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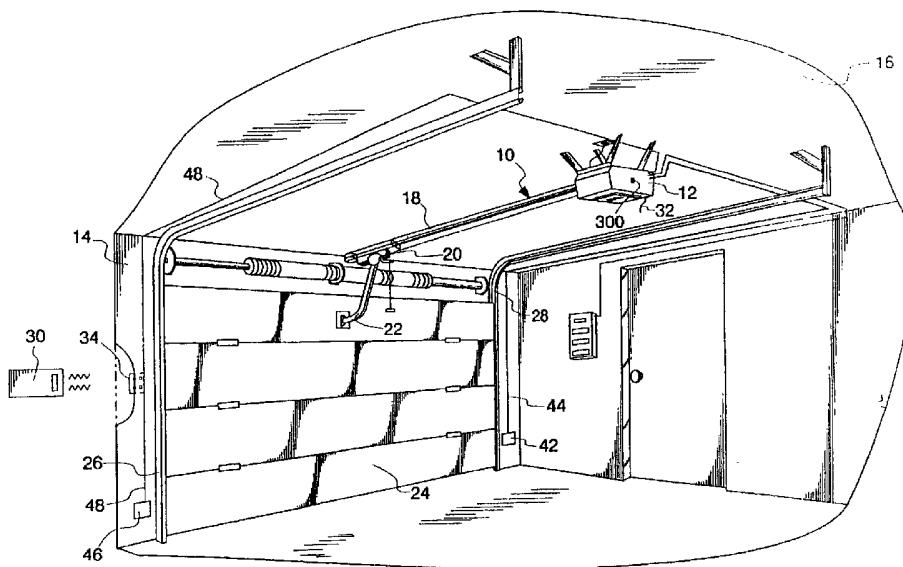
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(54) Title: ROLLING CODE SECURITY SYSTEM



(57) Abstract: A rolling code transmitter (Fig. 2) is useful in a security system (Fig. 1) for providing secure encrypted RF transmission comprising an interleaved trinary bit fixed code and rolling code (Fig. 6). To provide even greater security, the transmitter (Fig. 2) is limited in the number of times it may perform a resynchronization procedure. A receiver (Fig. 3) demodulates the encrypted RF transmission and recovers the fixed code and rolling code. Upon comparison of the fixed and rolling codes with stored codes and determining that the signal has emanated from an authorized transmitter (Fig. 7A, 7B, and 7C), a signal is generated to actuate an electric motor to open or close a movable barrier.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/25308

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04K 1/00
US CL : 380/270

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)
U.S. : 380/262, 270, 273

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)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,175,312 B1 (BRUWER et al) 16 January 2001 (16.01.2001), column 14, line 50 through column 15, line 55.	1-9, 11-17, and 21
Y	US 6,275,519 B1 (HENDRICKSON) 14 August 2001 (14.08.2001), column 4, lines 14-46	10 and 18-20
A	US 5,937,065 A (SIMON et al) 10 August 1999 (10.08.1999).	
A	US 5,872,519 A (ISSA et al) 16 February 1999 (16.02.1999).	
A	US 5,442,341 A (LAMBROPOULOS) 15 August 1995 (15.08.1995).	
A	US 5,369,706 A (LATKA) 29 November 1994 (29.11.1994).	
A	US 5,363,448 A (KOOPMAN, JR. et al) 8 November 1994 (08.11.1994).	

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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"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	"&" document member of the same patent family

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