



- (51) International Patent Classification:
A01K 15/04 (2006.01)
- (21) International Application Number:
PCT/US2014/066650
- (22) International Filing Date:
20 November 2014 (20.11.2014)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/911,096 3 December 2013 (03.12.2013) US
- (71) Applicant: RADIO SYSTEMS CORPORATION
[US/US]; 10427 PetSafe Way, Knoxville, TN 37932 (US).
- (72) Inventors: GERIG, Duane, A.; 10427 PetSafe Way,
Knoxville, TN 37932 (US). MOORE, William, P.; 10427
PetSafe Way, Knoxville, TN 37932 (US).
- (74) Agent: SAWRIE, David; Suite 800, 211 Commerce
Street, Nashville, TN 37201 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:
— with international search report (Art. 21(3))

[Continued on next page]

(54) Title: THRESHOLD BARRIER SYSTEM

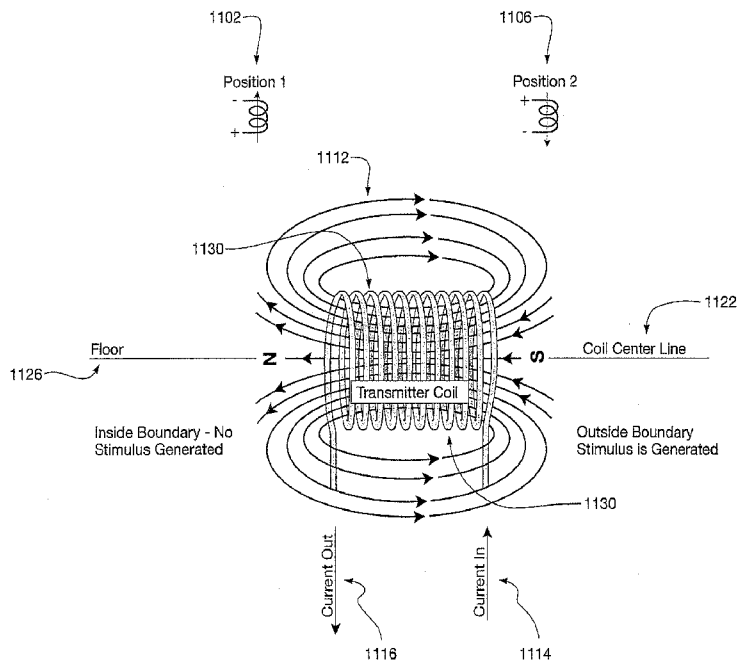


FIG. 11

(57) Abstract: An animal containment system is described that comprises a transmitter unit and a receiver, the transmitter unit comprising a transmitter coil and signal generator. The signal generator transmits a modulated activation signal through the coil and generates a uniform magnetic field within a region around the coil. A receiver travels through a portion of the uniform magnetic field and uses information of periodically emphasized positively directed portions of the signal to detect a first polarity of the magnetic field in a first detection area and a second reversed polarity of the magnetic field in the second detection area. A detected reversal of polarity indicates a boundary crossing event including the receiver transitioning across the boundary.



(88) Date of publication of the international search report:
12 November 2015

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2014/066650

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - A01K 15/04 (2014.01)
CPC - A01K15/023 (2014.11)
 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) - A01K 3/00, 1/035, 15/00, 15/04, 29/00, 15/02, 27/00, 31/02; G01V 3/08, 3/10, 13/00; (2014.01) (cont. on Extra Sheet)
 USPC - 340/539.13, 539.11, 551, 552, 573.1, 573.3, 564; 119/721 908 719, 720; 343/867

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 CPC - A01K 15/023, 1/0017, 15/021; G08B 21/0261, 21/0222, 21/023, 21/0247, 21/02, 21/02; Y10S 119/908 (2014.14) (keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 Orbit, Google Patents, Google Scholar, Google.
 Search terms used: transmitter, receiver, coil, signal generator, boundary, modulator, magnetic field, polarity, containment, threshold

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 7,142,167 B2 (ROCHELLE et al.) 28 November 2006 (28.11.2006) entire document	1-71
Y	US 8,047,161 B2 (MOORE) 01 November 2011 (01.11.2011) entire document	1-71
Y	US 7,978,078 B2 (COPELAND et al.) 12 July 2011 (12.07.2011) entire document	1-66, 71
Y	US 8,232,909 B2 (KROEGER et al.) 31 July 2012 (31.07.2012) entire document	51-66
Y	US 7,079,024 B2 (ALARCON) 18 July 2006 (18.07.2006) entire document	64-66
A	US 7,918,190 B2 (BELCHER et al.) 05 April 2011 (05.04.2011) entire document	1-71
A	WO 02/060240 A3 (BARRY et al.) 27 February 2002 (27.02.2002) entire document	1-71
A	US 6,657,544 B2 (BARRY et al.) 02 December 2003 (02.12.2003) entire document	1-71

Further documents are listed in the continuation of Box C.

* 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
"E" earlier application or patent but published on or after the international filing date	"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
"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"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 28 January 2015	Date of mailing of the international search report 19 FEB 2015
--	--

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/US2014/066650

Continuation of Box B Fields Searched

IPC (8) Class/Subclass(es): G08B 1/08, 13/08, 13/22, 15/00, 21/00, 23/00, 21/02; B65D 88/42, E05D 15/526, H01Q 21/24, G01P 13/02