(11) **EP 1 030 010 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: **09.01.2002 Bulletin 2002/02**

(51) Int Cl.7: **E05B 47/06**, H01F 7/17

(43) Date of publication A2: 23.08.2000 Bulletin 2000/34

(21) Application number: 00301338.0

(22) Date of filing: 21.02.2000

(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

(30) Priority: **19.02.1999 FI 990357 12.03.1999 EP 99301911**

(71) Applicant: Abloy Oy 80100 Joensuu (FI)

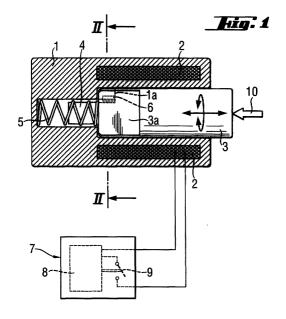
(72) Inventor: Hurskainen, Oiva 80230 Joensuu (FI)

(74) Representative: Newby, Martin John JY & GW Johnson, Kingsbourne House, 229-231 High Holborn London WC1V 7DP (GB)

(54) Electromechanical actuator

(57) An electromechanical actuator comprising a body element (1) and an elongate interaction means (3, 3', 3"), one of which is provided with electromagnetic means (2) and the other of which comprises ferromagnetic material or a permanent magnet. The body element and interaction means are arranged with respect to each other so that a rotational motion may be imparted to the interaction means (3, 3', 3") by means of a created magnetic field. The interaction means (3, 3', 3")

is rotatable between two rotational positions by altering the polarity of the electromagnetic means. When in one rotational position, the interaction means (3, 3', 3") is displaceable in a direction of its rotation axis, by the application of an external force. The interaction means is arranged to co-operate with the body element (1) in a manner such that they together define the freedom of operation of the interaction means (3, 3', 3") in the axial direction.





EUROPEAN SEARCH REPORT

Application Number

EP 00 30 1338

Category	Citation of document with indication of relevant passages	n, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
X	US 5 699 686 A (KREWENK 23 December 1997 (1997- * the whole document *		1-8, 10-13	E05B47/06 H01F7/17
D,A	DE 40 29 208 A (SCHULTE 19 March 1992 (1992-03- * the whole document *	C E GMBH) 19)	1	
P,X	EP 0 943 763 A (ABLOY 0 22 September 1999 (1999 * the whole document *		1-8, 10-13	
				TECHNICAL FIELDS SEARCHED (Int.CI.7) E05B H01F
	The present search report has been di			
	Place of search THE HAGUE	Date of completion of the search 14 November 200	1 Wes	Examiner ::tin, K
X : part Y : part docu A : tech	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with another ument of the same category inological background —written disclosure	T: theory or princi E: earlier patent o after the filing o D: document cited L: document cited	ple underlying the locument, but publiate in the application of the control of th	invention ished on, or

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

EP 00 30 1338

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.

14-11-2001

Patent document cited in search report		Publication date		Patent family member(s)		Publication date	
US	5699686	Α	23-12-1997	AT	405315	В	26-07-1999
				ΑT	129494	Α	15-11-1998
				WO	9600830	A1	11-01-1996
				ΑT	187223	T	15-12-1999
				DE	59507333	D1	05-01-2000
				EP	0715674	A1	12-06-1996
				FΙ	960903	Α	27-02-1996
				JP	9502494	T	11-03-1997
DE	4029208	Α	19-03-1992	DE	4029208	A1	19-03-1992
EP	943763	A	22-09-1999	 AU	2130999	A	30-09-1999
				CN	1232122	Α	20-10-1999
				CZ	9900919	A3	13-10-1999
				EE	9900142	Α	15-12-1999
				EP	0943763	A1	22-09-1999
				FΙ	981197		21-09-1999
				FΙ		Α	21-09-1999
				JP	11315653		16-11-1999
				PL.	332109		27-09-1999
				TW	432144		01-05-2001
				US	6155089	Α	05-12-2000
						— — ···· ··· ··· ··· ···	

FORM P0459

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