number and location of the slots, rings or bands can be adjusted depending on the particular application of the damper and the amount of damping that is desired for the particular application.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC(8): F16F 1/06 (2007.01)
 USPC: 267/170
 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)
 USPC: 267/170

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 USPC: 267/166, 170, 123/90.66, 90.67 (text search, see terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 PubWEST(USPT,PGPB,EPAB,JPAB);
 Search Terms: damper, oscillation

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,538,563 A (MAYERS) 03 September 1985 (03.09.1985), col 1, ln 54 to col 4, ln 29, Fig 1-5	1-43
Y	US 2,775,445 A (GOODLOE) 12 August 1955 (12.08.1955), col 2, ln 31-39, Fig 1-5	1-43
Y	US 2003/0222386 A1 (DUERRE et al.) 04 December 2003 (04.12.2003), para [0024], [0025], Fig 1-6	11-43

Further documents are listed in the continuation of Box C.

* Special categories of cited documents:
 "A" document defining the general state of the art which is not considered to be of particular relevance
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