PTO/AIA/15 (03-13)
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	81230.921US3
First Named Inventor	George Seelman
Title	SMART BARRIER ALARM DEVICE
Express Mail Label No.	Filed via EFS-Web

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. [ ] **Fee Transmittal Form** (PTO/SB/17 or equivalent)
2. [ ] **Applicant asserts small entity status.** See 37 CFR 1.27
3. [ ] **Applicant certifies micro entity status.** See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.
4. [✓] **Specification** [*Total Pages* 48] Both the claims and abstract must start on a new page. *(See MPEP § 608.01(a) for information on the preferred arrangement)*
5. [✓] **Drawing(s)** (35 U.S.C. 113) [*Total Sheets* 15]
6. **Inventor's Oath or Declaration** [*Total Pages* 1] *(including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))*
   a. [✓] Newly executed (original or copy)
   b. [ ] A copy from a prior application (37 CFR 1.63(d))
7. [✓] **Application Data Sheet** ** See note below.* See 37 CFR 1.76 (PTO/AIA/14 or equivalent)
8. **CD-ROM or CD-R** in duplicate, large table, or Computer Program (*Appendix*)
   [ ] Landscape Table on CD
9. **Nucleotide and/or Amino Acid Sequence Submission** (*if applicable, items a. – c. are required*)
   a. [ ] Computer Readable Form (CRF)
   b. [ ] Specification Sequence Listing on:
      i. [ ] CD-ROM or CD-R (2 copies); or
      ii. [ ] Paper
   c. [ ] Statements verifying identity of above copies

ADDRESS TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**

ACCOMPANYING APPLICATION PAPERS

10. [ ] **Assignment Papers** (cover sheet & document(s)) Name of Assignee ECOLINK INTELLIGENT TECHNOLOGY, INC.
11. [✓] **37 CFR 3.73(c) Statement** (*when there is an assignee*) [✓] **Power of Attorney**
12. [ ] **English Translation Document** (*if applicable*)
13. [✓] **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    [✓] Copies of citations attached
14. [ ] **Preliminary Amendment**
15. [ ] **Return Receipt Postcard** (*MPEP § 503*) (*Should be specifically itemized*)
16. [ ] **Certified Copy of Priority Document(s)** (*if foreign priority is claimed*)
17. [ ] **Nonpublication Request** Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
18. [✓] **Other:** ELECTRONIC FEE CALCULATION SHEET

*Note: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).
(2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS

[✓] The address associated with Customer Number: 34018 **OR** [ ] Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email	

Signature	/Gary R. Jarosik/	Date	November 26, 2018
Name (Print/Type)	Gary R. Jarosik	Registration No. (Attorney/Agent)	35,906

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	81230.921US3
	Application Number	
Title of Invention	SMART BARRIER ALARM DEVICE	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 — Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	George		Seelman	

Residence Information (Select One) ● US Residency Non US Residency Active US Military Service

City	State/Province	Country of Residence
Temecula	CA	US

Mailing Address of Inventor:

Address 1	2055 Corte del Nogal
Address 2	

City	State/Province	Postal Code	Country
Carlsbad	CA	92011	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	34018		
Email Address	chiipmail@gtlaw.com	Add Email	Remove Email

Application Information:

Title of the Invention	SMART BARRIER ALARM DEVICE		
Attorney Docket Number	81230.921US3	**Small Entity Status Claimed**	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	15	**Suggested Figure for Publication (if any)**	

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Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	◯ Limited Recognition (37 CFR 11.9)
Customer Number	34018		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation in part of	15946511	2018-04-05

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	81230.921US3
	Application Number	
Title of Invention	SMART BARRIER ALARM DEVICE	

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15946511	Division of	14629370	2015-02-03	9940797	2018-04-10

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	81230.921US3
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Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	81230.921US3
	Application Number	
Title of Invention	SMART BARRIER ALARM DEVICE	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 — Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	ECOLINK INTELLIGENT TECHNOLOGY, INC.		
Mailing Address Information For Applicant:			
Address 1	2055 Corte del Nogal		
Address 2			
City	Carlsbad	**State/Province**	CA
Country	US	Postal Code	92011
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	81230.921US3
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Title of Invention	SMART BARRIER ALARM DEVICE	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Gary R. Jarosik/			Date (YYYY-MM-DD)	2018-11-26
First Name	Gary R.	Last Name	Jarosik	Registration Number	35906

Additional Signature may be generated within this form by selecting the Add button. Add

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Title of Invention	SMART BARRIER ALARM DEVICE	

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1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	SMART BARRIER ALARM DEVICE

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [■] The attached application, or
- [ ] United States application or PCT international application number _____ filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: George Seelman Date (Optional): _____

Signature: /George Seelman/

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SMART BARRIER ALARM DEVICE

BACKGROUND

I. Cross-Reference to Related Application

[001] The present application is a continuation-in-part of U.S. patent application serial number 15/946,511, filed on April 5, 2018, which is a divisional of U.S. patent application serial number 14/629,370, filed on February 3, 2015, now U.S. patent number 9,940,797.

II. Field of Use

[002] The present application relates to the field of home and business security. More specifically, the present application relates to a barrier alarm device that helps reduce the occurrences of false alarms.

III. Description of the Related Art

[003] Security systems for homes and businesses have been around for many years. Often, these systems make use of barrier alarm devices, such as door and window sensors, motion detectors, sound detectors, etc. Door and window alarms typically comprise two distinct parts: a magnet and a reed switch/transmitter assembly. The reed switch/transmitter assembly is typically installed onto a stationary surface, such as a door or window frame, while the magnet is mounted to a movable portion of a door or window. When the door or window is closed, the magnet and reed switch are in close proximity to one another, maintaining the reed switch in a first state indicative of a "no alarm" condition. If the door or window is opened, proximity is lost between the magnet and the reed switch, resulting in the reed switch changing state, e.g., from closed to open or from open to closed. The change of state is indicative of a local alarm condition, and a signal may be generated by circuitry located within the reed switch assembly and sent, via wires or over-the-air, to a central security panel or gateway in the home, which may forward the signal to a remote monitoring station. In addition, a very loud audible alert is typically generated by a siren coupled to the central security panel in the home indicating that a door or window has been opened.

[004] One problem with security systems is the relatively frequent occurrence of false alarms. Most security systems offer a "home" arming feature which arms all door and window sensors, but does not arm any interior motion sensors. In this way, occupants are protected against intruders while being able to move about within the home without causing motion sensors to alarm. Often times, occupants forget that the security system is armed, and when they open a door or a window, a false alarm is triggered. These false alarms sometimes cause a response by police or fire personnel, wasting valuable public resources. Additionally, homeowners may be fined if too many false alarms occur within a certain time period. Further, occupants are often startled if a local siren is triggered inside the home, because the siren is deliberately designed to be very loud.

[005] It would be desirable to provide a security system that allows occupants to open doors or windows while the security system is in an armed, "home" mode of operation, without triggering an immediate, startling, audible alarm caused by a local siren.

SUMMARY

[006] The embodiments described herein relate to methods, systems, and apparatus for monitoring a barrier by a barrier alarm device that reduces or prevents false alarms from occurring. In one embodiment, a barrier alarm device is describe, comprising a barrier status detection device for detecting when a barrier monitored by the barrier alarm device has been opened, a human detection device for determining when a human being is inside a premises in proximity to the barrier, a transmitter for transmitting a timed alarm signal to a receiver, the timed alarm signal for initiating a timer, a memory having processor-executable instructions stored thereon, and a processor coupled to the barrier status detection device, the human detection device, the transmitter, and the memory, for executing the processor-executable instructions that cause the barrier alarm device to determine, by the processor via the barrier status detection device, that the barrier has been opened, determine, by the processor via the human detection device, that a human being is inside the premises in proximity to the barrier, and transmit, by the processor via the transmitter, the timed alarm signal to the receiver when

the barrier has been opened and when a human being is inside the premises in proximity to the barrier.

[007] In another embodiment, a central security panel is describe, comprising a communication interface for receiving signals from a barrier alarm device, a memory for storing processor-executable instructions, and a processor coupled to the communication interface and the memory, for processing the processor-executable instructions that causes the central security panel to receive a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened and that a human being is inside the monitored premises and in proximity to the barrier, in response to receiving the first alarm signal, begin monitoring an elapsed time from when the first alarm signal was received, determine, by the processor, that the elapsed time has exceeded a predetermined time, in response to determining that the elapsed time has exceeded the predetermined time, generate a security response, and provide the security response to a receiver via the communication interface.

[008] In another embodiment, a method is described, performed by a barrier status detection device, comprising determining when a barrier monitored by the barrier status detection device has been opened, determining when a human being is inside a premises monitored by a central security panel and inside the premises, and transmitting a timed alarm signal to a local receiver, the timed alarm signal for initiating a timer, when the barrier has been opened and a human being is in inside the premises and in proximity to the barrier.

[009] In yet another embodiment, a method is performed by a central security panel, comprising receiving a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened and that a human being is inside the premises in proximity to the barrier, in response to receiving the first alarm signal, starting a countdown timer, determining that the countdown timer has expired, in response to determining that the countdown timer has expired, generate a security response, and providing the security response to a receiver via a communication interface.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The features, advantages, and objects of the present invention will become more apparent from the detailed description as set forth below, when taken in conjunction with the drawings in which like referenced characters identify correspondingly throughout, and wherein:

[0011] FIG. **1** is an illustration of a security system in accordance with one embodiment of the principles discussed herein;

[0012] FIG. **2** is a perspective view of one embodiment of a barrier alarm device shown in FIG. **1**;

[0013] FIG. **3** is a functional block diagram of one embodiment of the barrier alarm device shown in FIG. **2**;

[0014] FIG. **4** is an illustration of another security system in accordance with another embodiment of the principles discussed herein;

[0015] FIG. **5** is a flow diagram illustrating one embodiment of a method performed by the barrier alarm device shown in FIG. **2** when installed into a system such as FIG. **1**;

[0016] FIG. **6** is a perspective view of another embodiment of the smart barrier alarm device as shown in FIG **2**;

[0017] FIG. **7** is a perspective view of the smart barrier alarm device as shown in FIG **6** showing an opening as a circular aperture formed through an end cap of the smart barrier alarm device;

[0018] FIG. **8** is a cutaway, side view of the smart barrier alarm device as shown in FIG. **6**;

[0019] FIG. **9** is a functional block diagram of one embodiment of a central security panel using in conjunction with the smart barrier alarm device as shown in FIG. **6**;

[0020] FIG. **10** is a flow diagram illustrating one embodiment of a method performed by the smart alarm device as shown in FIG. **6** and the central security panel as shown in FIG. **9**, for reducing or preventing the occurrence of false alarms;

[0021] FIG. **11** is a flow diagram illustrating one embodiment of a method performed by barrier alarm device **600** installed proximate to a door or a window of a premises being monitored and central security panel **116**, for reducing or preventing the occurrence of false alarms;

[0022] FIG. **12** is a functional block diagram of a stand-alone human detection device for use in yet another embodiment, where the human detection device is used in conjunction with an existing, prior-art barrier alarm device;

[0023] FIG. **13** is a flow diagram illustrating one embodiment of a method performed by the human detection device as shown in FIG. **12** and the central security panel as shown in FIG. **9** when the door is opened by someone from inside the premises when the central security panel is in an armed-home state;

[0024] FIG. **14** is a flow diagram illustrating the embodiment of a method performed by the human detection device and the central security panel, as described by FIG. **13**, except that a door is opened by someone from outside a premises when the central security panel is in an armed-home state; and

[0025] FIG. **15** is a flow diagram illustrating another embodiment of a method, performed by the barrier alarm device of FIG. **6**, to reduce the occurrence of false alarms, where the barrier alarm device initiates a countdown timer before sending an immediate alarm signal the central security device as shown in FIG. **9**; and

[0026] FIG. **16** is a flow diagram illustrating one embodiment of a method performed by the central security panel of FIG. **9** or a server as shown in Fig. **4** for reducing the occurrences of false alarms when the door is opened by someone from outside of a premises when a home security system is in an armed-home state.

DETAILED DESCRIPTION

[0027] The present application relates to systems, methods and apparatus for monitoring doors and windows ("barriers") using barrier alarm devices, such as door or window sensors, while reducing occurrences of false alarms. For the purpose of the discussions herein, the term "barrier alarm device" means any device used to monitor and report states, physical conditions, attributes, status, or parameters of an entrance/exit barrier such as a door, a window, a garage door, a gate, etc. Examples of barrier alarm devices comprise door and window sensors, glass breakage detectors, light interruption detectors, etc.

[0028] Embodiments of a barrier alarm device described herein comprise a human detection device that detects the presence of a human being in proximity to the barrier alarm device, either inside or outside of monitored premises. In once embodiment, if a person inside a

structure, such as a person's residence, opens a monitored door or window while a security system is armed, an alarm will not immediately be triggered if the barrier alarm device senses the person in inside the structure in proximity to the barrier that was opened. Instead, a timed alarm signal is generated by the barrier alarm device and transmitted to a security panel which, in response, start a countdown timer that allows a person to cancel a security response from occurring if a certain action is taken before the countdown timer expires. This new barrier alarm device operates on the principle that if a door or window is opened and a person is detected nearby the barrier alarm device on the inside of the premises, it is assumed that the person is authorized to be inside the premises, and a security response should not be immediately generated when the door or window is opened, allowing an authorized person time to cancel the security response. Conversely, a new barrier alarm device may operate on the principle that if a door or window is opened, and a person is detected in proximity to the barrier alarm device on the outside of the premises, a security response should be immediately initiated. Each of these principles is discussed in detail below.

[0029] FIG. **1** is an illustration of a security system in accordance with one embodiment of the principles discussed herein. In this embodiment a door assembly **100** and a window assembly **102** are monitored by barrier alarm devices **104** and **106**, respectively. In one embodiment, barrier alarm device **104** comprises magnet **108** mounted to door **112** and reed switch assembly **110** mounted to door frame **114**, while barrier alarm device **106** comprises a magnet-less type sensor. The barrier alarm devices could, use alternative techniques to magnetic field sensing to determine that status of a door or a window.

[0030] Each of the barrier alarm devices communicates with a receiver, such as central security panel **116**, typically using wireless RF signals generated by the barrier alarm devices and/or central security panel **116**. For example, if door **112** is opened, reed switch assembly **110** detects a reduction or elimination of a magnetic field produced by magnet **108** as magnet **108** moves away from reed switch assembly **110** as door **112** is opened. In response, reed switch assembly **110** transmits a message to central security panel **116** indicative of a local alarm condition, e.g., door **112** has been opened. In other embodiments, an Internet-connected "hub" or "gateway" may replace central security panel **116**, where signals from barrier alarms and other security devices are sent to a central processing station, such as a server in the "cloud", for processing. References made to "central security panel **116**" herein

shall also include devices such as a hub, gateway, or the like. Additionally, the functionality of central security panel **116** may be implemented by a remote processing device, such as a server accessible by security panel **116** over a wide-area network, such as the Internet. In this embodiment, signals from barrier alarm devices and other sensors may be sent via central security panel **116** to such a remote processing device, and central security panel **116** may receive commands from the remote processing device, such as to cause a siren located inside and/or outside a premises monitored by one or more barrier alarm devices, to produce a very loud, audible siren, to cause one or more lights to turn on, to lock or unlock one or more wireless locks, etc.

[0031] Some barrier alarm devices are capable of being placed into an open position while remaining "armed". For example, some reed switch barrier alarm devices may use two magnets, a first magnet positioned near the bottom of a window and one placed several inches above the first magnet along a window frame such that the resultant opening allows air through the window but not a human being. Thus, in an open but monitored position, the window is opened so that the reed switch assembly is in close proximity to the second magnet. Then, if an unauthorized person tries to enter the premises by opening the window further, an immediate alarm signal will be generated.

[0032] In some embodiments, central security panel **116** may send messages to either of the barrier alarm devices requesting a status of either alarm, e.g., either "open" or "closed". In response, one or both barrier alarm devices may transmit a response to central security panel **116** indicating a status of the door or window, as the case may be. Other commands may be transmitted by central security panel **116** to other devices, such as "sound alarm" (to a wireless siren), "turn on lights" (to a lamp control module), open gate (to an electronic gate opener), lock doors (to a wireless lock), etc.

[0033] As described above, central security panel **116** monitors barrier alarm devices **104**, **106**, and other security devices (for example, a tilt sensor, shock sensor, motion detector, passive infra-red detector, light interruption detector, etc.) that may be part of the security system. Such security panels are widely used in home security systems, sold by large companies such as Honeywell Security of Melville, New York, 2Gig Technologies of Lehi, Utah. In addition, central security panel **116** generally provides status information to users via a display, generally providing a visual indication of the status ("open", "closed", "on",

"off", "normal", "alarm", etc.) of each barrier alarm device, other security devices in the system, or the system as a whole. Central security panel **116** may also be in communication with an off-site remote monitoring station **124** via communication network **122**, such as the Internet, PSTN, a fiber optic communication network, a wireless communication network (e.g., cellular, data, satellite, etc.), and/or other wide-area network(s). Remote monitoring station **124** typically provides security monitoring services for homes and businesses equipped with security systems such as the one shown in FIG. **1**. Remote monitoring station **124** is adapted to receive communications from central security panel **116** via network **122** in response to central security panel **116** receiving an indication of an alarm condition being sensed by one or more barrier alarm devices/sensors in the security system. In other embodiments, central security panel **116** simply receives raw data from the barrier alarm devices and determines, based on the data, whether a local alarm condition has occurred. When a local alarm condition is detected, central security panel **116** generates a system alarm which may comprise taking one or more security responses, such as notifying remote monitoring station **124** that a local alarm condition has occurred, illuminating one or more lights, causing one or more audible alerts to sound within a home or business, etc.

[0034] Keypad **118** is a remote user interface, wired or wirelessly coupled to central security panel **114**. Keypad **118** may be conveniently located near an entry door and used to arm and disarm the security system, and display status information to a user. It is also generally used to allow a user to cancel an alarm, preventing a security response from being initiated, such as in the case when a timed alarm signal is sent by a barrier alarm that monitors a primary entry door. The timed alarm signal allows an authorized user to open a monitored door, whereupon a countdown timer is generally started by central security panel **116**, giving the person a fixed time period in which to cancel a security response by central security panel **116**. To cancel the security response, an authorized person typically enters a known security code into keypad **118**, and keypad **118** transmits the security code to central security panel **116**, whereupon central security panel **116** cancels the security response if the security code matches an authorized security code stored in a memory of central security panel **116**.

[0035] FIG. **2** is a perspective view of one embodiment of a barrier alarm device, comprising magnet **108** and reed switch assembly **110**. In other embodiments, the barrier alarm device may use alternative door/window status detection devices, such as an ultrasonic

transducer/receiver, an infrared transmitter/receiver, or some other device to determine whether a window is open or closed. The barrier alarm device may have additional features, such as a user interface **202** and status indicator **204**. The user interface **202** may comprise a pushbutton or other switch to provide input to the barrier alarm device. For example, in some embodiments, user interface **202** is used to place the barrier alarm device into a "learn" state of operation for initial installation and pairing with central security panel **116**, or can be used to "bypass" a barrier alarm device, for temporarily disabling a barrier alarm device. Status indicator **204** can comprise, for example, an LED or a piezo speaker and related electronics to indicate a state of the barrier alarm (i.e., normal, learn, low battery) and/or providing an indication that a timed alarm signal has been transmitted. Such a timed alarm signal is transmitted by a barrier alarm device when the barrier alarm device determines that a door or window has been opened, and that a human being is inside a structure in proximity to a barrier being monitored by the barrier alarm device. In this situation, status indicator **204** may be illuminated, or emit one or more sounds, indicating to the person in proximity to the barrier that he or she must cancel a security response within a fixed time period, as monitored by a countdown timer located either in the barrier alarm device, the central security panel, or a cloud-based server, such as within 30 seconds. The illumination and/or sound is generally bright/loud enough to gain the person's attention, but not so as to startle the person. For example, one or more audible "chirps" may be emitted by a piezo speaker when the timed alarm signal is transmitted, each chirp less than 40 decibels or so in volume. In one embodiment, as the countdown timer nears its expiration, the indication(s) produced by status indicator **204** may increase in frequency, intensity, and/or volume.

[0036] In one embodiment, reed switch assembly **110** comprises housing **200** that covers a processor, a barrier state detection device (in this example, a reed switch), an RF transmitter, a human detection device, and a battery. For purposes of discussion herein, the term "barrier alarm device" is used interchangeably with the term "reed switch assembly" or the combination of reed switch assembly **110** and magnet **108**. Of course, the barrier alarm device could comprise any number of alternative embodiments, such as a magnet-less door window sensor, an RF detector, an RFID sensor, a light interruption detector, or any other device that is able to determine the status of a barrier such as a door or a window (i.e., whether a door or window is open or closed). The reed switch is used to detect the presence

or absence of a magnetic field produced by magnet **108** and the transmitter used to transmit information to central security panel **116** relating to the status of a door or window. Reed switch assembly **110** further comprises a human detection device for detecting the presence of a person inside a home or business and in proximity to the barrier being monitored by the barrier alarm device. The term "in proximity" generally means within a distance from a barrier for a human being to open or close the barrier.

[0037] As mentioned above, reed switch assembly **110** comprises a human detection device. The human detection device detects the presence of a human being in proximity to a barrier that is being monitored by the reed switch assembly. In one embodiment, the reed switch assembly is configured to detect human beings inside a monitored premises and in proximity to a barrier and in another, configured to detect human beings outside a monitored premises and in proximity to a barrier. When configured to detect human beings outside of a monitored premises, the reed switch assembly may use a detector that is external to housing **200** and coupled to the detector via a wire or via wireless communications. For example, an ultrasonic transducer and receiver could be mounted external to a window, and a wire connecting it to the reed switch assembly. In other embodiments, reed switch assembly **110** comprises hardware and related circuitry to detect a human being outside of a premises, such as by using radar, subsonic tones.

[0038] Reed switch assembly **110** may comprise one or more apertures **206** to allow a human detection device inside housing **200** to propagate signals in order to detect a human being in proximity to a barrier. For example, if the human detection device is an ultrasonic transducer and receiver, the apertures **206** allow ultrasonic pings to escape the housing and to be returned to the ultrasonic receiver for processing. In other embodiments, the apertures **206** may, additionally or alternatively, be located on a different surface of housing **200** in order to better direct signals used to determine the presence of a human being. For example, in the embodiment shown in FIG. **2**, apertures **206** are located on "front-facing" side of housing **200**. This configuration might be best for a barrier alarm device that is mounted between three and a half to six feet from the floor, for example, such as on a "head" of a movable portion of a double hung window, to project signals horizontally towards anyone who might be in proximity to the window. In an embodiment where the barrier alarm device is mounted between seven and ten feet, for example mounted to a top portion of a door, apertures **206**

might be formed on the "bottom-facing" surface of housing **200**, in order to project signals downwards, towards a human being who may be opening the door.

[0039] In some embodiments, a deflection device **208** may be used to better guide signals emanating from housing **200** to detect a human being after being installed over apertures **206**. In one embodiment, deflection device **208** comprises a fixed structure that mounts over apertures **206**. In another embodiment, deflection device **208** comprise movable "shutters" or "louvers" mounted over or through apertures **206** to allow a user to adjust the direction of signals emanating from housing **200**. The deflection device **208** may be configured to guide signals at a certain angle away from the housing **200** to have the best opportunity to sense a human being, e.g., to guide signals to where a human being would expect to be when the reed switch assembly is mounted in a typical location, such as on top of a door or window frame. For example, the angle of deflection device **208** may be 45 degrees, thereby guiding signals downwards and away from the barrier by 1-2 feet or so, depending on how high the reed switch assembly is mounted.

[0040] In one embodiment, when a person is detected near barrier alarm device **110** inside a monitored premises, no alarm signal is transmitted to security panel **116** if a door or window is opened or, conversely, if a person is not detected when a door or window is opened, an alarm signal is transmitted to security panel **116**. This reduces the occurrence of false alarms, because a person opening a door or window from within a monitored premise is assumed to have authorization to be there. In another embodiment, the human detection device is configured to detect the presence of a person near the barrier alarm device, but outside the monitored premises. An alarm signal will only be generated when a door or window is opened and a person is detected near the barrier alarm device, outside the monitored premises or, conversely, when a door or window is opened and no person is detected outside the door or window, no alarm signal is transmitted to central security panel **116**. In another embodiment, a bypass signal is sent to central security panel **116** when it is determined that an authorized person has opened a door or a window, the bypass signal is an instruction to central the remote location **116** to ignore future alarm signals generated by the barrier alarm device or to disarm the system.

[0041] FIG. **3** is a functional block diagram of one embodiment of a portion of barrier alarm device **104** or **106** in accordance with the teachings herein. Specifically, FIG. **3** shows

processor **300**, memory **302**, human detection device **304**, a barrier status detection device **306**, and transmitter **308**. It should be understood that the functional blocks may be coupled to one another in a variety of ways, and that not all functional blocks necessary for operation of the barrier alarm device are shown (such as a power supply), for purposes of clarity.

[0042] Processor **300** is configured to provide general operation of the barrier alarm device by executing processor-executable instructions stored in memory **302**, for example, executable code. Processor **300** typically comprises a general purpose processor, such as an ADuC7024 analog microcontroller manufactured by Analog Devices, Inc. of Norwood Massachusetts, although any one of a variety of microprocessors, microcomputers, and/or microcontrollers may be used alternatively. Due to the relative small size of barrier alarm devices, and the fact that most barrier alarm devices are battery-powered, processor **300** is typically selected to have low power consumption, small in size, and inexpensive to purchase.

[0043] Memory **302** comprises one or more information storage devices, such as RAM memory, ROM memory, EEPROM memory, UVPROM memory, flash memory, SD memory, XD memory, or other type of electronic, optical, or mechanical memory device. Memory **302** is used to store processor-executable instructions for operation of the barrier alarm device as well as any information used by processor **300**, such as threshold information, parameter information, identification information, current or previous door or window status information, etc.

[0044] Barrier status detection device **306** is coupled to processor **300** and monitors or determines a state, physical condition, attribute, status, or parameter of something, such as the status (e.g., “open”, “closed”, “movement detected”, etc.) of a door, window, gate, or other entrance or exit barrier. Barrier status detection device **306** may comprise a reed switch, ultrasonic transducer/receiver, an infrared transmitter/receiver, an RFID receiver, a tilt sensor, an accelerometer, a gyroscope, a motion sensor, or some other device to determine whether a window is open or closed.

[0045] Human detection device **304** comprises a device or circuitry to detect the presence of a person in proximity to the barrier alarm device, either inside a monitored premises, outside a monitored premises, or both. Examples of human detection device **304** include an ultrasonic transducer/receiver, an infrared transmitter/receiver, a capacitance sensor, an RF tank circuit, an RFID receiver and RFID chip, a motion detector, or some other circuitry or device able to

detect the presence of a human being proximate to the barrier alarm device, door, or window. The term "proximate to the barrier alarm device, door or window" means that a person is within a distance from a barrier alarm device, door, or window that the person could open the door or window where a barrier alarm device is installed.

[0046] In one embodiment, when a person approaches a door or window monitored by the barrier alarm device, either inside premises being monitored or outside, human detection device **304** sends a signal to processor **300** when the person is within a predetermined distance from the barrier alarm device and, thus, the monitored door or window. In another embodiment, human detection device **304** is inactive until barrier status detection device **306** determines that a monitored door or window has been opened. In this embodiment, barrier status detection device **306** sends a signal to processor **300**, and processor **300** then activates the human detection device **304** to determine if a person is proximate to the barrier alarm device and, thus, the monitored door or window, either inside the monitored premises, outside, or both.

[0047] Transmitter **308** comprises circuitry necessary to wirelessly transmit alarm signals and/or status messages and/or other information from the barrier alarm device to one or more receivers, such as central security panel **116** or a gateway device coupled to a wide area network such as the Internet, either directly or through in intermediate device, such as a repeater, commonly used in popular mesh networks. Such circuitry is well known in the art and may comprise BlueTooth, Wi-Fi, RF, optical, ultrasonic circuitry, among others. Alternatively, or in addition, transmitter **308** comprises well-known circuitry to provide signals to central security panel **116** or a gateway via wiring, such as telephone wiring, twisted pair, two-conductor pair, CAT wiring, AC home wiring, or other type of wiring.

[0048] In normal operation, processor **300** executes processor-executable instructions stored in memory **302** that causes processor **300** to monitor signals provided by barrier status detection device **306** indicative of changes in one or more states, physical conditions, attributes, status, or parameters of something being monitored, such as the condition of a door or window being "open" or "closed", changes between these states, or simply "movement". Processor **300** uses this data from barrier status detection device **306** to determine whether a predetermined condition has occurred relating to the barrier alarm device (herein "local alarm condition"), such as a door or window being monitored by the barrier alarm device changing

state from "closed" to "open", movement between these states, or simply "movement". Human detection device **304** monitors for the presence of a person proximate to the barrier alarm device, door or window and provides signals to processor **300** indicative of whether a human being is proximate or not. If processor **300** determines that a door or window has been opened, it checks to see whether human detection device **304** has sensed a person proximate to the barrier alarm device, door, or window. In an embodiment where human detection device **304** is configured to detect persons inside a monitored premises, processor **300** generates an alarm signal only if there is no person proximate to the barrier alarm device, door, or window inside the monitored premises, indicating that door or window movement was the result of someone outside the monitored premises attempting unauthorized entry to the premises. In an embodiment where human detection device **304** is configured to detect persons outside a monitored premises, processor **300** generates an alarm signal only if there is a person proximate to the barrier alarm device, door, or window outside the monitored premises, again indicating that door or window movement was the result of someone outside the monitored premises attempting unauthorized entry to the premises. In any case, if processor **300** determines that a local alarm condition has occurred, an alarm signal is provided to transmitter **308** for transmission to a remote location, such as central security panel **116** or a gateway. In one embodiment, the alarm signal comprises a notification to central security panel **116** that a local alarm condition has been detected at a particular door or window being monitored by the barrier alarm device.

[0049] Thus, using the barrier alarm device described above, when a person inside a monitored premises opens a door or window while a security system is armed, an alarm signal will not be generated, or it will be ignored by central security panel **116**, thereby avoiding a false alarm.

[0050] FIG. **4** is an illustration of another security system in accordance with another embodiment of the principles discussed herein. In this embodiment, barrier alarm devices **104** and **106** communicate with a receiver such as gateway **402**, which forwards communications from the barrier alarm devices to remote server **400** via wide area network **404**. In one embodiment, the barrier alarm devices additionally may communicate with a second receiver, such as central alarm panel **116**, as discussed previously. Gateway **402** comprises a wireless and/or wired router and/or modem commonly found in millions of homes and businesses for

routing Internet traffic. In this embodiment, gateway **402** provides signals from the barrier alarm devices to remote server **400** and, in some embodiments, from remote server **400** to barrier alarm device **106**. Remote server **400** comprises an electronic computing device such as a desktop or laptop computer, server, smartphone, wearable device, etc. In one embodiment, remote server **400** may communicate with one or more remote entities, such as other desktop or laptop computers, tablets, smart devices such as smartphones, wearable devices, etc., to notify interested parties of activities occurring on/in the premises being monitored by one or more barrier alarm devices. Such interested parties may include family members and friends of an owner or renter of the premises, police, fire, paramedics, a remote security monitoring center, etc.

[0051] In one embodiment, when a barrier alarm device detects that a barrier, such as a door or a window, has been opened, and further that a human being is inside the premises being monitored in proximity to the barrier, the barrier alarm device does not send an alarm signal to gateway **402**, as this situation indicates that an authorized person inside the monitored premises has opened the barrier. In another embodiment, a bypass signal is transmitted to central security panel **116**, as described above. Additionally, or alternatively, the barrier alarm device sends a status signal to gateway **402** to notify server **400** that a barrier has been opened. Server **400** may simply store an indication of the opening and the time that it occurred in an account associated with an account owner, i.e., the owner or renter of the monitored premises. Alternatively, or in addition, server **400** may transmit an alert to one or more remote devices **406**, alerting interested parties of the opening.

[0052] When the barrier alarm device detects that a barrier has been opened, and further that a human being is not inside the premises being monitored in proximity to the barrier, the barrier alarm device sends an alarm signal to gateway **402**, as this situation indicates that an unauthorized person outside the monitored premises has opened the barrier. Server **400** receives the alarm signal and typically stores the date and time of the alarm signal occurrence in an account, as described above. Alternatively, or in addition, server **400** sends a remote alarm signal to one or more remote devices **406**, alerting users of those devices that a barrier has been opened by an unauthorized person. The alarm signal may also be transmitted from the barrier alarm device to central security panel **116**.

[0053] In an alternative embodiment, a barrier alarm device may be configured to detect whether a human being is outside of the monitored premises in proximity to a barrier being monitored. Thus, when a barrier alarm device detects that a barrier has been opened and that a human being is outside the monitored premises in proximity to the barrier, an alarm signal is transmitted. Conversely, when a barrier alarm device **106** detects that a barrier has been opened, and that a human being is not outside the monitored premises in proximity to the barrier, an alarm signal is not transmitted (and/or a bypass signal is transmitted), as this condition indicates that an authorized person has opened the barrier. The bypass signal, or another, separate signal, may be transmitted to gateway **402**, which then provides it to remote server **400** as an indication that a barrier has been opened by an authorized person.

[0054] In another embodiment, barrier alarm device **106** does not make determinations as to when to transmit an alarm signal and/or a bypass signal. Instead, processor **300** monitors barrier status determination device **306** and human detection device **304** and transmits a barrier status signal and a human status signal, respectively, to gateway **402**, central security panel **116**, or both, when a change in state of one or both devices occurs. Remote server **400** and/or central security panel **116** receives these status signals and determines whether a local alarm condition exists and whether to transmit an alarm signal to one or more remote devices **406** of interested parties and/or to a remote monitoring station **124**. For example, as an authorized person approaches a barrier, human detection device **304** changes state and processor **300** causes transmitter **308** to transmit a human status signal to gateway **402**, central security panel **116**, or both, which forwards it on to remote server **400** via wide area network **404** in the case of gateway **402**. If the authorized person does not open the barrier, and then walks away, barrier alarm device **106** transmits a second human status signal to gateway **402**, central security panel **116**, or both, indicative of the person leaving proximity to the barrier. If, however, the authorized person instead opens the barrier, barrier alarm device **106** transmits a barrier status signal to gateway **402**, central security panel **116**, or both, indicative of the barrier being opened. If remote server **400** and/or central security panel **116** receives this status indication signal, and the last known state of human detection device **304** is "person detected inside in proximity to barrier", then remote server **400** and/or central security panel **116** does not generate an alarm signal (but may provide a notification to interested parties of the status of the barrier such as "barrier open/authorized person present").

If no authorized person was present when the human status signal was received indicating that the barrier had been opened, remote server **400** and/or central security panel **116** generates an alarm signal that may provided to one or more interested parties and/or to remote monitoring station **124**.

[0055] FIG. **5** is a flow diagram illustrating one embodiment of a method performed by a barrier alarm device installed proximate to a door or a window in a premises being monitored, for reducing or preventing the occurrence of false alarms. It should be understood that in some embodiments, not all of the steps shown in FIG. **5** are performed. It should also be understood that the order in which the steps are carried out may be different in other embodiments.

[0056] At block **500**, processor **300** monitors signals from barrier status detection device **306** and human detection device **304**.

[0057] At block **502**, the barrier (e.g., door or window) is opened by an individual outside the premises.

[0058] At block **504**, processor **300** determines that the barrier has been opened by detecting a change in a signal from barrier status detection device **306**.

[0059] At block **506**, processor **300** determines that a human being is not inside the premises in proximity to the barrier by evaluating the signals from human detection device **304**.

[0060] In one embodiment, human detection device **304** periodically evaluates the space inside the premises and in proximity to the barrier to determine whether a human being is present or not. For example, a motion sensor may be energized once every three seconds to determine whether any infrared signal are detected, indicating the presence of a human being. In another embodiment, an ultrasonic transducer may transmit an ultrasonic "ping" once every two seconds to determine whether a return signal is received, indicating the presence of a human being.

[0061] In another embodiment, human detection device **304** is kept in a default, "quiescent", de-energized state and energized only when processor **300** determines that the barrier has been opened. The quiescent state refers to a low-power consumption state of operation or a no-power consumption state of operation, e.g., being in an "off" condition. In this way, power savings are achieved by the barrier alert device, as the circuitry comprising human detection device **304** is only energized when the barrier is opened. For example, in an

embodiment where human detection device **304** comprises an ultrasonic transducer and an ultrasonic receiver, the ultrasonic transducer and ultrasonic receiver may be powered off until processor **300** determines that the barrier has been opened. In response to determining that the barrier has been opened, processor **300** energizes the ultrasonic transducer and an ultrasonic receiver circuitry and causes the ultrasonic transducer to emit a number of ultrasonic "pings" in order to determine whether a human being is in proximity to the barrier or not. In one embodiment, only a single ping is sent. Processor **300** then determines whether a human being is in proximity of the barrier by determining if a return signal was received by the ultrasonic receiver. If no human being was determined to be in proximity of the barrier, it indicates that the barrier was opened by someone outside the premises, e.g., an unauthorized person. In this case processing continues to block **508**. If processor **300** determined that a human being was in proximity of the barrier, then no alarm signal would be transmitted to central security panel, as this is an indication that someone inside the premises opened the barrier, e.g., an authorized person, or a bypass signal is transmitted to central security panel **116**.

[0062] At block **508**, in response to determining that the barrier has been opened and that a human being is not inside the premises in proximity to the barrier, processor **300** generates an alarm signal and provides it to transmitter **308**.

[0063] At block **510**, transmitter **308** transmits the alarm signal to receiver, such as central security panel **116**. Alternatively, or in addition, transmitter **308** transmits the alarm signal to gateway **402** connected to a wide area network, such as the Internet, for presentation to remote server **400**.

[0064] At block **512**, central security panel **116** receives the alarm signal from the barrier alarm device and takes at least one action. For example, central security panel **116** may cause a loud siren inside the premises to activate and/or send a remote alarm signal to a remote monitoring station so that the remote monitoring station may summon appropriate authorities to the premises. Remote server **400** may also provide a notification to interested parties that an alarm signal was received.

[0065] At block **514**, processor **300** determines that the barrier has been placed into a closed position based on signals received from barrier status detection device **306**.

[0066] At block **516**, in response to determining that the barrier has been placed into the closed position, processor **300** provides a signal to transmitter **308** indicating that the barrier is in the closed position.

[0067] At block **518**, transmitter **308** transmits the signal to either central security panel **116**, gateway **402**, or both.

[0068] At block **520**, in response to receiving the signal by central security panel **116** from the barrier alarm device that the barrier is in the closed position, providing a remote alarm signal to a remote monitoring station by central security panel **116** when a future alarm signal is received by central security panel **116** from the barrier alarm device. In other words, the central security panel **116** will no longer ignore alarm signals sent by the barrier alarm device unless another bypass signal is received. Likewise, remote server **400** likewise will no longer ignore alarm signals sent by the barrier alarm device.

[0069] At block **522**, after the barrier has been closed, processor **300** determines that the barrier has been opened by detecting a change in a signal from barrier status detection device **306**.

[0070] At block **524**, processor **300** determines that a human being is inside the premises in proximity to the barrier by evaluating the signals from human detection device **304**.

[0071] At block **526**, in response to determining that the barrier has been opened and that a human being is inside the premises in proximity to the barrier detection device, processor **300** may refrain from sending an alarm signal to central security panel **116** and gateway **402**. Additionally, or alternatively, processor **300** generates a bypass signal and provides the bypass signal to transmitter **308** where it is transmitted to central security device **116** and/or gateway **402**. The bypass signal is an instruction to central security panel **116** to ignore future alarm signals generated by the barrier alarm device. The bypass signal may, additionally or alternatively, cause central security panel **116** to disarm the entire security system and to notify one or more persons that the security system has been disarmed, and/or that a barrier has been opened by an authorized person. Similarly, the bypass signal, or a different signal, may be transmitted to gateway **402** to provide an indication to remote server **400** that a barrier has been opened by an authorized person and to ignore future alarm signals generated by the barrier alarm device until the barrier is again placed into the closed position.

[0072] At block **528**, the bypass signal is transmitted by transmitter **308** to central security panel **116** and/or the same or similar signal is transmitted to gateway **402**.

[0073] FIG. **6** is a perspective view of another embodiment of the smart barrier alarm device **104** or **106**, shown as smart barrier alarm device **600**. In this embodiment, smart barrier alarm device **600** comprises a top end **602** and a bottom end **604**, with bottom end **604** comprising an opening **606**. Smart barrier alarm device **600** is mounted to a door or window frame, or to a door or window itself, while magnet **608** is mounted in proximity to smart barrier alarm device **600** when a door or window is closed. In one embodiment, smart barrier alarm device **600** is mounted such that top end **602** is positioned upwards towards a ceiling, while bottom end **604** is positioned downwards and in alignment towards a door handle or door deadbolt, or window latch (or some other portion of a window), i.e., the bottom end **604** is pointed in a particular direction to determine whether a human being is present within a confined area, such as a door handle, door deadbolt, window latch, or some other portion of a window. In other embodiments, smart barrier alarm device **600** may be positioned horizontally, for example in the case where smart barrier alarm device **600** is mounted to a window sash. In this case, smart barrier alarm device **600** is mounted to a window sash such that bottom end **604** points towards a window latch, or some other portion of a window.

[0074] It should be understood that opening **606** may resemble a perimeter of the external surface of smart barrier alarm device **600**, in this case, a square, but that in other embodiments, opening **606** may comprise an aperture of any shape, formed into an end cap, as shown in FIG. **7**, showing opening **606** as a circular aperture formed through end cap **702**. Opening **606** is formed to allow human detection device **304** located inside smart barrier alarm device **600** to pass signals to detect the presence of a human hand that may grab a door handle, door deadbolt, or window latch (or some other portion of a window) upon opening a door or window. Detection of a human hand on or approaching a door handle, door deadbolt, or a window latch or some other portion of a window, such as a window "lip" formed, for example, on a window sill of a double-hung window that aids in opening a window. In one embodiment, a lens **704** may be used to direct light or sound energy towards a particular area of a door or window, for example, directed towards a door handle or deadbolt, or a portion of a window, such as a window latch or sash.

[0075] FIG. **8** is a cutaway, side view of smart barrier alarm device **600**. Shown is human detection device **304**, processor **300**, and memory **302** mounted to circuit board **800**, housing **200**, user interface **202**, barrier status detection device **306**, transmitter **308** and indictor **204**. It should be understood that in other embodiments, user interface **202** and indicator **204** could comprise a single unit, such as a push button switch having one or more LEDs mounted thereon, and that the physical arrangement of the components shown in FIG. **8** could be arranged differently in other embodiments. Processor **300**, memory **302**, human detection device **304,** barrier status detection device **306**, transmitter **308,** indictor **204** and user interface **202** are referenced in terms of the components found in FIGs. 2 and 3, as they are the same or similar in structure and in functionality.

[0076] In the embodiment shown in FIG. **8**, human detection device **304** comprises a thermopile, an ultrasonic transceiver, an IR transceiver, a passive infrared detector, a camera, or any other circuitry capable of determining whether a human being is proximate to a barrier monitored by barrier alarm device **600**. Generally, human detection device **304** is positioned so that any emissions from human detection device **304** is directed out of barrier alarm device **600** via opening **606**. User interface **202** allows a person to operate barrier alarm device **600**, for example, to place barrier alarm device **600** into various operating modes, or to turn barrier alarm device **600** on or off. Indicator **204** provides an indication that a timed alarm signal has been transmitted, as explained below.

[0077] FIG. **9** is a functional block diagram of one embodiment of central security panel **116**. Shown is processor **900**, memory **902**, transmitter **904**, receiver **906** and user interface **908**. It should be understood that the functional blocks may be coupled to one another in a variety of ways, and that not all functional blocks necessary for operation of the barrier alarm device are shown (such as a power supply), for purposes of clarity.

[0078] Processor **900** is configured to provide general operation of the central security panel **116** by executing processor-executable instructions stored in memory **902**, for example, executable code. Processor **900** typically comprises a general purpose processor, such as an ADuC7024 analog microcontroller manufactured by Analog Devices, Inc. of Norwood Massachusetts, although any one of a variety of microprocessors, microcomputers, and/or microcontrollers may be used alternatively. Processor **900** is typically selected based on factors such as cost, computational power, and memory requirements.

[0079] Memory **902** comprises one or more information storage devices, such as RAM memory, ROM memory, EEPROM memory, flash memory, SD memory, XD memory, or other type of electronic, optical, or mechanical memory device. Memory **902** is used to store processor-executable instructions for operation of central security panel **116** as well as any information used by processor **900**, such as one or more authorized security codes, a predetermined countdown time (such as thirty seconds), an identification of all of the sensors that have been learned into central security panel **116** and information related thereto, door and window current status, etc.

[0080] Transmitter **904** comprises circuitry necessary to transmit alarm signals and/or status messages and/or other information from central security panel **116** to a remote receiver, such as central security panel **116**. Transmitter **904** may also be used to transmit security responses, such as a signal to sound a local siren or to cause a strobe to flash. Such circuitry is well known in the art and may comprise POTS, Wi-Fi, RF, cellular, LTE, and/or Ethernet circuitry, among others.

[0081] Receiver **906** comprises circuitry necessary to receive timed alarm signals and alarm signals from one or more barrier alarm devices located throughout the premises. Such circuitry is well known in the art and may comprise Wi-Fi, RF, Ethernet or some other well-known, local-area network circuitry.

[0082] User interface **908** comprises one or more pushbuttons, touch screens, video cameras, microphones, display screens, or other well-known devices for allowing a user to interact with central security panel **116** for purposes of introducing new sensors, or barrier alarm devices, to central security panel **116**, and to receive status information of the security system.

[0083] FIG. **10** is a flow diagram illustrating one embodiment of a method performed by barrier alarm device **600** installed proximate to a door or a window of a premises being monitored and central security panel **116**, for reducing or preventing the occurrence of false alarms. It should be understood that in some embodiments, not all of the steps shown in FIG. **10** are performed. It should also be understood that the order in which the steps are carried out may be different in other embodiments.

[0084] At block **1000**, processor **300** monitors signals from barrier status detection device **306** and human detection device **304** while the security system is in the "armed-home" mode. The armed-home mode is used when authorized persons are present in a home or business. In this

mode, central security panel **116** causes one or more security responses to be generated in response to any door or window barrier alarm device sending an alarm signal, i.e., a signal in response to a door or window being opened. However, any signals from motion sensors are typically ignored.

[0085] At block **1002**, the barrier (e.g., door or window) is opened by an individual inside the premises.

[0086] At block **1004**, processor **300** determines that the barrier has been opened by detecting a change in a signal from barrier status detection device **306**.

[0087] At block **1006**, processor **300** determines whether a human being is inside the premises in proximity to the barrier by evaluating the signals from human detection device **304**. In one embodiment, processor **300** determines whether a human hand is approaching, or has touched, a door handle, door deadbolt, a window latch or some other portion of a window.

[0088] In one embodiment, human detection device **304** periodically or continuously evaluates the space inside the premises and in proximity to the barrier to determine whether a human being is proximate to the barrier. For example, a motion sensor may be energized once every three seconds to determine whether any infrared signal are detected, indicating the presence of a human being. In another embodiment, an ultrasonic transducer may transmit an ultrasonic "ping" once every two seconds to determine whether a return signal is received, indicating the presence of a human being.

[0089] In another embodiment, human detection device **304** is kept in a default, "quiescent", de-energized or low-power state, and energized only when processor **300** determines that the barrier has been opened. The quiescent state refers to a low-power consumption state of operation or a no-power consumption state of operation, e.g., being in an "off" condition. In this way, power savings are achieved by the barrier alert device, as the circuitry comprising human detection device **304** is only energized when the barrier is opened. For example, in an embodiment where human detection device **304** comprises an ultrasonic transducer and an ultrasonic receiver, the ultrasonic transducer and ultrasonic receiver may be powered off until processor **300** determines that the barrier has been opened. In response to determining that the barrier has been opened, processor **300** energizes the ultrasonic transducer and an ultrasonic receiver circuitry and causes the ultrasonic transducer to emit a number of ultrasonic "pings" in order to determine whether a human being is in proximity to the barrier

or not. In one embodiment, only a single ping is sent. Processor **300** then determines whether a human being is in proximity of the barrier by determining if a return signal was received by the ultrasonic receiver.

[0090] At block **1008**, in response to determining that the barrier has been opened and that a human being is inside the premises in proximity to the barrier, processor **300** generates a timed alarm signal and provides it to transmitter **308**. In another embodiment, the timed alarm signal is transmitted when processor **300** determines that the barrier has been opened and that a human being is not outside the premises in proximity to the barrier.

[0091] At block **1010**, transmitter **308** transmits the timed alarm signal to a receiver, such as central security panel **116**.

[0092] At block **1012**, in response to transmitting the timed alarm signal or, alternatively, in response to processor **300** detecting that the barrier has been opened and that a person is inside (or not outside) a premises in proximity to the barrier, processor **300** causes indicator **204** to provide an audio or visual alert to a person that one or more security responses will be generated unless the timed alarm signal is canceled within a predetermined time period, such as 30 seconds. The alert may comprise a steady or blinking light, an audible alert, such as a series of "beeps", "chirps", a synthesized human voice providing instructions to cancel the alert, etc.

[0093] At block **1014**, central security panel **116** receives the timed alarm signal from barrier alarm device **600** via receiver **906** and, in response, processor **900** begins tracking the time from when the timed alarm signal was received. In one embodiment, processor **900** may initiate a countdown timer, set to a predetermined time that provides enough time for a person to disarm central security panel **116** from anywhere within the premises when a door or window is inadvertently opened when central security panel **116** is armed. Central security panel **116** may be disarmed by a person entering a security code into security panel **116**, or keypad **118**.

[0094] At block **1016**, if processor **900** receives a cancelation code from an authorized person to cancel the security response, processor **900** may cancel the countdown timer and refrain from enacting one or more security responses, such as contacting remote monitoring station **124**, causing a siren inside the premises to sound a loud, audible warning, or contact one or

more remote communication devices, such as wired or wireless phones, smart phones, tablets, wearables or computers.

[0095] At block **1018**, if processor **900** does not receive the cancellation code from an authorized person to cancel the security response by the time the predetermined time has elapsed, or the countdown timer has expired, processor initiates the one or more security responses, as mentioned above.

[0096] At block **1020**, when the security system is in the "armed-home" mode, in response to determining that a barrier has been opened and that a human being is not inside the premises in proximity to the barrier, processor **300** generates an immediate alarm signal and provides it to transmitter **308**. In another embodiment, the immediate alarm signal is transmitted when processor **300** determines that the barrier has been opened and that a human being is outside the premises in proximity to the barrier.

[0097] At block **1022**, transmitter **308** transmits the immediate alarm signal to central security panel **116**.

[0098] At block **1024**, central security panel **116** receives the immediate alarm signal via receiver **906** from barrier alarm device **600** and, in response, immediately initiates one or more security responses, as described above, i.e., within 5 seconds, or some other short time period on the order of seconds, of receipt of the immediate alarm signal.

[0099] FIG. **11** is a flow diagram illustrating one embodiment of a method performed by barrier alarm device **600** installed proximate to a door or a window of a premises being monitored and central security panel **116**, for reducing or preventing the occurrence of false alarms. It should be understood that in some embodiments, not all of the steps shown in FIG. **11** are performed. It should also be understood that the order in which the steps are carried out may be different in other embodiments.

[00100] As described previously, in this embodiment, barrier alarm device **600** is programmed to transmit both a timed alarm signal and an immediate alarm signal. The timed alarm signal may comprise a serial number of barrier alarm device **600**, while the alarm signal may comprise a modified version of the serial number, in order to differentiate the two signal from each other by central security panel **116**. Of course, the timed alarm signal the alarm signal could comprise other information, so long as central security panel **116** can differentiate between the two signals.

[00101] At block **1100**, central security panel **116** is placed into a "learn" mode of operation, where new barrier alarm devices and/or other sensors may be introduced, or enrolled, into central security panel **116**. In one embodiment, a user places central security panel **116** into the learn mode via user interface **908**. In other embodiments, the user may place central security panel **116** into the learn mode via a personal communication device, such as a smart phone or tablet computing executing a software application specially designed to interface to central security panel **116**.

[00102] At block **1102**, the user provides an indication to central security panel **116** that the user would like to add a new sensor or barrier alarm device into central security panel **116**. The indication is received by processor **900**.

[00103] At block **1104**, the user provides a first identification code to central security panel **116**, indicative of barrier alarm device **600** when barrier alarm device transmits a timed alarm signal. The first identification code may comprise a serial number of smart barrier device **600**, a serial number appended with an alphanumeric character (such as an "A"), some other alpha-numeric identification of smart barrier device **600** while transmitting a timed alarm signal.

[00104] The user may enter the first identification code via user interface **908** or by causing barrier alarm device **600** to transmit the timed alarm signal. In this embodiment, the user simulates a door or window opening by bringing a small magnet in proximity to barrier alarm device **600**, in an embodiment where barrier alarm device **600** comprises a reed switch. In some embodiments, this must be repeated one or more times. While the user is bringing the magnet in proximity to barrier alarm device **600**, the user ensures that human detection device **304** detects the user by pointing barrier alarm device **600** towards the user's body, or some other object such that human detection device **304** indicates the presence of a human. In response to detecting a human being, and that the magnet is brought in close proximity to barrier alarm device **600**, barrier alarm device **600** transmits the first identification code.

[00105] Sensors may be assigned to zones based on their proximity to certain rooms, where triggering one sensor assigned to a zone causes the central security system **116** to report that a fault, or alarm, has occurred in that particular zone. However, zones may be set up to respond to signals from sensors differently. For example, signals received from sensors assigned to a first zone might cause central security panel **116** to immediately initiate one or more security

responses, i.e., without allowing a person to cancel the alarm within a predetermined time period. Signals received from other sensors assigned to a second zone might cause central security panel **116** to begin a timer, allowing a person 30 seconds, for example, to cancel the alarm. Sensors assigned to such a zone might include entry doors, where authorized persons are given a fixed time period to disarm an alarm after entering a premises through a monitored door.

[00106] In other embodiments, each sensor is assigned to its own zone (effectively eliminating the concept of zones). In this embodiment, central security panel **116** is programmed to respond to each sensor in a particular way, i.e., either generating one or more immediate security responses, or allowing a predetermined time period for someone to cancel an alarm received from a sensor.

[00107] In one embodiment, barrier alarm device **600** is learned into two zones: a first zone whereby central security panel **116** immediately initiates one or more security responses, and a second zone, whereby central security panel **116** to allows a predetermined time for a person to cancel an alarm generated by an authorized person, i.e., a homeowner or other resident of a premises. This is accomplished by assigning two identification codes to barrier alarm device **600**, one to initiate an immediate security response and another code to delay initiation of the security response. Such identification codes are stored in memory **302**.

[00108] At block **1106**, processor **900** receives the first identification code and stores it in memory **902**.

[00109] At block **1108**, the user may provide additional information to central security panel **116**, indicating the type of sensor that was just added, such as a "door" or "window" sensor, a description of an intended location of the sensor (i.e., "back sliding door"), and an indication that one or more security responses should be delayed by a predetermined delay time when the timed alarm signal is received. The additional information is received by processor **900** and stored in memory **902** in association with the first identification code. When learning in a sensor to central security panel **116**, i.e., activating a new sensor in a security system, each sensor is assigned to a zone by a person performing the learn process.

[00110] At block **1110**, the user provides a second identification code to central security panel **116**, indicative of barrier alarm device **600** when barrier alarm device transmits an immediate alarm signal. The second identification code may comprise a serial number of smart barrier

device **600** with an alphanumeric character (such as a "B"), or some other alpha-numeric identification of smart barrier device **600** while transmitting an immediate alarm signal, different than the first identification code.

[00111] As with the first identification code, the user may enter the second identification code manually via user interface **908** or by causing barrier alarm device **600** to transmit the immediate alarm signal by bringing a small magnet in proximity to barrier alarm device **600** one or more times (or by some other method suited to the particular type of barrier alarm device). While the user is bringing the magnet in proximity to barrier alarm device **600**, the user ensures that human detection device **304** does not detect the user by pointing barrier alarm device **600** towards empty space. In response to detecting that the magnet is brought in close proximity to barrier alarm device **600**, and not detecting a human being, barrier alarm device **600** transmits the second identification code.

[00112] At block **1112**, processor **900** receives the second identification code and stores it in memory **902**. The second identification code may be associated with the first identification code, indicating that the two identification codes originate from the same barrier alarm device **600**.

[00113] At block **1114**, the user may provide additional information to central security panel **116**, indicating the type of sensor that was just added, such as a "door" or "window" sensor, a description of an intended location of the sensor (i.e., "back sliding door"), and an indication that one or more security responses should be initiated immediately by processor **900** in response to receipt of the immediate alarm signal. Some of the additional information may be the same as the additional information associated with the first identification code, such as a sensor name, the type of sensor and/or its intended location, since the same barrier alarm device **600** transmits either the first identification code or the second identification code, depending on whether a human being is detected or not when a door or window is opened. The additional information is received by processor **900** and stored in memory **902** in association with the second identification code.

[00114] At block **1116**, the user places central security panel **116** into an armed-home mode of operation, where central security panel **116** monitors smart barrier devices and other sensor in the security system.

[00115] At block **1118**, central security panel **116** receives the first identification code associated with barrier alarm device **600** via receiver **906** when a person is inside a premises being monitored by barrier alarm device **600** and proximate to a door or window that is being monitored. The first identification code is provided to processor **900**.

[00116] At block **1120**, processor **900** compares the first identification code to a number of identification codes stored in memory **902**.

[00117] At block **1122**, when a match is found, processor **900** determines whether an immediate security response is needed, or whether a security response should be delayed by a predetermined delay time, in order to allow an authorized person to cancel any security response. Processor **900** evaluates the additional information stored in association with the matched identification code to make this determination, i.e., the first identification code is associated with a zone that immediately responds to immediate alarm signals or not. In this case, processor **900** determines that an immediate security response is not needed, based on the additional information.

[00118] At block **1124**, processor **900** begins monitoring the time from when the first identification code was received, either by monitoring an elapsed time, or by starting a countdown timer set to the predetermined time period.

[00119] At block **1126**, if processor **900** receives a cancellation code from an authorized person to cancel the security response, processor **900** stops monitoring the elapsed time from when the timed alarm signal is receives, or cancels the countdown timer, and refrains from enacting one or more security responses, such as contacting remote monitoring station **124**, causing a siren inside the premises to sound a loud, audible warning, or contact one or more remote communication devices, such as wired or wireless phones, smart phones, tablets, wearables or computers.

[00120] At block **1128**, if processor **900** does not receive a cancellation code from an authorized person to cancel the security response by the time the predetermined time has elapsed, or the countdown timer has expired, processor initiates the one or more security responses, as mentioned above.

[00121] At block **1130**, at some other time, processor **900** receives a second identification code from barrier alarm device **600** while the security system is in the armed-home mode, generated by barrier alarm device **600** in response to barrier alarm device **600** determining

that a barrier has been opened and that a human being is not inside the premises (or, alternatively, that a person is outside the premises) in proximity to the barrier.

[00122] At block **1132**, processor **900** receives the second identification code from barrier alarm device **600** and compares the second identification code to the number of identification codes stored in memory **902**.

[00123] At block **1134**, when a match is found, processor **900** determines whether an immediate security response is needed, or whether a security response should be delayed by a predetermined delay time, in order to allow an authorized person to cancel any security response. Processor **900** evaluates the additional information stored in association with the matched identification code to make this determination, i.e., the first identification code is associated with a zone that immediately responds to immediate alarm signals or not. In this case, processor **900** determines that an immediate security response is needed, based on the additional information.

[00124] At block **1136**, in response to determining that an immediate security response is needed, processor **900** immediately initiates one or more security responses, as described above.

[00125] FIG. **12** is a functional block diagram of a stand-alone human detection device **1200**, for use in yet another embodiment, where human detection device **1200** is used in conjunction with an existing barrier alarm device to reduce the occurrences of false alarms. In this embodiment, when a door or window is opened, a corresponding barrier alarm device transmits an alarm signal to central security panel **116**, indicating that a door or a window has been opened. Human detection device **1200** also transmits a signal if a human being is in proximity to the door or window being monitored by the barrier alarm device. Central security panel **116** receives the alarm signal, and if no signal is received from human detection device **1200**, central security panel **116** immediately initiates one or more security responses. If central security panel **116** does receive a signal from human detection device **1200** indicative of a human being inside the premises and in proximity to a door or window monitored by the barrier alarm device that transmitted the alarm signal, central security panel **116** initiates a timer, or monitors an elapsed time from when the signal is received from human detection device **1200**, that allows an authorized person to cancel the one or more security responses if a cancellation code is received by central security panel **116** within a

predetermined time period, such as 30 seconds. This embodiment allows implementation of a delayed security response while not having to replace an existing, prior art barrier alarm device.

[00126] Human detection device **1200** is generally no larger than a typical barrier alarm device, designed to be battery operated, and mounted in proximity to a door or window in order to detect when a human being is in proximity to the door or window. Human detection device **1200** may be mounted near a barrier alarm device, for example on a door next to a barrier alarm device, near a door handle, door lock, or a window latch to detect when a human hand is approaching, or has grabbed, a door handle, door lock, or a window latch.

[00127] Human detection device **1200** comprises processor **1201**, memory **1202**, transmitter **1204**, human detection element **1206**, in some embodiments, a barrier status detection device **1208**, and an indicator **1210**.

[00128] Processor **1201** is configured to provide general operation of human detection device **1200** by executing processor-executable instructions stored in memory **1202**, for example, executable code. Processor **1201** typically comprises a general purpose processor, such as an ADuC7024 analog microcontroller manufactured by Analog Devices, Inc. of Norwood Massachusetts, although any one of a variety of microprocessors, microcomputers, microcontrollers and/or custom ASICs may be used alternatively. Due to the relative small size of barrier alarm devices, and the fact that most barrier alarm devices are battery-powered, processor **1201** is typically selected to have low power consumption, small in size, and inexpensive to purchase.

[00129] Memory **1202** comprises one or more information storage devices, such as RAM memory, ROM memory, flash memory, SD memory, XD memory, or other type of electronic, optical, or mechanical memory device. Memory **1202** is used to store processor-executable instructions for operation of human detection device **1200** as well as any information used by processor **1201**, such as threshold parameters, identification information, current or previous status information, etc. In some embodiments, memory **1202** may be part of processor **1201**.

[00130] Transmitter **1204** comprises circuitry necessary to wirelessly transmit human status detection signals and/or status messages and/or other information to one or more receivers, such as central security panel **116**. Such circuitry is well known in the art and may comprise

BlueTooth, Low-Energy Bluetooth, Wi-Fi, RF, optical, ultrasonic circuitry, among others. Alternatively, or in addition, transmitter

[00131] Human detection element **1206** comprises a device or circuitry to detect the presence of a person in proximity to the barrier alarm device, either inside a monitored premises, outside a monitored premises, or both. Examples of human detection element **1206** include an ultrasonic transducer/receiver, an infrared transmitter/receiver, a capacitance sensor, an RF tank circuit, an RFID receiver, a motion detector, a "time of flight" sensor, or some other circuitry or device able to detect the presence of a human being proximate to the barrier alarm device, door, or window.

[00132] In one embodiment, human detection element **1206** is chosen to only detect a person's hand as it approaches or touches a door handle, door deadbolt, window latch or other designated portion of a window. In this embodiment, human detection element **1206** generally does not detect the mere presence of a person in proximity to a barrier. Thus, human detection element may be configured to only detect the presence of a human being with, say 3 inches of a door handle, door deadbolt, window latch, other designated portion of a window, or to human detection device **1200**. For example, if human detection element **1206** comprises a time of flight sensor or an ultrasonic detector, human detection element **1206** may be selected based on a limited range of the time of flight sensor or ultrasonic detector. In other embodiments, memory **1202** may store a threshold distance, such as 3 inches, representing the maximum distance from a door handle, door deadbolt, window latch, other designated portion of a window, or to human detection device **1200** that human detection element **1206** will be triggered.

[00133] Optional barrier status detection device **1208** is coupled to processor **1201** and monitors or determines a state, physical condition, attribute, status, or parameter of something, such as the status (e.g., "open", "closed", "movement detected", etc.) of a door, window, gate, or other entrance or exit barrier. Barrier status detection device **1208** may comprise a reed switch, ultrasonic transducer/receiver, an infrared transmitter/receiver, an RFID receiver, a tilt sensor, an accelerometer, a gyroscope, a motion sensor, or some other device to determine whether a window is open or closed. Barrier status detection device **1208** may be used with either the magnet associated with a typical barrier alarm device, such as a reed switch-based door or window sensor, or it could operate using a second magnet. In the

case of "sharing" the barrier status alarm device's magnet, human detection device **1200** may be installed just above or below the barrier status detection device, such that barrier status detection device **1208** can sense a magnetic field generated by the barrier alarm device's magnet. In the case of using its own magnet, human detection device **1200** may be located away from a barrier alarm device. In the case of human detection element **1206** comprising a reed switch, human detection device **1200** operates much the same as a typical barrier alarm device, where processor **1201** detects when a door or window is opened based on the status of human detection element **1206**, in this case, a reed switch.

[00134] Barrier status detection device **1208** may be used to keep the other components of human detection device **1200** in a default, "quiescent", low-power or de-energized state until barrier status detection device **1208** detects that a door or window being monitored by human detection device **1200** has been opened. In this embodiment, power savings may be maximized by keeping a majority of the circuitry in a low or de-powered state, and processor **1201**, memory **1202**, transmitter **1204** and human detection element **1206** may be selected to consume more energy than would otherwise be tolerated, since human detection device **1200** is typically battery-powered.

[00135] Indicator **1210** can comprise, for example, an LED or a piezo speaker and related electronics to indicate when a human being, or human hand, is in proximity to a door handle, door deadbolt, window latch (or some other portion of a window), or to human detection device **1200** itself. Indicator **1210** may be activated for a predetermined time period by processor **1201**, for example 3 seconds, upon processor **1201** determining that a human being, or human hand, is in proximity to a door handle, door deadbolt, window latch (or some other portion of a window), or to human detection device **1200** itself. This serves to alert a person who is grabbing for a door handle, door deadbolt, window latch, or some other portion of a window, to know that human detection device **1200** has detected the person's hand. Alternatively, or in addition, processor **900** may cause activation of indicator **1210** to alert a person that a countdown time period has begun that allows an authorized person to cancel one or more security responses that will be initiated by central security panel **116** within the countdown time period.

[00136] FIG. **13** is a flow diagram illustrating one embodiment of a method performed by a human detection device **1200** and central security panel **116** when the door is opened by

someone from inside the premises when central security panel **116** is in an armed-home state. It should be understood that in some embodiments, not all of the steps shown in FIG. **13** are performed and that the order in which the steps are carried out may be different in other embodiments.

[00137] At block **1300**, human detection device **1200** is learned into central security panel **116**, similar to learning in a barrier alarm device as described previously herein. As part of the learn in process, a user may associate human detection device **1200** with a particular prior-art barrier alarm device near where human detection device **1200** will be located for example, a user may name the human detection device **1200** with the same name as the barrier alarm device, i.e., "rear sliding door", or the user may assign human detection device **1200** to the same zone as the barrier alarm device.

[00138] At block **1302**, central security panel **116** is in an armed-home mode of operation, human detection device **1200** is mounted to detect the presence of a human hand proximate to a door handle, door deadbolt, window latch, or some other part of a window, and a typical barrier alarm device monitors the same door or window that the human detection device **1200** is monitoring. For the remainder of the discussion of FIG. **13**, it will be assumed that a door is being monitored.

[00139] In one embodiment, at block **1304**, a person approaches the door inside a premises. Human detection device **1200** may not respond to the person who is merely in proximity of the person of the door in an embodiment where only a constricted area is monitored by human detection device **1200**, such as the area around a door handle, door deadbolt, window latch, or other portion of a window.

[00140] At block **1306**, the person reaches for a door handle to open the door.

[00141] At block **1308**, human detection device **1200** detects the person's hand approaching the door handle, as human detection element **1206** provides a signal to processor **1201**, indicating detection of the human hand (or detection of a human body proximate to the door).

[00142] At block **1310**, processor **1201** receives the signal from human detection element **1206** and, in response, generates a message for transmission by transmitter **1204** to central security panel **116**. The message typically comprises an identification code to uniquely identify human detection device **1200**.

[00143] At block **1312**, transmitter **1204** transmits the message.

[00144] At block **1314**, processor **1201** may cause indicator **1210** to activate, alerting the person that human detection device **1200** has sensed the person, or the person's hand, in proximity to the door handle.

[00145] At block **1316**, central security panel **116** receives the message from human detection device **1200** and provides it to processor **900**. Processor **900** may begin monitoring the elapsed time from when the message was received.

[00146] A short time after detecting that the human hand is in proximity to the door handle, the person grabs the door handle and opens the door. In one embodiment, this is when human detection device **1200** transmits the signal to central security panel **116**, as opposed to transmitting the signal when the human hand is near the door handle.

[00147] At block **1318**, the prior-art barrier alarm device transmits an alarm signal to central security panel **116**, indicating that the door has been opened. The alarm signal typically comprises an identification code that uniquely identifies the prior-art barrier alarm device.

[00148] At block **1320**, central security panel **116** receives the alarm signal and provides it to processor **900**. Processor **900** may determine the time when the alarm signal was received.

[00149] At block **1322**, processor **900** may determine that the alarm signal is associated with the message by determining that an identification code of the alarm signal is associated with the identification code of the message, i.e., that each identification code is associated with the same location (i.e., "rear sliding door"), or that each identification code is associated with the same zone. If the two identification codes are not associated with the same location, processor **900** may immediately cause one or more security responses to be generated. If the two identification codes are associated with the same location, this indicates that the message that was transmitted by the human detection device is monitoring the same door or window as a barrier alarm that is monitoring the same door or window.

[00150] At block **1324**, in one embodiment, if the time between when the message is received and the alarm signal is received is less than a predetermined time period, such as 3 seconds, processor **1201** begins monitoring the time from when either the message from human detection device **1200** was received, or from when the alarm signal from the barrier alarm device was received. In one embodiment, processor **1201** starts a countdown timer, set for a predetermined time period for a person inside the premises to cancel a security response. The

predetermined time is selected to allow the some time between when a human hand is detected near the door handle and the time when the door is actually opened.

[00151] At block **1326**, if processor **900** receives a cancellation code from an authorized person to cancel the security response, processor **900** stops monitoring the elapsed time, or cancels the countdown timer, and refrains from enacting one or more security responses, such as contacting remote monitoring station **124**, causing a siren inside the premises to sound a loud, audible warning, or contact one or more remote communication devices, such as wired or wireless phones, smart phones, tablets, wearables or computers.

[00152] At block **1328**, if processor **900** does not receive a cancellation code from an authorized person to cancel the security response by the time the predetermined time has elapsed, or the countdown timer has expired, processor **900** initiates the one or more security responses, as mentioned above.

[00153] At block **1330**, referring back to block **1318**, if the alarm signal is not received within the predetermined time from when the message was received from human detection device **1200**, processor **900** immediately initiates one or more security responses.

[00154] FIG. **14** is a flow diagram illustrating the embodiment of a method performed by stand-alone human detection device **1200**, a prior art barrier alarm device **104** or **102** and central security panel **116**, as described by FIG. **13**, except that in this description, the door is opened by someone from outside the premises when central security panel is in an armed-home state. It should be understood that in some embodiments, not all of the steps shown in FIG. **14** are performed and that the order in which the steps are carried out may be different in other embodiments.

[00155] At block **1400**, the barrier alarm device **102/104**transmits an alarm signal when it detects that the door has been opened. Since the door was opened by someone outside the premises, human detection device **1200** does not transmit a message to central security panel **116**.

[00156] At block **1402**, central security panel **116** receives the alarm signal via receiver **906**, and provides it to processor **900**. Processor **900** may being monitoring the elapsed time from when the alarm signal was received.

[00157] At block **1404**, processor **900** may determine a type of sensor that sent the alarm signal, a zone to which the sensor belongs, or otherwise determine whether one or more

security responses should be initiated, based on an identification code contained within the alarm signal;

[00158] At block **1406**, if the identification code is indicative of immediately initiating one or more security responses, processor **900** initiates the one or more security responses.

[00159] At block **1408**, if the identification code is indicative of delaying implementation of the one or more security responses, processor **900** waits for the elapsed time to expire in accordance with a predetermined time to allow a person to cancel the one or more security responses.

[00160] At block **1410**, if processor **900** receives a cancellation code from an authorized person to cancel the one or more security responses, processor **900** stops monitoring the elapsed time, or cancels the countdown timer, and refrains from enacting one or more security responses, such as contacting remote monitoring station **124**, causing a siren inside the premises to sound a loud, audible warning, or contact one or more remote communication devices, such as wired or wireless phones, smart phones, tablets, wearables or computers.

[00161] At block **1412**, if processor **900** does not receive a cancellation code from an authorized person to cancel the one or more security responses by the time the predetermined time has elapsed, or the countdown timer has expired, processor **900** initiates the one or more security responses.

[00162] FIG. **15** is a flow diagram illustrating another embodiment of a method performed by barrier alarm device **600** to reduce the occurrence of false alarms, where barrier alarm device **600** initiates a countdown timer before sending an immediate alarm signal to central security device **116**. It should be understood that in some embodiments, not all of the steps shown in FIG. **15** are performed and that the order in which the steps are carried out may be different in other embodiments.

[00163] At block **1500**, processor **300** monitors signals from barrier status detection device **306** and human detection device **304** while the security system is in the "armed-home" mode.

[00164] At block **1502**, the barrier (e.g., door or window) is opened by an individual inside the premises.

[00165] At block **1504**, processor **300** determines that the barrier has been opened by detecting a change in a signal from barrier status detection device **306**.

[00166] At block **1506**, processor **300** determines whether a human being is inside the premises in proximity to the barrier by evaluating the signals from human detection device **304**.

[00167] In one embodiment, human detection device **304** periodically or continuously evaluates the space inside the premises and in proximity to the barrier to determine whether a human being is proximate to the barrier.

[00168] In another embodiment, human detection device **304** is kept in a default, "quiescent", de-energized or low-power state, and energized only when processor **300** determines that the barrier has been opened, as described previously.

[00169] At block **1508**, in response to determining that the barrier has been opened and that a human being is inside the premises in proximity to the barrier, processor **300** begins monitoring the time from when the door or window was opened, or begins a countdown timer set to a predetermined time period, such as 30 seconds, for an authorized person to cancel the one or more security responses.

[00170] At block **1510**, processor **300** causes indicator **204** to provide an audio or visual alert to a person, indicating that one or more security responses will be initiated by central security panel **116** unless an authorized person cancels the one or more security responses within the predetermined time period. Processor **300** may cause indicator **204** to modify the audio or visual alert as the predetermined time period elapses, such as blinking at a slow rate to blinking at a faster rate, chirping at a slow rate to chirping at a faster rate, in order to impart an importance to an authorized person that the predetermined time period is close to expiration.

[00171] At block **1512**, before the predetermined time period expires, processor **900** in central security panel **116** may receive a cancelation code from an authorized person to cancel the one or more security responses, either via user interface **908**, or via receiver **906**, as a result of triggering the countdown time in barrier alarm device **600**. Processor **900** compares the cancellation code to one or more cancellation codes stored in memory **902** and, if a match is found, processor **900** waits for an immediate alarm signal to be received from barrier alarm device **600**, up to the predetermined time used as the countdown time at barrier alarm device **600**.

[00172] At block **1514**, when processor **300** determines that the predetermined time period has expired in barrier alarm device **600**, processor **300** transmits an immediate alarm signal to central security panel **116**, the immediate alarm signal comprising an identification code of barrier alarm device **600**.

[00173] At block **1516**, central security panel **116** receives the immediate alarm signal and provides it to processor **900**.

[00174] At block **1518**, if processor **900** has not received the cancellation code before receiving the immediate alarm signal, processor **900** immediately initiates the one or more security responses, i.e., within 5 seconds or some other short time period on the order of seconds.

[00175] At block **1520**, if processor **900** has received a valid cancellation code before receiving the immediate alarm signal, processor **900** simply ignores the immediate alarm signal and refrains from initiating the one or more security responses.

[00176] At block **1522**, if processor **900** fails to receive an immediate alarm signal from barrier alarm device **600**, processor **900** simply discards the authorized cancellation code and resets its timer.

[00177] FIG. **16** is a flow diagram illustrating one embodiment of a method performed by central security panel **116** or server **400** for reducing the occurrences of false alarms when the door is opened by someone from outside the premises when central security panel **116** is in an armed-home state. Throughout this section, reference will be made only to central security panel **116** and its components therein, although it is to be understood that reference will also apply to server **400** and similar components. In this embodiment, central security panel **116** receives alarm signals from a prior-art barrier alarm device, such as window sensor **102** or door sensor **104**, and also receives a human status signals from a camera **128** that is configured to view an area outside area proximate to door **112**. Camera **128** could comprise a wireless still or video camera wireless coupled to local-area network **126** (or to gateway **402**), comprising one or more well-known wireless gateways, routers, modems, repeaters, etc., such as home Wi-Fi network equipment. In one embodiment, camera **128** may comprise motion detection capability, and send one or more digital photos or videos when movement is detected in front of door **112**. In some embodiments, camera **128** may be part of a doorbell camera **130** or "doorbell cam", such as a Wi-Fi enabled doorbell camera sold by Ring, Inc. of

Santa Monica, California. Such doorbell cams may begin to record images when a doorbell button **132** is pressed, or when doorbell camera **130** detects motion in front of door **112**. In any case, when a person is detected, a notification may be transmitted by camera **128** or doorbell camera **130** to local-area network **126**/gateway **402**, and local-area network **126**/gateway **402** forwards the alert to a user's smart device, computer, wearable, etc. via wide-area network **122**/**404**. The notification may comprise the digital photo(s) and/or video. In this embodiment, central security panel **116** is configured to receive the notification from camera **128** or doorbell camera **130** when camera **128**/doorbell camera **130** detects a person outside of door **112**. In some embodiments, the notification is additionally received by chime **134**, located inside a premises monitored by prior-art door sensor **104**, which may be used to emit a gentle sound, or "chime", to alert people inside the premises that there is someone outside of door **112**. In this embodiment, user interface **908** may additionally comprise a microphone that can detect sound emissions from chime **134** to provide a notification to central security panel **116** that a person is outside and in proximity to door **112**. It should be understood that in some embodiments, not all of the steps shown in FIG. **16** are performed and that the order in which the steps are carried out may be different in other embodiments.

[00178] At block **1600**, door **112** is monitored by prior-art door sensor **104** and an area outside of door **112**, proximate to door **112**, is monitored by camera **128**/doorbell camera **130**. Prior-art door sensor **104** is in communication with central security panel **116**, and camera **128**/**130** is in communication with local-area network **126**. In another embodiment, camera **128**/**130** is in communication directly with central security system **116** by "learning in" camera **128**/**130** to central security system similarly to how a sensor may be learned in. Central security system **116** is placed into an armed-home mode.

[00179] At block **1602**, a person approaches door **112** from the outside.

[00180] At block **1604**, camera **128**/**130** detects the person and, in response, transmits a notification to local-area network **126**.

[00181] At block **1606**, local-area network **126** forwards the notification to wide-area network **122**/**404** for alerting a user that a person is outside of door **112**, as well as to central security panel **116**. The notification may be forwarded to a back-end system that manages user accounts associated with cameras **128**/**130**, where the notification may be forwarded to a user's mobile device, such as a phone, tablet, or wearable device in accordance with a phone

number, email address, or some other notification code provided by a user to receive such notifications from the back end system. In one embodiment, a user account may store a notification code identifying central security panel **116** so that when a notification is received from camera **128/130** by the back end system, central security panel **116** is provided with the notification via wide-area network **122/404**.

[00182] At block **1608**, the notification is also received by central security panel **116**, either directly from camera **128/130**, from local-area network **126** or from the back end system via wide-area network **122/404**.

[00183] At block **1610**, processor **900** receives the notification and, in response, begins tracking the time from when the notification was received.

[00184] At block **1612**, the person outside door **112** opens door **112**.

[00185] At block **1614**, in response to detecting that door **112** has been opened, prior-art door sensor **104** transmits an alarm signal to central security panel **116**.

[00186] At block **1616**, central security panel **116** receives the alarm signal and provides it to processor **900**.

[00187] At block **1618**, processor **900** determines that the alarm signal was received within a predetermined time from when processor **900** received the notification. The predetermined time is chosen to allow the person outside door **112** to open door **112**, in some cases, by forcing door **112** open. As such, the predetermined time may be chosen to be several minutes, such as 2 minutes.

[00188] At block **1620**, processor **900** generates a security response in response to determining that the alarm signal was received within the predetermined time from when processor **900** received the notification.

[00189] At block **1622**, processor **900** provides the security response to transmitter **904**, which transmits the security response to remote monitoring station **124**, to a local siren, and/or to a local illumination device, such as one or more lights, strobes, etc.

[00190] At block **1624**, after block **1614**, processor **900** determines that the alarm signal was not received within the predetermined time from when processor **900** received the notification from camera **128/130**. In this case, processor **900** ignores the alarm signal and does not generate a security response, as receipt of the alarm signal outside the predetermined time period indicates that door **112** was opened by an authorized person inside door **112**.

[00191] The methods or algorithms described in connection with the embodiments disclosed herein may be embodied directly in hardware or embodied in processor-readable instructions executed by a processor. The processor-readable instructions may reside in RAM memory, flash memory, ROM memory, EPROM memory, EEPROM memory, registers, hard disk, a removable disk, a CD-ROM, or any other form of storage medium known in the art. An exemplary storage medium is coupled to the processor such that the processor can read information from, and write information to, the storage medium. In the alternative, the storage medium may be integral to the processor. The processor and the storage medium may reside in an ASIC. The ASIC may reside in a user terminal. In the alternative, the processor and the storage medium may reside as discrete components.

[00192] Accordingly, an embodiment of the invention may comprise a computer-readable media embodying code or processor-readable instructions to implement the teachings, methods, processes, algorithms, steps and/or functions disclosed herein.

[00193] While the foregoing disclosure shows illustrative embodiments of the invention, it should be noted that various changes and modifications could be made herein without departing from the scope of the invention as defined by the appended claims. The functions, steps and/or actions of the method claims in accordance with the embodiments of the invention described herein need not be performed in any particular order. Furthermore, although elements of the invention may be described or claimed in the singular, the plural is contemplated unless limitation to the singular is explicitly stated.

CLAIMS

I claim:

1. A barrier alarm device, comprising:

a barrier status detection device for detecting when a barrier monitored by the barrier alarm device has been opened;

a human detection device for determining when a human being is inside a premises in proximity to the barrier;

a transmitter for transmitting a timed alarm signal to a receiver, the timed alarm signal for initiating a timer;

a memory having processor-executable instructions stored thereon; and

a processor coupled to the barrier status detection device, the human detection device, the transmitter, and the memory, for executing the processor-executable instructions that cause the barrier alarm device to:

determine, by the processor via the barrier status detection device, that the barrier has been opened;

determine, by the processor via the human detection device, that a human being is inside the premises in proximity to the barrier; and

transmit, by the processor via the transmitter, the timed alarm signal to the receiver when the barrier has been opened and when a human being is inside the premises in proximity to the barrier.

2. The barrier alarm of claim 1, wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to:

determine, by the processor via the human detection device, that a human being is not inside the premises in proximity to the barrier when the barrier is opened; and

transmit, by the processor via the transmitter, an immediate alarm signal to the local receiver for causing a security response to be initiated.

3. The barrier alarm of claim 1 further comprising:

an indicator for providing an alert to the human being when the timed alarm signal is transmitted;

wherein the processor-executable instructions comprise further instructions that causes the barrier alarm device to:

cause, by the processor via the indicator, the alert to be generated by the indicator when the timed alarm signal is transmitted, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response.

4. The barrier alarm of claim 3, wherein the indicator comprises a light-emitter, and the alert comprises a blinking light produced by the light-emitter.

5. The barrier alarm of claim 3, wherein the indicator comprises a speaker, and the alert comprises a sound produced by the speaker.

6. The barrier alarm of claim 2, further comprising:

an indicator for providing an alert to the human being when the timed alarm signal is transmitted;

wherein the processor-executable instructions further comprise instructions that causes the barrier alarm device to:

cause, by the processor via the indicator, the alert to be generated by the indicator, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response; and

refrain, by the processor, from causing the alert to be generated by the indicator when the processor determines that a human being is not inside the premises in proximity to the barrier when the barrier is opened.

7. A central security panel, comprising:

a communication interface for receiving signals from a barrier alarm device;

a memory for storing processor-executable instructions; and

a processor coupled to the communication interface and the memory, for processing the processor-executable instructions that causes the central security panel to:

receive a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened and that a human being is inside the monitored premises and in proximity to the barrier;

in response to receiving the first alarm signal, begin monitoring an elapsed time from when the first alarm signal was received;

determine, by the processor, that the elapsed time has exceeded a predetermined time;

in response to determining that the elapsed time has exceeded the predetermined time, generate a security response; and

provide the security response to a receiver via the communication interface.

8. The central security panel of claim 7, wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to:

receive a second alarm signal from the barrier alarm device, the second alarm signal indicative of the barrier being opened and that a human being is not inside the monitored premises and in proximity to the barrier;

in response to receiving the second signal, provide the security response to the receiver via the communication interface.

9. The central security panel of claim 7, further comprising:

an indicator coupled to the processor for providing an alert to the human being when the timed alarm signal is received; and

a user interface coupled to the processor for receiving user input;

wherein the processor-executable instructions comprise further instructions that causes the central security panel to:

cause, by the processor via the indicator, the alert to be generated by the indicator when timed alarm signal is received;

receive, by the processor via the user interface, a cancellation signal prior to the elapsed time exceeding the predetermined time; and

refrain, by the processor, from providing the security response to the receiver when the cancellation signal is received prior to the elapsed time exceeding the predetermined time.

10. The central security panel of claim 9, wherein the indicator comprises a light-emitter, and the alert comprises a blinking light produced by the light-emitter.

11. The central security panel of claim 9, wherein the indicator comprises a speaker, and the alert comprises a sound produced by the speaker.

12. A method performed by a barrier status detection device, comprising:

determining when a barrier monitored by the barrier status detection device has been opened;

determining when a human being is inside a premises monitored by a central security panel and inside the premises; and

transmitting a timed alarm signal to a local receiver, the timed alarm signal for initiating a timer, when the barrier has been opened and a human being is in inside the premises and in proximity to the barrier.

13. The method of claim 12, further comprising:

determining that a human being is not inside the premises in proximity to the barrier when the barrier is opened; and

transmitting an immediate alarm signal to the local receiver for causing a security response to be initiated.

14. The method of claim 12 further comprising:

generating an alert when the timed alarm signal is transmitted, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response.

15. The method of claim 14, wherein the alert comprises a blinking light.

16. The method of claim 14, wherein the alert comprises a sound.

17. The method of claim 13, further comprising:

generating an alert when the timed alarm signal is transmitted, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response; and

refraining from generating the alert when the processor determines that a human being is not inside the premises in proximity to the barrier when the barrier is opened.

18. A method performed by a central security panel, comprising:

receiving a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened and that a human being is inside the premises in proximity to the barrier;

in response to receiving the first alarm signal, starting a countdown timer;

determining that the countdown timer has expired;

in response to determining that the countdown timer has expired, generate a security response; and

providing the security response to a receiver via a communication interface.

19. The method of claim 18, further comprising:

receiving a second alarm signal from the barrier alarm device, the second alarm signal indicative of the barrier being opened and that a human being is not inside the monitored premises and in proximity to the barrier;

in response to receiving the second signal, providing the security response to the receiver via the communication interface.

20. The method of claim 18, further comprising:

generating the alert when timed alarm signal is received;

receiving a cancellation signal prior to the countdown timer elapsing; and

refraining from providing the security response to the receiver when the cancellation signal is received prior to the countdown timer elapsing.

ABSTRACT

A barrier alarm device for reducing the number of false alarms that may occur in a home or business security system. In one embodiment, a barrier alarm device, such as a door or window sensor, determines whether a barrier, such as a door or a window, has been opened, and determines whether a human being is inside a premises in proximity to the door or window. If a human being is inside the monitored premises when the door or window is opened, it indicates that the human being is authorized to be inside the monitored premises, and the barrier alarm device transmits a timed alarm signal to a central security panel, causing a security response to be generated by the central security panel if a predetermined time period elapses without a user canceling the security response.

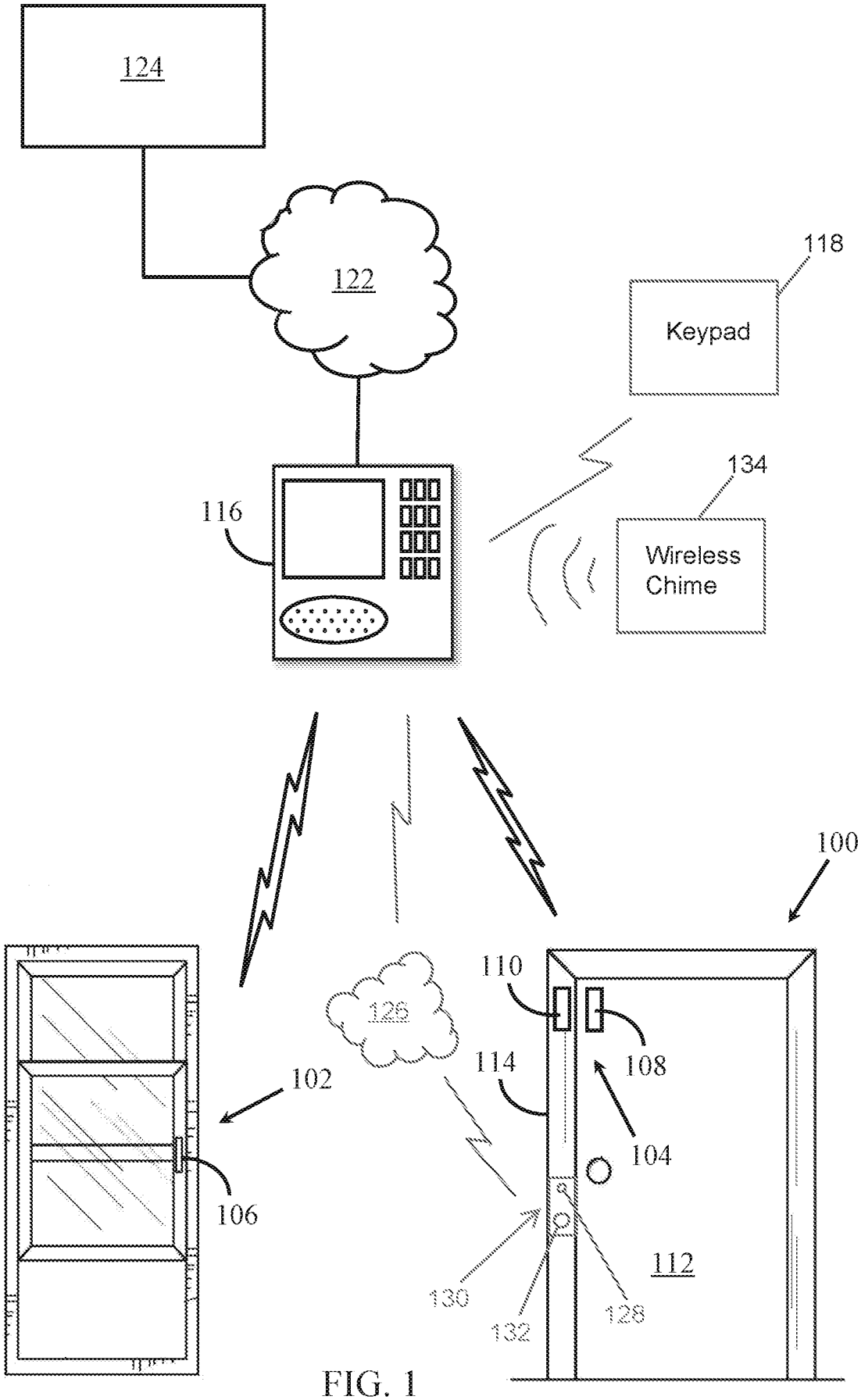

124
122
118
Keypad
134
Wireless Chime
116
100
110
108
126
114
102
104
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132
128

FIG. 1

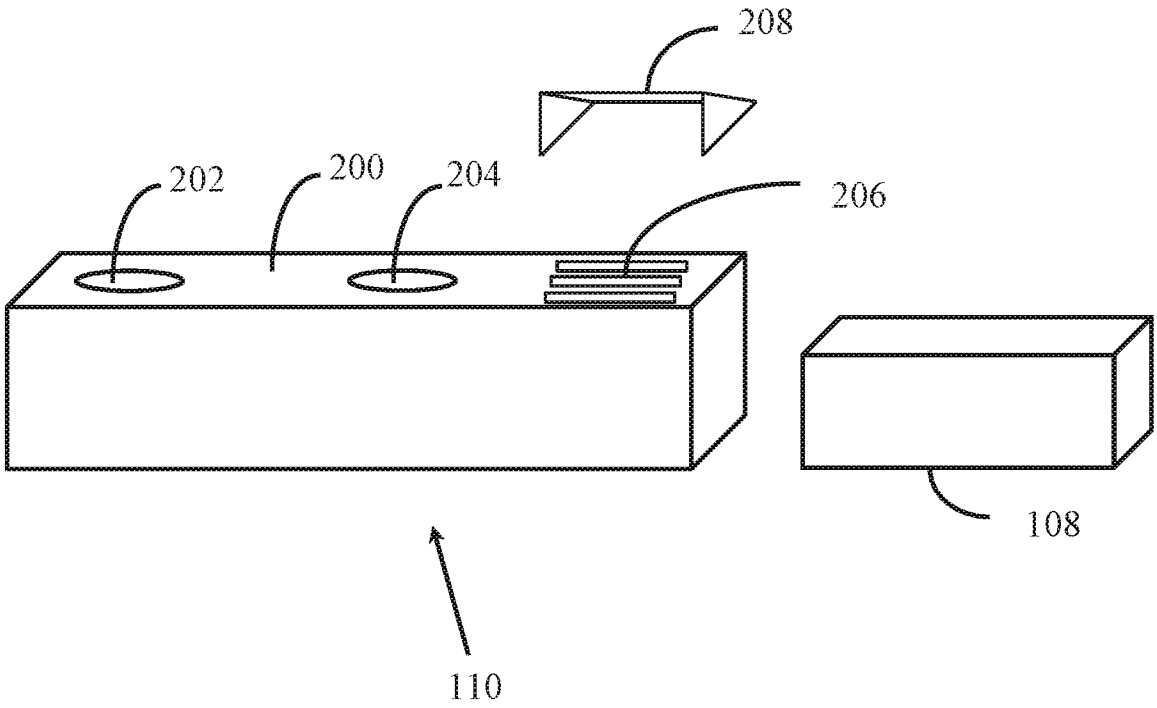


FIG. 2

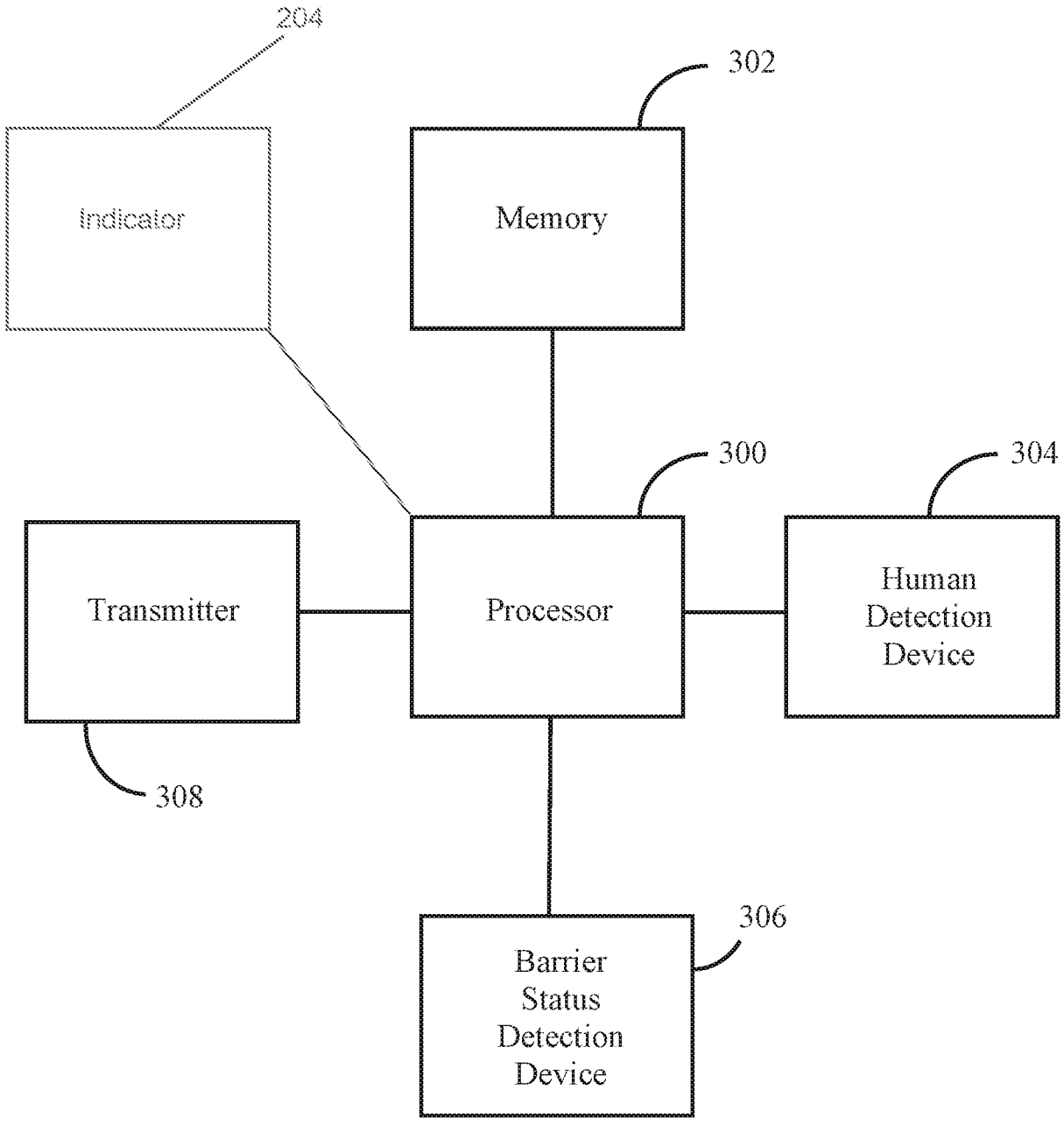

204
Indicator
302
Memory
300
304
Transmitter
Processor
Human
Detection
Device
308
306
Barrier
Status
Detection
Device

FIG. 3

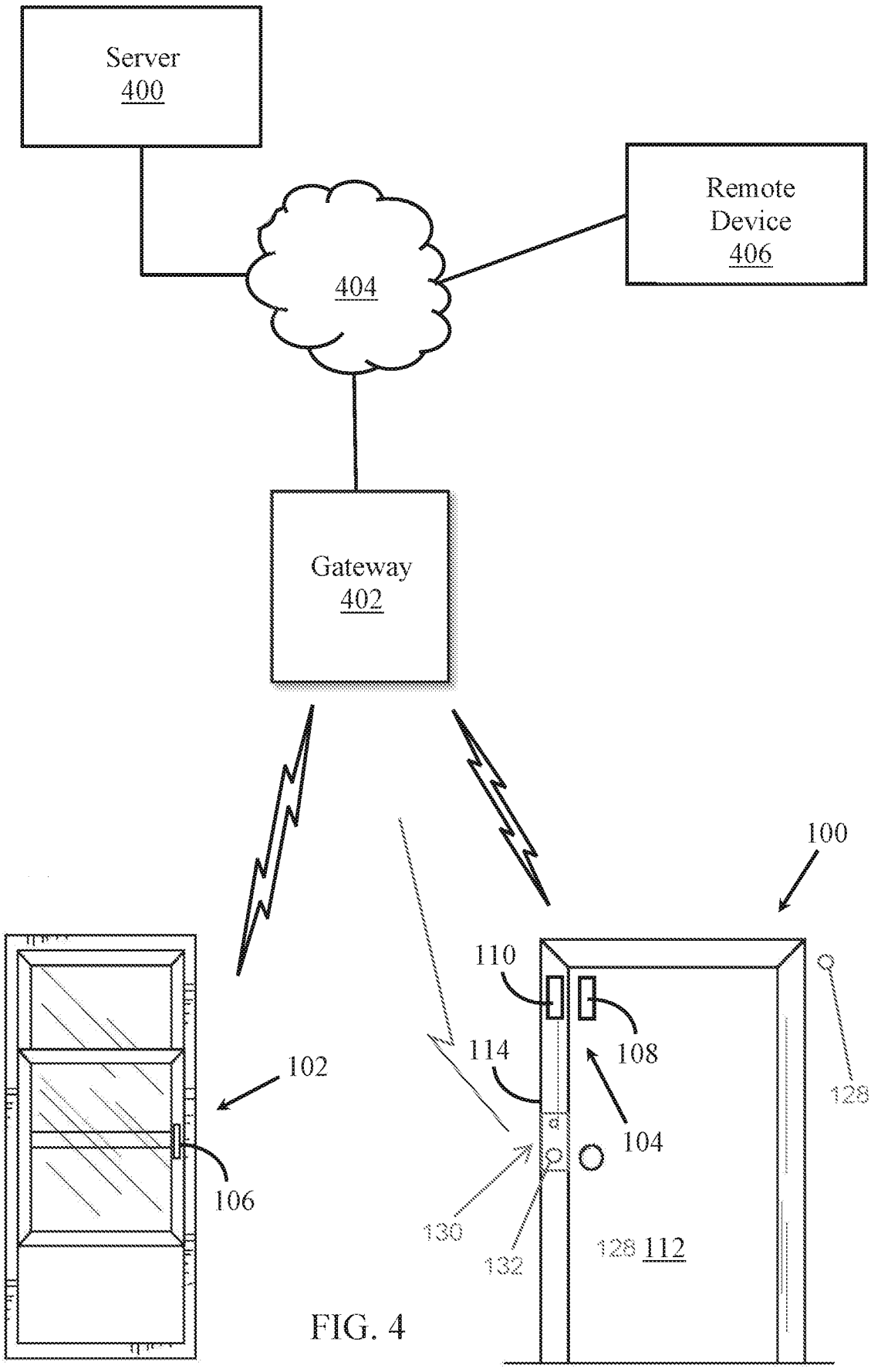

Server
400
Remote
Device
406
404
Gateway
402
100
110
108
114
102
104
106
128
130
132
128 112

FIG. 4

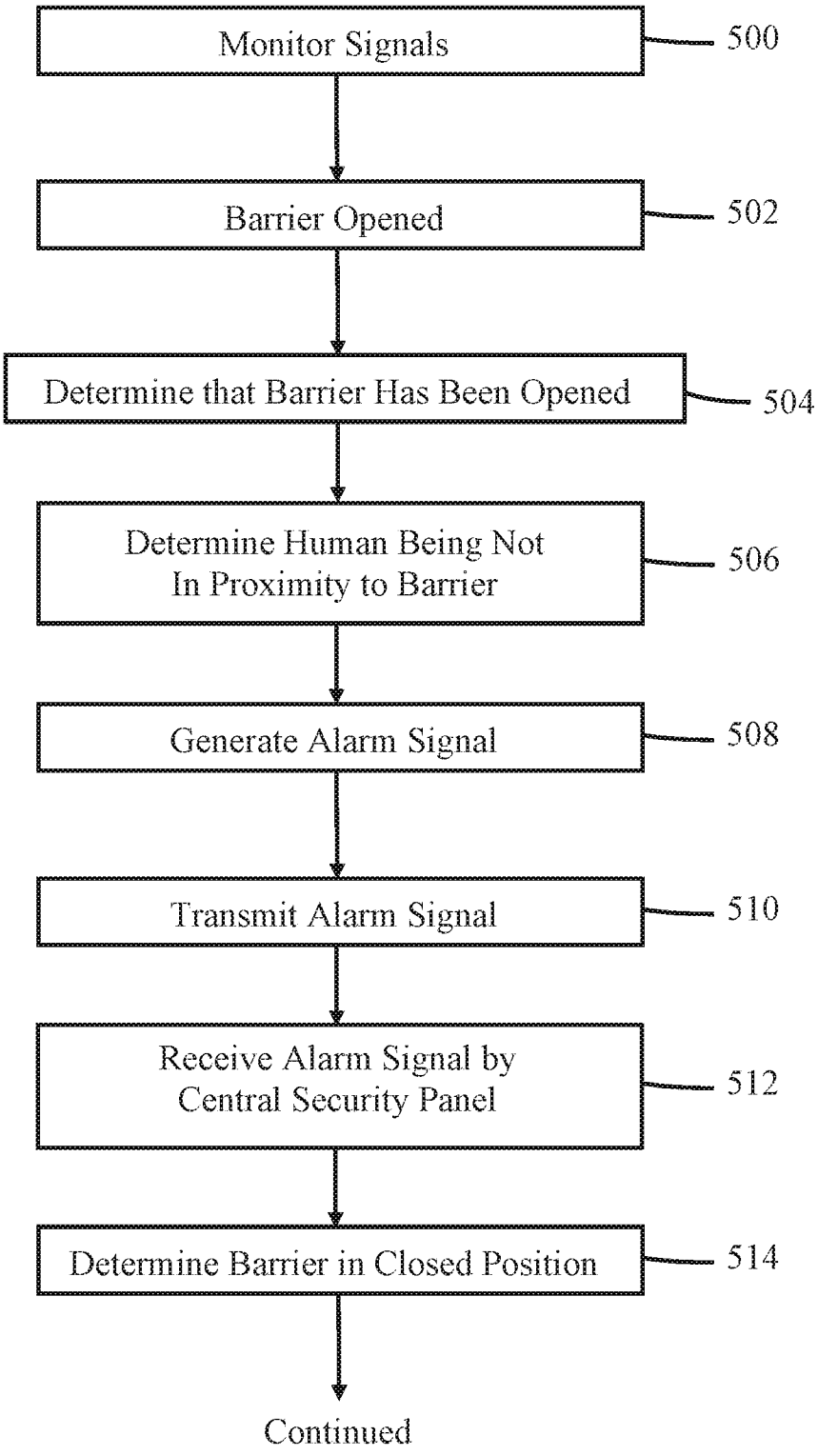

Monitor Signals
500
Barrier Opened
502
Determine that Barrier Has Been Opened
504
Determine Human Being Not In Proximity to Barrier
506
Generate Alarm Signal
508
Transmit Alarm Signal
510
Receive Alarm Signal by Central Security Panel
512
Determine Barrier in Closed Position
514
Continued

FIG. 5

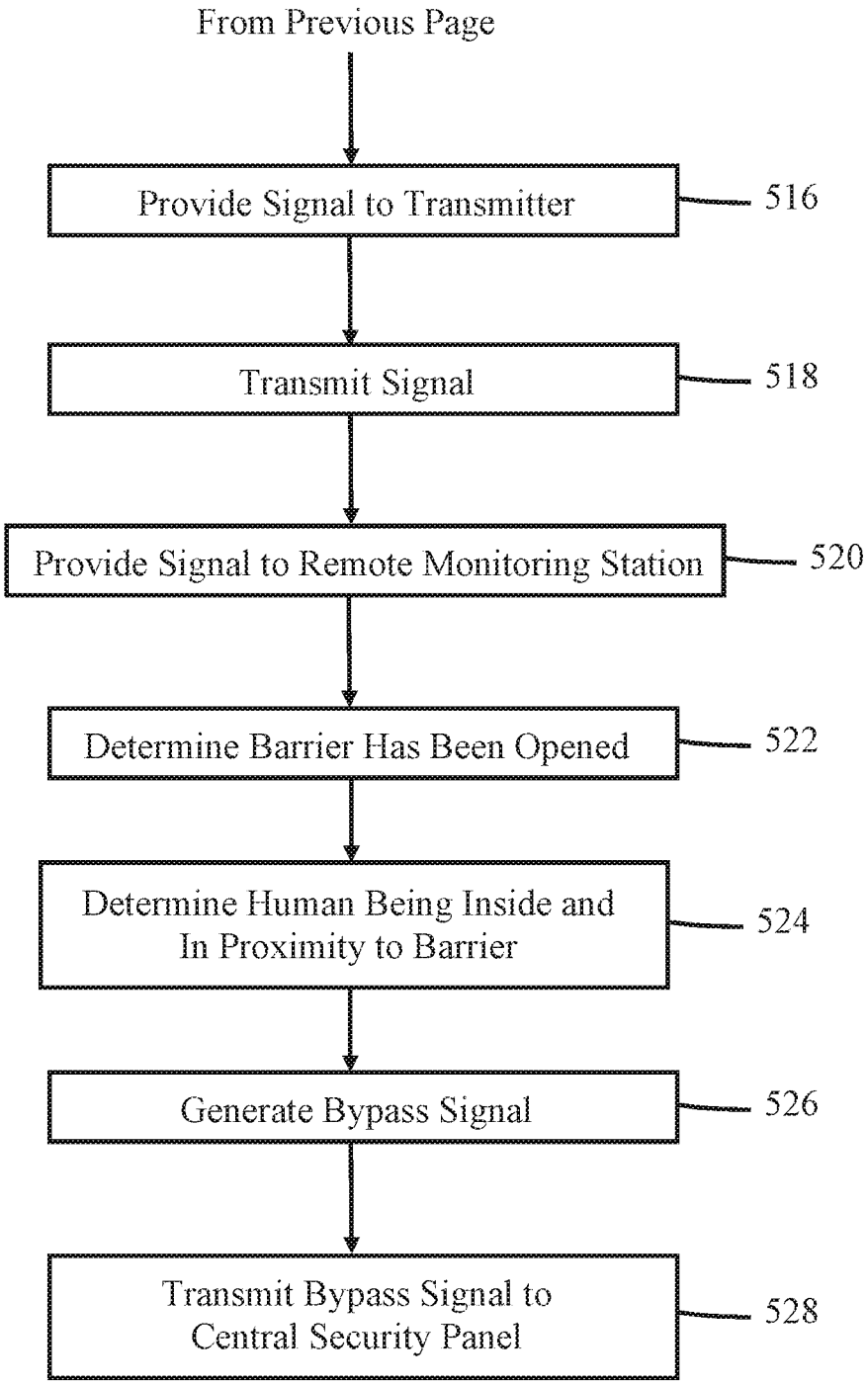


FIG. 5

Continued

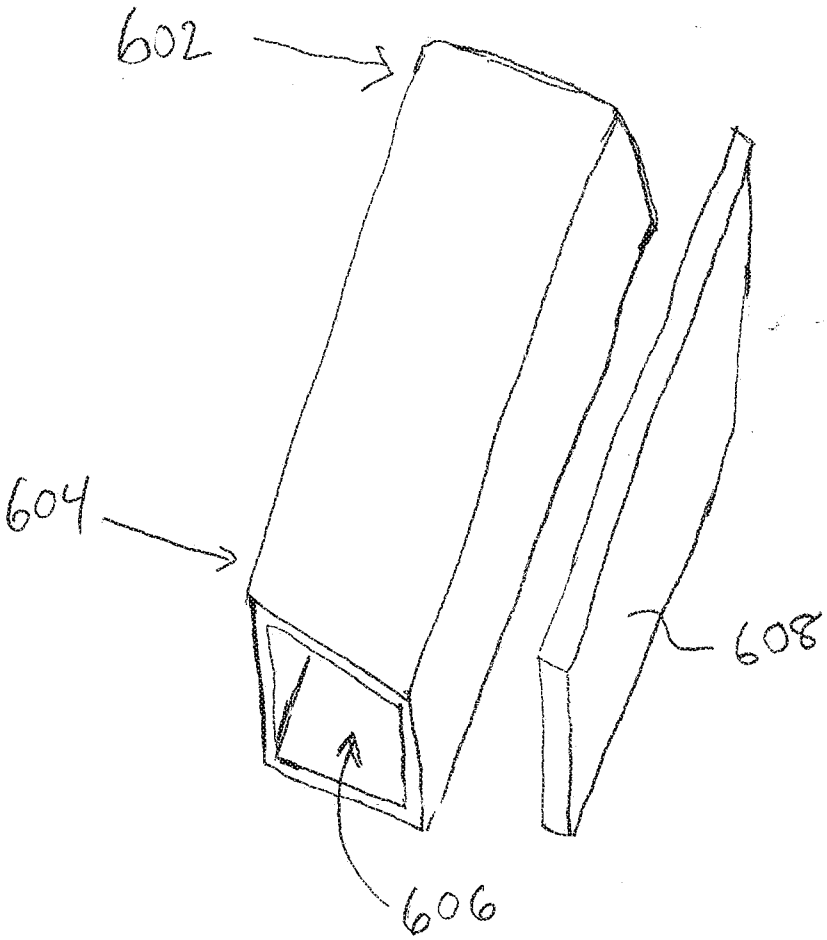


Fig. 6

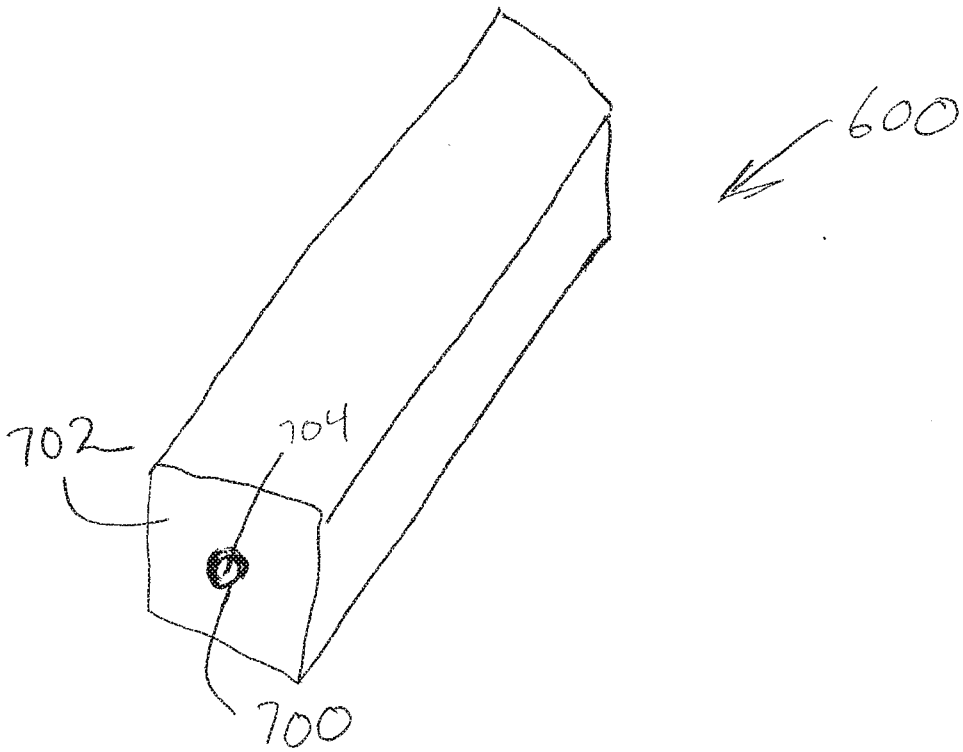


Fig 7.

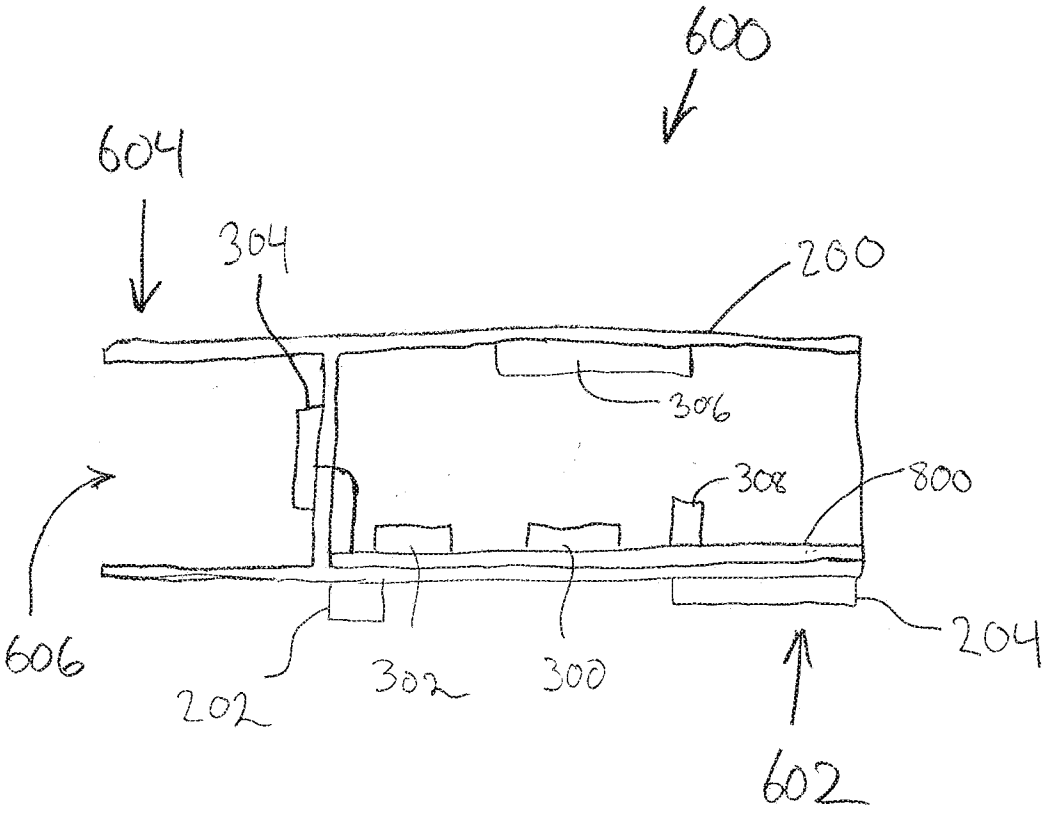


Fig. 8

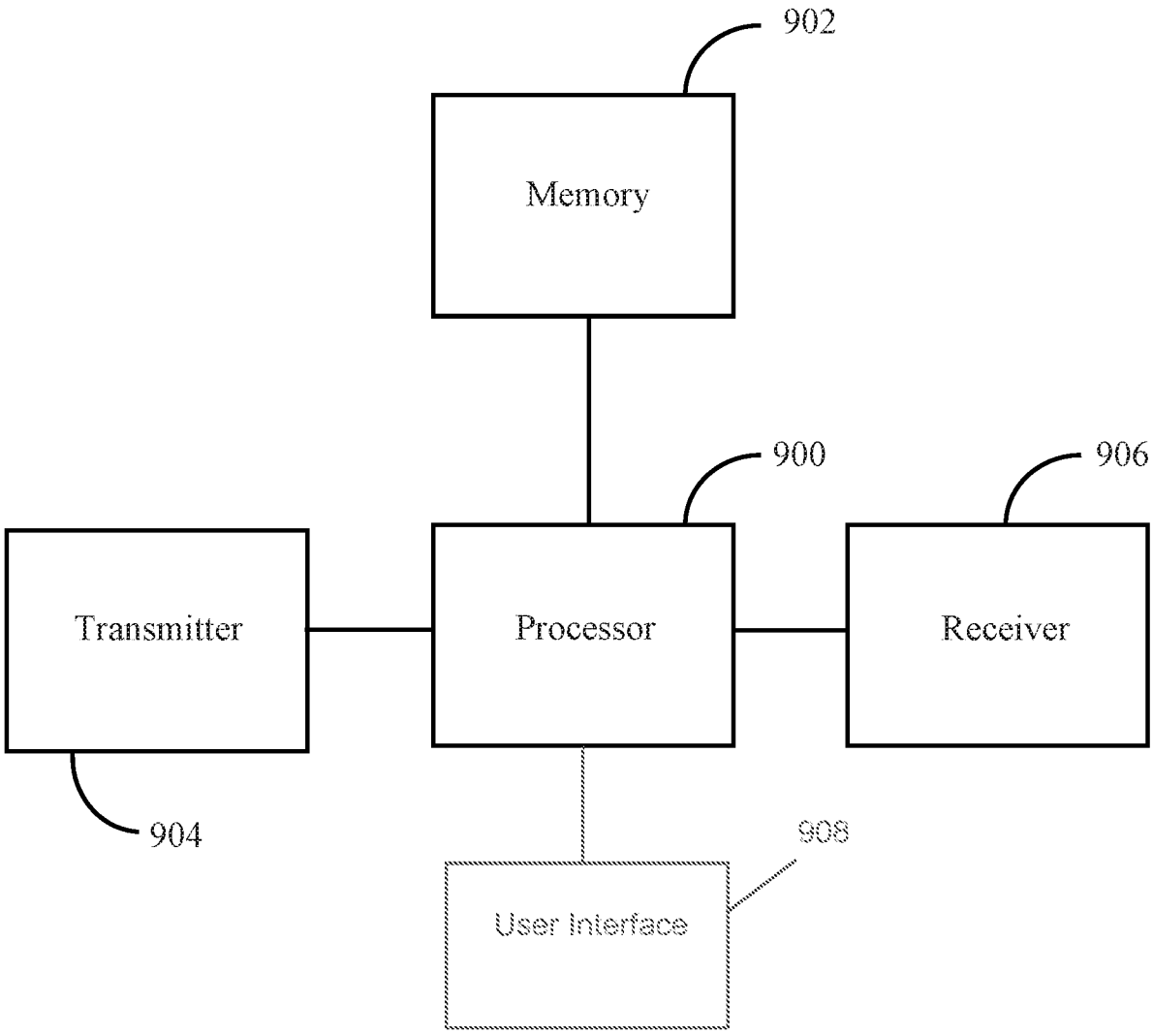

902
Memory
900
906
Transmitter
Processor
Receiver
904
908
User Interface

FIG. 9

Fig. 10

1000 - Monitor Signals from Barrier Status Detection Device and Human Detection Device
1002 - Barrier Opened
1004 - Processor Determines Barrier Open
1006 - Processor Determines if Human Being Inside Premises in Proximity to Barrier
1008 - Generate Timed Alarm Signal
1010 - Transmit Timed Alarm Signal
1012 - Activate Indicator
1014 - Receive Timed Alarm Signal by Central Security Panel
1016 - Receive Cancellation Code - Refrain From Initiating Security Response(s)
1018 - Initiate Security Response(s) if Cancellation Code Not Received
1020 - Determine Barrier Opened; No Human Being Inside
1022 - Transmit Immediate Alarm Signal to Central Security Panel
1024 - Receive Immediate Alarm Signal - Initiate Security Response(s)

Fig. 11

1100 - Central Security Device Placed in Learn Mode
1102 - Receive Indication to Add New Sensor
1104 - Receive First Identification Code
1106 - Store First Identification Code in Memory
1108 - Receive Additional Information - Store in Association with First Identification Code
1110 - Receive Second Identification Code
1112 - Store Second Identification Code in Memory
1114 - Receive Additional Information - Store in Association with First Identification Code
1116 - Central Security Panel Placed Into Armed-Home Mode
1118 - Receive First Identification Code via Receiver
1120 - Compare First Identification Code to Codes Stored in Memory
1122 - Determine Whether to Immediately Initiate Security Response(s) or Wait
1124 - Monitor Elapsed Time From When First Identification Code Received
1126 - Refrain from Initiating Security Response(s) When Cancellation Code Received
1128 - Initiate Security Response(s) When Cancellation Code Not Received
1130 - Receive Second Identificaiton Code
1132 - Compare Second Identification Code to Codes Stored in Memory
1134 - Determine Whether to Immediately Initiate Security Response(s) or Wait
1136 - Initiate Security Response(s)

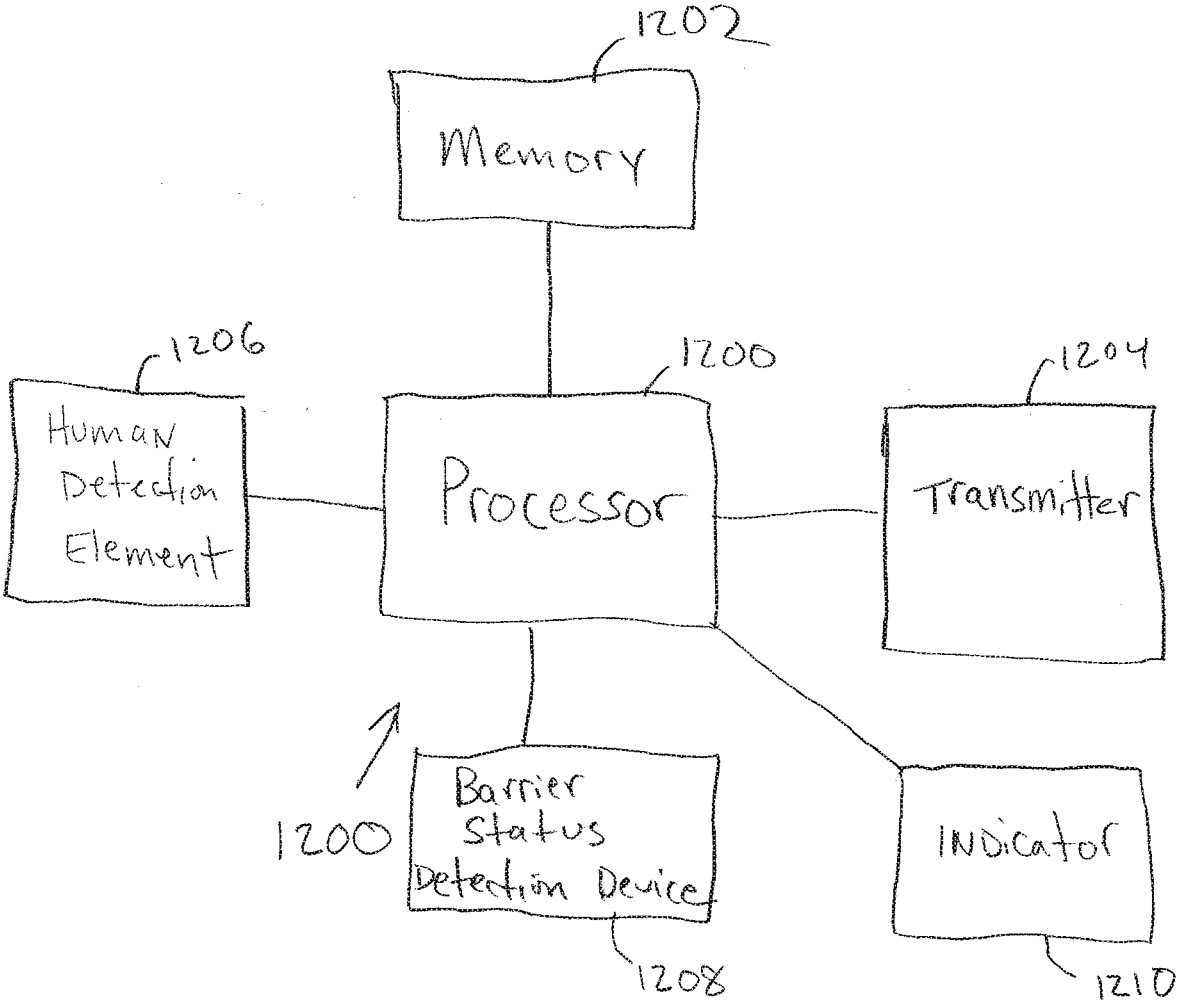

1202
Memory
1206
Human Detection Element
1200
Processor
1204
Transmitter
1200
Barrier Status Detection Device
1208
INDicator
1210

Fig 12

FIG. 13

1300 - Learn In Human Detection Device Into Central Security Panel
1302 - Place Central Security Panel Into Armed-Home Mode
1304 - Person Approaches Door
1306 - Person Reaches for Door Handle
1308 - Detect Human Being in Proximity to Door
1310 - Generate Message
1312 - Transmit Message
1314 - Activate Indicator
1316 - Receive Message by Central Security Panel
1318 - Transmit Alarm Signal by Barrier Alarm Device
1320 - Receive Alarm Signal by Central Security Panel
1322 - Determine If Alarm Signal Associated with Message
1324 - Start Timer
1326 - Refrain from Initiating Security Response(s) When Cancellation Code Received
1328 - Initiate Security Response(s) When Cancellation Code Not Received

FIG. 14

1400 - Transmit Alarm Signal When Barrier Opened from Outside
1402 - Receive Alarm Signal by Central Security Panel - Begin Timer
1404 - Determine Attribute of Sensor
1406 - Initiate Security Response(s)
1408 - Wait for Timer to Expire
1410 - Refrain from Initiating Security Response(s) When Cancellation Code Received
1412 - Initiate Security Response(s) When Cancellation Code Not Received

FIG. 15

1500 - Monitor Signals from Barrier Status Detection Device and Human Detection Device
1502 - Barrier Opened
1504 - Determine Barrier Opened
1506 - Processor Determines if Human Being Inside Premises in Proximity to Barrier
1508 - Initiate Timer
1510 - Activate Indicator
1512 - Receive Cancellation Code
1514 - Timer Expires - Transmit Alarm Signal by Barrier Alarm Device
1516 - Receive Alarm Signal by Central Security Panel
1518 - Initiate Security Response(s)
1520 - Refrain from Initiating Security Response(s) When Cancellation Code Received
1522 - Discard Cancellation Code - Refrain from Initiating Security Response(s)

FIG. 16

1600 - Security System in Armed-Home Mode
1602 - Person Approaches Door from Outside
1604 - Detect Person - Transmit Notification
1606 - Notification of Person Sent
1608 - Notification Received by Central Security Panel
1610 - Begin Tracking Time of Receipt
1612 - Door is Opened by Person Outside
1614 - Transmit Alarm Signal by Door Sensor
1616 - Alarm Signal Received by Central Security Panel
1618 - Determine That Alarm Signal Received w/in Predetermined Time
1620 - Generate Security Response
1622 - Transmit Security Response
1624 - Determine That Alarm Signal Not Received w/in Predetermined Time

PTO/AIA/96 (08-12)
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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: ECOLINK INTELLIGENT TECHNOLOGY, INC.

Application No./Patent No.: filed herewith Filed/Issue Date: filed herewith

Titled: SMART BARRIER ALARM DEVICE

ECOLINK INTELLIGENT TECHNOLOGY, INC., a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

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   The document was recorded in the United States Patent and Trademark Office at

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☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Gary R. Jarosik/	November 26, 2018
Signature	Date
Gary R. Jarosik	35,906
Printed or Typed Name	Title or Registration Number

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The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ASSIGNMENT

In consideration of the sum of $1.00 (One Dollar), the receipt of which is hereby acknowledged, and other good and valuable consideration, be it known that **GEORGE SEELMAN**, an individual, has sold, assigned and transferred and by these presents do sell, assign, transfer and set over unto **ECOLINK INTELLIGENT TECHNOLOGY, Inc.**, a Delaware corporation, having a place of business at 2055 Corte Del Nogal, Carlsbad, California 92011, its successors, legal representatives, or assigns, the whole right, title and interest in and to a certain invention relating to a **SMART BARRIER ALARM DEVICE** by myself devised and any applications for United States Patents therefor filed in the United States Patent and Trademark Office, and all original and reissue patents granted thereof, and all divisions, and continuations thereof, including the subject matter of any and all claims which may be obtained in every such patent, and all foreign rights to said invention, and covenant that I have full right to do so, and agree that I will communicate to said corporation or its representatives all facts known to me respecting said invention, whenever requested, and testify in any legal proceedings, sign all lawful papers, make all rightful oaths and generally do everything possible to aid said corporation, its successors, assigns and nominees, to obtain and enforce proper patent protection for said invention in all countries.

The Commissioner of Patents and Trademarks is requested to issue the Letters Patent which may be granted for said invention or any part thereof unto said corporation in keeping with this Assignment.

Done at Carlsbad, California, this 19th day of November, 2018.

George Seelman
Print Name

/George Seelman/
Signature

PTO/AIA/80 (07-12)
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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

■ Practitioners associated with Customer Number: 34018

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

■ The address associated with Customer Number: 34018

OR

☐	Firm or Individual Name			
	Address			
	City		State	Zip
	Country			
	Telephone		Email	

Assignee Name and Address: ECOLINK INTELLIGENT TECHNOLOGY, INC.
2055 Corte del Nogal
Carlsbad, California 92011

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	Jan. 26, 2016
Name	Michael Lamb	Telephone	855-432-6546
Title	President		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	George Seelman
Art Unit	
Examiner Name	
Attorney Docket Number	81230.921US3

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	2	5656900	A	1997-08-12	Michel et al.	
	3	5534849	A	1996-07-09	McDonald et al.	
	4	6919918	B2	2005-07-19	Carretero Guerrero	

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	2	20130257611	A1	2013-10-03	Lamb et al.	

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	Filing Date	
	First Named Inventor	George Seelman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	81230.921US3

	3	20040021778	A1	2004-02-05	Oldani et al.	
	4	20070132578	A1	2007-06-14	Powell	
	5	20010056579	A1	2001-12-27	Kogane et al.	
	6	20070182540	A1	2007-08-09	Marman	
	7	20100245088	A1	2010-09-30	Meier et al.	
	8	20060170572	A1	2006-08-03	Kurachi et al.	

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	First Named Inventor	George Seelman
	Art Unit	
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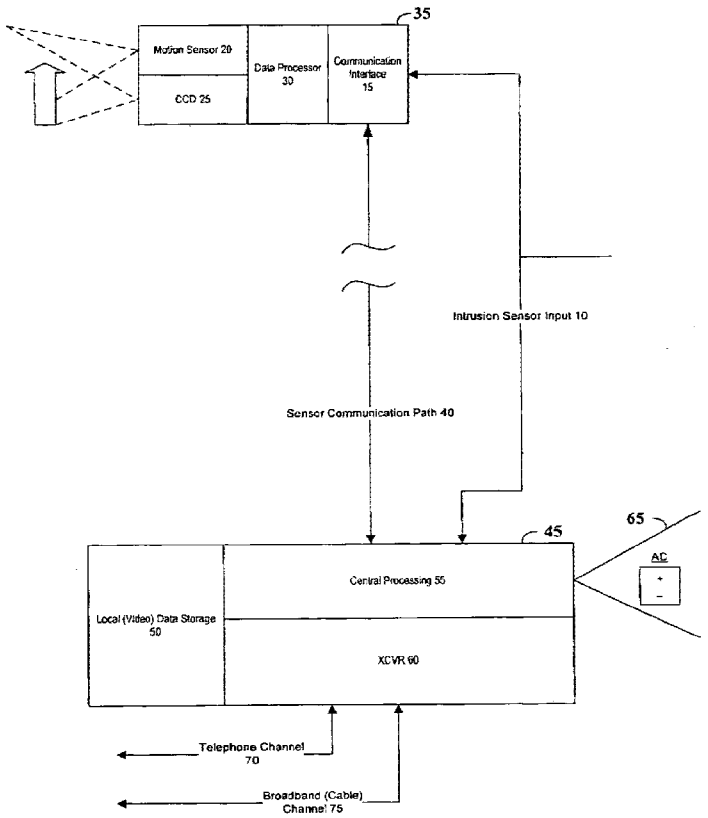
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(54) Title: SECURITY MONITORING WITH PROGRAMMABLE MAPPING



(57) Abstract: An integrated security arrangement is implemented in a variety of embodiments. In one such embodiment an integrated security arrangement includes a plurality of intrusion sensors that sense an intrusion in a target area, a motion sensor, and an image-capture device that is responsive to the motion sensor. When the image-capture device is enabled it captures images of the target area in response to movement in the target area as indicated by the motion sensor. The integrated security arrangement also includes a mapping database that contains data used to associate one or more of the plurality of intrusion sensors with the image-capture device. A user configures the mapping database to select at least one of the intrusion sensors for enabling the image-capture device. The integrated security arrangement further includes a control unit that enables the image-capture device in response to the selected intrusion sensor as configured in the mapping database.

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SECURITY MONITORING WITH PROGRAMMABLE MAPPPING

RELATED PATENT DOCUMENTS

This Application is a continuation-in-part and claims priority to common aspects of: U.S. Patent Application Serial No. 11/389,673 (RSIA.010PA), entitled "Spread Spectrum Communications For Building-Security Systems," filed on March 24, 2006; U.S. Patent Application Serial No. 11/388,764 (RSIA.006PA), entitled "Security Monitoring Arrangement And Method Using A Common Field Of View," filed on March 24, 2006; and U.S. Patent Application Serial No. 60/785,570 (RSIA.009P1), entitled "Motion-Image Monitoring Method and Device," filed on March 24, 2006. Priority is claimed for common subject matter, under 35 U.S.C. §120, to each of these underlying patent documents.

FIELD OF THE INVENTION

The present invention is directed to a security arrangement and method for monitoring the inside of a facility or residence.

BACKGROUND

Home, office and other building-security systems are often used for safeguarding valuable possessions and for personal protection. These systems are typically implemented using different monitoring devices, such as cameras, motion sensors, keypads or contact sensors. Many buildings have multiple locations that are monitored for security purposes, requiring multiple monitoring devices in the different locations. For increased security and functionality, the monitoring devices can be configured to communicate with one or more central control devices. The central control device can, among other things, perform monitoring or recording functions, determine whether the building-security has been breached and whether to contact security personnel.

One method of communicating between the monitoring devices and the central control device is by a physical connection, such as electrical or other wiring. Using wiring to establish communication between the security devices can be troublesome for a number of reasons, such as the high cost of installation and maintenance. For example, exposed wiring is often unacceptable in a building, and thus, the installation of the security system requires passing the wires through the walls of the building. This type of installation can significantly increase the time required to complete a security system installation. Moreover, the troubleshooting and repair of the security system can be difficult because

there is limited access to the unexposed wiring. The cost of the wire is another factor, especially in large buildings requiring numerous monitoring devices.

One potential solution is to use wireless monitoring devices to reduce or eliminate the need for physical connections between the devices, however, wireless security systems also have a set of problems, such as battery life. Ideally, the security devices would be self-powered by, for example, a battery. Self-powered devices are more secure because they are not subject to failure upon loss of power to the building. They also require less installation problems because they do not need to be connected to a separate power source; however, self-powered devices often have reliability issues due to the finite life of their power source. Increasing the useable time of a power source reduces the cost for replacement of the power source and increases the security of the entire system by having less potential downtime of the system or its components. Several recent developments have increased the potential power requirements of wireless security devices.

For example, the use of wireless communications in home, office and other buildings has been steadily increasing, creating additional issues with wireless security systems. One such issue is the increased potential for corrupted data due to interference between different wireless communications devices. This issue may also be present when an unauthorized person attempts to disrupt the security system by "jamming" the wireless communications using a wireless interference device. Techniques exist for reducing unwanted interference, however, the implementation of some of the techniques result in increased power requirements. Two such techniques, both of which can result in increased power requirements, include increasing the power of the transmission or varying the frequency of the transmission.

Another problem with power requirements arises from the desire to have increased monitoring capabilities with smaller devices. As security systems become more advanced, the power requirements of the monitoring devices are often increased. For instance, monitoring devices that contain digital cameras require enough power to run the camera, to store the digital picture in memory and to transmit the digital picture to the control device. The increased functionality of the monitoring devices, along with the desire to have smaller, less noticeable devices with less room for batteries or other power sources, has impacted the reliability of the monitoring devices.

Implementing a wireless building-security system can be further complicated by industry or government regulations. One such set of regulations is imposed by the Federal Communications Commission (FCC). The current regulations cover numerous aspects of

wireless communications systems including, but not limited to, a range of restricted frequencies, a minimum number of different hopping frequencies within the allowable frequencies, the maximum output power of a transmitter and a requirement related to equal use of the hopping frequencies.

Attempts have been made to implement wireless security systems using a variety of methods. One such method is taught by European Patent Application Publication No. EP 1 363 260 filed on May 6, 2003, entitled "Procédé de communication radiofréquence entre plusieurs dispositifs et système de surveillance mettant en œuvre un tel procédé," which is fully incorporated herein by reference. Yet, these methods still leave room for improvement.

In order to protect residents, employees, personal property, and the like, security monitoring systems are used to monitor a variety of facilities and to sense the presence of unwanted intruders. Many such security systems are connected to a central control unit and monitored by an operator who can alert the appropriate emergency services in the event of an unwanted intruder. Typically, a home monitoring security system includes a combination of sensing devices and alarm devices and some also include cameras. To achieve the maximum monitoring coverage, these devices are distributed throughout the interior of the facility.

Security systems that employ cameras are advantageous in that they are able to record activity associated with a suspected breach of the facility and also can be used by a monitoring station to prevent false alarms. In some instances, however, the cameras record the regular activities of the facilities' residents and/or employees. The cameras also record activities that are falsely perceived to be security breaches such as pet behaviors and authorized users that have been accidentally locked out.

In specific situations, such as those having the potential to violate the privacy of authorized residents and/or employees of the facility, such comprehensive recordation by the security cameras may be undesirable. Since unwanted intruders could breach the security of a facility while the inhabitants are present, it is necessary for the security monitoring system to be functioning at all times. However, having cameras constantly being triggered to record the inhabitants' daily living and working routines is a dramatic invasion of the inhabitants' privacy, and is burdensome with respect to false triggers. Further, the monitoring and recording of guests' activities can be just as invasive.

Moreover, the installation and configuration of the various cameras and devices often requires complex and time-consuming installation procedures.

The above-discussed issues have presented challenges to developing a home and/or facility security monitoring system that provides maximum coverage while minimizing one or more of the above-identified issues.

SUMMARY

The present invention is directed to the above and related types of integrated security systems. These and other aspects of the present invention are exemplified in a number of illustrated implementations and applications, some of which are shown in the figures and characterized in the claims section that follows.

In one embodiment of the present invention, an integrated security arrangement includes a plurality of intrusion sensors that sense an intrusion in a target area, a motion sensor, and an image-capture device that is responsive to the motion sensor. When the image-capture device is enabled it captures images of the target area in response to movement in the target area as indicated by the motion sensor. The integrated security arrangement also includes a mapping database that contains data used to associate one or more of the plurality of intrusion sensors with the image-capture device. A user configures the mapping database to select at least one of the plurality of intrusion sensors for enabling the image-capture device. The integrated security arrangement further includes a control unit that enables the image-capture device in response to the selected intrusion sensor as configured in the mapping database.

In another embodiment of the present invention, an integrated security arrangement is implemented. The arrangement has a plurality of intrusion sensors to sense an intrusion and a motion sensor to sense motion in a target area. An image-capture device captures images of the target area in response to the motion sensor and at least one selected one of the intrusion sensors. A control arrangement uses a mapping database that contains data used to associate one or more of the plurality of intrusion sensors with the image-capture device. The control arrangement permits a user to configure the mapping database to select said at least one of the plurality of intrusion sensors to which the image-capture device is responsive.

In another embodiment of the present invention, an integrated security arrangement is implemented. The arrangement has an intrusion sensor to sense an intrusion and a plurality of motion sensors to sense motion in respective target areas. A selected at least one of a plurality of image-capture devices, each associated with respective ones of the plurality of motion sensors, captures images of the respective target area in response to the

respective motion sensor and the intrusion sensor. A control arrangement includes a mapping database that contains data used to associate the intrusion sensor with the selected image-capture device. The control arrangement permits a user to configure the mapping database to select said at least one of a plurality of image-capture devices that which is responsive to the intrusion sensor.

In another embodiment of the present invention, an integrated security arrangement includes an intrusion sensor to detect an intrusion, a plurality of motion sensors, and a plurality of image-capture devices. Each of the image-capture devices is responsive to a respective one of the motion sensors and when the image-capture devices are enabled they capture images of respective target areas in response to movement in the respective target areas as indicated by the respective motion sensors. The integrated security arrangement also includes a mapping database that contains data used to associate one or more of the plurality of image-capture devices with the intrusion sensor. The mapping database is configurable by a user. The integrated security arrangement further includes a control unit that enables one or more of the plurality of image-capture devices in response to the intrusion sensor detecting an intrusion. The control unit determines whether to enable one or more of the image-capture devices based upon data in the mapping database.

Commensurate with another embodiment of the present invention, an integrated security arrangement is implemented with a mapping database for mapping sensors/detectors other than intrusions sensors to various image-devices. The detection of an event by a sensor triggers the correspondingly mapped image-device to capture images of a target area.

The above summary of the present invention is not intended to describe each illustrated embodiment or every implementation of the present invention. The figures and detailed description that follow more particularly exemplify these embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention may be more completely understood in consideration of the detailed description of various embodiments of the invention in connection with the accompanying drawings, in which:

FIG. 1 depicts a building-security system according to an example embodiment of the present invention;

FIG. 1A illustrates an example embodiment of an integrated security system, according to the present invention;

FIG. 2 shows a block diagram of a security system for mapping a plurality of sensors to a camera, according to an example embodiment of the present invention;

FIG. 3 shows a block diagram of a security system for mapping a plurality of cameras to a sensor, according to an example embodiment of the present invention;

FIG. 4 shows an example mapping or lookup table, according to an example embodiment of the present invention;

FIG. 5 shows a flow diagram for logic for implementing a process to enable security cameras in response to mapped sensors, according to an example embodiment of the present invention;

FIG. 6 shows a flow diagram for logic used to enable cameras for a security system, according to an example embodiment of the present invention;

FIG. 7 shows a block diagram of an interface for implementing differing levels of access to a security system, to an example embodiment of the present invention;

FIG. 8 shows a block diagram of another interface for implementing differing levels of access to a security system, to an example embodiment of the present invention; and

FIG. 9 shows a block diagram of another interface that provides administrative monitoring of configuration settings for a security system, to an example embodiment of the present invention.

While the invention is amenable to various modifications and alternative forms, specifics thereof have been shown by way of example in the drawings and will be described in detail. It should be understood, however, that the intention is not necessarily to limit the invention to the particular embodiments described. On the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the invention as defined by the appended claims.

DETAILED DESCRIPTION

The present invention is believed to be applicable to a variety of different approaches and arrangements for providing security services. The invention has been found to be particularly advantageous for addressing security monitoring needs in a residence or private-office environment.

According to an example embodiment, a security system utilizes cameras to detect and identify intruders. The system includes an integrated camera/motion detector that is responsive to intrusion sensors and other types of sensors/alarms (*e.g.*, a smoke detector, a carbon monoxide detector, a gas detector, or a panic button). For simplicity, the following

discussion focuses on the integrated camera/motion detector being responsive to intrusion detection; however, the discussion is equally applicable to the integrated camera/motion detector being responsive to other types of sensors and alarms as well. The camera's smart-behavior results in reduced power consumption and mitigates privacy concerns on various levels. A system user sets up zones with at least one intrusion sensor (*e.g.*, door/window contacts, glass-break detectors, hyper frequency radar detector, or an infrared barrier) for each zone around the perimeter of a facility and sets up corresponding camera/motion detectors in the interior of the facility. The intrusion sensors are activated (armed) by a system user, using, *e.g.*, a keypad on a security panel, a remote control keyfob, a phone call using DTMF, a personal computer or a remote server. This allows for a complete activation of the system when the system user leaves the facility as well as a partial perimeter activation of the facility when the system user (or other authorized person) is present. Thus, when the user is present the camera remains "off" unless appropriately triggered by the motion detector. However, the motion detector also remains "off" unless it is armed by a corresponding intrusion sensor. Therefore, cameras record images inside the facility when both an intrusion sensor has been tripped and a motion detector has detected motion. In one implementation, the system user enters a code (*e.g.*, using a keypad on a security panel) to identify the desired mode of system operation. In another implementation, the system user enters a system access code and then selects that desired mode of operation from a display.

Another example embodiment is directed to an integrated security arrangement. The arrangement includes an intrusion sensor to sense an intrusion at a target area of a facility, a second sensor to sense movement, an image-capture device, and a base unit. The image-capture device captures images in response to an intrusion indication from the intrusion sensor and in response to a movement indication from the second sensor. The base unit integrates a direction of view of the second sensor and of the image-capture device, thereby directing the second sensor to sense in the target area in which the images are captured by the image-capture device.

FIG. 1 depicts a building-security system according to an example embodiment of the present invention. FIG. 1 includes building 100, control panel 102, and peripheral devices 104-110. The security system is implemented in such a manner so as to reduce the power consumption of one or more of the control panel and peripheral devices as related to the wireless communications between the devices. When implementing the wireless communications, the devices use multiple frequencies (channels) as well as communication

intervals. The devices are able to reduce the power consumption by utilizing information regarding a specific frequency from the multiple frequencies used and the communication interval. For example, if the transmitting devices modify their transmissions based upon the information, a receiving device may reduce the power consumption by decreasing the time the receiving device is listening for a transmission from another device. By reducing the power consumption, the system lends itself to implementing bi-directional communications between the devices, which typically require more power consumption than unidirectional communications.

The jagged lines and ellipses found between control panel 102 and the peripheral devices represent wireless communications between the control panel and the peripheral devices. The wireless communications may be implemented using suitable frequencies. For instance, wireless communications frequencies in industrial, scientific and medical (ISM) radio bands (900Mhz, 2.4Ghz and 5.8Ghz) have been found to be suitable for security systems; however, alternate frequencies may be implemented in accordance with the particulars of the system or its intended implementation.

The various elements of the peripheral devices and the control panel are implemented using one or more of electric circuit arrangements, processors, memory elements, software code, programmable logic devices, input/output interfaces or combinations thereof.

Building 100 represents a facility for which the building-security system is implemented. Common implementations of building 100 include, but are not limited to, residential homes, retail stores, office buildings, government buildings, museums and other facilities. Typically, the security system will monitor several locations within building 100. Accordingly, FIG. 1 depicts various peripheral devices throughout the building.

Peripheral communications devices 104-110 may take the form of a variety of different devices, a few of which are depicted in FIG. 1. For instance, device 104 depicts a window sensor that may, among other things, detect when the window has been opened or otherwise compromised; device 106 depicts a camera for video capture; device 108 depicts an alarm; and device 110 depicts a mobile peripheral, such as a key fob for interfacing with the control panel or another peripheral. Other example sensors include but are not limited to fire alarms, carbon dioxide sensors and panic buttons. These peripheral devices communicate with control panel 102 using wireless communications.

Block 112 depicts several elements that may be implemented in the peripheral devices, including a transceiver block, a message protocol block, a synchronization block

and a transmit (Tx) anticipation block. Various embodiments of the present invention use one or more of these blocks. In one such embodiment, a peripheral device wirelessly transmits a signal using the transceiver block. The peripheral device uses information regarding a transmission period and the listening channel of the control panel in the transmission process.

In one embodiment, the peripheral devices transmit building-security information to the control panel. For instance, device 106 might transmit video images or device-status information to the control panel, while device 104 might transmit information relating to the window's sensor.

FIG. 1 depicts control panel 102 as including a transceiver block, a message protocol block, a synchronization block and a transmit (Tx) anticipation block. Various embodiments of the present invention use one or more of these blocks. In one such embodiment, the transceiver block is used for receiving signals from one of the peripheral devices as a function of the communication intervals and the frequency the control panel uses to listen for transmissions. The listening frequency is one of several potential frequencies available for communication between the peripheral devices and the control panel. For instance, the system may use a number of contiguous frequency slots (channels) within a suitable frequency band. One example of such a use includes 25 or more channels within the ISM frequency band from 902-928 MHz. Numerous other combinations of channels and frequency bands are possible using the present invention.

Typically, the control panel and peripherals are implemented using a similar set of elements as depicted by blocks 102 and 112; however, various components may be implemented differently. For instance, the synchronization block can be implemented differently in the control panel versus the peripheral devices where the control panel provides synchronization information to each of the peripherals and the peripherals must use the synchronization information to maintain synchronization using a local clock. In such an instance, the peripherals would compare the synchronization information with the local clock in order to compensate for any difference between the peripherals' time frames and the control panel's time frame. The synchronization information can take the form of a time index, such as a counter value, a current time of day or any other time based data which the peripheral can use as a reference for synchronization. In another example, the time index can be a reference within each message transmitted. Using such a system the peripheral device can compare when the message was received to when the message was expected. The peripheral device may also be configured to adjust the local clock using a

compensation for a timing error. For instance, if the peripheral clock appears to be running slower than the control panel, the peripheral can compensate by increasing the clock frequency or using a counter to compensate for the differences between clocks.

The control panel and the peripheral blocks are depicted as having a transceiver; however, the system may be implemented using variations of receivers and transmitters. In some instances, a peripheral may be implemented with only a transmitter. In other instances, a peripheral may be implemented with only a receiver. Other implementations allow for one or more of the control panels and peripherals to have both a transmitter and receiver (transceiver). Thus, transceiver is used herein to describe a receiver, transmitter or both a receiver and transmitter.

One embodiment of the present invention reduces the power of one of the devices as a function of the listening channel and a communications period. The system decreases the length of time that a receiver is active by using the communications period and listening channel to reduce the window of time necessary to receive the start of a transmission. When the receiver is not active, various methods of power reduction are employed, such as removing power from the receiving devices or reducing or stopping selected functions (*e.g.*, amplification or processing).

Another embodiment synchronizes the various peripheral devices with the control panel. The synchronization can further reduce the active time of the transmitter because, for example, the transmitter may limit the transmission times relative to the times for which the receiver is active. Such a reduction can be accomplished because, for example, in many systems the transmission time cannot be shorter than the Rx activation period of the receiver without knowledge of when the Rx activation occurs; however, synchronization can reduce the transmission times to less than the Rx activation period of the receiver.

In a specific example, the control panel sends periodic synchronization messages to the peripheral devices. A peripheral device that determines it has lost synchronization with the control panel can increase the active time of the receiver to compensate for the loss in synchronization. In the event that the peripheral device is no longer receiving synchronization messages, the device can increase the active receive time to ensure that a transmission from the control panel will be received. The peripheral device can increase the activation time based upon an expected accuracy of the local tracking (*e.g.*, local clock) of the control panel time-base. For instance, where the expected accuracy of the local tracking is relatively high, the peripheral device increases the activation time only upon the loss of several synchronization messages.

Some devices, such as a keyfob or other handheld device (110), are portable and are often removed from the wireless communication range of the rest of the system or may cease to receive or transmit information in response to a period of inactivity. Thus, the portable devices often lose synchronization during the time they are unable to communicate with the control panel. Accordingly, such portable devices frequently increase the activation time to compensate for the lack of synchronization between the portable devices and the control panel. The frequent increase in activation time often leads to a high rate of power consumption. To compensate, portable devices can be implemented to shut down transmission monitoring efforts until an external action occurs, such as a button being pressed.

In one embodiment of the present invention, the messages sent by the control panel are received by multiple peripheral devices simultaneously. Where the message is not intended for all the peripherals, the message can include information that indicates for which peripheral the message is intended. The message can also be associated with a channel that the control panel uses for an acknowledge message from the peripheral.

FIG. 1A illustrates an example embodiment of an integrated security system, according to the present invention. A base unit 35 is located in the interior of a facility and integrates a motion sensor 20, a camera 25 (*e.g.*, CCD camera), a data processor 30, and a communication interface 15. In one implementation the motion sensor is a passive infrared (PIR) sensor, which detects infrared energy in a target area and, in connection with a processor 30, recognizes changes in infrared energy (*e.g.*, temperature changes) to detect motion. Depending on the size of the facility, multiple base units are located throughout the facility's interior, with a control panel 45 acting as a conventional communication hub for the facility. The control panel 45 interfaces with the base unit 35 via communications interface 15. In the event that an intrusion signal 10 is received by the control panel 45 from an intrusion sensor, the control panel arms motion sensor 20 allowing the motion senor to activate the camera 25 when movement is detected. The control panel 45 can also directly activate the camera 25 (*e.g.*, without regard to motion sensor 20). In one implementation, the base unit 35 can receive the intrusion sensor input 10 via communications interface 15. The sensor input 10 can therefore inform either the base unit 35 or the control panel 45 to arm the motion sensor 20 and/or activate the camera 25. When unarmed, the motion sensor 20 will not be able to activate camera 25 but may still detect motion. The motion sensor 20 can detect motion in its field of view, and once the motion sensor is armed, the motion sensor is able to activate the camera 25. The motion

sensor 20 and the camera 25 are positioned such that both devices have overlapping fields of detection. Thus, images of the source of the detected motion are recorded by the camera without requiring any intervening adjustment or alignment. The recorded images are processed by a data processor 30, which can be integrated with the motion sensor 20 and the camera 25 in a base unit 35 as shown, or may be located remotely and electrically coupled to the base unit 35.

It will be appreciated that the data processor 30 can be implemented, for example, in the form of a high-speed processor such as a DSP (including an ALU) and/or a more general-purpose processor that may be optionally programmed for video data (de)compression. Thus, various embodiments may include a variety of combinations of processing operations with one or more aspects of the processing operations performed at one or more local or remote processors. For example, both video data storage and compression may be performed in the base unit 35 by the data processor 30. When the processor is located remotely, the data storage may still occur in base unit 35, but compression of the video data could be implemented in the remote processor. Another embodiment may involve data storage in the base unit 35 without any compression of the video data. Moreover, each of the above operations may be performed in combination with a central processor 55, as further discussed below.

In example implementations the base unit 35 is a battery-operated, wireless device having both motion sensing and image-capture capabilities. For further information on such a device, reference may be made to filed provisional application serial no. 60/785,570 filed on March 24, 2006, entitled "Motion-Image Monitoring Method and Device"(Attorney Docket No. RSIA.009P1), which is fully incorporated herein by reference. In certain implementations, data processor 30 is configured to preserve battery life by communicating in accordance with appropriate power-saving protocols. For example implementations related to communicative coupling and data transfer among the above-discussed devices in accordance with appropriate protocols, reference may be made to U.S. application serial no. 11/389,673 filed on March 24, 2006, entitled "Spread Spectrum Communications for Building-Security" (Attorney Docket No. RSIA.010PA) and European Patent Application Publication No. EP 1 363 260 filed on May 6, 2003, entitled "Procédé de communication radiofréquence entre plusieurs dispositifs et système de surveillance mettant en œuvre un tel procédé," which are herein fully incorporated by reference. The power-saving approaches also provide for limited activation of the above-

discussed camera such that the privacy of the inhabitants of a residence or facility is largely maintained.

The recorded images are transmitted over a bi-directional sensor communication path 40 to a control panel 45. In one implementation, the sensor communication path 40 is wireless and can be employed, *e.g.*, as described in the above two incorporated patent documents. The transmitted images may be encrypted by the data processor 30 before being transmitted to the control panel 45. The control panel 45 includes a local storage area for the recorded images 50, the central processing unit 55, and a transceiver 60. The control panel 45 is located within the same facility as the base unit 35. The central processor 55 receives images from each of the base units located within the facility. Similar to the above discussion, the central processor 55 may perform a variety of processing operations alone or in combination with data processor 30. The images may optionally be stored in data storage 50 for further review or processing. The control panel 45 includes a battery backup power source 65 in the event of a loss of power, *e.g.*, a natural disaster or an intruder disables power to the facility. The transceiver 60 further transmits signals including system status reports or recorded images via a telephone channel 70 or cable channel 75 to outside monitoring facilities. The telephone channel 70 and cable channel 75 are not limited to PSTN or broadband channels; they may be part of a GSM/CDMA network. Outside monitoring facilities may include a private security company or a local law enforcement station.

In another example embodiment, when an intrusion sensor senses an intruder breaching the facility (*e.g.*, door/window contact is tripped), the intrusion signal 10 is transmitted directly to the control panel 45. The control panel 45 arms one or more base units 35 in the same zone as where the intrusion signal (via sensor 10) originated. For example, in response to a widow contact being tripped in a room the control panel 45 can arm the sensor 20 of base unit 35 in that room, as well as the sensors of the base units located in adjacent rooms and/or the hallway outside the room. In this manner the system can track intruders as they move throughout the facility. The base unit(s) 35 respond as discussed above. In this system architecture, the control panel 45 is the master and the sensors and control devices (*e.g.*, keypads, keyfobs) are slave devices. The radio link in this architecture is a star topology with the control panel 45 at the center of the network. The branches include base units 35 and external links, *e.g.*, telephone channel 70 and broadband channel 75.

Other aspects of the present invention are applicable to a security system where a second sensor and image-capture device are not physically integrated inside the same housing. In one such example, an embodiment is arranged with an intrusion sensor to sense an intrusion at a target area of a facility, a second sensor to sense movement, and an image-capture device. The second sensor bears a special relationship (*e.g.*, located sufficiently near and aligned) with the image-capture device to form a common field of view, such that the fields of view for both devices overlap without the devices being located inside a common housing. The image-capture device captures images in response to an intrusion indication from the intrusion sensor and in response to a movement indication from the second sensor.

In more specific embodiments, the various arrangements permit for the devices to be situated in different ways to provide the common field of view. For example, horizontal movement, vertical movement, or horizontal and vertical movement can be provided for each of the motion sensor and the image-capture device, with their movements mirrored to maintain the integrated field of view. More particularly, such mirrored movement can be provided by using a ratchet-like mechanism with devices to provide increment adjustments in the horizontal and/or vertical directions; the skilled artisan would appreciate that such adjustment can be implemented using servo-control motors or be manually implemented using conventional position-stabilizers that permit step-wise/incremental rotation.

In a related embodiment, horizontal movement, vertical movement, or horizontal and vertical movement can be provided for either or both the motion sensor and the image-capture device by way of conventional electronically-implemented pan/tilt/zoom operation(s), with their movements coordinated to maintain the integrated field of view. For image-capture, such pan/tilt/zoom operation is commonly used in digital video-recording devices. The motion detector may also be manipulated to alter the field of view.

In more specific embodiments, the various arrangements can be implemented with a spatial relationship between the motion sensor and the image-capture device by using a common backplate to which each of the motion sensor and the image-capture devices are mounted and/or a template for aligning the motion sensor and the image-capture device for mounting on a wall, where contoured portions of the respective backs of the motion sensor and the image-capture device may provide an offset for biasing the direction of view.

In other specific embodiments, the various arrangements permit for such above-described devices to be situated such that their movement is pre-set before they are used or dynamically controlled while in use with automated or semi-automated coordination

provided by the control circuitry and/or personnel at a remote-site center. Such coordinated movement, while maintaining a common field of view, benefits a variety of monitoring and/or security applications.

According to one example embodiment of the present invention, an intrusion sensor, such as a window or door contact, located at a perimeter of a facility detects whether the contact subject, window or door, has been breached. If, for example, a window has been opened, the window contact (intrusion sensor) sends a signal to a corresponding integrated motion sensor/camera located at the interior of the facility. Upon receipt of the intrusion signal, the motion sensor is armed and the integrated camera is set to a "ready" mode without initiating recording. The motion detector remains armed and when motion is detected, the integrated motion sensor/camera is again triggered. Once motion is detected, the camera turns "on" and captures images of the source of the motion. The video images are sent to a central control panel for further evaluation. Further evaluation may include determining (manually or automatically using, *e.g.*, machine visions) whether the source of the motion is human, an animal such as a pet, or another moving object. If the source is determined to be human, further evaluation may reveal whether any identifying images were captured, whether the human is an intruder or an inhabitant of the facility, and face recognition may be used to identify a previously unknown person intruding on the facility.

In another example embodiment, the home entry intrusion sensor (*e.g.*, front door contact) corresponds to a delayed-response motion sensor such that the transmission of the motion indication is delayed to accommodate a security system control keypad located near the entrance. In another zone located nearby, such as a kitchen, the motion indication is not delayed when motion is detected. The system recognizes that motion sensed in the nearby room (*e.g.*, person setting grocery bags down in the kitchen) following a delayed sensing of motion in the entry zone is likely an authorized user and an alarm will not sound for a predetermined length of time. If the system is not deactivated or reset before the predetermined length of time expires, the alarm will sound. The number of nearby zones configured with such a relationship with the delayed motion indication in the entry zone should be limited to ensure that an actual intruder is not provided enough time to traverse the premises without being detected.

In a further example embodiment, the security system is equipped to capture an image of the person arming or disarming the system (*e.g.*, by entering a code on a security system control keypad) to determine if the person is an authorized user. In one instance,

the captured image can be sent to a remote monitoring station for verification or stored for future reference. In another instance, the security system can be programmed with images of the authorized users and the system uses face recognition to compare the captured image of the person attempting to arm/disarm the system with the images of the authorized users to determine whether the person is an authorized user. If the person's image matches that of an authorized user, then the person is allowed to arm/disarm the system. In one implementation, the security system control keypad is equipped with a camera to capture an image of the person entering a code. In another implementation, a base unit 35 is positioned such that the base unit's camera 25 can capture an image of the person entering a code on the security system control keypad. In response to a code being entered, the security system control keypad activates the camera 25 to capture an image of the person entering the code.

In an additional example embodiment, the security system is equipped with a self diagnostic mode that is used to determine if the system is functioning properly. The system sends test signals representing intrusion detections by various sensors to the base stations 45 to determine that the appropriate sensors 20 are armed and/or the appropriate cameras 25 are activated. The system can also enable each of the cameras 25 to capture an image to check that the cameras are working. The results of the diagnostic tests can be displayed for the system user, saved for future review or provided to a remote monitoring station.

FIG. 2 shows a block diagram of a security system for mapping a plurality of sensors to a camera, according to an example embodiment of the present invention. Control block 206 interfaces with sensors 204 (*i.e.*, sensor(1) to sensor(N)) and camera 202. Control block 206 receives input from sensors 204 regarding the status of the sensor. For instance, a particular sensor may send a message to control block 206 in response to a window or door being opened. Control block 206 can then make a determination as to whether camera 202 should be activated. In one implementation, control block 206 has a mapping or lookup table that links one or more of the sensors to camera 202. In this fashion the response of control block 206 to one or more of sensors 204 can be limited to sensors that correspond to the room or field of view covered by camera 202. In some instances, control block 206 can receive images from camera 202 and also forward the images to a monitoring station, using a telephone or network interface. Moreover, in some instances, camera 202 is able to pan, tilt, zoom or otherwise change the field of view to correspond to the particular sensor that was triggered.

According to an example embodiment of the present invention, sensors 204 and camera 202 announce their presence to control block 206 during an initialization stage. A user of the system can select from these devices when determining what sensors camera 202 should be configured to respond to. In one instance a graphical user interface can be used to allow for ease of configuration. In another instance, a graphical display of the location of the sensors 204 and camera 202 can be used to allow a user to easily select and configure the system. Such configuration can be limited to implementation during installation of the security system, or can be implemented throughout the use of the security system. For instance, given that sensors 204 can optionally be wireless, it is possible that the sensors may be moved from time to time. This may be necessary where the function of a room changes or where the structure undergoes changes. Moreover, sensors can be added or replaced at later dates.

In certain instances, camera 202 can operate in different modes that may or may not be responsive to sensors 204. For example, one mode may disable camera 202 completely, while another mode may enable camera 202. One such mode would include control block 206 enabling cameras 202 in response to one or more selected sensors 204. In one embodiment of the present invention, different modes may have different sensors mapped to camera 202. For instance, one mode may have a door sensor mapped to camera 202, while another mode may have both a door sensor and a motion sensor mapped to camera 202 (*e.g.*, for when there should be no authorized occupant in the area). The system can be programmed such that a different code is used to identify each of these modes of operation. The system user enters one of the codes (*e.g.*, on a security system control keypad) to select the desired mode of operation. In one implementation, the system user enters a security access code and then selects from one of the programmed modes of system operation that are identified on a display screen (*e.g.*, by selecting a corresponding icon on a touch screen or by entering a number identifying one of the modes). In another implementation, the system user enters a code for each mode of operation. This can be useful for allowing different levels of access/mode settings for different users. For instance, a child, friend or relative could be given only certain codes. This is particularly useful for controlling access to configuration settings or preventing access during restricted time periods, such as late at night.

In a particular instance, one of the codes may correspond to a sequence of image captures from various cameras. Thus, a user of the system can initiate a sequence of camera shots to view different areas of the facility. This can be particularly useful for

assuring a user that there are no intruders or for monitoring the status of an occupant (*e.g.*, a small child or otherwise vulnerable person) and the house in general (*e.g.*, to check for fire or damage due to natural disasters).

In connection with the embodiments discussed herein as examples of the present invention, the camera can be enabled in various ways. Generally, enabling of the camera includes enabling the camera arrangements discussed in connection with figures 1-3. Accordingly, when a sensor mapped to a camera arrangement detects a potential intruder, the motion detector of the camera arrangement is enabled. If the motion detector senses motion, the camera can then be enabled to capture pictures of potential intruders. In an alternative mode, the camera can also be configured to immediately capture pictures (*e.g.*, regardless of the motion detector) in response to the detection of a potential intruder. This can be particularly useful for sensors that do not necessarily correspond to an intruder (*e.g.*, fire alarm) and for high security modes that do not implement a delay or second level of motion detection. In such a mode, the camera would capture images independent of motion detection by the motion sensor. Another mode or setting could be used to distinguish between video capture (*e.g.*, consecutive shots over a period of time capable of showing motion, such as those stored in an MPEG file) and still image capture (*e.g.*, one or more individual images that can be stored using file formats such as JPEG) by the camera. Accordingly, in response to a sensor and a selected mode, the system can be configured to 1) capture images after detecting motion in the field of view, 2) immediately capture video, and 3) immediately capture a still image. These and other configuration options can be implemented using the various mapping features discussed herein.

FIG. 3 shows a block diagram of a security system for mapping a plurality of cameras to a sensor, according to an example embodiment of the present invention. As discussed above, sensor 302 and cameras 304 (*i.e.*, camera(1) to camera(N)) communicate with control block 306. In response to input from sensor 302, one or more of cameras 304 can be enabled. As discussed in connection with FIG. 2 and elsewhere herein, the control block 306 can implement the desired correspondence between cameras 304 to sensor 302 using mapping database or lookup table. This can be advantageous where the cameras provide different angles of view and/or different fields of view. For instance, in response to window sensor, several cameras can be enabled, allowing for security monitoring stations to view the entire room, and also to have a better chance of identifying a potential intruder.

In one embodiment of the present invention, multiple cameras can be selectively linked to multiple sensors. For instance, all cameras and sensors within a room can be linked together. Accordingly, the mapping of both FIG. 2 and FIG. 3 can be used in conjunction with each other.

FIG. 4 shows an example mapping or lookup table, according to an example embodiment of the present invention. The data contained in the mapping table can be stored in a suitable memory device, such as flash, random-access-memories, hard drives and the like. In some applications it can be advantageous to use nonvolatile memory for guarding against problems due to power loss.

Column 402 contains camera-1 to camera-N. It should be noted that FIG. 4 and the relevant discussion make reference to camera-1 to camera-N. As discussed herein, such cameras may include an integrated motion detector, and thus, identification information as to whether the camera device includes such an integrated motion detector may also be stored in the mapping or lookup table. Column 404 contains sensors that are configured to enable the camera arrangement in the corresponding row. For instance, sensors A, B and C would enable camera 1, while sensors X, Y and Z would enable camera 2. In this manner a user of the system provides information as to the desired associations between sensors and cameras resulting in a corresponding change in the data in the mapping table. For example, a graphical user interface can be presented to a user through a software application running on a processor. In one instance, the processor is a general purpose computer, such as a personal computer or personal digital assistant, that can interface with the control device of the security system using, for example a universal-serial-bus (USB), Ethernet or similar interface. In another instance, the processor is part of the control device.

Column 406 contains additional information regarding relationships between sensors and cameras. In one instance, column 406 represents sensors that enable the corresponding camera when the security system is in a particular mode (*i.e.*, a different mode than column 404 would be associated with). This is useful to distinguish between situations where the occupants are awake from when they are sleeping, windows that are opened from the inside from windows that are opened from the outside, situations where the occupants are on vacation from when they are not, and the like. In another instance, column 406 represents sensors that need to be triggered prior to sensors in column 404 activating a camera in column 402. Thus, the sensors can be linked to each other, thereby requiring a succession of sensors to be triggered prior to activation of a mapped camera. In yet another instance, column 406 represents sensors that are only enabled after a certain

delay. This can be particularly useful for enabling sensors that are in the likely path of an intruder. For instance, the camera in a bedroom may be enabled after a window sensor in the bedroom is triggered. After a delay sufficient to allow an intruder to traverse the room, a sensor from column 406 and corresponding to an adjoining room can be enabled.

Column 408 represents additional data used to supplement the mapping functions. In one instance, column 408 may contain information relating to cameras that are only enabled after a certain delay. This can be particularly useful for enabling cameras that are in the likely path of an intruder. For instance, the camera in a bedroom may be enabled after a window sensor in the bedroom is triggered. After a given delay (*e.g.*, sufficient to allow an intruder to traverse the room) a camera in an adjoining room can be enabled. In another instance, column 408 may contain data that contains delay values for enabling the cameras or sensor of column 404 and 406. In yet another instance, the data in column 408 can be used to denote one or more security modes for which the sensors and cameras stored in the respective mapping table columns are enabled or disabled.

According to another embodiment of the present invention, a combination of sensor events and the details of the sensor events can be selected to further define enabling events for various cameras. In addition to requiring a sensor to be triggered, combinational events can be used to determine details, such as whether a series of sensor events represent a person leaving or entering an area. More specifically, the order of sensor events and the absence of certain sensor events can be used to determine the direction a person is traveling, the number of people present and other security factors. Using information relative to the sequences of events, the system can be configured to avoid unnecessary video capture of normal occurrences, such as the exit of an authorized person from a secured area, while still capturing abnormal occurrences, such as the entrance of a person to the secured area.

Additional data storage elements of the mapping table (*e.g.*, similar to columns 406 and 408) are possible and only limited by practical considerations, such as complexity and storage space.

FIG. 5 shows a flow diagram for logic for implementing a process to enable security cameras in response to mapped sensors, according to an example embodiment of the present invention. Block 502 represents a decision as to whether a sensor has been triggered. The process waits at block 502 for a sensor to be triggered. If a sensor is triggered, the process proceeds to block 504. Block 504 determines whether the sensor is mapped to a camera. If no camera is mapped to the sensor, the process returns to block 502

and waits for another sensor to be triggered. If a camera is mapped to the sensor, the process proceeds to block 506.

Block 506 represents potential enable logic. In the simplest case, the enable logic depicted by block 506 need not be implemented. In such a case, the process proceeds directly to block 508. In other instances, various determinations, delays and other functions can be carried out at block 506. In a particular embodiment of the present invention, information stored in a mapping table is used to implement the enabling logic. As discussed herein, such information may represent different logic for different modes, delays before enabling and the like. In some instances, the logic may determine that no camera should be enabled and the process proceeds to block 510. One such instance is where the security system is in a mode for which the linked camera is not to be enabled. In another instance, the logic may enable other sensors prior to enabling the camera. After determining that the camera should be enabled the process proceeds to block 508 to enable the camera.

The process next checks for additional cameras that are linked to the triggered sensor as shown by block 510. If no additional camera is found, the process returns to block 502. If an additional camera is found, the process proceeds to block 512. Block 512 is a logic block similar to block 506, where the process can branch to blocks 510 or 514. Block 514 enables the corresponding camera and returns to block 510 to determine if additional cameras are mapped to the triggered sensor. In this manner, a series of cameras can be enabled in response to one or more triggered sensors. This is particularly useful for enabling cameras along a likely path of an intruder.

The various components of such a process can be implemented using one or more general purpose processors configured with appropriate software, one or more custom processors, programmable logic devices, analog/digital circuits, integrated circuit devices and combinations thereof.

FIG. 6 shows a flow diagram for logic used to enable cameras for a security system, according to an example embodiment of the present invention. In a particular embodiment this logic can be implemented in place of enable logic blocks 506 and 512 (*e.g.*, as a function call in a software routine). The process begins at block 602 where it proceeds to block 604. Block 604 can implement a delay before enabling any cameras. If no delay is require, the delay step can be skipped. In one instance, the delay can be a fixed delay for each camera. In another instance, the delay can be a function of data stored in the mapping table along with other variables, such as the current mode of the security system. After the

delay, if any, is implemented, the process proceeds to block 606. At block 606, a determination is made as to whether the sensor is configured to enable the camera relative to the current security mode. This can be accomplished, for example, by a comparison of the data in the mapping table with the current security mode. If it is determined that the camera should not be enabled in response to the sensor, the process exits as shown by block 614. Otherwise the process proceeds to block 608.

At block 608 a determination is made as to whether additional sensors are linked (*e.g.*, required to be triggered) relative to the corresponding camera. This is useful for configuring the camera to only be triggered in response to more than one sensor. If it is determined that no additional sensors are linked, the process proceeds to block 612 where the corresponding camera is enabled. The process then exits as shown by block 614.

If at least one additional sensor is linked, the process proceeds to block 610. At block 610 a determination is made as to whether the linked sensor is triggered. If the linked sensor is not triggered, the process can wait at block 610 until the linked sensor is triggered. In some instances, it is desirable to reset or exit from this state even if the linked sensor is not triggered. This can be accomplished using various methods. Using one such method, at timer can precipitate the exit from state 610. Using another such method, the process exits from state 610 in response to an external event, such as the resetting of the triggered sensor(s). If the linked sensor is triggered, the process returns to block 608 to check for other linked sensors.

FIG. 7 shows a block diagram of an interface for implementing differing levels of access to a security system, to an example embodiment of the present invention. FIG. 7 depicts a security interface 704 that provides two control/access levels 706 and 712 for different users of the system. The different control levels can be particularly useful for simplifying the control aspects available to an end user 702, while allowing additional functionality to be configured by a qualified installer 710. The control levels can also be particularly useful for reducing the risk of an end user 702 improperly configuring the security system, by limiting the control of certain aspects of the system. Thus, the security system can be configured such that a minimum level of security is maintained, regardless of the end user 702 configuration changes.

Security interface 704 is accessed using a number of different mechanisms. A non-exhaustive list of acceptable interfaces includes a general purpose computer connected through Ethernet, USB or the like, key pads, touch screens, voice response systems and keyfobs. Security interface 704 provides a different level of access depending upon the

user. In one instance, the user credentials can be determined by a username and/or password, electronic identification cards, wireless transmitters, biometric identifications or the like. Once the user credentials are determined, the user is granted an appropriate level of control over the system as shown by blocks 708 and 714. The number of different levels of control and user can vary depending upon the particular application. For example, a first level (*e.g.*, full access) may exist for an installer of the system; a second level (*e.g.*, limited access) may exist for home owners and a third level (*e.g.*, mode change only) may exist for children of the home owners.

FIG. 8 shows a block diagram of an interface for implementing differing levels of access to a security system, to an example embodiment of the present invention. FIG. 8 depicts a security system 808 that allows end user 802 access using end user interface 804 and qualified installer 814 access using qualified installer interface 812. By providing multiple interfaces to the system with different levels of control, the can be further protected. For instance, subset of control features 806 could be provided through a touch screen or local computer. Such interfaces may be subject to potential security risks (*e.g.*, hacking into the computer remotely or gaining access to the touch screen prior when the system is not armed) that may compromise the security system. By limiting the control available through the end user interface, the overall security can be improved. A higher level of control (*e.g.*, installer control features 810) can be provided using a more secure interface method. For example, the interface might only accept a security card that is controlled by the installer, or it may only accept instructions from a known server or input port. Accordingly, the security system is not entirely compromised simply by compromising the end user interface 804. This can also be particularly useful for limiting the complexity by essentially hiding certain configuration options from the end user.

FIG. 9 shows a block diagram of another interface that provides administrative monitoring of configuration settings for a security system, to an example embodiment of the present invention. FIG. 9 depicts an end user interface 904 that allows end user 902 to access control logic 916. End user interface 904 sends data to and from end user 902 using network 906. End user is able to configure control logic 916 and monitor the status of sensors 912 and cameras 914 through such data transfers. Offsite administrator 908 provides monitoring functions for all or a subset of end user transactions. For instance, offsite administrator 908 can monitor configuration settings for control logic 916 to verify that the system is not compromised due to user error or an unauthorized person. In some instances, the monitoring can be limited to critical functions, such as disabling sensors 912

and cameras 914. In other instances, the monitoring can encompass all transactions. This monitoring can be accomplished using an automated process that follows a rule set designed to identify potential issues. The monitoring can also be accomplished using (alone or in combination with automated processes) human operators that watch for potential problems.

While certain aspects of the present invention have been described with reference to several particular example embodiments, those skilled in the art will recognize that many changes may be made thereto. For example, aspects of the underlying patent documents (*e.g.*, aspects that provide integration on fields of view, and implementation details of the integrated image-capture and motion-sensing devices). Such changes do not necessarily depart from the spirit and scope of the present invention. Aspects of the invention are set forth in the following claims.

What is claimed is:

1. An integrated security arrangement, comprising:

a plurality of intrusion sensors;

a motion sensor to sense motion in a target area;

an image-capture device physically integrated with the motion sensor to capture images of the target area in response to the motion sensor and in response to at least one selected one of the intrusion sensors; and

a control arrangement including a mapping database that contains data used to associate one or more of the plurality of intrusion sensors with the image-capture device and to permit a user to configure the mapping database to select said at least one of the plurality of intrusion sensors to which the image-capture device is responsive.

2. The arrangement of claim 1, further including a base unit that physically integrates the image-capture device with the motion sensor, and wherein the control arrangement is configurable to override responsiveness of the image-capture device to the motion sensor and said selected one of the intrusion sensors, and to cause the image-capture device to capture images of the target area in response to a security code received at the control arrangement.

3. The arrangement of claim 1, wherein the control arrangement is configurable to override responsiveness of the image-capture device to the motion sensor or said selected one of the intrusion sensors, and to cause the image-capture device to capture images of the target area in response to a security code received at the control arrangement.

4. The arrangement of claim 1, wherein the control arrangement is configurable to cause the image-capture device to capture images of the target area in response to a security code received at the control arrangement.

5. The arrangement of claim 1, wherein the control arrangement is configurable to cause the image-capture device to capture images of the target area in response to a signal from a sensor, the signal representing a detectable situation, and wherein the signal is directly provided to the image-capture device.

6. The arrangement of claim 1, where the control arrangement is configurable to override the image-capture device to cause the image-capture device to capture images of the target area in response to a signal from a sensor, the signal representing a detectable situation and the signal from at least one of one of the plurality of intrusion sensors, a sensor other than one of the plurality of intrusion sensors.

7. The integrated security arrangement of claim 1, wherein the image-capture device includes and is integrated with the motion sensor, and further including a user interface that receives data for configuring the mapping database.

8. The integrated security arrangement of claim 1, wherein the image-capture device includes and is integrated with the motion sensor, and further including a user interface that receives data for configuring the mapping database, and wherein configuring the mapping database is limited based upon a control level associated with a user that is configuring the mapping database.

9. The integrated security arrangement of claim 8, wherein configuring the mapping database is limited based upon a different control level for a different user.

10. The integrated security arrangement of claim 1, further including a communication device to transmit signals to a remotely-located central controller, and housing to contain the communication device, the control unit, the motion sensor, and the image-capture device.

11. The integrated security arrangement of claim 1, wherein multiple sensors are linked in the mapping database, thereby requiring more than one sensor be tripped prior to the image-capture device capturing pictures.

12. The integrated security arrangement of claim 1, wherein the image-capture device is used to differentiate between images of a human and another moving object.

13. The integrated security arrangement of claim 1, wherein the intrusion sensor is one of a window contact and a glass-break detector.

14. The integrated security arrangement of claim 1, wherein, responsive to data stored in the mapping database, a second image-capture device capture images in response to a first image-capture device capturing images.

15. The integrated security arrangement of claim 1, further including a user interface and an installation interface that each receive input for configuring the mapping database, wherein the user interface has a first level of access to the mapping database and the installation interface has a second level of access to the mapping database.

16. The integrated security arrangement of claim 15, wherein said first level of access is a subset of said second level of access.

17. The integrated security arrangement of claim 1, wherein, in a first mode, the image-capture device captures one or more still images and, in a second mode, the image-capture-device captures video images.

18. The integrated security arrangement of claim 1, wherein the image-capture device includes and is integrated with the motion sensor, and further including a user interface that receives data for configuring the mapping database, and wherein the mapping database stores data identifying the image-capture device and each of the plurality of intrusion sensors.

19. The integrated security arrangement of claim 1, wherein the image-capture device includes and is integrated with the motion sensor, and further including a user interface that receives data for configuring the mapping database, and wherein the user interface is one of a personal computer running software configured to interface with the control unit through a communication link, a keypad and a remote server.

20. An integrated security arrangement, comprising:

an intrusion sensor;

a plurality of motion sensors to sense motion in respective target areas;

a selected at least one of a plurality of image-capture devices, the selected image-capture device physically integrated with a respective one of the plurality of motion

sensors, to capture images of the respective target area in response to the respective motion sensor and the intrusion sensor; and

a control arrangement including a mapping database that contains data used to associate the intrusion sensor with the selected image-capture device and to permit a user to configure the mapping database to select said at least one of a plurality of image-capture devices that which is responsive to the intrusion sensor.

21. The integrated security arrangement of claim 20, further including a base unit that physically integrates the image-capture device with the motion sensor, and wherein the image-capture devices are each integrated with respective motion sensors, and further including a user interface that receives data for configuring the mapping database.

22. The integrated security arrangement of claim 20, wherein the image-capture devices are integrated with the respective motion sensors, and further including a user interface that receives data for configuring the mapping database, and wherein configuring the mapping database is limited based upon a control level associated with a user that is providing the data for configuring the mapping database, and wherein configuring the mapping database is limited based upon a different control level for a different user.

23. The integrated security arrangement of claim 20, wherein each image-capture device further includes a camera, and a housing to contain the control unit, the motion sensor, and the camera.

24. The integrated security arrangement of claim 20, wherein the image-capture devices are used to differentiate between images of a human and another moving object.

25. The integrated security arrangement of claim 20, wherein the intrusion sensor is one of a window contact and a glass-break detector.

26. The integrated security arrangement of claim 20, wherein after the selected at least one of a plurality of image-capture devices captures an image, and after a delay, another one of the image-capture devices is enabled in response to data stored in the mapping database and independent of additional sensors.

27. The integrated security arrangement of claim 20, further including a user interface and an installation interface that each receive input for configuring the mapping database, wherein the user interface has a first level of access to the mapping database and the installation interface has a second level of access to the mapping database.

28. The integrated security arrangement of claim 20, further including a user interface and an installation interface that each receive input for configuring the mapping database, wherein the user interface has a first level of access to the mapping database and the installation interface has a second level of access to the mapping database, and wherein said first level of access is a subset of said second level of access.

29. The integrated security arrangement of claim 20, wherein, in response to a user selected mode, the control unit configures two or more image-capture devices of the plurality of image-capture devices to consecutively capture images independent of their respective motion sensors.

30. The integrated security arrangement of claim 20, wherein the mapping database stores data identifying each of the plurality of image-capture devices.

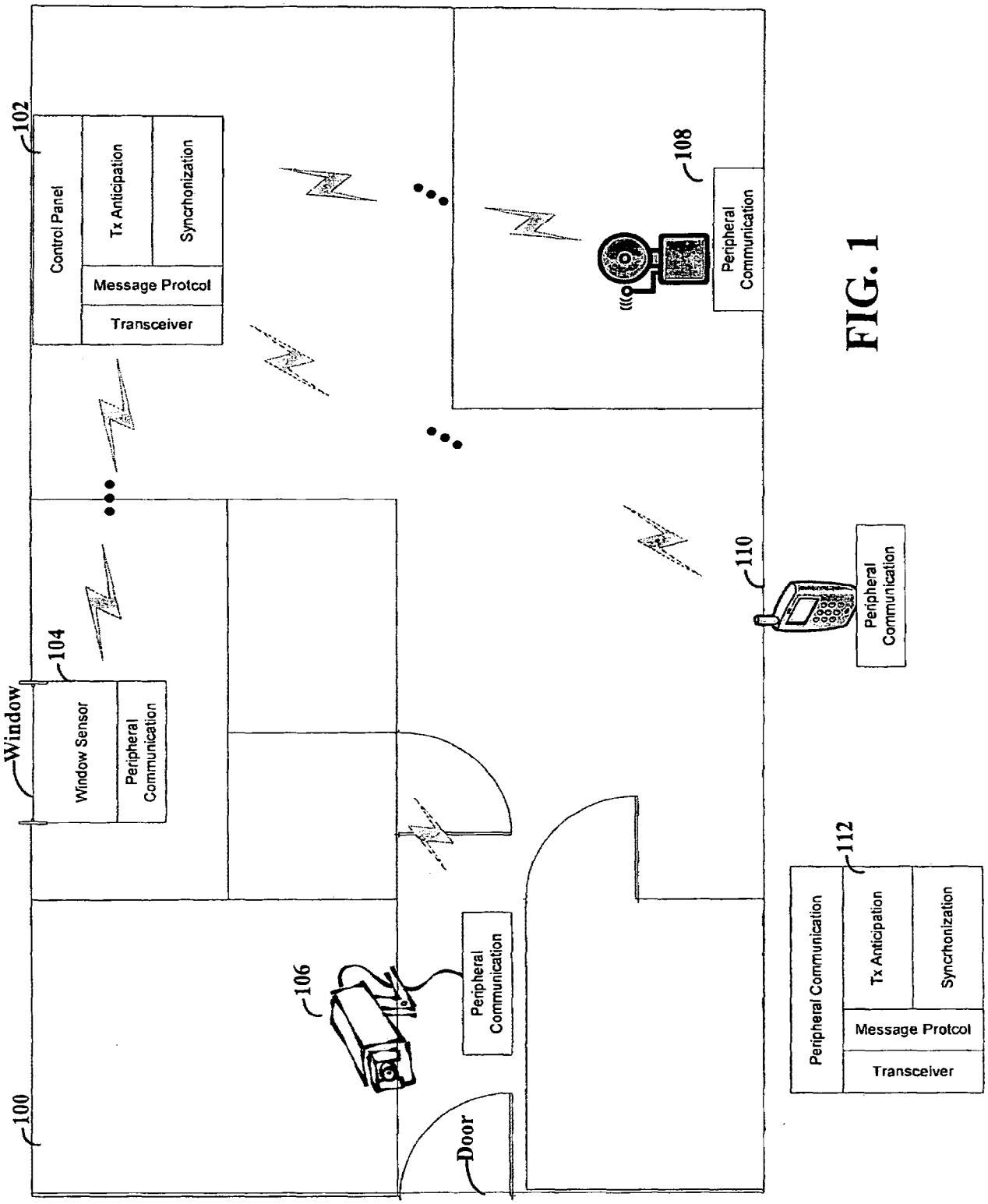

102
Control Panel
Tx Anticipation
Syncrhonization
Message Protcol
Transceiver
108
Peripheral Communication
110
Peripheral Communication
104
Window
Window Sensor
Peripheral Communication
106
Peripheral Communication
112
Peripheral Communication
Tx Anticipation
Syncrhonization
Message Protcol
Transceiver
100
Door

FIG. 1

FIG. 1A

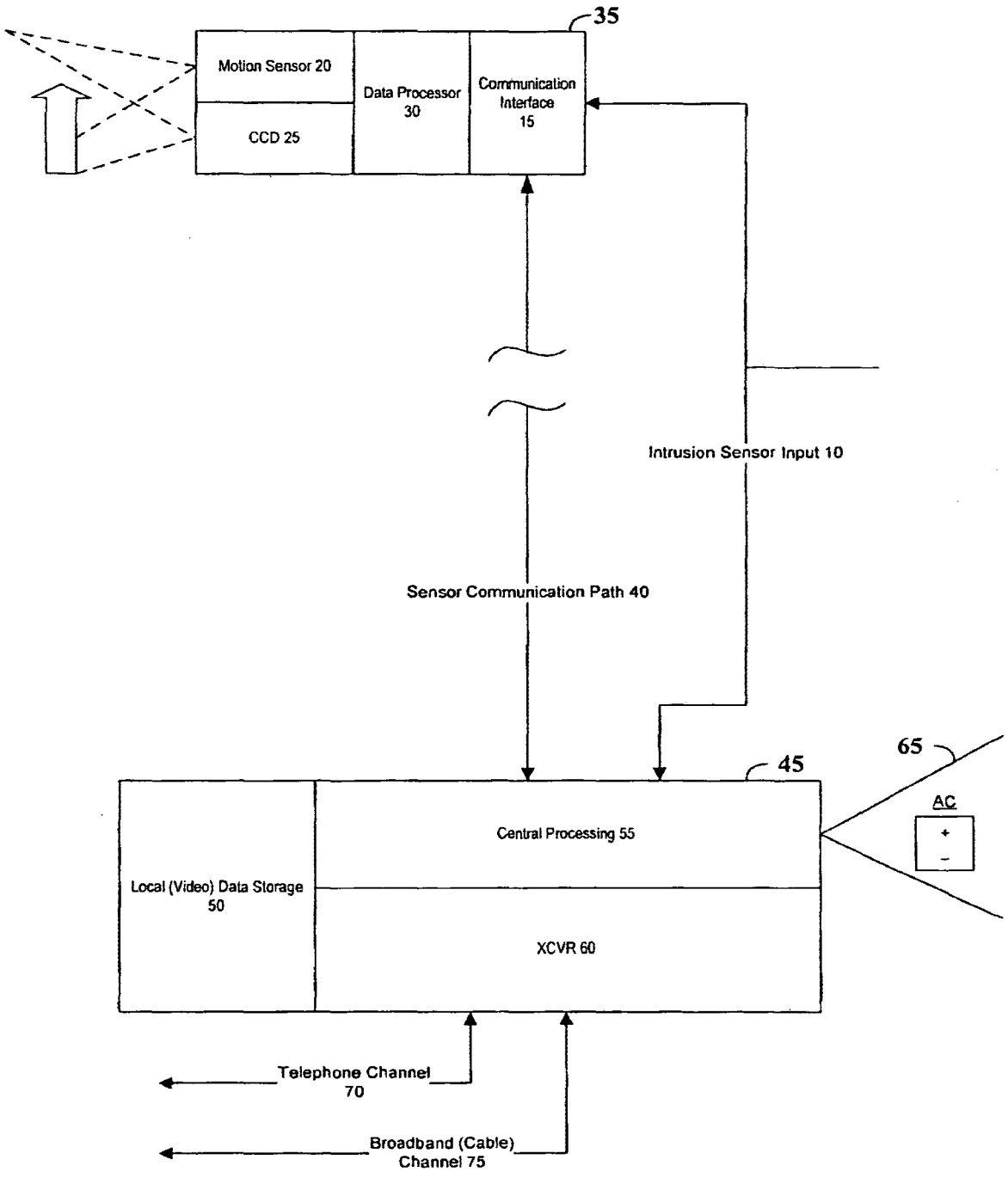

35
Motion Sensor 20
CCD 25
Data Processor 30
Communication Interface 15
Intrusion Sensor Input 10
Sensor Communication Path 40
45
65
AC
+
–
Central Processing 55
Local (Video) Data Storage 50
XCVR 60
Telephone Channel 70
Broadband (Cable) Channel 75

FIG. 2

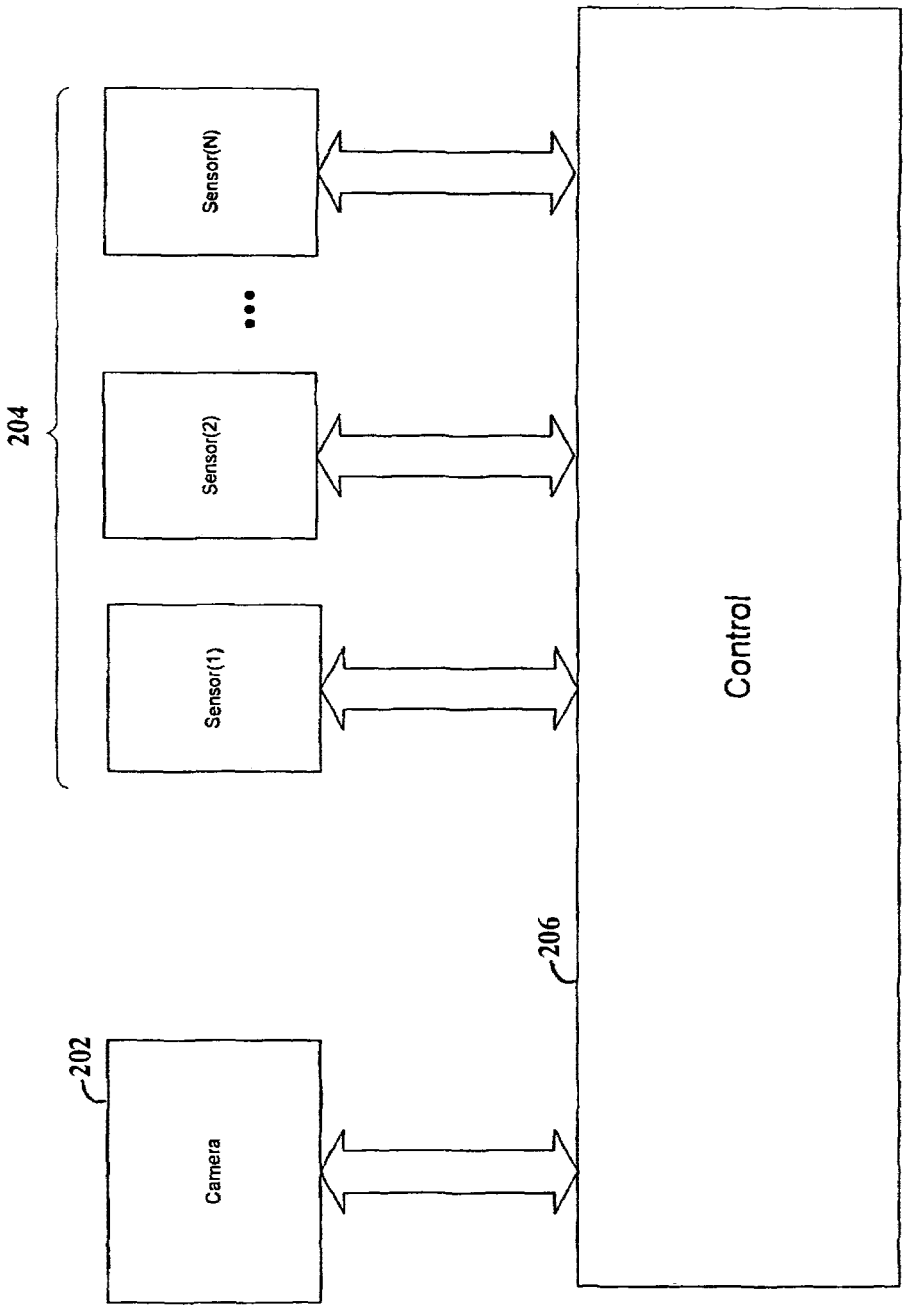


FIG. 3

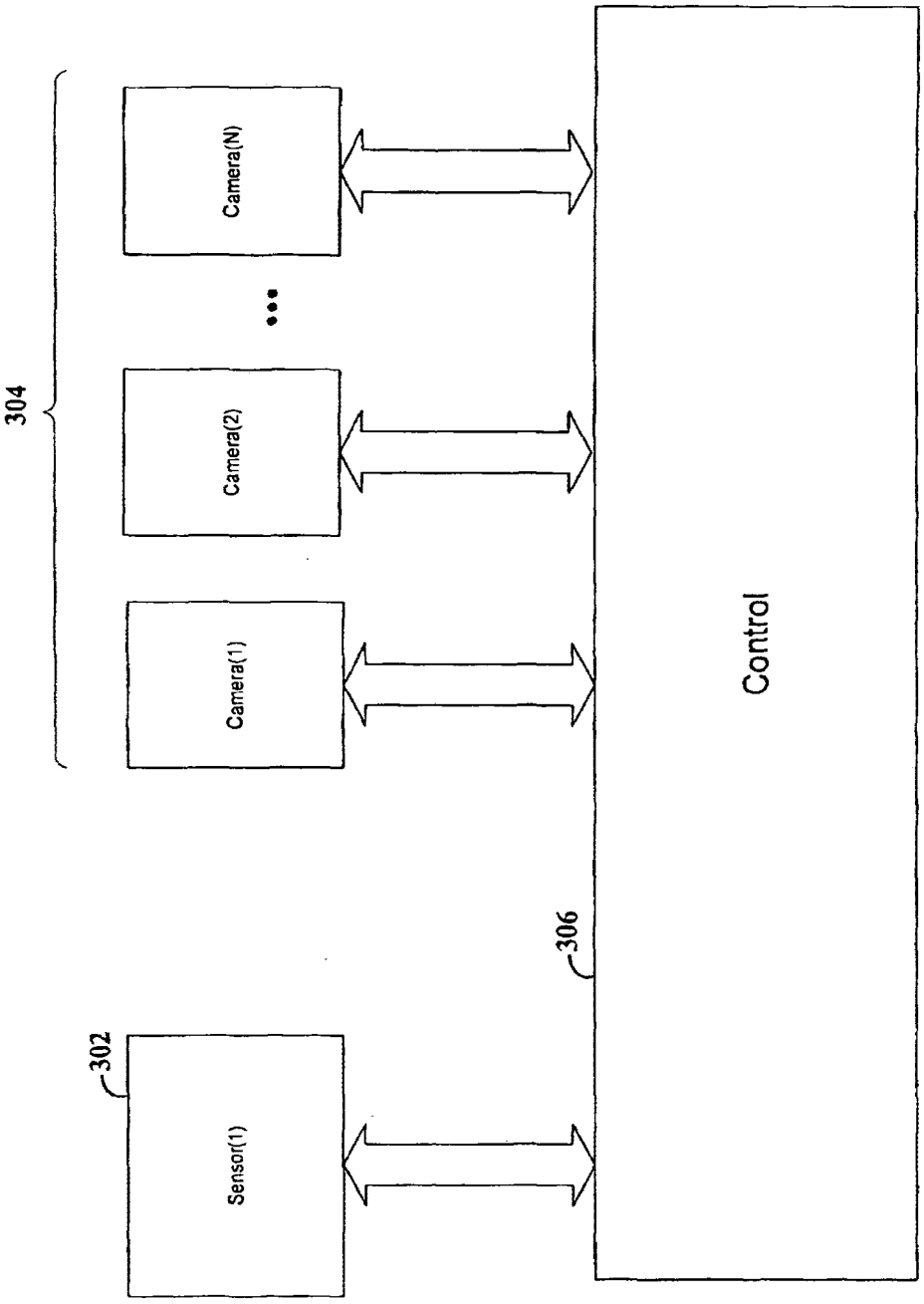


FIG. 4

402 Camera 1	404 Sensor A, B and C	406 Sensor D, E, and F	408 Additional Data
Camera N	Sensor X, Y and Z	Sensor U, V and W	Additional Logic

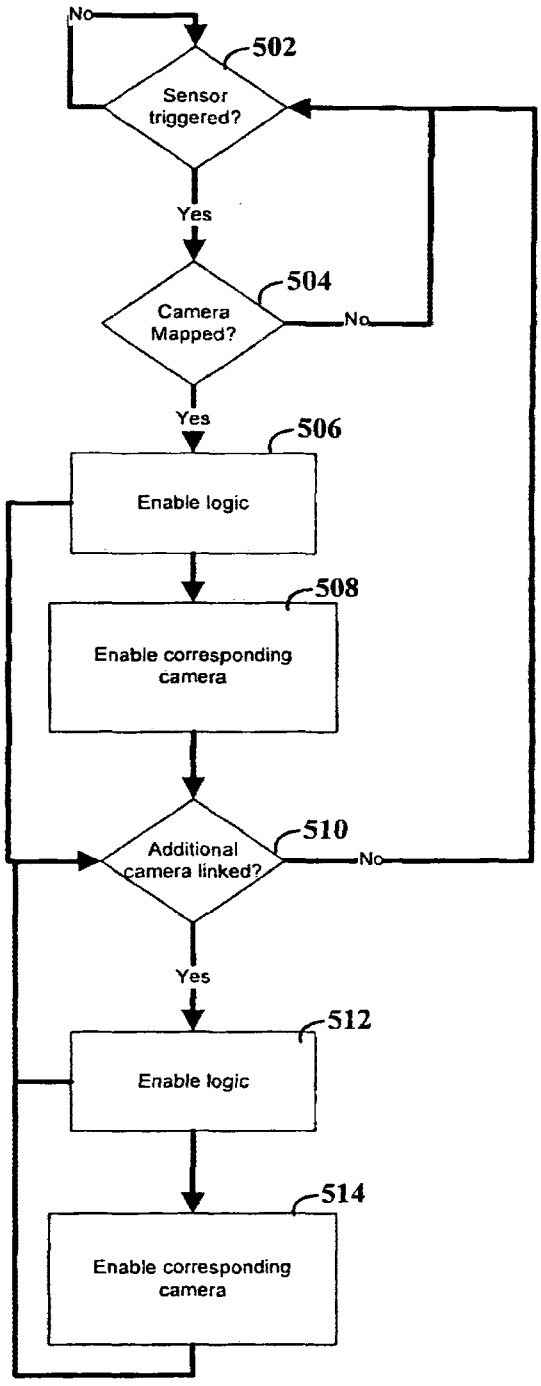

No
502
Sensor triggered?
Yes
504
Camera Mapped?
No
Yes
506
Enable logic
508
Enable corresponding camera
510
Additional camera linked?
No
Yes
512
Enable logic
514
Enable corresponding camera

FIG. 5

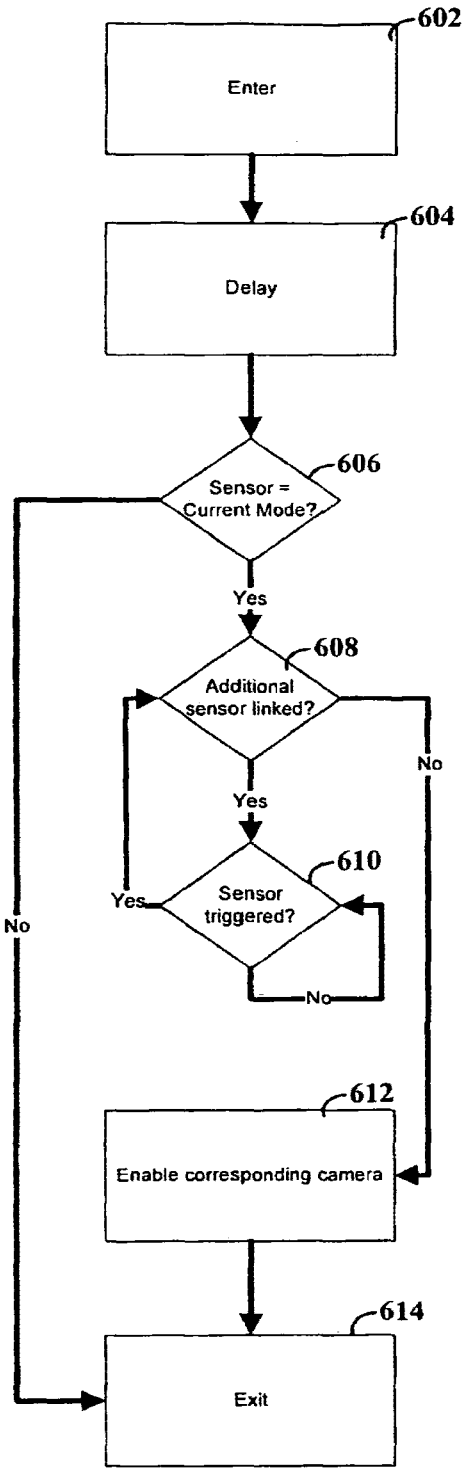

602
Enter
604
Delay
606
Sensor = Current Mode?
Yes
608
Additional sensor linked?
No
Yes
610
Sensor triggered?
Yes
No
No
612
Enable corresponding camera
614
Exit

FIG. 6

FIG. 7

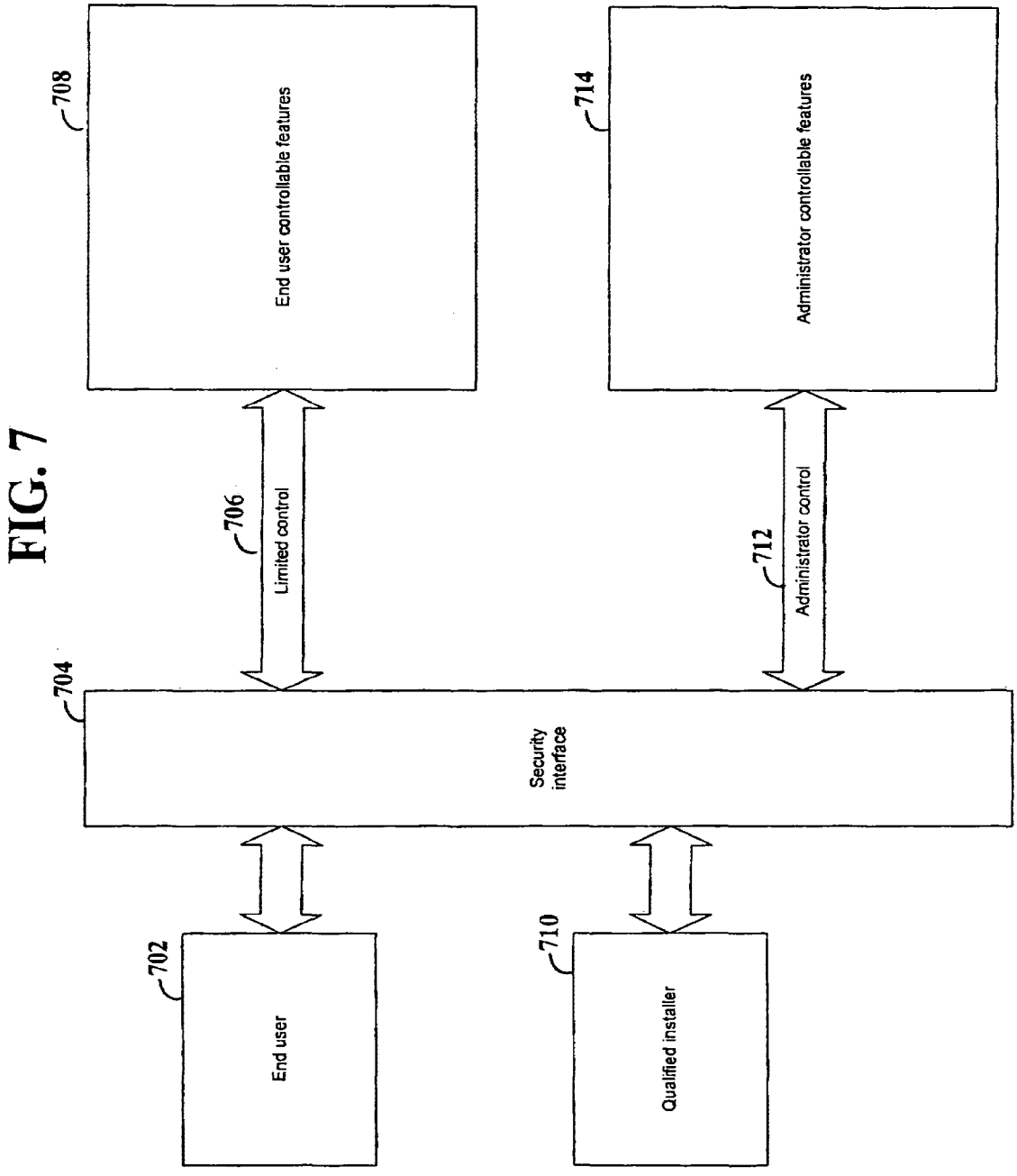

708
End user controllable features
714
Administrator controllable features
706
Limited control
712
Administrator control
704
Security interface
702
End user
710
Qualified installer

FIG. 8

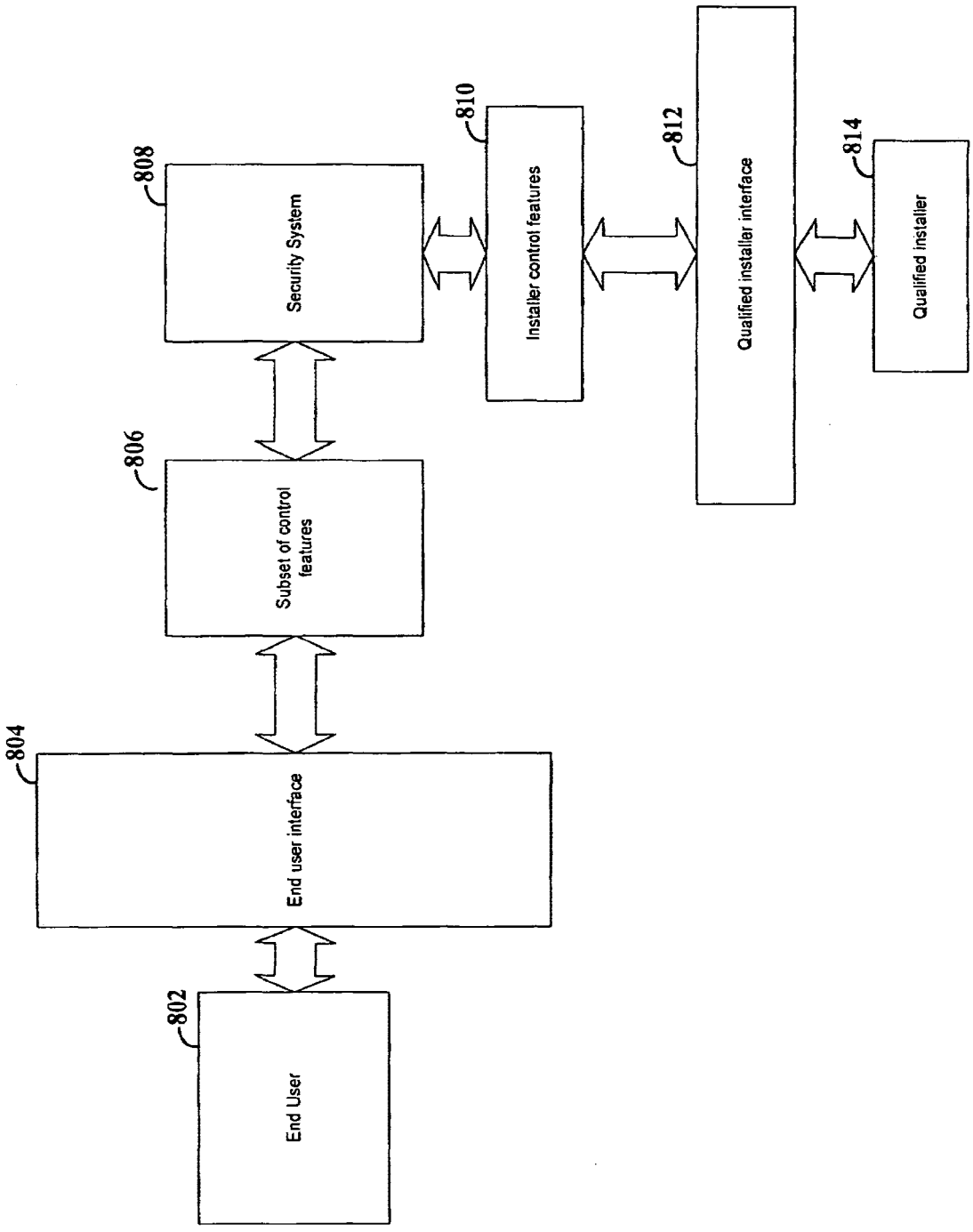
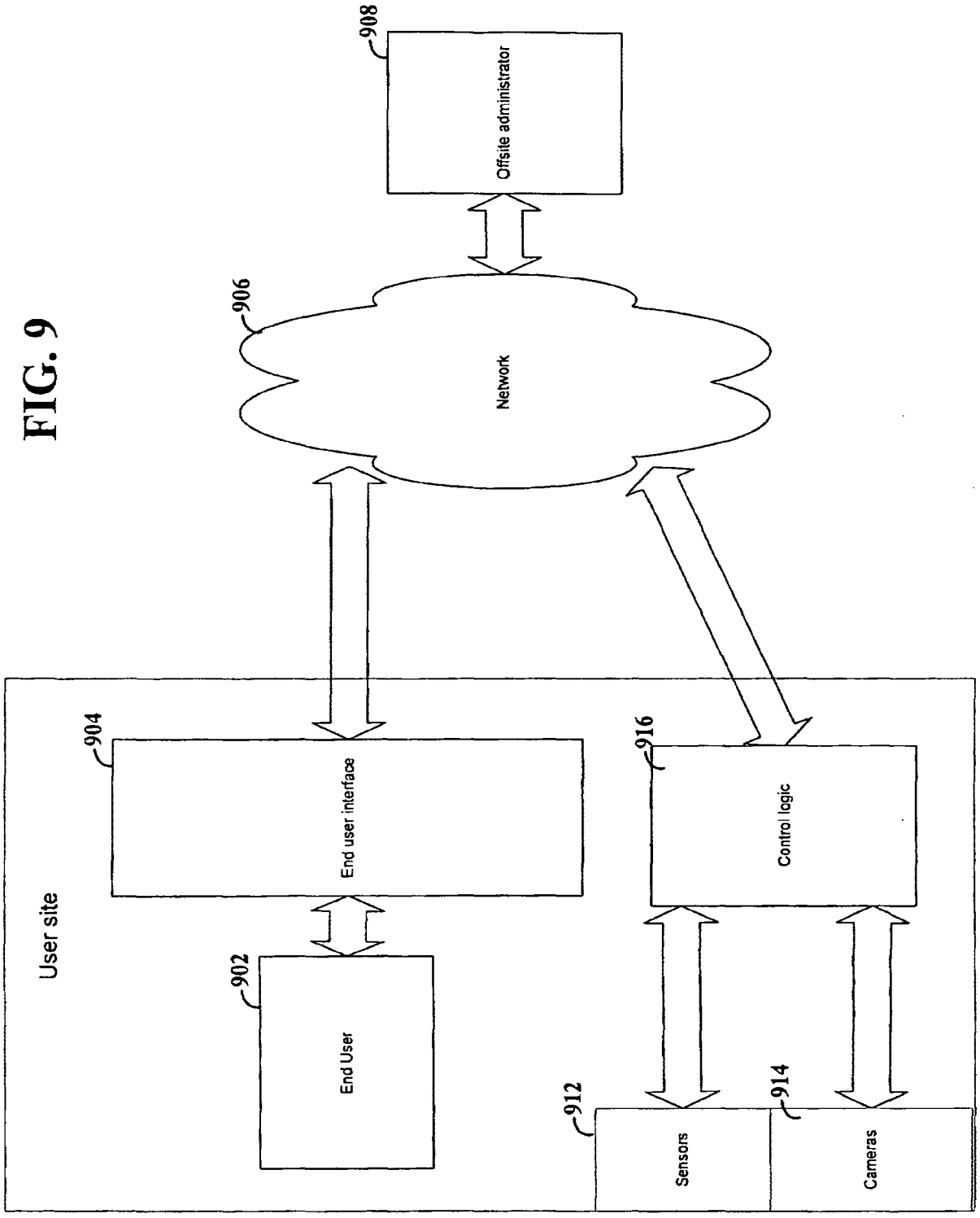

802
End User
804
End user interface
806
Subset of control features
808
Security System
810
Installer control features
812
Qualified installer interface
814
Qualified installer

FIG. 9


908
Offsite administrator
906
Network
904
End user interface
916
Control logic
User site
902
End User
912
Sensors
914
Cameras

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Gary R. Jarosik
Greenberg Traurig, LLP
77 W. Wacker Drive
Suite 3100
Chicago, Illinois 60601-1732
United States of America

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	06 MAY 2016
Applicant's or agent's file reference: 81230-921PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US16/17807	International filing date *(day/month/year)*: 12 February 2016 (12.02.2016)

Applicant: ECOLINK INTELLIGENT TECHNOLOGY, INC.

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   How? Directly to the International Bureau of WIPO preferably through ePCT or on paper to, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.
   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may **submit comments on an informal basis on the written opinion of the International Searching Authority** to the International Bureau. These comments will be made available to the public after international publication. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established.

   Shortly after the expiration of **18 months from the priority date, the international application will be published** by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90*bis*.1 and 90*bis*.3).

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for **entry into the national phase** before those designated Offices. In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months. For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

   Within **19 months from the priority date, the applicant may request that a supplementary international search be carried out** by a different International Searching Authority that offers this service (Rule 45*bis*.1). The procedure for requesting supplementary international search is described in the *PCT Applicant's Guide*, International Phase, paragraphs 8.006-8.032.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300	Authorized officer Shane Thomas Telephone No. PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2014)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 81230-921PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US16/17807	International filing date *(day/month/year)* 12 February 2016 (12.02.2016)	(Earliest) Priority Date *(day/month/year)* 23 February 2015 (23.02.2015)
Applicant ECOLINK INTELLIGENT TECHNOLOGY, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 1

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US16/17807

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G08B 29/18, 29/12, 13/08 (2016.01)
CPC - G08B 29/18, 29/185, 13/08
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): G08B 29/18, 29/12, 13/08 (2016.01)
CPC: G08B 29/18, 29/185, 29/12, 13/08

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)
PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data); Google Scholar; EBSCO; IP.com
Keywords: Prevent False Entry Barrier Door Access Window Alarm Human Occupant Detect Sensor Proximity Near

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008/0157964 A1 (ESKILDSEN, K et al.) 03 July 2008, abstract, figures 1, 2, 3, paragraphs [0016], [0017], [0019]-[0021], [0026]-[0028], claim 6.	1, 12
Y		2-6, 8-11, 13-17
A		19, 20
Y	WO 2007/111802 A2 to (RSIALARM, INC.) 04 October 2007, column 5, lines 31-32, column 7, lines 13-14, column 8, lines 25-30, column 12, lines 4-6, column 13, line 11-13, lines 21-24, column 15, lines 8-10, lines 13-15, column 19, lines 24-30, figures 1, 1A.	5, 6,16,17, 8-11
A		19, 20
Y	US 2013/0257611 A1 (LAMB, M et al.) 03 October 2013, figure 4, paragraphs [0027], [0051]-[0054].	2, 3, 13, 14
Y	US 4,639,902 A (LEVERANCE, R et al.) 27 January 1987, figure 1, column 3, lines 1-5, column 5, lines 27-34, lines 57-59, lines 66-68.	4, 6, 11, 15, 17
Y	US 2004/0021778 A1 (OLDANI, J et al.) 05 February 2004, paragraph [0047].	5, 6, 10, 16, 17
A	US 2007/0132578 A1 (POWELL, M) 14 June 2007, paragraphs [0086], [0088].	7, 18
A	US 2001/0056579 A1 (KOGANE, H et al.) 27 December 2001, paragraphs [0011], [0040].	19, 20

☐ 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
"E" earlier application or patent but published on or after the international filing date
"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)
"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
"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
"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
"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
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 April 2016 (15.04.2016)	06 MAY 2016
Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (January 2015)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Gary R. Jarosik
Greenberg Traurig, LLP
77 W. Wacker Drive
Suite 3100
Chicago, Illinois 60601-1732
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	06 MAY 2016
Applicant's or agent's file reference 81230-921PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US16/17807	12 February 2016 (12.02.2016)	23 February 2015 (23.02.2015)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G08B 29/18, 29/12, 13/08 (2016.01)
CPC - G08B 29/18, 29/185, 13/08

Applicant ECOLINK INTELLIGENT TECHNOLOGY, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/	Date of completion of this opinion	Authorized officer
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300	15 April 2016 (15.04.2016)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (January 2015)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US16/17807

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a)).

3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:

   a. ☐ forming part of the international application as filed:

      ☐ in the form of an Annex C/ST.25 text file.

      ☐ on paper or in the form of an image file.

   b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.

   c. ☐ furnished subsequent to the international filing date for the purposes of international search only:

      ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).

      ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US16/17007

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	2-11, 13-20	YES
	Claims	1, 12	NO
Inventive step (IS)	Claims	7, 18-20	YES
	Claims	1-6, 8-17	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1, 12 lack novelty under PCT Article 33(2) as being anticipated by US 2008/0157964 A1 to ESKILDSEN, K et al. (hereinafter "Eskildsen").

As per claim 1, Eskildsen discloses a barrier alarm device (system for securing a structure against intrusion; abstract, figure 1), comprising: a barrier status detection device for detecting whether a barrier monitored by the barrier alarm device has been opened (door/window sensor 104 (barrier status detection device) detects the door or window is open; figure 1, paragraph [0019]); a human detection device for determining whether a human being is inside a monitored premises in proximity to the barrier (IR sensor 102 (human detection device) detects motion inside the premises near a door or window (proximity to the barrier); figure 3, paragraph [0017], claim 6); a transmitter for transmitting an alarm signal to a receiver (transceiver 106 sends (transmits) a fault signal (alarm) which is received by the control panel 112; figure 1, paragraph [0019]); a memory having processor-executable instructions stored thereon (sensor 104 coupled to processor 108 stores (memory) unique identifiers; figure 1, paragraphs [0016], [0021]); and a processor coupled to the barrier status detection device (sensor 104 (barrier status detection device) coupled to processor 108; figure 1, paragraph [0016]), the human detection device, the transmitter, and the memory for executing the processor-executable instructions that cause the barrier alarm device to: generate the alarm signal when the processor determines that the barrier has been opened based on the barrier status detection device and that a human being is not in proximity to the barrier human detection device (if no motion is detected 207 (human being not in proximity) and the door is opened 209 (barrier is open) then a fault signal 211 (alarm) is sent (transmitted) to the control panel; figure 2, paragraphs [0026], [0027], [0028]).

As per claim 12, Eskildsen discloses a method for a barrier alarm device to reduce occurrences of false alarms, comprising: determining, by a processor coupled to a barrier status detection device (sensor 104 (barrier status detection device) coupled to processor 108; figure 1, paragraph [0016]), whether a barrier monitored by the barrier alarm device has been opened (door/window sensor 104 (barrier status detection device) detects the door or window is open; figure 1, paragraph [0019]); determining, by the processor coupled to a human detection device (upon detecting motion, IR sensor 102 (human detection device) sends a signal (coupled) to processor 108; paragraph [0017]), whether a human being is inside a monitored premises in proximity to the barrier (step 207 determines whether human being is present or not within the monitored area (premises); figure 2, claim 6); and generating, by the processor, an alarm signal when the processor determines that the barrier has been opened based on the barrier status detection device and that a human being is not in proximity to the barrier human detection device (if no motion is detected 207 (human being not in proximity) and the door is opened 209 (barrier is open) then a fault signal 211 (alarm) is sent (transmitted) to the control panel; figure 2, paragraphs [0026], [0027], [0028]).

Claims 2, 3, 13, 14 lack an inventive step under PCT Article 33(3) as being obvious over Eskildsen in view of US 2013/0257611 A1 to LAMB, M et al. (hereinafter "Lamb").

As per claim 2, Eskildsen discloses the barrier alarm of claim 1. Eskildsen further discloses wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to: determine that the barrier has been opened (door/window sensor 104 detects the door or window is open; figure 1, paragraph [0019]); determine that a human being is inside the premises and in proximity to the barrier (IR sensor 102 (human detection device) detects motion inside the premises (human being inside) near a door or window (proximity to the barrier); figure 3, paragraph [0017]); in response to determining that the barrier has been opened and that a human being is inside the premises and in proximity to the barrier (Step 207 detects motion (human being inside) and step 209 determines a door (barrier) is open; figure 2). However, Eskildsen does not disclose generate a bypass signal by the processor; the bypass signal for instructing the receiver to ignore future alarm signals from the barrier alarm device; and transmit the bypass signal to the receiver. Lamb discloses generate a bypass signal by the processor (barrier alarm is placed in a bypass mode and contains a processor 400; figure 4, paragraph [0050]); the bypass signal for instructing the receiver to ignore future alarm signals from the barrier alarm device (entering bypass prevents (ignore) central controller 116 (receiver) from declaring an alarm condition occurred; paragraph [0051]); and transmit the bypass signal to the receiver (transmit a message (bypass signal) to the central controller 116 (receiver) to indicate barrier alarm is entering bypass mode; paragraph [0050]). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm of Eskildsen, by generating a bypass signal and instructing the receiver to ignore future alarms, as taught by Lamb, in order to gain the capability of allowing the user to open a barrier without sounding an alarm.

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As per claim 3, Eskildsen discloses the barrier alarm device of claim 1. However, Eskildsen does not disclose wherein the processor-executable instructions further comprise instructions that cause the barrier alarm to: determine that the barrier has been placed into a closed position; in response to determining that the barrier has been placed into the closed position, transmit a signal to the receiver indicating that the barrier is in the closed position; in response to receiving the signal by the receiver from the barrier alarm device that the barrier is in the closed position, providing a remote alarm signal to a remote monitoring station by the receiver when a future alarm signal is received by the receiver from the barrier alarm device. Lamb discloses wherein the processor-executable instructions further comprise instructions that cause the barrier alarm to: determine that the barrier has been placed into a closed position (user will close a door or window (barrier) prior to entering the normal mode; paragraph [0052]); in response to determining that the barrier has been placed into the closed position (sensor 404 and processor 400 determine that door or window (barrier) is closed; paragraph [0053]), transmit a signal to the receiver indicating that the barrier is in the closed position (barrier alarm transmits a message (signal) to the central controller 116 indicating that the barrier alarm is entering normal (barrier is closed) mode; paragraph [0054]); in response to receiving the signal by the receiver from the barrier alarm device that the barrier is in the closed position (begin monitoring messages sent by the barrier alarm in a usual manner which includes performing action if an alarm condition occurs; paragraph [0054]), providing a remote alarm signal to a remote monitoring station by the receiver when a future alarm signal is received by the receiver from the barrier alarm device (central controller 116 notifies a remote monitoring station 124 when an alarm occurs; paragraph [0027]). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by transmitting a signal to the receiver that the barrier is closed to allow future alarm signals to be received by the remote monitoring station, as taught by Lamb, in order to gain the capability of releasing the barrier alarm device from a bypass mode and continue to monitor the barriers for intrusion thereby improving the safety of the premises.

As per claim 13, Eskildsen discloses the method of claim 12. Eskildsen discloses further comprising: determining that the barrier has been opened (door/window sensor 104 detects the door or window is open; figure 1, paragraph [0019]); determining that a human being is inside the premises and in proximity to the barrier (IR sensor 102 (human detection device) detects motion inside the premises (human being inside) near a door or window (proximity to the barrier); figure 3, paragraph [0017], claim 6); in response to determining that the barrier has been opened and that a human being is inside the premises and in proximity to the barrier (Step 207 detects motion (human being inside) and step 209 determines a door (barrier) is open; figure 2). However, Eskildsen does not disclose generating a bypass signal by the processor; the bypass signal for instructing the receiver to ignore future alarm signals from the barrier alarm device; and transmitting the bypass signal to a receiver. Lamb discloses generating a bypass signal by the processor (barrier alarm is placed in a bypass mode and contains a processor 400; figure 4, paragraph [0050]); the bypass signal for instructing the receiver to ignore future alarm signals from the barrier alarm device (entering bypass prevents (ignore) central controller 116 (receiver) from declaring an alarm condition occurred; paragraph [0051]); and transmitting the bypass signal to a receiver (transmit a message (bypass signal) to the central controller 116 (receiver) to indicate barrier alarm is entering bypass mode; paragraph [0050]). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm of Eskildsen, by generating a bypass signal and instructing the receiver to ignore future alarms, as taught by Lamb, in order to gain the capability of allowing the user to open a barrier without sounding an alarm.

As per claim 14, Eskildsen discloses the method of claim 12. However, Eskildsen does not disclose further comprising: determining that the barrier has been placed into a closed position; in response to determining that the barrier has been placed into the closed position, transmitting a signal to the receiver indicating that the barrier is in the closed position; in response to receiving the signal by the receiver from the barrier alarm device that the barrier is in the closed position, providing a remote alarm signal to a remote monitoring station by the receiver when a future alarm signal is received by the receiver from the barrier alarm device. Lamb discloses further comprising: determining that the barrier has been placed into a closed position (user will close a door or window (barrier) prior to entering the normal mode; paragraph [0052]); in response to determining that the barrier has been placed into the closed position (sensor 404 and processor 400 determine that door or window (barrier) is closed; paragraph [0053]), transmitting a signal to the receiver indicating that the barrier is in the closed position (barrier alarm transmits a message (signal) to the central controller 116 indicating that the barrier alarm is entering normal (barrier is closed) mode; paragraph [0054]); in response to receiving the signal by the receiver from the barrier alarm device that the barrier is in the closed position (begin monitoring messages sent by the barrier alarm in a usual manner which includes performing action if an alarm condition occurs; paragraph [0054]), providing a remote alarm signal to a remote monitoring station by the receiver when a future alarm signal is received by the receiver from the barrier alarm device (central controller 116 notifies a remote monitoring station 124 when an alarm occurs; paragraph [0027]). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by transmitting a signal to the receiver that the barrier is closed to allow future alarm signals to be received by the remote monitoring station, as taught by Lamb, in order to gain the capability of releasing the barrier alarm device from a bypass mode and continue to monitor the barriers for intrusion thereby improving the safety of the premises..

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Claims 4, 15 lack an inventive step under PCT Article 33(3) as being obvious over Eskildsen in view of US 4,639,902 A to LEVERANCE, R et al. (hereinafter "Leverance").

As per claim 4, Eskildsen discloses the barrier alarm device of claim 1. Eskildsen further discloses determine that a human being is in proximity to the barrier (IR sensor (human detection device) monitors an area near the window or door (barrier); figure 2, paragraph [0017]). However, Eskildsen does not disclose wherein the human detection device comprises an ultrasonic transducer and an ultrasonic receiver, wherein the processor executable instructions for determining whether a human being is in proximity to the barrier comprise instructions for the barrier alarm device to: transmit ultrasonic pings by the ultrasonic transducer at predetermined time periods; determine that a human being is not inside the premises when an ultrasonic return signal is not received by the ultrasonic receiver. Leverance discloses wherein the human detection device comprises an ultrasonic transducer and an ultrasonic receiver (transmit transducer 20 and receive transducer 24 are quasi-ultrasonic detector; figure 1, column 3, lines 1-5), wherein the processor executable instructions for determining whether a human being is in proximity to the barrier comprise instructions for the barrier alarm device to: transmit ultrasonic pings by the ultrasonic transducer at predetermined time periods (ultrasonic transducer (transmitter) generates plurality of pulses (pings) at predetermined period and intervals; figure 1, column 3, 1-5, column 5, lines 57-59, 66-68); determine that a human being is not inside the premises when an ultrasonic return signal is not received by the ultrasonic receiver (receive return ultrasonic signal and compare against stored signals for an unoccupied (human being not inside) room; column 5 lines 27-34). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by transmitting and receiving using ultrasonic transducers, as taught by Leverance, in order to improve the accuracy of sensors and allow operation in bright light because the sensors are sonic based.

As per claim 15, Eskildsen discloses the method of claim 12. Eskildsen further discloses determining that a human being is in proximity to the barrier (IR sensor (human detection device) monitors an area near the window or door (barrier); figure 2, paragraph [0017]). However, Eskildsen does not disclose wherein the human detection device comprises an ultrasonic transducer and an ultrasonic receiver, wherein determining whether a human being is in proximity to the barrier comprises: transmitting ultrasonic pings by the ultrasonic transducer at predetermined time periods; determining that a human being is not inside the premises when an ultrasonic return signal is not received by the ultrasonic receiver. Leverance discloses wherein the human detection device comprises an ultrasonic transducer and an ultrasonic receiver (transmit transducer 20 and receive transducer 24 are quasi-ultrasonic detector; figure 1, column 3, lines 1-5), wherein determining whether a human being is in proximity to the barrier comprises: transmitting ultrasonic pings by the ultrasonic transducer at predetermined time periods (ultrasonic transducer (transmitter) generates plurality of pulses (pings) at predetermined period and intervals; figure 1, column 3, lines 1-5, column 5, lines 57-59, 66-68); determining that a human being is not inside the premises when an ultrasonic return signal is not received by the ultrasonic receiver (receive return ultrasonic signal and compare against stored signals for an unoccupied (human being not inside) room; column 5, lines 27-34). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by transmitting and receiving using ultrasonic transducers, as taught by Leverance, in order to improve the accuracy of sensors and allow operation in bright light because the sensors are sonic based.

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Claim 5, 16 lack an inventive step under PCT Article 33(3) as being obvious over Eskildsen in view of WO 2007/111802 A2 to RSIALARM, INC. (hereinafter "Rsialarm") further in view of US 2004/0021778 A1 OLDANI, J et al. (hereinafter "Oldani").

As per claim 5, Eskildsen discloses the barrier alarm device of claim 1. Eskildsen further discloses, wherein the processor-executable instructions for generating an alarm signal comprise instructions for the barrier alarm device to: generate a signal by the human detection device indicative of whether a human being is in proximity to the barrier or not and provide the signal to the processor (IR sensor (human detection device) monitors an area near (proximity) the window or door (barrier) and determines at step 207 if motion is detected or not (human being in proximity or not) and sends the signal to processor 108; figure 2, paragraph [0017]). However, Eskildsen does not disclose wherein the human detection device operates in a default quiescent state, wherein the processor-executable instructions for generating an alarm signal comprise instructions for the barrier alarm device to: in response to determining that the barrier has been opened, energize the human detection device; determine that a human being is not inside the premises and in proximity to the barrier by the processor using the signal from the human detection device; and return the human detection device back to the quiescent state. Rsialarm discloses wherein the human detection device operates in a default quiescent state (camera (human detection device) remains off (quiescent state) unless triggered by motion detector; column 7, lines 13-14), wherein the processor-executable instructions for generating an alarm signal comprise instructions for the barrier alarm device to: in response to determining that the barrier has been opened (device 104 for detecting whether a window (barrier) has been opened or otherwise compromised; figure 1, column 8, lines 26-28), energize the human detection device (camera is to "ready"(energizes human detection device) mode when intrusion signal is received; column 15, lines 8-10); determine that a human being is not inside the premises and in proximity to the barrier by the processor using the signal from the human detection device (cameras record images and evaluation (processing) of images by control panel determines if source of motion is human, combination of sensor enables camera to distinguish when occupants are on vacation (human being not inside) and window is opened from outside (human being proximate to barrier); column 15, lines 13-15, column 19, lines 24-30). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by energizing the human detection device to determine human being is not inside the premises and proximate to the barrier, as taught by Rsialarm, in order to confirm that the premises are vacant and an intruder is outside the barrier therefore confirm the validity of the alarm condition and improve security. Oldani discloses return the human detection device back to the quiescent state (server turns the camera (human detection device) off; paragraph [0047]). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by returning the human detection device back to the quiescent state, as taught by Oldani, because by activating the human detection device only when necessary would save power.

As per claim 16, Eskildsen discloses the method of claim 12. Eskildsen further discloses generating a signal by the human detection device indicative of whether a human being is in proximity to the barrier or not and provide the signal to the processor (IR sensor (human detection device) monitors an area near (proximity) the window or door (barrier) and determines at step 207 if motion is detected or not (human being in proximity or not) and sends the signal to processor 108; figure 2, paragraph [0017]). However, Eskildsen does not disclose wherein the human detection device operates in a default quiescent state, wherein generating an alarm signal comprises: in response to determining that the barrier has been opened, energizing the human detection device; determining that a human being is not inside the premises and in proximity to the barrier by the processor using the signal from the human detection device; and returning the human detection device back to the quiescent state. Rsialarm discloses wherein the human detection device operates in a default quiescent state (camera (human detection device) remains off (quiescent state) unless triggered by motion detector; column 7, lines 13-14), wherein generating an alarm signal comprises: in response to determining that the barrier has been opened (device 104 for detecting whether a window (barrier) has been opened or otherwise compromised; figure 1, column 8, lines 26-28), energizing the human detection device (camera is to "ready"(energizes human detection device) mode when intrusion signal is received; column 15, lines 8-10); determining that a human being is not inside the premises and in proximity to the barrier by the processor using the signal from the human detection device (cameras record images and evaluation (processing) of images by control panel determines if source of motion is human, combination of sensor enables camera to distinguish when occupants are on vacation (human being not inside) and window is opened from outside (human being proximate to barrier); column 15, lines 13-15, column 19, lines 24-30). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by energizing the human detection device to determine human being is not inside the premises and proximate to the barrier, as taught by Rsialarm, in order to confirm that the premises are vacant and an intruder is outside the barrier therefore confirm the validity of the alarm condition and improve security. Oldani discloses returning the human detection device back to the quiescent state (server turns the camera (human detection device) off; paragraph [0047]). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by returning the human detection device back to the quiescent state, as taught by Oldani, because by activating the human detection device only when necessary would save power.

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Claims 6, 17 lacks an inventive step under PCT Article 33(3) as being obvious over Eskildsen in view of Rsialarm further in view of Oldani, further in view of Leverance.

As per claim 6, Eskildsen in view of Rsialarm further in view of Oldani discloses the barrier alarm device of claim 5. However, Eskildsen does not disclose wherein the human detection device comprises an ultrasonic transducer and an ultrasonic receiver, wherein the processor executable instructions for detecting whether a human being is inside the premises and in proximity to the barrier or not comprise instructions for causing the barrier alarm device to: transmit at least one ultrasonic ping by the ultrasonic transducer; and determine that a human being is not inside the premises and in proximity to the barrier if an ultrasonic return signal is not received by the ultrasonic receiver. Leverance discloses wherein the human detection device comprises an ultrasonic transducer and an ultrasonic receiver (transmit transducer 20 and receive transducer 24 are quasi-ultrasonic detector; figure 1, column 3, lines 1-5), wherein the processor executable instructions for detecting whether a human being is inside the premises and in proximity to the barrier or not comprise instructions for causing the barrier alarm device to: transmit at least one ultrasonic ping by the ultrasonic transducer (ultrasonic transducer (transmitter) generates plurality of pulses (pings) at predetermined period and intervals; figure 1, column 3, lines 1-5, column 3, lines 57-59, 66-68); and determine that a human being is not inside the premises if an ultrasonic return signal is not received by the ultrasonic receiver (receive return ultrasonic signal and compare against stored signals for an unoccupied (human being not inside) room; column 5, lines 27-34). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by transmitting and receiving using ultrasonic transducers, as taught by Leverance, in order to improve the accuracy of sensors and allow operation in bright light because the sensors are sonic based. Rsialarm discloses wherein determine that a human being is in proximity to the barrier (cameras record images and evaluation of images by control panel determines if source of motion is human, combination of sensor enables camera to distinguish when window is opened from outside (human being proximate to barrier); column 15, lines 13-15, column 19, lines 24-30). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by determining human being is proximate to the barrier, as taught by Rsialarm, in order to confirm an intruder is outside the barrier therefore confirm the validity of the alarm condition and improve security.

As per claim 17, Eskildsen in view of Rsialarm further in view of Oldani disclose the method of claim 16. However, Eskildsen does not disclose wherein the human detection device comprises an ultrasonic transducer and an ultrasonic receiver, wherein detecting whether a human being is inside the premises and in proximity to the barrier or not comprises: transmitting at least one ultrasonic ping by the ultrasonic transducer; and determining that a human being is not inside the premises and in proximity to the barrier if an ultrasonic return signal is not received by the ultrasonic receiver. Leverance discloses wherein the human detection device comprises an ultrasonic transducer and an ultrasonic receiver (transmit transducer 20 and receive transducer 24 are quasi-ultrasonic detector; figure 1, column 3, lines 1-5), wherein detecting whether a human being is inside the premises and in proximity to the barrier or not comprises: transmitting at least one ultrasonic ping by the ultrasonic transducer (ultrasonic transducer (transmitter) generates plurality of pulses (pings) at predetermined period and intervals; figure 1, column 3, lines 1-5, column 3, lines 57-59, 66-68); and determining that a human being is not inside the premises if an ultrasonic return signal is not received by the ultrasonic receiver (receive return ultrasonic signal and compare against stored signals for an unoccupied (human being not inside) room; column 5, lines 27-34). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by transmitting and receiving using ultrasonic transducers, as taught by Leverance, in order to improve the accuracy of sensors and allow operation in bright light because the sensors are sonic based. Rsialarm discloses wherein determine that a human being is in proximity to the barrier (cameras record images and evaluation of images by control panel determines if source of motion is human, combination of sensor enables camera to distinguish when window is opened from outside (human being proximate to barrier); column 15, lines 13-15, column 19, lines 24-30). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by determining human being is proximate to the barrier, as taught by Rsialarm, in order to confirm an intruder is outside the barrier therefore confirm the validity of the alarm condition and improve security.

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Claims 8, 9 lack an inventive step under PCT Article 33(3) as being obvious over Eskildsen in view of Rsialarm.

As per claim 8, Eskildsen discloses a system for monitoring a barrier of a premises (system for securing a structure against intrusion; figure 1, abstract), comprising: a barrier alarm device installed proximate to the barrier, comprising: a barrier status detection device for detecting whether the barrier monitored by the barrier alarm device has been opened (door/window sensor 104 (barrier status detection device) detects the door or window is open; figure 1, paragraph [0019]); a transmitter for transmitting status signals to a receiver (transceiver 106 sends (transmitter) a fault signal (alarm) received by the control panel 112; figure 1, paragraphs [0019]); a memory having processor-executable instructions stored thereon (sensor 104 coupled to processor 108 store (memory) unique identifiers; figure 1, paragraphs [0016], [0021]); and a processor coupled to the barrier status detection device (sensor 104 (barrier status detection device) coupled to processor 108; figure 1, paragraph [0016]), the human detection device, the transmitter, and the memory for executing the processor executable instructions that cause the barrier alarm device to: determine a barrier status as being open or closed using signals provided by the barrier status detection device (door/window sensor 104 (barrier status detection device) at step 209 determines if the door (barrier) is open or not; figure 2, paragraph [0019]); determine a human being status as being inside the premises in proximity to the monitored barrier or not using signals from the human detection device; transmit a barrier status signal to the receiver (RF transceiver 106 is used to transmit fault signal (barrier status signal) to the control panel (receiver) when sensor 104 detects door/window is open; paragraph [0019]); and transmit a human status signal to the receiver (IR sensor 102 (human detection device) housed separately transmits motion signal (human status signal) to the control panel (receiver); paragraph [0020]); the receiver for receiving the barrier status signal and the human status signal and for generating an alarm signal if the receiver determines that the barrier has been opened from the barrier status signal , and a human being is not in proximity to the barrier from the human status signal (control panel 112 considers signals received from door/window sensor (barrier status) and corresponding motion sensor (human detection), if no motion is detected 207 (human being not in proximity) and the door is opened 209 (barrier is open) then a fault signal 211 (alarm) is raised; figure 2, paragraphs [0022], [0026], [0027], [0028]). However, Eskildsen does not disclose a human detection device for determining whether a human being is inside the premises in proximity to the monitored barrier or not. Rsialarm discloses a human detection device for determining whether a human being is inside the premises in proximity to the monitored barrier or not (cameras record images and evaluation of images by control panel determines if source of motion is human, combination of sensor enables camera to distinguish when occupants are on vacation (human being not inside) and window is opened from outside (human being proximate to barrier); column 15, lines 13-15, column 19, lines 24-30). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the system for monitoring a barrier of a premises of Eskildsen, by determining a human being is inside the premises in proximity to the barrier or not, as taught by Rsialarm, in order to confirm the presence of an intruder outside the barrier of vacant premises, therefore confirm the validity of the alarm condition and improve security.

As per claim 9, Eskildsen in view of Rsialarm discloses the system of claim 8. Eskildsen further discloses wherein the receiver is further configured to send the alarm signal to a remote monitoring station (If a fault signal (alarm) is received by the control panel (receiver) it is processed accordingly and sent to a remote monitoring station; paragraph [0017]).

Claim 10 lacks an inventive step under PCT Article 33(3) as being obvious over Eskildsen in view of Rsialarm and in further in view of Oldani.

As per claim 10, Eskildsen in view of Rsialarm discloses the system of claim 8. Eskildsen further discloses generate a signal by the human detection device indicative of whether a human being is in proximity to the barrier or not and provide the signal to the processor (IR sensor (human detection device) monitors an area near (proximity) the window or door (barrier) and determines at step 207 if motion is detected or not (human being in proximity or not) and sends the signal to processor 108; figure 2, paragraph [0017]). However, Eskildsen does not disclose wherein the human detection device operates in a default quiescent state, wherein the processor-executable instructions for determining whether a human being is inside the monitored premises in proximity to the barrier or not comprise instructions for the barrier alarm device to: in response to determining that the barrier has been opened, energize the human detection device; determine that a human being is not in proximity to the barrier by the processor using the signal from the human detection device; and return the human detection device back to the quiescent state. Rsialarm discloses wherein the human detection device operates in a default quiescent state (camera (human detection device) remains off (quiescent state) unless triggered by motion detector; column 7, lines 13-14), wherein the processor-executable instructions for determining whether a human being is inside the monitored premises in proximity to the barrier or not comprise instructions for the barrier alarm device to: in response to determining that the barrier has been opened (device 104 for detecting whether a window (barrier) has been opened or otherwise compromised; figure 1, column 8, lines 26-28), energize the human detection device (camera is to "ready"(energizes human detection device) mode when intrusion signal is received; column 15, lines 8-10); generate a signal by the human detection device indicative of whether a human being is in proximity to the barrier or not and provide the signal to the processor (images recorded by camera (human detection device) which may be integrated within base unit 35 communicates via sensor communication (signal) path 40 with central control panel (processor) to determine presence of human being in proximity to barrier; figure 1A, column 12, lines 4-6, column 15, lines 13-15); determine that a human being is not in proximity to the barrier by the processor using the signal from the human detection device (combination of sensor enables camera to distinguish when occupants are on vacation (human being not inside) and window is opened from outside (human being proximate to barrier); column 15, lines 13-15, column 19, lines 24-30). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by energizing the human detection device to determine human being is not inside the premises and proximate to the barrier, as taught by Rsialarm, in order to confirm that the premises are vacant and an intruder is outside the barrier therefore confirm the validity of the alarm condition and improve security. Oldani discloses return the human detection device back to the quiescent state (server turn the camera off; paragraph [0047]). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by returning the human detection device back to the quiescent state, as taught by Oldani, because by activating the human detection device only when necessary would save power.

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Claim 11 lacks an inventive step under PCT Article 33(3) as being obvious over Eskildsen in view of Rsialarm further in view of Leverance.

As per claim 11, Eskildsen in view of Rsialarm discloses the system of claim 8. However, Eskildsen does not disclose wherein the human detection device comprises an ultrasonic transducer and an ultrasonic receiver, wherein the processor-executable instructions for detecting whether a human being is inside the premises and in proximity to the barrier or not comprise instructions for causing the barrier alarm device to: transmit at least one ultrasonic ping by the ultrasonic transducer; and determine that a human being is not in proximity to the barrier if an ultrasonic return signal is not received by the ultrasonic receiver. Leverance discloses wherein the human detection device comprises an ultrasonic transducer and an ultrasonic receiver (transmit transducer 20 and receive transducer 24 are quasi-ultrasonic detector; figure 1, column 3, lines 1-5), wherein the processor-executable instructions for detecting whether a human being is inside the premises and in proximity to the barrier or not comprise instructions for causing the barrier alarm device to: transmit at least one ultrasonic ping by the ultrasonic transducer (ultrasonic transducer (transmitter) generates plurality of pulses (pings) at predetermined period and intervals; figure 1, column 3, lines 1-5, column 3, lines 57-59, 66-68); and determine that a human being is not in proximity to the barrier if an ultrasonic return signal is not received by the ultrasonic receiver (receive return ultrasonic signal and compare against stored signals for an unoccupied (human being not proximal to barrier) room; column 5 lines 27-34). It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have modified the barrier alarm device of Eskildsen, by transmitting and receiving using ultrasonic transducers, as taught by Leverance, in order to improve the accuracy of sensors and allow operation in bright light because the sensors are sonic based.

Claim 7 meets the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest, the barrier alarm device wherein generate a signal indicative of the capacitance and provide it to the processor; and determine that a human being is not in proximity to the barrier if the signal from the capacitance sensor indicates no change in detected capacitance.

In the closest prior art, US 2007/0132578 A1 to Powell, M (hereinafter "Powell") discloses wherein the human detection device comprises a capacitance sensor (body proximity sensor 30 (human detection device) senses child unit 12 has separated from a child's body; paragraph [0086]), detect a change in capacitance by the capacitance detector (change in capacitance is detected; paragraph [0086]); generate a signal indicative of the capacitance and provide it to the processor (value of time constant Tc indicates to the microprocessor the separation of the child unit 12 from the child; paragraph [0088]); and determine that a human being is not in proximity if the signal from the capacitance sensor indicates no change in detected capacitance (capacitance C decreases when the body proximity sensor is not in proximity to the body; paragraph [0086]).

Powell and the reference of record fail to disclose the barrier alarm device wherein the human detection device comprises a capacitance sensor, wherein the processor-executable instructions for determining whether a human being is inside the monitored premises in proximity to the barrier or not comprise instructions for the barrier alarm device to: detect a change in capacitance by the capacitance detector; generate a signal indicative of the capacitance and provide it to the processor; and determine that a human being is not in proximity to the barrier if the signal from the capacitance sensor indicates no change in detected capacitance. Although Powell discloses a human detection device comprising a capacitance sensor it fails to disclose providing the signal to a processor and determine that a human being is not in proximity to the barrier if the signal from the capacitance sensor indicates no change in detected capacitance. It would not have been obvious to one of ordinary skill in the art at the time the invention was made to have employed these instructions, because the references taken solely, or in combination, fail to provide the required limitations, and modification of any complementary combination of the references of record would be impermissible and not provide any advantages over the present application.

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US16/17807

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

-***-Continued from Previous Supplemental Box-***-

Claim 18 meets the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest, the barrier alarm device wherein generate a signal indicative of the capacitance and provide it to the processor; and determine that a human being is not in proximity to the barrier if the signal from the capacitance sensor indicates no change in detected capacitance.

In the closest prior art, Powell discloses wherein the human detection device comprises a capacitance sensor (body proximity sensor 30 (human detection device) senses child unit 12 has separated from a child's body; paragraph [0086]), detecting a change in capacitance by the capacitance detector (change in capacitance is detected; paragraph [0086]); generating a signal indicative of the capacitance and provide it to the processor (value of time constant Tc indicates to the microprocessor the separation of the child unit 12 from the child; paragraph [0088]); and determining that a human being is not in proximity if the signal from the capacitance sensor indicates no change in detected capacitance (capacitance C decreases when the body proximity sensor is not in proximity to the body; paragraph [0086]).

Powell and the reference of record fail to disclose the barrier alarm device, wherein the human detection device comprises a capacitance sensor, wherein determining whether a human being is inside the monitored premises in proximity to the barrier or not comprises: detecting a change in capacitance by the capacitance detector; generating a signal indicative of the capacitance and provide it to the processor; and determining that a human being is not in proximity to the barrier if the signal from the capacitance sensor indicates no change in detected capacitance. Although Powell discloses a human detection device comprising a capacitance sensor it fails to disclose providing the signal to a processor and determine that a human being is not in proximity to the barrier if the signal from the capacitance sensor indicates no change in detected capacitance. It would not have been obvious to one of ordinary skill in the art at the time the invention was made to have employed these instructions, because the references taken solely, or in combination, fail to provide the required limitations, and modification of any complementary combination of the references of record would be impermissible and not provide any advantages over the present application.

Claim 19 meets the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest, a system for monitoring a barrier of a premises, comprising the receiver for forwarding the barrier status signal and the human status signal to a remote server, the remote server for generating an alarm signal if the remote server determines that the barrier has been opened from the barrier status signal, and a human being is not in proximity to the barrier from the human status signal.

In the closest prior art, Eskildsen discloses a system for monitoring a barrier of a premises (system for securing a structure against intrusion; figure 1, abstract), comprising: a barrier alarm device installed proximate to the barrier (four components of present invention (barrier alarm device) for monitoring a door or window; figure 1), comprising: a barrier status detection device for detecting whether the barrier monitored by the barrier alarm device has been opened (door/window sensor 104 (barrier status detection device) detects the door or window is open; figure 1, paragraph [0019]); a transmitter for transmitting status signals to a receiver (transceiver 106 sends (transmitter) a fault signal, received by the control panel 112; figure 1, paragraphs [0019], [0022]); a memory having processor-executable instructions stored thereon (sensor 104 coupled to processor 108 store (memory) unique identifiers; figure 1, paragraphs [0016], [0021]); and a processor coupled to the barrier status detection device (sensor 104 (barrier status detection device) coupled to processor 108; figure 1, paragraph [0016]), the human detection device, the transmitter, and the memory for executing the processor executable instructions that cause the barrier alarm device to: determine a barrier status as being open or closed using signals provided by the barrier status detection device (step 209 determines if a door is open or not based on door/window sensor 104 (barrier status detection device); figures 1, 2, paragraph [0019]); transmit a barrier status signal to the receiver (RF transceiver 106 is used to transmit fault signal (barrier status signal) to the control panel (receiver) when sensor 104 detects door/window is open; paragraph [0019]); and transmit a human status signal to the receiver (IR sensor 102 (human detection device) housed separately transmits motion signal (human status signal) to the control panel (receiver); paragraph [0020]), the receiver for receiving the barrier status signal and the human status signal (control panel 112 receives door/window sensor (barrier status) and motion sensor (human detection) signals; paragraph [0022]).

In additional prior art, Rsialarm discloses determine a human being status as being inside the premises in proximity to the monitored barrier or not using signals from the human detection device (combination of sensor enables camera to distinguish when occupants are on vacation (human being not inside) and window is opened from outside (human being proximate to barrier); column 15, lines 13-15, column 19, lines 24-30).

In additional prior art, US 2001/0056579 A1 to KOGANE, H et al. (hereinafter "Kogane") discloses forwarding the barrier status signal and the human status signal to a remote server for generating an alarm signal (network surveillance system transmits alarm data including sensor data to control server which transmits the alarm further; paragraphs [0011], [0040]).

Eskildsen, Rsialarm and Kogane and the reference of record fail to disclose a system for monitoring a barrier of a premises, comprising: the receiver forwarding the barrier status signal and the human status signal to a remote server, the remote server for generating an alarm signal if the remote server determines that the barrier has been opened from the barrier status signal, and a human being is not in proximity to the barrier from the human status signal. Kogane does not adequately teach forwarding the barrier and human status signals being forwarded by the receiver to a remote server. It would not have been obvious to one of ordinary skill in the art at the time the invention was made to have employed these instructions, because the references taken solely, or in combination, fail to provide the required limitations, and modification of any complementary combination of the references of record would be impermissible and not provide any advantages over the present application.

Claim 20 also meet the criteria set out in PCT Article 33(2)-(3), because it depends upon Claim 19.

Claims 1-20 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Filer:	Gary R. Jarosik/Gladys Negron-Munoz
Attorney Docket Number:	81230.921US3

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	300	300
UTILITY SEARCH FEE	1111	1	660	660
UTILITY EXAMINATION FEE	1311	1	760	760
Pages:				
Claims:				
INDEPENDENT CLAIMS IN EXCESS OF 3	1201	1	460	460
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**2180**

Electronic Acknowledgement Receipt

EFS ID:	34396240
Application Number:	16200172
International Application Number:	
Confirmation Number:	4128
Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Customer Number:	34018
Filer:	Gary R. Jarosik/Gladys Negron-Munoz
Filer Authorized By:	Gary R. Jarosik
Attorney Docket Number:	81230.921US3
Receipt Date:	26-NOV-2018
Filing Date:	
Time Stamp:	17:28:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$2180
RAM confirmation Number	112718INTEFSW00004917502428
Deposit Account	
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal of New Application	UtilityTransmittal_81230_921us3.pdf	242458 c68392d3e1732558b69ced5dc7ac1d3c3f6da9e2	no	2
Warnings:					
Information:					
2	Application Data Sheet	ADS_81230_921us3.pdf	1256147 a46cdf3cef25a1b409f6f8bba7f9e1e19e8b50d0	no	8
Warnings:					
Information:					
3	Oath or Declaration filed	Declaration_81230_921us3.pdf	578384 c1944c452c69e0246fadc3dc7fb8d1263c503bf7	no	1
Warnings:					
Information:					
4		Spec_81230_921us3.pdf	301849 e0bc597b3cc89d878f929126fa90d8e5c6fc8f43	yes	48

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Specification	1	42
Claims	43	47
Abstract	48	48

Warnings:					
Information:					
5	Drawings-only black and white line drawings	Drawings_81230_921us3.pdf	932796 92defe3e134ec5e47aa82276d5e0474f060e3117	no	15

Warnings:					
Information:					
6	Assignee showing of ownership per 37 CFR 3.73	Stat73c_81230_921us3.pdf	122768 2dce77b5f49d9c2f109f2094d08209d5dbd17392	no	4
Warnings:					
Information:					
7	Power of Attorney	ECOLINK_Executed_POA.pdf	1185496 5e0556b08bf3fa4282298d6294168c88d9ae7448	no	1
Warnings:					
Information:					
8	Information Disclosure Statement (IDS) Form (SB08)	IDS_81230_921us3.pdf	612638 67d377d630767fed822223c6312416f1fbadf797	no	5
Warnings:					
Information:					
9	Foreign Reference	ForeignRef_WO2007111802.pdf	770528 f1cfebb567886e6a63b69803b8a99c2964e4c520	no	41
Warnings:					
Information:					
10	Non Patent Literature	NPL_ISRwo_921pct.pdf	1004770 5236e8fe9439d4977f00065e5eac5d0d67f13782	no	13
Warnings:					
Information:					
11	Fee Worksheet (SB06)	fee-info.pdf	36905 1f28df80a9d555bb59e0a32a77251ccb95b43916	no	2
Warnings:					
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		Total Files Size (in bytes):	7044739		

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National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

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DocCode – SCORE

SCORE Placeholder Sheet for IFW Content

Application Number: 16200172 Document Date: 11/26/2018

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Form Revision Date: August 26, 2013

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2685
Examiner Name	
Attorney Docket Number	81230.921US3

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20150097669	A1	2015-04-09	Li	

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	16200172
	Filing Date	2018-11-26
	First Named Inventor	George Seelman
	Art Unit	2685
	Examiner Name	
	Attorney Docket Number	81230.921US3

	1		☐

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2685
Examiner Name	
Attorney Docket Number	81230.921US3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☒ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Gary R. Jarosik/	Date (YYYY-MM-DD)	2018-12-05
Name/Print	Gary R. Jarosik	Registration Number	35906

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ecolink Intelligent Technology, Inc.	)	
	)	Examiner:
Serial No.: 16/200,172	)	
	)	Group Art Unit: 2685
Filed: November 26, 2018	)	
	)	Docket No.: 81230.921US3
Title: SMART BARRIER ALARM DEVICE	)	

CERTIFICATION STATEMENT

FILED VIA EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

The Information Disclosure Statement being filed concurrently herewith should be considered because it is submitted, pursuant to 37 C.F.R. §1.97(b)(3) before the mailing of a first Office Action on the merits. Therefore, no fee is required.

Respectfully submitted,

Date: December 5, 2018

By: /Gary R. Jarosik/
Gary R. Jarosik, Reg. No. 35,906
Greenberg Traurig, LLP
77 W. Wacker Drive - Suite 3100
Chicago, Illinois 60601
(312) 456-8400

CHI 69748189v1

Certificate of Electronic Transmission: The undersigned hereby certifies that this document and its attachments are being transmitted electronically via EFS-Web to the United States Patent and Trademark Office on this 5th day of December, 2018.

By: /Cynthia Tapia/
Name: Cynthia Tapia

Electronic Acknowledgement Receipt

EFS ID:	34491477
Application Number:	16200172
International Application Number:	
Confirmation Number:	4128
Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Customer Number:	34018
Filer:	Gary R. Jarosik/Cynthia Tapia
Filer Authorized By:	Gary R. Jarosik
Attorney Docket Number:	81230.921US3
Receipt Date:	05-DEC-2018
Filing Date:	
Time Stamp:	13:34:26
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	81230_921US3IDS.pdf	152841 2571482020d641b04620a2b02cd938b171971d6f	no	5

Warnings:

Information:	
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 16/200,172

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	660
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*			OR	x 100 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1				x 460 =	460
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	2180

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
16/200,172	11/26/2018	2685	2180	81230.921US3	20	4

CONFIRMATION NO. 4128

34018
Greenberg Traurig, LLP
77 W. Wacker Drive
Suite 3100
CHICAGO, IL 60601-1732

FILING RECEIPT

OC000000104486502

Date Mailed: 12/18/2018

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

George Seelman, Temecula, CA;

Applicant(s)

ECOLINK INTELLIGENT TECHNOLOGY, INC., Carlsbad, CA;

Power of Attorney: The patent practitioners associated with Customer Number 34018

Domestic Priority data as claimed by applicant

This application is a CIP of 15/946,511 04/05/2018
which is a DIV of 14/629,370 02/23/2015 PAT 9940797 *
(*)Data provided by applicant is not consistent with PTO records.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 12/14/2018

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/200,172**

Projected Publication Date: 03/28/2019

Non-Publication Request: No

Early Publication Request: No

Title

SMART BARRIER ALARM DEVICE

Preliminary Class

340

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/200,172	11/26/2018	George Seelman	81230.921US3

CONFIRMATION NO. 4128

34018
Greenberg Traurig, LLP
77 W. Wacker Drive
Suite 3100
CHICAGO, IL 60601-1732

PUBLICATION NOTICE

OC00000106950648

Title:SMART BARRIER ALARM DEVICE

Publication No.US-2019-0096202-A1
Publication Date:03/28/2019

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6392547	B1	2002-05-21	Stewart et al.	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20130249730	A1	2013-09-26	Adcook	
	2	20070089467	A1	2007-04-26	Ace-Kirker	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	United States Patent and Trademark Office, Non-Final Office Action issued in U.S. Application No. 15/946,511, Notification Date of May 13, 2019, 7 pgs.	☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☒ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Gary R. Jarosik/	Date (YYYY-MM-DD)	2019-06-10
Name/Print	Gary R. Jarosik	Registration Number	35906

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Ecolink Intelligent Technology, Inc.	)
		)
Serial No.:	16/200,172	) Examiner: Previl, Daniel
		)
Filed:	November 26, 2018	) Group Art Unit: 2684
		)
Title:	SMART BARRIER ALARM DEVICE	) Docket No.: 81230.921US3

CERTIFICATION STATEMENT

FILED VIA EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In accordance with 37 CFR 1.704(d), each item of information contained in the Information Disclosure Statement being filed concurrently herewith: (i) was first cited in a communication from a patent office in a counterpart foreign or international application or from the Office, and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the information disclosure statement; or (ii) is a communication that was issued by a patent office in a counterpart foreign or international application or by the Office, and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the information disclosure statement.

While it is believed that no fee is required, the Commissioner is authorized to charge any fee deficiency to deposit account number 502428 in the name of Greenberg Traurig, LLP.

Respectfully submitted,

Date: June 10, 2019

By: /Gary R. Jarosik/
Gary R. Jarosik, Reg. No. 35,906
Greenberg Traurig, LLP
77 W. Wacker Drive - Suite 3100
Chicago, Illinois 60601
(312) 456-8400

ACTIVE 43869378v1

Certificate of Electronic Transmission: The undersigned hereby certifies that this document and its attachments are being transmitted electronically via EFS-Web to the United States Patent and Trademark Office on June 10, 2019.

By: /Cynthia Tapia/
Cynthia Tapia

Electronic Acknowledgement Receipt

EFS ID:	36248593
Application Number:	16200172
International Application Number:	
Confirmation Number:	4128
Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Customer Number:	34018
Filer:	Gary R. Jarosik/Cynthia Tapia
Filer Authorized By:	Gary R. Jarosik
Attorney Docket Number:	81230.921US3
Receipt Date:	10-JUN-2019
Filing Date:	26-NOV-2018
Time Stamp:	12:45:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	059489_921US3IDS.pdf	189843 b2b75733a6fdfd8c18f8b164ecb55bd6d58d6bdb	no	5

Warnings:

Information:					
This is not an USPTO supplied IDS fillable form					
2	Non Patent Literature	059489_921US3NPL.pdf	234628 6727ef29f4bc5ad51e56f2416f0804d0be1e6682	no	7
Warnings:					
Information:					
			Total Files Size (in bytes):	424471	

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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PLUS Search Results for S/N 16200172, Searched Thu Sep 19 09:04:05 EDT 2019

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

5727407 99
9940797 99
20160247370 99
20180225937 99
20190096202 99
6121864 89
20020196155 89
20140361886 89
5461364 86
3849614 85
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4843375 75

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Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/200,172	11/26/2018	George Seelman	81230.921US3	4128

34018 7590 09/26/2019

Greenberg Traurig, LLP
77 W. Wacker Drive
Suite 3100
CHICAGO, IL 60601-1732

EXAMINER
PREVIL, DANIEL

ART UNIT	PAPER NUMBER
2684	

NOTIFICATION DATE	DELIVERY MODE
09/26/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chiipmail@gtlaw.com
clairt@gtlaw.com
jarosikg@gtlaw.com

Office Action Summary	Application No. 16/200,172	Applicant(s) Seelman, George	
	Examiner DANIEL PREVIL	Art Unit 2684	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 11/26/2018.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-20 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 12-17 are rejected under 35 U.S.C. 103 as being unpatentable over Lamb et al. (US 2013/0257611) in view of Meier et al. (US 2010/0245088).

Regarding claims 1, 12, Lamb discloses a barrier alarm device (abstract), comprising: a barrier status detection device for detecting when a barrier monitored by the barrier alarm device has been opened (page 2, [0016]); a transmitter for transmitting a timed alarm signal to a receiver, the timed alarm signal for initiating a timer (scheduled time in page 5, [0048]; page 6, [0063]); a memory having processor-executable instructions stored thereon (page 1, [0011]); and a processor coupled to the barrier status detection device (page 1, [0011]), the human detection device (page 3, [0030]), the transmitter (page 5, [0048]), and the memory, for executing the processor-executable instructions that cause the barrier alarm device (page 1, [0011]) to: determine, by the processor via the barrier status detection device, that the barrier has been opened (page 2, [0025]); and transmit, by the processor via the transmitter, the timed alarm signal to the receiver when the barrier has been opened (page 5, [0048 -0049]).

Lamb discloses all the limitations set above but fails to explicitly disclose a human detection device for determining when a human being is inside a premises in proximity to the barrier; determine, by the processor via the human detection device, that a human being is inside the premises in proximity to the barrier and when a human being is inside the premises in proximity to the barrier.

However, Meier discloses a human detection device for determining when a human being is inside a premises in proximity to the barrier (page 4, [0040]); determine, by the processor via the human detection device, that a human being is inside the premises in proximity to the barrier (page 4, [0040]) and when a human being is inside the premises in proximity to the barrier (page 4, [0040]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the features of Meier within the system of Lamb in order to accurately detect the presence of a person and/or detecting some movement of an object caused by the person thereby improving the reliability of the system.

Regarding claims 2, 13, Lamb discloses wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to: determine, by the processor via the human detection device, that a human being is not inside the premises in proximity to the barrier when the barrier is opened; and transmit, by the processor via the transmitter, an immediate alarm signal to the local receiver for causing a security response to be initiated (page 1, [0009-0011]).

Regarding claims 3, 14, Lamb discloses an indicator for providing an alert to the human being when the timed alarm signal is transmitted; wherein the processor-executable instructions comprise further instructions that causes the barrier alarm device to: cause, by the processor via the indicator, the alert to be generated by the indicator when the timed alarm signal is transmitted, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response (page 5, [0048-0050]).

Regarding claims 4, 15, Lamb discloses a light-emitter, and the alert comprises a blinking light produced by the light-emitter (page 5, [0050, 0057]).

Regarding claims 5, 16, Lamb discloses wherein the indicator comprises a speaker, and the alert comprises a sound produced by the speaker (page 6, [0058]).

Regarding claims 6, 17, Lamb discloses an indicator for providing an alert to the human being when the timed alarm signal is transmitted; wherein the processor-executable instructions further comprise instructions that causes the barrier alarm device to: cause, by the processor via the indicator, the alert to be generated by the indicator, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response; and refrain, by the processor, from causing the alert to be generated by the indicator when the processor determines that a human being is not inside the premises in proximity to the barrier when the barrier is opened (page 5, [0048-0050).

Claims 7-11, 18-20 are rejected under 35 U.S.C. 103 as being unpatentable over Lamb in view of Meier and further in view of Ohtsubo et al. (US 6,542,071).

Regarding claims 7, 9, 18, 20, Lamb discloses a central security panel (fig. 1), comprising: a communication interface for receiving signals from a barrier alarm device (page 2, [0028-0029]); a memory for storing processor-executable instructions; and a processor coupled to the communication interface and the memory, for processing the processor-executable instructions that causes the central security panel (page 5, [0056-0057]) to: receive a first alarm signal from a barrier alarm device that monitors a barrier of a premises (page 5, [0050]), generate a security response; and provide the security response to a receiver via the communication interface (page 6, [0058]).

Lamb discloses all the limitations set forth above but fails to explicitly disclose the first alarm signal indicative of the barrier being opened and that a human being is inside the monitored premises and in proximity to the barrier;

in response to receiving the first alarm signal, begin monitoring an elapsed time from when the first alarm signal was received; determine, by the processor, that the elapsed time has exceeded a predetermined time; in response to determining that the elapsed time has exceeded the predetermined time, generate a security response.

However, Meier discloses the first alarm signal indicative of the barrier being opened and that a human being is inside the monitored premises and in proximity to the barrier (page 4, [0040]).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the features of Meier within the system of Lamb in order to accurately detect the presence of a person and/or detecting some movement of an object caused by the person thereby improving the reliability of the system.

Moreover, in response to receiving the first alarm signal, begin monitoring an elapsed time from when the first alarm signal was received (col. 4, lines 11-31); determine, by the processor, that the elapsed time has exceeded a predetermined time (col. 4, lines 11-31); in response to determining that the elapsed time has exceeded the predetermined time, generate a security response (col. 4, lines 11-31). Claim 18, starting a countdown timer (col. 12, lines 39-42; col. 15, lines 33-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the features of Ohtsubo within the system of Lamb and Meier in order to accurately detect the presence of a person and/or detecting some movement of an object caused by the person thereby improving the reliability of the system.

Regarding claim 8, Lamb discloses wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to: receive a second alarm signal from the barrier alarm device, the second alarm signal indicative of the barrier being opened and that a human being is not inside the monitored premises and in proximity to the barrier; in response to receiving the second signal, provide the security response to the receiver via the communication interface (fig. 2; page 2, [0024-0031]).

Regarding claim 10, Lamb discloses wherein the indicator comprises a light-emitter, and the alert comprises a blinking light produced by the light-emitter (page 5, [0050]).

Regarding claim 11, Lamb discloses wherein the indicator comprises a speaker, and the alert comprises a sound produced by the speaker (page 6, [0058]).

Regarding claim 19, Lamb discloses receiving a second alarm signal from the barrier alarm device, the second alarm signal indicative of the barrier being opened and that a human being is not inside the monitored premises and in proximity to the barrier (page 6, [0058]); in response to receiving the second signal, providing the security response to the receiver via the communication interface (page 6, [0058]).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Eskildsen et al. (US 2008/0157964) discloses wireless door contact sensor with motion sensor disable.

Hanning (US 2016/0093179) discloses alarm system for passageways.

Daniel (US 5,769,011) discloses transaction security system.

Andersen (US 5,712,621) discloses security system with variable inductance sensor.

Freebody et al. (US 2009/0309723) discloses public distress beacon and method of use thereof.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL PREVIL whose telephone number is (571)272-2971. The examiner can normally be reached on Monday-Friday from 9:30 AM -6:00 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wang Quan-Zhen can be reached on 571 272 3114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DP

September 21, 2019

/DANIEL PREVIL/
Primary Examiner, Art Unit 2684

Notice of References Cited	Application/Control No. 16/200,172	Applicant(s)/Patent Under Reexamination Seelman, George	
	Examiner DANIEL PREVIL	Art Unit 2684	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20130257611-A1	10-2013	Lamb; Michael	G08B13/02	340/501
*	B	US-20100245088-A1	09-2010	Meier; Stein Arne	G08B13/08	340/545.1
*	C	US-20090309723-A1	12-2009	Freebody; Allan P.	G08B3/10	340/545.1
*	D	US-5712621-A	01-1998	Andersen; James D.	G08B13/08	324/207.16
*	E	US-5769011-A	06-1998	Daniel; Robert R.	E05G5/02	109/2
*	F	US-20160093179-A1	03-2016	Hanning; Jeffrey L.	G08B13/1618	340/541
*	G	US-20080157964-A1	07-2008	Eskildsen; Kenneth G.	G08B29/188	340/545.1
*	H	US-6542071-B1	04-2003	Ohtsubo; Yoshinori	B60R25/2036	340/10.1
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/200,172	Seelman, George
	Examiner	**Art Unit**
	DANIEL PREVIL	2684

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/19/2019								
	1	✓								
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	17	✓								
	18	✓								
	19	✓								
	20	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/200,172	Seelman, George
	Examiner	Art Unit
	DANIEL PREVIL	2684

CPC - Searched*		
Symbol	Date	Examiner
G01S5/02 OR G01S11/06 OR G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14 OR E05B65/1026 OR E05Y2800/102 OR E05Y2900/134 OR E06B2003/343 OR E06B2003/346 OR E06B2003/406 OR E06B2003/7057 OR E06B2007/202 OR E06B3/341 OR E06B5/00 OR E06B5/125 OR E06B7/20 OR E06B9/00 OR F21Y2115/10 OR F21Y2103/00 OR F24F11/00 OR G06N5/045 OR G06Q50/22 OR G06Q10/00 OR G06Q10/06 OR G06Q10/10 OR G06Q50/165 OR G06Q50/265 OR H04M1/72538 OR H04M2250/10 OR H04M2250/52 OR H05B33/0896 OR H05B33/0845 OR H05B33/0857 OR H05B33/0866 OR H05B33/0872 OR H05B37/0218 OR H05B37/0227 OR H05B37/0245 OR H05B37/0272 OR H05B37/0281 OR A23L27/70 OR A23L27/88 OR A23L7/191 OR A61B5/00 OR A61B5/002 OR A61B5/4815 OR A61M21/00 OR A61N2005/0626 OR A61N5/0618 OR B33Y50/00 OR B60N2/002 OR B60Q9/00 OR B65D1/32 OR B65D25/42 OR B65D51/2807 OR B65D77/24 OR B65D81/32 OR B65D83/06 OR E05G5/02 OR E05G7/008 OR F21K9/232 OR F21K9/238 OR F21K9/27 OR F21K9/272 OR F21K9/278 OR F21S2/00 OR F21V23/0442 OR F21V23/06 OR G06F17/00 OR G06F17/50 OR G06F2217/04 OR G06K9/00221 OR G06K9/00369 OR G16H40/20 OR G16H40/67 OR G16H50/20 OR Y02B20/383 OR Y02B20/46 OR Y02D70/00 OR Y02D70/10 OR Y02D70/142 OR Y02D70/144 OR Y02D70/164 OR Y02D70/20 OR Y02D70/26 OR Y04S10/54	09/19/2019	DP

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/200,172	Seelman, George
	Examiner	Art Unit
	DANIEL PREVIL	2684

US Classification - Searched*			
Class	Subclass	Date	Examiner
340	545.9, 501, 541, 550, 545.1, 545.2, 547, 552, 555, 908.1, 501, 545.8	09/20/2019	DP

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Plus search, East search, Inventor search	09/20/2019	DP
CPC search	09/20/2019	DP

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2685
Examiner Name	Daniel Previl
Attorney Docket Number	81230.921US3

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/D.P/	1	20150097669	A1	2015-04-09	Li	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

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	Examiner Name	Daniel Previl
	Attorney Docket Number	81230.921US3

	1		☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/DANIEL PREVIL/	Date Considered	09/19/2019

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2685
Examiner Name	
Attorney Docket Number	81230.921US3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☒ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Gary R. Jarosik/	Date (YYYY-MM-DD)	2018-12-05
Name/Print	Gary R. Jarosik	Registration Number	35906

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ecolink Intelligent Technology, Inc.	)	
	)	Examiner:
Serial No.: 16/200,172	)	
	)	Group Art Unit: 2685
Filed: November 26, 2018	)	
	)	Docket No.: 81230.921US3
Title: SMART BARRIER ALARM DEVICE	)	

CERTIFICATION STATEMENT

FILED VIA EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

The Information Disclosure Statement being filed concurrently herewith should be considered because it is submitted, pursuant to 37 C.F.R. §1.97(b)(3) before the mailing of a first Office Action on the merits. Therefore, no fee is required.

Respectfully submitted,

Date: December 5, 2018

By: /Gary R. Jarosik/
Gary R. Jarosik, Reg. No. 35,906
Greenberg Traurig, LLP
77 W. Wacker Drive - Suite 3100
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(312) 456-8400

CHI 69748189v1

Certificate of Electronic Transmission: The undersigned hereby certifies that this document and its attachments are being transmitted electronically via EFS-Web to the United States Patent and Trademark Office on this 5th day of December, 2018.

By: /Cynthia Tapia/
Name: Cynthia Tapia

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/D.P/	1	6392547	B1	2002-05-21	Stewart et al.	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/D.P/	1	20130249730	A1	2013-09-26	Adcook	
/D.P/	2	20070089467	A1	2007-04-26	Ace-Kirker	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

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NON-PATENT LITERATURE DOCUMENTS

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.P/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
/D.P/	1	United States Patent and Trademark Office, Non-Final Office Action issued in U.S. Application No. 15/946,511, Notification Date of May 13, 2019, 7 pgs.	☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/DANIEL PREVIL/	Date Considered	09/19/2019

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.P/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☒ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Gary R. Jarosik/	Date (YYYY-MM-DD)	2019-06-10
Name/Print	Gary R. Jarosik	Registration Number	35906

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.P/

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.P/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Ecolink Intelligent Technology, Inc.	)
Serial No.:	16/200,172	) Examiner: Previl, Daniel
Filed:	November 26, 2018	) Group Art Unit: 2684
Title:	SMART BARRIER ALARM DEVICE	) Docket No.: 81230.921US3

CERTIFICATION STATEMENT

FILED VIA EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In accordance with 37 CFR 1.704(d), each item of information contained in the Information Disclosure Statement being filed concurrently herewith: (i) was first cited in a communication from a patent office in a counterpart foreign or international application or from the Office, and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the information disclosure statement; or (ii) is a communication that was issued by a patent office in a counterpart foreign or international application or by the Office, and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the information disclosure statement.

While it is believed that no fee is required, the Commissioner is authorized to charge any fee deficiency to deposit account number 502428 in the name of Greenberg Traurig, LLP.

Respectfully submitted,

Date: June 10, 2019

By: /Gary R. Jarosik/
Gary R. Jarosik, Reg. No. 35,906
Greenberg Traurig, LLP
77 W. Wacker Drive - Suite 3100
Chicago, Illinois 60601
(312) 456-8400

ACTIVE 43869378v1

Certificate of Electronic Transmission: The undersigned hereby certifies that this document and its attachments are being transmitted electronically via EFS-Web to the United States Patent and Trademark Office on June 10, 2019.

By: /Cynthia Tapia/
Cynthia Tapia

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	("9940797").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/19 15:52
L2	1	(monitor$3 or detect$3) near45 (barrier or gate or door) near55 open$3 same (baby or kid or elderly) same (inside or interior) near55 (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:15
L3	8	(monitor$3 or detect$3) same (barrier or gate or door) same (unlatch$3 or open$3) same (baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:16
L4	28	(monitor$3 or detect$3) same (barrier or gate or door) same (unlatch$3 or open$3) and (baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:29
L5	251	(sens$3 or monitor$3 or detect$3) same (barrier or gate or door) same (unlock$3 or unlatch$3 or open$3) and (inmate$1 or child or children or baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise or building or prison)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 17:24
L6	112	l5 and (timer or tim$3 near5 alarm or tim$3 near5 buzzer or tim$3 near5 alert$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 17:30
L7	111	l6 and (central near5 panel or panel or control near5 panel or controller or processor or cpu or computer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 17:32

9/ 19/ 2019 6:24:54 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"20130257611".pn. and tim$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 22:49
L2	1	"20130257611".pn. and (person or human or resident)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 22:58
L3	1	"20130257611".pn. and (blink$3 or flash$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 23:41
L4	1	"20130257611".pn. and (sound or speaker)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 23:43
L5	1	"20130257611".pn. and (elaps$3 or exceed$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/21 00:01
L6	4	(("20130257611") or ("20100245088")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:05
L7	1	l6 and (elaps$3 or exceed$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:05
L8	4585	elaps$3 near5 time near5 exceed$3 near5 predetermin$3 near5 time	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:16
L9	1	l8 and barrier near5 alarm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:17
L10	2	l8 and barrier same alarm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:17
L11	101	l8 and (gate or door or barrier) same (buzzer or beep$3 or alarm or alert$3 or warn$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:20
L12	3	l11 and human near55 detect$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:20

L13	3	l11 and human same detect$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:21
L14	16	l11 and (person or resident or intruder or human) same (detect$3 or sens$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:23

9/ 21/ 2019 12:43:37 AM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	("9940797").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/19 15:52
L2	1	(monitor$3 or detect$3) near45 (barrier or gate or door) near55 open$3 same (baby or kid or elderly) same (inside or interior) near55 (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:15
L3	8	(monitor$3 or detect$3) same (barrier or gate or door) same (unlatch$3 or open$3) same (baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:16
L4	28	(monitor$3 or detect$3) same (barrier or gate or door) same (unlatch$3 or open$3) and (baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:29
L5	251	(sens$3 or monitor$3 or detect$3) same (barrier or gate or door) same (unlock$3 or unlatch$3 or open$3) and (inmate$1 or child or children or baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise or building or prison)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 17:24
L6	112	l5 and (timer or tim$3 near5 alarm or tim$3 near5 buzzer or tim$3 near5 alert$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 17:30
L7	111	l6 and (central near5 panel or panel or control near5 panel or controller or processor or cpu or computer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 17:32
L8	20	4 AND ((G01S5/02 OR G01S11/06 OR	US-PGPUB;	OR	ON	2019/09/19

		G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14).CPC.)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			18:25
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L10	26	4 AND ((G01S5/02 OR G01S11/06 OR G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 18:26

		H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14 OR E05B65/1026 OR E05Y2800/102 OR E05Y2900/134 OR E06B2003/343 OR E06B2003/346 OR E06B2003/406 OR E06B2003/7057 OR E06B2007/202 OR E06B3/341 OR E06B5/00 OR E06B5/125 OR E06B7/20 OR E06B9/00 OR F21Y2115/10 OR F21Y2103/00 OR F24F11/00 OR G06N5/045 OR G06Q50/22 OR G06Q10/00 OR G06Q10/06 OR G06Q10/10 OR G06Q50/165 OR G06Q50/265 OR H04M1/72538 OR H04M2250/10 OR H04M2250/52 OR H05B33/0896 OR H05B33/0845 OR H05B33/0857 OR H05B33/0866 OR H05B33/0872 OR H05B37/0218 OR H05B37/0227 OR H05B37/0245 OR H05B37/0272 OR H05B37/0281 OR A23L27/70 OR A23L27/88 OR A23L7/191 OR A61B5/00 OR A61B5/002 OR A61B5/4815 OR A61M21/00 OR A61N2005/0626 OR A61N5/0618).CPC.)				
L11	28	4 AND ((G01S5/02 OR G01S11/06 OR G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14 OR E05B65/1026 OR E05Y2800/102 OR E05Y2900/134 OR E06B2003/343 OR E06B2003/346 OR E06B2003/406 OR E06B2003/7057 OR E06B2007/202 OR E06B3/341 OR E06B5/00 OR E06B5/125 OR E06B7/20 OR E06B9/00 OR F21Y2115/10 OR F21Y2103/00 OR F24F11/00 OR G06N5/045 OR G06Q50/22 OR G06Q10/00 OR G06Q10/06 OR G06Q10/10 OR G06Q50/165 OR G06Q50/265 OR H04M1/72538 OR H04M2250/10 OR H04M2250/52 OR H05B33/0896 OR H05B33/0845 OR H05B33/0857 OR H05B33/0866 OR H05B33/0872 OR H05B37/0218 OR	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 18:27

		H05B37/0227 OR H05B37/0245 OR H05B37/0272 OR H05B37/0281 OR A23L27/70 OR A23L27/88 OR A23L7/191 OR A61B5/00 OR A61B5/002 OR A61B5/4815 OR A61M21/00 OR A61N2005/0626 OR A61N5/0618 OR B33Y50/00 OR B60N2/002 OR B60Q9/00 OR B65D1/32 OR B65D25/42 OR B65D51/2807 OR B65D77/24 OR B65D81/32 OR B65D83/06 OR E05G5/02 OR E05G7/008 OR F21K9/232 OR F21K9/238 OR F21K9/27 OR F21K9/272 OR F21K9/278).CPC.)				
L12	28	4 AND ((G01S5/02 OR G01S11/06 OR G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14 OR E05B65/1026 OR E05Y2800/102 OR E05Y2900/134 OR E06B2003/343 OR E06B2003/346 OR E06B2003/406 OR E06B2003/7057 OR E06B2007/202 OR E06B3/341 OR E06B5/00 OR E06B5/125 OR E06B7/20 OR E06B9/00 OR F21Y2115/10 OR F21Y2103/00 OR F24F11/00 OR G06N5/045 OR G06Q50/22 OR G06Q10/00 OR G06Q10/06 OR G06Q10/10 OR G06Q50/165 OR G06Q50/265 OR H04M1/72538 OR H04M2250/10 OR H04M2250/52 OR H05B33/0896 OR H05B33/0845 OR H05B33/0857 OR H05B33/0866 OR H05B33/0872 OR H05B37/0218 OR H05B37/0227 OR H05B37/0245 OR H05B37/0272 OR H05B37/0281 OR A23L27/70 OR A23L27/88 OR A23L7/191 OR A61B5/00 OR A61B5/002 OR A61B5/4815 OR A61M21/00 OR A61N2005/0626 OR A61N5/0618 OR B33Y50/00 OR B60N2/002 OR B60Q9/00 OR B65D1/32 OR B65D25/42 OR B65D51/2807 OR B65D77/24 OR B65D81/32 OR B65D83/06 OR E05G5/02 OR E05G7/008 OR F21K9/232 OR F21K9/238 OR F21K9/27 OR F21K9/272 OR F21K9/278 OR F21S2/00 OR F21V23/0442 OR F21V23/06 OR G06F17/00 OR G06F17/50 OR G06F2217/04 OR G06K9/00221 OR G06K9/00369).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 18:27

L13	28	4 AND ((G01S5/02 OR G01S11/06 OR G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14 OR E05B65/1026 OR E05Y2800/102 OR E05Y2900/134 OR E06B2003/343 OR E06B2003/346 OR E06B2003/406 OR E06B2003/7057 OR E06B2007/202 OR E06B3/341 OR E06B5/00 OR E06B5/125 OR E06B7/20 OR E06B9/00 OR F21Y2115/10 OR F21Y2103/00 OR F24F11/00 OR G06N5/045 OR G06Q50/22 OR G06Q10/00 OR G06Q10/06 OR G06Q10/10 OR G06Q50/165 OR G06Q50/265 OR H04M1/72538 OR H04M2250/10 OR H04M2250/52 OR H05B33/0896 OR H05B33/0845 OR H05B33/0857 OR H05B33/0866 OR H05B33/0872 OR H05B37/0218 OR H05B37/0227 OR H05B37/0245 OR H05B37/0272 OR H05B37/0281 OR A23L27/70 OR A23L27/88 OR A23L7/191 OR A61B5/00 OR A61B5/002 OR A61B5/4815 OR A61M21/00 OR A61N2005/0626 OR A61N5/0618 OR B33Y50/00 OR B60N2/002 OR B60Q9/00 OR B65D1/32 OR B65D25/42 OR B65D51/2807 OR B65D77/24 OR B65D81/32 OR B65D83/06 OR E05G5/02 OR E05G7/008 OR F21K9/232 OR F21K9/238 OR F21K9/27 OR F21K9/272 OR F21K9/278 OR F21S2/00 OR F21V23/0442 OR F21V23/06 OR G06F17/00 OR G06F17/50 OR G06F2217/04 OR G06K9/00221 OR G06K9/00369 OR G16H40/20 OR G16H40/67 OR G16H50/20 OR Y02B20/383 OR Y02B20/46 OR Y02D70/00 OR Y02D70/10 OR Y02D70/142 OR Y02D70/144 OR Y02D70/164 OR Y02D70/20 OR Y02D70/26 OR Y04S10/54).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 18:28

9/ 19/ 2019 6:30:31 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3	("20070089467" | "20130249730" | "6392547").PN.	US-PGPUB; USPAT	OR	OFF	2019/09/19 21:37
L2	1	("20150097669").PN.	US-PGPUB; USPAT	OR	OFF	2019/09/19 21:53
L3	12	("20010056579" | "20040021778" | "20060170572" | "20070132578" | "20070182540" | "20080157964" | "20100245088" | "20130257611" | "4639902" | "5534849" | "5656900" | "6919918").PN.	US-PGPUB; USPAT	OR	OFF	2019/09/19 22:12

9/19/2019 11:25:52 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"20130257611".pn. and tim$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 22:49
L2	1	"20130257611".pn. and (person or human or resident)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 22:58
L3	1	"20130257611".pn. and (blink$3 or flash$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 23:41
L4	1	"20130257611".pn. and (sound or speaker)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 23:43
L5	1	"20130257611".pn. and (elaps$3 or exceed$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/21 00:01
L6	4	(("20130257611") or ("20100245088")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:05
L7	1	l6 and (elaps$3 or exceed$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/21 00:05

9/21/2019 12:07:59 AM

Bibliographic Data

Application No: 16/200,172

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /DANIEL PREVIL/ (Examiner's Signature) DP (Initials)

Title: SMART BARRIER ALARM DEVICE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/26/2018	340	2684	81230.921US3
RULE			

APPLICANTS

ECOLINK INTELLIGENT TECHNOLOGY, INC., Carlsbad, CA,

INVENTORS

George Seelman Temecula, CA, UNITED STATES

CONTINUING DATA

This application is a CIP of 15946511 04/05/2018

15946511 is a DIV of 14629370 02/23/2015 PAT 9940797

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

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$2,180

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	("9940797").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/19 15:52
L2	1	(monitor$3 or detect$3) near45 (barrier or gate or door) near55 open$3 same (baby or kid or elderly) same (inside or interior) near55 (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:15
L3	8	(monitor$3 or detect$3) same (barrier or gate or door) same (unlatch$3 or open$3) same (baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:16
L4	28	(monitor$3 or detect$3) same (barrier or gate or door) same (unlatch$3 or open$3) and (baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:29
L5	251	(sens$3 or monitor$3 or detect$3) same (barrier or gate or door) same (unlock$3 or unlatch$3 or open$3) and (inmate$1 or child or children or baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise or building or prison)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 17:24
L6	112	l5 and (timer or tim$3 near5 alarm or tim$3 near5 buzzer or tim$3 near5 alert$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 17:30
L7	111	l6 and (central near5 panel or panel or control near5 panel or controller or processor or cpu or computer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 17:32
L8	20	4 AND ((G01S5/02 OR G01S11/06 OR	US-PGPUB;	OR	ON	2019/09/19

		G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14).CPC.)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			18:25
L9	25	4 AND ((G01S5/02 OR G01S11/06 OR G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14 OR E05B65/1026 OR E05Y2800/102 OR E05Y2900/134 OR E06B2003/343 OR E06B2003/346 OR E06B2003/406 OR E06B2003/7057 OR E06B2007/202 OR E06B3/341 OR E06B5/00 OR E06B5/125 OR E06B7/20 OR E06B9/00 OR F21Y2115/10 OR F21Y2103/00 OR F24F11/00 OR G06N5/045 OR G06Q50/22 OR G06Q10/00 OR G06Q10/06 OR G06Q10/10 OR G06Q50/165 OR G06Q50/265 OR H04M1/72538 OR H04M2250/10 OR H04M2250/52).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 18:26
L10	26	4 AND ((G01S5/02 OR G01S11/06 OR G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 18:26

		H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14 OR E05B65/1026 OR E05Y2800/102 OR E05Y2900/134 OR E06B2003/343 OR E06B2003/346 OR E06B2003/406 OR E06B2003/7057 OR E06B2007/202 OR E06B3/341 OR E06B5/00 OR E06B5/125 OR E06B7/20 OR E06B9/00 OR F21Y2115/10 OR F21Y2103/00 OR F24F11/00 OR G06N5/045 OR G06Q50/22 OR G06Q10/00 OR G06Q10/06 OR G06Q10/10 OR G06Q50/165 OR G06Q50/265 OR H04M1/72538 OR H04M2250/10 OR H04M2250/52 OR H05B33/0896 OR H05B33/0845 OR H05B33/0857 OR H05B33/0866 OR H05B33/0872 OR H05B37/0218 OR H05B37/0227 OR H05B37/0245 OR H05B37/0272 OR H05B37/0281 OR A23L27/70 OR A23L27/88 OR A23L7/191 OR A61B5/00 OR A61B5/002 OR A61B5/4815 OR A61M21/00 OR A61N2005/0626 OR A61N5/0618).CPC.)				
L11	28	4 AND ((G01S5/02 OR G01S11/06 OR G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14 OR E05B65/1026 OR E05Y2800/102 OR E05Y2900/134 OR E06B2003/343 OR E06B2003/346 OR E06B2003/406 OR E06B2003/7057 OR E06B2007/202 OR E06B3/341 OR E06B5/00 OR E06B5/125 OR E06B7/20 OR E06B9/00 OR F21Y2115/10 OR F21Y2103/00 OR F24F11/00 OR G06N5/045 OR G06Q50/22 OR G06Q10/00 OR G06Q10/06 OR G06Q10/10 OR G06Q50/165 OR G06Q50/265 OR H04M1/72538 OR H04M2250/10 OR H04M2250/52 OR H05B33/0896 OR H05B33/0845 OR H05B33/0857 OR H05B33/0866 OR H05B33/0872 OR H05B37/0218 OR	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 18:27

		H05B37/0227 OR H05B37/0245 OR H05B37/0272 OR H05B37/0281 OR A23L27/70 OR A23L27/88 OR A23L7/191 OR A61B5/00 OR A61B5/002 OR A61B5/4815 OR A61M21/00 OR A61N2005/0626 OR A61N5/0618 OR B33Y50/00 OR B60N2/002 OR B60Q9/00 OR B65D1/32 OR B65D25/42 OR B65D51/2807 OR B65D77/24 OR B65D81/32 OR B65D83/06 OR E05G5/02 OR E05G7/008 OR F21K9/232 OR F21K9/238 OR F21K9/27 OR F21K9/272 OR F21K9/278).CPC.)				
L12	28	4 AND ((G01S5/02 OR G01S11/06 OR G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14 OR E05B65/1026 OR E05Y2800/102 OR E05Y2900/134 OR E06B2003/343 OR E06B2003/346 OR E06B2003/406 OR E06B2003/7057 OR E06B2007/202 OR E06B3/341 OR E06B5/00 OR E06B5/125 OR E06B7/20 OR E06B9/00 OR F21Y2115/10 OR F21Y2103/00 OR F24F11/00 OR G06N5/045 OR G06Q50/22 OR G06Q10/00 OR G06Q10/06 OR G06Q10/10 OR G06Q50/165 OR G06Q50/265 OR H04M1/72538 OR H04M2250/10 OR H04M2250/52 OR H05B33/0896 OR H05B33/0845 OR H05B33/0857 OR H05B33/0866 OR H05B33/0872 OR H05B37/0218 OR H05B37/0227 OR H05B37/0245 OR H05B37/0272 OR H05B37/0281 OR A23L27/70 OR A23L27/88 OR A23L7/191 OR A61B5/00 OR A61B5/002 OR A61B5/4815 OR A61M21/00 OR A61N2005/0626 OR A61N5/0618 OR B33Y50/00 OR B60N2/002 OR B60Q9/00 OR B65D1/32 OR B65D25/42 OR B65D51/2807 OR B65D77/24 OR B65D81/32 OR B65D83/06 OR E05G5/02 OR E05G7/008 OR F21K9/232 OR F21K9/238 OR F21K9/27 OR F21K9/272 OR F21K9/278 OR F21S2/00 OR F21V23/0442 OR F21V23/06 OR G06F17/00 OR G06F17/50 OR G06F2217/04 OR G06K9/00221 OR G06K9/00369).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 18:27

9/ 19/ 2019 6:28:18 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	6	human near55 detection same determin$3 near55 (intruder or human) same (room or premise or facility or building) same proximity near55 barrier	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:04
L2	27	human same detection same determin$3 same (intruder or human) same (room or premise or facility or building) same proximity same (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:06
L3	7	human same detect$3 same determin$3 same (intruder or human or burglar or child) same (inside or interior) same (room or premise or facility or building) same proximity same (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:21
L4	24	human same detect$3 same (intruder or human or burglar or child) same (inside or interior) same (room or premise or facility or building) same proximity same (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:27
L5	21	detect$3 near55 (intruder or human or burglar or child) same (inside or interior) same (room or premise or facility or building) same proximity same (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:48

9/ 20/ 2019 7:58:26 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	("9940797").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/20 00:31
L2	0	("20080157964.pn.").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/20 00:33
L3	2	("20080157964").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/20 00:33
L4	2	("20130257611").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/20 00:37
L5	2	l4 and open$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 00:46
L6	1	l4 and human	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 00:58
L7	0	l4 and inside	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 01:00
L8	0	l4 and timed near55 alarm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 01:01
L9	0	l4 and timed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 01:01
L10	1	l4 and tim$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 01:01

9/ 20/ 2019 1:05:23 AM

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	George Seelman
Art Unit	
Examiner Name	Daniel Previl
Attorney Docket Number	81230.921US3

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/D.P/	1	4639902	A	1987-01-27	Leverance et al.	
/D.P/	2	5656900	A	1997-08-12	Michel et al.	
/D.P/	3	5534849	A	1996-07-09	McDonald et al.	
/D.P/	4	6919918	B2	2005-07-19	Carretero Guerrero	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/D.P/	1	20080157964	A1	2008-07-03	Eskildsen et al.	
/D.P/	2	20130257611	A1	2013-10-03	Lamb et al.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.P/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	George Seelman
	Art Unit	
	Examiner Name	Daniel Previl
	Attorney Docket Number	81230.921US3

/D.P/	3	20040021778	A1	2004-02-05	Oldani et al.	
/D.P/	4	20070132578	A1	2007-06-14	Powell	
/D.P/	5	20010056579	A1	2001-12-27	Kogane et al.	
/D.P/	6	20070182540	A1	2007-08-09	Marman	
/D.P/	7	20100245088	A1	2010-09-30	Meier et al.	
/D.P/	8	20060170572	A1	2006-08-03	Kurachi et al.	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
/D.P/	1	2007111802	WO	A2	2007-10-04	Rsialarm, Inc.		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.P/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	George Seelman
Art Unit	
Examiner Name	Daniel Previl
Attorney Docket Number	81230.921US3

/D.P/	1	ISA/US, Int. Search Report and Written Opinion issued on PCT/US16/17807, dated May 6, 2016, 13 pages

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EXAMINER SIGNATURE

Examiner Signature	/DANIEL PREVIL/	Date Considered	09/19/2019

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.P/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	George Seelman
Art Unit	
Examiner Name	
Attorney Docket Number	81230.921US3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Gary R. Jarosik/	Date (YYYY-MM-DD)	2018-11-26
Name/Print	Gary R. Jarosik	Registration Number	35906

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.P/

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	("9940797").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/09/19 15:52
L2	1	(monitor$3 or detect$3) near45 (barrier or gate or door) near55 open$3 same (baby or kid or elderly) same (inside or interior) near55 (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:15
L3	8	(monitor$3 or detect$3) same (barrier or gate or door) same (unlatch$3 or open$3) same (baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:16
L4	28	(monitor$3 or detect$3) same (barrier or gate or door) same (unlatch$3 or open$3) and (baby or kid or elderly) same (inside or interior) same (premises or facilities or facility or premise)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/19 16:29

9/ 19/ 2019 5:22:14 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	6	human near55 detection same determin$3 near55 (intruder or human) same (room or premise or facility or building) same proximity near55 barrier	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:04
L2	27	human same detection same determin$3 same (intruder or human) same (room or premise or facility or building) same proximity same (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:06
L3	7	human same detect$3 same determin$3 same (intruder or human or burglar or child) same (inside or interior) same (room or premise or facility or building) same proximity same (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:21
L4	24	human same detect$3 same (intruder or human or burglar or child) same (inside or interior) same (room or premise or facility or building) same proximity same (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:27
L5	21	detect$3 near55 (intruder or human or burglar or child) same (inside or interior) same (room or premise or facility or building) same proximity same (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:48
L6	90	(intruder or human or burglar or child) same (inside or interior) same (room or premise or facility or building) same proximity same (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 19:59
L7	495	(intruder or human or burglar or child) same (room or premise or facility or building) same proximity same (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 20:27
L8	61	(intruder or human or burglar or child) near15 (room or premise or facility or building) near15 proximity near15 (door or window or barrier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/09/20 20:28
L9	27	detect$3 near25 (intruder or human or burglar or child) near15 (room or	US-PGPUB; USPAT;	OR	ON	2019/09/20 20:28

		premise or facility or building) near15 proximity near15 (door or window or barrier)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	16200172
	Filing Date	2018-11-26
	First Named Inventor	George Seelman
	Art Unit	2684
	Examiner Name	Previl, Daniel
	Attorney Docket Number	81230.921US3

	1	ISA/US, International Search Report and Written Opinion issued on PCT application number US19/56176, dated November 8, 2019, 9 pages

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Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☒ See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Gary R. Jarosik/	Date (YYYY-MM-DD)	2019-11-15
Name/Print	Gary R. Jarosik	Registration Number	35,906

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
GARY R. JAROSIK
GREENBERG TRAURIG, LLP
77 W. WACKER DRIVE
SUITE 3100
CHICAGO, ILLINOIS 60601
UNITED STATES OF AMERICA

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	08 NOV 2019
Applicant's or agent's file reference: 81230-921PCT3	FOR FURTHER ACTION: See paragraphs 1 and 4 below
International application No.: PCT/US2019/056176	International filing date *(day/month/year)*: 15 October 2019 (15.10.2019)
Applicant: ECOLINK INTELLIGENT TECHNOLOGY, INC.	

1. ☑ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   How? Directly to the International Bureau of WIPO preferably through ePCT or on paper to, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

   The applicant may **submit comments on an informal basis on the written opinion of the International Searching Authority** to the International Bureau. These comments will be made available to the public after international publication. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established.

   Shortly after the expiration of **18 months from the priority date, the international application will be published** by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90bis.1 and 90bis.3).

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for **entry into the national phase** before those designated Offices. In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months. For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the PCT Applicant's Guide, National Chapters.

   Within **19 months from the priority date, the applicant may request that a supplementary international search be carried out** by a different International Searching Authority that offers this service (Rule 45bis.1). The procedure for requesting supplementary international search is described in the PCT Applicant's Guide, International Phase, paragraphs 8.006-8.032.

Name and mailing address of the ISA/US: COMMISSIONER FOR PATENTS MAIL STOP PCT, ATTN: ISA/US P.O. BOX 1450 ALEXANDRIA, VA 22313-1450, UNITED STATES OF AMERICA	Authorized officer: HARRY C. KIM
Facsimile No. (571)273-8300	Telephone No. 571-272-4300

Form PCT/ISA/220 (July 2014)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference **81230-921PCT3**	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. **PCT/US2019/056176**	International filing date *(day/month/year)* **15 October 2019 (15.10.2019)**	(Earliest) Priority Date *(day/month/year)* **26 November 2018 (26.11.2018)**
Applicant **ECOLINK INTELLIGENT TECHNOLOGY, INC.**		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☑ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☑ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☑ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 15

   ☑ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2019/056176

A. CLASSIFICATION OF SUBJECT MATTER

IPC: G08B 13/08, 13/22, 19/00, 25/00; E05B 45/06
CPC: G08B 13/08, 13/22, 19/00, 25/008; E05B 45/06

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)

CPC: CPC: G08B 13/08, 13/22, 19/00, 25/008; E05B 45/06/IPC: G08B 13/08, 13/22, 19/00, 25/00;E05B 45/06

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)

US-PGPUB, USPAT, USOCR, FPRS, EPO, JPO, DERWENT, IBM_TDB: person, and, human, blink, speaker, timed, or, exceed, sound, elapse, flash, resident, detection, same, facility, barrier, intruder, proximity, window, burglar, door, interior, room, determine, near, door, premise, child, inside, warn, alarm, detect, predetermine, sound, sensor, elderly, kid, baby, gate, monitor, open, premise, unlatch, premises, buzzer, panel, controller, central, computer, children, inmate, alert

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2013/0257611 A1 (LAMB ET AL.) 03 October 2013 (03.10.2013), See entire documents.	1-6, 7-11, 12-17, and 18-20
Y	US 2010/0245088 A1 (MEIER ET AL.) 30 September 2010 (30.09.2010), See entire documents.	1-6, 7-11, 12-17, and 18-20
Y	US 6,542,071 B1 (OHTSUBO ET AL.) 01 April 2003 (01.04.2003), See entire documents.	7-11, and 18-20
A	US 2008/0157964 A1 (ESKILDSEN ET AL.) 03 July 2008 (03.07.2008), See entire documents.	1-20
A	US 2016/0093179 A1 (HANNING) 31 March 2016 (31.03.2016), See entire documents.	1-20

☑ 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
"E" earlier application or patent but published on or after the international filing date
"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)
"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
"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
"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
"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
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
05 November 2019 (05.11.2019)	08 NOV 2019
Name and mailing address of the ISA/US COMMISSIONER FOR PATENTS MAIL STOP PCT, ATTN: ISA/US P.O. BOX 1450 ALEXANDRIA, VA 22313-1450, UNITED STATES OF AMERICA Facsimile No. (571)273-8300	Authorized officer HARRY C. KIM Telephone No. 571-272-4300

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2019/056176

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,769,011 A (DANIEL) 23 June 1998 (23.06.1998) , See entire documents.	1-20
A	US 5,712,621 A (ANDERSON) 27 January 1998 (27.01.1998) , See entire documents.	1-20
A	US 2009/0309723 A1 (FREEBODY ET AL.) 17 December 2009 (17.12.2009) , See entire documents.	1-20

Form PCT/ISA/210 (second sheet) (January 2015)

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
GARY R. JAROSIK
GREENBERG TRAURIG, LLP
77 W. WACKER DRIVE
SUITE 3100
CHICAGO, ILLINOIS 60601
UNITED STATES OF AMERICA

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	08 NOV 2019
Applicant's or agent's file reference: 81230-921PCT3	FOR FURTHER ACTION: See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2019/056176	15 October 2019 (15.10.2019)	26 November 2018 (26.11.2018)

International Patent Classification (IPC) or both national classification and IPC
IPC: G08B 13/08, 13/22, 19/00, 25/00; E05B 45/06
CPC: G08B 13/08, 13/22, 19/00, 25/008; E05B 45/06

Applicant: ECOLINK INTELLIGENT TECHNOLOGY, INC.

1. This opinion contains indications relating to the following items:

- [x] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [x] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer
COMMISSIONER FOR PATENTS MAIL STOP PCT, ATTN: ISA/US P.O. BOX 1450 ALEXANDRIA, VA 22313-1450, UNITED STATES OF AMERICA	05 November 2019 (05.11.2019)	HARRY C. KIM
Facsimile No. (571)273-8300		Telephone No. 571-272-4300

Form PCT/ISA/237 (Cover sheet) (January 2015)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2019/056176

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
   - [✓] the international application in the language in which it was filed.
   - [ ] a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. [ ] This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a)).

3. [ ] With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
   - a. [ ] forming part of the international application as filed:
     - [ ] in the form of an Annex C/ST.25 text file.
     - [ ] on paper or in the form of an image file.
   - b. [ ] furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
   - c. [ ] furnished subsequent to the international filing date for the purposes of international search only:
     - [ ] in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).
     - [ ] on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).

4. [ ] In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2019/056176

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations :

---------- EXPLANATION ----------

Claims 1-6, 12-17 lacks an inventive step under PCT Article 33(3) as being obvious over Lamb et al. (US 2013/0257611) in view of Meier et al. (US 2010/0245088).

Regarding claims 1, 12, Lamb discloses a barrier alarm device (abstract), comprising: a barrier status detection device for detecting when a barrier monitored by the barrier alarm device has been opened (page 2, [0016]); a transmitter for transmitting a timed alarm signal to a receiver, the timed alarm signal for initiating a timer (scheduled time in page 5, [0048]; page 6, [0063]); a memory having processor-executable instructions stored thereon (page 1, [0011]); and a processor coupled to the barrier status detection device (page 1, [0011]), the human detection device (page 3, [0030]), the transmitter (page 5, [0048]), and the memory, for executing the processor-executable instructions that cause the barrier alarm device (page 1, [0011]) to: determine, by the processor via the barrier status detection device, that the barrier has been opened (page 2, [0025]); and transmit, by the processor via the transmitter, the timed alarm signal to the receiver when the barrier has been opened (page 5, [0048 -0049]).

Lamb discloses all the limitations set above but fails to explicitly disclose a human detection device for determining when a human being is inside a premises in proximity to the barrier; determine, by the processor via the human detection device, that a human being is inside the premises in proximity to the barrier and when a human being is inside the premises in proximity to the barrier.

However, Meier discloses a human detection device for determining when a human being is inside a premises in proximity to the barrier (page 4, [0040]); determine, by the processor via the human detection device, that a human being is inside the premises in proximity to the barrier (page 4, [0040]) and when a human being is inside the premises in proximity to the barrier (page 4, [0040]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the features of Meier within the system of Lamb in order to accurately detect the presence of a person and/or detecting some movement of an object caused by the person thereby improving the reliability of the system.

Regarding claims 2, 13, Lamb discloses wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to: determine, by the processor via the human detection device, that a human being is not inside the premises in proximity to the barrier when the barrier is opened; and transmit, by the processor via the transmitter, an immediate alarm signal to the local receiver for causing a security response to be initiated (page 1, [0009-0011]).

Regarding claims 3, 14, Lamb discloses an indicator for providing an alert to the human being when the timed alarm signal is transmitted; wherein the processor-executable instructions comprise further instructions that causes the barrier alarm device to: cause, by the processor via the indicator, the alert to be generated by the indicator when the timed alarm signal is transmitted, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response (page 5, [0048-0050]).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US2019/056176

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

Regarding claims 4, 15, Lamb discloses a light-emitter, and the alert comprises a blinking light produced by the light-emitter (page 5, [0050, 0057]).

Regarding claims 5, 16, Lamb discloses wherein the indicator comprises a speaker, and the alert comprises a sound produced by the speaker (page 6, [0058]).

Regarding claims 6, 17, Lamb discloses an indicator for providing an alert to the human being when the timed alarm signal is transmitted; wherein the processor-executable instructions further comprise instructions that causes the barrier alarm device to: cause, by the processor via the indicator, the alert to be generated by the indicator, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response; and refrain, by the processor, from causing the alert to be generated by the indicator when the processor determines that a human being is not inside the premises in proximity to the barrier when the barrier is opened (page 5, [0048-0050).

Claims 7-11, 18-20 lacks an inventive step under PCT Article 33(3) as being obvious over Lamb in view of Meier, in the prior art as applied in the immediately preceding paragraph and further in view of Ohtsubo et al. (US 6,542,071).

Regarding claims 7, 9, 18, 20, Lamb discloses a central security panel (fig. 1), comprising: a communication interface for receiving signals from a barrier alarm device (page 2, [0028-0029]); a memory for storing processor-executable instructions; and a processor coupled to the communication interface and the memory, for processing the processor-executable instructions that causes the central security panel (page 5, [0056-0057]) to: receive a first alarm signal from a barrier alarm device that monitors a barrier of a premises (page 5, [0050]), generate a security response; and provide the security response to a receiver via the communication interface (page 6, [0058]).

Lamb discloses all the limitations set forth above but fails to explicitly disclose the first alarm signal indicative of the barrier being opened and that a human being is inside the monitored premises and in proximity to the barrier;

in response to receiving the first alarm signal, begin monitoring an elapsed time from when the first alarm signal was received; determine, by the processor, that the elapsed time has exceeded a predetermined time; in response to determining that the elapsed time has exceeded the predetermined time, generate a security response.

However, Meier discloses the first alarm signal indicative of the barrier being opened and that a human being is inside the monitored premises and in proximity to the barrier (page 4, [0040]).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the features of Meier within the system of Lamb in order to accurately detect the presence of a person and/or detecting some movement of an object caused by the person thereby improving the reliability of the system.

Moreover, in response to receiving the first alarm signal, begin monitoring an elapsed time from when the first alarm signal was received (col. 4, lines 11-31); determine, by the processor, that the elapsed time has exceeded a predetermined time (col. 4, lines 11-31); in response to determining that the elapsed time has exceeded the predetermined time, generate a security response (col. 4, lines 11-31). Claim 18, starting a countdown timer (col. 12, lines 39-42; col. 15, lines 33-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the features of Ohtsubo within the system of Lamb and Meier in order to accurately detect the presence of a person and/or detecting some movement of an object caused by the person thereby improving the reliability of the system.

Regarding claim 8, Lamb discloses wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to: receive a second alarm signal from the barrier alarm device, the second alarm signal indicative of the barrier being opened and that a human being is not inside the monitored premises and in proximity to the barrier; in response to receiving the second signal, provide the security response to the receiver via the communication interface (fig. 2; page 2, [0024-0031]).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2019/056176

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement**

Regarding claim 10, Lamb discloses wherein the indicator comprises a light-emitter, and the alert comprises a blinking light produced by the light-emitter (page 5, [0050]).

Regarding claim 11, Lamb discloses wherein the indicator comprises a speaker, and the alert comprises a sound produced by the speaker (page 6, [0058]).

Regarding claim 19, Lamb discloses receiving a second alarm signal from the barrier alarm device, the second alarm signal indicative of the barrier being opened and that a human being is not inside the monitored premises and in proximity to the barrier (page 6, [0058]); in response to receiving the second signal, providing the security response to the receiver via the communication interface (page 6, [0058]).

Claims **1-20 meets** the criteria set out in PCT Article 33(4), and thus **have** industrial applicability because the subject matter claimed can be made or used in industry.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	ECOLINK INTELLIGENT TECHNOLOGY, INC.	)	
Serial No.:	16/200,172	)	Examiner: Previl, Daniel
Filed:	11/26/2018	)	Group Art Unit: 2684
Title:	SMART BARRIER ALARM DEVICE	)	Docket No.: 81230.921PCT3

CERTIFICATION STATEMENT

FILED VIA EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In accordance with 37 CFR 1.704(d), each item of information contained in the Information Disclosure Statement being filed concurrently herewith: (i) was first cited in a communication from a patent office in a counterpart foreign or international application or from the Office, and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the information disclosure statement; or (ii) is a communication that was issued by a patent office in a counterpart foreign or international application or by the Office, and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the information disclosure statement.

While it is believed that no fee is required, the Commissioner is authorized to charge any fee deficiency to deposit account number 502428 in the name of Greenberg Traurig, LLP.

Respectfully submitted,

Date: November 15, 2019

By: /Gary R. Jarosik/
Gary R. Jarosik, Reg. No. 35,906
Greenberg Traurig, LLP
77 W. Wacker Drive - Suite 3100
Chicago, Illinois 60601
(312) 456-8400

ACTIVE 40742299v1

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By: /Gladys Negron-Munoz/
Name: Gladys Negron-Munoz

Electronic Acknowledgement Receipt

EFS ID:	37768752
Application Number:	16200172
International Application Number:	
Confirmation Number:	4128
Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Customer Number:	34018
Filer:	Gary R. Jarosik/Gladys Negron-Munoz
Filer Authorized By:	Gary R. Jarosik
Attorney Docket Number:	81230.921US3
Receipt Date:	15-NOV-2019
Filing Date:	26-NOV-2018
Time Stamp:	16:23:24
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	TransmittalForm_16200172.pdf	199462 eb39155ac86e9976322205f97a40b992a78c43a	no	2

Warnings:

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	IDS_16200172.pdf	611997 099bf66d1116dfa43624de79a5d239e34e18b016	no	4
Warnings:					
Information:					
A U.S. Patent Number Citation or a U.S. Publication Number Citation is required in the Information Disclosure Statement (IDS) form for autoloading of data into USPTO systems. You may remove the form to add the required data in order to correct the Informational Message if you are citing U.S. References. If you chose not to include U.S. References, the image of the form will be processed and be made available within the Image File Wrapper (IFW) system. However, no data will be extracted from this form. Any additional data such as Foreign Patent Documents or Non Patent Literature will be manually reviewed and keyed into USPTO systems.					
3	Non Patent Literature	NPL_ISRwo_921pct3.pdf	9369611 1010f0c84d63f8413c51873baf9c45e7d0902260	no	9
Warnings:					
Information:					
4	Transmittal Letter	CertStat_16200172.pdf	91387 c4d528be183ace67e68c5c2f36a81f5230469636	no	1
Warnings:					
Information:					
			Total Files Size (in bytes):	10272457	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	

Application Number	16/200,172
Filing Date	11/26/2018
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
- ☑ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☑ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  - Certification Statement
  - NPL

Remarks

THE COMMISSIONER IS AUTHORIZED TO CHARGE ANY FEE DEFICIENCY OR CREDIT OVERPAYMENT TO DEPOSIT ACCOUNT NO. 502428 IN THE NAME OF GREENBERG TRAURIG.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Greenberg Traurig, LLP - Customer No. 34018		
Signature	/Gary R. Jarosik/		
Printed name	Gary R. Jarosik		
Date	November 15, 2019	Reg. No.	35,906

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Signature	/Gladys Negron-Munoz/		
Typed or printed name	Gladys Negron-Munoz	Date	November 15, 2019

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
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4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Lamb	) Examiner:	Previl, Daniel
		)	
Application No.:	16/200,172	) Attny Doc.:	81230.921US3
		)	
Filing Date:	November 26, 2018	) Art Unit:	2684
		)	
Title:	Smart Barrier Alarm Device	)	

RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action dated September 26, 2019, please enter the Amendment to the Claims which begins on page 2 of this paper and consider the Remarks which begin on page 9 of this paper.

The Commissioner is authorized to charge any fee deficiency to deposit account number 50-2428 in the name of Greenberg Traurig, LLP.

Certificate of Electronic Transmission: I hereby certify that this document is being transmitted electronically via EFS-Web to the U.S. Patent and Trademark Office on this 6th day of December 2019.

/Gladys Negron-Munoz/
Gladys Negron-Munoz

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior listing of claims in the subject application.

Listing of claims:

1. (Currently Amended) A barrier alarm device, comprising:

a barrier status detection device for ~~detecting when~~ indicating that a barrier monitored by the barrier alarm device has been opened;

a human detection device for ~~determining when~~ indicting that a human being is inside a premises in proximity to the barrier;

a transmitter for transmitting a timed alarm signal to a receiver associated with a security panel, the timed alarm signal for initiating a timer associated with the security panel;

a memory having processor-executable instructions stored thereon; and

a processor coupled to the barrier status detection device, the human detection device, the transmitter, and the memory, for executing the processor-executable instructions that cause the barrier alarm device to:

~~determine, by the processor via the barrier status detection device, that the barrier has been opened~~;

respond to the barrier status detection device indicating that the barrier has been opened by determining ~~determine, by the processor via~~ whether the human detection device[[,]] indicates that [[a]] the human being is inside the premises in proximity to the barrier; and

transmit, ~~by the processor~~ via the transmitter, the timed alarm signal to the receiver only when it is determined that the human detection device indicates that the ~~barrier has been opened and when a~~ human being is inside the premises in proximity to the barrier.

2. (Currently Amended) The barrier alarm of claim 1, wherein the processor-executable

instructions further comprise instructions that cause the barrier alarm device to~~: determine, by the processor via the human detection device, that a human is inside the premises in proximity to the barrier when the barrier is opened; and~~ transmit, ~~by the processor~~ via the transmitter, an immediate alarm signal to the ~~local~~ receiver for causing a security response to be initiated when it is determined that the human detection device does not indicate that the human being is inside the premises in proximity to the barrier.

3. (Currently Amended) The barrier alarm of claim 1 further comprising[[:]] an indicator, coupled to the processor, for providing an alert to the human ~~being~~ when the timed alarm signal is caused to be transmitted~~; wherein the processor-executable instructions comprise further instructions that causes the barrier alarm device to: cause, by the processor via the indicator, the alert to be generated by the indicator when the timed alarm signal is transmitted, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response~~.

4. (Original) The barrier alarm of claim 3, wherein the indicator comprises a light-emitter, and the alert comprises a blinking light produced by the light-emitter.

5. (Original) The barrier alarm of claim 3, wherein the indicator comprises a speaker, and the alert comprises a sound produced by the speaker.

6. (Canceled)

7. (Currently Amended) A central security panel, comprising:

a communication interface for receiving signals from a barrier alarm device;

a memory for storing processor-executable instructions; and

a processor coupled to the communication interface and the memory, for processing the processor-executable instructions that causes the central security panel to:

receive a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened ~~and that a human being is inside the monitored premises and in proximity to the barrier~~;

respond to the first alarm signal by determining whether a human being has been indicated to be inside the premises and in proximity to the barrier;

begin ~~monitoring~~ a measuring of an elapsed time from when the first alarm signal was received when it is determined that the human being has been indicated to be inside the premises in proximity to the barrier;

determine~~, by the processor, that~~ whether the elapsed time has exceeded a predetermined time;

~~in response to determining that the elapsed time has exceeded the predetermined time,~~ generate a security response when it is determined that the elapsed time has exceeded the predetermined time; and

provide the generated security response to a receiver via the communication interface.

8. (Currently Amended) The central security panel of claim 7, wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to~~: receive a second alarm signal from the barrier alarm device, the second alarm signal indicative of the barrier being~~

~~opened and that a human being is not inside the monitored premises and in proximity to the barrier; in response to receiving the second signal,~~ generate the security response when it is determined that the human being has not been indicated to be inside the premises in proximity to the barrier and to provide the generated security response to the receiver via the communication interface.

9. (Currently Amended) The central security panel of claim 7, further comprising:

an indicator coupled to the processor for providing an alert to the human being when the ~~timed alarm signal~~ first alarm signal is received; and

a user interface coupled to the processor for receiving user input for stopping the measuring of the elapsed time and for turning off the alert~~;~~

~~wherein the processor-executable instructions comprise further instructions that causes the central security panel to: cause, by the processor via the indicator, the alert to be generated by the indicator when timed alarm signal is received; receive, by the processor via the user interface, a cancellation signal prior to the elapsed time exceeding the predetermined time; and refrain, by the processor, from providing the security response to the receiver when the cancellation signal is received prior to the elapsed time exceeding the predetermined time~~.

10. (Original) The central security panel of claim 9, wherein the indicator comprises a light-emitter, and the alert comprises a blinking light produced by the light-emitter.

11. (Original) The central security panel of claim 9, wherein the indicator comprises a speaker, and the alert comprises a sound produced by the speaker.

12. (Currently Amended) A method ~~performed by a barrier status detection device~~, comprising:

in response to ~~determining~~ a ~~barrier monitored by the~~ barrier status detection device associated with a barrier alarm device indicating that a barrier being monitored by the barrier alarm device has been opened[[;]], determining ~~when~~ whether a human detection device associated with the barrier alarm device indicates that a human being is inside a premises monitored by a central security panel ~~and inside the premises~~ in proximity to the barrier; and

transmitting by the barrier alarm device a timed alarm signal to the central security panel for the purpose of initiating a timer associated with the central security panel only ~~a local receiver, the timed alarm signal for initiating a timer,~~ when it is determined that the human detection device indicates that the ~~barrier has been opened and a~~ human being is in inside the premises and in proximity to the barrier.

13. (Currently Amended) The method of claim 12, further comprising~~: determining that a human being is not inside the premises in proximity to the barrier when the barrier is opened; and~~ transmitting by the barrier alarm device an immediate alarm signal to the ~~local receiver~~ central security panel for causing a security response to be initiated when it is determined that the human detection device does not indicate that the human being is in inside the premises and in proximity to the barrier.

14. (Currently Amended) The method of claim 12 further comprising: generating by at least one of the barrier alarm device and the securing panel an alert when the timed alarm signal is transmitted, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response.

15. (Original) The method of claim 14, wherein the alert comprises a blinking light.

16. (Original) The method of claim 14, wherein the alert comprises a sound.

17. (Canceled)

18. (Currently Amended) A method performed by a central security panel, comprising:

receiving a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened;

responding to the first alarm signal by determining whether ~~and that~~ a human being has been indicated to be ~~is~~ inside the premises in proximity to the barrier;

~~in response to receiving the first alarm signal,~~ starting a countdown timer when it is determined that the human being has been indicted to be inside the premises in proximity to the barrier;

determining ~~that~~ whether the countdown timer has expired;

in response to determining that the countdown timer has expired, ~~generate~~ generating a security response; and

providing the generated security response to a receiver via a communication interface.

19. (Currently Amended) The method of claim 18, further comprising~~: receiving a second alarm signal from the barrier alarm device, the second alarm signal indicative of the barrier being opened and that a human being is not inside the monitored premises and in proximity to the~~

~~barrier; in response to receiving the second signal,~~ generating the security response when it is determined that the human being has not been indicated to be inside the premises in proximity ot the barrier and providing the generated security response to the receiver via the communication interface.

20. (Currently Amended) The method of claim 18, further comprising: generating ~~the~~ an alert when ~~timed alarm~~ first alarm signal is received; receiving a cancellation signal prior to the countdown timer elapsing; and refraining from providing the security response to the receiver and stopping the generation of the alert when the cancellation signal is received prior to the countdown timer elapsing.

REMARKS

In the application claims 1-5, 7-16, and 18-20 remain pending. Claims 6 and 17 have been cancelled without prejudice. The claims have been amended to better clarify what is regarded as the invention. Support for the claim amendments is found in the application as filed. No new matter has been added.

The pending claims have been rejected under 35 U.S.C. § 103 as being unpatentable over Lamb (US 2013/0257611) in view of Meier (US 2010/0245088).

The reconsideration of this rejection is respectfully requested.

In the Office Action it has been acknowledged that Lamb does not disclose, teach, or suggest a human detection device for determining whether a human being is inside a monitored premises in proximity to a barrier. (OA, pg. 3).

It is submitted that, because Lamb admittedly does not disclose, teach, or suggest a human detection device for determining whether a human being is inside a monitored premises in proximity to a barrier, Lamb must also fail to disclose, teach, or suggest:

A) a barrier alarm device that *responds to* a barrier status detection device indicating that a barrier being monitored by the barrier alarm device has been opened *by determining whether a human detection device associated with the barrier alarm device indicates that* a human being is inside a premises monitored in proximity to the barrier and a barrier alarm device that subsequently transmits *a timed alarm signal to a central security panel for the purpose of initiating a timer associated with the central security panel* only *when it is determined that the human detection device indicates that the human being is inside the premises and in proximity to the barrier* as recited in claims 1 and 12; or

B) a central security panel that *responds to a receipt of* a first alarm signal from a barrier

alarm device that monitors a barrier of a premises that is indicative of the barrier being opened *by determining whether a human being has been indicated to be inside the premises in proximity to the barrier* and a central security panel that subsequently starts a measure of a timed interval/starts a countdown timer *when it is determined that the human being has been indicted to be inside the premises in proximity to the barrier* as recited in claims 7 and 18.

Turning now to Meier, it is respectfully submitted that Meier also fails to disclose, teach, or suggest these claimed elements.

More particularly, it is respectfully submitted that Meier discloses a security control panel that *responds to* a perimeter sensor entering into a fault/bypassed condition *by reconfiguring* an interior sensor whereupon the interior sensor will cause an alarm signal to be issued by the interior sensor *after a period of time – as measured by the interior sensor - has elapsed subsequent to the interior sensor sensing an alarm condition*. (¶¶ 0008-0011, 0037, and 0049).

Accordingly, were one of skill in the art to use the teachings within Meier to modify Lamb in order to accurately detect the presence of a person and/or detecting some movement of an object caused by the person as proposed, while one of skill in the art might be led to include within the system of Lamb interior sensors that might delay the sending of an alarm signal to a control panel in the event it was determined that a barrier alarm was in a fault condition, nothing within Meier would lead one of skill in the art to use a status indication generated by a barrier alarm device and a status indication generated by a human detection device in the cooperative manner that is claimed. For at least this reason, it is respectfully submitted that the combination of Lamb and Meier cannot be said to present a *prima facie* case of obviousness with respect to the claims presented and the rejection of the claims under 35 U.S.C. § 103 must be withdrawn.

Conclusion

It is respectfully submitted that the subject application stands in condition to receive a Notice of Allowability. Such action on the part of the Office is respectfully requested.

Respectfully Submitted;

/Gary R. Jarosik/

Date: December 6, 2019

By: Gary R. Jarosik, Reg. No. 35,906
Greenberg Traurig, LLP
77 West Wacker Drive, Suite 2500
Chicago, Illinois 60601
(312) 456-8449

Electronic Acknowledgement Receipt

EFS ID:	37955413
Application Number:	16200172
International Application Number:	
Confirmation Number:	4128
Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Customer Number:	34018
Filer:	Gary R. Jarosik/Gladys Negron-Munoz
Filer Authorized By:	Gary R. Jarosik
Attorney Docket Number:	81230.921US3
Receipt Date:	06-DEC-2019
Filing Date:	26-NOV-2018
Time Stamp:	14:40:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	TransmittalForm_16200172.pdf	199070 20a0bc2840bcda6345ac69dab6f9a5eeb48c60ff	no	2

Warnings:

Information:					
2		RespOA_16200172_921us3.pdf	126072 432a83f5d8a77814fc1669e787ce6fa9e1acf5ba	yes	11

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	8
	Applicant Arguments/Remarks Made in an Amendment	9	11

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New International Application Filed with the USPTO as a Receiving Office

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Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	

Application Number	16/200,172
Filing Date	11/26/2018
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
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- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
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- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☐ Other Enclosure(s) (please Identify below):

Remarks

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Greenberg Traurig, LLP - Customer No. 34018		
Signature	/Gary R. Jarosik/		
Printed name	Gary R. Jarosik		
Date	December 6, 2019	Reg. No.	35,906

CERTIFICATE OF TRANSMISSION/MAILING

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Signature	/Gladys Negron-Munoz/		
Typed or printed name	Gladys Negron-Munoz	Date	December 6, 2019

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/200,172	Filing Date 11/26/2018	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $460 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	12/06/2019	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 18	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 4	Minus	*** 4	= 0		x $460 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/JASON B EADDY/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Lamb	) Examiner:	Previl, Daniel
		)	
Application No.:	16/200,172	) Attny Doc.:	81230.921US3
		)	
Filing Date:	November 26, 2018	) Art Unit:	2684
		)	
Title:	Smart Barrier Alarm Device	)	
		)	

RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Per the request of the Office, please enter the Amendment to the Claims which begins on page 2 of this paper and consider the Remarks which begin on page 8 of this paper.

The Commissioner is authorized to charge any fee deficiency to deposit account number 50-2428 in the name of Greenberg Traurig, LLP.

Certificate of Electronic Transmission: I hereby certify that this document is being transmitted electronically via EFS-Web to the U.S. Patent and Trademark Office on this 23rd day of January 2020.

/Gladys Negron-Munoz/
Gladys Negron-Munoz

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior listing of claims in the subject application.

Listing of claims:

1. (Currently Amended) A barrier alarm device, comprising:

a barrier status detection device for indicating that a barrier monitored by the barrier alarm device has been opened;

a human detection device for ~~indicting~~ indicating that a human being is inside a premises in proximity to the barrier;

a transmitter for transmitting a timed alarm signal to a receiver associated with a security panel, the timed alarm signal for initiating a timer associated with the security panel;

a memory having processor-executable instructions stored thereon; and

a processor coupled to the barrier status detection device, the human detection device, the transmitter, and the memory, for executing the processor-executable instructions that cause the barrier alarm device to:

respond to the barrier status detection device indicating that the barrier has been opened by determining whether the human detection device indicates that the human being is inside the premises in proximity to the barrier; and

transmit, via the transmitter, the timed alarm signal to the receiver only when it is determined that the human detection device indicates that the human being is inside the premises in proximity to the barrier.

2. (Previously Presented) The barrier alarm of claim 1, wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to transmit, via the

transmitter, an immediate alarm signal to the receiver for causing a security response to be initiated when it is determined that the human detection device does not indicate that the human being is inside the premises in proximity to the barrier.

3. (Previously Presented) The barrier alarm of claim 1 further comprising an indicator, coupled to the processor, for providing an alert to the human when the timed alarm signal is caused to be transmitted.

4. (Original) The barrier alarm of claim 3, wherein the indicator comprises a light-emitter, and the alert comprises a blinking light produced by the light-emitter.

5. (Original) The barrier alarm of claim 3, wherein the indicator comprises a speaker, and the alert comprises a sound produced by the speaker.

6. (Canceled)

7. (Previously Presented) A central security panel, comprising:

a communication interface for receiving signals from a barrier alarm device;

a memory for storing processor-executable instructions; and

a processor coupled to the communication interface and the memory, for processing the processor-executable instructions that causes the central security panel to:

receive a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened;

respond to the first alarm signal by determining whether a human being has been indicated to be inside the premises and in proximity to the barrier;

begin a measuring of an elapsed time from when the first alarm signal was received when it is determined that the human being has been indicated to be inside the premises in proximity to the barrier;

determine whether the elapsed time has exceeded a predetermined time;

generate a security response when it is determined that the elapsed time has exceeded the predetermined time; and

provide the generated security response to a receiver via the communication interface.

8. (Previously Presented) The central security panel of claim 7, wherein the processor-executable instructions further comprise instructions that cause the barrier alarm device to generate the security response when it is determined that the human being has not been indicated to be inside the premises in proximity to the barrier and to provide the generated security response to the receiver via the communication interface.

9. (Previously Presented) The central security panel of claim 7, further comprising:

an indicator coupled to the processor for providing an alert to the human being when the first alarm signal is received; and

a user interface coupled to the processor for receiving user input for stopping the measuring of the elapsed time and for turning off the alert.

10. (Original) The central security panel of claim 9, wherein the indicator comprises a light-

emitter, and the alert comprises a blinking light produced by the light-emitter.

11. (Original) The central security panel of claim 9, wherein the indicator comprises a speaker, and the alert comprises a sound produced by the speaker.

12. (Previously Presented) A method, comprising:

in response to a barrier status detection device associated with a barrier alarm device indicating that a barrier being monitored by the barrier alarm device has been opened, determining whether a human detection device associated with the barrier alarm device indicates that a human being is inside a premises monitored by a central security panel in proximity to the barrier; and

transmitting by the barrier alarm device a timed alarm signal to the central security panel for the purpose of initiating a timer associated with the central security panel only when it is determined that the human detection device indicates that the human being is in inside the premises and in proximity to the barrier.

13. (Previously Presented) The method of claim 12, further comprising transmitting by the barrier alarm device an immediate alarm signal to the central security panel for causing a security response to be initiated when it is determined that the human detection device does not indicate that the human being is in inside the premises and in proximity to the barrier.

14. (Previously Presented) The method of claim 12 further comprising: generating by at least one of the barrier alarm device and the securing panel an alert when the timed alarm signal is

transmitted, the alert indicating that a security response will be initiated after a predetermined time unless the human being performs an act to cancel the security response.

15. (Original) The method of claim 14, wherein the alert comprises a blinking light.

16. (Original) The method of claim 14, wherein the alert comprises a sound.

17. (Canceled)

18. (Currently Amended) A method performed by a central security panel, comprising:

receiving a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened;

responding to the first alarm signal by determining whether a human being has been indicated to be inside the premises in proximity to the barrier;

starting a countdown timer when it is determined that the human being has been ~~indicted~~ indicated to be inside the premises in proximity to the barrier;

determining whether the countdown timer has expired;

in response to determining that the countdown timer has expired, generating a security response; and

providing the generated security response to a receiver via a communication interface.

19. (Currently Amended) The method of claim 18, further comprising generating the security response when it is determined that the human being has not been indicated to be inside the

premises in proximity [[ot]] to the barrier and providing the generated security response to the receiver via the communication interface.

20. (Currently Amended) The method of claim 18, further comprising: generating an alert when the first alarm signal is received; receiving a cancellation signal prior to the countdown timer elapsing; and refraining from providing the security response to the receiver and stopping the generation of the alert when the cancellation signal is received prior to the countdown timer elapsing.

REMARKS

In the application claims 1-5, 7-16, and 18-20 remain pending. Claims 6 and 17 have been cancelled without prejudice.

The claims have been amended to correct typographical errors as requested by the Office.

Conclusion

It is respectfully submitted that the subject application stands in condition to receive a Notice of Allowability. Such action on the part of the Office is respectfully requested.

Respectfully Submitted;

/Gary R. Jarosik/

Date: January 23, 2020

By: Gary R. Jarosik, Reg. No. 35,906
Greenberg Traurig, LLP
77 West Wacker Drive, Suite 2500
Chicago, Illinois 60601
(312) 456-8449

Electronic Acknowledgement Receipt

EFS ID:	38381916
Application Number:	16200172
International Application Number:	
Confirmation Number:	4128
Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Customer Number:	34018
Filer:	Gary R. Jarosik/Gladys Negron-Munoz
Filer Authorized By:	Gary R. Jarosik
Attorney Docket Number:	81230.921US3
Receipt Date:	23-JAN-2020
Filing Date:	26-NOV-2018
Time Stamp:	15:49:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	TransmittalForm_16200172.pdf	198635 c0c117eb74971520e32381827a487b86383c5dce	no	2

Warnings:

Information:					
2		Resp_16200172_uei_921us3.pdf	167456 0021ee3a9fe31bc8d48a9a35bf3695b941be3cf2	yes	8

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	8

Warnings:	
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Total Files Size (in bytes):	366091

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Doc Code: TRAN.LET

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	

Application Number	16/200,172
Filing Date	11/26/2018
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Daniel Previl
Attorney Docket Number	81230.921US3

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☐ Other Enclosure(s) (please Identify below):

Remarks

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Greenberg Traurig, LLP - Customer No. 34018		
Signature	/Gary R. Jarosik/		
Printed name	Gary R. Jarosik		
Date	January 23, 2020	Reg. No.	35,906

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Typed or printed name	Gladys Negron-Munoz	Date	January 23, 2020

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PLUS Search Results for S/N 16200172, Searched Thu Jan 23 09:55:09 EST 2020

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

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PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/200,172	Filing Date 11/26/2018	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
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	☐ Application Size Fee (37 CFR 1.16(s))							
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Application Number	16200172
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First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
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Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
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(54) [Title of the invention] INFRARED HUMAN BODY DETECTING DEVICE

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[FI]
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G08B 13/19
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(21) [Application number] 09053985
(22) [Filing date] 19970221
(71) [Applicant]
[Name] HONDA DENSHI GIKEN:KK
(72) [Inventor]
[Full name] FUKUOKA HIDEKAZU

Overview Open

Scope of Claims Close

[Patent Claims]
[Claim 1]A passive type far infrared detector for detecting far infrared energy emitte d from a human body, an active near infrared detector including a light emitting ele ment and a light receiving element for detecting a change in the amount of reflected light of near infrared rays, and a control means for detecting a human body in the m onitoring area by output signals of both detectors ;A temperature sensor for detectin g ambient temperature of the detector and a temperature setting part for setting a r eference temperature to the control means are provided, and the control means com pares the ambient temperature detected by the temperature sensor with a reference temperature set by the temperature setting part, and when the ambient temperature is lower than the reference temperature, the temperature sensor is used. The infrare d human body detection device is characterized in that an output signal of the far inf rared ray detector and an output signal of the near infrared ray detector are effective ly operated, and when the ambient temperature is higher than the reference temper ature, an output signal of the far infrared ray detector is invalidated, and only an out

put signal of an output signal of the near infrared ray detector is activated.

[Claim 2]The infrared human body detection device according to claim 1, wherein wh en the ambient temperature is lower than the reference temperature, the control me ans operates by the logical product of the output signals of the two detectors.

[Claim 3]The control means sets the reference temperature as a 1 reference temper ature and sets a 2 reference temperature higher than the reference temperature, an d once the ambient temperature becomes equal to or lower than the 1 reference tem perature, the control means is used. The infrared human body detection device accor ding to claim 1 or 2, wherein, when the ambient temperature exceeds the 2 referenc e temperature, only an output signal from the near infrared ray detector is activated.

Detailed Description Close

[Detailed description of the invention]

[0001]

[Technical field of invention] The present invention relates to an infrared human bod y detection apparatus and, more particularly, to an infrared human body detection a pparatus which can accurately detect a human body without being affected by a bac kground of a monitoring region.

[0002]

[Prior art] As an example of an automatic door, a human body detection sensor is ro ughly classified into an ultrasonic sensor, an electrostatic capacitance sensor, and an infrared sensor.

[0003]Of these, an ultrasonic sensor is most inexpensive, but its directivity (extent o f spreading) is not clear, and there is a possibility that a human body other than a m onitoring area may be detected and an automatic door may be opened and closed un necessarily.

[0004]On the other hand, since the capacitance sensor is caused by electromagnetic induction coupling with the human body, the monitoring region is clear, but the elect rode plate must be buried in the floor in addition to the fact that the apparatus itself is expensive, and the application is limited exclusively in terms of cost.

[0005]

[Problem to be solved by the invention] In an infrared sensor, it is a carrier.

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While there are a working far-infrared sensor and an active infrared sensor, the pres ent invention has been recently becoming mainstream in the field of control of an au tomatic door, and has been evaluated in that it is cheaper in terms of cost than an ul trasonic sensor or a capacitive sensor, is easy to install around a door, and is capabl e of clearly setting a monitoring area.

[0006]However, since the far-infrared sensor receives infrared rays of about 10 μ m emitted by the human body and determines that the infrared ray is a human body, t he detection ability decreases in a summer season in which the temperature in the m onitoring region becomes close to the human body temperature, and in some cases, the detection capability of the human body becomes undetectable.

[0007]Further, since the near-infrared ray sensor is of a reflection type using near in frared rays having a wavelength of, for example, about 950 nm, it is detected that th ere is a human body due to the reflected light due to snow accumulation and snowfal l in a cold district or other disturbance light, and the automatic door may malfunctio n.

[0008]The present invention has been made to solve the drawbacks of the passive in frared sensor and the infrared ray sensor. To provide an infrared human body detecti ng device capable of reliably detecting a human body in a monitoring area without d etecting failure in summer and preventing erroneous detection due to reflected light and disturbance light due to snow and snow.

[0009]

[Means for solving the problem] To achieve the above object, the present invention r elates to a passive far-infrared detector for detecting far-infrared energy emitted fro m a human body, an active near-infrared detector including a light-emitting element and a light-receiving element for detecting a change in the amount of reflected near-infrared light, and a control means for detecting a human body in the monitoring regi on based on output signals from both the detectors. A temperature sensor for detecti ng ambient temperature of the detector and a temperature setting part for setting a reference temperature to the control means are provided, and the control means co mpares the ambient temperature detected by the temperature sensor with a referen ce temperature set by the temperature setting part, and when the ambient temperat ure is lower than the reference temperature, the temperature sensor is used. In this case, an output signal from the near-infrared detector is validated, and when the am bient temperature is higher than the reference temperature, an output signal of the f ar-infrared detector is invalidated, and only an output signal of an output signal of th

e near-infrared detector is activated.

[0010]The far-infrared detector detects 7.0 μ m of infrared rays (heat rays). A heat r ay of about 10 μ m is radiated from the human body, but in summer, a far infrared r ay detector becomes insufficient in sensitivity. Therefore, in the present invention, w hen a far infrared ray detector and a near-infrared ray detector are used together, th e two detectors are selectively used depending on ambient temperature.

[0011]In other words, in summer, a far infrared detector is turned off, a human bod y is detected using only a near-infrared detector (a summer operation mode), and in a winter season where snow and snow fall, a human body detection operation is perf ormed on the basis of output signals from both detectors on the basis of output sign als from both detectors.

(Winter operation mode).

[0012]In this way, for example, in winter in which the ambient temperature is lower than or equal to a predetermined reference temperature, both the far infrared detect or and the near infrared detector are turned on, but in this case, it is preferable to o perate the control means by the logical product of the output signals of the two dete ctors, thereby preventing erroneous opening and closing of the automatic door due t o snow or the like.

[0013]The control means is constituted by a CPU (central processing unit) and an MP U (microprocessor), and a reference temperature for switching between the summer operation mode and the winter operation mode is input to the control unit by, for ex ample, an operation panel or a dip switch. It is preferable that a 2 reference tempera ture higher than the reference temperature (1 reference temperature) is set, and aft er the ambient temperature becomes lower than or equal to the 1 reference tempera ture, only an output signal from the near infrared ray detector is enabled when the a mbient temperature exceeds the 2 reference temperature.

[0014]For example, when the 1 reference temperature is set at 5 ° C., whereas the 2 reference temperature is set at 15 ° C., when the ambient temperature is reduced to 5 ° C. or lower, both the far infrared detector and the near infrared detector are t urned on and the winter operation mode is established. Once the engine is in the win ter operation mode, even if the ambient temperature exceeds 5 ° C., the winter oper ation mode is not canceled, and the operation mode is not switched to the summer o peration mode unless the temperature exceeds the 2 reference temperature 15 ° C.

[0015]Thus, even if the ambient temperature fluctuates in the vicinity of 5 ° C. after the operation mode is once set in the winter season, the operation mode is not chan

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ged to the summer operation mode, and so-called teaching is prevented. Note that t he 2 reference temperature may be input together with the 1 reference temperature by an operator, or may be automatically set on the control means side when the 1 re ference temperature is input.

[0016]

[Embodiment of invention] In order to better understand the technical idea of the pr esent invention, a preferred embodiment of the present invention will be described w ith reference to the accompanying drawings.

[0017]As shown in FIG. 1, the infrared human body detecting device 10 includes 2 d etectors of a far infrared ray detector 11 and a near infrared ray detector 12, and a t emperature sensor 13 which detects a surrounding ambient temperature. A CPU 14 as a control means which receives output signals from both the detectors 11,12 and and the temperature sensor 13 and sends the opening / closing control signal to an a utomatic door (not shown) and an operation unit 15 which sets a reference temperat ure and the like to the CPU 14 are provided.

[0018]While both the far infrared ray detector 11 and the near infrared ray detector 12 are set to the same monitoring area, the far infrared ray detector 11 is provided with a light receiving element 111 for detecting infrared rays (heat rays) of 7.0 μ m and an amplifier 112, and an output signal amplified by the amplifier 112 is given to the CPU 14. The amplification of the amplifier 112 is the *.

It can be arbitrarily set by the roller 113.

[0019]The near infrared ray detector 12 includes a light emitting element 121 compr ising, for example, a light emitting diode for emitting a predetermined near infrared r ay to the monitoring region, a light receiving element 122 for receiving the reflected light from the monitoring region, and an amplifier 123 of the light receiving element 122, and an output signal amplified by the amplifier 123 is given to the CPU 14. Inci dentally, the amplification degree of the amplifier 123 can be arbitrarily set by the co ntroller 124.

[0020]For example, a thermocouple type, a semiconductor type, or the like is used f or the temperature sensor 13, and in this embodiment, although the temperature se nsor 13 is built in the body (housing) of the infrared human body detection device 1 0, in order to detect the temperature more accurately, the temperature sensor 13 m ay be extracted from the inside of the body and preferably placed outside the periph ery of the door. The output signal of the temperature sensor 13 is read into the CPU 14 at a predetermined time interval.

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[0021]The infrared human body detection device 10 is attached to, for example, a non-eye portion of an automatic door as in the case of a normal door sensor, and at this time, a 1 reference temperature T 1 and a 2 reference temperature T 2 are set from the operation portion 15 to the CPU 14. In other words, in this embodiment, the 1 reference temperature T 1 is 5 ° C. and the 2 reference temperature T 2 is 15 ° C., which is input into the CPU 14.

[0022]The temperature graph of FIG. 2 shows a relationship between the reference temperatures T 1 and T 2 and the ambient temperature T detected by the temperature sensor 13. In this embodiment, when the ambient temperature T is higher than 5 ° C. of the 1 reference temperature T 1, the CPU 14 determines that the vehicle is in the summer operation mode, cancels (disables) the output signal from the far infrared detector 11, detects the presence or absence of a human body based on only the output signal from the near-infrared detector 12, and controls the opening and closing of the automatic door.

[0023]When the ambient temperature T gradually decreases and becomes less than or equal to 5 ° C. of the 1 reference temperature T 1, the CPU 14 determines that the vehicle is in a winter operation mode, receives an output signal from the far infrared detector 11 together with an output signal from the near-infrared detector 12, and performs an AND operation of the both output signals to control the opening and closing of the automatic door.

[0024]In other words, only when the output signals of the far infrared detector 11 and the near infrared detector 12 are "presence of human body", the CPU 14 sends an "open" signal to the automatic door. As a result, it is possible to prevent the Samukaze from being blown into the building by opening the door even if there is no person in winter snow or snowfall.

[0025]Once the winter operation mode is entered, the CPU 14 does not shift to the summer operation mode even if the ambient temperature T fluctuates around the 2 reference temperature T 2 unless the ambient temperature T exceeds 15 ° C. of the 1 reference temperature T 1. Thus, so-called chattering, in which the winter operation mode and the summer operation mode are frequently switched, is prevented.

[0026]In the above embodiment, the 1 reference temperature T 1 and the 2 reference temperature T 2 are input by the operation unit 15, but the 2 reference temperature T 2 may be automatically set on the side of the CPU 14 based on the 1 reference temperature T 1.

[0027]Alternatively, a calendar timer function may be provided to the CPU 14, and a

winter operation mode may be set for a certain period of time, for example, from No vember 1 to March 31, and a summer operation mode may be set for another period of time.

[0028]Further, if an illuminance sensor is additionally provided and, even in the wint er operation mode, there is a possibility that the sunshine (heat ray) is strong and th e sensitivity of the far infrared ray detector 11 is insufficient, an output signal from t he far infrared ray detector 11 may be disabled. In the above embodiment, both of t he output signals of the far-infrared detector 11 and the near-infrared detector 12 ar e effective during the winter operation mode, but only the output signal of the far-inf rared detector 11 may be effective in some cases.

[0029]

[Effect of the Invention] As described above, according to the present invention, ther e is provided 2 infrared detectors of a far-infrared detector and a near-infrared detec tor, only a near-infrared detector is used in summer, and a far-infrared detector and a near-infrared detector are combined in winter where snow and snowfall and snowfa ll are expected to be expected, and near red due to snow or the like.

By covering the erroneous operation of the outside line detector with a far infrared r ay detector, it is possible to prevent the door from being opened even though there i s no particular problem in the snowfall region.

[0030]Further, a 1 reference temperature and a 2 reference temperature higher tha n the first reference temperature are set, and after the ambient temperature is once lower than the 1 reference temperature, the second reference temperature is set. W hen the ambient temperature exceeds the 2 reference temperature, only an output s ignal from the near infrared ray detector is enabled, thereby preventing so-called ch attering in which the winter operation mode and the summer operation mode are fre quently switched.

Brief description of the drawings Open

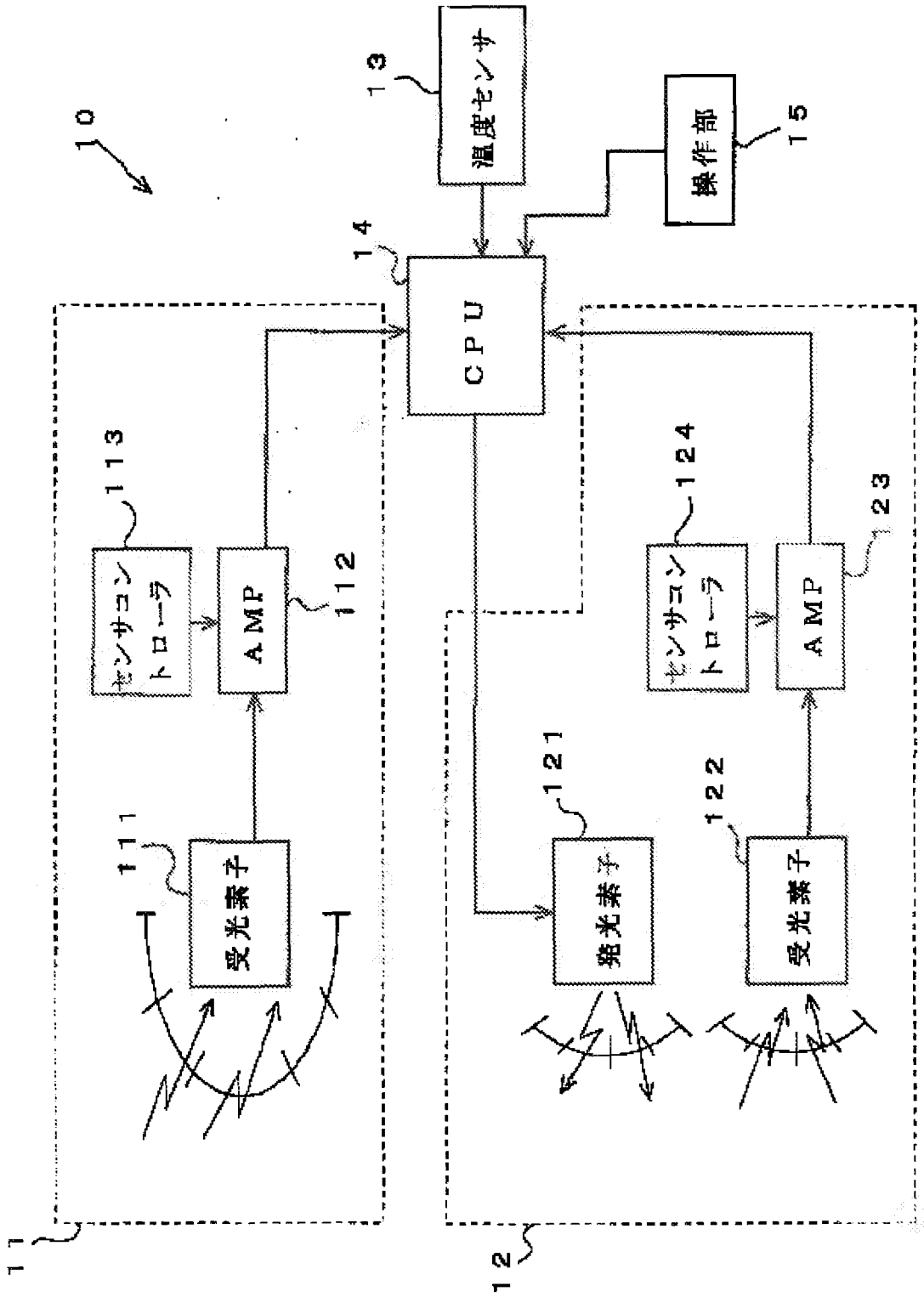
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Ｇ０１Ｓ　17/02		Ｇ０８Ｂ　13/19	
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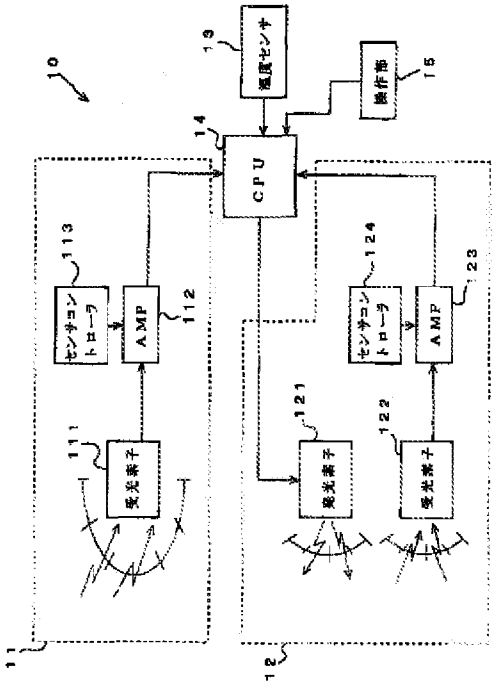
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(54)【発明の名称】　赤外線人体検知装置

(57)【要約】

【課題】　夏場での検出不良がないとともに、降雪や積雪およびその他の外乱光などにより誤検知することがなく、監視領域内にいる人体を確実に検知する。

【解決手段】　遠赤外線検知器１１および近赤外線検知器１２と、これら両検知器１１，１２の出力信号により監視領域内の人体を検知するＣＰＵ１４と、周囲の環境温度を検出する温度センサ１３と、ＣＰＵ１４に対して基準設定温度を与える温度設定部１５とを備え、ＣＰＵ１４は、温度センサ１３にて検出された環境温度が基準温度以下の場合には、両検知器１１，１２の出力信号を有効として動作し、環境温度が基準温度を超えている場合には、近赤外線検知器１１からの出力信号のみを有効として動作する。



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CRIME PREVENTION ALARM SYSTEM

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Abstract of JP2004310495 (A)

PROBLEM TO BE SOLVED: To provide a crime prevention alarm system in which an accident warning means appropriately emits an alarm to positively prevent a false alarm caused by a signal transmission means. ;SOLUTION: The crime prevention alarm system comprises: crime prevention sensors 1 detecting the opening movement of the entrance door, the window, and the like of a dwelling unit; and a house information board 6 having the accident warning means 2 emitting the alarm by receiving the detection signal of the crime prevention sensor 1, and the signal transmission means 5 sending the alarm state to a separate administrant room, a security management company, and the like. The house information board 6 has a stop switch 7 releasing the alarm state generated from the signal transmission means 2 to actuate no signal transmission means 5 except when the stop switch 7 is not operated within a specified period of time after operating the signal transmission means 2. ;COPYRIGHT: (C)2005,JPO&NCIPI

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CLAIMS JP2004310495

1.

A security sensor that detects the opening operation of the entrance door or window of the dwelling unit, an alarm device that receives a detection signal of the security sensor and issues an alarm, A housing information panel having a transfer means for notifying a receiver or the like of a security management company, wherein the house information panel has a stop switch for canceling an alarm state of the alarm means, A security alarm system in which the transfer means is not operated unless the stop switch is not operated within a predetermined time after the operation of the notification means.

2.

A mode selection switch is provided on the housing information panel to select and set the absence alert mode in which the resident is absent and the home alert mode in which the resident is at home. Only when the alarm means is operated and the home alert mode is set, the transfer means is not operated unless the stop switch is not operated within a predetermined time after the operation of the alarm means. 2. The security alarm system according to claim 1, wherein

3.

A security sensor that detects the presence of a person near the inside of a dwelling unit, such as an entrance door or window, whose opening operation is detected by the security sensor, is provided.If the security sensor detects without detecting the human sensor, The transfer means is operated together with the notification means, and only when the security sensor detects the detection following the detection of the coterie sensor, except when the stop switch is not operated within a predetermined time after the operation of the notification means. 2. The security alarm system according to claim 1, wherein the transfer means is not operated.

4.

Only when the security sensor detects within a certain period of time after detection of the motion sensor, the transfer means is not operated unless the stop switch is not operated within a predetermined time after the operation of the alarm means. The security alarm system according to claim 3, wherein

5.

Only when the security sensor detects in the detection state following the detection of the human sensor, the transfer means is not operated unless the stop switch is not operated within a predetermined time after the operation of the notification means. The security alarm system according to claim 3, wherein:

6.

6. The security alarm system according to claim 5, wherein a switch unit is formed by connecting a security sensor that opens a switch in the detection state and a human sensor that closes the switch in the detection state in a parallel circuit.

7.

7. The security alarm system according to claim 6, wherein a plurality of switch units are wired and connected in series.

8.

A security sensor and a housing information panel are arranged in each of a plurality of dwelling units, an alarm monitoring panel for centrally managing each housing information panel, and a transmitter for connecting the alarm monitoring panel and a receiver of a security management company, 8. A method as claimed in claim 1, wherein the means for reporting the housing information panel of each dwelling unit reports the alarm state to the receiver via the alarm monitoring panel and the transmitter. The security alarm system described in (1).

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DESCRIPTION JP2004310495

Provided is a crime-prevention alarm system in which an alarm is appropriately issued by an alarm unit and a false alarm by a transfer unit can be reliably prevented. A security sensor for detecting an opening operation of an entrance door or a window of a dwelling unit, an alarming means for receiving a detection signal of the security sensor and issuing an alarm, and a warning state for another security room. In a security alarm system including a housing information panel 6 having a transfer means 5 for notifying a security management company or the like, the house information panel 6 has a stop switch 7 for canceling an alarm state of the alarm means 2. The transfer means 5 is not operated except when the stop switch 7 is not operated within a predetermined time after the operation of the notification means 2. [Selection diagram] Fig. 1

Security alarm system

[0001] The present invention relates to a system for notifying a resident that an entrance door, a window, or the like of a dwelling unit has been opened by an intruder, or an alarm monitoring panel or a crime prevention system in another management room. The present invention relates to a security alarm system that can notify a receiver of a management company or the like. 2. Description of the Related Art Conventionally, as shown in FIGS. 15 and 16, a security alarm system of this kind detects a security sensor 1 for detecting an opening operation of an entrance door or a window of a dwelling unit, and a detection by the security sensor 1. Notification means (not shown) for receiving a signal and issuing an alarm, and notification means (not shown) for notifying the alarm state to an alarm monitoring panel 3 in another management room, a receiver 4 of a security management company, and the like. (Not shown)). This kind of crime prevention alarm system is constructed in an apartment house such as a condominium. Here, an alarm monitor panel 3 installed in a manager's office and a house information panel 6 installed in each dwelling unit are connected. A call and various kinds of information are exchanged between each other, and each house information panel 6 is centrally managed by the alarm monitoring panel 3. In the security alarm system, when the security sensor 1 detects the opening operation of the entrance door or window, a detection signal is transmitted to the house information panel 6, and in this house information panel 6, an alarm means issues an alarm. Emit. Then, the transfer means of the house information panel 6 notifies the alarm state by the alarm means to the alarm monitor panel 3 of the manager's office, and this information is transmitted from the alarm monitor panel 3 to the receiver 4 of the security management company. It will be further reported. In this case, the security alarm system includes a transmitter 11, information is transmitted from the alarm monitor panel 3 to the transmitter 11 via the I / F, and information is transmitted from the transmitter 11 to the receiver 4 through an external line. Is done. Accordingly, in this security alarm system, when an entrance door, a window, or the like is opened by an intruder in any of the dwelling units of the apartment house, the security information sensor 1 detects the house information panel 6 of the dwelling unit. The alarm is issued and the security alarm information is transmitted to the alarm monitoring panel 3, so that the manager can monitor the alarm of each dwelling unit. Further, in this case, the alarm state is notified to the receiver 4 of the security management company through an outside line via the transmitter 11, and the security management company can also perform security monitoring of each dwelling unit of the apartment house. I have. [0005] When the security management company receives the notification of the alarm state, a clerk rushes to the site to confirm and take appropriate action. Also, when a manager is resident in the manager's room, is being promptly dealt with by the same manager, and has been thoroughly monitored for security.

This security monitoring state is particularly important when a resident is absent, and a switch (not shown) that allows the resident to set whether or not to perform the security monitoring state is provided on the house information panel 3. It is

provided. However, in the security alarm system, when the security monitoring state is set in the absence of a resident, the security monitoring state is preferably set to a perfect security monitoring state. If the resident forgets that and opens the window for ventilation or opens the entrance door with a visitor, the treatment in the security monitoring state is performed. That is, the transfer means of the housing information panel 6 immediately operates and is erroneously reported to the manager's office or the security management company. Rushed, causing a great burden on residents and security management companies. [0007] On the other hand, there has been known a security device for general households in which a home security mode and an out-of-home security mode can be selectively set (see JP-A-2002-279564). In this case, if the out-of-office alert mode is set, after a grace period when going out, all the alert areas are alerted, and if a sensor is detected in this state, it is determined that an abnormal situation has occurred, and the security device of the dwelling unit is detected. A warning is issued and the security company is also notified. The home alert mode is a mode mainly set when the user is asleep. When this mode is set, the alert status is set only for a predetermined area (for example, outdoors) and the alert status is set for other areas (for example, indoors). That is not done. In this case, if a sensor is detected in the area in the alert state, it is determined that an abnormal situation has occurred, and the alarm is issued and transferred in the same manner as described above. In the area not in the alert state, the sensor detection is ignored and the alarm is issued. Neither the report nor the transfer is made, and the resident's movement does not determine that an abnormal situation has occurred. In the security device, when returning home or going out while the home security mode is set, the home / out-of-home security mode can be set so as not to determine that an abnormal situation has occurred. . This at-home / out-of-home alert mode is further set in a state where the at-home / out-of-home alert mode is set.When entering the at-home / out-of-home alert mode, after returning to the at-home / out-of-home alert mode after a grace period, this Even if the sensor is detected within the grace period, it is not immediately determined that an abnormal situation has occurred, and it is determined that an abnormal situation has occurred only when the at-home / out-of-home warning mode is not canceled within the grace period.

Therefore, in the security device, the occurrence of an abnormal situation is determined by distinguishing between the operation of the intruder and the operation of the resident. An alarm is issued by the security device, and is also notified to a security company. That is, even in this security device, the alarming means and the transfer means are operated at the same time as in the security alarm system described above, and false alarms to the security company are not reliably prevented. However, there is a problem in that it places a great burden on residents and security companies. Also, in this case, if it is not determined that an abnormal situation has occurred, the alarming means itself does not operate, so that the resident is not notified. there were. [0010] Patent Document 1: Japanese Patent Application Laid-Open No. 2002-279564 [0011] The present invention has been invented in order to solve all of the problems in the above-described conventional technology. It is an object of the present invention to provide a crime-prevention alarm system in which an alarm is appropriately issued by an alarm unit and a false alarm by the transfer unit can be reliably prevented. According to a first aspect of the present invention, there is provided a security alarm system for detecting an opening operation of an entrance door, a window, or the like of a dwelling unit, and receiving a detection signal of the security sensor. A security alarm comprising: an alarming means for issuing an alarm by issuing an alarm; and a housing information panel having a notification means for notifying the alarm state to an alarm monitoring panel in another management room or a receiver of a security management company. In the system, the house information panel has a stop switch for releasing an alarm state of the alarm means, and does not operate the transfer means unless the stop switch is not operated within a predetermined time after the operation of the alarm means. That's what I did. [0013] Therefore, in this case, even if the resident opens the entrance door, window, or the like, the alarming means operates temporarily, and the house information panel issues an alarm. When the stop switch is operated, the alarm state of the alarm means is released and the alarm means does not operate, and false alarms to the alarm monitoring panel in the manager's office and the receiver of the security management company by this alarm means are surely made. Is prevented. Also, when a resident is absent, for example, when an entrance door or a window is opened by an intruder other than the resident, the alarm means is activated first, and the housing information panel issues an alarm, and thereafter within a predetermined time. The stop switch is not operated, and after a predetermined period of time, the alarm state of the alarm means is automatically notified to the alarm monitoring panel of the manager's office, the receiver of the security management company, etc. by the notification means. , Security monitoring status.

According to a second aspect of the present invention, there is provided a security alarm system according to the first aspect of the present invention, which selectively sets an absence alert mode in which a resident is absent and a home alert mode in which a resident is at home. A mode selection switch is provided on the house information panel, so that when the absence alert mode is set, the notifying means is operated together with the alert means, and the alarm is activated only when the home alert mode is set. The transfer means is not operated except when the stop switch is not operated within a predetermined time after the operation of the notification means. Therefore, in this case, in particular, the absence mode and the home security mode can be selectively set by the mode selection switch provided on the house information panel. Only when the home security mode is set, the above-mentioned condition is set. As described above, since the transfer means is not operated except when the stop switch is not operated within a predetermined time after the operation of the alarm means, the absence alert mode is set when

the resident goes out and becomes absent. By this, when only an intruder other than the resident can open the entrance door or window, the notifying means is operated together with the notifying means, and the predetermined information is issued after the housing information panel issues an alarm. Without waiting for time, the alarm is immediately sent to the alarm monitoring panel of the security officer room, the receiver of the security management company, etc., and the security monitoring state is more thorough. According to a third aspect of the present invention, there is provided a security alarm system according to the first aspect of the present invention, wherein a person is present in the vicinity of the inside of the dwelling unit, such as a front door or a window, whose opening operation is detected by a security sensor. If the security sensor detects the presence of the security sensor without detecting the presence sensor, the notification means is operated together with the alarm means, and the security Only when the sensor detects, the transfer means is not operated except when the stop switch is not operated within a predetermined time after the operation of the notification means. Therefore, in this case, in particular, when the security sensor detects the human body sensor provided near the inside of the dwelling unit such as the entrance door or window, that is, when the resident detects the entrance door or window inside the dwelling unit. Only when it is highly probable that the opening operation has been performed, as described above, the transfer unit is not operated except when the stop switch is not operated within a predetermined time after the operation of the alarm unit. If the security sensor detects without detecting the sensor, it is determined that an intruder other than the resident has opened the entrance door or window from the outside of the dwelling unit, and at that time, the notification unit operates together with the alarm unit After the warning is issued from the housing information panel, the warning is immediately sent to the alarm monitoring panel in the manager's office, the receiver of the security management company, etc. without waiting for a predetermined time. Security surveillance letter State.

The security alarm system of the invention according to claim 4 of the present invention is the security alarm system according to claim 3, wherein the alarm is issued only when the security sensor detects within a predetermined time after the detection of the human sensor. The transfer means is not operated except when the stop switch is not operated within a predetermined time after the operation of the notification means. Therefore, in this case, in particular, in the security alarm system, it is assumed that the security sensor detects within a certain period of time after the detection of the human sensor. The degree of freedom in setting the position and range of the coterie sensor is increased by appropriately changing and setting according to the route and distance between the sensor and the window. According to a fifth aspect of the present invention, in the security alarm system according to the third aspect, the alarm means is provided only when the security sensor detects in the detection state following the detection of the human sensor. The notification means is not operated except when the stop switch is not operated within a predetermined time after the above operation. Therefore, in this case, in particular, in the security alarm system described above, the security sensor is detected in the detection state following the detection of the human sensor, so that the human sensor and the security sensor have an open / close switch structure. By setting the correspondence between the open / closed detection states of the two, it is possible to easily determine the case where the security sensor detects subsequent to the detection of the coterie sensor. The security alarm system of the invention according to claim 6 of the present invention is the security alarm system according to claim 5, wherein a security sensor that opens a switch in a detection state and a human sensor that closes a switch in a detection state are arranged in parallel. A switch unit is formed by circuit connection. Therefore, in this case, in particular, a simple switch unit is formed by connecting a security sensor that opens the switch in the detection state and a human sensor that closes the switch in the detection state in a parallel circuit. Further, the human sensor can be easily installed and constructed as the switch unit. Here, even when the human sensor is in the switch closed detection state and the security sensor is in the switch open detection state, the switch remains ON due to the switch contact ON of the human sensor, and the notification means is not operated. In the non-detection state of the sense sensor when the switch is not detected, when the security sensor is in the detection state of switch open, both switch contacts are turned off to be in a non-conductive state, and the notification means operates together with the notification means.

A security alarm system according to a seventh aspect of the present invention is the security alarm system according to the sixth aspect, wherein a plurality of switch units are connected in series by wiring. Therefore, in this case, in particular, a plurality of the switch units are connected in series and the wiring between each security sensor and the human sensor and the house information panel is simplified. In the unit, only when both the human sensor and the security sensor are turned on, the notifying means is operated together with the notifying means. Otherwise, a closed loop circuit is formed between the housing information panel and each switch unit. Then, the notification means is not operated. A security alarm system according to claim 8 of the present invention is the security alarm system according to any one of claims 1 to 7, wherein a security sensor and a housing information panel are provided in each of the plurality of dwelling units. An alarm monitor that centrally manages each house information panel, and a transmitter that connects the alarm monitor to a receiver of a security management company. The present invention is characterized in that an alarm state is notified to a receiver via an alarm monitoring panel and a transmitter. Therefore, in this case, it is particularly suitable for construction in an apartment house or the like. When a security sensor detects an opening operation of an entrance door, a window, or the like in any one of the dwelling units, a detection signal is generated. It is transmitted to the housing information panel, and in this house information panel, the alarm means issues an alarm, and the transfer means of the housing information panel notifies the alarm state of the alarm means to the alarm

monitoring panel of the management room, This information is further transferred from the alarm monitoring panel to the receiver of the security management company via the transmitter, and the security monitoring state is fully ensured, and all false alarms by the transfer means here are reliably prevented. You. 1 to 4 show a security alarm system according to a first embodiment of the present invention. The security alarm system according to this embodiment includes a security sensor 1 for detecting an opening operation of an entrance door or a window of a dwelling unit, an alarm unit 2 for receiving a detection signal of the security sensor 1 and issuing an alarm, and the alarm. And a housing information panel 6 having a transfer means 5 for notifying the state to an alarm monitoring panel 3 in another management room and a receiver 4 of a security management company. In this security alarm system, the house information panel 6 has a stop switch 7 for canceling the alarm state of the alarm means 2, except when the stop switch 7 is not operated within a predetermined time after the operation of the alarm means 2. The transfer means 5 is not operated.

Further, in this security alarm system, a mode selection switch 8 for selecting and setting an absence alert mode in which a resident is absent and a home alert mode in which a resident is at home is provided on the house information panel 6. If set, the notifying means 5 is operated together with the notifying means 2, and only when the home alarm mode is set, stops within a predetermined time after the operation of the notifying means 2. The notification unit 5 is not operated except when the switch 7 is not operated. The security alarm system includes a security sensor 1 and a housing information panel 6 provided in each of a plurality of dwelling units, an alarm monitoring panel 3 for centrally managing each of the housing information panels 6, and an alarm monitoring panel 3 And a transmitter 11 for connecting the receiver 3 of the security management company, and the transfer means 5 of the house information panel 6 of each dwelling unit is connected to the receiver 11 via the alarm monitoring panel 3 and the transmitter 11. 4 to notify the alarm state. Hereinafter, the security alarm system of this embodiment will be described more specifically. This security alarm system is a security monitoring system constructed in an apartment house or the like. As shown in FIG. 2, an alarm monitoring panel 3 installed in a manager's office and a housing information panel 6 installed in each of a plurality of dwelling units are provided. Are branched and connected to each other, and a call and various kinds of information are exchanged. Each house information panel 6 is centrally managed by the alarm monitoring panel 3. In each dwelling unit, a house information panel 6 is installed inside the dwelling unit and a door phone slave unit 12 is installed outside the dwelling unit, and they are connected to each other. In each dwelling unit, a plurality of security sensors 1 are installed. Here, a security sensor 1a for detecting the opening operation of the window is installed near the window, and a security sensor 1b for detecting the opening operation of the entrance door. Is installed near this entrance door. In this case, when any one of the security sensors 1 detects the opening operation, this detection signal is transmitted to the house information panel 6, and an alarm is issued from the house information panel 6. If it is determined that the information is not a false report, the information indicating the alarm state is transmitted to the alarm monitoring panel 3 and further transmitted from the alarm monitoring panel 3 to the receiver of the security management company. 4 In this case, the security alarm system includes a transmitter 11, and information is transmitted from the alarm monitor panel 3 to the transmitter 11 via the I / F 13, and the information is transmitted from the transmitter 11 to the receiver 4 through the outside line 14. Sent. Therefore, in any one of the dwelling units of an apartment house, when an entrance door, a window, or the like is opened by an illegal intruder, the detection of the security sensor 1 causes the dwelling unit information panel 6 of the dwelling unit to issue an alarm, and no false alarm Is a security monitoring system in which this security alarm information is transferred to the alarm monitoring panel 3 so that the manager can monitor the alarm of each dwelling unit.

Further, in this case, the alarm state is reported to the receiver 4 of the security management company via the outside line 14 via the transmitter 11, and the security management company can also perform security monitoring of each dwelling unit of the apartment house. ing. When the security management company receives the notification of the alarm condition, a clerk rushes to the site to check and perform an appropriate action. Also, when a manager is resident in the manager's room, Is being promptly dealt with by the same manager, and has been thoroughly monitored for security. Such a transfer is performed when the security alarm information is not a false report, and when a resident opens the entrance door or window, etc., a false report is made. By operating a stop switch 7 described later, the security alarm information is not transferred. As shown in FIG. 1, the plurality of security sensors 1 are connected to the house information panel 6 at input terminals 15, and detection signals from the security sensors 1 are transmitted from the input terminals 15 to the security input circuit 16. Is input to the CPU 17 via the. When the detection signal is transmitted from the CPU 17 to the alarm means 2, the alarm means 2 emits an alarm sound. The notification means 2 has a sound generation circuit 18 and a speaker 19, and when the sound generation circuit 18 receives a detection signal from the CPU 17, the notification sound is generated and sounded from the speaker 19. The CPU 17 controls the alarming means 2 and the transferring means 5, and in this case, the security sensor 1 and other switches such as the stop switch 7, the mode selection switch 8, and the security alarm set switch 20 are controlled by the CPU 17. It is controlled based on the input information. When the security alert state is set by operating the security alert set switch 20, one of an absence alert mode and a home alert mode, which will be described later, can be selected and set. Can release the security alert state by operating the security alert set switch 20. In the state where the security alert state is set by operating the security alert set switch 20 and the absence alert mode is selected and set by the mode selection switch 8, when a detection signal is input from

the security sensor 1 to the CPU 17, The detection signal is immediately transmitted from the CPU 17 to both the notification means 2 and the transfer means 5, whereby the notification means 2 starts the notification operation as described above and the transfer means 5 is connected to the output terminal 21. Transmits the security alarm information to the alarm monitor 3.

In the state where the security alarm state is set by operating the security alarm set switch 20 and the home security mode is selected and set by the mode selection switch 8, when a detection signal is input from the security sensor 1 to the CPU 17, This detection signal is immediately transmitted from the CPU 17 to the alarm means 2 and the alarm means 2 starts the alarm operation as described above, but the detection signal is not immediately transmitted to the transfer means 5. Here, the CPU 17 timers a predetermined time (for example, about several tens of seconds to one minute), and transmits the detection signal to the notification means 5 depending on whether the stop switch 7 is operated within the predetermined time. It is determined whether or not. That is, if the stop switch 7 is not operated within a predetermined time, the detection signal is transmitted to the transfer means 5 after the predetermined time, and the operation of the transfer means 5 is controlled. The security alert information is transmitted and transmitted. Further, if the stop switch 7 is operated within a predetermined time, the detection signal is not transmitted to the transfer means 5 and the operation of the notification means 2 (sound of notification sound) is stopped by operating the stop switch 7. And the alarm state is released. Further, as shown in FIG. 3, such various switches are arranged near a display unit 22 to be described later on a surface portion of the house information panel 6. In this case, the house information panel 6 is provided with a handset for talking with the intercom slave unit 12 or the alarm monitor panel 3, and a display unit 22 is provided beside the handset. Various switches such as a stop switch 7, a mode selection switch 8, and a security alarm set switch 20 are provided below the unit 22. On the display unit 22, the security light 22a is illuminated when the security alert state is set, and the home light 22b is illuminated when the home alert mode is further selected and set in this security alert state. . Then, on the display unit 22, the two crime prevention lights 22d are lit and displayed during the operation of the alarm means 2, and the one crime prevention light 22c is illuminated and displayed while the transfer means 5 is operating. In 6, the alarm state is also notified by the display unit 22. Next, the operation of the security alarm system of this embodiment will be described with reference to FIG. In this security alarm system, the presence / absence of detection by the security sensor 1 is constantly monitored. When the security sensor 1 is detected, it is determined which of the absence alert mode and the home alert mode is set, When the alert mode is set, the alerting means 2 and the alerting means 5 are immediately operated to issue alerts and alerts. When the alert mode is set, the alerting means 2 and the alerting means 5 are alerted. Only the alarm is issued on the house information panel 6 and no notification is made.

Then, time counting is performed simultaneously with the start of the operation of the alarm means 2, and if the stop switch 7 is operated within a predetermined time based on the time measurement, the operation of the alarm means 2 is stopped at that time. It is stopped and the alarm state is released. If the stop switch 7 is not operated within the predetermined time, the time is up and the notification means 5 is operated after the predetermined time, and the notification from the house information panel 6 to the alarm monitoring panel 3 is performed. These operations are controlled by the CPU 17, and the CPU 17 also controls the display unit 22, the parts related to the call, and the like. Therefore, in the security alarm system of this embodiment, even if the resident opens the entrance door, window, or the like, the alarm means 2 operates temporarily, and the house information panel 6 issues an alarm. If the resident operates the stop switch 7 within a predetermined time after confirming the sound and the display unit 22, the alarm state of the alarm unit 2 is released and the alarm unit 5 does not operate. False alarms to the alarm monitoring panel 3 in the security officer room, the receiver 4 in the security management company, and the like are reliably prevented. When the entrance door or window is opened by an intruder other than the resident, such as when the resident goes out and is absent, first, the alarm means 2 operates and the housing information panel 6 issues an alarm. In this case, since the stop switch 7 is not operated within a predetermined time thereafter, the alarm state of the notification means 2 is changed by the transfer means 5 after this predetermined time to the alarm monitoring of the manager room. It is automatically notified to the panel 3 and the receiver 4 of the security management company, etc., and is in a state of thorough security monitoring. Furthermore, in the security alarm system of this embodiment, the absence mode and the home security mode can be selected and set by the mode selection switch 8 provided on the house information panel 6, and the home security mode is set. Only when the stop switch 7 is not operated within a predetermined time after the operation of the alarm unit 2 as described above, the transfer unit 5 is not operated, so that a more thorough security monitoring state can be achieved. It can be. That is, when the resident goes out and becomes absent, the mode selection switch 8 is operated to select and set the absence alert mode, so that only an intruder other than the resident can open the entrance door or window. When the alarm is not obtained, the transfer means 5 is operated together with the notification means 2, so that the alarm monitor panel 3 and the security control in the management room are immediately provided without waiting for a predetermined time after the house information panel 6 has issued an alarm. The notification is sent to the receivers 4 of the company and the like, and the security monitoring state is more thorough.

Further, the security alarm system of this embodiment is optimally installed in an apartment house or other condominium. That is, in any one of the dwelling units, when the security sensor 1 detects an opening operation of an entrance door, a window, or

the like, a detection signal is transmitted to the house information panel 6, and in this house information panel 6, the alarm unit 2 issues an alarm. When the alarm is not false, the transfer means 5 of the house information panel 6 notifies the alarm state of the alarm means 2 to the alarm monitor panel 3 of the management room, and this information is transmitted from the alarm monitor panel 3 to the transmitter. The information is further transferred to the receiver 4 of the crime prevention management company via 11 and a thorough security monitoring state is achieved, whereby all false alarms by the transfer means 5 are reliably prevented. FIGS. 5 to 10 show a security alarm system according to a second embodiment corresponding to claims 1, 3, 4, and 8 of the present application. In the security alarm system of this embodiment, a human sensor 9 for detecting the presence of a person H is provided near the inside of a dwelling unit such as an entrance door 25 or a window 24 whose opening operation is detected by the security sensor 1. When the security sensor 1 detects without detection of the security sensor 9, the notification means 5 is operated together with the notification means 2, and when the security sensor 1 detects following the detection of the coterie sensor 9. Only when the stop switch 7 is not operated within a predetermined time after the operation of the alerting means 2, the notifying means 5 is not operated. In this case, the human sensor 9 is a sensor of a heat sensing type, an infrared sensing type, or the like. As shown in FIG. 5, a plurality of human sensors 9 are connected to the housing information panel 6 at input terminals 15. The detection signal from each human sensor 9 is input from the input terminal 15 to the CPU 17 via the human sensor input circuit 23. 7 to 9, the security sensor 1a detects the opening operation of the window 24. A human sensor 9a is provided inside the dwelling unit near the window 24, and the security sensor 1b is connected to the entrance door 25. The human body sensor 9b is provided inside the dwelling unit near the entrance door 25. As shown in FIG. 8, the security sensor 1 a is provided inside the window 24 to detect the opening operation of the window 24, and the motion sensor 9 a is installed on the ceiling or wall near the window 24. Then, a person H (resident) who approaches the window 24 from inside the dwelling unit and tries to open the window 24 for ventilation or the like is detected. As shown in FIG. 9, the security sensor 1b is attached to an upper frame portion of the entrance door 25 inside the dwelling unit to detect the opening operation of the entrance door 25. It is installed on a nearby entrance ceiling, and detects a resident who approaches the entrance door 25 from inside the dwelling unit and tries to open the entrance door 25 for a visitor or the like.

In the house information panel 6 of this embodiment, as shown in FIG. 6, the security alarm set switch 20 of the first embodiment also functions as the mode selection switch 8, and the security alarm set switch 20 (mode selection By repeatedly pushing the switch 8), it is possible to set the security alert state, set the absence alert mode, set the home alert mode, and release the security alert state. Although the home light 22b in the first embodiment is omitted from the display unit 22, the warning light 22a may be blinked when the home security mode is selected and set. Further, in the security alarm system of this embodiment, the alarm is issued only when the security sensor 1 detects within a certain period of time (for example, about several seconds to several tens of seconds) after the detection of the human sensor 9. The notification means 5 is not operated except when the stop switch 7 is not operated within a predetermined time after the operation of Step 2. In this case, as shown in FIG. 10, when the security sensor 1 is detected, it is determined whether or not it is within a predetermined time after the detection of the human sensor 9, and if it is not, the notification means 2 and the transfer If the means 5 is operated immediately and within a certain period of time after the detection of the motion sensor 9, only the alarm means 2 is operated, and the subsequent operation is the same as in the first embodiment. . Therefore, in the security alarm system of this embodiment, when the security sensor 1 detects the detection next to the human sensor 9 provided near the inside of the dwelling unit such as the entrance door 25 or the window 24, that is, the inside of the dwelling unit Only when it is highly probable that the resident has opened the entrance door 25, the window 24, etc. in the same manner as in the first embodiment, the stop switch is set within a predetermined time after the operation of the alarm means 2 The transfer means 5 is not operated except when the user 7 is not operated. Therefore, when the security sensor 1 detects without detecting the motion sensor 9, it is determined that an intruder other than the resident has opened the entrance door 25, the window 24, etc. from the outside of the dwelling unit. At this time, the notifying means 5 is operated together with the notifying means 2, so that the alarm is not received by the alarm monitoring panel 3 or the security management company of the security office immediately without waiting for a predetermined time after the housing information panel 6 issues an alarm. As a result, the security monitoring status is more thorough. Also, in the security alarm system of this embodiment, only when the security sensor 1 detects within a certain time after the detection of the human sensor 9, The notification means 5 is not operated except when the stop switch 7 is not operated, so that a certain period of time following the detection of the human sensor 9 is a predetermined time after the detection by the human sensor 9, the entrance door 25, the window 24, etc. Can be appropriately changed and set in accordance with the route, distance, and the like, thereby increasing the degree of freedom in setting the position and range of the coterie sensor 9.

Otherwise, the configuration is the same as in the first embodiment, and the same operation and effect as in the first embodiment are achieved. FIGS. 11 and 12 show a security alarm system according to a third embodiment corresponding to the first, third, fifth and eighth aspects of the present invention. In the security alarm system of this embodiment, the stop switch 7 is not operated within a predetermined time after the operation of the alarm unit 2 only when the security sensor 1 detects the detection of the human sensor 9 in the continuous detection state. Except at the time, the transfer means 5 is not operated. In this case, as shown in FIG. 11, the circuit having the security sensor 1 and the circuit having the motion sensor 9 are separately

connected to the input terminal 15 of the house information panel 6, and the detection signal is 1 and the human sensor 9 are individually input to the house information panel 6. Here, when the resident opens the entrance door, window, or the like, as shown in FIG. 12A, the detection input from the human sensor 9 is in the ON state (detection is being continued), and the security sensor 1 The detection input is turned on, that is, the ON state continues from time A when the motion sensor 9 is turned on, and the security sensor 1 is turned on during that time (time B). When the intruder opens the entrance door, window, or the like, as shown in FIG. 12B, the detection input from the human sensor 9 is OFF (no detection), and the security sensor The detection input from 1 is turned on, that is, the security sensor 1 is turned on while the human sensor 9 is kept off (time C). In this case, the transfer means 5 is operated together with the notification means 2, and in the case of the opening operation by the resident, except when the stop switch 7 is not operated within a predetermined time after the operation of the notification means 2. Does not operate the transfer means 5 to prevent false reports. Therefore, in the security alarm system of this embodiment, only when the security sensor 1 detects in the detection ON state following the detection of the human sensor 9 within a predetermined time after the operation of the alarm means 2 Since the transfer means 5 is not operated except when the stop switch 7 is not operated, the human sensor 9 and the security sensor 1 have an open / close switch structure, and the correspondence between the open / closed detection states of the two is described above. By setting, it is possible to easily determine the case where the security sensor 1 detects the detection following the detection of the coterie sensor 9. Otherwise, the configuration is the same as in the second embodiment, and the same operation and effect as in the second embodiment are achieved.

FIGS. 13 and 14 show a security alarm system according to a fourth embodiment of the present invention. In the security alarm system of this embodiment, a switch unit 10 is formed by connecting a security sensor 1 that opens a switch in a detection state and a human sensor 9 that closes a switch in a detection state in a parallel circuit. 10 are connected in series. In this case, as shown in FIG. 13, the switch unit 10 in which the security sensor 1b and the human sensor 9b are integrated is installed in the upper frame portion of the entrance door 25 inside the dwelling unit. The unit 10 is installed. As shown in FIG. 14, the switch unit 10 in which the security sensor 1 and the human sensor 9 are connected in a parallel circuit is wired in series and connected to the house information panel 6. In this case, when the security sensor 1 detects an opening operation of the entrance door 25, a window, or the like, its contact is opened. When the human sensor 9 detects a person, the contact is closed. That is, in the state shown in FIG. 14, both the security sensor 1 and the human sensor 9 are in the non-detection state. Here, when all the security sensors 1 are in the switch closed state (normal state), the voltage of Vcc · RcRb / (RaRc + RaRb + RbRc) is applied to the A / D input port of the CPU 17 in the house information panel 6. When the security sensor 1 detects that the switch is open, a voltage of Vcc · Rc / (Ra + Rc) is applied to the A / D input port. By such a change in voltage, the CPU 17 of the house information panel 6 can determine the detection state of the security sensor 1. When the human sensor 9 detects a person and the switch is closed, even if the security sensor 1 detects the switch and opens the switch as described above, in this state, one of the parallel circuits Since the conductive state continues at the contact point of the coterie sensor 9, a closed loop circuit is formed between the house information panel 6 and each switch unit 10, and the transfer means 5 is not operated. Even if the security sensor 1 detects (switch open) while the human sensor 9 is detecting (switch closed), it is necessary to operate the alarming means 2, so that the security sensor 1 serving as a parallel circuit is required. By making a difference in the resistance value between the side and the human sensor 9 side, for example, by providing a resistor R in the circuit on the human sensor 9 side, the change in the voltage is observed as described above, or By observing a change in the current, a normal state in which the motion sensor 9 is switched on and the security sensor 1 is closed, and an alarm state in which the motion sensor 9 is closed and the security sensor 1 is switched open are determined. After the identification and determination, the alarm means 2 can be operated in this alarm state.

Therefore, in the security alarm system of this embodiment, a simple switch unit 10 is formed by connecting the security sensor 1 that opens the switch in the detection state and the human sensor 9 that closes the switch in the detection state in a parallel circuit. The two security sensors 1 and the human sensor 9 can be easily installed and constructed together as the same switch unit 10, and the installation and wiring work of the sensors is simplified. Also, here, even if the security sensor 1 is in the detection state of the switch open while the human sensor 9 is in the detection state of the switch closed, the conduction state is maintained by the switch contact of the human sensor 9 and the conduction state is changed. The notifying unit 5 is not operated, and when the security sensor 1 is in the detecting state of the switch opening in the non-detection state of the human body sensor 9 and the switch is open, both the switch contacts are turned off and become non-conductive, and together with the notifying unit 2, The notification means 5 is operated, and the notification is immediately performed without waiting for a predetermined time. Further, in the security alarm system of this embodiment, a plurality of the switch units 10 are wired and connected in series, and the wiring between each of the security sensors 1 and the human sensor 9 and the house information panel 6 is simply performed. In this case, in any one of the switch units 10, only when both the human sensor 9 and the security sensor 1 are opened, the notifying unit 5 and the notifying unit 5 are operated. Otherwise, a closed loop circuit is formed between the house information panel 6 and each switch unit 10, and the transfer means 5 is not operated. Otherwise, the configuration is the same as in the third embodiment, and the same operation and effect as in the third embodiment are exerted.

In the security alarm system according to the first aspect of the present invention, when the resident opens the entrance door, window, or the like, only the alarm means operates, and the house information panel issues an alarm temporarily. If the inhabitant operates the stop switch within a predetermined time after confirming the alarm, the signaling means does not operate, and false reporting by the signaling means is reliably prevented, and the entrance door or window is opened by the intruder. When the alarm is issued, the alarm is activated, and after a predetermined time, the alarm is automatically notified by the alarm and the security monitoring state is established. In the security alarm system according to the second aspect of the present invention, the absence alarm mode is set when the resident is absent, so that only the intruder can open the entrance door or window. Then, the notifying means is operated together with the notifying means, and the alarm is immediately issued without waiting for a predetermined time after the alarm is issued from the house information panel, so that the security monitoring state becomes more thorough.

In the crime prevention alarm system according to the third aspect of the present invention, especially when the security sensor detects after the detection of the human sensor inside the dwelling unit, it is regarded as an opening operation by the resident and the notification means is immediately operated. However, when the security sensor detects without detecting the human sensor, it is regarded as an opening operation by the intruder, the notification means is operated together with the alarm means, and a predetermined time after the housing information panel issues an alarm You will be notified immediately without waiting, and you will be in a more thorough security monitoring state. In the security alarm system according to the fourth aspect of the present invention, in particular, in the security alarm system, it is assumed that the security sensor detects within a predetermined time after the detection of the human sensor, The degree of freedom in installing the coterie sensor is increased by appropriately changing and setting the route according to the route and distance between the sensation sensor and the entrance door or window. In the security alarm system according to the fifth aspect of the present invention, in particular, in the security alarm system, it is assumed that the security sensor detects in the detection state following the detection of the human sensor. With the open / close switch structure, the open / close detection state corresponding to both can be easily set. In the security alarm system according to the sixth aspect of the present invention, in particular, the security sensor and the human sensor are formed as a simple switch unit in a parallel circuit, and can be easily installed and constructed as the same switch unit. As a result, the notification is immediately sent only when both the human sensor and the security sensor are open. In the security alarm system according to the seventh aspect of the present invention, in particular, a plurality of the switch units are connected in series and the wiring is simplified, and the human sensor and the security sensor are combined in any one of the switch units. Only when the switch is opened, the notification is sent immediately, otherwise, a closed loop circuit is formed and the notification is not sent immediately. In the crime prevention alarm system according to the eighth aspect of the present invention, it is most suitable when the building is installed in an apartment house. The information is notified to the monitoring panel, further transferred to the receiver of the crime prevention management company via the transmitter, and the security monitoring state is fully ensured, whereby all false reports by the transfer means are surely prevented. BRIEF DESCRIPTION OF THE DRAWINGS FIG. 1 is a main part block diagram mainly showing a house information panel showing a security alarm system according to a first embodiment of the present invention.

FIG. 2 is an overall configuration diagram of the security alarm system. FIG. 3 is an enlarged front view showing the vicinity of a housing information panel and its display section in the security alarm system; FIG. 4 is a flowchart showing an operation in the security alarm system. FIG. 5 is a main part block diagram mainly showing a house information panel showing a security alarm system according to a second embodiment of the present invention. FIG. 6 is an external front view showing, in an enlarged manner, the vicinity of a housing information panel and its display unit in the security alarm system. FIG. 7 is a system configuration diagram showing the security alarm system; FIG. 8 is a schematic explanatory view showing a detection state in a window of the security alarm system. FIG. 9 is a schematic explanatory view showing a detection state at a front door of the security alarm system. FIG. 10 is a flowchart showing an operation in the security alarm system. FIG. 11 is a main part circuit diagram mainly showing a house information panel showing a security alarm system according to a third embodiment of the present invention. 12A is a time chart showing a detection input state when a resident performs an opening operation, and FIG. 12B is a time chart showing a detection input state when an intruder performs an opening operation. FIG. 13 is a schematic explanatory view showing a detection state at a front door of a security alarm system according to a fourth embodiment of the present invention. FIG. 14 is a main part circuit diagram mainly showing a house information panel showing the security alarm system; FIG. 15 is an overall system configuration diagram showing a conventional security alarm system. FIG. 16 is a main part circuit diagram mainly showing a house information panel showing the security alarm system; [Description of Signs] 1 Security sensor 2 Alarm unit 3 Alarm monitor 4 Receiver 5 Transfer unit 6 Housing information panel 7 Stop switch 8 Mode selection switch 9 Human sensor 10 Switch unit 11 Transmitter

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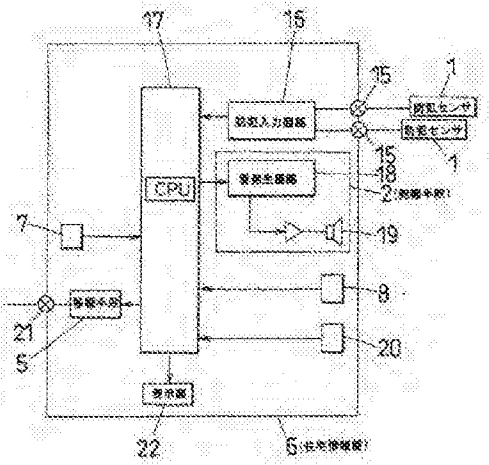
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(54)【発明の名称】防犯警報システム

(57)【要約】
【課題】発報手段で適切に警報が発せられ、移報手段による誤報を確実に防止することのできる防犯警報システムを提供する。
【解決手段】住戸の玄関ドアや窓等の開動作を検知する防犯センサ１と、防犯センサ１の検知信号を受信して警報を発する発報手段２及び同警報状態を別の管理人室や防犯管理会社等へ報知する移報手段５を有する住宅情報盤６と、を備えた防犯警報システムにおいて、住宅情報盤６は発報手段２の警報状態を解除する停止スイッチ７を有し、発報手段２の動作後の所定時間内に同停止スイッチ７が操作されないとき以外は移報手段５を動作させないようになした。
【選択図】　図１



【特許請求の範囲】
【請求項1】
住戸の玄関ドアや窓等の開動作を検知する防犯センサと、この防犯センサの検知信号を受信して警報を発する発報手段、及び、同警報状態を別の管理人室の警報監視盤や防犯管理会社の受信機等へ報知する移報手段を有する住宅情報盤と、を備えた防犯警報システムであって、住宅情報盤は発報手段の警報状態を解除する停止スイッチを有し、発報手段の動作後の所定時間内に同停止スイッチが操作されないとき以外は移報手段を動作させないようになした防犯警報システム。
【請求項2】
住人が不在である不在警戒モードと住人が在宅している在宅警戒モードとを選択設定するモード選択スイッチを住宅情報盤に設け、不在警戒モードに設定されている場合には、発報手段と共に移報手段が動作されるようになし、在宅警戒モードに設定されている場合にのみ、発報手段の動作後の所定時間内に停止スイッチが操作されないとき以外は移報手段を動作させないようになしたことを特徴とする請求項１記載の防犯警報システム。
【請求項3】
防犯センサによりその開動作が検知される玄関ドアや窓等の住戸内側近傍に人の存在を検知する人感センサを設け、この人感センサの検知なしで防犯センサが検知した場合には、発報手段と共に移報手段が動作されるようになし、同人感センサの検知に続いて防犯センサが検知した場合にのみ、発報手段の動作後の所定時間内に停止スイッチが操作されないとき以外は移報手段を動作させないようになしたことを特徴とする請求項１記載の防犯警報システム。
【請求項4】
人感センサの検知に続いてその後一定時間内に防犯センサが検知した場合にのみ、発報手段の動作後の所定時間内に停止スイッチが操作されないとき以外は移報手段を動作させないようになしたことを特徴とする請求項３記載の防犯警報システム。
【請求項5】
人感センサの検知に続きその検知状態において防犯センサが検知した場合にのみ、発報手段の動作後の所定時間内に停止スイッチが操作されないとき以外は移報手段を動作させないようになしたことを特徴とする請求項３記載の防犯警報システム。
【請求項6】
検知状態でスイッチ開となる防犯センサと検知状態でスイッチ閉となる人感センサとを並列回路接続してスイッチユニットを形成したことを特徴とする請求項５記載の防犯警報システム。
【請求項7】
複数のスイッチユニットを直列に配線接続したことを特徴とする請求項６記載の防犯警報システム。
【請求項8】
複数の各住戸に防犯センサ及び住宅情報盤が配設され、各住宅情報盤を集中的に管理する警報監視盤と、この警報監視盤と防犯管理会社の受信機とを接続する送信機と、を備え、各住戸の住宅情報盤の移報手段が同警報監視盤と送信機を介して受信機へと警報状態を報知するものであることを特徴とする請求項１～７のいずれか一つに記載の防犯警報システム。

【発明の詳細な説明】
【０００１】
【発明の属する技術分野】
本願発明は、住戸の玄関ドアや窓等が侵入者によって開けられたことを住人に報知したり、この状態を別の管理人室の警報監視盤や防犯管理会社の受信機等へと移報したりすることのできる防犯警報システムに関するものである。
【０００２】
【従来の技術】

従来、この種の防犯警報システムは、図１５、１６に示す如く、住戸の玄関ドアや窓等の開動作を検知する防犯センサ１と、この防犯センサ１の検知信号を受信して警報を発する発報手段（図示せず）、及び、同警報状態を別の管理人室の警報監視盤３や防犯管理会社の受信機４等へ報知する移報手段（図示せず）を有する住宅情報盤６と、を備えていた。この種の防犯警報システムは、マンション等の集合住宅において施工されるものであり、ここでは、管理人室に設置される警報監視盤３と各住戸に設置される住宅情報盤６とが接続され、相互間で通話や各種の情報交換が行われ、各住宅情報盤６は同警報監視盤３によって集中的に管理される。

【０００３】

前記防犯警報システムにおいて、防犯センサ１が玄関ドア或いは窓の開動作を検知すると、その検知信号が住宅情報盤６へと送信されて、この住宅情報盤６では発報手段が警報を発する。そして、住宅情報盤６の移報手段は前記発報手段による警報状態を管理人室の警報監視盤３へと報知し、この情報が同警報監視盤３から防犯管理会社の受信機４へと更に移報される。この場合、防犯警報システムは送信機１１を備えており、警報監視盤３から１／Ｆを介して同送信機１１へと情報送信され、この送信機１１から外線を通じて受信機４へと情報送信される。

【０００４】

したがって、この防犯警報システムにあっては、集合住宅のいずれかの住戸において、玄関ドアや窓等が不法侵入者によって開けられると、防犯センサ１の検知により当該住戸の住宅情報盤６が警報を発すると共にこの防犯警報情報は警報監視盤３へと移報されるので、管理人が各住戸の警報監視を行うことができるシステムとなっている。更に、この場合、送信機１１を介し外線を通じて前記警報状態は防犯管理会社の受信機４へと通報され、この防犯管理会社においても集合住宅の各住戸のセキュリティ監視を行うことができるシステムともなっている。

【０００５】

そして、防犯管理会社は前記警報状態の通報を受けると、係員が現場へと駆けつけ確認して適切な処置を行うものであり、又、管理人室に管理人が常駐している場合には、同管理人によってもいち早く処置されるものであり、万全のセキュリティ監視状態となっている。このセキュリティ監視状態は、特に、住人が不在である場合に重要となるものであり、住宅情報盤３には、同セキュリティ監視状態とするか否かを住人により設定できるスイッチ（図示せず）が備えられるものである。

【０００６】

しかしながら、前記防犯警報システムにあって、住人不在でセキュリティ監視状態が設定されている場合には、万全のセキュリティ監視状態となって好ましいものであるが、住人が在宅中にセキュリティ監視状態を設定している場合に、同住人がそのことを忘れて換気のために窓を開けたり来客で玄関ドアを開けたりしてしまうと、前記セキュリティ監視状態での処置が行われる。すなわち、住宅情報盤６の移報手段が即座に動作してしまって、管理人室や防犯管理会社へと誤報されることとなり、誤報であるにもかかわらず、管理人或いは防犯管理会社の係員が駆けつけることとなり、住人や防犯管理会社にとって多大な負担になってしまうという問題があった。

【０００７】

一方、一般家庭用の警備装置において、在宅警戒モードと外出警戒モードとを選択設定できるようにしたものも知られている（特開２００３－２７９５６４号公報参照）。この場合、外出警戒モードが設定されると、外出する際の猶予時間の後、全警戒エリアについて警戒状態とされ、この状態でセンサ検知されると異常事態発生と判断されて、住戸の警備装置で警報が発せられると共に警備会社へも移報される。又、在宅警戒モードは主として就寝中に設定されるモードで、このモードが設定された場合、所定のエリア（例えば屋外）についてのみ警戒状態とされ、その他のエリア（例えば屋内）については警戒状態とされないものである。この場合、警戒状態とされたエリアにおいてセンサ検知されると、異常事態発生と判断されて、前記と同様に発報、移報共になされ、警戒状態とされないエリ

アでは、センサ検知が無視されて発報、移報共になされず，住人の動きで異常事態発生と判断されることはない。

【０００８】

そして、前記警備装置では、在宅警戒モードが設定されている時に帰宅したり外出する場合、異常事態発生と判断されないようにするために、在宅・外出警戒モードを設定できるようにしている。この在宅・外出警戒モードは在宅警戒モードが設定されている状態で更に設定されるもので、同在宅・外出警戒モードに入ると猶予時間の後に再び在宅・外出警戒モードに戻るものであり、この猶予時間内にセンサ検知しても即座に異常事態発生とは判断されず、同猶予時間内に在宅・外出警戒モードが解除されなかった場合にのみ異常事態発生と判断されるものである。

【０００９】

したがって、前記警備装置においては、侵入者の動作と住人の動作とを区別して異常事態発生が判断されるようになってはいるが、異常事態発生と判断された場合には、住戸の警備装置で警報が発せられると共に警備会社へも移報されてしまうものである。すなわち、この警備装置にあっても、上記防犯警報システムと同様に、発報手段と移報手段とは同時に動作されるものであり、警備会社への誤報が確実には防止されず、この誤報が住人や警備会社にとって多大な負担になってしまうという問題は生じるものであった。又、この場合、異常事態発生と判断されないと、発報手段そのものが動作しないため住人には報知されず、住人の各種操作忘れや操作ミスによる発報、移報の誤報が発生し易いものでもあった。

【００１０】

【特許文献１】

特開２００２－２７９５６４号公報

【００１１】

【発明が解決しようとする課題】

本願発明は、上記従来の技術における問題を悉く解決するために発明されたもので、その課題は、発報手段で適切に警報が発せられ、移報手段による誤報を確実に防止することのできる防犯警報システムを提供することである。

【００１２】

【課題を解決するための手段】

本願請求項１に係る発明の防犯警報システムは、住戸の玄関ドアや窓等の開動作を検知する防犯センサと、この防犯センサの検知信号を受信して警報を発する発報手段、及び、同警報状態を別の管理人室の警報監視盤や防犯管理会社の受信機等へ報知する移報手段を有する住宅情報盤と、を備えた防犯警報システムであって、住宅情報盤は発報手段の警報状態を解除する停止スイッチを有し、発報手段の動作後の所定時間内に同停止スイッチが操作されないとき以外は移報手段を動作させないようになしたものである。

【００１３】

したがって、この場合、住人により玄関ドアや窓等が開動作されても一応は発報手段が動作して住宅情報盤は警報を発し、この警報を確認して住人が所定時間内に停止スイッチを操作すると、同発報手段の警報状態は解除されて移報手段は動作せず、この移報手段による管理人室の警報監視盤や防犯管理会社の受信機等への誤報が確実に防止される。又、住人が不在であるとき等に、住人以外の侵入者によって玄関ドアや窓等が開動作されると、まず発報手段が動作して住宅情報盤は警報を発し、その後所定時間内に停止スイッチが操作されることはなく、この所定時間後に移報手段により同発報手段の警報状態が管理人室の警報監視盤や防犯管理会社の受信機等へと自動的に報知されるので、万全のセキュリティ監視状態となる。

【００１４】

本願請求項２に係る発明の防犯警報システムは、上記請求項１記載の防犯警報システムにおいて、住人が不在である不在警戒モードと住人が在宅している在宅警戒モードとを選択設定するモード選択スイッチを住宅情報盤に設け、不在警戒モードに設定されている場合

には、発報手段と共に移報手段が動作されるようになし、在宅警戒モードに設定されている場合にのみ、発報手段の動作後の所定時間内に停止スイッチが操作されないとき以外は移報手段を動作させないようになしたことを特徴とするものである。

【００１５】

したがって、この場合は特に、住宅情報盤に設けられるモード選択スイッチにより不在警戒モードと在宅警戒モードとを選択設定することができ、在宅警戒モードに設定されている場合にのみ、上記の如く、発報手段の動作後の所定時間内に停止スイッチが操作されないとき以外は移報手段を動作させないようになっているので、住人が外出して不在となる際に不在警戒モードを設定することで、住人以外の侵入者にしか玄関ドアや窓等を開動作し得ないときに、発報手段と共に移報手段が動作されるようになって、住宅情報盤が警報を発した後に所定時間待つことなく直ちに管理人室の警報監視盤や防犯管理会社の受信機等へと移報されるようになり、より万全なセキュリティ監視状態となる。

【００１６】

本願請求項３に係る発明の防犯警報システムは、上記請求項１記載の防犯警報システムにおいて、防犯センサによりその開動作が検知される玄関ドアや窓等の住戸内側近傍に人の存在を検知する人感センサを設け、この人感センサの検知なしで防犯センサが検知した場合には、発報手段と共に移報手段が動作されるようになし、同人感センサの検知に続いて防犯センサが検知した場合にのみ、発報手段の動作後の所定時間内に停止スイッチが操作されないとき以外は移報手段を動作させないようになしたことを特徴とするものである。

【００１７】

したがって、この場合は特に、玄関ドアや窓等の住戸内側近傍に設けられる人感センサの検知に続いて防犯センサが検知した場合、すなわち、住戸内側で住人が玄関ドアや窓等を開動作させた可能性が高い場合にのみ、上記の如く、発報手段の動作後の所定時間内に停止スイッチが操作されないとき以外は移報手段を動作させないようになっているので、人感センサの検知なしで防犯センサが検知した場合には、住人以外の侵入者が住戸外側から玄関ドアや窓等を開動作させたものであるとして、その際、発報手段と共に移報手段が動作されるようになり、住宅情報盤が警報を発した後に所定時間待つことなく直ちに管理人室の警報監視盤や防犯管理会社の受信機等へと移報されるようになって、より万全なセキュリティ監視状態となる。

【００１８】

本願請求項４に係る発明の防犯警報システムは、上記請求項３記載の防犯警報システムにおいて、人感センサの検知に続いてその後一定時間内に防犯センサが検知した場合にのみ、発報手段の動作後の所定時間内に停止スイッチが操作されないとき以外は移報手段を動作させないようになしたことを特徴とするものである。

【００１９】

したがって、この場合は特に、前記防犯警報システムにおいて、人感センサの検知に続いてその後一定時間内に防犯センサが検知した場合とされるので、この一定時間を人感センサと玄関ドアや窓等との間の経路や距離等に応じて適宜変化設定することにより、同人感センサの位置や範囲の設置自由度は大きくなる。

【００２０】

本願請求項５に係る発明の防犯警報システムは、上記請求項３記載の防犯警報システムにおいて、人感センサの検知に続きその検知状態において防犯センサが検知した場合にのみ、発報手段の動作後の所定時間内に停止スイッチが操作されないとき以外は移報手段を動作させないようになしたことを特徴とするものである。

【００２１】

したがって、この場合は特に、上記防犯警報システムにおいて、人感センサの検知に続きその検知状態において防犯センサが検知した場合とされるので、人感センサ及び防犯センサを開閉スイッチ構造として、両者の開閉検知状態の対応関係を設定することにより、同人感センサの検知に続いて防犯センサが検知した場合を簡単に判断することができる。

【００２２】

本願請求項６に係る発明の防犯警報システムは、上記請求項５記載の防犯警報システムにおいて、検知状態でスイッチ開となる防犯センサと検知状態でスイッチ開となる人感センサとを並列回路接続してスイッチユニットを形成したことを特徴とするものである。

【００２３】

したがって、この場合は特に、検知状態でスイッチ開となる防犯センサと検知状態でスイッチ開となる人感センサとを並列回路接続して簡単なスイッチユニットが形成されており、両防犯センサ及び人感センサを同スイッチユニットとして容易に設置施工することができる。ここでは、人感センサがスイッチ開の検知状態で防犯センサがスイッチ開の検知状態となっても、同人感センサのスイッチ接点ＯＮによって導通状態のままであり、移報手段は動作されず、人感センサがスイッチ開の非検知状態では防犯センサがスイッチ開の検知状態となると、両スイッチ接点共にＯＦＦとなって非導通状態となり、発報手段と共に移報手段が動作される。

【００２４】

本願請求項７に係る発明の防犯警報システムは、上記請求項６記載の防犯警報システムにおいて、複数のスイッチユニットを直列に配線接続したことを特徴とするものである。

【００２５】

したがって、この場合は特に、前記スイッチユニットが複数直列に配線接続されて、各防犯センサ及び人感センサと住宅情報盤との間の配線は簡略化され、ここでは、いずれかのスイッチユニットにおいて、人感センサと防犯センサとが共にスイッチ開となったときにのみ、発報手段と共に移報手段が動作され、それ以外は住宅情報盤と各スイッチユニットとの間で閉ループ回路が構成されて、移報手段は動作されない。

【００２６】

本願請求項８に係る発明の防犯警報システムは、上記請求項１～７のいずれか一つに記載の防犯警報システムにおいて、複数の各住戸に防犯センサ及び住宅情報盤が配設され、各住宅情報盤を集中的に管理する警報監視盤と、この警報監視盤と防犯管理会社の受信機とを接続する送信機と、を備え、各住戸の住宅情報盤の移報手段が同警報監視盤と送信機を介して受信機へと警報状態を報知するものであることを特徴とするものである。

【００２７】

したがって、この場合は特に、マンション等の集合住宅において施工されると最適なものであり、いずれかの住戸において防犯センサが玄関ドアや窓等の開動作を検知すると、その検知信号が住宅情報盤へと送信されて、この住宅情報盤では発報手段が警報を発し、住宅情報盤の移報手段は同発報手段による警報状態を管理人室の警報監視盤へと報知し、この情報が同警報監視盤から送信機を介して防犯管理会社の受信機へと更に移報されるもので、万全のセキュリティ監視状態となり、ここでの移報手段による誤報が全て確実に防止される。

【００２８】

【発明の実施の形態】

図１～４は、本願請求項１、２、８に対応した第一の実施形態である防犯警報システムを示している。この実施形態の防犯警報システムは、住戸の玄関ドアや窓等の開動作を検知する防犯センサ１と、この防犯センサ１の検知信号を受信して警報を発する発報手段２、及び、同警報状態を別の管理人室の警報監視盤３や防犯管理会社の受信機４等へ報知する移報手段５を有する住宅情報盤６と、を備えている。この防犯警報システムにおいて、住宅情報盤６は発報手段２の警報状態を解除する停止スイッチ７を有し、発報手段２の動作後の所定時間内に同停止スイッチ７が操作されないとき以外は移報手段５を動作させないようになしている。

【００２９】

又、この防犯警報システムでは、住人が不在である不在警戒モードと住人が在宅している在宅警戒モードとを選択設定するモード選択スイッチ８を住宅情報盤６に設け、不在警戒モードに設定されている場合には、発報手段２と共に移報手段５が動作されるようになし、在宅警戒モードに設定されている場合にのみ、発報手段２の動作後の所定時間内に停止

スイッチ７が操作されないとき以外は移報手段５を動作させないようになしている。
【００３０】
そして、この防犯警報システムは、複数の各住戸に防犯センサ１及び住宅情報盤６が配設され、各住宅情報盤６を集中的に管理する警報監視盤３と、この警報監視盤３と防犯管理会社の受信機４とを接続する送信機１１と、を備えており、各住戸の住宅情報盤６の移報手段５が同警報監視盤３と送信機１１を介して受信機４と入警報状態を報知するものである。
【００３１】
以下、この実施形態の防犯警報システムを、より具体的に説明する。この防犯警報システムは、マンション等の集合住宅において施工されるセキュリティ監視システムで、図２に示す如く、管理人室に設置される警報監視盤３と複数の各住戸に設置される住宅情報盤６とが分岐接続され、相互間で通話や各種の情報交換が行われ、各住宅情報盤６は同警報監視盤３によって集中的に管理されるものである。そして、各住戸では、住戸内側に住宅情報盤６、住戸外側にドアホン子器１２が設置されて相互に接続され、この両者の間でも通話が行われる。
【００３２】
又、各住戸には複数の防犯センサ１が設置され、ここでは、窓の開動作を検知する防犯センサ１ａがこの窓付近に設置され、玄関ドアの開動作を検知する防犯センサ１ｂがこの玄関ドア付近に設置されている。この場合、いずれかの防犯センサ１が開動作を検知すると、この検知信号は住宅情報盤６に送信され、この住宅情報盤６にて警報が発せられる。そして、誤報でないと判断される場合には、前記警報状態であるという情報が警報監視盤３へと送信移報されて、更には、この警報監視盤３から同情報が防犯管理会社の受信機４へと移報される。この場合、防犯警報システムは送信機１１を備えており、警報監視盤３からＩ／Ｆ１３を介して同送信機１１へと情報送信され、この送信機１１から外線１４を通じて受信機４へと情報送信される。
【００３３】
それ故、集合住宅のいずれかの住戸において、玄関ドアや窓等が不法侵入者によって開けられると、防犯センサ１の検知により当該住戸の住宅情報盤６が警報を発し、誤報でない場合は、この防犯警報情報が警報監視盤３へと移報されるので、管理人が各住戸の警報監視を行うことができるセキュリティ監視システムとなっている。更に、この場合、送信機１１を介し外線１４を通じて前記警報状態は防犯管理会社の受信機４へと通報され、この防犯管理会社においても集合住宅の各住戸のセキュリティ監視を行うことができるシステムともなっている。
【００３４】
そして、防犯管理会社は前記警報状態の通報を受けると、係員が現場へと駆けつけ確認して適切な処置を行うものであり、又、管理人室に管理人が常駐している場合には、同管理人によってもいち早く処置されるものであり、万全のセキュリティ監視状態となっている。このように移報が行われるのは、前記防犯警報情報が誤報でない場合であり、玄関ドアや窓等を住人が開動作させたような場合には誤報となるので、同住人が住宅情報盤６の後述する停止スイッチ７を操作することによって同防犯警報情報は移報されなくなる。
【００３５】
住宅情報盤６には、図１に示す如く、前記複数の防犯センサ１が入力端子１５において接続されており、各防犯センサ１からの検知信号は同入力端子１５から防犯入力回路１６を介してＣＰＵ１７へと入力される。そして、ＣＰＵ１７から前記検知信号が発報手段２へと送信されると、この発報手段２は報知音を鳴動する。発報手段２は音発生回路１８及びスピーカ１９を有しており、この音発生回路１８がＣＰＵ１７から検知信号を受信することにより、前記報知音は同スピーカ１９から発生鳴動される。
【００３６】
ＣＰＵ１７は発報手段２及び移報手段５を制御するもので、その際、前記防犯センサ１及びその他の停止スイッチ７、モード選択スイッチ８、防犯警戒セットスイッチ２０等の各

種スイッチからの入力情報に基づいて制御される。防犯警戒セットスイッチ２０の操作により防犯警戒状態が設定されると、後述する不在警戒モード、在宅警戒モードのいずれかを選択設定できるようになって、防犯警戒状態となり、昼間在宅中の場合等には、同防犯警戒セットスイッチ２０の操作により防犯警戒状態を解除することができる。

【００３７】

前記防犯警戒セットスイッチ２０の操作により防犯警戒状態が設定され、モード選択スイッチ８により不在警戒モードが選択設定された状態では、ＣＰＵ１７に防犯センサ１から検知信号が入力されると、この検知信号は同ＣＰＵ１７から直ちに発報手段２及び移報手段５の両者へと送信され、これにより、発報手段３が前記のように発報動作を開始すると共に移報手段５は出力端子２１から前記警報監視盤３へと防犯警報情報を送信する。

【００３８】

又、防犯警戒セットスイッチ２０の操作により防犯警戒状態が設定され、モード選択スイッチ８により在宅警戒モードが選択設定された状態では、ＣＰＵ１７に防犯センサ１から検知信号が入力されると、この検知信号が同ＣＰＵ１７から直ちに発報手段２へと送信されて発報手段２は前記のように発報動作を開始するが、移報手段５へは同検知信号が直ちには送信されない。ここで、ＣＰＵ１７は所定時間（例えば数十秒～１分程度）をタイマ計時して、この所定時間内に停止スイッチ７が操作されたか否かにより、移報手段５へ前記検知信号を送信するか否かを判断する。

【００３９】

すなわち、所定時間内に停止スイッチ７が操作されなければ、前記検知信号を同所定時間後に移報手段５へ送信してこの移報手段５を動作制御し、前記警報監視盤３へと防犯警報情報は送信移報される。又、所定時間内に停止スイッチ７が操作されれば、前記検知信号を移報手段５へは送信せず、同停止スイッチ７の操作によって前記発報手段２の動作（報知音鳴動）も停止され、警報状態が解除される。又、このような各種スイッチ類は、図３に示す如く、住宅情報盤６の表面部位の後述する表示部２２に近接して配設されている。

【００４０】

この場合、住宅情報盤６には、前記ドアホン子器１２或いは警報監視盤３との通話用のハンドセットが備えられており、このハンドセットの側方に表示部２２が設けられ、この表示部２２の下側に停止スイッチ７、モード選択スイッチ８、防犯警戒セットスイッチ２０等の各種スイッチ類が配設されている。表示部２２では、前記防犯警戒状態が設定されている場合に警戒灯２２ａが点灯表示され、この防犯警戒状態で更に前記在宅警戒モードが選択設定されている場合に在宅灯２２ｂが点灯表示される。そして、表示部２２では、前記発報手段２の動作中に防犯２灯２２ｄが点灯表示され、前記移報手段５の動作中に防犯１灯２２ｃが点灯表示され、このようにこの住宅情報盤６では表示部２２によっても警報状態が報知される。

【００４１】

次に、図４に基づいて、この実施形態の防犯警報システムにおける動作を説明する。この防犯警報システムでは、防犯センサ１での検知の有無が常に監視されているもので、防犯センサ１が検知有となると不在警戒モード、在宅警戒モードのいずれに設定されているかを判断し、不在警戒モードに設定されている場合には、発報手段２及び移報手段５が直ちに動作されて発報・移報が行われ、在宅警戒モードに設定されている場合には、発報手段２のみが動作されて住宅情報盤６で警報が発せられるだけで移報は行われない。

【００４２】

そして、前記発報手段２の動作開始と同時にタイム計時が行われ、このタイム計時による所定時間内に停止スイッチ７の操作が有れば、その時点で前記発報手段２の動作が停止されて警報状態解除となる。又、前記所定時間内に停止スイッチ７の操作が無ければ、タイムアップとなって同所定時間後に移報手段５が動作され、住宅情報盤６から警報監視盤３への移報が行われる。なお、これ等の動作は前記ＣＰＵ１７で制御され、このＣＰＵ１７はそれ以外にも前記表示部２２や通話関係部位等をも制御するものである。

【００４３】

したがって、この実施形態の防犯警報システムにおいては、住人により玄関ドアや窓等が開動作されても一応は発報手段２が動作して住宅情報盤６は警報を発し、この警報を鳴動や表示部２２で確認して住人が所定時間内に停止スイッチ７を操作すれば、同発報手段２の警報状態は解除されて移報手段５は動作せず、この移報手段５による管理人室の警報監視盤３や防犯管理会社の受信機４等への誤報が確実に防止される。

【００４４】

又、住人が外出して不在であるとき等に、住人以外の侵入者によって玄関ドアや窓等が開動作されると、まずは発報手段２が動作して住宅情報盤６は警報を発し、この場合には、その後の所定時間内に停止スイッチ７が操作されることはないので、この所定時間後に移報手段５により同発報手段２の警報状態が管理人室の警報監視盤３や防犯管理会社の受信機４等へと自動的に報知され、万全のセキュリティ監視状態となっている。

【００４５】

更に、この実施形態の防犯警報システムにおいては、住宅情報盤６に設けられるモード選択スイッチ８により不在警戒モードと在宅警戒モードとを選択設定することができ、在宅警戒モードに設定されている場合にのみ、上記の如く、発報手段２の動作後の所定時間内に停止スイッチ７が操作されないとき以外は移報手段５を動作させないようになっているので、より万全なセキュリティ監視状態とすることができる。

【００４６】

すなわち、住人が外出して不在となる際に、モード選択スイッチ８を操作して不在警戒モードを選択設定することで、住人以外の侵入者にしか玄関ドアや窓等を開動作し得ないときに、発報手段２と共に移報手段５が動作されるようになって、住宅情報盤６が警報を発した後に所定時間待つことなく直ちに管理人室の警報監視盤３や防犯管理会社の受信機４等へと移報されるようになり、より万全なセキュリティ監視状態となっている。

【００４７】

又、この実施形態の防犯警報システムは、マンション等の集合住宅に施工されて最適なものとなっている。すなわち、いずれかの住戸において、防犯センサ１が玄関ドアや窓等の開動作を検知すると、その検知信号が住宅情報盤６へと送信されて、この住宅情報盤６では発報手段２が警報を発し、誤報でない場合、住宅情報盤６の移報手段５は同発報手段２による警報状態を管理人室の警報監視盤３へと報知し、この情報が同警報監視盤３から送信機１１を介して防犯管理会社の受信機４へと更に移報されるもので、万全のセキュリティ監視状態となり、ここでの移報手段５による誤報が全て確実に防止されるものである。

【００４８】

図５～１０は、本願請求項１、３、４、８に対応した第二の実施形態である防犯警報システムを示している。この実施形態の防犯警報システムでは、防犯センサ１によりその開動作が検知される玄関ドア２５や窓２４等の住戸内側近傍に人Ｈの存在を検知する人感センサ９を設け、この人感センサ９の検知なして防犯センサ１が検知した場合には、発報手段２と共に移報手段５が動作されるようになしており、同人感センサ９の検知に続いて防犯センサ１が検知した場合にのみ、発報手段２の動作後の所定時間内に停止スイッチ７が操作されないとき以外は移報手段５を動作させないようになしている。

【００４９】

この場合、人感センサ９は熱感知式や赤外線感知式等のセンサで、図５に示す如く、住宅情報盤６には複数の人感センサ９が入力端子１５において接続されており、各人感センサ９からの検知信号は同入力端子１５から人感センサ入力回路２３を介してＣＰＵ１７へと入力される。又、図７～９に示す如く、防犯センサ１ａは窓２４の開動作を検知するもので、この窓２４近傍の住戸内側に人感センサ９ａが設けられており、防犯センサ１ｂは玄関ドア２５の開動作を検知するもので、この玄関ドア２５近傍の住戸内側に人感センサ９ｂが設けられている。

【００５０】

図８に示す如く、防犯センサ１ａは窓２４の内側に付設されてこの窓２４の開動作を検知するものであり、人感センサ９ａは同窓２４の近傍の天井面或いは壁面に設置され、この

窓２４に住戸内側から近づいて換気等のために同窓２４を開けようとする人Ｈ（住人）を検知するものである。又、図９に示す如く、防犯センサ１ｂは玄関ドア２５の住戸内側における上枠部分に付設されてこの玄関ドア２５の開動作を検知するものであり、人感センサ９ｂは同玄関ドア２５の近傍の玄関天井に設置され、この玄関ドア２５に住戸内側から近づいて来客等のために同玄関ドア２５を開けようとする住人を検知するものである。

【００５１】

この実施形態における住宅情報盤６では、図６に示す如く、上記第一の実施形態における防犯警戒セットスイッチ２０がモード選択スイッチ８を兼ねており、同防犯警戒セットスイッチ２０（モード選択スイッチ８）を繰り返しプッシュ操作することによって、防犯警戒状態の設定、不在警戒モードの設定、在宅警戒モードの設定、防犯警戒状態の解除を行うことができる。又、表示部２２では、上記第一の実施形態における在宅灯２２ｂが省略されているが、警戒灯２２ａを在宅警戒モードが選択設定されている場合に点滅表示させるようになしてもよい。

【００５２】

又、この実施形態の防犯警報システムでは、人感センサ９の検知に続いてその後一定時間（例えば数秒～数十秒程度）以内に防犯センサ１が検知した場合にのみ、発報手段２の動作後の所定時間内に停止スイッチ７が操作されないとき以外は移報手段５を動作させないようになしている。この場合の動作は、図１０に示す如く、防犯センサ１が検知有となると、人感センサ９の検知後一定時間以内であるか否かをみて否の場合は、発報手段２及び移報手段５が直ちに動作され、人感センサ９の検知後一定時間以内である場合は、発報手段２のみが動作されるものであり、その後の動作は上記第一の実施形態におけると同様である。

【００５３】

したがって、この実施形態の防犯警報システムにおいては、玄関ドア２５や窓２４等の住戸内側近傍に設けられる人感センサ９の検知に続いて防犯センサ１が検知した場合、すなわち、住戸内側で住人が玄関ドア２５や窓２４等を開動作させた可能性が高いとみられる場合にのみ、上記第一の実施形態におけると同様に、発報手段２の動作後の所定時間内に停止スイッチ７が操作されないとき以外は移報手段５を動作させないようになっている。

【００５４】

そのため、人感センサ９の検知なしで防犯センサ１が検知した場合には、住人以外の侵入者が住戸外側から玄関ドア２５や窓２４等を開動作させたものであるとして、その際に、発報手段２と共に移報手段５が動作されるようになり、住宅情報盤６が警報を発した後に所定時間待つことなく直ちに管理人室の警報監視盤３や防犯管理会社の受信機４等へと移報されるようになって、より万全なセキュリティ監視状態となっている。

【００５５】

又、この実施形態の防犯警報システムにおいては、人感センサ９の検知に続いてその後一定時間内に防犯センサ１が検知した場合にのみ、発報手段２の動作後の所定時間内に停止スイッチ７が操作されないとき以外は移報手段５を動作させないようになっているので、前記人感センサ９の検知に続くその後の一定時間を人感センサ９と玄関ドア２５や窓２４等との間の経路や距離等に応じて適宜変化設定することができ、これにより、同人感センサ９の位置や範囲の設置自由度は大きくなっている。なお、それ以外は、上記第一の実施形態と同様に構成され、上記第一の実施形態におけると同様の作用効果が奏される。

【００５６】

図１１、１２は、本願請求項１、３、５、８に対応した第三の実施形態である防犯警報システムを示している。この実施形態の防犯警報システムでは、人感センサ９の検知に続きその検知継続状態において防犯センサ１が検知した場合にのみ、発報手段２の動作後の所定時間内に停止スイッチ７が操作されないとき以外は移報手段５を動作させないようになしている。

【００５７】

この場合、図１１に示す如く、防犯センサ１を有する回路と人感センサ９を有する回路と

が別々に住宅情報盤６の入力端子１５と接続されており、検知信号はこの防犯センサ１及び人感センサ９から同住宅情報盤６へと各別に入力される。そして、ここでは、住人が玄関ドアや窓等を開動作させた場合、図１２（ａ）に示す如く、人感センサ９からの検知入力がＯＮ状態（検知継続中）で防犯センサ１からの検知入力がＯＮ状態となり、すなわち、人感センサ９がＯＮされたＡ時点からこのＯＮ状態が継続してその間に防犯センサ１がＯＮされ（Ｂ時点）る。

【００５８】

又、侵入者が玄関ドアや窓等を開動作させた場合には、図１２（ｂ）に示す如く、人感センサ９からの検知入力がＯＦＦ状態（検知無状態）で防犯センサ１からの検知入力がＯＮ状態となり、すなわち、人感センサ９はＯＦＦのままで防犯センサ１がＯＮされ（Ｃ時点）る。この場合には、発報手段２と共に移報手段５が動作され、前記住人による開動作の場合には、発報手段２の動作後の所定時間内に停止スイッチ７が操作されないとき以外は移報手段５を動作させないようになって誤報が防止される。

【００５９】

したがって、この実施形態の防犯警報システムにおいては、人感センサ９の検知に続きその検知ＯＮ状態において防犯センサ１が検知した場合にのみ、発報手段２の動作後の所定時間内に停止スイッチ７が操作されないとき以外は移報手段５を動作させないようになっているので、人感センサ９及び防犯センサ１を開閉スイッチ構造として、両者の開閉検知状態の対応関係を前記のように設定することにより、同人感センサ９の検知に続いて防犯センサ１が検知した場合を簡単に判断することができる。なお、それ以外は、上記第二の実施形態と同様に構成され、上記第二の実施形態におけると同様の作用効果が奏される。

【００６０】

図１３、１４は、本願請求項１、３、５～８に対応した第四の実施形態である防犯警報システムを示している。この実施形態の防犯警報システムでは、検知状態でスイッチ開となる防犯センサ１と検知状態でスイッチ閉となる人感センサ９とを並列回路接続してスイッチユニット１０を形成し、複数の同スイッチユニット１０を直列に配線接続している。この場合、図１３に示す如く、玄関ドア２５の住戸内側における上枠部分に、防犯センサ１ｂと人感センサ９ｂとを一体化した前記スイッチユニット１０は設置され、住戸の窓においても同様のスイッチユニット１０が設置されるものである。

【００６１】

そして、図１４に示す如く、防犯センサ１と人感センサ９とを並列回路接続した前記スイッチユニット１０は直列に配線されて住宅情報盤６と接続される。この場合、防犯センサ１は玄関ドア２５や窓等の開動作を検知するとその接点がスイッチ開となるもので、人感センサ９は人を検知するとその接点がスイッチ閉となるものである。すなわち、図１４に示す状態では、いずれの防犯センサ１、人感センサ９も非検知状態にある。

【００６２】

ここで、全ての防犯センサ１がスイッチ開の状態（正常状態）には、住宅情報盤６におけるＣＰＵ１７のＡ／Ｄ入力ポートにＶｃｃ・ＲｃＲｂ／（ＲａＲｃ＋ＲａＲｂ＋ＲｂＲｃ）の電圧が加わり、いずれかの防犯センサ１が検知してスイッチ開の状態となると、同Ａ／Ｄ入力ポートにはＶｃｃ・Ｒｃ／（Ｒａ＋Ｒｃ）の電圧が加わることになる。このような電圧の変化により、住宅情報盤６のＣＰＵ１７は防犯センサ１の検知状態を判断することができる。そして、人感センサ９が人を検知してスイッチ閉の状態になっていると、この状態では前記のように防犯センサ１が検知してスイッチ開の状態になっても、並列回路の一方の同人感センサ９の接点では導通状態が継続されるため、住宅情報盤６と各スイッチユニット１０との間では閉ループ回路が構成され、移報手段５は動作されない。

【００６３】

又、人感センサ９の検知中（スイッチ閉状態）に防犯センサ１が検知（スイッチ開）した場合でも、発報手段２を動作させる必要はあるので、並列回路となる防犯センサ１側と人感センサ９側との両者間で抵抗値に差をつけることで、例えば、人感センサ９側の回路に抵抗Ｒを設ける等して、前記のように電圧の変化をみたり或いは電流の変化をみたりする

ことにより、人感センサ９がスイッチ開で防犯センサ１がスイッチ閉となる正常状態と人感センサ９がスイッチ閉で防犯センサ１がスイッチ開となる発報状態とを識別判断して、この発報状態に発報手段２を動作させることができる。

【００６４】

したがって、この実施形態の防犯警報システムにおいては、検知状態でスイッチ開となる防犯センサ１と検知状態でスイッチ閉となる人感センサ９とを並列回路接続して簡単なスイッチユニット１０が形成されており、両防犯センサ１及び人感センサ９を同スイッチユニット１０として容易にまとめて設置施工することができ、センサの設置配線作業は簡略化される。

【００６５】

又、ここでは、人感センサ９がスイッチ開の検知状態で防犯センサ１がスイッチ開の検知状態となっても、同人感センサ９のスイッチ接点ＯＮによって導通状態のままであって移報手段５は動作されず、人感センサ９がスイッチ開の非検知状態では防犯センサ１がスイッチ開の検知状態となると、両スイッチ接点共にＯＦＦとなって非導通状態となり、発報手段２と共に移報手段５が動作されて、所定時間待つことなく直ちに移報される。

【００６６】

更に、この実施形態の防犯警報システムにおいては、前記スイッチユニット１０が複数直列に配線接続されて、各防犯センサ１及び人感センサ９と住宅情報盤６との間の配線は単純になってより簡略化され、ここでは、いずれかのスイッチユニット１０において、人感センサ９と防犯センサ１とが共にスイッチ開となったときにのみ、発報手段２と共に移報手段５が動作され、それ以外は住宅情報盤６と各スイッチユニット１０との間で閉ループ回路が構成されて移報手段５は動作されない。なお、それ以外は、上記第三の実施形態と同様に構成され、上記第三の実施形態におけると同様の作用効果が奏される。

【００６７】

【発明の効果】

本願請求項１記載の防犯警報システムにおいては、住人により玄関ドアや窓等が開動作されると、発報手段のみ動作して住宅情報盤が一応は警報を発し、この警報を確認して住人が所定時間内に停止スイッチを操作すると移報手段は動作せず、この移報手段による誤報が確実に防止され、侵入者によって玄関ドアや窓等が開動作されたときは、発報手段が動作してその所定時間後に移報手段により自動的に報知され、万全のセキュリティ監視状態となる。

【００６８】

本願請求項２記載の防犯警報システムにおいては、特に、住人が不在となる際に不在警戒モードを設定することで、侵入者にしか玄関ドアや窓等を開動作し得ないときに、発報手段と共に移報手段が動作されるようになって、住宅情報盤が警報を発した後に所定時間待つことなく直ちに移報されるようになり、より万全なセキュリティ監視状態となる。

【００６９】

本願請求項３記載の防犯警報システムにおいては、特に、住戸内側の人感センサの検知に続いて防犯センサが検知したときは住人による開動作とみて、即座に移報手段を動作させず、人感センサの検知なしで防犯センサが検知したときは侵入者による開動作とみて、発報手段と共に移報手段が動作されるようになり、住宅情報盤が警報を発した後に所定時間待つことなく直ちに移報されるようになって、より万全なセキュリティ監視状態となる。

【００７０】

本願請求項４記載の防犯警報システムにおいては、特に、前記防犯警報システムにおいて、人感センサの検知に続いてその後一定時間内に防犯センサが検知した場合とされ、この一定時間を人感センサと玄関ドアや窓等との間の経路や距離等に応じて適宜変化設定することにより、同人感センサの設置自由度は大きくなる。

【００７１】

本願請求項５記載の防犯警報システムにおいては、特に、上記防犯警報システムにおいて、人感センサの検知に続きその検知状態において防犯センサが検知した場合とされ、人感

センサ及び防犯センサを開閉スイッチ構造として、両者の相対応する開閉検知状態を簡単に設定することができる。

【００７２】

本願請求項６記載の防犯警報システムにおいては、特に、防犯センサと人感センサとが並列回路となる簡単なスイッチユニットとして形成され、同スイッチユニットとして容易にまとめて設置施工することができ、人感センサ及び防犯センサが共にスイッチ開のときにのみ直ちに移報されるようになる。

【００７３】

本願請求項７記載の防犯警報システムにおいては、特に、前記スイッチユニットが複数直列に配線接続されてこの配線は簡略化され、いずれかのスイッチユニットにおいて人感センサと防犯センサとが共にスイッチ開のときにのみ直ちに移報され、それ以外は閉ループ回路が構成されて直ちには移報されない。

【００７４】

本願請求項８記載の防犯警報システムにおいては、特に、集合住宅において施工されると最適となり、いずれかの住戸で住宅情報盤が警報を発すると、この警報状態は管理人室の警報監視盤へと報知され、送信機を介して防犯管理会社の受信機へと更に移報されて、万全のセキュリティ監視状態となり、ここでの移報手段による誤報が全て確実に防止される。

【図面の簡単な説明】

【図１】本願発明の第一の実施形態である防犯警報システムを示す住宅情報盤を中心とした要部ブロック図。

【図２】同防犯警報システムを示すシステム全体構成図。

【図３】同防犯警報システムにおける住宅情報盤とその表示部付近を拡大して示す外観正面図。

【図４】同防犯警報システムにおける動作を示すフローチャート。

【図５】本願発明の第二の実施形態である防犯警報システムを示す住宅情報盤を中心とした要部ブロック図。

【図６】同防犯警報システムにおける住宅情報盤とその表示部付近を拡大して示す外観正面図。

【図７】同防犯警報システムを示すシステム要部構成図。

【図８】同防犯警報システムの窓における検知状態を示す概略説明図。

【図９】同防犯警報システムの玄関ドアにおける検知状態を示す概略説明図。

【図１０】同防犯警報システムにおける動作を示すフローチャート。

【図１１】本願発明の第三の実施形態である防犯警報システムを示す住宅情報盤を中心とした要部回路図。

【図１２】同防犯警報システムにおける（ａ）は住人が開動作した場合の検知入力状態を示すタイムチャート、（ｂ）は侵入者が開動作した場合の検知入力状態を示すタイムチャート。

【図１３】本願発明の第四の実施形態である防犯警報システムの玄関ドアにおける検知状態を示す概略説明図。

【図１４】同防犯警報システムを示す住宅情報盤を中心とした要部回路図。

【図１５】従来例である防犯警報システムを示すシステム全体構成図。

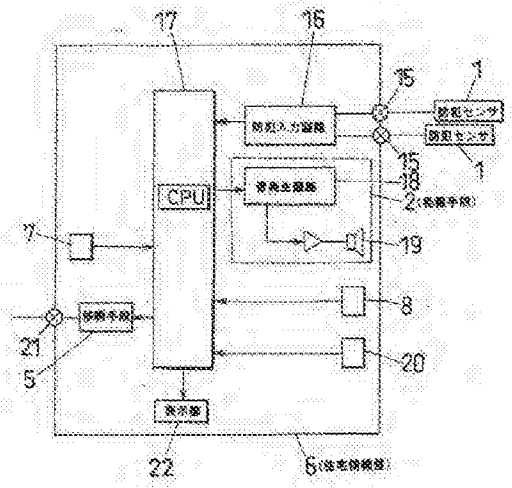
【図１６】同防犯警報システムを示す住宅情報盤を中心とした要部回路図。

【符号の説明】

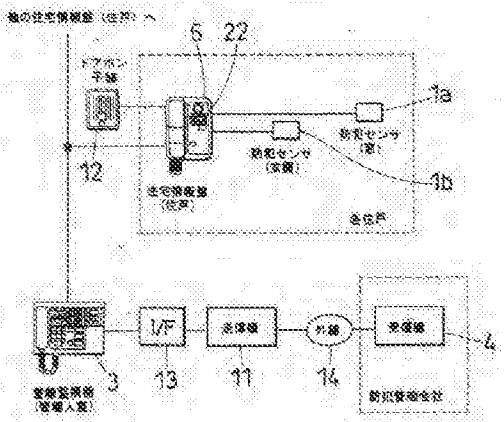
１　防犯センサ
２　発報手段
３　警報監視盤
４　受信機
５　移報手段
６　住宅情報盤

７　停止スイッチ
８　モード選択スイッチ
９　人感センサ
１０　スイッチユニット
１１　送信機

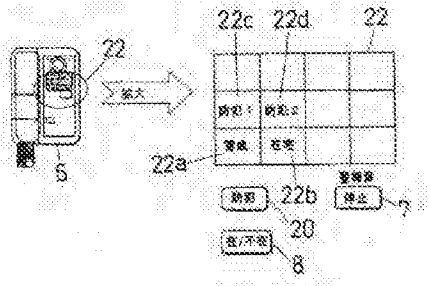
【図１】



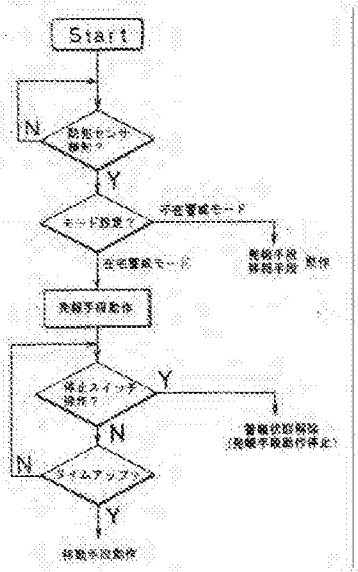
【図２】



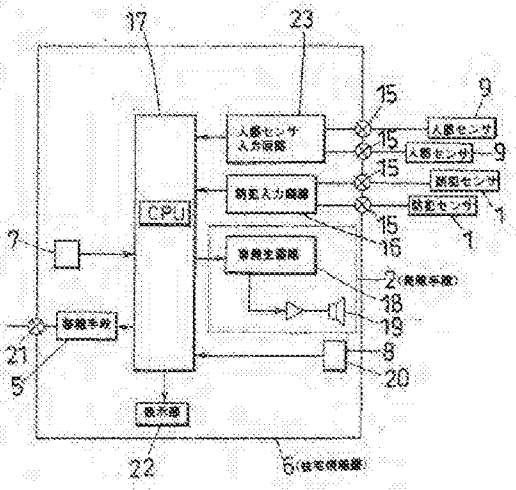
【図３】



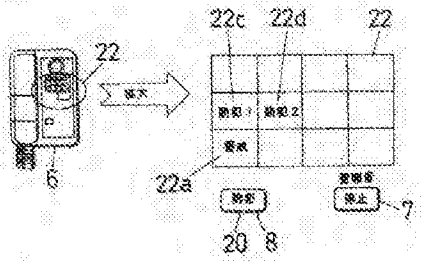
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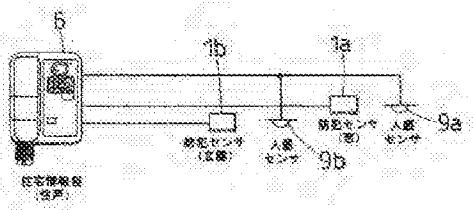
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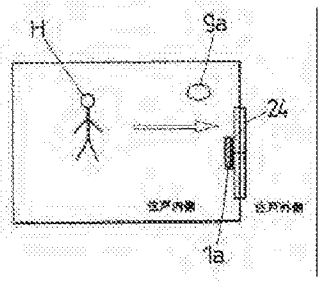
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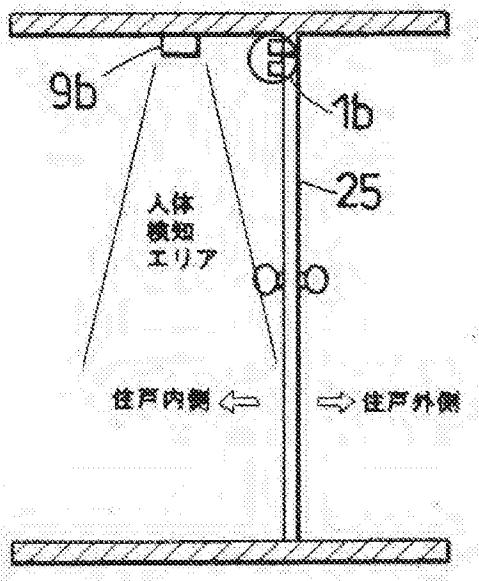
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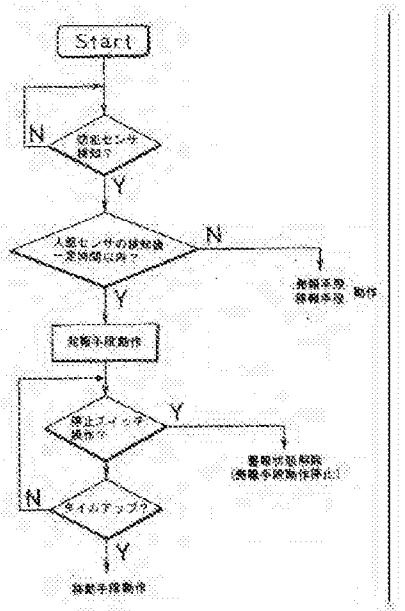
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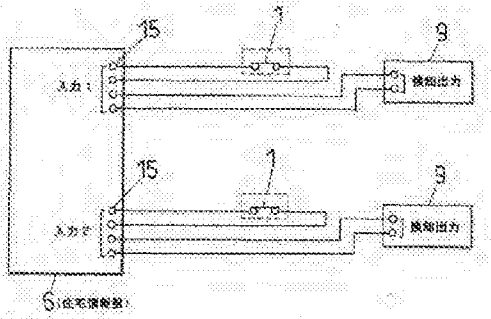
【図9】



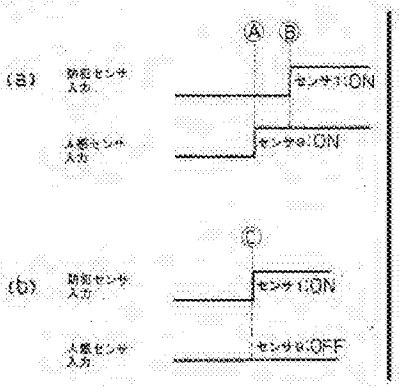
【図10】



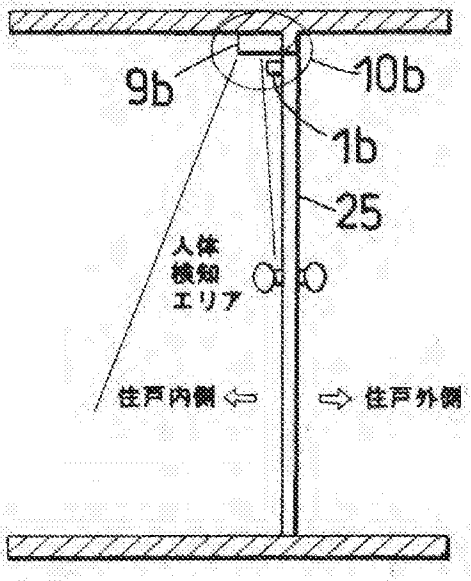
【図11】



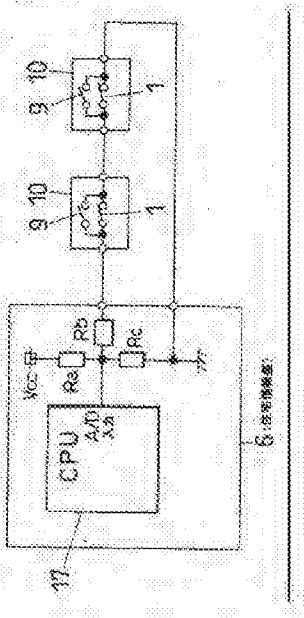
【図12】



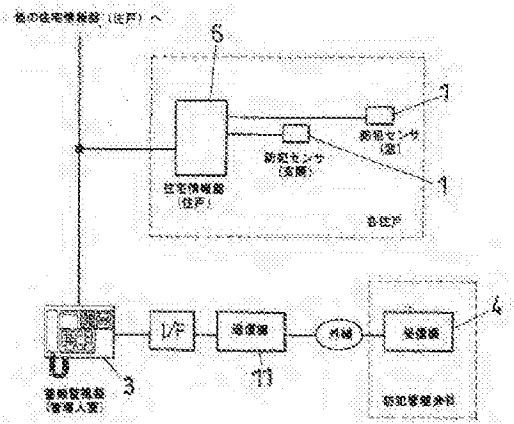
【図13】



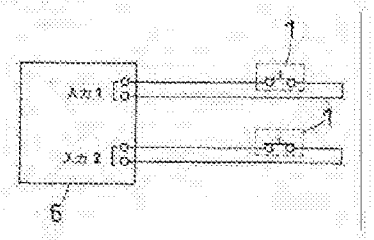
【図14】



【図15】



【図16】



(51)Int.Cl.⁷	FI		テーマコード（参考）
	G０８B　25/04	F	
	G０８B　25/04	H	

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First Named Inventor/Applicant Name:	George Seelman
Customer Number:	34018
Filer:	Gary R. Jarosik/Gladys Negron-Munoz
Filer Authorized By:	Gary R. Jarosik
Attorney Docket Number:	81230.921US3
Receipt Date:	24-JAN-2020
Filing Date:	26-NOV-2018
Time Stamp:	16:29:02
Application Type:	Utility under 35 USC 111(a)

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Information:					
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4	Foreign Reference	ForeignRef_JP10239450A.pdf	336465 dd5f76ac7ac25f1230457e189451540309e8d231	no	11
Warnings:					
Information:					
5	Foreign Reference	ForeignRef_JP2004310495A.pdf	7858010 708df55da2c7feb0f90ec1a705cb42ce90ea38c3	no	29
Warnings:					
Information:					
6	Non Patent Literature	NPL_921jp1_OA.pdf	1436365 21745b203a4634f147d7cd5bff55a16fbec29e8a	no	28
Warnings:					
Information:					
		Total Files Size (in bytes):	10637368		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	16/200,172
Filing Date	11/26/2018
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

Total Number of Pages in This Submission

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☑ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  - Certification Statement
  - NPL
  - Foreign references

Remarks

THE COMMISSIONER IS AUTHORIZED TO CHARGE ANY FEE DEFICIENCY OR CREDIT OVERPAYMENT TO DEPOSIT ACCOUNT NO. 502428 IN THE NAME OF GREENBERG TRAURIG.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Greenberg Traurig, LLP - Customer No. 34018		
Signature	/Gary R. Jarosik/		
Printed name	Gary R. Jarosik		
Date	January 24, 2020	Reg. No.	35,906

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	/Gladys Negron-Munoz/		
Typed or printed name	Gladys Negron-Munoz	Date	January 24, 2020

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	ECOLINK INTELLIGENT TECHNOLOGY, INC.	)	
Serial No.:	16/200,172	)	Examiner: Previl, Daniel
Filed:	11/26/2018	)	Group Art Unit: 2684
Title:	SMART BARRIER ALARM DEVICE	)	Docket No.: 81230.921US3

CERTIFICATION STATEMENT

FILED VIA EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In accordance with 37 CFR 1.704(d), each item of information contained in the Information Disclosure Statement being filed concurrently herewith: (i) was first cited in a communication from a patent office in a counterpart foreign or international application or from the Office, and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the information disclosure statement; or (ii) is a communication that was issued by a patent office in a counterpart foreign or international application or by the Office, and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the information disclosure statement.

While it is believed that no fee is required, the Commissioner is authorized to charge any fee deficiency to deposit account number 502428 in the name of Greenberg Traurig, LLP.

Respectfully submitted,

Date: January 24, 2020

By: /Gary R. Jarosik/
Gary R. Jarosik, Reg. No. 35,906
Greenberg Traurig, LLP
77 W. Wacker Drive - Suite 3100
Chicago, Illinois 60601
(312) 456-8400

ACTIVE 40742299v1

Certificate of Electronic Transmission: The undersigned hereby certifies that this document and its attachments are being transmitted electronically via EFS-Web to the United States Patent and Trademark Office on January 24, 2020.

By: /Gladys Negron-Munoz/
Name: Gladys Negron-Munoz

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

34018 7590 02/10/2020

Greenberg Traurig, LLP
77 W. Wacker Drive
Suite 3100
CHICAGO, IL 60601-1732

EXAMINER
PREVIL, DANIEL

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 02/10/2020

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/200,172	11/26/2018	George Seelman	81230.921US3	4128

TITLE OF INVENTION: SMART BARRIER ALARM DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0.00	$0.00	$1000	05/11/2020

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

34018 7590 02/10/2020

Greenberg Traurig, LLP
77 W. Wacker Drive
Suite 3100
CHICAGO, IL 60601-1732

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/200,172	11/26/2018	George Seelman	81230.921US3	4128

TITLE OF INVENTION: SMART BARRIER ALARM DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0.00	$0.00	$1000	05/11/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
PREVIL, DANIEL	2684	340-545900

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required) ❑ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (08-18) Approved for use through 01/31/2020 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/200,172	11/26/2018	George Seelman	81230.921US3	4128

34018 7590 02/10/2020

Greenberg Traurig, LLP
77 W. Wacker Drive
Suite 3100
CHICAGO, IL 60601-1732

EXAMINER	
PREVIL, DANIEL	
ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 02/10/2020

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulations

Notice of Allowability	Application No. 16/200,172	Applicant(s) Seelman, George	
	Examiner DANIEL PREVIL	Art Unit 2684	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 1/24/2020.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1-5,7-16 and 18-20 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information , please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☑ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/DANIEL PREVIL/
Primary Examiner, Art Unit 2684

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: In combination with all the limitations in the claims, the prior arts fail to teach or make obvious: a transmitter for transmitting a timed alarm signal to a receiver associated with a security panel, the timed alarm signal for initiating a timer associated with the security panel; a memory having processor-executable instructions stored thereon; and a processor coupled to the barrier status detection device, the human detection device, the transmitter, and the memory, for executing the processor-executable instructions that cause the barrier alarm device to: respond to the barrier status detection device indicating that the barrier has been opened by determining whether the human detection device indicates that the human being is inside the premises in proximity to the barrier; and transmit, via the transmitter, the timed alarm signal to the receiver only when it is determined that the human detection device indicates that the human being is inside the premises in proximity to the barrier.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL PREVIL whose telephone number is (571)272-2971. The examiner can normally be reached on Monday-Friday from 9:30 AM -6:00 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wang Quan-Zhen can be reached on 571 272 3114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DP

February 1, 2020

/DANIEL PREVIL/
Primary Examiner, Art Unit 2684

Notice of References Cited	Application/Control No. 16/200,172	Applicant(s)/Patent Under Reexamination Seelman, George	
	Examiner DANIEL PREVIL	Art Unit 2684	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-6542071-B1	04-2003	Ohtsubo; Yoshinori	B60R25/2036	340/10.1
*	B	US-20100245088-A1	09-2010	Meier; Stein Arne	G08B13/08	340/545.1
*	C	US-20130257611-A1	10-2013	Lamb; Michael	G08B13/02	340/501
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/200,172	Seelman, George
	Examiner	Art Unit
	DANIEL PREVIL	2684

CPC - Searched*		
Symbol	**Date**	**Examiner**
G01S5/02 OR G01S11/06 OR G01S5/00 OR G01S5/0036 OR G01S5/0226 OR G01S5/0252 OR G01S5/0273 OR G01S5/06 OR G08B21/24 OR G08B25/016 OR G08B25/12 OR G08B29/181 OR G08B21/0469 OR G08B13/19621 OR G08B21/0423 OR G08B21/0484 OR G08B25/08 OR G08B21/043 OR G08B21/0476 OR G08B21/0492 OR G08B21/22 OR G01C21/206 OR H04B1/38 OR H04B17/309 OR H04B1/385 OR H04L27/362 OR H04L25/0228 OR H04L25/0242 OR H04L25/4902 OR H04L43/12 OR H04L51/04 OR H04L51/18 OR H04L51/20 OR H04L7/042 OR H04W40/244 OR H04W4/33 OR H04W72/0413 OR H04W4/021 OR H04W4/06 OR H04W4/14 OR H04W4/80 OR H04W4/90 OR H04W52/0229 OR H04W52/0254 OR H04W56/001 OR H04W84/18 OR A62C3/14 OR E05B65/1026 OR E05Y2800/102 OR E05Y2900/134 OR E06B2003/343 OR E06B2003/346 OR E06B2003/406 OR E06B2003/7057 OR E06B2007/202 OR E06B3/341 OR E06B5/00 OR E06B5/125 OR E06B7/20 OR E06B9/00 OR F21Y2115/10 OR F21Y2103/00 OR F24F11/00 OR G06N5/045 OR G06Q50/22 OR G06Q10/00 OR G06Q10/06 OR G06Q10/10 OR G06Q50/165 OR G06Q50/265 OR H04M1/72538 OR H04M2250/10 OR H04M2250/52 OR H05B33/0896 OR H05B33/0845 OR H05B33/0857 OR H05B33/0866 OR H05B33/0872 OR H05B37/0218 OR H05B37/0227 OR H05B37/0245 OR H05B37/0272 OR H05B37/0281 OR A23L27/70 OR A23L27/88 OR A23L7/191 OR A61B5/00 OR A61B5/002 OR A61B5/4815 OR A61M21/00 OR A61N2005/0626 OR A61N5/0618 OR B33Y50/00 OR B60N2/002 OR B60Q9/00 OR B65D1/32 OR B65D25/42 OR B65D51/2807 OR B65D77/24 OR B65D81/32 OR B65D83/06 OR E05G5/02 OR E05G7/008 OR F21K9/232 OR F21K9/238 OR F21K9/27 OR F21K9/272 OR F21K9/278 OR F21S2/00 OR F21V23/0442 OR F21V23/06 OR G06F17/00 OR G06F17/50 OR G06F2217/04 OR G06K9/00221 OR G06K9/00369 OR G16H40/20 OR G16H40/67 OR G16H50/20 OR Y02B20/383 OR Y02B20/46 OR Y02D70/00 OR Y02D70/10 OR Y02D70/142 OR Y02D70/144 OR Y02D70/164 OR Y02D70/20 OR Y02D70/26 OR Y04S10/54	09/19/2019	DP

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/200,172	Seelman, George
	Examiner	Art Unit
	DANIEL PREVIL	2684

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**
G08B13/08 OR G08B13/1618 OR G08B21/0415 OR G08B21/0469 OR G08B25/008 OR G08B21/22 OR G08B25/001 OR G08B25/14 OR G08B29/188	02/01/2020	DP

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
340	545.9, 501, 541, 550, 545.1, 545.2, 547, 552, 555, 908.1, 501, 545.8	09/20/2019	DP

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
Plus search, East search, Inventor search	09/20/2019	DP
CPC search	09/20/2019	DP
search updated above on	02/01/2020	DP

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
340	545.9, 908.1, 555	02/01/2020	DP

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/200,172	Seelman, George
	Examiner	Art Unit
	DANIEL PREVIL	2684

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/19/2019	02/01/2020							
1	1	✓	=							
2	2	✓	=							
3	3	✓	=							
4	4	✓	=							
5	5	✓	=							
	6	✓	-							
6	7	✓	=							
7	8	✓	=							
8	9	✓	=							
9	10	✓	=							
10	11	✓	=							
11	12	✓	=							
12	13	✓	=							
13	14	✓	=							
14	15	✓	=							
15	16	✓	=							
	17	✓	-							
16	18	✓	=							
17	19	✓	=							
18	20	✓	=							

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/200,172	Seelman, George
	Examiner	**Art Unit**
	DANIEL PREVIL	2684

CPC						
Symbol					**Type**	**Version**
G08B	/	13	/	08	F	2013-01-01
G08B	/	25	/	008	I	2013-01-01
G08B	/	21	/	0415	I	2013-01-01
G08B	/	21	/	0469	I	2013-01-01
G08B	/	13	/	1618	I	2013-01-01
G08B	/	25	/	001	I	2013-01-01
G08B	/	29	/	188	I	2013-01-01
G08B	/	25	/	14	I	2013-01-01
G08B	/	21	/	22	I	2013-01-01

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	18	
/DANIEL PREVIL/ Primary Examiner, Art Unit 2684	01 February 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office — Part of Paper No.: 20200201

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/200,172	Seelman, George
	Examiner	**Art Unit**
	DANIEL PREVIL	2684

INTERNATIONAL CLASSIFICATION				
CLAIMED				
B60R	/	25	/	34

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
340	545.9

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					
340	908.1	555				

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	18	
/DANIEL PREVIL/ Primary Examiner, Art Unit 2684	01 February 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office — Part of Paper No.: 20200201

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/200,172	Seelman, George
	Examiner	**Art Unit**
	DANIEL PREVIL	2684

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	9	10	17	19										
2	2	10	11	18	20										
3	3	11	12												
4	4	12	13												
5	5	13	14												
	6	14	15												
6	7	15	16												
7	8		17												
8	9	16	18												

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	18	
/DANIEL PREVIL/ Primary Examiner, Art Unit 2684	01 February 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office

Part of Paper No.: 20200201

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	starting near55 countdown near55 timer same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) near55 (inside or interior) near55 (premise or building or apartment or home or office) near55 (proximity) near55 (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:52
L2	0	start$3 same countdown same timer same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (proximity) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:54
L3	0	countdown same timer same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (proximity) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:55
L4	0	countdown same tim$3 same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (proximity) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:56
L5	1	countdown same tim$3 same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:57

1/ 22/ 2020 9:19:25 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	0	countdown same timer same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (proximity) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:55
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L6	2	countdown same tim$3 and (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 21:20
L7	61	countdown same tim$3 and (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) and (inside or interior) same (premise or building or apartment or home or office) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 21:21
L8	55	7 AND ((G08B25/008 OR G08B25/14 OR G08B13/19682 OR G08B25/10 OR G08B29/18 OR G08B25/003 OR G08B19/005 OR G08B13/00 OR G08B13/1968 OR G08B25/009 OR G08B29/02 OR G08B29/181 OR G08B13/08 OR G08B13/19684 OR G08B27/005 OR G08B5/00 OR G08B13/19697 OR G08B25/004 OR G08B25/016 OR G08B29/00 OR G08B25/007 OR G08B25/08 OR G08B13/04 OR G08B17/10 OR G08B21/182 OR G08B13/1618 OR G08B13/19656 OR G08B13/19695 OR G08B19/00 OR G08B21/02 OR G08B21/0415 OR G08B21/0469 OR G08B21/22 OR G08B25/001 OR	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 21:41

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		G06F16/954 OR G06F3/04847 OR G06F3/0482 OR G06F3/0488 OR G06F1/263 OR G06F1/30 OR G06F1/3209 OR G06F1/3275 OR G06F1/3287 OR G06F3/0481 OR G06F3/04883 OR G06F9/54 OR G06F21/6218 OR G05B15/02 OR H04W12/06 OR H04W4/21 OR H04W4/33 OR H04W88/16 OR H04W84/042 OR H04W84/12 OR H04W88/02 OR A61G2203/16 OR A61G2203/20 OR A61G2203/42 OR A61G2203/44 OR A61G7/008 OR A61G7/018 OR A61G7/05 OR A61G7/0524 OR A61G7/05769 OR A61G7/05776 OR A61H2201/0142 OR A61H2201/5007 OR A61H2201/501 OR A61H2201/5046 OR A61H2201/5048 OR A61H23/006 OR A61H23/02 OR A61H9/0078 OR G06Q50/06 OR G06Q50/08 OR G06Q50/12 OR G06Q50/16 OR G06Q50/26 OR G06Q10/02 OR G06Q20/00 OR G06Q20/045 OR G06Q50/01).CPC.)				
L10	58	7 AND ((G08B25/008 OR G08B25/14 OR G08B13/19682 OR G08B25/10 OR G08B29/18 OR G08B25/003 OR G08B19/005 OR G08B13/00 OR G08B13/1968 OR G08B25/009 OR G08B29/02 OR G08B29/181 OR G08B13/08 OR G08B13/19684 OR G08B27/005 OR G08B5/00 OR G08B13/19697 OR G08B25/004 OR G08B25/016 OR G08B29/00 OR G08B25/007 OR G08B25/08 OR G08B13/04 OR G08B17/10 OR G08B21/182 OR G08B13/1618 OR G08B13/19656 OR G08B13/19695 OR G08B19/00 OR G08B21/02 OR G08B21/0415 OR G08B21/0469 OR G08B21/22 OR G08B25/001 OR G08B25/014 OR G08B25/12 OR G08B27/001 OR G08B29/188 OR H04L12/2809 OR H04L12/2818 OR H04L2012/2841 OR H04L2012/2843 OR H04L67/025 OR H04L12/2803 OR H04L41/22 OR H04L41/12 OR H04L41/0806 OR H04L41/0883 OR H04L63/0853 OR H04L67/125 OR H04L12/2834 OR H04L63/029 OR H04L63/0428 OR H04L63/166 OR H04L12/2823 OR H04L12/2825 OR H04L2012/285 OR H04L41/0213 OR H04L41/0253 OR H04L41/08 OR H04L41/28 OR H04L43/0817 OR H04L43/10 OR H04L67/26 OR H04L67/36 OR H04L12/281 OR H04L12/283 OR H04L41/06 OR H04L41/0803 OR H04L41/0813 OR H04L43/04 OR H04L43/045 OR H04L51/04 OR H04L51/32 OR H04L67/02 OR H04L12/10 OR H04L12/12 OR H04L41/0273 OR G06F3/04842 OR G06F3/04817 OR G06F16/954 OR G06F3/04847 OR G06F3/0482 OR G06F3/0488 OR G06F1/263 OR G06F1/30 OR G06F1/3209 OR G06F1/3275 OR G06F1/3287 OR G06F3/0481 OR G06F3/04883 OR G06F9/54 OR G06F21/6218 OR G05B15/02 OR	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 21:41

		H04W12/06 OR H04W4/21 OR H04W4/33 OR H04W88/16 OR H04W84/042 OR H04W84/12 OR H04W88/02 OR A61G2203/16 OR A61G2203/20 OR A61G2203/42 OR A61G2203/44 OR A61G7/008 OR A61G7/018 OR A61G7/05 OR A61G7/0524 OR A61G7/05769 OR A61G7/05776 OR A61H2201/0142 OR A61H2201/5007 OR A61H2201/501 OR A61H2201/5046 OR A61H2201/5048 OR A61H23/006 OR A61H23/02 OR A61H9/0078 OR G06Q50/06 OR G06Q50/08 OR G06Q50/12 OR G06Q50/16 OR G06Q50/26 OR G06Q10/02 OR G06Q20/00 OR G06Q20/045 OR G06Q50/01 OR H04M11/04 OR H04M1/72522 OR H04M1/72533 OR H04N7/181 OR G06K7/10366 OR G07B15/04 OR G07C9/00563 OR G07C9/0069 OR G07C9/00904 OR G07C9/10 OR G07C9/00 OR G07C9/00571).CPC.)				
L11	61	7 AND ((G08B25/008 OR G08B25/14 OR G08B13/19682 OR G08B25/10 OR G08B29/18 OR G08B25/003 OR G08B19/005 OR G08B13/00 OR G08B13/1968 OR G08B25/009 OR G08B29/02 OR G08B29/181 OR G08B13/08 OR G08B13/19684 OR G08B27/005 OR G08B5/00 OR G08B13/19697 OR G08B25/004 OR G08B25/016 OR G08B29/00 OR G08B25/007 OR G08B25/08 OR G08B13/04 OR G08B17/10 OR G08B21/182 OR G08B13/1618 OR G08B13/19656 OR G08B13/19695 OR G08B19/00 OR G08B21/02 OR G08B21/0415 OR G08B21/0469 OR G08B21/22 OR G08B25/001 OR G08B25/014 OR G08B25/12 OR G08B27/001 OR G08B29/188 OR H04L12/2809 OR H04L12/2818 OR H04L2012/2841 OR H04L2012/2843 OR H04L67/025 OR H04L12/2803 OR H04L41/22 OR H04L41/12 OR H04L41/0806 OR H04L41/0883 OR H04L63/0853 OR H04L67/125 OR H04L12/2834 OR H04L63/029 OR H04L63/0428 OR H04L63/166 OR H04L12/2823 OR H04L12/2825 OR H04L2012/285 OR H04L41/0213 OR H04L41/0253 OR H04L41/08 OR H04L41/28 OR H04L43/0817 OR H04L43/10 OR H04L67/26 OR H04L67/36 OR H04L12/281 OR H04L12/283 OR H04L41/06 OR H04L41/0803 OR H04L41/0813 OR H04L43/04 OR H04L43/045 OR H04L51/04 OR H04L51/32 OR H04L67/02 OR H04L12/10 OR H04L12/12 OR H04L41/0273 OR G06F3/04842 OR G06F3/04817 OR G06F16/954 OR G06F3/04847 OR G06F3/0482 OR G06F3/0488 OR G06F1/263 OR G06F1/30 OR G06F1/3209 OR G06F1/3275 OR G06F1/3287 OR G06F3/0481 OR G06F3/04883 OR G06F9/54 OR G06F21/6218 OR G05B15/02 OR	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 21:42

		H04W12/06 OR H04W4/21 OR H04W4/33 OR H04W88/16 OR H04W84/042 OR H04W84/12 OR H04W88/02 OR A61G2203/16 OR A61G2203/20 OR A61G2203/42 OR A61G2203/44 OR A61G7/008 OR A61G7/018 OR A61G7/05 OR A61G7/0524 OR A61G7/05769 OR A61G7/05776 OR A61H2201/0142 OR A61H2201/5007 OR A61H2201/501 OR A61H2201/5046 OR A61H2201/5048 OR A61H23/006 OR A61H23/02 OR A61H9/0078 OR G06Q50/06 OR G06Q50/08 OR G06Q50/12 OR G06Q50/16 OR G06Q50/26 OR G06Q10/02 OR G06Q20/00 OR G06Q20/045 OR G06Q50/01 OR H04M11/04 OR H04M1/72522 OR H04M1/72533 OR H04N7/181 OR G06K7/10366 OR G07B15/04 OR G07C9/00563 OR G07C9/0069 OR G07C9/00904 OR G07C9/10 OR G07C9/00 OR G07C9/00571 OR E03F2201/40 OR E03F7/00 OR E03F9/00 OR F24F11/0001 OR F24F11/30 OR F24F2110/10 OR F24F2110/20 OR F24F2110/22 OR F24F7/013 OR F24F13/18 OR F24F13/28 OR F24F2003/1614 OR G01F23/164 OR G01F23/18 OR G01F23/185).CPC.)				
L12	61	7 AND ((G08B25/008 OR G08B25/14 OR G08B13/19682 OR G08B25/10 OR G08B29/18 OR G08B25/003 OR G08B19/005 OR G08B13/00 OR G08B13/1968 OR G08B25/009 OR G08B29/02 OR G08B29/181 OR G08B13/08 OR G08B13/19684 OR G08B27/005 OR G08B5/00 OR G08B13/19697 OR G08B25/004 OR G08B25/016 OR G08B29/00 OR G08B25/007 OR G08B25/08 OR G08B13/04 OR G08B17/10 OR G08B21/182 OR G08B13/1618 OR G08B13/19656 OR G08B13/19695 OR G08B19/00 OR G08B21/02 OR G08B21/0415 OR G08B21/0469 OR G08B21/22 OR G08B25/001 OR G08B25/014 OR G08B25/12 OR G08B27/001 OR G08B29/188 OR H04L12/2809 OR H04L12/2818 OR H04L2012/2841 OR H04L2012/2843 OR H04L67/025 OR H04L12/2803 OR H04L41/22 OR H04L41/12 OR H04L41/0806 OR H04L41/0883 OR H04L63/0853 OR H04L67/125 OR H04L12/2834 OR H04L63/029 OR H04L63/0428 OR H04L63/166 OR H04L12/2823 OR H04L12/2825 OR H04L2012/285 OR H04L41/0213 OR H04L41/0253 OR H04L41/08 OR H04L41/28 OR H04L43/0817 OR H04L43/10 OR H04L67/26 OR H04L67/36 OR H04L12/281 OR H04L12/283 OR H04L41/06 OR H04L41/0803 OR H04L41/0813 OR H04L43/04 OR H04L43/045 OR H04L51/04 OR H04L51/32 OR H04L67/02 OR H04L12/10 OR H04L12/12 OR H04L41/0273 OR G06F3/04842 OR G06F3/04817 OR	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 21:42

		G06F16/954 OR G06F3/04847 OR G06F3/0482 OR G06F3/0488 OR G06F1/263 OR G06F1/30 OR G06F1/3209 OR G06F1/3275 OR G06F1/3287 OR G06F3/0481 OR G06F3/04883 OR G06F9/54 OR G06F21/6218 OR G05B15/02 OR H04W12/06 OR H04W4/21 OR H04W4/33 OR H04W88/16 OR H04W84/042 OR H04W84/12 OR H04W88/02 OR A61G2203/16 OR A61G2203/20 OR A61G2203/42 OR A61G2203/44 OR A61G7/008 OR A61G7/018 OR A61G7/05 OR A61G7/0524 OR A61G7/05769 OR A61G7/05776 OR A61H2201/0142 OR A61H2201/5007 OR A61H2201/501 OR A61H2201/5046 OR A61H2201/5048 OR A61H23/006 OR A61H23/02 OR A61H9/0078 OR G06Q50/06 OR G06Q50/08 OR G06Q50/12 OR G06Q50/16 OR G06Q50/26 OR G06Q10/02 OR G06Q20/00 OR G06Q20/045 OR G06Q50/01 OR H04M11/04 OR H04M1/72522 OR H04M1/72533 OR H04N7/181 OR G06K7/10366 OR G07B15/04 OR G07C9/00563 OR G07C9/0069 OR G07C9/00904 OR G07C9/10 OR G07C9/00 OR G07C9/00571 OR E03F2201/40 OR E03F7/00 OR E03F9/00 OR F24F11/0001 OR F24F11/30 OR F24F2110/10 OR F24F2110/20 OR F24F2110/22 OR F24F7/013 OR F24F13/18 OR F24F13/28 OR F24F2003/1614 OR G01F23/164 OR G01F23/18 OR G01F23/185 OR B01D46/0002 OR B01D46/0005 OR B01D46/10 OR Y02A50/21).CPC.)				

1/ 22/ 2020 9:46:54 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	human near55 detect$3 near55 indicat$3 near55 (user or person or patient) near55 (inside or interior) near55 (premise or building) near55 proximity near55 (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/02/01 17:04
L2	5	human same detect$3 same indicat$3 same (user or person or patient) same (inside or interior) same (premise or building) same proximity same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/02/01 17:06
L3	5	2 AND ((G08B13/08 OR G08B13/1618 OR G08B21/0415 OR G08B21/0469 OR G08B25/008 OR G08B21/22 OR G08B25/001 OR G08B25/14 OR G08B29/188).CPC.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/02/01 17:07

2/ 1/ 2020 5:07:58 PM

Bibliographic Data

Application No: 16/200,172

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /DANIEL PREVIL/ (Examiner's Signature) | DP (Initials)

Title: SMART BARRIER ALARM DEVICE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/26/2018	340	2684	81230.921US3
RULE			

APPLICANTS

ECOLINK INTELLIGENT TECHNOLOGY, INC., Carlsbad, CA,

INVENTORS

George Seelman Temecula, CA, UNITED STATES

CONTINUING DATA

This application is a CIP of 15946511 04/05/2018 PAT 10497230

15946511 is a DIV of 14629370 02/23/2015 PAT 9940797

FOREIGN APPLICATIONS

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12/14/2018

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77 W. Wacker Drive
Suite 3100
CHICAGO, IL 60601-1732
UNITED STATES

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$2,180

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	starting near55 countdown near55 timer same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) near55 (inside or interior) near55 (premise or building or apartment or home or office) near55 (proximity) near55 (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:52
L2	0	start$3 same countdown same timer same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (proximity) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:54
L3	0	countdown same timer same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (proximity) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:55
L4	0	countdown same tim$3 same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (proximity) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:56
L5	1	countdown same tim$3 same (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 20:57
L6	2	countdown same tim$3 and (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) same (inside or interior) same (premise or building or apartment or home or office) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 21:20
L7	61	countdown same tim$3 and (human near5 being or intruder or person or burglar or infant or toddler or child or kid or baby) and (inside or interior) same (premise or building or apartment or home or office) same (barrier or gate or portal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2020/01/22 21:21

1/ 22/ 2020 9:40:15 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2066	barrier near55 indicat$3 near55 open$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/01/22 17:56
L2	5	l1 and transmit$3 near55 time$1 near55 alarm near55 signal	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/01/22 17:58

1/ 22/ 2020 6:53:17 PM

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
/D.P/	1	2004310495	JP	A	2004-11-04	Matsushita Electric Works Ltd		X
/D.P/	2	10-239450	JP	A	1998-09-11	Honda Denshi Giken		☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
/D.P/	1	JPO, Office Action issued on Japanese patent application number 2017-544674, received December 25, 2019, 28 pages	X

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/DANIEL PREVIL/	Date Considered	02/01/2020

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☒ See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Gary R. Jarosik/	Date (YYYY-MM-DD)	2020-01-24
Name/Print	Gary R. Jarosik	Registration Number	35,906

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.P/

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	16200172
	Filing Date	2018-11-26
	First Named Inventor	George Seelman
	Art Unit	2684
	Examiner Name	Previl, Daniel
	Attorney Docket Number	81230.921US3

/D.P/	1	ISA/US, International Search Report and Written Opinion issued on PCT application number US19/56176, dated November 8, 2019, 9 pages

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EXAMINER SIGNATURE

Examiner Signature	/DANIEL PREVIL/	Date Considered	01/22/2020

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16200172
Filing Date	2018-11-26
First Named Inventor	George Seelman
Art Unit	2684
Examiner Name	Previl, Daniel
Attorney Docket Number	81230.921US3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☒ See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Gary R. Jarosik/	Date (YYYY-MM-DD)	2019-11-15
Name/Print	Gary R. Jarosik	Registration Number	35,906

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/200,172	11/26/2018	George Seelman	81230.921US3	4128

34018 7590 04/01/2020
Greenberg Traurig, LLP
77 W. Wacker Drive
Suite 3100
CHICAGO, IL 60601-1732

EXAMINER	
PREVIL, DANIEL	

ART UNIT	PAPER NUMBER
2684	

NOTIFICATION DATE	DELIVERY MODE
04/01/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chiipmail@gtlaw.com
jarosikg@gtlaw.com
clairt@gtlaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Application No. : 16200172
Applicant : Seelman
Filing Date : 11/26/2018
Date Mailed : 04/01/2020

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Notice of Allowance Mailed

This application has been accorded an Allowance Date and is being prepared for issuance. The application, however, is incomplete for the reasons below.

Applicant is given two (2) months from the mail date of this Notice within which to respond. This time period for reply is extendable under 37 CFR 1.136(a) for only TWO additional MONTHS.

The informalities requiring correction are indicated in the attachment(s). If the informality pertains to the abstract, specification (including claims) or drawings, the informality must be corrected with an amendment in compliance with 37 CFR 1.121 (or, if the application is a reissue application, 37 CFR 1.173). Such an amendment may be filed after payment of the issue fee if limited to correction of informalities noted herein. See Waiver of 37 CFR 1.312 for Documents Required by the Office of Patent Publication, 1280 Off. Gaz. Patent Office 918 (March 23, 2004). In addition, if the informality is not corrected until after payment of the issue fee, for purposes of 35 U.S.C. 154(b)(1)(iv), "all outstanding requirements" will be considered to have been satisfied when the informality has been corrected. A failure to respond within the above-identified time period will result in the application being ABANDONED.

See attachment(s).

A copy of this notice MUST be returned with the reply. Please address response to "Mail Stop Issue Fee, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450".

/Kam Sin/
Publication Branch
Office of Data Management
(571) 272-4200

IDENTIFICATION OF DRAWING DEFICIENCIES

- [ ] There is a hole or the image thereof within the illustration. FIG(s)
- [ ] The illustration is penetrated or traversed by a solid or broken line that is not intended to be part of the drawing, such as a dark line caused by a flaw in the copying process. FIG(s)
- [ ] An ink stamp or the image thereof obscures part of the illustration. FIG(s)
- [ ] The drawing is marred by black smudges, obliterations, or fax/copier marks (for example, speckles or dots in a substantial portion of the drawing). FIG(s)
- [ ] Figure numbers are duplicated or missing. FIG(s)
- [ ] Drawing sheet or figure is missing. FIG(s)
- [ ] Numbers, letters, or reference characters in the drawing have been crossed out or are illegibly handwritten. FIG(s)
- [ ] The character of the lines, numbers, and letters is poor. FIG(s)
- [ ] The drawing's background shows that the original drawing was made on graph paper or other paper with a pattern or decoration. FIG(s)
- [ ] The FIG. number label is placed in a location that causes the drawing to be read upside down. FIG(s)
- [X] Data, a reference number, or part of the drawing is truncated or missing, or a lead line has no reference number. FIG(s) 6
- [ ] The drawing and/or the FIG. label contain(s) foreign language. FIG(s)
- [ ] This utility application contains a photograph of a view that is capable of being illustrated as a line drawing. FIG(s)
- [ ] A petition under 37 CFR 1.84(a)(2) to accept color drawings has been granted, but the brief description of the drawings in the specification does not contain (or has not been amended to contain) the paragraph required by 37 CFR 1.84(a)(2)(iii).
- [ ] This reissue application contains added and/or amended drawings that are not labeled as “New” or “Amended” or “Canceled” as required by 37 CFR 1.173(b)(3). FIG(s)
- [ ] This Design reissue application contains a drawing that is labeled as “Canceled” but is not surrounded by brackets, or a drawing that is surrounded by brackets but is not labeled as “Canceled.” See 37 CFR 1.173(b)(3). FIG(s)
- [ ] OTHER:
- [ ] COMMENTS:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Ecolink Intelligent Technology, Inc.	)
		)
Serial No.:	16/200,172	) Examiner: Previl, Daniel
		)
Filed:	November 26, 2018	) Group Art Unit: 2684
		)
Title:	SMART BARRIER ALARM DEVICE	) Atty. Docket No.: 81230.921US3

RESPONSE TO NOTICE TO FILE CORRECTED APPLICATION PAPERS

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notice to File Corrected Application Papers mailed on **April 1, 2020,** attached is one complete copy of **Replacement Sheets (16 pgs.)**.

Commissioner is hereby authorized to charge any fee deficiency or credit overpayment to deposit account number 50-2428 in the name of Greenberg Traurig.

Respectfully submitted,

Date: April 1, 2020

By: /Gary R. Jarosik/
Gary R. Jarosik, Reg. No. 35,906
Greenberg Traurig, LLP
77 W. Wacker Drive/Suite 3100
Chicago, Illinois 60601
(312) 456-8400

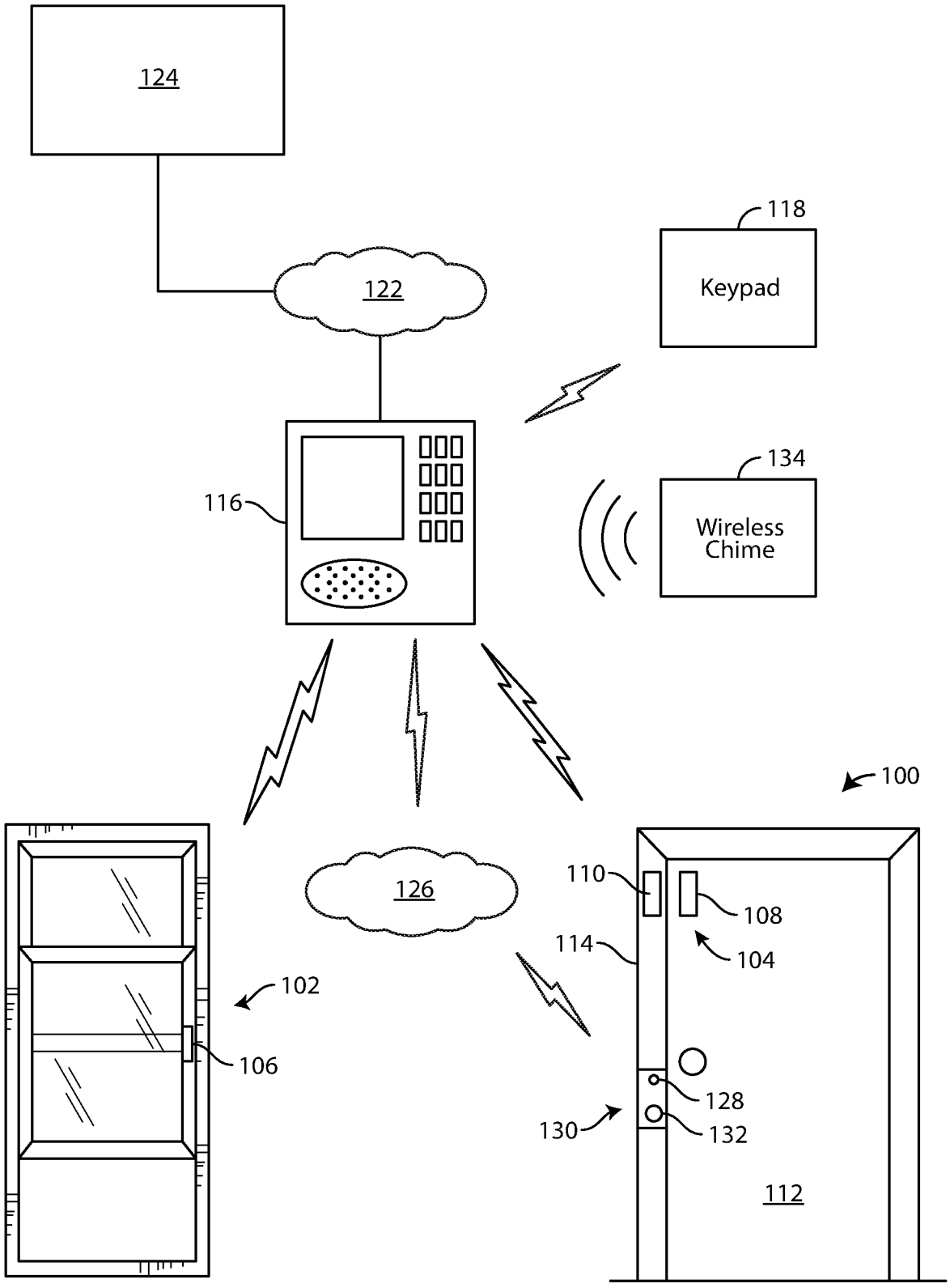

124
122
118
Keypad
116
134
Wireless Chime
100
126
110
108
114
104
102
106
128
130
132
112

FIG. 1

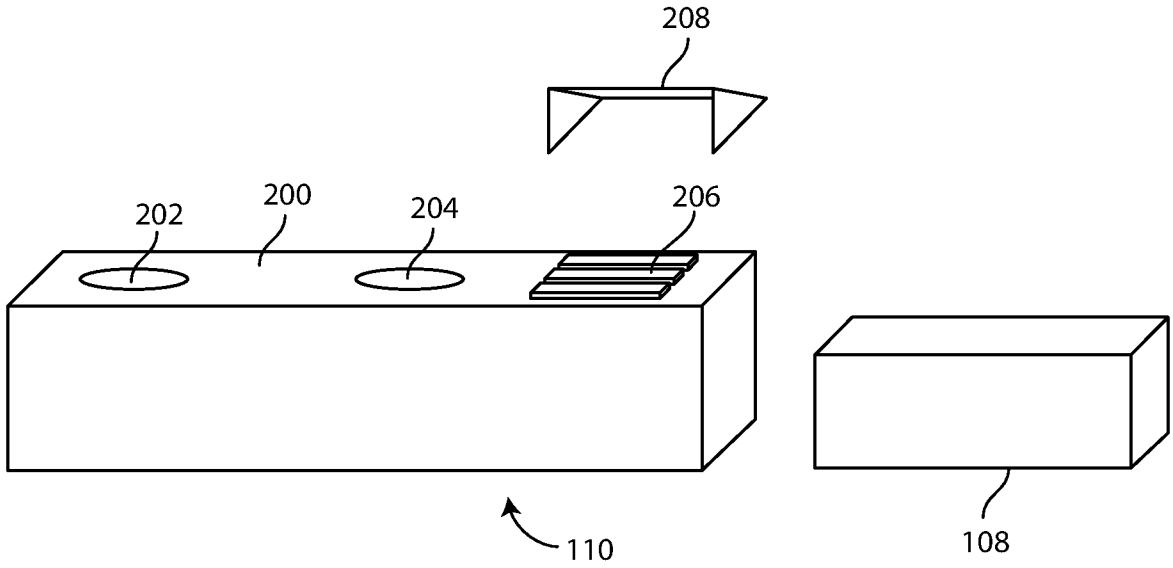


FIG. 2

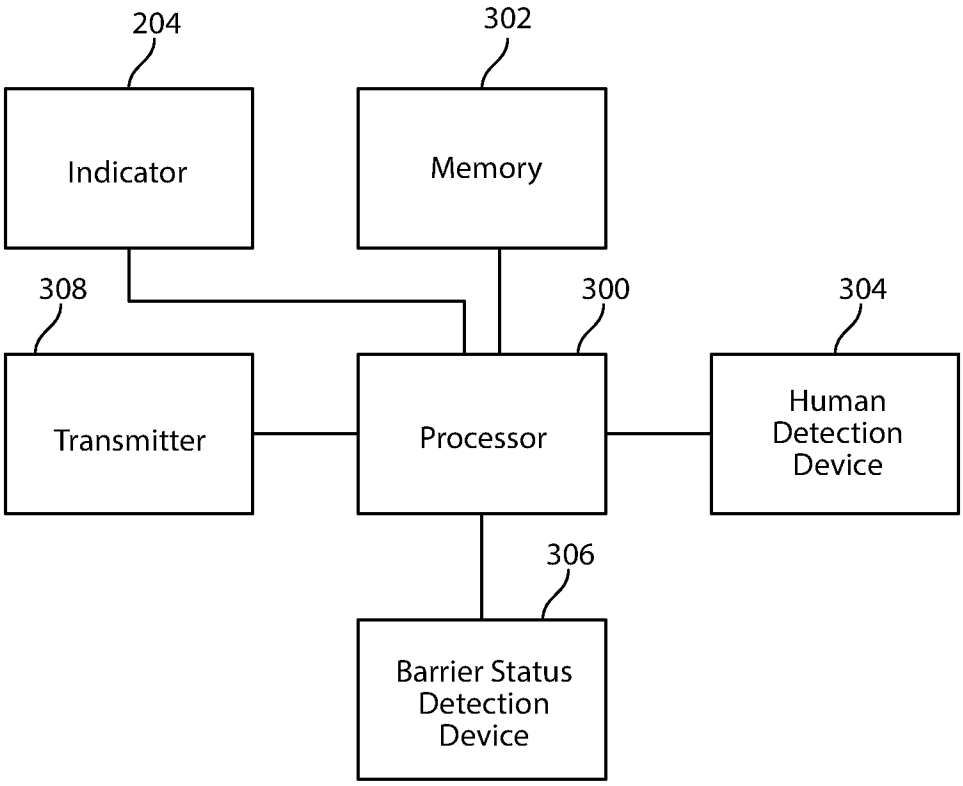

204
302
Indicator
Memory
308
300
304
Transmitter
Processor
Human Detection Device
306
Barrier Status Detection Device

FIG. 3

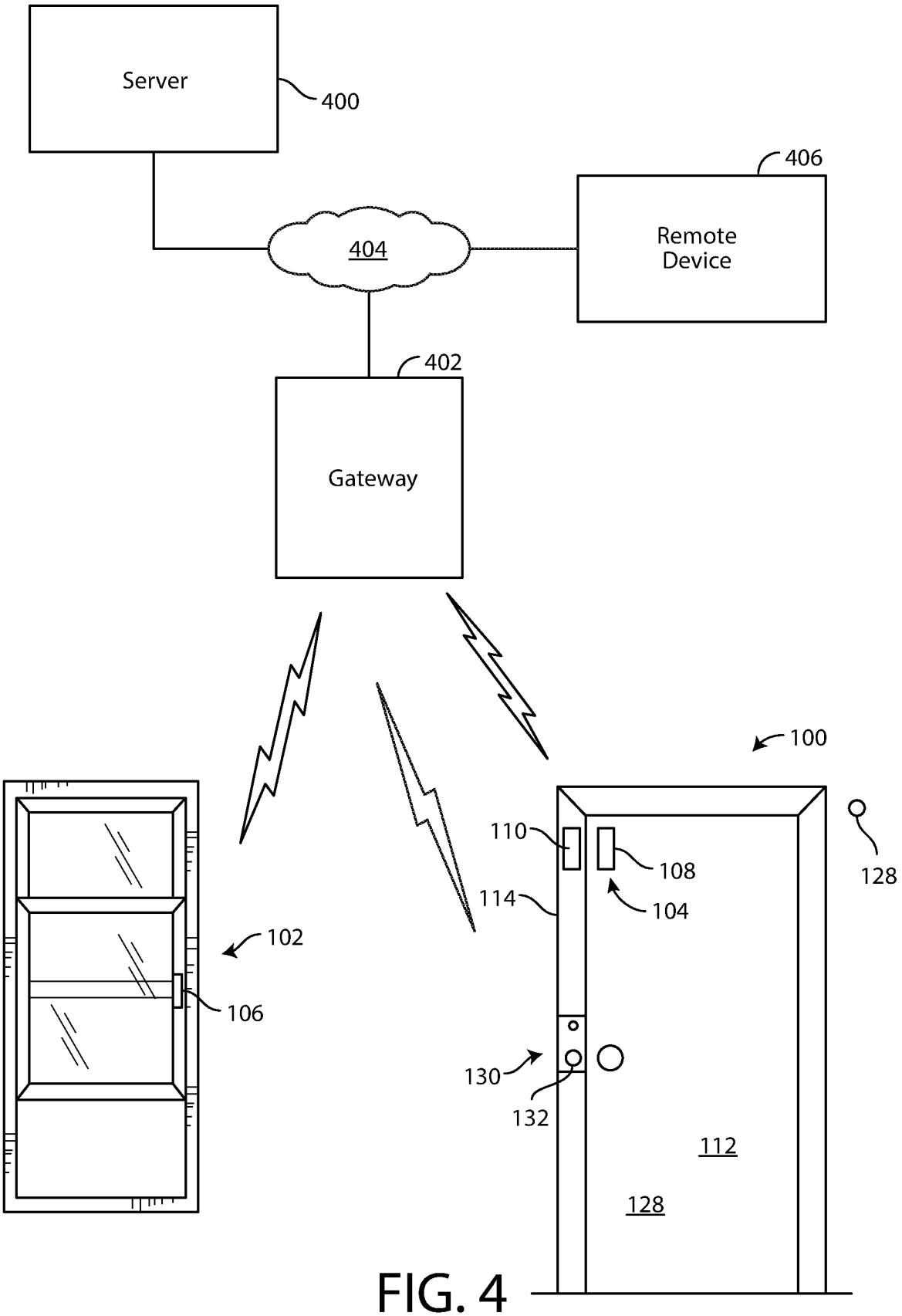

Server
400
406
Remote Device
404
402
Gateway
100
110
108
114
104
128
102
106
130
132
112
128

FIG. 4

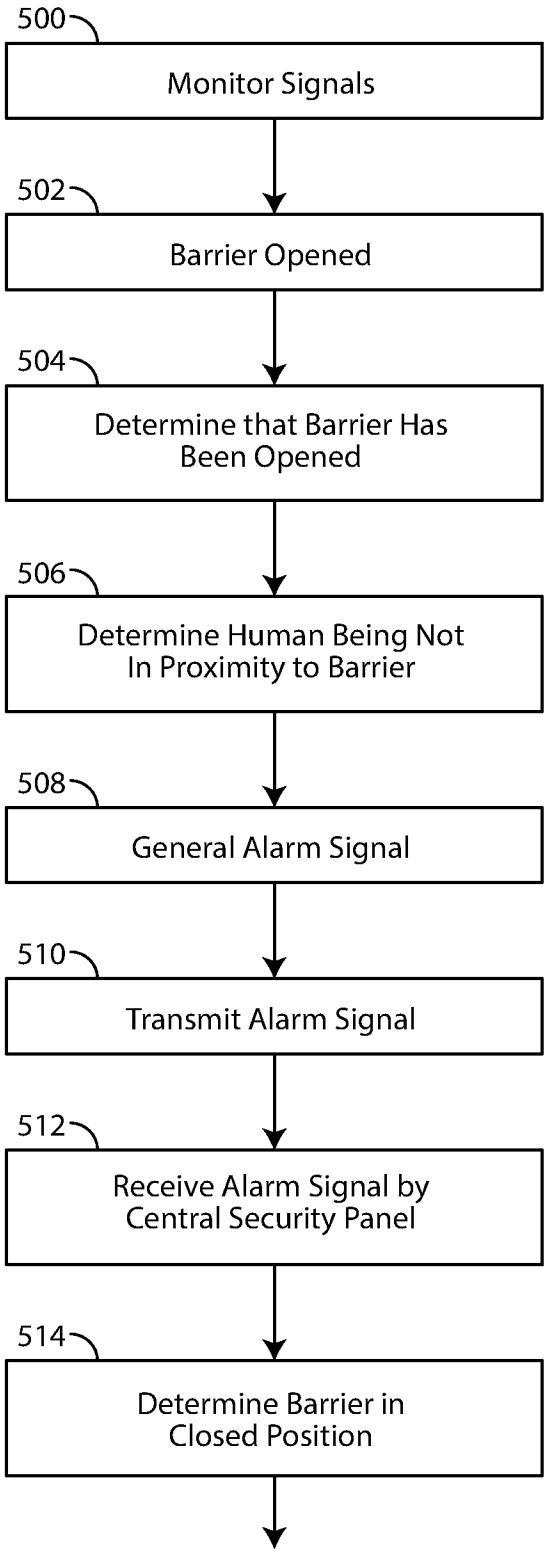

500
Monitor Signals
502
Barrier Opened
504
Determine that Barrier Has Been Opened
506
Determine Human Being Not In Proximity to Barrier
508
General Alarm Signal
510
Transmit Alarm Signal
512
Receive Alarm Signal by Central Security Panel
514
Determine Barrier in Closed Position

FIG. 5A

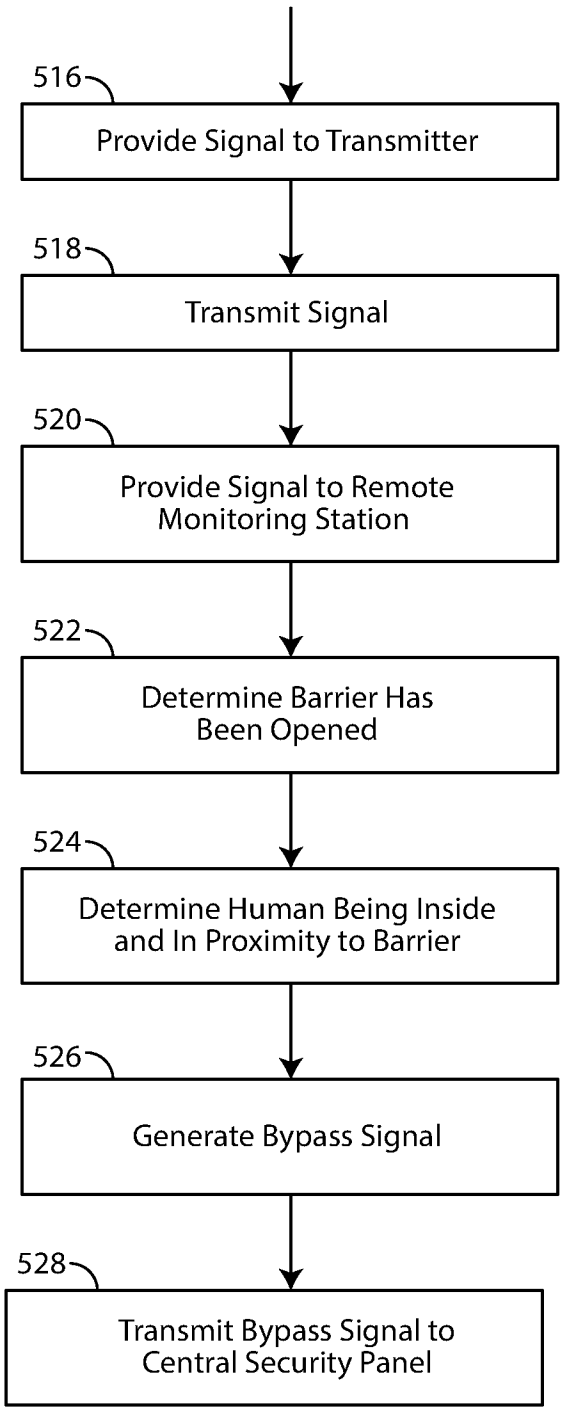

516
Provide Signal to Transmitter
518
Transmit Signal
520
Provide Signal to Remote Monitoring Station
522
Determine Barrier Has Been Opened
524
Determine Human Being Inside and In Proximity to Barrier
526
Generate Bypass Signal
528
Transmit Bypass Signal to Central Security Panel

FIG. 5B

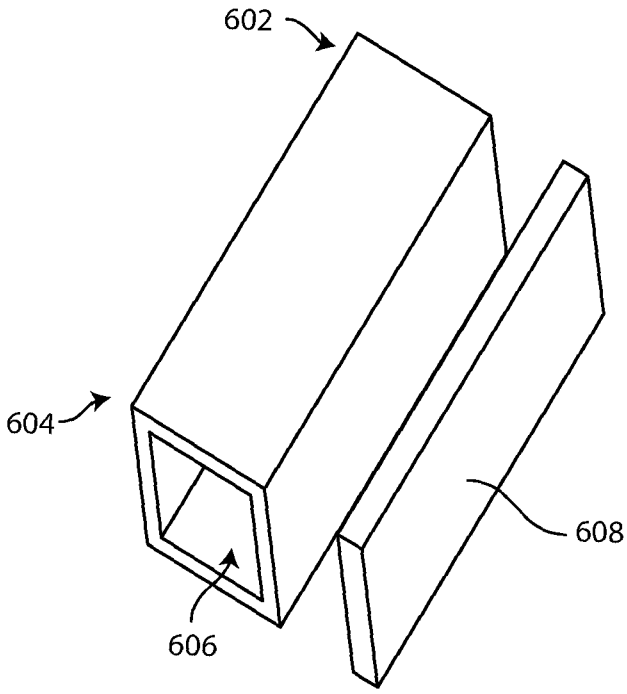


FIG. 6

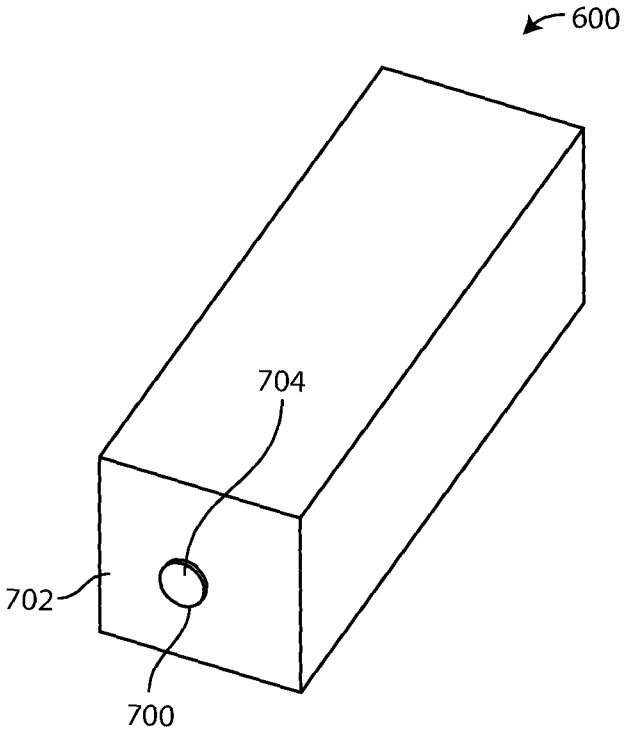


FIG. 7

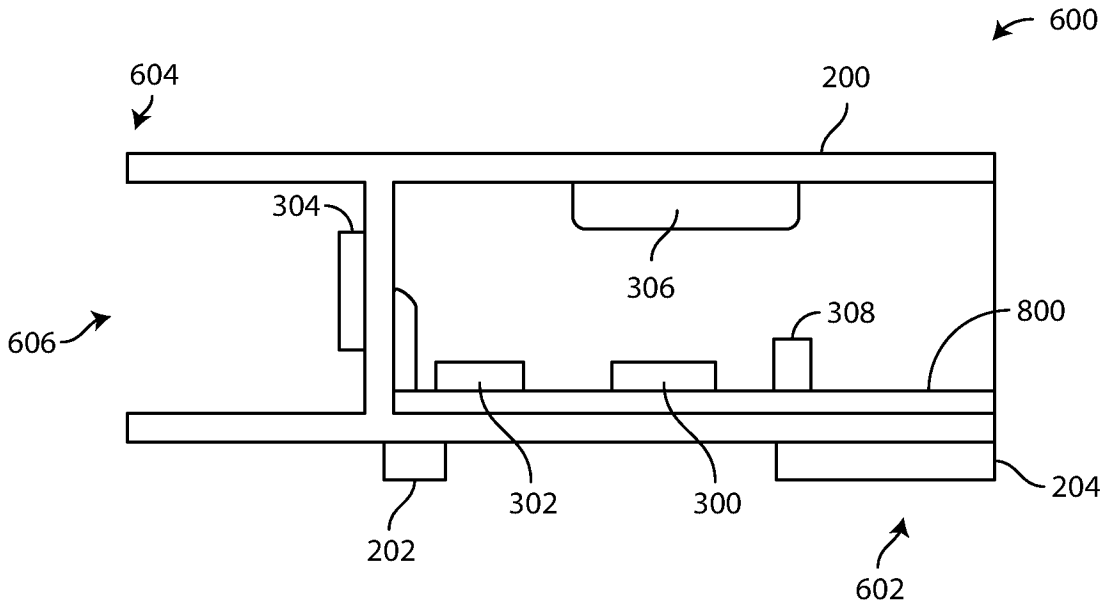

600
604
200
304
306
606
308
800
302
300
204
202
602

FIG. 8

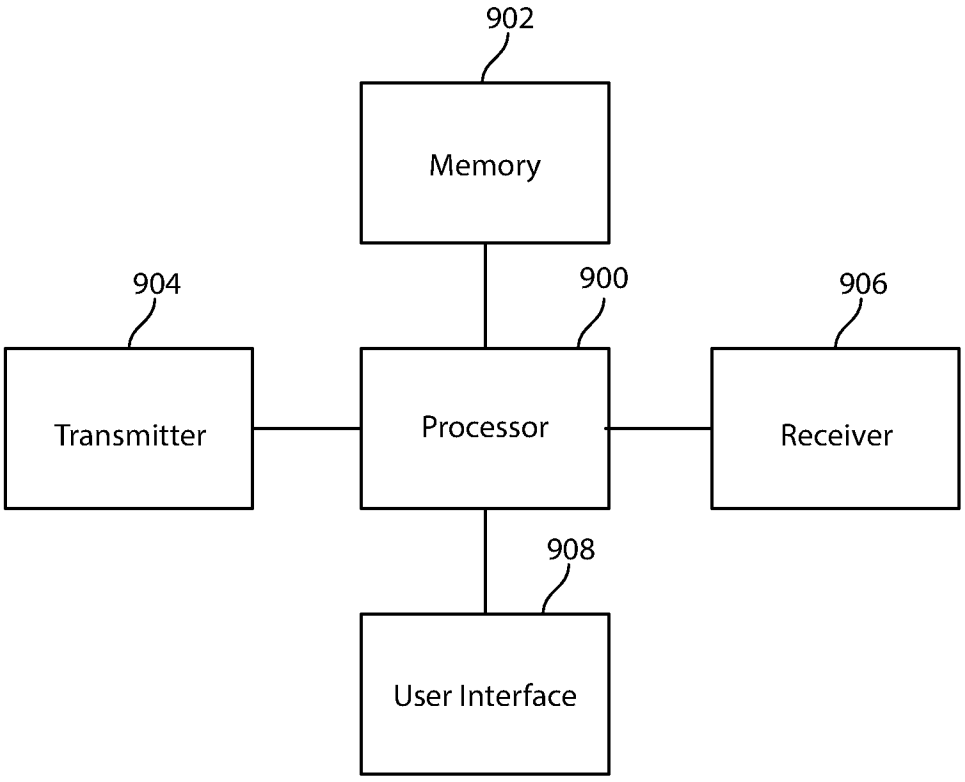

902
Memory
904
900
906
Transmitter
Processor
Receiver
908
User Interface

FIG. 9

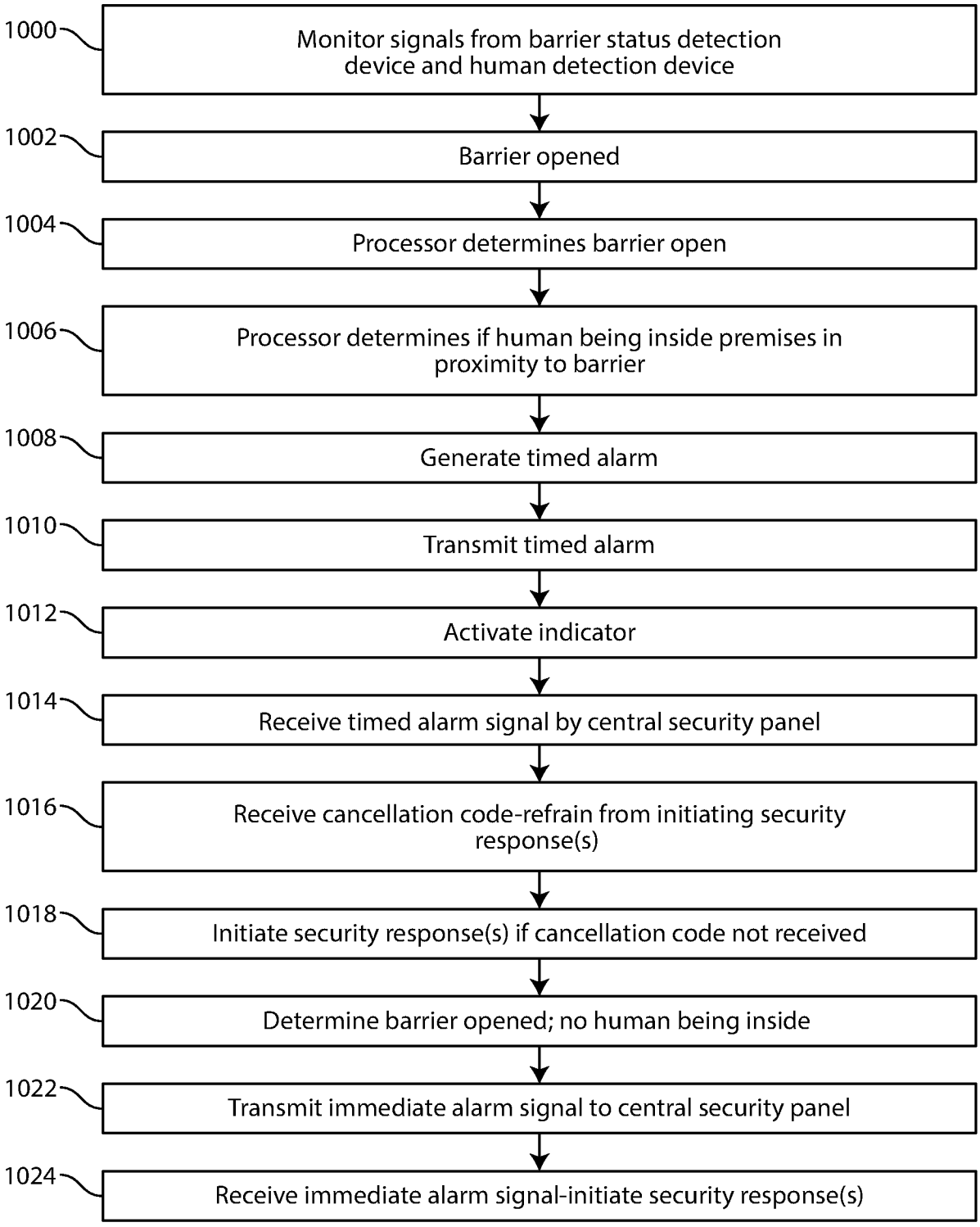

1000
Monitor signals from barrier status detection device and human detection device
1002
Barrier opened
1004
Processor determines barrier open
1006
Processor determines if human being inside premises in proximity to barrier
1008
Generate timed alarm
1010
Transmit timed alarm
1012
Activate indicator
1014
Receive timed alarm signal by central security panel
1016
Receive cancellation code-refrain from initiating security response(s)
1018
Initiate security response(s) if cancellation code not received
1020
Determine barrier opened; no human being inside
1022
Transmit immediate alarm signal to central security panel
1024
Receive immediate alarm signal-initiate security response(s)

FIG. 10

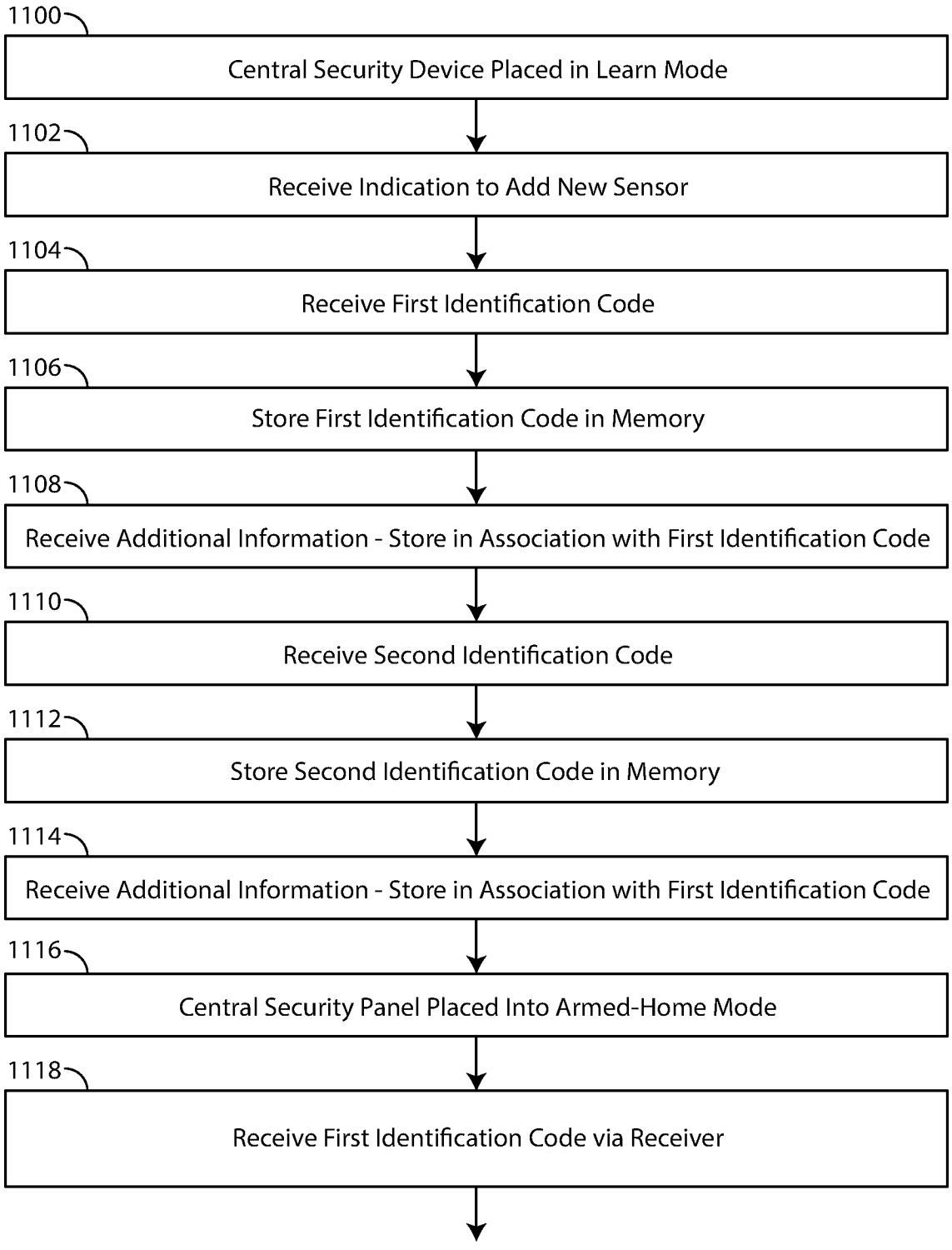

1100
Central Security Device Placed in Learn Mode
1102
Receive Indication to Add New Sensor
1104
Receive First Identification Code
1106
Store First Identification Code in Memory
1108
Receive Additional Information - Store in Association with First Identification Code
1110
Receive Second Identification Code
1112
Store Second Identification Code in Memory
1114
Receive Additional Information - Store in Association with First Identification Code
1116
Central Security Panel Placed Into Armed-Home Mode
1118
Receive First Identification Code via Receiver

FIG. 11A

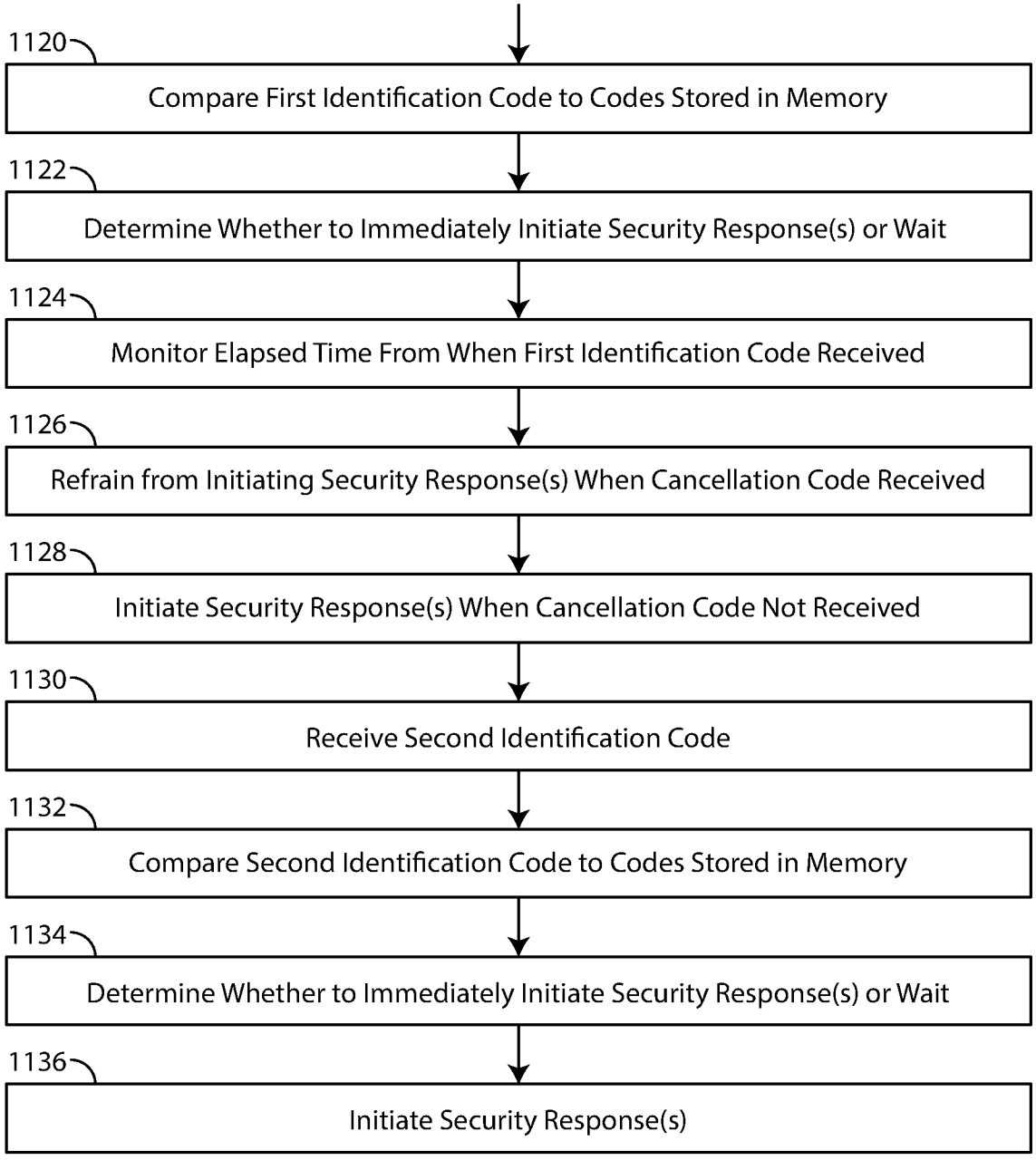

1120
Compare First Identification Code to Codes Stored in Memory
1122
Determine Whether to Immediately Initiate Security Response(s) or Wait
1124
Monitor Elapsed Time From When First Identification Code Received
1126
Refrain from Initiating Security Response(s) When Cancellation Code Received
1128
Initiate Security Response(s) When Cancellation Code Not Received
1130
Receive Second Identification Code
1132
Compare Second Identification Code to Codes Stored in Memory
1134
Determine Whether to Immediately Initiate Security Response(s) or Wait
1136
Initiate Security Response(s)

FIG. 11B

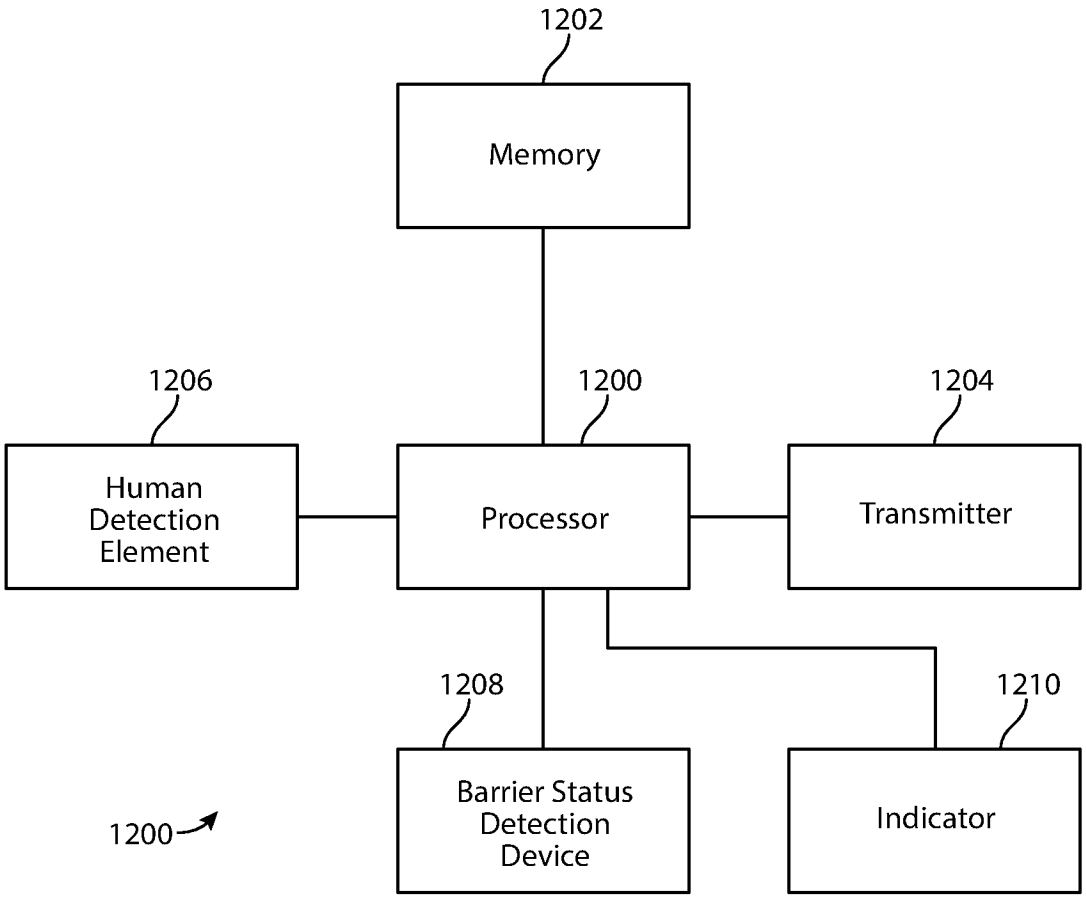

1202
Memory
1206
1200
1204
Human Detection Element
Processor
Transmitter
1208
1210
Barrier Status Detection Device
Indicator
1200

FIG. 12

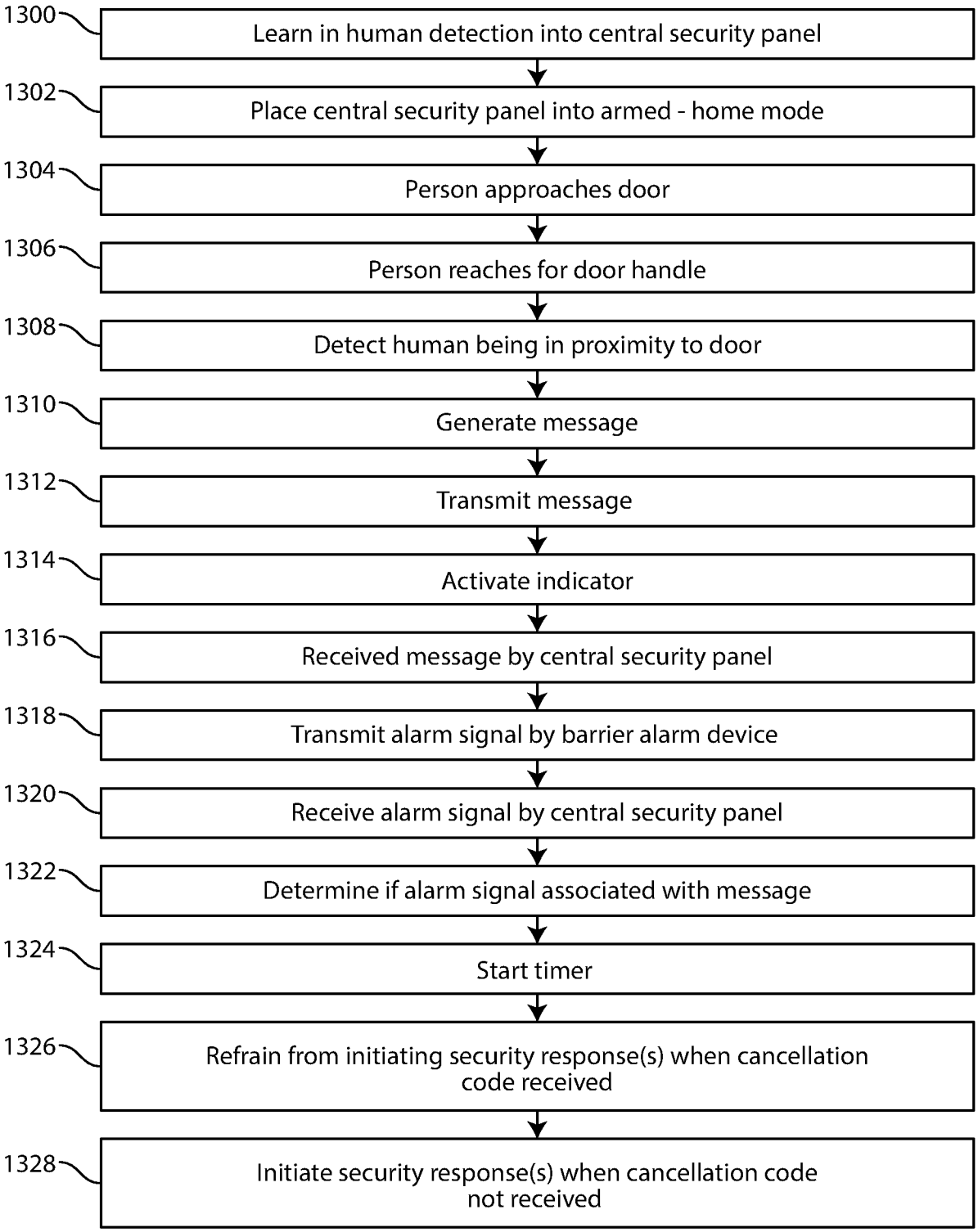

1300
Learn in human detection into central security panel
1302
Place central security panel into armed - home mode
1304
Person approaches door
1306
Person reaches for door handle
1308
Detect human being in proximity to door
1310
Generate message
1312
Transmit message
1314
Activate indicator
1316
Received message by central security panel
1318
Transmit alarm signal by barrier alarm device
1320
Receive alarm signal by central security panel
1322
Determine if alarm signal associated with message
1324
Start timer
1326
Refrain from initiating security response(s) when cancellation code received
1328
Initiate security response(s) when cancellation code not received

FIG. 13

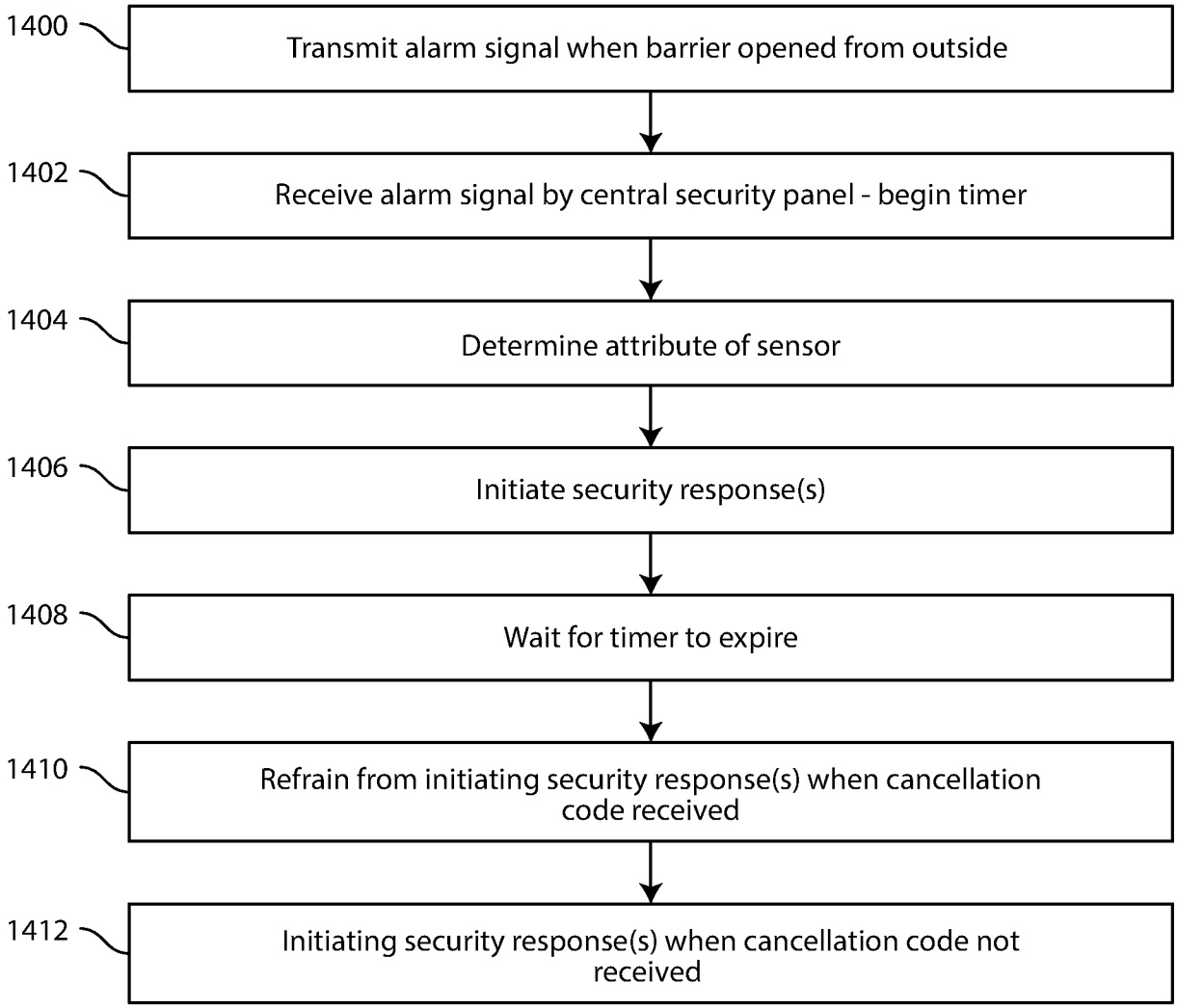

1400
Transmit alarm signal when barrier opened from outside
1402
Receive alarm signal by central security panel - begin timer
1404
Determine attribute of sensor
1406
Initiate security response(s)
1408
Wait for timer to expire
1410
Refrain from initiating security response(s) when cancellation code received
1412
Initiating security response(s) when cancellation code not received

FIG. 14

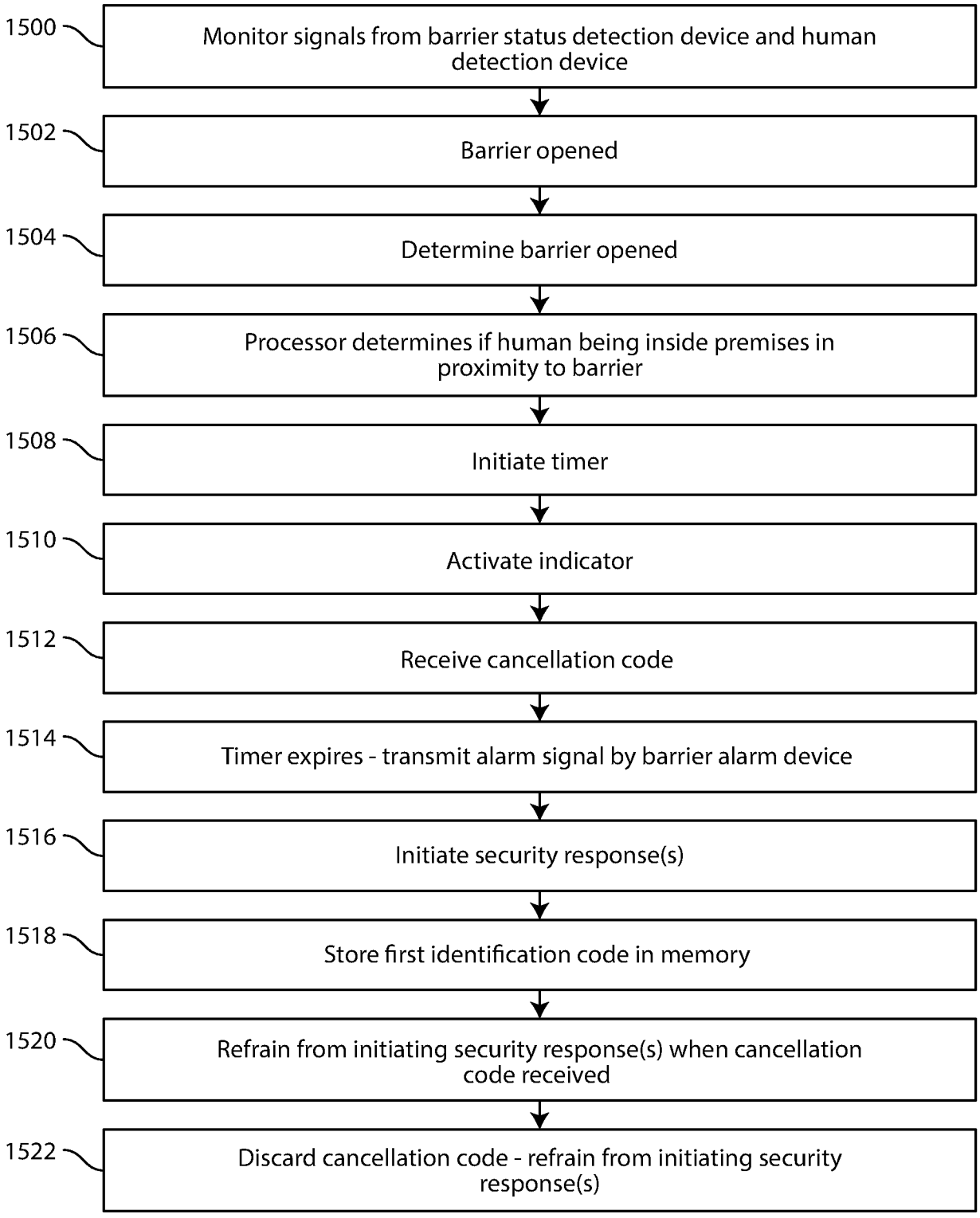

1500
Monitor signals from barrier status detection device and human detection device
1502
Barrier opened
1504
Determine barrier opened
1506
Processor determines if human being inside premises in proximity to barrier
1508
Initiate timer
1510
Activate indicator
1512
Receive cancellation code
1514
Timer expires - transmit alarm signal by barrier alarm device
1516
Initiate security response(s)
1518
Store first identification code in memory
1520
Refrain from initiating security response(s) when cancellation code received
1522
Discard cancellation code - refrain from initiating security response(s)

FIG. 15

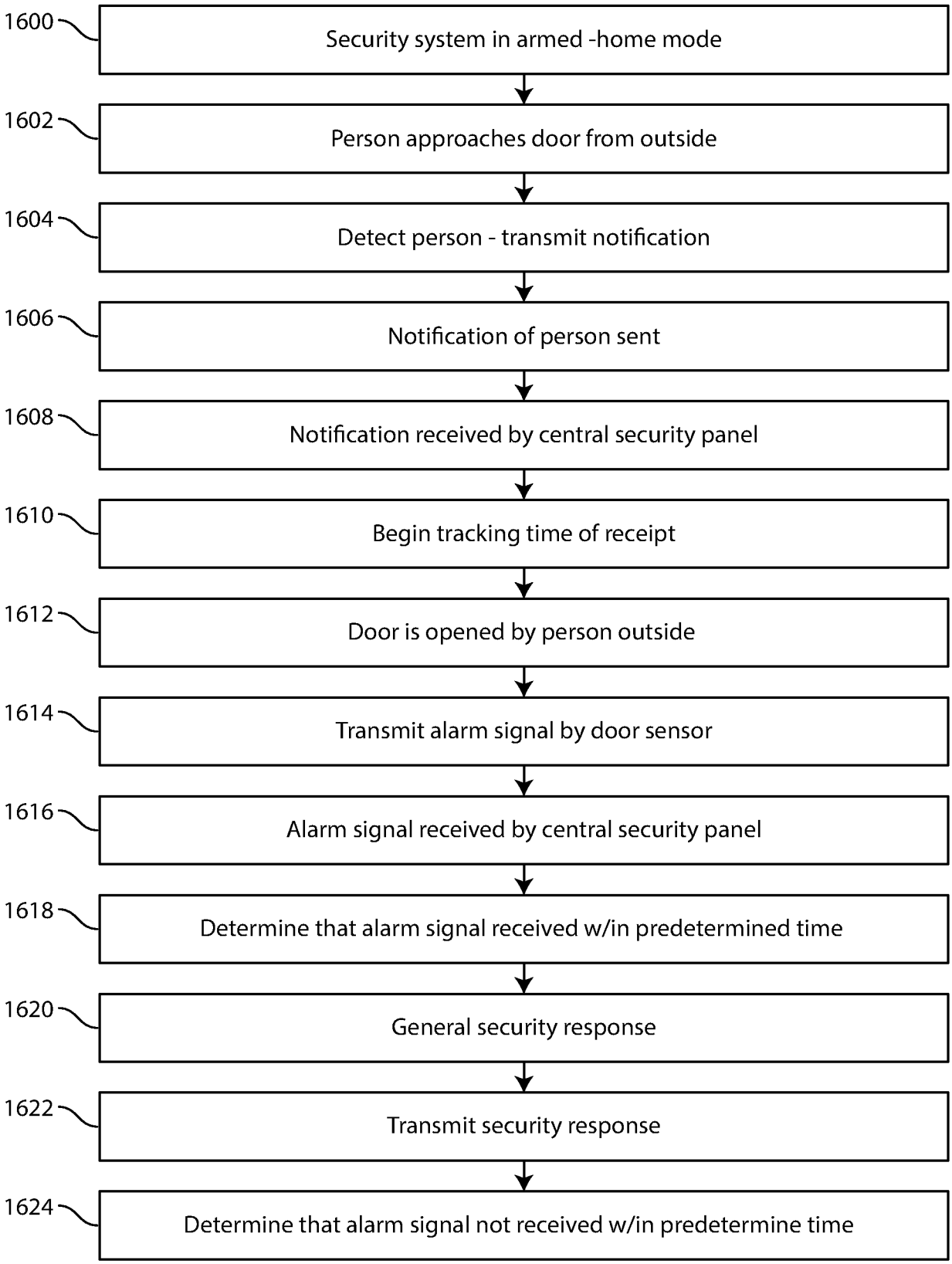

1600
Security system in armed -home mode
1602
Person approaches door from outside
1604
Detect person - transmit notification
1606
Notification of person sent
1608
Notification received by central security panel
1610
Begin tracking time of receipt
1612
Door is opened by person outside
1614
Transmit alarm signal by door sensor
1616
Alarm signal received by central security panel
1618
Determine that alarm signal received w/in predetermined time
1620
General security response
1622
Transmit security response
1624
Determine that alarm signal not received w/in predetermine time

FIG. 16

Electronic Acknowledgement Receipt

EFS ID:	39032054
Application Number:	16200172
International Application Number:	
Confirmation Number:	4128
Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Customer Number:	34018
Filer:	Gary R. Jarosik/Cynthia Tapia
Filer Authorized By:	Gary R. Jarosik
Attorney Docket Number:	81230.921US3
Receipt Date:	01-APR-2020
Filing Date:	26-NOV-2018
Time Stamp:	12:34:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment after Notice of Allowance (Rule 312)	81230_921US3Response.pdf	89016 124dfc770a5c09cdf745dc82154a5b091d76184d	no	1

Warnings:

Information:					
2	Drawings-only black and white line drawings	81230_921US3Replacements.pdf	90490 82df2005c9d4a1e86ecc0730eba02464ef744e92	no	16
Warnings:					
Information:					
			Total Files Size (in bytes):	179506	

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34018 7590 02/10/2020

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CHICAGO, IL 60601-1732

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Cynthia Tapia	(Typed or printed name)
/Cynthia Tapia/	(Signature)
May 7, 2020	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/200,172	11/26/2018	George Seelman	81230.921US3	4128

TITLE OF INVENTION: SMART BARRIER ALARM DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0.00	$0.00	$1000	05/11/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
PREVIL, DANIEL	2684	340-545900

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

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(A) NAME OF ASSIGNEE: Ecolink Intelligent Technology, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Carlsbad, CA

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

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❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

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NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Gary R. Jarosik/ Date May 7, 2020

Typed or printed name Gary R. Jarosik Registration No. 35,906

PTOL-85 Part B (08-18) Approved for use through 01/31/2020 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Electronic Patent Application Fee Transmittal

Application Number:	16200172
Filing Date:	26-Nov-2018
Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Filer:	Gary R. Jarosik/Cynthia Tapia
Attorney Docket Number:	81230.921US3

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	1000	1000

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1000**

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EFS ID:	39376604
Application Number:	16200172
International Application Number:	
Confirmation Number:	4128
Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Customer Number:	34018
Filer:	Gary R. Jarosik/Cynthia Tapia
Filer Authorized By:	Gary R. Jarosik
Attorney Docket Number:	81230.921US3
Receipt Date:	07-MAY-2020
Filing Date:	26-NOV-2018
Time Stamp:	11:55:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1000
RAM confirmation Number	E202057B55223127
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1	Issue Fee Payment (PTO-85B)	81230_921US3IssueFeeTrans.pdf	87511 22aeff5b6f357ae68d27fc4c895dc7527c97111b	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30382 540ec8182a380e195d8b02b10a4944e0fb12c8fd	no	2
Warnings:					
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Cynthia Tapia	(Typed or printed name)
/Cynthia Tapia/	(Signature)
May 7, 2020	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/200,172	11/26/2018	George Seelman	81230.921US3	4128

TITLE OF INVENTION: SMART BARRIER ALARM DEVICE

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Typed or printed name Gary R. Jarosik Registration No. 35,906

PTOL-85 Part B (08-18) Approved for use through 01/31/2020 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Electronic Patent Application Fee Transmittal

Application Number:	16200172
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Title of Invention:	SMART BARRIER ALARM DEVICE
First Named Inventor/Applicant Name:	George Seelman
Filer:	Gary R. Jarosik/Cynthia Tapia
Attorney Docket Number:	81230.921US3

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Pages:				
Claims:				
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Petition:				
Patent-Appeals-and-Interference:				
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UTILITY APPL ISSUE FEE	1501	1	1000	1000

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Miscellaneous:				
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EFS ID:	39376419
Application Number:	16200172
International Application Number:	
Confirmation Number:	4128
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First Named Inventor/Applicant Name:	George Seelman
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Filer Authorized By:	Gary R. Jarosik
Attorney Docket Number:	81230.921US3
Receipt Date:	07-MAY-2020
Filing Date:	26-NOV-2018
Time Stamp:	11:44:23
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

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1	Issue Fee Payment (PTO-85B)	81230_921US3IssueFeeTrans.pdf	87511 22aeff5b6f357ae68d27fc4c895dc7527c97111b	no	1
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2	Fee Worksheet (SB06)	fee-info.pdf	30382 02ab836e57c9d7c242ed0136c1016ef5c1964660	no	2
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/200,172	06/23/2020	10692340	81230.921US3	4128

34018 7590 06/03/2020

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77 W. Wacker Drive
Suite 3100
CHICAGO, IL 60601-1732

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

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APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

ECOLINK INTELLIGENT TECHNOLOGY, INC., Carlsbad, CA;
George Seelman, Temecula, CA;

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