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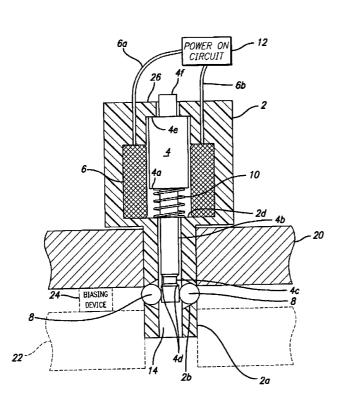
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#### **Declarations under Rule 4.17:**

 as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,

[Continued on next page]

(54) Title: LOCKING DEVICE WITH SOLENOID RELEASE PIN



(57) Abstract: A locking device with a solenoid release actuator includes a housing (2), a plunger (4) axially slidable within the housing (2), a biasing member (10) for biasing the plunger (4) in a first direction, one or more locking balls (8), and the locking balls (8) disposed in an aperture in the housing (2), the plunger (4) having a portion thereof containing at least one recess (4c) for receiving the balls (8), a member (20) to be locked being held in a first locked position with the plunger (4) in a first locking position and the balls (8) in a radially outward position, the plunger (4) being positioned axially such that the recesses (4c) therein are not in alignment with the apertures, and a solenoid coil (6) disposed in the housing (2) around the plunger (4), for inducing a magnetic force to move the plunger (4) against the biasing member (10) such that the recesses (4c) align with the apertures and the balls (8) are movable radially inward into the recesses (4c) thereby releasing the locked member. In another embodiment, a bomb, missile or torpedo having a head and tail and fins (4, 14) proximate the tail biased into a retracted position, incorporates such a locking device for maintaining the fins (4, 14) in the retracted position, and for releasing the fins (4, 14) upon solenoid actuation. The locking device may be tested and reset, as desired.

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CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

 as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 F42B10/14 B64C5/12

According to International Patent Classification (IPC) or to both national classification and IPC

#### **B. FIELDS SEARCHED**

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

FPO-Internal WPI Data PAJ

С. ПОСШМ	ENTS CONSIDERED TO BE RELEVANT		
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X	US 3 753 316 A (SAVARIEAU ET A 21 August 1973 (1973-08-21)	L)	1-5,13, 14,16, 17,20, 25-27
Y	abstract  column 2, line 66 - column 4,	line 25	6-12,15, 18,19, 21-24
Y	figure 1  US 6 224 013 B1 (CHISOLM)  1 May 2001 (2001-05-01)  cited in the application  abstract  column 2, line 64 - column 5,  figures 1-4	line 4	6-12,15, 18,19, 21-24
X Furth	her documents are listed in the continuation of box C.	-/  χ Patent family members are listed in	n annex.
"A" docume consid "E" earlier of filing d "L" docume which citation "O" docume other r "P" docume	ent which may throw doubts on priority claim(s) or is cited to establish the publication date of another in or other special reason (as specified) ent referring to an oral disclosure, use, exhibition or	<ul> <li>"T" later document published after the interest or priority date and not in conflict with cited to understand the principle or the invention</li> <li>"X" document of particular relevance; the considered novel or cannot involve an inventive step when the document of particular relevance; the considered to involve an involve and comments, such combination being obvious in the art.</li> <li>"&amp;" document member of the same patent for the same</li></ul>	the application but sory underlying the laimed invention be considered to current is taken alone laimed invention rentive step when the re other such docurs to a person skilled
	actual completion of the international search  7 July 2005	Date of mailing of the international sear 04/08/2005	ch report
	7 July 2003  mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2  NL – 2280 HV Rijswijk  Tel. (+31–70) 340–2040, Tx. 31 651 epo nl,  Fax: (+31–70) 340–3016	Authorized officer  Menier, R	

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	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	10	
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X	US 5 263 751 A (PRIEST ET AL) 23 November 1993 (1993-11-23) abstract column 1, line 66 - column 4, line 7 figure 2	1-5	
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