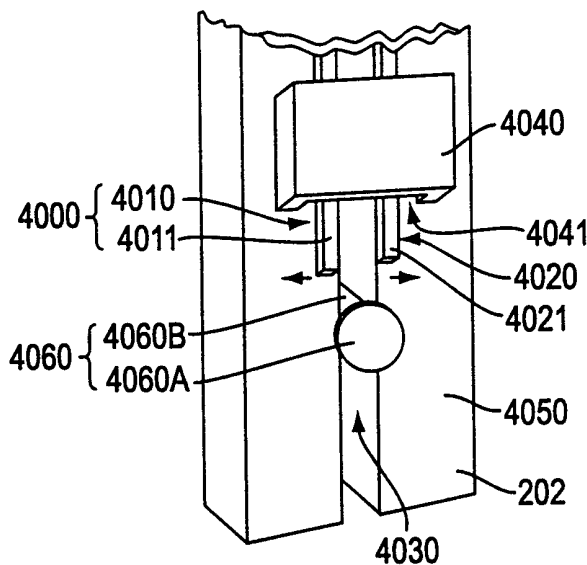




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification⁶ : E05B 47/06, 17/20</p>	<p>A3</p>	<p>(11) International Publication Number: WO 99/14504</p> <p>(43) International Publication Date: 25 March 1999 (25.03.99)</p>
<p>(21) International Application Number: PCT/US98/19130</p> <p>(22) International Filing Date: 16 September 1998 (16.09.98)</p> <p>(30) Priority Data: 08/931,887 17 September 1997 (17.09.97) US 09/004,919 9 January 1998 (09.01.98) US</p> <p>(71) Applicant: MEDECO SECURITY LOCKS, INC. [US/US]; 3625 Allegheny Drive, Salem, VA 24153 (US).</p> <p>(72) Inventors: SCHOELL, Lance, G.; Apartment 136, 3406 Sunchase Court, Roanoke, VA 24018 (US). SCHROEDER, Matthew, O.; 5122 Appletree Drive, Roanoke, VA 24019 (US). CREGGER, Barton, B.; 2101 Ridgefield Green Way, Richmond, VA 23233 (US).</p> <p>(74) Agents: PARKER, Stephen, B. et al.; Rothwell, Figg, Ernst & Kurz, Suite 701 East, 555 13th Street N.W., Columbia Square, Washington, DC 20004 (US).</p>	<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p> <p>(88) Date of publication of the international search report: 3 June 1999 (03.06.99)</p>	

(54) Title: ANTI-TAMPERING DEVICE FOR USE WITH SPRING-LOADED ELECTRONICALLY MOVED PIN LOCKING MECHANISMS IN ELECTRONIC LOCKS AND THE LIKE



(57) Abstract

An anti-tamper locking assembly for locking a position of a block (202), such as a locking bolt in an electronic lock, electrically moves a pin (4060) to engage or dis-engage the block (202). When dis-engaged, the block (202) can be moved and access or the like can be made. The pin (4060) is selectively moved electronically in order to allow access, entry or the like. The pin (4060) can be moved with, e.g., a solenoid (209). The pin (4060) has an overhanging portion, or a head portion (4060A). In order to prevent an individual from forcing the pin (4060) into an un-locked position, the head portion (4060A) operates in conjunction with at least one spring-arm member (4010, 4020) and a blocker (4040) which are fixed to the block (202) to prevent a user from being able to strike the device with a hammer or the like to "temporarily" move the pin (4060) to a position allowing the block (202) to be moved and access or the like to be made.

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INTERNATIONAL SEARCH REPORT

International Application No PCT/US 98/19130
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A. CLASSIFICATION OF SUBJECT MATTER
 IPC 6 E05B47/06 E05B17/20

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 6 E05B G07F

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category ³	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	WO 91 19068 A (LA GARD INC) 12 December 1991 see the whole document ---	19 1, 4, 10-12, 18, 22, 23
X A	DE 34 06 913 A (BURG- WÄCHTER KG LÜLIN A) 12 September 1985 see page 9, line 18 - page 11, line 2; figures 1-3 ---	19 1, 4, 5, 12, 18
X A	FR 839 865 A (OKAMOTO YONEZO) 13 April 1939 see page 2, line 77 - line 78; figure 11 --- -/--	19 1, 4, 7-9, 12

Further documents are listed in the continuation of box C. Patent family members are listed in annex.

³ Special categories of cited documents:

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Date of the actual completion of the international search 31 March 1999	Date of mailing of the international search report - 8. 04. 99
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Name and 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 PEREZ MENDEZ, J
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INTERNATIONAL SEARCH REPORT

Interr. Application No

PCT/US 98/19130

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	WO 94 21089 A (MEDECO SECURITY LOCKS INC) 15 September 1994 see figures 1-4,9,13	27-29, 32,34-37

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 98/19130

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-26

Improved anti-tampering device for electronic solenoids having spring-biased elements

2. Claims: 27-38

Arrangement to avoid damaging a wing, without handles, when its lock key is used as a handle

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No.

PCT/US 98/19130

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