



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
19.11.2003 Bulletin 2003/47

(51) Int Cl.7: **F04B 39/10, F16K 15/16**

(43) Date of publication A2:
24.05.2000 Bulletin 2000/21

(21) Application number: **99308362.5**

(22) Date of filing: **22.10.1999**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(72) Inventor: **Lawson, Stuart**
Thatcham, Berkshire RG18 3BH (GB)

(74) Representative: **Jones, Graham H.**
Graham Jones & Company
Blackheath
77 Beaconsfield Road
London SE3 7LG (GB)

(30) Priority: **20.11.1998 GB 9825550**

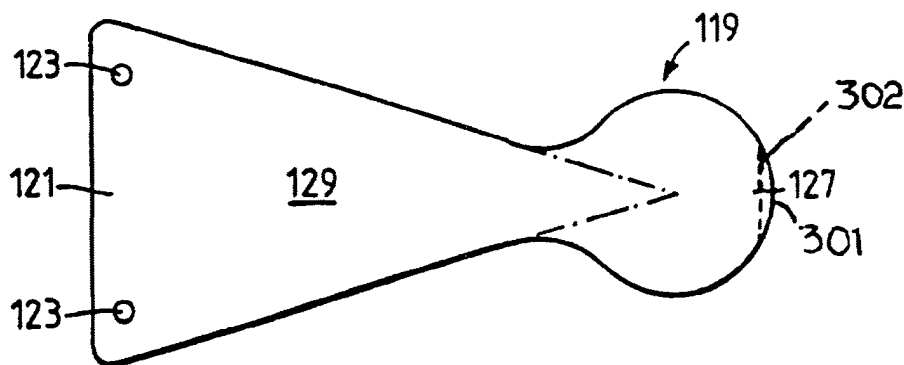
(71) Applicant: **Arctic Circle Limited**
Hereford HR2 6JL (GB)

(54) **A reed for use in a valve assembly**

(57) A reed (119) for use in a valve assembly, the reed being an elongate resilient reed (119) which comprises a body portion (129) having one end (121) intended for fixing to a mount and another end contiguous with a valve closure portion (127) of the reed (119), the reed (119) being such that the width of the body portion (129) tapers towards the valve closure portion (127) so that the width of the surface of the body portion (129) adjacent the valve closure portion (127) is small relative to

the width of the valve closure portion (127) whereby the configuration of the reed (119) is such as substantially to equalise the bending stress experienced by the reed (119) along the length of the body portion (129) when the reed (119) is in use and a load generated by fluid flow is applied to the valve closure portion (127), and the reed (119) being such that the end of the valve closure portion which is furthest away from the body portion is a straight end (303) which extends transversely to the longitudinal axis of the body portion (129).

FIG. 4.





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 30 8362

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.7)
X	GB 860 008 A (JOHN COURTNEY FISHER) 1 February 1961 (1961-02-01)	1, 2, 7, 9, 10	F04B39/10 F16K15/16
Y	* figure 7 *	3-6, 8	

D, Y	GB 2 161 583 A (PRESTCOLD LTD) 15 January 1986 (1986-01-15) * the whole document *	3-6, 8	

			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			F04B F04C F16K
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		26 September 2003	Dimitroulas, P
CATEGORY OF CITED DOCUMENTS			
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 T : 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 & : member of the same patent family, corresponding document			

EPO FORM 1503 03 82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 30 8362

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

26-09-2003

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 860008	A	01-02-1961	NONE	
GB 2161583	A	15-01-1986	NONE	

EPO FORM P4459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82