

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
24 May 2007 (24.05.2007)

PCT

(10) International Publication Number  
WO 2007/059261 A3

(51) International Patent Classification:  
B60L 7/00 (2006.01)

(21) International Application Number:  
PCT/US2006/044449

(22) International Filing Date:  
16 November 2006 (16.11.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
11/280,983 16 November 2005 (16.11.2005) US

(71) Applicant (for all designated States except US): STRAT-  
TEC SECURITY CORPORATION [US/US]; 3333 West  
Good Hope Road, Milwaukee, WI 53209 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ORGANEK, Gre-  
gory, J. [US/US]; 4943 North Cumberland Boulevard,  
Whitefish Bay, WI 53217 (US). DIMIG, Steven, J.  
[US/US]; W4931 County Road J, Plymouth, WI 53073  
(US).

(74) Agents: FELLOWS, Gerald, L. et al.; Michael Best &  
Friedrich LLP, 100 East Wisconsin Avenue, Ste. 3300, Mil-  
waukee, WI 53202-4108 (US).

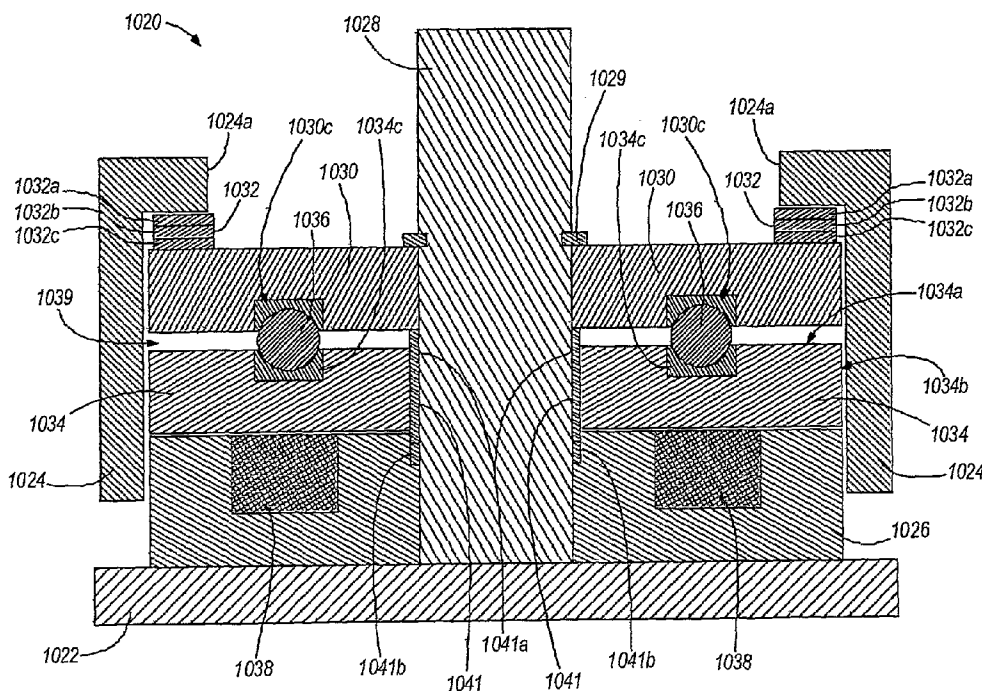
(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS,  
JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS,  
LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY,  
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,  
RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,  
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:  
— with international search report

[Continued on next page]

(54) Title: RESIDUAL MAGNETIC DEVICES AND METHODS



(57) Abstract: Residual magnetic locks, brakes, rotation inhibitors, clutches, actuators, and latches. The residual magnetic devices can include a core housing and an armature. The residual magnetic devices can include a coil that receives a magnetization current to create an irreversible residual magnetic force between the core housing and the armature.

WO 2007/059261 A3



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(88) Date of publication of the international search report:**

18 October 2007

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/44449

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC(8) - B60L 07/00 (2007.01)  
 USPC - 188/161  
 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)  
 IPC(8) - B60L 07/00 (2007.01)  
 USPC - 188/161

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 practicable, search terms used)  
 MicroPatent, IP.com, DialogPro

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,235,311 A (BRINKMANN et al) 25 November 1980 (25.11.1980) entire document	1-4, 6, 9, 34-36
---		-----
Y		5, 7, 8, 10-33, 37-76
Y	US 6,439,355 B1 (KIMBLE) 27 August 2002 (27.08.2002) entire document	5, 7, 15, 21, 25, 41, 43, 51, 57, 58, 60
Y	US 3,313,381 A (HARTING et al) 11 April 1967 (11.04.1967) entire document	8, 44
Y	EP 0 825 356 A2 (ORGANEK et al) 25 February 1998 (25.02.1998) entire document	10-13, 37-70, 76
Y	GB 1,144,360 A (NATIONAL ACME COMPANY) 05 March 1969 (05.03.1969) entire document	14, 17, 50, 53
Y	US 5,353,688 A (PIERCE et al) 11 October 1994 (11.10.1994) entire document	16, 52
Y	US 5,708,955 A (UNGRUE) 13 January 1998 (13.01.1998) entire document	18-19, 54-55
Y	US 6,603,307 B2 (SEKIYA et al) 05 August 2003 (05.08.2003) entire document	20, 33, 56, 68
Y	US 3,476,223 A (HUBBARD) 04 November 1969 (04.11.1969) entire document	22, 23, 38, 40, 58, 71-76
Y	US 5,259,264 A (BODIN et al) 09 November 1993 (09.11.1993) entire document	24, 29, 59, 64
Y	US 2004/0084259 A1 (CARLSON) 06 May 2004 (06.05.2004) entire document	26, 30, 31, 61, 65, 66
Y	US 5,344,204 A (LIU) 06 September 1994 (06.09.1994) entire document	27, 62

Further documents are listed in the continuation of Box C.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search: 09 April 2007  
 Date of mailing of the international search report: 09 AUG 2007

Name and mailing address of the ISA/US: Mail Stop PCT, Attn: ISA/US, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, Facsimile No. 571-273-3201  
 Authorized officer: Blaine R. Copenheaver  
 PCT Helpdesk: 571-272-4300, PCT OSP: 571-272-7774

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/44449

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,401,928 A (KAMIJO et al) 30 August 1983 (30.08.1983) entire document	28, 63
Y	US 6,319,169 B1 (AVILA) 20 November 2001 (20.11.2001) entire document	32, 67