

(19)



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(11)

EP 0 752 357 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
05.11.1997 Bulletin 1997/45

(51) Int Cl.⁶: **B61K 7/02**

(43) Date of publication A2:
08.01.1997 Bulletin 1997/02

(21) Application number: **96304982.0**

(22) Date of filing: **05.07.1996**

(84) Designated Contracting States:
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE**

(72) Inventor: **van Heerden, Andre Jacques
Johannesburg 2000 (ZA)**

(30) Priority: **05.07.1995 ZA 9505575**

(74) Representative: **Godwin, Edgar James
MARKS & CLERK,
57-60 Lincoln's Inn Fields
London WC2A 3LS (GB)**

(71) Applicant: **TRANSNET LIMITED
Parktown (ZA)**

(54) **A piston assembly for hydraulically operated piston-type retarders**

(57) The invention relates to a piston assembly for use in a hydraulically operated piston-type retarder. The piston assembly comprises a piston rod 1, a piston head 2, a speed spring 3, a closure member 4, a spacer member 5, a retainer member 9 and a lock nut 6. The piston

head 2 is provided with a set of first hydraulic fluid passageways with corresponding energy extraction ports 8 and a set of second hydraulic fluid passageways with corresponding idling ports 7. A method of retarding wagon stock is also provided.

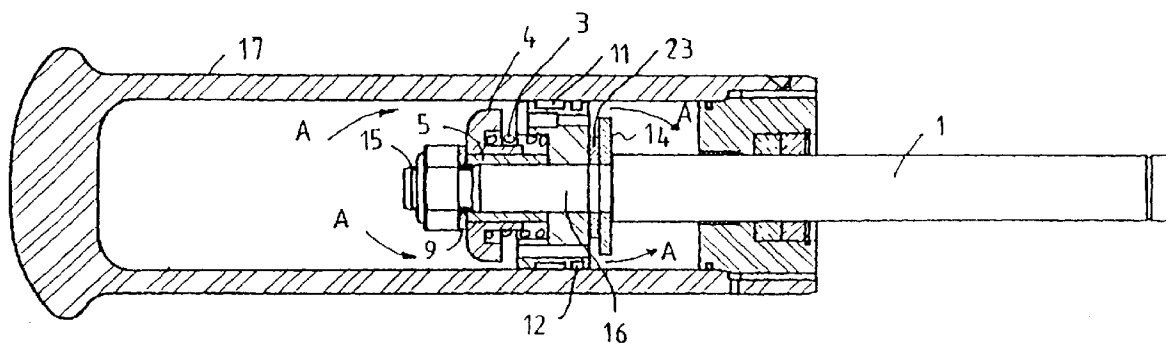


FIGURE 1

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EUROPEAN SEARCH REPORT

Application Number
EP 96 30 4982

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	GB 2 099 544 A (STABILUS GMBH) 8 December 1982	1,6	B61K7/02
A	* page 2, line 20 - page 3, line 38; figures 1-5 *	2-4	
E	DE 196 04 721 A (NEW JOULES ENGINEERING SALES P) 14 August 1996 * page 3, line 34 - page 4, line 66; figures 1-8 *	1,6	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B61K F16F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 4 September 1997	Examiner Chlosta, P
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>I : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.82 (P04C01)