

UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
ORLANDO DIVISION

KENNETH BAULDREE, Individually,

Plaintiff,

Case No.

v.

FIRST RESPONSE LOCATOR SYSTEMS
OF AMERICA, LLC, a Georgia Limited
Liability Company, THOMSON GLOBAL
HOLDINGS, INC., a Georgia Corporation,
TERRY S. LACY, Individually, BRIAN
THOMSON, Individually, and ANGELA
GLYNN, Individually,

**JURY TRIAL
DEMANDED**

Defendants.

...../

COMPLAINT

Plaintiff KENNETH BAULDREE ("Bauldree" or "Plaintiff"), by and through him, Kenneth Bauldree is Pro Se for his Complaint against Defendants FIRST RESPONSE LOCATOR SYSTEMS OF AMERICA, LLC ("First Response"), THOMSON GLOBAL HOLDINGS, INC. ("Thomson Global"), TERRY S. LACY ("Lacy"), BRIAN THOMSON ("Thomson"), and ANGELA GLYNN ("Glynn") (hereinafter sometimes collectively referred to as "Defendants") hereby alleges, upon knowledge as to himself and his own actions and upon information and belief as to all other matters, as follows:

NATURE OF THE ACTION

1. This is a civil action wherein Plaintiff seeks relief and damages under Title 35 of the United States Code for correction of a named inventor, for tortious interference of contractual relations, and for tortious interference of Florida prospective economic advantage.

2. In this action, Plaintiff seeks declaratory, monetary and equitable relief, and costs, expenses and any court or attorney fees pursuant to 35 U.S.C. §§ 284 & 285.

PARTIES

3. At all times material hereto, Plaintiff Kenneth Bauldree was and is resident of Doylestown, PA→Fort Myers→Naples→Sarasota, Florida.

4. At all times material hereto, Defendant First Response Locator Systems of America, LLC was and is a Georgia Limited Liability Company with its principal place of business at 7800 NE Industrial Blvd., Macon, Georgia 31216.

5. The three (3) members of First Response Locator Systems of America, LLC are Terry S. Lacy, an individual domiciled in Macon, Georgia, and a citizen of Georgia; Brian Thomson, an individual domiciled in Macon, Georgia, and a citizen of Georgia; and Angela Glynn, domiciled in Fort Myers, Florida, and a citizen of Florida. First Response Locator Systems of America, LLC can be served by serving its registered agent, Terry S. Lacy, at 7800 NE Industrial Blvd., Macon, Georgia 31216.

6. At all times material hereto, Defendant Thomson Global Holdings, Inc. was and is a Georgia corporation with its principal place of business at 7800 NE Industrial Blvd., Macon, Georgia 31216. Thomson Global Holdings, Inc. is domiciled in Georgia and is a citizen of Georgia. Thomson Global Holdings, Inc. can be served by serving its registered agent, Brian Thomson, at 7800 NE Industrial Blvd., Macon, Georgia 31216.

7. At all times material hereto, Defendant Terry S. Lacy was and is domiciled in, and is a resident of, Macon, Georgia.

8. At all times material hereto, Defendant Brian Thomson was and is domiciled in, and is a resident of, Macon, Georgia.

9. At all times material hereto, Defendant Angela Glynn was and is resident of Fort Myers, Florida.

SUBJECT MATTER JURISDICTION

10. This Court has jurisdiction under 35 U.S.C. § 256, and 28 U.S.C. §§ 1331 (federal question jurisdiction), and 1338(a) & (b).

11. Declaratory and equitable relief is sought pursuant to 35 U.S.C. § 256.

12. Damages are sought pursuant to 35 U.S.C. § 284.

13. Costs and attorney's fees are sought pursuant to 35 U.S.C. § 285, and Rule 54 of the Federal Rules of Civil Procedure.

PERSONAL JURISDICTION

14. Defendants First Response, Thomson Global, Terry S. Lacy, Brian Thomson, and Angela Glynn are subject to personal jurisdiction in this Court. In particular, this Court has personal jurisdiction over Defendants because each has engaged in continuous, systematic and substantial activities within this judicial district, including the engagement of significant relevant legal services, in this judicial district. Furthermore, upon information and belief, this Court has personal jurisdiction over Defendants because each has committed acts giving rise to Plaintiffs claims within and directed to this judicial district.

15. The Court has personal jurisdiction over Defendants First Response, Thomson Global, Terry S. Lacy, Brian Thomson, and Angela Glynn because Defendants, among other things, conduct business in, and purposely avail themselves of the laws of, the State of Florida. In addition, upon information and belief, Defendants through their own acts make, use, offer to sell, sell (directly or through intermediaries), import, license and/or supply, in this judicial district and elsewhere in the United States, products, through regular distribution channels, knowing such products would be used, offered for sale and/or sold in this judicial district. Plaintiffs' claims arise directly from Defendants business contacts and other activities in the State of Florida and in this judicial district.

16. Further, the Court has personal jurisdiction over Defendant Angela Glynn in that she is a resident of and domiciled in the State of Florida.

VENUE

17. Venue is proper in the Middle District of Florida pursuant to 28 U.S.C. § 1391 because a substantial part of the events giving rise to Plaintiffs claims occurred in this District and Defendants' conduct giving rise to the claims set forth herein occurred in, and originated and emanated from, this District.

FACTS

18. On February 27, 2017, after a period of negotiations, Plaintiff and Thomson Response, LLC formed First Response.

19. Defendants Thomson, Lacy, and Glynn are the principals of Thomson Global.

20. Bauldree and Defendant Glynn are the originating members of FRLS Inc.

21. Bauldree is the inventor of the "First Response Locator System" (hereinafter, "Locator").

22. Bauldree first conceived of the ideas and technology for the Locator in 2015.

23. Bauldree created the first prototypes for the Locator in 2015.

24. Bauldree and Defendant Glynn submitted the first patent application, as co-inventors, for the Locator while operating under FRLS, Inc.

25. Bauldree and Defendant Glynn applied for the patent with the United States Patent and Trademark Office ("USPTO") on May 2, 2017. The U.S. 9,928,702 Patent for the Locator was issued on March 27, 2018 (the "'702 Patent"). See **Exhibit A**.

26. The Locator's technology and intellectual property, including the '702 Patent, was assigned to FRLS, Inc. in consideration and reliance on Defendants Thomson and Lacy's representation of their vast business experience, resources, and manufacturing capabilities to bring the Locator to market.

27. Bauldree's main objective in working with Defendants was to develop, manufacture, and market the Locator.

28. Beginning sometime in 2019, Bauldree's relationship with Defendants began to deteriorate after Defendants failed to produce a workable or marketable prototype of the Locator.

29. A fractured relationship between Bauldree and Defendants quickly turned volatile as Defendants began excluding Bauldree from meetings, calls, decisions, and all communications related to the Locator.

30. In addition to Defendants' failure to fulfill their obligations to produce and market a workable Locator, Defendant Lacy, while sitting on the Board of Directors and as Managing Members of First Response, and Defendant Thomson misappropriated trade secret inventions and technology from Bauldree by filing U.S. and foreign patent applications under his name as sole inventor, respectively, for said Locator technology:

31. Defendant Lacy submitted a patent application with the USPTO on April 5, 2019, which included the technology that Plaintiff Bauldree invented. The U.S. 10,636,269 Patent was issued on April 28, 2020 (the "'269 Patent"). See **Exhibit B**.

32. Defendant Thomson submitted a patent application with the USPTO on November 22, 2019, which also included the technology that Plaintiff Bauldree invented. The U.S. D948,365 Patent was issued on April 12, 2022 (the "'365 Design Patent"). See **Exhibit C**.

33. Defendants had full knowledge the technology was invented by Bauldree at the time of filing the patents.

34. Bauldree has established a reputation for himself as an inventor.

35. An inventor designation is a clear, and important, mark of success in the industry.

36. Bauldree has suffered financially and socially as a direct result of the reputational harm from Defendants not including Bauldree as a co-inventor on the '269 Patent and the '365 Design Patent.

37. Defendants intended to expend attention and financial resources of First Response into filing multiple continuation patent applications and foreign patent applications on inventions conceived of and reduced to practice by Bauldree for Defendants' own benefit.

38. On June 26, 2020, Brian Thomson, falsely representing himself as "President" of First Response Locator Systems, Inc., revoked all former appointments of agent and appointed Hicks Intellectual Property Law as its patent agent. See **Exhibit D**.

39. FRLS, Inc.'s former counsel, Daniel Law Offices, P.A. of Orlando, Florida, stopped any and all communications with Bauldree per Defendants' instructions.

40. Daniel Law Offices, P.A. represented Bauldree and, per Defendants' instructions, violated its professional and fiduciary responsibilities to Bauldree by refusing to communicate with him regarding his intellectual property and other rights.

41. Additionally, Daniel Law Offices, P.A. prepared and filed all of Defendants' fraudulent patent applications while still representing FRLS, Inc. See **Exhibit E**.

42. Despite the obvious conflict of interest, Daniel Law Offices, P.A. ceased all communications with Bauldree during the fraudulent filings.

43. Daniel Law Offices, P.A. failed to file Information Disclosure Statements with any of Defendants' patent applications despite having personal knowledge of Bauldree's patent applications and prior art.

44. Additionally, Defendant Glynn has improperly and falsely claimed that she should be listed as a co-inventor on the '269 Patent and the '365 Design Patent.

COUNTI

DECLARATORY JUDGMENT TO CORRECT INVENTORSHIP

UNDER 35 U.S.C. § 256

45. Plaintiff incorporates and realleges paragraphs 1 through 44 above as if fully set forth herein.

46. Plaintiff is one of the true co-inventors of the subject matter claimed in the '269 Patent and the '365 Design Patent (collectively, the "Incorrect Inventor Patents").

47. The '269 Patent falsely lists Defendant Lacy as the sole inventor.

48. The '365 Design Patent falsely lists Defendant Thomson as the sole inventor.

49. Defendant Glynn falsely claims to be a co-inventor of the Incorrect Inventor Patents.

50. The Incorrect Inventor Patents generally relate to similar concepts of emergency response location detection.

51. Plaintiff, while employed at FLRS, Inc., contributed to the conception and reduction to practice of emergency alert detection.

52. Defendants were aware of Plaintiffs invention and were taught technical details about the functionality and features of the emergency response location detection device, yet Defendants intentionally omitted and failed to name Plaintiff as a co-inventor on any claim in the applications for the Incorrect Inventor Patents.

53. Through his agreements with Defendants, Plaintiff assigned to First Response his rights in the '702 Patent.

54. There is a dispute as to the correct naming of inventors on the Incorrect Inventor Patents.

55. Defendants falsely represented to the United States Patent and Trademark Office ("USPTO") that Defendants Lacy and Thomson are the true and sole inventors of the subject matter claimed in the Incorrect Inventor Patents.

56. Defendants filed the applications for the Incorrect Inventor Patents and obtained patent protection for the invention claimed in the Incorrect Inventor Patents without Plaintiff's authorization.

57. Defendants' wrongful actions as detailed above have deprived Plaintiff of his inventorship and assignable ownership interest in the Incorrect Inventor Patents and the proceeds, reputational goodwill, and commercial opportunities that would have resulted therefrom.

58. Plaintiff requests that the Court issue a declaratory judgment correcting the inventorship of the Incorrect Inventor Patents.

59. As a direct and proximate result of Defendants' actions, Plaintiff has suffered diminution of his rights to control his inventions, financial loss, and injury to his professional reputation, and he has been deprived of recognition of his work to which he was entitled.

60. As a direct and proximate result of Defendants' actions, Plaintiff has lost employment opportunities, which has harmed his reputation.

WHEREFORE, Bauldree prays that this Court enter final judgment that Plaintiff Bauldree is a co-inventor of the subject matter claimed in the Incorrect Inventor Patents, enter an Order directing the USPTO to correct the Incorrect Inventor Patents to name Plaintiff Bauldree as a co-inventor thereof, pursuant to 35 U.S.C. § 256, and grant Plaintiff such other relief as this Court deems just and proper.

COUNT II
CONVERSION

61. Plaintiff incorporates and realleges paragraphs 1 through 60 above as if fully set forth herein.

62. At all times material hereto, Plaintiff maintained the right to possession of the intellectual property underlying the Locator '702 Patent.

63. As part of Defendants' scheme to cut Plaintiff out of the inventorship and ownership rights of the Incorrect Inventor Patents, Defendants wrongfully exercised control of Plaintiffs intellectual property by filing the applications for the Incorrect Inventor Patents with the USPTO in Alexandria, Virginia.

64. As part of Defendants' scheme to cut Plaintiff out of the inventorship and ownership rights of the Incorrect Inventor Patents, Defendants deprived Plaintiff of possession of his intellectual property.

65. As a direct and proximate result of Defendants' conversion, Plaintiff has suffered diminution of his rights to control his inventions, financial loss, injury to his professional reputation, and he has been deprived of recognition of his work to which he was entitled.

WHEREFORE, Plaintiff Bauldree prays for this Court to enter a final judgment granting monetary damages, together with pre-judgment interest, attorneys fees, costs, and punitive damages and grant Plaintiff such other relief as this Court deems just and proper.

COUNT III

TORTIOUS INTERFERENCE WITH CONTRACT

66. Plaintiff incorporates and realleges paragraphs 1 through 65 above as if fully set forth herein.

67. Plaintiff had a valid and existing representation agreement (the "Agreement") with Daniel Law Offices, P.A., which has legal rights.

68. Defendants knew about the Agreement between Plaintiff and Daniel Law Offices, P.A.

69. Defendants, without a right or privilege, intentionally and unjustifiably interfered with the Agreement between Plaintiff and Daniel Law Offices, P.A. by causing Daniel Law Offices, P.A. to breach said agreement and ceasing all communications with Plaintiff.

70. Defendants' interference was wanton, willful, and malicious and intended to, or done with such want of care as to, trick and deceive Daniel Law Offices, P.A. into breaching its Agreement with Plaintiff.

71. Defendants intentional and unjustified interference with the Agreement was the direct and proximate cause of Daniel Law Offices, P.A.'s breach.

72. The foregoing acts were conducted illegally, intentionally, and maliciously by the Defendants, wherefore they are liable for punitive damages.

73. Based on the foregoing intentional acts conducted in flagrant disregard for their professional obligations and ethics requirements, the actions of Defendants rendered them direct, joint, and conspiratorial tortfeasors, independently liable for their willful, wanton actions.

74. As a result of Defendants' intentional and unjustified interference with the Agreement, Plaintiff has suffered damages, exceeding \$__

WHEREFORE, Plaintiff Bauldree requests the Court enter final judgment against Defendants for monetary damages, including, without limitation, loss of revenue, lost profits, lost business value, costs, interest, and such other relief as the Court deems just and proper.

COUNT IV
TORTIOUS INTERFERENCE WITH PROSPECTIVE ECONOMIC
ADVANTAGE

75. Plaintiff incorporates and realleges paragraphs I through 74 above as if fully set forth herein.

76. Defendants tortiously interfered with Plaintiff's prospective economic advantage.

77. Plaintiff had a prior and ongoing relationship with Defendants and the commercialization of the patents he invented.

78. Defendants knew about the details of the business relationship they had with Plaintiff.

79. Defendants were aware that the business relationship they had with Plaintiff represented a prospective economic advantage for Plaintiff.

80. Defendants, without a right or privilege, intentionally and unjustifiably interfered with Plaintiff's prospective economic advantage by falsely filing patent applications that listed Defendant Lacy and Defendant Thomson as sole inventors, respectively.

81. Plaintiff has suffered actual damages as a direct and proximate result of Defendants' wrongful conduct.

WHEREFORE, Plaintiff Bauldree requests the Court enter final judgment against Defendants for monetary damages, including, without limitation, loss

of revenue, lost profits, lost business value, costs, interest, and such other relief as the Court deems just and proper.

COUNTY
ACCOUNTING

82. Plaintiff incorporates and realleges paragraphs 1 through :81 above as if fully set forth herein.

83. Plaintiff is entitled to an accounting from Defendants of the profits made by Defendants in violation of Plaintiff's rights in the Incorrect Inventor Patents (as previously alleged herein).

JURY TRIAL DEMANDED

Plaintiff Kenneth Bauldree demands trial by jury of all issues so triable.

Dated: September 3, 2024

Respectfully submitted,

Kenneth Bauldree

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing Complaint has been furnished electronically on September 3, 2024 with the Clerk of the Court using CM/ECF. The undersigned also certifies that the foregoing document is being served this day on all counsel of record via transmission of Notice of Electronic Filing generated by CM/ECF.

By: Kenneth Bauldree



US009928702B2

(12) **United States Patent**
Bauldree et al.

(10) **Patent No.:** **US 9,928,702 B2**
(45) **Date of Patent:** **Mar. 27, 2018**

(54) **FIRST RESPONSE LOCATOR SYSTEM**

(71) Applicants: **Kenneth Bauldree**, Doylestown, PA (US); **Angela Glynn**, Ft. Meyers, FL (US)

(72) Inventors: **Kenneth Bauldree**, Doylestown, PA (US); **Angela Glynn**, Ft. Meyers, FL (US)

(73) Assignee: **First Response Locator Systems of America, LLC**, Macon, GA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **15/584,781**

(22) Filed: **May 2, 2017**

(65) **Prior Publication Data**

US 2018/0047261 A1 Feb. 15, 2018

Related U.S. Application Data

(63) Continuation-in-part of application No. 15/235,493, filed on Aug. 12, 2016.

(51) **Int. Cl.**
G08B 7/06 (2006.01)
G01S 19/48 (2010.01)
G08B 21/02 (2006.01)
G08B 5/36 (2006.01)
G01S 19/17 (2010.01)
G01S 5/00 (2006.01)

(52) **U.S. Cl.**
CPC *G08B 7/064* (2013.01); *G01S 5/0009* (2013.01); *G01S 19/17* (2013.01); *G01S 19/48* (2013.01); *G08B 5/36* (2013.01); *G08B 21/02* (2013.01)

(58) **Field of Classification Search**

CPC ... *G06F 3/04842*; *G08B 26/003*; *G08B 7/064*; *G08B 5/36*; *G08B 21/02*; *G08B 21/0438*; *G01S 5/0009*; *G01S 19/17*; *G01S 19/48*; *H04W 4/22*; *H04W 4/025*
USPC 340/8.1; 455/404.2
See application file for complete search history.

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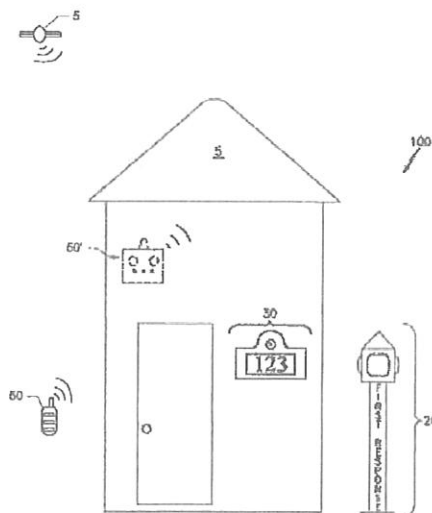
Primary Examiner — Ali Neyzari

(74) *Attorney, Agent, or Firm* — Jason T. Daniel, Esq.; Daniel Law Offices, P.A.

(57) **ABSTRACT**

A first response locator system includes at least one emergency locator unit having a main body and a lighting unit for generating light in a plurality of different colors. Indicia is disposed along the main body, and a speaker for generating an audible sound is positioned along the main body. An internal controller controls the operation of the speaker and the lighting unit. A remote operation device communicates with the internal controller and includes a plurality of buttons for selectively activating one or both of the lighting unit and the speaker.

20 Claims, 8 Drawing Sheets



U.S. Patent

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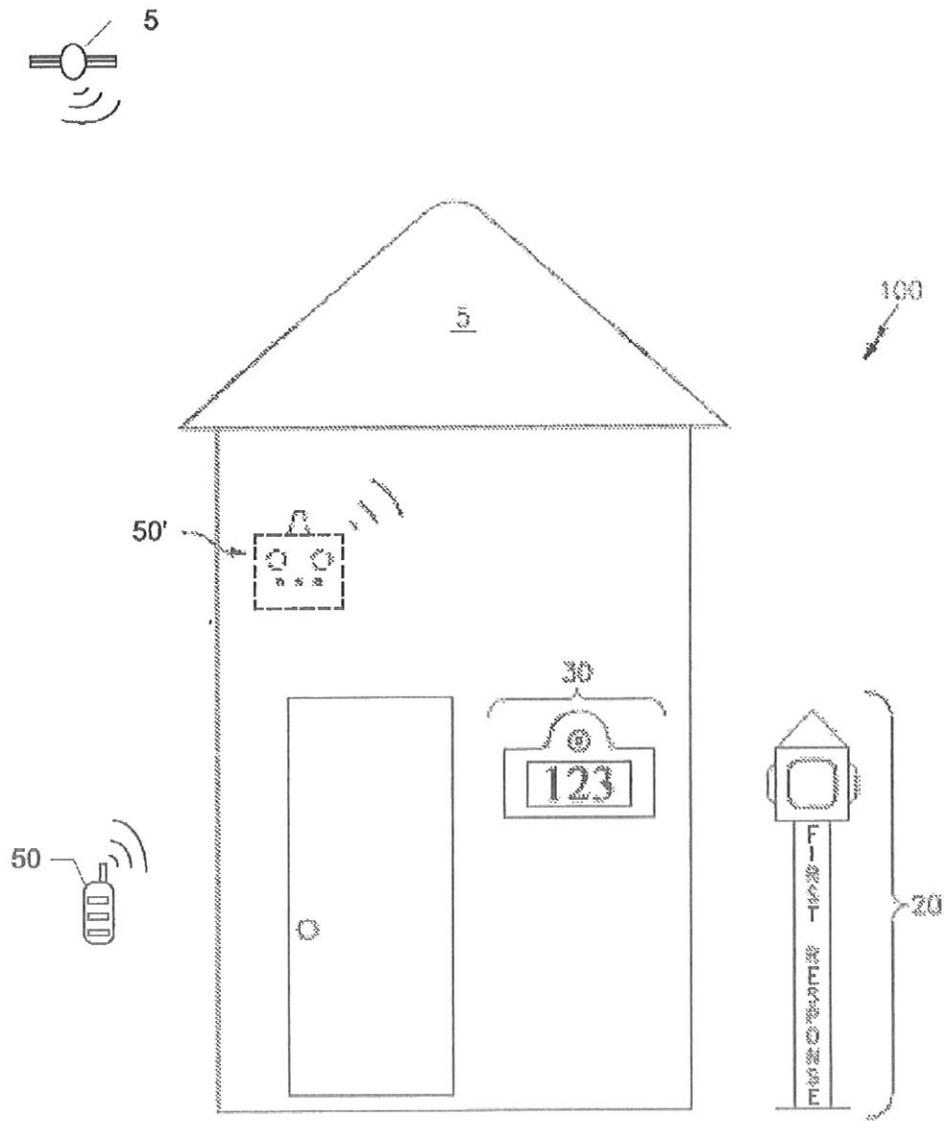


FIG. 1

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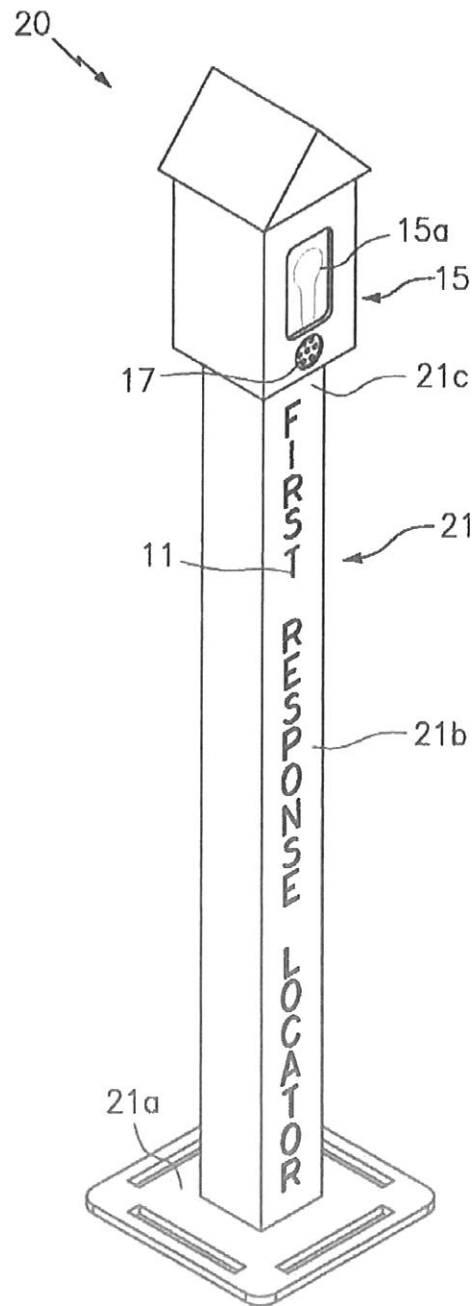


FIG. 2A

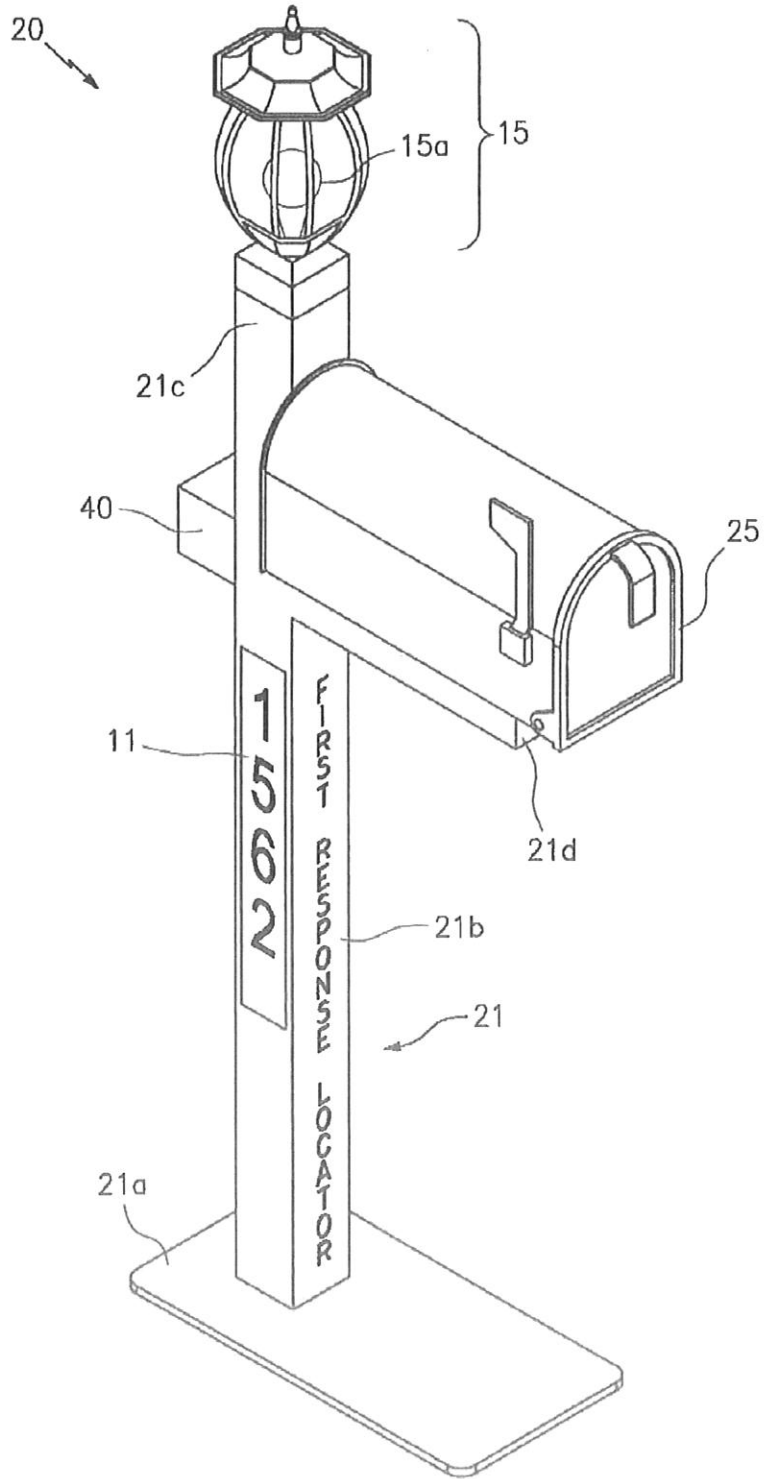


FIG. 2B

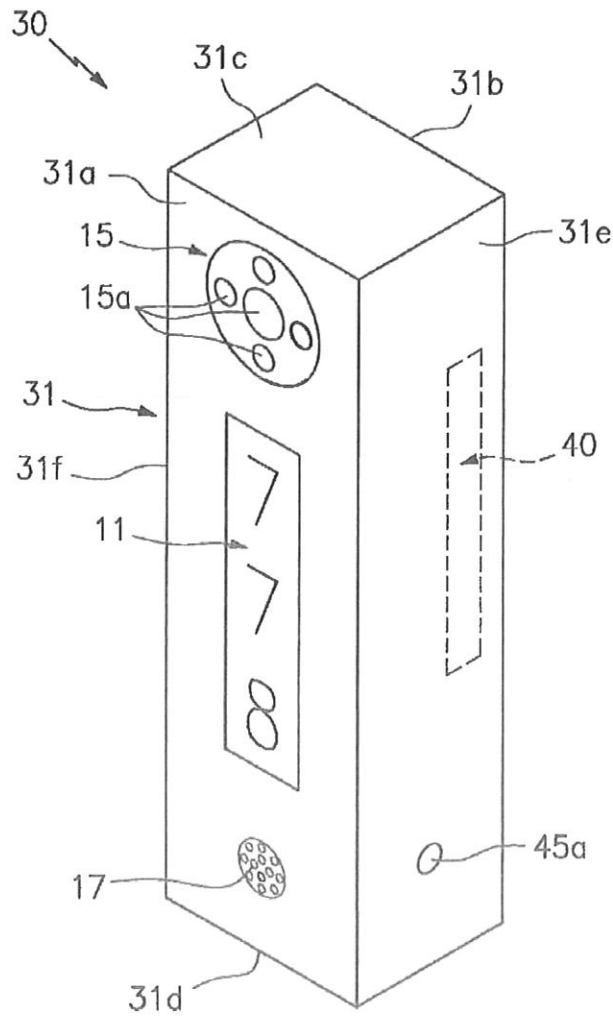
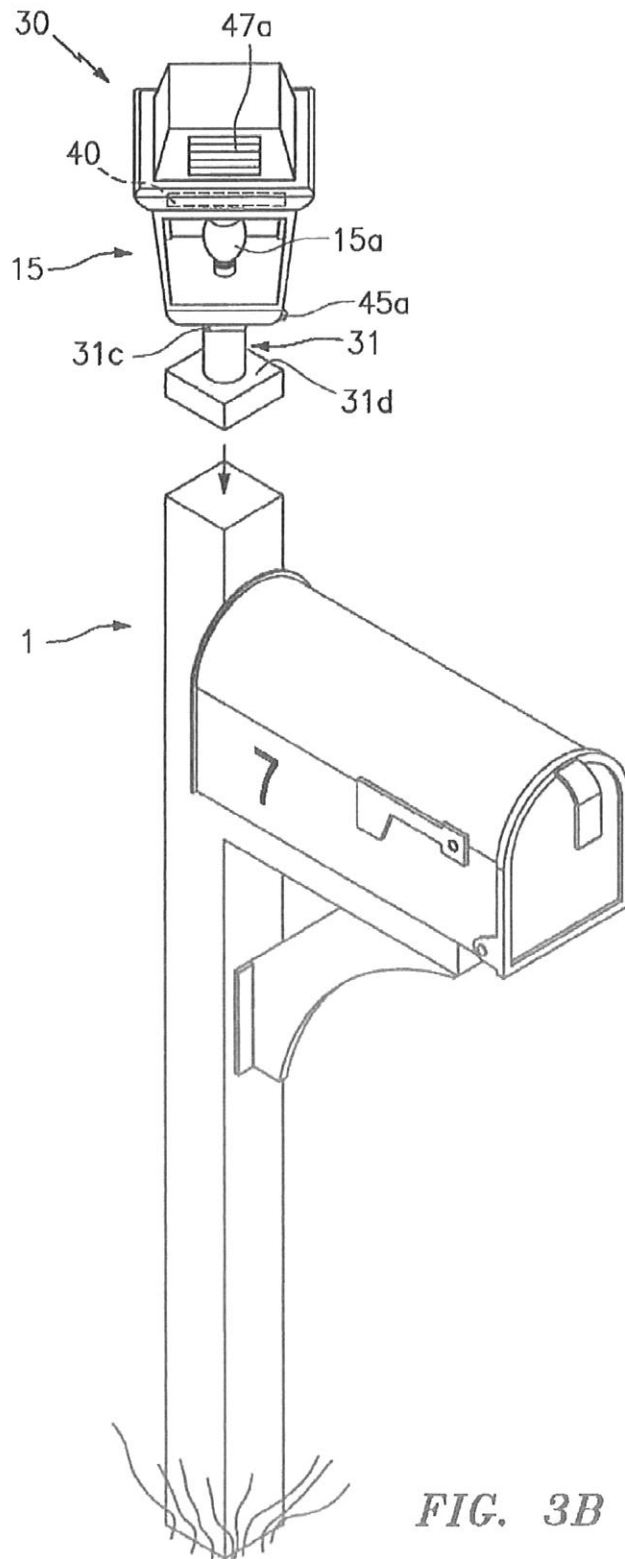


FIG. 3A



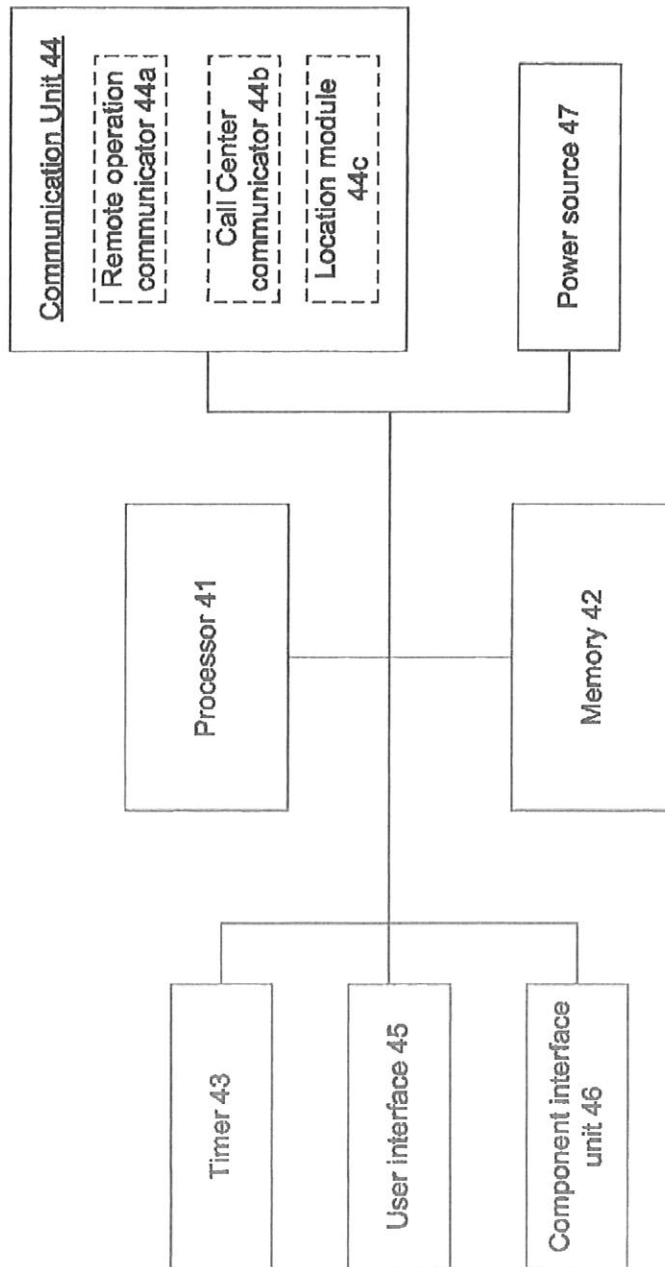


FIG. 4

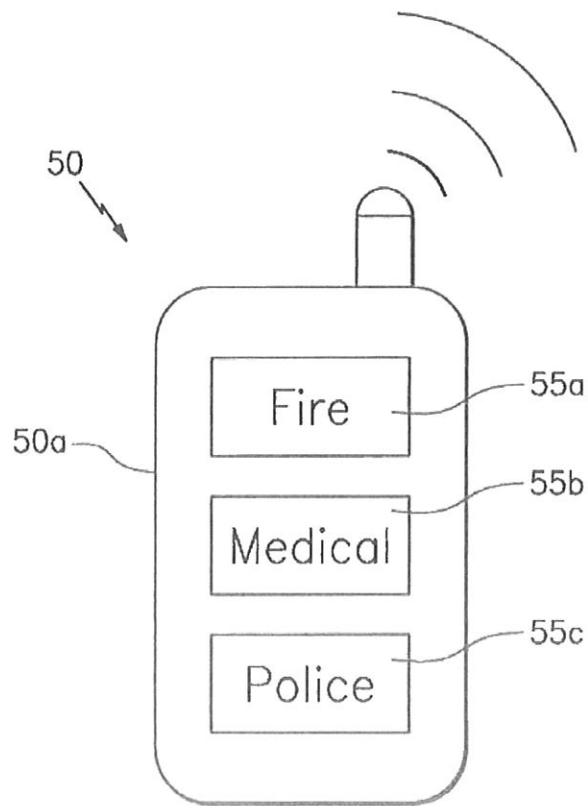


FIG. 5A

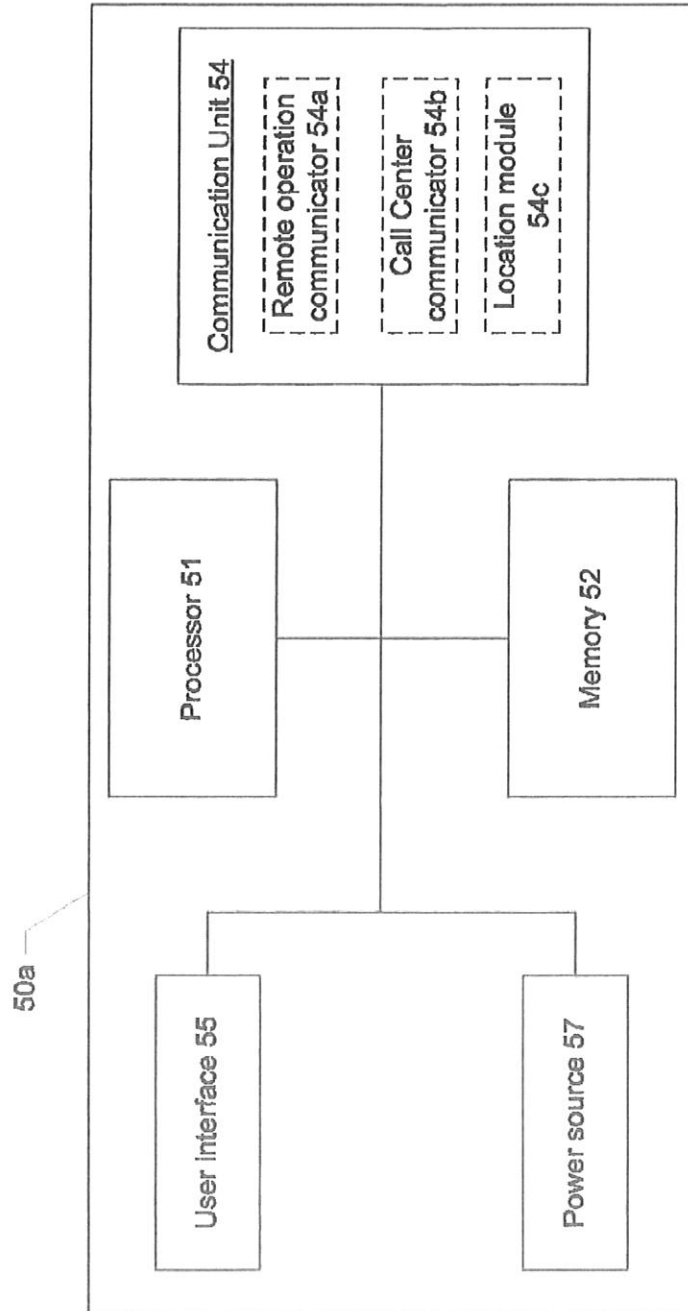


FIG. 5B

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FIRST RESPONSE LOCATOR SYSTEM**CROSS-REFERENCE TO RELATED APPLICATIONS**

This application claims the benefit of U.S. application Ser. No. 62/205,477 filed on Aug. 14, 2015, and U.S. application Ser. No. 15/235,493 filed on Aug. 12, 2016, the contents of each of which are incorporated herein by reference.

TECHNICAL FIELD

The present invention relates generally to life safety devices, and more particularly to a first response locator system that can be selectively activated in an emergency situation.

BACKGROUND

The statements in this section merely provide background information related to the present disclosure and may not constitute prior art.

When emergencies occur within a structure such as a home, apartment, or office building, for example, it is important that a first responder be able to quickly find the individual in distress. Whether the emergency requires the assistance of the police, paramedic/EMS, or the fire department, a few seconds can sometimes mean the difference between life and death.

In recent years, the implementation of GPS navigation systems within first responder vehicles has drastically shortened response times. Although these systems are extremely useful for finding the street or high-rise structure on which the emergency is located, first responders often spend several minutes attempting to locate the correct home or apartment unit. This is especially true at night, where individual house and/or unit numbers may not be sufficiently illuminated.

Within the United States, virtually every home, apartment, condo, and/or business location has a mailbox that is used for sending and receiving mail through the U.S. Postal Service. For detached homes, the mailbox typically includes a freestanding pedestal unit that is located adjacent to the street. Conversely, multi-dwelling units often utilize wall mounted units that are secured to an exterior wall of the building at a location adjacent to the apartment door. In either instance, such mailboxes often display the home or unit number to which it belongs, and it is this address which first responders look for in identifying they have arrived at the correct location.

Accordingly, it would be beneficial to provide a first response locator system that can function alone or in conjunction with a mailbox to provide a conspicuous visual indication of the location of an emergency to first responders. Additionally, it would be beneficial to provide first responders with the exact location of the person requesting assistance upon arrival at the building or residence to which an emergency locator unit is located.

SUMMARY OF THE INVENTION

The present invention is directed to a first response locator system. One embodiment of the present invention can include at least one emergency locator unit which can be positioned at a conspicuous outdoor location such as at a mailbox or a building wall. Each of the locator units can include a lighting unit having at least one lighting element

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which can generate light in a plurality of different colors such as red, blue, and green, for example. Each of the locator units can also include a speaker for generating an audible sound. The lighting unit and speaker can be controlled by an internal controller having a communication unit that is capable of receiving operating instructions from an external device.

Another embodiment of the present invention can include one or more remote operation devices that can communicate with the internal controller to selectively activate one or both of the lighting unit and the speaker. The remote operation devices can be constructed as a portable unit that is small enough to fit in the pocket of clothing, or can be permanently affixed within a structure. The remote operation device can include a plurality of buttons which can be selectively activated to correspond to a fire, medical or police emergency.

In yet another embodiment one or both of the emergency locator unit and the remote operation devices can include a locator module. The location information captured by the locator module can be transmitted to a call center for aiding first responders in locating both the emergency locator unit, and the remote operation device.

This summary is provided merely to introduce certain concepts and not to identify key or essential features of the claimed subject matter.

BRIEF DESCRIPTION OF THE DRAWINGS

Presently preferred embodiments are shown in the drawings. It should be appreciated, however, that the invention is not limited to the precise arrangements and instrumentalities shown.

FIG. 1 is an exemplary operating environment of a first response locator system that is useful for understanding the inventive concepts disclosed herein.

FIG. 2A is a front side view of a freestanding emergency locator unit of the system, in accordance with one embodiment of the invention.

FIG. 2B is a perspective view of another freestanding emergency locator unit of the system, in accordance with one embodiment of the invention.

FIG. 3A is a perspective view of a compact emergency locator unit of the system, in accordance with one embodiment of the invention.

FIG. 3B is a perspective view of another compact emergency locator unit of the system, in accordance with one embodiment of the invention.

FIG. 4 is a simplified block diagram of the internal controller of the emergency locator unit, in accordance with one embodiment of the invention.

FIG. 5A is a perspective view of the remote operation device of the system, in accordance with one embodiment of the invention.

FIG. 5B is a simplified block diagram of the internal components of the remote operation device of the system, in accordance with one embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

While the specification concludes with claims defining the features of the invention that are regarded as novel, it is believed that the invention will be better understood from a consideration of the description in conjunction with the drawings. As required, detailed embodiments of the present invention are disclosed herein; however, it is to be under-

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stood that the disclosed embodiments are merely exemplary of the invention which can be embodied in various forms. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the inventive arrangements in virtually any appropriately detailed structure. Further, the terms and phrases used herein are not intended to be limiting but rather to provide an understandable description of the invention.

As described herein, a "call center" can include one or more offsite locations that are equipped to communicate with each of the below described first response locator systems. In this regard, the call center(s) can act as a function of the First Response Locator System umbrella, and/or can include any number of third party companies who provide alarm monitoring, for example. In either instance, the call center(s) can function to monitor the first response systems and take appropriate action when necessary, including dispatching police and fire as well as private emergency response services, when a system is activated by a user.

In each of the drawings, identical reference numerals are used for like elements of the invention or elements of like function. For the sake of clarity, only those reference numerals are shown in the individual figures which are necessary for the description of the respective figure. For purposes of this description, the terms "upper," "bottom," "right," "left," "front," "vertical," "horizontal," and derivatives thereof shall relate to the invention as oriented in FIG. 1.

FIG. 1 illustrates one embodiment of the first response locator system 100 for assisting first responders to locate a particular building or residence 5. As shown, the system can include a one or both of a freestanding emergency locator unit 20, and a compact emergency locator unit 30, that are in communication with one or more remote operation devices 50 and 50'.

FIG. 2A, illustrates one embodiment of a freestanding emergency locator unit 20 that includes an elongated main body 21 having a bottom end 21a for engaging the ground, a middle section 21b and a top end 21c. The main body can include any number of different shapes and sizes, and can function to house the below described internal controller 40. As such, the main body can be constructed from any number of different materials that are suitable for prolonged use in an outdoor environment (i.e., weather resistant), such as various metals, plastics and/or composites, for example.

As shown in FIG. 2B, the freestanding main body 21 can also include a generally horizontal arm 21d onto which a mailbox 25 can be secured. In various embodiments, the horizontal arm can be positioned so as to ensure the height of the mailbox 25 from the ground is in compliance with any applicable laws and/or ordinances. Such a feature is particularly advantageous for new construction projects wherein the lifesaving benefits of the first response locator system can be seamlessly incorporated into the design of a new mailbox and can be deployed uniformly across an entire subdivision.

In either instance, the locator unit 20 can also include any type of indicia 11, such as the building address, and/or emergency identification information, which clearly describe the purpose for the device to which the indicia is attached. Of course, the term "indicia" can also include any type of decorative and/or functional elements such as various colors, markings, words, shapes, symbols, logos, designs, lights, types of materials, texturing of materials, patterns, images, lithographs, and/or photographs, for example. The indicia can be secured onto and/or into the

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main body in accordance with known techniques so as to be flush with the surface of the main body or can be raised/protruding outward from the main body so as to give a three dimensional effect.

A lighting unit 15 can be provided along the main body in order to provide a clear visual indication of the location of an emergency. As shown, the lighting unit of the freestanding locator unit 20 can preferably include a decorative shape that can be positioned at the top end of the main body 21c, so as to disburse a bright beam of light in a 360 degree field of view. Of course, the lighting unit 15 is not to be construed as limited to the illustrated shape or location along the associated main body, as the lighting unit can include any shape, any size and can be secured along any location of the main body (See FIGS. 3A and 3B).

In either instance, the lighting unit 15 can function to house any number of different lighting elements 15a, such as one or more light emitting diodes (LED), for example. Of course the lighting unit is not limited to the use of LED's, as any type and number of light producing element(s) can be utilized herein. Several nonlimiting examples include compact fluorescent, incandescent, and/or halogen, for example.

As will be described below, the lighting unit 15 can be controlled by the internal controller 40 and can be selectively activated via the remote operation device 50. In the preferred embodiment, the lighting elements 15a will be configured to generate red, green and blue light. Of course, the lighting unit can function to generate continuous and/or bursts of light in any number of different colors, intensities and/or durations.

In various embodiments, one or more speakers 17 can also be provided along the main body and/or the lighting unit 15. Each of the speakers can function to play an audible sound such as an alarm tone and/or a pre-recorded message, for example, based on an instruction from the internal controller 40 and the remote operation device 50.

FIGS. 3A and 3B illustrate various embodiments of a compact emergency locator unit 30, which can be used at locations such as apartment buildings, for example, where it is not possible to utilize a freestanding unit 20. The compact locator unit 30 can also be secured onto other structures such as an existing mailbox, for example, so as to allow the same to be retrofitted with the lifesaving features provided by the first response locator system.

As shown, the compact emergency locator unit 30 can include a main body 31 having a front surface 31a, a back surface 31b a top surface 31c, a bottom surface 31d and a pair of opposing side surfaces 31e and 31f that define a generally hollow interior space for housing the below described internal controller 40.

The main body 31 can include an unlimited number of different and/or decorative shapes and sizes such as square, oval, or rectangular, for example, and can also be constructed from any number of different materials that are suitable for prolonged use in an outdoor environment, such as various metals, plastics and/or composites, for example.

As shown in FIG. 3A, one embodiment of the compact locator unit 30 can include a generally flat back surface 31b so as to allow the unit to include or be fitted with any type of mounting hardware and/or brackets (not illustrated). Such a feature allows the device 30 to be secured onto a secondary object such as an office/apartment building wall, for example.

In the present embodiment, the lighting unit 15 can include a non-decorative shape having a generally flat front surface that is positioned along the main body 31 so as to allow the lighting elements 15a to disburse the generated

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light outward from the front surface thereof. Likewise, the speaker 17 and indicia 11 can be provided along the front surface of the main body. Of course, the unit 30 is not limited to the illustrated shape or arrangement of components, as many different modifications to the same are also contemplated.

For example, FIG. 3B illustrates one embodiment of a compact emergency locator unit 30 that includes a decorative lighting unit 15 that extends upward from the top surface 31c of the main body. In the present example, the bottom surface 31d can be generally flat, so as to allow the unit to include or be fitted with a post bracket 35, or other such mounting hardware. Such a feature allows the device 30 to be secured onto the top of an existing mailbox 1 or other such structure, for example.

FIG. 4 is an exemplary block diagram of an internal controller 40 which can be provided within the main body and/or lighting unit of the locator units 20 and 30. As shown, the internal controller 40 can include any number of components such as a processor 41 that is conventionally connected to an internal memory 42, a timer module 43, a communication unit 44, a user interface 45, a component interface unit 46, and/or a power source 47.

The processor/CPU 41 can act to execute program code stored in the memory 42 in order to allow the device to perform the functionality described herein. Likewise, a timer module 43 can be provided, and can function to accurately measure the passage of time. As described herein, the timer module can be provided as a function of the processor or can include a separate physical circuit. In either instance, processors and timers are extremely well known in the art, therefore no further description will be provided.

Memory 42 can act to store operating instructions in the form of program code for the processor 41 to execute. Although illustrated in FIG. 4 as a single component, memory 42 can include one or more physical memory devices such as, for example, local memory and/or one or more bulk storage devices. As used herein, local memory can refer to random access memory or other non-persistent memory device(s) generally used during actual execution of program code, whereas a bulk storage device can be implemented as a persistent data storage device such as a hard drive, for example. Additionally, memory 42 can also include one or more cache memories that provide temporary storage of at least some program code in order to reduce the number of times program code must be retrieved from the bulk storage device during execution. Each of these devices are well known in the art.

The communication unit 44 can function to provide wired or wireless communication between the internal controller 40 and external devices. For example, the communication unit 44 can include a remote operation communicator 44a in the form of a variable radio wave transceiver 44a which can send and/or receive information wirelessly with the below described remote operation device(s) 50 and 50'. Alternatively, or in addition thereto, the remote operation communicator 44a can include a Bluetooth transceiver for communicating wirelessly with a portable user device such as the device 50' and/or a smartphone that is running a First Response Locator App, for example. Of course, any number of other known transmission and reception mechanisms and protocols can also be utilized herein.

In another embodiment, the communication unit 44 can also include a call center communicator 44b in the form of a cellular telephone, hard wired telephone and/or network adapter functioning to communicate over a WAN, LAN or the internet via an internet service provider, for example.

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The call center communicator can function to allow the device to send alarm, emergency and/or location information to a call center who can utilize the information to guide pertinent emergency services to the location of the emergency.

In another embodiment, the communication unit 44 can also include a location module 44c in the form of a cellular telephone location system and/or a satellite-based location tracking unit for communicating with a satellite. In this regard, the module can include a GPS signal antenna, for example, which can work with the processor and memory to receive and store the location coordinates of the locator unit (e.g., location information), which can be transmitted to the above noted call center.

The user interface 45 can function to accept user inputs for instructing device operation. As such, the user interface can include or control one or more buttons/switches 45a that are connected to the processor 41 so as to activate various programmatic functions, such as pairing the unit with an external device and/or transitioning the device between an ON and OFF operating state, for example.

The component interface unit 46 can function to provide a communicative link between the processor 41 and various other device components such as the above described lighting unit 15 and/or speaker 17, for example. In this regard, the component interface unit can include any number of different components such as one or more PIC microcontrollers, internal bus, USB connections and other such hardware capable of providing a direct link between the various components. Of course any other means for providing the two way communication between the identified components can also be utilized herein.

The power source 47 can include any number of different components capable of providing the necessary power requirements to each element of the locator unit. To this end, the power source can include or comprise any number of different batteries and/or can include a common A/C electrical power transformer and cord capable of allowing the locator unit to be powered from an electrical outlet. In various embodiments, the power source can also include one or more solar panels 47a which can use the sun to power the device.

The system 100 can include any number of remote operation devices which can function to selectively activate one or more of the above described emergency locator units.

To this end, FIGS. 5A and 5B illustrate one nonlimiting embodiment of a remote operation device 50. As shown, the device can include a main body 50a which houses an internal processor 51, memory 52, communication unit 54, user interface 55 and power source 57. Each of the components 51, 52, 54, 55 and 57 being identical in form and function to those described above with respect to components 41, 42, 44, 45 and 47, respectively, therefore a duplicate description is not provided.

The main body 50a can include any number of different shapes and sizes, and can be constructed from any number of different materials such as plastic, for example. In the preferred embodiment, the main body can be constructed so as to be portable in nature (e.g., pendant or keychain), so as to be carried by a user; however other embodiments are also contemplated (see 50' below).

In either instance, the device 50 can include a plurality of user interface components, such as the illustrated buttons, for example, that can be provided at any location along the main body 50a. Each of the buttons can function to selectively activate the lighting unit 15 and/or speaker 17 of an

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emergency locator unit to which the remote operation device is programmed to communicate with.

In one nonlimiting example, the remote operation device 50 can include a first button 55a which can be selectively engaged by a user to transmit a first signal to the internal controller 40 of an emergency locator unit 20 and/or 30. Upon receiving the first signal, the lighting unit 15 can immediately begin to flash red light, so as to assist firefighters in locating the building or residence at which a fire is occurring. Simultaneously to this action, the location of the remote operation device 50 itself can be captured by the location information module 54c, and can be transmitted to a remote call center via one or both of the call center communicators 54b or 44b. Such a feature can act to assist firefighters upon arrival in locating the individual holding the remote operation unit, so as to ensure they are no longer within the building.

In another nonlimiting example, the remote operation device 50 can include a second button 55b which can be selectively engaged by a user to transmit a second signal to the internal controller 40 of a particular location unit 20 and/or 30. In the present example, receipt of this second signal can cause the lighting unit 15 to flash blue light, so as to assist EMS responders in locating the building or residence at which a medical emergency is occurring. Simultaneously to this action, the location of the remote operation device 50 itself can be captured by the location information module 54c, and can be transmitted to a remote call center via one or both of the call center communicators 54b or 44b. Such a feature can act to assist EMS upon arrival in locating the individual having the medical emergency. Such a feature is particularly advantageous, as such a situation may occur at a swimming pool or other location not within the building itself.

In yet another nonlimiting example, the remote operation device 50 can include a third button 55c which can be selectively engaged by a user to transmit a third signal to the internal controller 40 of a particular location unit 20 and/or 30. In the present example, receipt of this third signal can cause the speaker 17 to produce an alarm, and can cause the lighting unit 15 to flash red and blue light, so as to assist police in locating the building or residence at which help is needed. Simultaneously to this action, the location of the remote operation device 50 itself can be captured by the location information module 54c, and can be transmitted to a remote call center via one or both of the call center communicators 54b or 44b. Such a feature can act to assist police upon arrival in locating the individual in distress. Such a feature is particularly advantageous, as such a situation may occur at a location adjacent to the building itself.

The lighting unit and/or speakers in the above described examples can be programmed to operate only for a predetermined period of time, such as 30 minutes, for example, utilizing the internal timer, or can continue to operate until the respective button has been pressed again, thereby deactivating the operation of the locator unit.

In this regard, upon the occurrence of an emergency situation, the system 100 provides a means for allowing first responders to quickly identify the address/physical location of the emergency while driving thereto, via the locator unit(s) 20 and/or 30. Moreover, upon arrival, the system can provide the first responders with the exact location of the individual in distress, based on the location of the remote operation unit 50. This can be accomplished by verbal relay of the location by the call center staff to the first responder over the telephone, for example, or via electronic patch

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wherein the coordinates are sent directly to a portable electronic device carried by the first responder.

Finally, by providing a call center communicator within both the locator unit 44b, and the remote operation unit 54b, the system 100 has a built in redundant mechanism for ensuring the call center is notified of the emergency and can take action to notify first responders.

Although described above with regard to particular examples, the inventive concepts are not so limiting. As such, those of skill in the art will recognize that any number of different programmatic instructions can be sent and received between the respective devices in order to utilize the functionality of the individual location units. For example, the system can further include functionality for automatically activating the lighting unit between dusk and dawn, when no emergency is occurring. When so activated, the light will preferably include a soft white hew which can illuminate the device and deter criminal activity nearby.

Finally, although described above with regard to a portable unit, other embodiments are also contemplated. For example, the system 100 can also include a fixed-location remote operation unit 50' (See FIG. 1), having a shape and design that is suitable for being fixedly and/or permanently mounted to a wall or other suitable location within a building. As described herein, the unit 50' can include the same components as the above described portable unit 50, therefore a duplicate description is not provided. Such a feature is beneficial in the event the user loses the portable unit and needs assistance.

Accordingly, the above described first response locator system can function to provide an immediate visual indication of the location of an emergency, which can be viewed from great distances by a first responder.

As to a further description of the manner and use of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

The terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the invention. As used herein, the singular forms "a," "an," and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will be further understood that the terms "comprises" and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof. Likewise, the terms "consisting" shall be used to describe only those components identified. In each instance where a device comprises certain elements, it will inherently consist of each of those identified elements as well.

The corresponding structures, materials, acts, and equivalents of all means or step plus function elements in the claims below are intended to include any structure, material, or act for performing the function in combination with other claimed elements as specifically claimed. The description of the present invention has been presented for purposes of illustration and description, but is not intended to be exhaustive or limited to the invention in the form disclosed. Many modifications and variations will be apparent to those of ordinary skill in the art without departing from the scope and spirit of the invention. The embodiment was chosen and described in order to best explain the principles of the invention and the practical application, and to enable others of ordinary skill in the art to understand the invention for

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various embodiments with various modifications as are suited to the particular use contemplated.

The invention claimed is:

1. A first response locator system, said system comprising:
 - an emergency locator unit that includes
 - a main body having a first shape,
 - a lighting unit that is connected to the main body,
 - at least one lighting element that is positioned within the lighting unit, and
 - an internal controller that is in communication with the lighting unit, said internal controller including a locator module for independently receiving and storing a location of the emergency locator unit to which the internal controller is installed;
 - a remote operation device that includes
 - one or more user input members that correspond to a request for assistance, and
 - a communication unit that is configured to transmit a signal to the internal controller to selectively activate the lighting unit when the one or more user input members is engaged; and
 - a call center communicator that is configured to transmit the corresponding request for assistance, and the location of the emergency locator unit to a call center, wherein the call center communicator is located within one of the emergency locator unit and the remote operation device.
2. The system of claim 1, further comprising:
 - a speaker that is disposed along at least one of the main body and the lighting unit, said speaker being in communication with the internal controller and being selectively activated by the remote operation device.
3. The system of claim 1, wherein the at least one lighting element includes one or more light emitting diodes that are configured to generate light at a plurality of different colors.
4. The system of claim 1, wherein the at least one lighting element includes a plurality of light emitting diodes that are each configured to simultaneously generate light at a plurality of different colors.
5. The system of claim 1, wherein the remote operation device includes a portable main body, and
 - a remote location module that independently receives and stores a location of the remote operation device.
6. The system of claim 1, wherein the one or more user input members includes a button that corresponds to a request for firefighter assistance, and
 - the communication unit is configured to instruct the lighting unit to produce red light for a predetermined period of time.
7. The system of claim 1, wherein the one or more user input members includes a button that corresponds to a request for medical assistance, and
 - the communication unit is configured to instruct the lighting unit to produce blue light for a predetermined period of time.
8. The system of claim 1, wherein the one or more user input members includes a button that corresponds to a request for police assistance, and

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the communication unit is configured to instruct the lighting unit to produce alternating beams of blue light and red light for a predetermined period of time.

9. The system of claim 1, wherein the first shape of the main body comprises:
 - an elongated freestanding unit having a top end, a bottom end, and a middle section, and said lighting unit includes a decorative shape that is disposed along the top end of the main body.
10. The system of claim 9, further comprising:
 - an arm that extends outward from the main body at a generally perpendicular angle; and
 - a mailbox that is disposed along the arm.
11. The system of claim 1, wherein the first shape of the main body comprises:
 - a compact decorative shape having a front surface, and a generally flat back surface that is configured to receive a wall mounting bracket.
12. The system of claim 11, wherein the lighting unit includes a non-decorative shape having a generally flat front surface that is positioned along the front surface of the main body.
13. The system of claim 12, further comprising:
 - indicia that is secured along the main body, said indicia including at least one of an address information and an emergency information.
14. The system of claim 1, wherein the main body comprises:
 - a compact decorative shape having a top surface, and a generally flat bottom surface; and
 - a post bracket that is removably secured along the bottom surface.
15. The system of claim 14, wherein the lighting unit includes a decorative shape that is positioned along the top surface of the main body.
16. The system of claim 15, further comprising:
 - at least one solar panel that is disposed along the lighting unit.
17. The system of claim 5, wherein the locator module and the remote location module each comprise, at least one of a cellular telephone location system and a satellite-based location tracking system.
18. The system of claim 5, wherein the call center communicator is configured to transmit both the location of the emergency locator unit, and the location of the remote operation device to the call center.
19. The system of claim 5, further comprising:
 - a second call center communicator that is positioned within the remote operation device.
20. The system of claim 19, wherein the call center communicator is positioned within the emergency locator unit, and
 - both the call center communicator and the second call center communicator are configured to independently transmit the corresponding request for assistance, and the location of at least one of the emergency locator unit and the remote operation device to the call center.

* * * * *



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Lacy

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(45) **Date of Patent:** **Apr. 28, 2020**

(54) **HAZARDOUS CONDITION DETECTOR WITH WIRELESS COMMUNICATION INTERFACE**

USPC 340/540
See application file for complete search history.

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(73) Assignee: **Thompson IP, L.L.C., Macon, GA (US)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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- G08B 25/01 (2006.01)
- G08B 25/00 (2006.01)
- G08B 5/36 (2006.01)
- G08B 27/00 (2006.01)
- G08B 3/10 (2006.01)
- G08B 26/00 (2006.01)

(52) U.S. Cl.

CPC G08B 21/02 (2013.01); G08B 3/1016 (2013.01); G08B 5/36 (2013.01); G08B 25/008 (2013.01); G08B 25/016 (2013.01); G08B 26/007 (2013.01); G08B 27/005 (2013.01)

(58) **Field of Classification Search**

CPC G08B 21/02; G08B 3/1016; G08B 5/36; G08B 25/008; G08B 25/016; G08B 26/007; G08B 27/005

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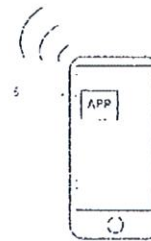
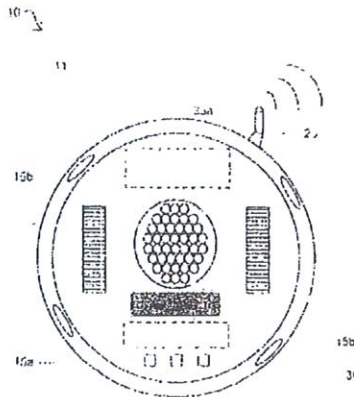
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(57) **ABSTRACT**

A hazardous condition detection device includes a small and lightweight main body having connectors along one side for securement to a building wall or ceiling. A detection unit is positioned within the main body and includes sensors such as a smoke detection sensor, a heat detection sensor, a carbon monoxide sensor, a radon detection sensor, a natural gas detection sensor, and/or a propane detection sensor. An alarm unit is positioned within the main body for generating an audiovisual alarm indication. A controller having a wireless interface is positioned within the main body and communicates with an externally located processor enabled device.

12 Claims, 3 Drawing Sheets

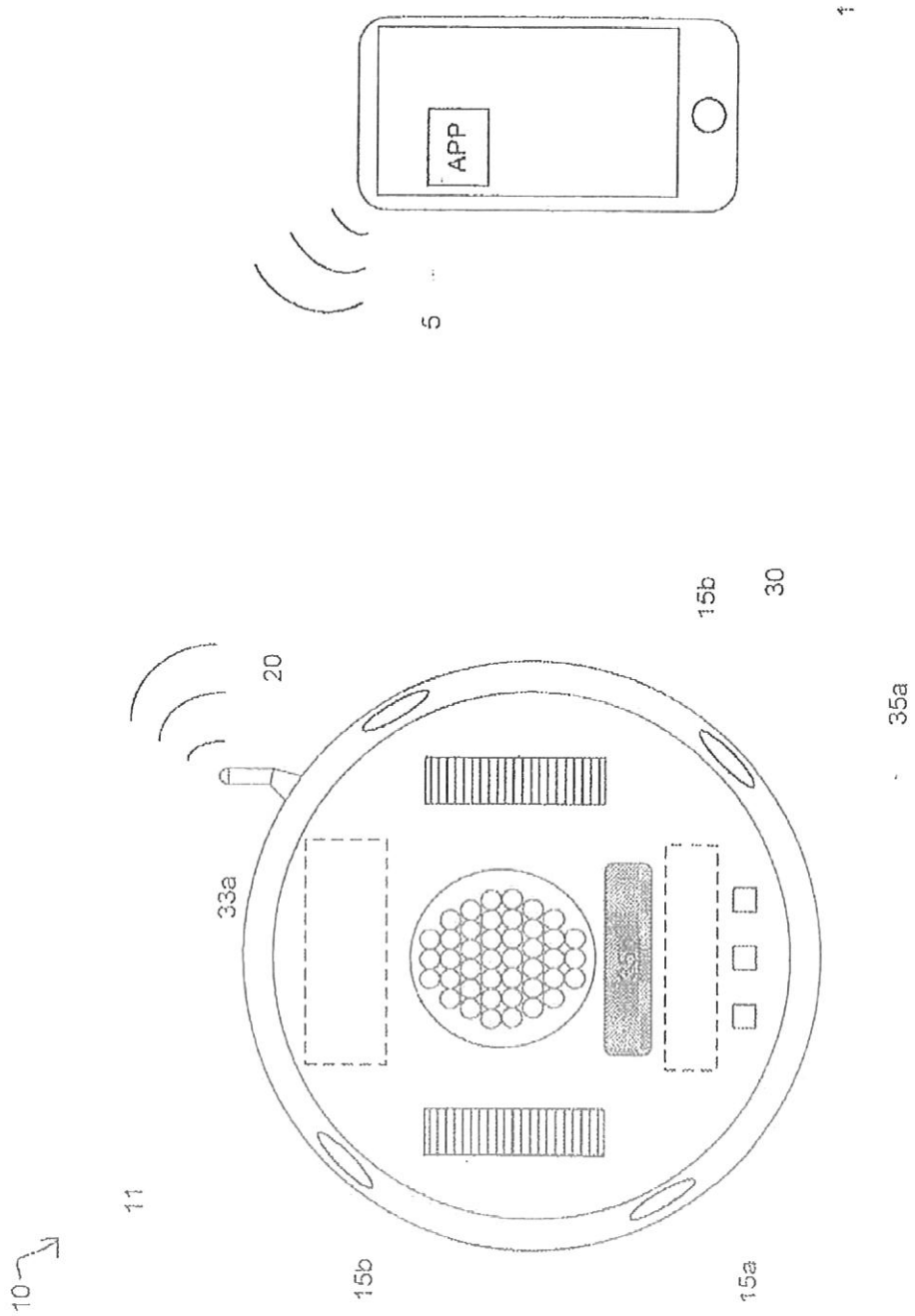


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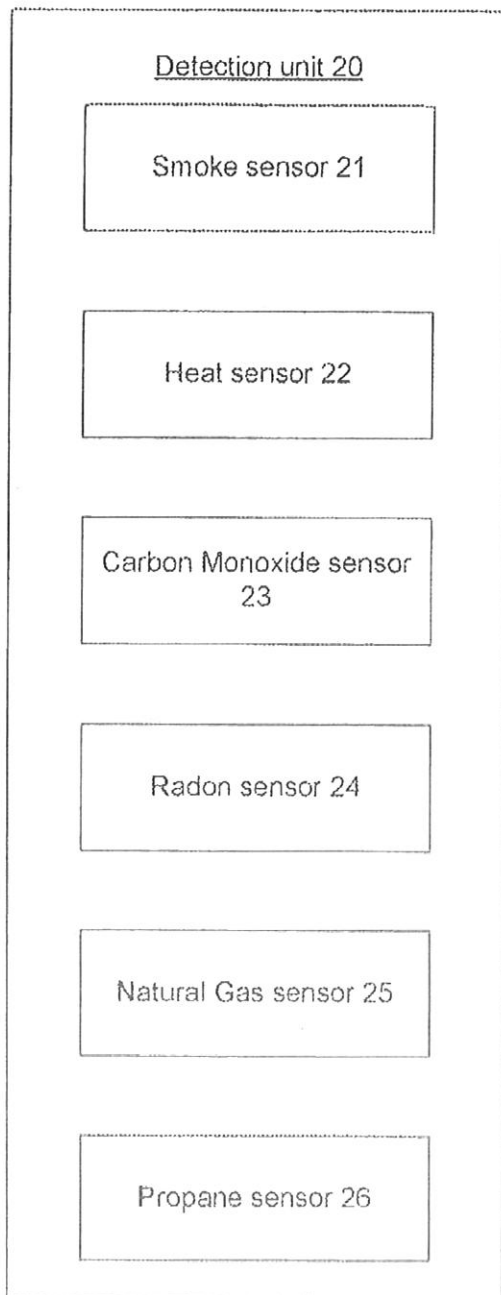


FIG. 2

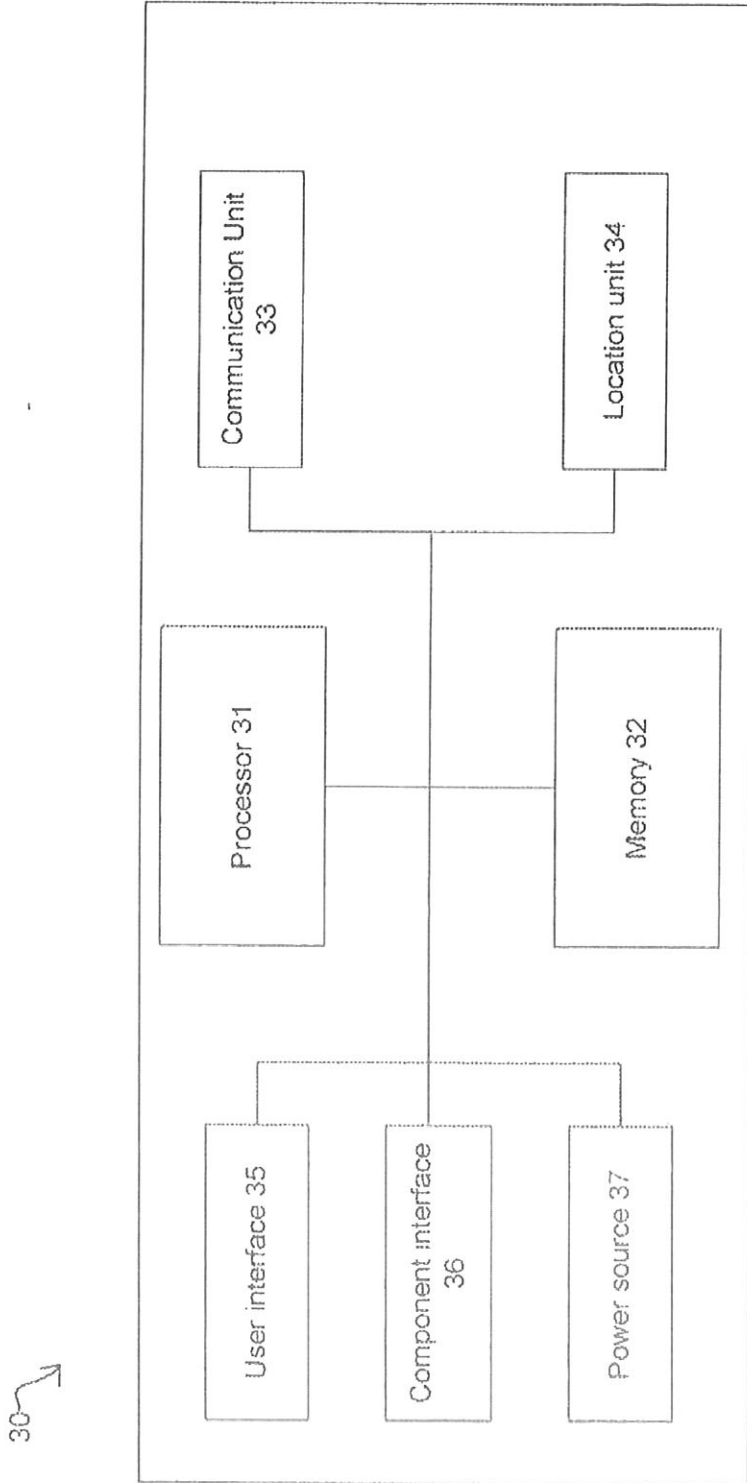


FIG. 3

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HAZARDOUS CONDITION DETECTOR WITH WIRELESS COMMUNICATION INTERFACE

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. Application Ser. No. 62/654,122 filed on Apr. 6, 2018, the contents of which are incorporated herein by reference.

TECHNICAL FIELD

The present invention relates generally to electronic safety systems, and more particularly to a hazardous condition detector that can interface with an external wireless device.

BACKGROUND

The statements in this section merely provide background information related to the present disclosure and may not constitute prior art.

There are many commercially available systems for detecting hazardous conditions such as smoke or carbon monoxide, for example. Such systems are designed to include a compact main body that can be easily secured to a wall or ceiling unobtrusively, and to activate an onboard siren upon detection of the harmful substances. These systems are designed to operate independently and for several such devices to be provided throughout a structure so that a failure in any one system still results in notification to the building occupants so as to allow the occupants to evacuate and call for help.

Although these small, lightweight independent detectors have undoubtedly saved hundreds if not thousands of lives, they still rely on a person to manually contact first responders or other appropriate agencies to investigate and cure the root cause of the alarm.

Although complex integrated systems may exist that utilize a plurality of networked detection devices that communicate with a centralized controller which can alert an alarm monitoring company, such systems are extremely costly, require extensive physical network resources and ongoing monitoring services that are simply not palatable for the average household.

Accordingly, it would be beneficial to provide a hazardous condition detector having a wireless communication unit capable of identifying hazardous conditions and independently notifying a third party, without the drawbacks described above.

SUMMARY OF THE INVENTION

The present invention is directed to a hazardous condition detection device. One embodiment of the present invention can include a small and lightweight main body having connectors along one side for securement to a building wall or ceiling. The device can include a detection unit for detecting hazardous conditions, the detection unit can include one or more sensors such as a smoke detection sensor, a heat detection sensor, a carbon monoxide sensor, a radon detection sensor, a natural gas detection sensor, and/or a propane detection sensor.

The device can include an alarm unit for generating one or both of an audible and visual alarm indication. The device can also include a controller having a wireless interface. The

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controller can include functionality for communicating with an external device directly, over a network and/or through a mobile application. The controller can also receive instructions from the external device. In various instances, the wireless interface can directly communicate notifications of detected hazardous conditions to a user-specified contact list.

This summary is provided merely to introduce certain concepts and not to identify key or essential features of the claimed subject matter.

BRIEF DESCRIPTION OF THE DRAWINGS

Presently preferred embodiments are shown in the drawings. It should be appreciated, however, that the invention is not limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view of a hazardous condition detector device that is useful for understanding the inventive concepts disclosed herein.

FIG. 2 is a simplified block diagram of a detection unit of the hazardous condition detector device, in accordance with one embodiment of the invention.

FIG. 3 is a simplified block diagram of the internal controller of the hazardous condition detector device, in accordance with one embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

While the specification concludes with claims defining the features of the invention that are regarded as novel, it is believed that the invention will be better understood from a consideration of the description in conjunction with the drawings. As required, detailed embodiments of the present invention are disclosed herein; however, it is to be understood that the disclosed embodiments are merely exemplary of the invention which can be embodied in various forms. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the inventive arrangements in virtually any appropriately detailed structure. Further, the terms and phrases used herein are not intended to be limiting but rather to provide an understandable description of the invention.

As described herein, the term "hazardous condition" for which the device can be constructed to detect include, but are not limited to the presence of smoke, fire, heat, radon, carbon monoxide, natural gas and/or propane, for example. Of course, other embodiments of the device are contemplated for detecting additional and/or specific conditions based on newly discovered science and/or particular environmental conditions for which the unit is designed to operate. For example, some units may be equipped with radiation sensor(s) for use at locations nearby to nuclear power plants.

FIGS. 1-3 illustrate one embodiment of a hazardous condition detector 10 that are useful for understanding the inventive concepts disclosed herein. In each of the drawings, identical reference numerals are used for like elements of the invention or elements of like function. For the sake of clarity, only those reference numerals are shown in the individual figures which are necessary for the description of the respective figure. For purposes of this description, the terms "upper," "bottom," "right," "left," "front," "vertical,"

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"horizontal," and derivatives thereof shall relate to the invention as oriented in FIG. 1.

As shown in FIG. 1, the device 10 can include, essentially, a main body 11 that houses an alarm unit, a detection unit 20, and a control and communication unit 30.

As described herein, the main body 11 can include any number of different shapes and sizes and can be constructed from any number of different materials suitable for encompassing each of the controller elements. In one preferred embodiment, the main body 11 can be constructed from lightweight injection molded plastic having a plurality of internal connectors (not shown) for securely housing each of the device elements. Of course, any number of other known construction materials such as PVC and composites, for example, are also contemplated.

As the device 10 is intended to replace conventional smoke detectors within a building, it is preferred that the finished device include similar dimensions. To this end, the device can preferably include a small unobtrusive footprint of less than 8 inches, and a total weight of between 8 and 12 ounces, for example. Although not illustrated, the back surface of the main body can include any number of different brackets or receivers for engaging mounting hardware such as screws, for example.

The alarm unit can include any number of different devices capable of providing an audible and/or visual indication to a user. For example, the alarm unit can include a speaker/siren 15a and one or more lights 15b that can be selectively activated by the controller 30 upon detection of a hazardous condition by the detection unit 20. The device can also include a display screen 35b which can display operating information, alarm conditions and power levels, for example.

In one embodiment, the alarm unit can include functionality for describing the particular type of environmental condition detected. For example, if smoke is detected, the speaker can say "WARNING SMOKE DETECTED" and the light can flash red, whereas if carbon monoxide is detected the speaker can say "WARNING CARBON MONOXIDE DETECTED" and the light can flash green. Of course, any number of other spoken words, sounds and visual indicators are also contemplated.

The detection unit 20 can be positioned within the main body 11 and can include one or more sensors capable of detecting a hazardous condition. As shown best in FIG. 2, the detection unit 20 can include one or more sensors such as a smoke detection sensor 21, a heat detection sensor 22, a carbon monoxide sensor 23, a radon detection sensor 24, a natural gas detection sensor 25, and/or a propane detection sensor 26. Each of the sensors 21-26 can be constructed in accordance with known manufacturing processes. For example, the smoke detector 21 may employ ionization or photoelectric sensors, the heat detector 22 may employ a thermostatic sensor, the carbon monoxide detector 23 may employ a metal oxide semiconductor sensor, the radon detector 24 may employ a photodiode impact sensor, and the gas detector(s) 25 and 26 may employ catalytic and infrared sensors to detect combustible gasses.

FIG. 3 illustrates one embodiment of a system control unit 30, that includes a processor 31 that is conventionally connected to an internal memory 32, a wireless interface 33, a location detection unit 34, a user interface 35, a component interface unit 36 and/or a power source 37.

Although illustrated as separate elements, those of skill in the art will recognize that one or more system components may comprise or include one or more printed circuit boards (PCB) containing any number of integrated circuit or cir-

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cuits for completing the activities described herein. The CPU may be one or more integrated circuits having firmware for causing the circuitry to complete the activities described herein. Of course, any number of other analog and/or digital components capable of performing the below described functionality can be provided in place of, or in conjunction with the below described controller elements.

The processing unit 31 can be a conventional central processing unit (CPU) or any other type of device, or multiple devices, capable of manipulating or processing information such as program code stored in the memory 32 in order to allow the device to perform the functionality described herein.

The memory 32 can act to store operating instructions in the form of program code for the processor 31 to execute. Although illustrated in FIG. 3 as a single component, memory 32 can include one or more physical memory devices such as, for example, local memory and/or one or more bulk storage devices. As used herein, local memory can refer to random access memory or other non-persistent memory device(s) generally used during actual execution of program code, whereas a bulk storage device can be implemented as a persistent data storage device such as a hard drive, for example, containing programs that permit the processor to perform the functionality described below. Additionally, memory 32 can also include one or more cache memories that provide temporary storage of at least some program code in order to reduce the number of times program code must be retrieved from the bulk storage device during execution. Each of these devices are well known in the art.

The wireless interface 33 can include any number of components capable of sending and/or receiving electronic signals with an externally located device, either directly or over a network. In the preferred embodiment, the interface/communication unit 33 can include a cellular transceiver having an antenna 33a for sending and receiving signals over a cellular network.

Of course, any number of other known transmission and reception mechanisms and protocols can also be utilized herein, several nonlimiting examples include Bluetooth transceivers, Near-Field-Communication (NFC) devices, unique radio frequencies, and/or a network adapter for communicating over a WAN, LAN or the internet via an internet service provider, for example. To this end, the device may also include functionality for communicating directly with other safety systems, such as a FIRST RESPONSE LOCATOR SYSTEM, for example, as described in U.S. Pat. No. 9,928,702, to Bauldree. Of course, any number of other systems are also contemplated.

In one embodiment, the device 10 may be provided with a custom mobile application 5 (i.e., App) for execution on a processor enabled device 1 such as a smartphone or tablet, for example. The App can include functionality for allowing a user to send and receive information with the device. The information can include receiving alarm status indicators, providing contact(s) for the device to communicate with directly in designated alarm conditions, and other such functionality.

The location detection unit 34 can include any number of known devices capable of detecting the location of the device 10 so that the same can be communicated to an external device. In the preferred embodiment, the detection unit can interface with the cellular transceiver so as to utilize the cellular service provider to determine the device location (e.g., cellular localization). Of course, other embodiments are contemplated wherein other types of location identifi-

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6 cation systems are utilized, several nonlimiting examples include GPS location and signal strength triangulation which can be displayed on a mobile device running an App that is paired to the device 10, for example.

The user interface 35 can function to accept user inputs and/or to provide operating information to a device user. In various embodiments, the user interface can include or control one or more buttons 35a, switches, and/or a display 35b such as an LCD screen, for example, that are connected to the processor 31 so as to activate various programmatic functions (e.g., alarm test, power levels, WPS setup, Bluetooth Pairing). In addition to above, the user interface can include or control one or more communication ports such as a Universal Serial Bus or micro USB, for example, in order to send and receive information with another device via a direct communication link.

The component interface unit 36 can function to provide a communicative link between the processor 31 and various other device components such as the speaker 15a, lights 15b and buttons 35a, for example. In this regard, the component interface unit can include any number of different components such as one or more PIC microcontrollers, internal bus, USB connections and other such hardware capable of providing a direct link between the various components. Of course, any other means for providing the two-way communication between the identified components can also be utilized herein.

The power source 37 can include any number of different components capable of providing the necessary power requirements to each element of the system. To this end, the power source can include or comprise any number of different batteries and/or can include functionality for engaging A/C electrical power in the building to which the device is to be installed.

In operation, the device 10 can be installed at any desirable location within a building, warehouse or other such structure. Once installed, the device 10 can be paired with any number of external devices utilizing the above described communication unit. For example, the device can be paired with a cellular telephone, tablet or other such device that is running a mobile application (App).

As the device 10 is intended to operate for long periods of time without alarm conditions, the system controller can include power management functionality for allowing a user to visually check the power level of the device and to set custom alerts. For example, the App 5 and/or display 35b can show the current battery life percentage at all times, or upon actuation of one of the buttons 35a, for example. Such a feature allows a user to replace the battery before it dies, as opposed to only performing an audible beep when the battery is almost dead.

Additionally, the system can allow a user to instruct the alarm unit to generate a specific notification upon the battery reaching a predetermined power level. For example, the speaker can chirp and/or the lights can blink once every 2 hours when the battery is at 10% power level. Of course, other notifications and power level indications are contemplated. Likewise, the system can include functionality for allowing a user to pause or delay low battery notifications. For example, by pressing one of the buttons 35a and/or selecting an option on the App, the above noted battery alarm can be paused for 5 hours. This functionality can be suspended when the battery reaches a critical level (e.g., below 5%) or upon other user-specified criteria (e.g., after 5-10 pauses).

Next, if/when the detection unit 20 identifies the presence of a hazardous condition, the device 10 can immediately

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trigger the alarm unit to notify occupants within the vicinity of the device 10. Again, this notification may include one or both of an audible sound and/or visual indicator using the lights 15b and display 35b that can identify the specific hazardous condition detected.

Simultaneously with the alarm activation, the communication unit 20 can send a notification to any number of external devices such as the paired phone or tablet via the App. In one embodiment, the communication unit can activate the onboard cellular transceiver to provide a voice or data notification to any number of pre-designated contacts such as the building owner, first responders and/or a third-party safety system. To this end, the system can include functionality for contacting different contacts based on the type of detected substance. For example, activation of the heat or smoke alarm can cause the device to automatically dial the fire department or 911, whereas detection of propane or natural gas may cause the device to automatically dial 911 along with the gas provider.

In either instance, the information distributed from the device 10 may contain the exact nature of the harmful substance that was detected and/or the exact location where the substance was detected along with any number of other information to aid first responders and/or the designated contact.

In one embodiment, the device 10 and/or the associated App can include functionality for allowing an App user to cancel the alarm and/or notification to third parties via the communication unit. Such a feature is advantageous in instances where the user is aware of the nature of the alarm and are already taking control of the situation. For example, if the smoke alarm is activated due to overcooked food.

As described herein, one or more elements of the device 10 can be secured together utilizing any number of known attachment means such as, for example, screws, glue, compression fittings and welds, among others. Moreover, although the above embodiments have been described as including separate individual elements, the inventive concepts disclosed herein are not so limiting. To this end, one of skill in the art will recognize that one or more individually identified elements may be formed together as one or more continuous elements, either through manufacturing processes, such as welding, casting, or molding, or through the use of a singular piece of material milled or machined with the aforementioned components forming identifiable sections thereof.

As to a further description of the manner and use of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

The terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the invention. As used herein, the singular forms "a," "an," and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will be further understood that the terms "comprises" and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof. The term "unit" includes specified components and equivalents that are grouped together to perform a specified task. Likewise, the terms "consisting" shall be used to describe only those components identified. In each instance where a device comprises certain elements, it will inherently consist of each of those identified elements as well.

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The corresponding structures, materials, acts, and equivalents of all means or step plus function elements in the claims below are intended to include any structure, material, or act for performing the function in combination with other claimed elements as specifically claimed. The description of the present invention has been presented for purposes of illustration and description but is not intended to be exhaustive or limited to the invention in the form disclosed. Many modifications and variations will be apparent to those of ordinary skill in the art without departing from the scope and spirit of the invention. The embodiment was chosen and described in order to best explain the principles of the invention and the practical application, and to enable others of ordinary skill in the art to understand the invention for various embodiments with various modifications as are suited to the particular use contemplated.

The invention claimed is:

1. A hazardous condition detection device, comprising:
 a main body that is configured to be secured onto a building wall or ceiling;
 an alarm unit that is positioned within the main body, said alarm unit being configured to generate at least one of an audible or visual alarm notification;
 a detection unit that is positioned within the main body, said detection unit being configured to detect a presence of a hazardous condition;
 a battery;
 a controller having a wireless interface that is positioned within the main body, said controller including functionality for receiving a notification from the detection unit and activating one or both of the alarm unit and the wireless interface; and
 a mobile application for execution on a processor enabled device, said application being encoded with instructions for allowing the processor enabled device to communicate with the wireless interface of the controller.
 wherein the controller further includes functionality for monitoring a power level of the battery, and for selectively operating the alarm unit when the power level is beneath a user defined threshold, and
 said controller further including functionality for communicating a type of hazardous condition present in the notification transmitted to the mobile application, and for simultaneously transmitting a notification containing the type of hazardous condition present to a third party device.

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2. The device of claim 1, wherein the controller includes functionality for communicating a type of hazardous condition present in the notification transmitted to the mobile application.

3. The device of claim 2, wherein the mobile application includes functionality for deactivating the alarm unit on the main body upon receipt of the notification.

4. The device of claim 1, wherein the detection unit comprises:

at least one of a smoke detection sensor, a heat detection sensor, a carbon monoxide detection sensor, a radon detection sensor, a natural gas detection sensor, and a propane gas detection sensor.

5. The device of claim 1, wherein the detection unit comprises:

at least two of a smoke detection sensor, a heat detection sensor, a carbon monoxide detection sensor, a radon detection sensor, a natural gas detection sensor, and a propane gas detection sensor.

6. The device of claim 1, wherein the detection unit comprises:

at least three of a smoke detection sensor, a heat detection sensor, a carbon monoxide detection sensor, a radon detection sensor, a natural gas detection sensor, and a propane gas detection sensor.

7. The device of claim 1, wherein the detection unit comprises:

each of a smoke detection sensor, a heat detection sensor, a carbon monoxide detection sensor, a radon detection sensor, a natural gas detection sensor, and a propane gas detection sensor.

8. The device of claim 1, wherein the alarm unit comprises both a speaker and at least one light.

9. The device of claim 8 wherein the controller includes functionality for instructing the speaker to communicate a type of hazardous condition detected by the detection unit.

10. The device of claim 1 wherein the mobile application is encoded with instructions for showing the power level of the battery.

11. The device of claim 10 wherein the mobile application is encoded with instructions for providing an audiovisual alert on the processor enabled device when the power level of the battery is beneath a user defined threshold.

12. The device of claim 1, wherein the mobile application includes functionality for deactivating the alarm unit on the main body upon receipt of the notification, and for canceling the notification to the third party device.

* * * * *

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US00D948365S

(12) **United States Design Patent** (10) Patent No.: **US D948,365 S**
 Thomson (45) Date of Patent: **** Apr. 12, 2022**

(54) **FIRST RESPONSE LOCATOR SYSTEM** 5.926,098 A * 7/1999 Wieneyer G08B 17/113
 340/630
 (71) Applicant: **Brian Thomson, Macon, GA (US)** D426.482 S * 6/2000 Sakurai D10/106.5
 D605.966 S * 12/2009 Weil D10/109.2
 (72) Inventor: **Brian Thomson, Macon, GA (US)** D628.108 S * 11/2010 Akdag D10/106.5
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 (**) Term: **15 Years** 2015/0097679 A1 * 4/2015 Andrews G08B 17/113
 340/628
 (21) Appl. No.: **29/714,392** 2015/0111404 A1 * 4/2015 Seiler G08B 17/10
 439/170
 (22) Filed: **Nov. 22, 2019** 2016/0217682 A1 * 7/2016 Brigham G08B 17/10
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 (51) LOC (13) Cl. 10-05 2019/0005793 A1 * 1/2019 Stibich G08B 17/107
 2020/0098236 A1 * 3/2020 Bauldree G08B 3/1016
 (52) U.S. Cl.
 USPC D10/104.1; D10/106.1; D10/106.5
 (58) Field of Classification Search * cited by examiner
 USPC D10/52, 53, 56, 57, 60, 104.1, Primary Examiner — Katherine Glennon
 D10/106.1–106.95, 109.1, 109.2, 116.1, (74) Attorney, Agent, or Firm — Jason T. Daniel, Esq.;
 D10/118, 118.2, 120, 121 Daniel Law Offices, P.A.
 CPC G08B 17/00; G08B 17/10; G08B 17/11;
 G08B 17/113; G08B 17/12; G08B 21/02;
 G08B 21/0277; G08B 21/10; G08B
 21/12; G08B 25/00; G08B 25/14
 See application file for complete search history.

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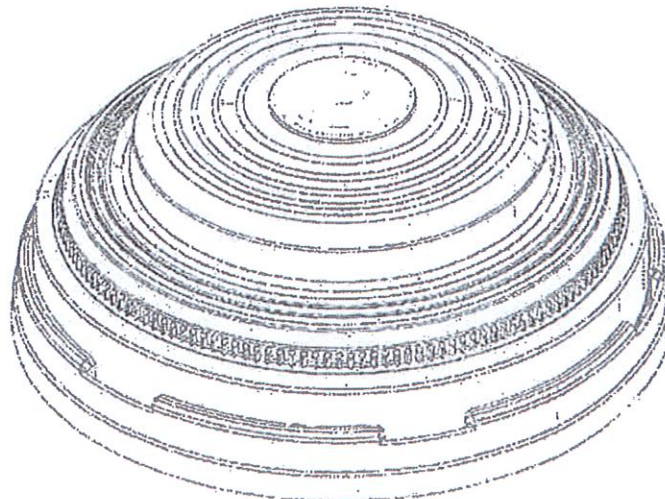
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(57) **CLAIM**
 The ornamental design for a first response locator system, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a first response locator system, showing my new design,
 FIG. 2 is a top side view thereof,
 FIG. 3 is a bottom side view thereof; and,
 FIG. 4 is a front side view thereof.
 The back side, left side and right side are mirror images of the front side view.
 The broken lines show portions of the first response locator system that form no part of the claimed design.

1 Claim, 4 Drawing Sheets



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Sheet 1 of 4

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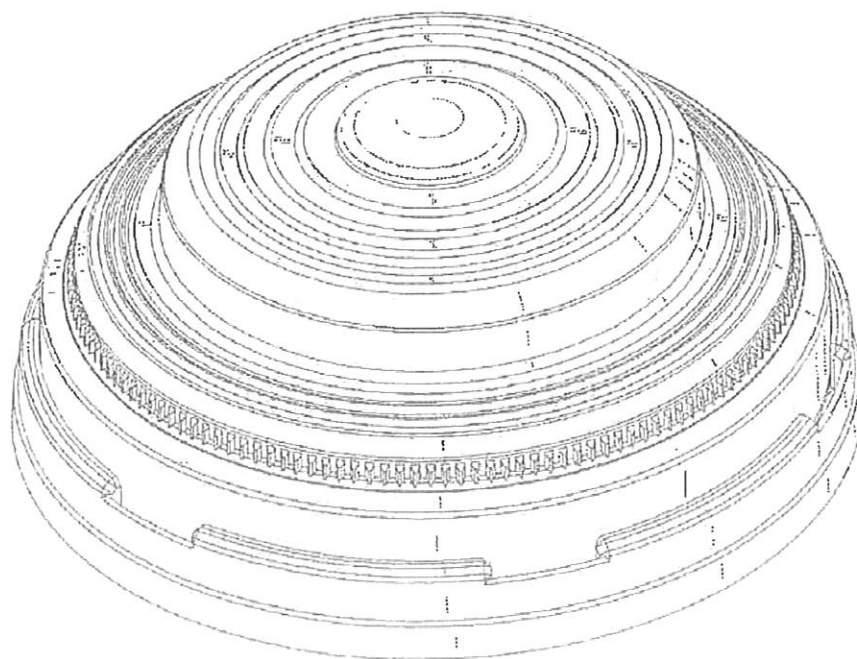


FIG. 1

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Apr. 12, 2022

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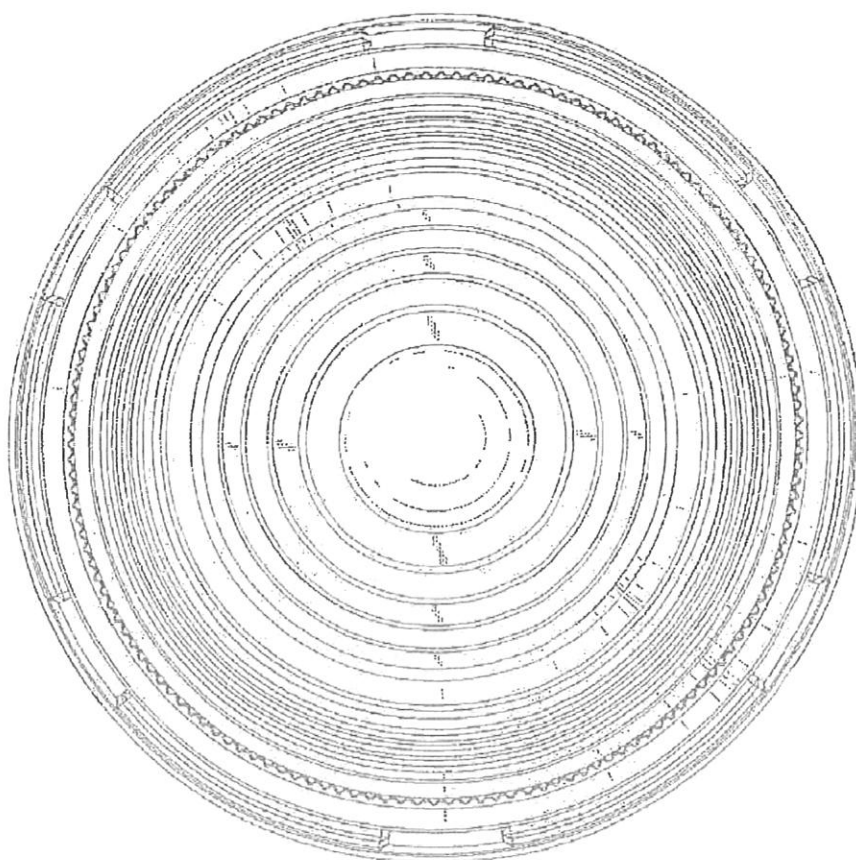


FIG. 2

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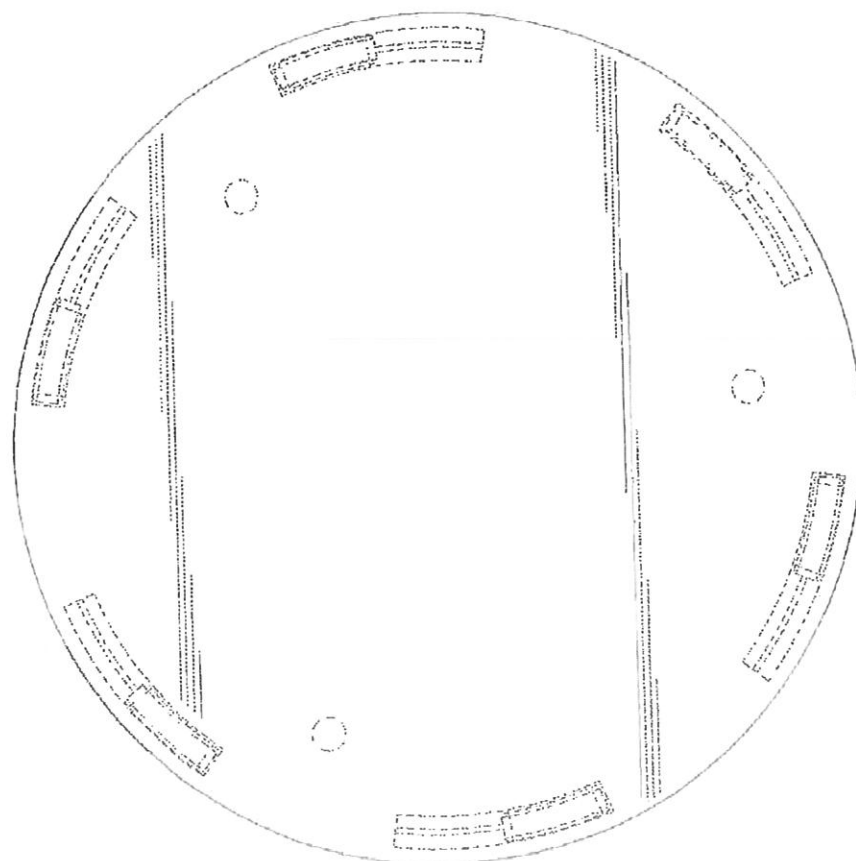


FIG. 3

U.S. Patent

Apr. 12, 2022

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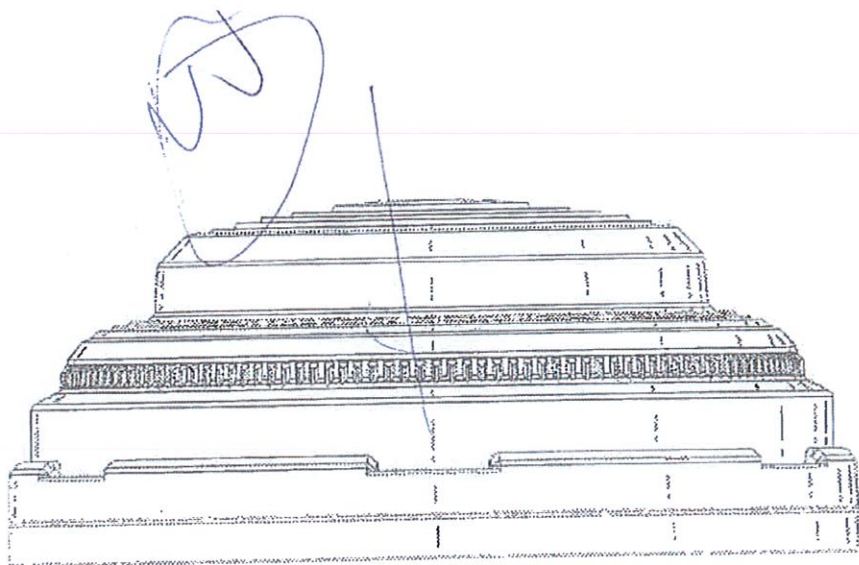


FIG. 4

8/19/21, 12:52 PM

Signed document

angela glynn <angela@frls-inc.com>

Mon 8/16/2021 11:12 AM

To: Bryan Loeffler <Bryan@lawipgroup.com>; Ken Bauldree <kenneth@frls-inc.com>

Bryan, this is a signed document that Brian Thomson signed without our knowledge and signed it as President of FRLS INC which is the Florida team only not of America. This is fraud.

IN THE CANADIAN PATENT OFFICE

REVOCATION OF AGENT AND APPOINTMENT OF ANOTHER AGENT

Application No.: 2,983,037
Title: First Response Locator System
Applicant: FIRST RESPONSE LOCATOR SYSTEMS, INC.
Our File: HL-PA3286CA

The undersigned hereby revokes all former Appointments of Agent and appoints Hicks Intellectual Property Law whose full post office address is:

Hicks Intellectual Property Law
213-304 Old Canmore Road
Canmore, Alberta T1W 0L5

as its patent agent in respect of the above identified application for patent with full power to appoint an associate agent when required to do so by Subsection 28(1) of the Patent Rules and to revoke such appointment, to sign the petition and drawings, to amend the specification and drawings, to prosecute the application, and to receive the patent granted thereon; and ratifies any act done by said last named appointee in respect of said application.

SIGNED at ROCKWELL Industrial Blvd. this 26 day of June, 2020.
(place of signing)
Mexon, Georgia 31216, USA

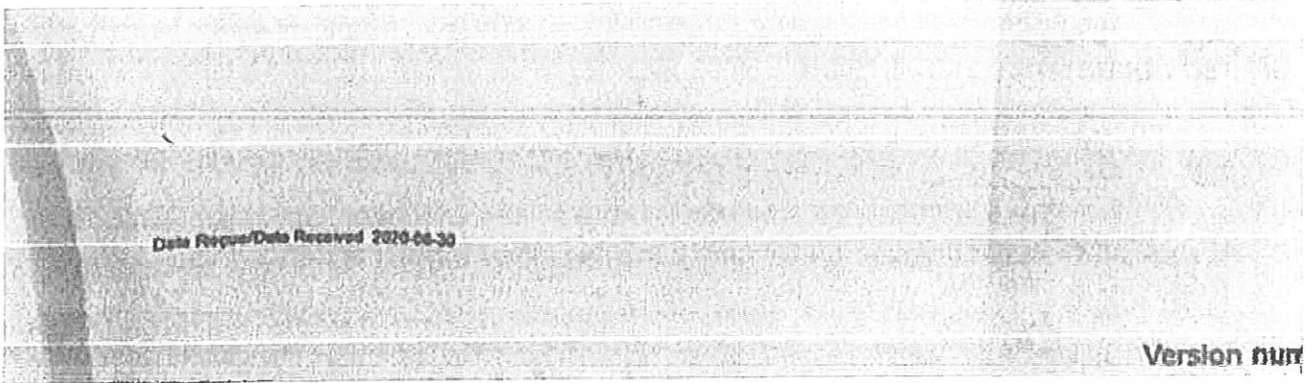
FIRST RESPONSE LOCATOR SYSTEMS, INC.

Brian Thomson

Name: Brian Thomson

Title: President

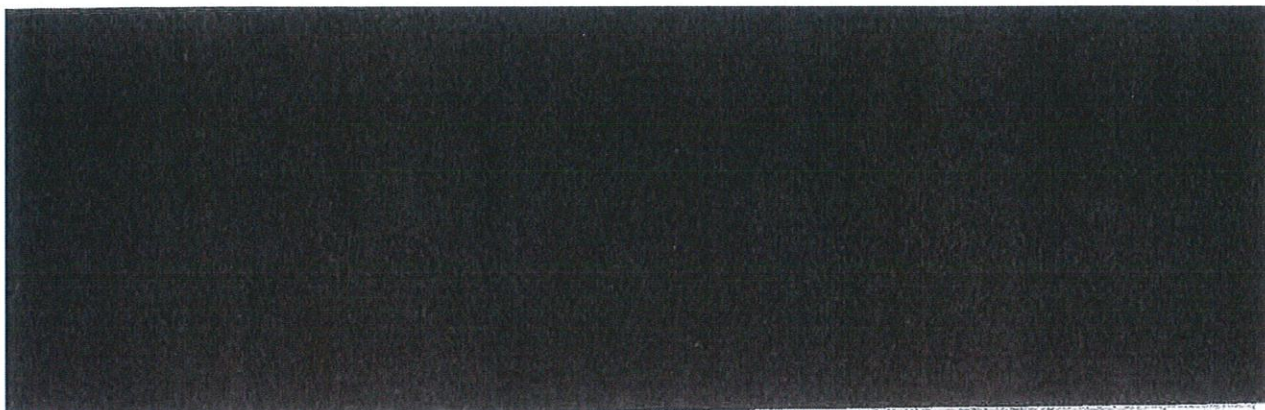
8/19/21, 12:52 PM



Angela Glynn
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"EVERY SECOND COUNTS"

Exhibit **D**



From: Terry Lacy
Sent: Thursday, March 21, 2019 2:40 PM
To: 'Jason T. Daniel, ESQ.'; 'Arst response'; 'Ken'; Brian Thomson; Roy Benton III (roy@bentonandsons.com)
Cc: Daniel Law Offices, P.A.
Subject: RE: FRIS domestic patent status

Jason,

I apologize for the delayed response - but I've been contemplating my response since I first read this email on Tuesday afternoon. First - I apologize for any conduct by any member of FRLS (Florida or Georgia) that would have encouraged you to write this email. We've found you to be nothing but professional, insightful, and extremely helpful.

As it was noted in the beginning of our relationship- I am the single elected "Manager" for FRLS of America- which holds all the patent rights on all FRLS projects - and as such - I have been given the ability to consolidate and streamline communication with anyone to just me - and I will disseminate information to the rest of the team as needed. Normally, I wouldn't care (and have not cared this entire time) about another member calling you and asking you random questions about the status of a patent or clarifying their understanding of the patent as new products are developed, but I feel something else is going on here. I'm not sure if you're being put in an uncomfortable professional position concerning the topics of conversations - or if appropriate conversations are dragging on in length and you're wondering if invoices for "consultation" time should be generated-and then wondering if they would be paid. Either way - we've put you in an uncomfortable position and again - I apologize.

For the foreseeable future, all requests for any conversations/ information by other members will be emailed to me - and if I can't answer the question - I will forward it to you - so that you can respond to all members. If a call is needed to address something in depth -we will set up a conference call for all members to attend. It's unfortunate that we've gotten to this point, but please do NOT engage in any conversations with any other members without me being involved.

I'm professionally embarrassed that you've found yourself in this situation with FRLS- for whatever reason - and I will do everything I can to make you feel comfortable with us again.

Best regards,

Terry

From: Jason T. Daniel, ESQ. [mailto:Jason@danlelpatents.com]
Sent: Tuesday, March 19, 2019 3:53 PM
To: 'First response'; 'Ken'; terry Lacy; Brian Thomson; 'roy3@firstrespo.nselocator.com'

