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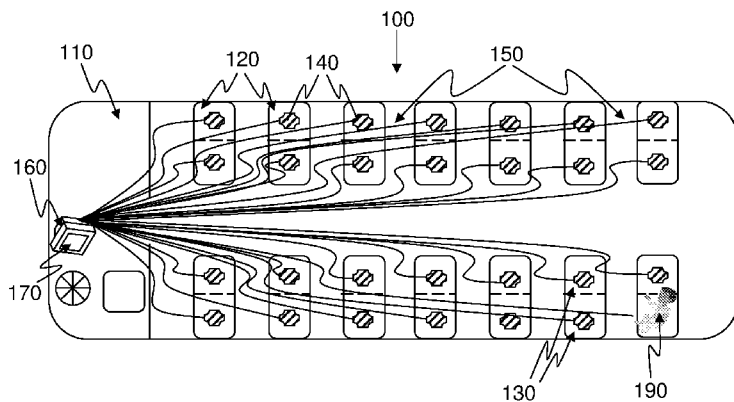
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(54) Title: SYSTEM AND METHOD FOR DETERMINING WHETHER ITEMS HAVE BEEN LEFT IN VEHICLES



(57) Abstract: The present invention discloses a system for determining whether items occupy seating locations of a vehicle. The system comprises at least one sensor which is enabled to sense the presence of at least one item on at least one seating location and a controller for communicating with the sensor. The controller activates the sensor and receives data therefrom. The aforementioned system also includes a display which communicates with the controller and displays the location of each said item; the system is so arranged that a driver can monitor occupancy of the seat. Other embodiments are herein described.

Figure 1



SYSTEM AND METHOD FOR DETERMINING WHETHER ITEMS HAVE BEEN LEFT IN VEHICLES

FIELD OF THE INVENTION

The present invention generally pertains to a system and method for determining whether items have been left in vehicles.

BACKGROUND OF THE INVENTION

It is a not uncommon occurrence for items to be left unintentionally in vehicles. Most frequently, this is a minor nuisance, with the owner of the item losing no more than the time necessary to return to the vehicle and retrieve the item. However, occasionally a valuable items is forgotten in a vehicle and a subsequent break-in results in both the loss of the item and damage to the vehicle. Occasionally a child is thus left in the vehicle, which can lead to a very upset child and, on rare occasions, especially in the summer, this can lead to the death of the child.

It is therefore a long felt need to provide a means of checking whether an item has been left in a vehicle.

SUMMARY OF THE INVENTION

It is an object of the present invention to disclose a system and method for determining whether items have been left in vehicles.

It is also an object of the present invention to disclose a system for determining whether items occupy seating locations of a vehicle, comprising:

- a. at least one sensor, said sensor enabled to sense the presence of at least one item on at least one said seating location;
- b. a controller enabled to communicate with said sensor, said controller activating said sensor and receiving data therefrom; and
- c. a display enabled to communicate with said controller and enabled to display the location of each said item;

wherein said system is activated such that a driver can monitor said occupancy.

It is also an object of the present invention to disclose the system, wherein said system is adapted to be activated at such time as the vehicle is to be left unattended.

It is also an object of the present invention to disclose the system, wherein said system is adapted to be activated by turning the engine off, by removing the keys from the ignition, by activating the emergency brake, by locking the vehicle, by touching a predetermined symbol on the graphic device, by activating a code sequence, by any other conventional means of activating software, and by any combination thereof.

It is also an object of the present invention to disclose the system, wherein said system is adapted to be activated from a remote location.

It is also an object of the present invention to disclose the system, wherein said display is at a remote location.

It is also an object of the present invention to disclose the system, additionally comprising an alarm adapted to provide a warning if the presence of at least one said item is detected at the time of activation of said system.

It is also an object of the present invention to disclose the system, wherein said alarm is selected from a group consisting of a constant intensity light, a varying intensity light, a constant color light, a varying color light, visible text, a constant intensity sound, a varying intensity sound, a constant pitch sound, a varying pitch sound, audible predetermined words, sending the driver an SMS, sending the driver an e-mail, sending the driver a voicemail message, and any combination thereof

It is also an object of the present invention to disclose the system, wherein said sensor is selected from a group consisting of ultrasound transmitters and detectors, mass sensors, photon detectors, at least one photon source and at least one photon detector, pressure sensors, piezoelectric sensors, heat sensors and any combination thereof.

It is also an object of the present invention to disclose the system, wherein said photon source is an IR source and said photon detector is an IR detector.

It is also an object of the present invention to disclose the system, wherein, for each seating location, there is at least one sensor.

It is also an object of the present invention to disclose the system, wherein said sensor is located in a position selected from a group consisting of: beneath said item on said seating location, behind said item on said seating location, in front of said item on said seating location, and above said item on said seating location.

It is also an object of the present invention to disclose the system, additionally comprising a locking device at the rear of the vehicle.

It is also an object of the present invention to disclose the system, wherein said locking device is selected from a group consisting of a keypad with predefined code, a lock and key, a switch, a depressable button, a slider, and any combination thereof.

It is also an object of the present invention to disclose the system, wherein, until the state of said locking device is altered, at least one of the following is prevented: turning the vehicle's engine off, locking the doors of the vehicle, unlocking the doors of the vehicle, extinguishing the vehicle's interior lights, extinguishing the vehicle's exterior lights, and stopping the vehicle's interior climate control system.

It is also an object of the present invention to disclose the system, wherein said vehicle is a private vehicle or is a commercial vehicle.

It is also an object of the present invention to disclose the system, wherein said system is coupled to said vehicle's battery.

It is also an object of the present invention to disclose the system, wherein activation of said system is enabled by an attempt to turn off the engine.

It is also an object of the present invention to disclose the system, wherein activation of said system is enabled by removal of the key from the ignition.

It is also an object of the present invention to disclose a method of determining whether items have items occupy seating locations of a vehicle, comprising steps of:

- a. providing a system for determining whether items occupy seating locations of a vehicle, comprising:
 - i. at least one sensor, said sensor enabled to sense the presence of at least one item on at least one said seating location;
 - ii. a controller enabled to communicate with said sensor, said controller activating said sensor and receiving data therefrom; and
 - iii. a graphic display enabled to communicate with said controller and enabled to display the location of each said item; and
 - b. activating said system;
- thereby informing the driver of items in the vehicle.

It is also an object of the present invention to disclose the method, comprising an additional step of activating the system at such time as the vehicle is to be left unattended.

It is also an object of the present invention to disclose the method, comprising an additional step of activating the system by turning the engine off, by removing the keys from the ignition, by activating the emergency brake, by locking the vehicle, by touching a predetermined symbol on the graphic device, by activating a code sequence, by any other conventional means of activating software, and by any combination thereof.

It is also an object of the present invention to disclose the method, comprising an additional step of activating the system from a remote location.

It is also an object of the present invention to disclose the method, comprising an additional step of providing a display at a remote location.

It is also an object of the present invention to disclose the method, comprising an additional step of providing an alarm adapted to provide a warning if the presence of at least one said item is detected at the time of activation of said system.

It is also an object of the present invention to disclose the method, comprising an additional step of selecting said alarm from a group consisting of a constant intensity light, a varying intensity light, a constant color light, a varying color light, visible text, a constant intensity sound, a varying intensity sound, a constant pitch sound, a varying pitch sound, audible predetermined words, sending the driver an SMS, sending the driver an e-mail, sending the driver a voicemail message, and any combination thereof

It is also an object of the present invention to disclose the method, comprising an additional step of selecting said sensor from a group consisting of ultrasound transmitters and detectors, mass sensors, photon detectors, at least one photon source and at least one photon detector, pressure sensors, piezoelectric sensors, heat sensors and any combination thereof.

It is also an object of the present invention to disclose the method, comprising an additional step of selecting an IR source for said photon source and an IR detector for said photon detector.

It is also an object of the present invention to disclose the method, comprising an additional step of providing at least one sensor for each seating location.

It is also an object of the present invention to disclose the method, comprising an additional step of locating said sensor in a position selected from a group consisting of: beneath said item on said

seating location, behind said item on said seating location, in front of said item on said seating location, and above said item on said seating location.

It is also an object of the present invention to disclose the method, comprising an additional step of locating said sensor in a position selected from a group consisting of: beneath said item on said seating location, behind said item on said seating location, in front of said item on said seating location, and above said item on said seating location.

It is also an object of the present invention to disclose the method, comprising an additional step of providing a locking device at the rear of the vehicle.

It is also an object of the present invention to disclose the method, comprising an additional step of selecting said locking device from a group consisting of a keypad with predefined code, a lock and key, a switch, a depressable button, a slider, and any combination thereof.

It is also an object of the present invention to disclose the method, comprising an additional step of preventing, until the state of said locking device is altered, at least one of the following: turning the vehicle's engine off, locking the doors of the vehicle, unlocking the doors of the vehicle, extinguishing the vehicle's interior lights, extinguishing the vehicle's exterior lights, and stopping the vehicle's interior climate control system.

It is also an object of the present invention to disclose the method, comprising an additional step of selecting said vehicle to be a private vehicle or is a commercial vehicle.

It is also an object of the present invention to disclose the method, comprising an additional step of coupling said system to said vehicle's battery.

It is also an object of the present invention to disclose the method, comprising an additional step of activating said system by an attempt to turn off the engine.

It is also an object of the present invention to disclose the method, comprising an additional step of activating said system by removal of the key from the ignition.

It is also an object of the present invention to disclose a system for encouraging a driver to check whether items have been left on seating locations of a vehicle, comprising

- a. a locking device at the rear of the vehicle; and
- b. a controller interconnectable with the operating system of the vehicle and enabled to affect said operating system

wherein said vehicle can not be put in a state such that it can be left unattended until the state of the locking device has been altered.

It is also an object of the present invention to disclose the system, wherein said locking device is selected from a group consisting of a keypad with predefined code, a lock and key, a switch, a depressable button, a slider, and any combination thereof.

It is also an object of the present invention to disclose the system, wherein said system is adapted to be activated by turning the engine off, by removing the keys from the ignition, by activating the emergency brake, by locking the vehicle, by touching a predetermined symbol on the graphic device, by activating a code sequence, by any other conventional means of activating software, and by any combination thereof.

It is also an object of the present invention to disclose the system, wherein, until said system is activated, at least one of the following is prevented: turning the vehicle's engine off, locking the doors of the vehicle, unlocking the doors of the vehicle, extinguishing the vehicle's interior lights, extinguishing the vehicle's exterior lights, and stopping the vehicle's interior climate control system.

It is also an object of the present invention to disclose the system, wherein said vehicle is a private vehicle or is a commercial vehicle.

It is also an object of the present invention to disclose the system, wherein said system is coupled to said vehicle's battery.

It is also an object of the present invention to disclose the system, wherein activation of said system is enabled by an attempt to turn off the engine.

It is also an object of the present invention to disclose the system, wherein activation of said system is enabled by removal of the key from the ignition.

It is also an object of the present invention to disclose a method for encouraging a driver to check whether items have been left on seating locations of a vehicle, comprising steps of:

- a. providing a system for encouraging a driver to check whether items have been left on seating locations of a vehicle, comprising
 - i. a locking device at the rear of the vehicle; and
 - ii. a controller interconnectable with the operating system of the vehicle and enabled to affect said operating system;
- b. activating said system;
- c. changing the state of the locking device

thereby requiring said driver to traverse said vehicle before leaving it unattended.

It is also an object of the present invention to disclose a the method, additionally comprising a step of selecting said locking device from a group consisting of a keypad with predefined code, a lock and key, a switch, a depressable button, a slider, and any combination thereof.

It is also an object of the present invention to disclose a the method, additionally comprising a step of activating said system by turning the engine off, by removing the keys from the ignition, by activating the emergency brake, by locking the vehicle, by touching a predetermined symbol on the graphic device, by activating a code sequence, by any other conventional means of activating software, and by any combination thereof.

It is also an object of the present invention to disclose the method, comprising an additional step of selecting said vehicle to be a private vehicle or is a commercial vehicle.

It is also an object of the present invention to disclose the method, comprising an additional step of coupling said system to said vehicle's battery.

It is also an object of the present invention to disclose the method, comprising an additional step of activating said system by an attempt to turn off the engine.

It is also an object of the present invention to disclose the method, comprising an additional step of activating said system by removal of the key from the ignition.

BRIEF DESCRIPTION OF THE FIGURES

In order to better understand the invention and its implementation in practice, a plurality of embodiments will now be described, by way of non-limiting example only, with reference to the accompanying drawings, wherein

Fig. 1 schematically illustrates a vehicle equipped with an embodiment of the present invention comprising sensors.

Fig. 2 schematically illustrates a vehicle equipped with an embodiment of the present invention comprising a locking device

DETAILED DESCRIPTION OF THE PREFERRED EMBODIEMNTS

The following description is provided, alongside all chapters of the present invention, so as to enable any person skilled in the art to make use of said invention and sets forth the best modes contemplated by the inventor of carrying out this invention. Various modifications, however, will remain apparent to those skilled in the art, since the generic principles of the present invention have

been defined specifically to provide a means and method for determining whether items have been left in vehicles.

The term '**plurality**' hereinafter refers to any number greater than one.

The term '**driver**' hereinafter refers to the person responsible for ensuring that no items are left in an unattended vehicle. Normally, the driver is the person who has driven the vehicle and who now wants to leave the vehicle unattended.

The term '**item**' hereinafter refers to an object left in a vehicle, of such size that it is detectable, either by a sensor or by visual inspection by a driver. Items include both animate objects such as, but not limited to, children, pets or persons who have fallen asleep or are ill, and inanimate objects. Non-limiting examples of inanimate objects commonly left in vehicles are packages, parcels, handbags, purses, sacks, bags, mobile telephones, cameras, umbrellas, and musical instruments.

The term '**emergency brake**' hereinafter refers to a secondary braking system in vehicles, normally activated by pulling a lever, and normally activated at times when the vehicle is not moving and it is undesirable that the vehicle moves. It is also called a "handbrake".

The term '**seating location**' hereinafter refers to an area on a vehicle on which, normally, a single person sits.

The term '**seat**' hereinafter refers to an area on a vehicle intended to seat one or more people. For non-limiting example, the bench seat in the back of a car is intended to seat up to three people. The area at the left is one seating location, the area at the right is a second seating location, and the center provides the third seating location.

The system for determining whether items have been left in a vehicle is adapted to signal to a user of a vehicle, normally the driver, that items have been left in the vehicle. The system comprises at least one sensor system, a controlling system and a signaling system. It can be activated at around the time that the driver is likely to be leaving the vehicle unattended.

The system described herein can be used on any type of passenger-carrying vehicle. It can be a commercial or public vehicle such as a taxi or bus, or it can be a private vehicle. Examples of vehicles which can usefully be equipped with the system described herein are public buses, taxis and private cars. In buses, the system can vastly reduce, if not eliminate, the possibility of passengers remaining on the bus when the bus leaves service. In taxis, it can vastly reduce, if not eliminate, the problem of passengers leaving items such as suitcases or large handbags in the

vehicle. In private cars, it can vastly reduce, if not eliminate, the possibility of forgetting a sleeping child in the car.

In reference to Figure 1, a schematic of one embodiment of the system (100) is shown. In this embodiment, the multi-passenger vehicle (110) comprises a number of bench seats (120), each bench seat comprising two seating locations (130). At each seating location (130), there is a sensor (140) adapted to communicate with the controller (160) via a communication line (150). Preferably, this is a wired link; in some embodiments a wireless link is used. The controller is also adapted to communicate with a display screen (170).

In preferred embodiments, the sensor is under, on, or within the seating cushion or other seat base. Other possible locations for the sensor include behind, on, or within the seat back or above the seat, as part of an overhead rack or as part of the ceiling of the bus. Sensors in seat backs can detect items on the seat in front of the seat back, or items in the seat to the rear of the seat back.

In preferred embodiments, the signaling system comprises a display screen on which is displayed a schematic of the vehicle and its seating locations. A pre-defined graphic symbol indicates that there is an item (190) at a seating location. A non-limiting example is a rectangle for each seating location and a filled rectangle for a seating location where there is an item.

In some embodiments, the system also comprises a warning system, such that if the system detects an item at a seating location, an alarm is activated. This alarm is selected from a group comprising a constant intensity light, a varying intensity light, a constant color light, a varying color light, visible text, a constant intensity sound, a varying intensity sound, a constant pitch sound, a varying pitch sound, audible predetermined words, sending the driver an SMS, sending the driver an e-mail, sending the driver a voicemail message, and any combination thereof.

In preferred embodiments, the system comprises one sensor for each seating location in the vehicle. In other embodiments, at least one sensor determines the presence of items for multiple seating locations, for example, one sensor per two-person bench. Sensor systems are selected from a group comprising ultrasound transmitters and detectors, mass sensors, photon detectors, at least one photon source and at least one photon detector, pressure sensors, piezoelectric sensors, heat sensors and any combination thereof. The photon source is preferably an IR source and the photon detector is preferably an IR detector.

In preferred embodiments, the system is activated at such times as the driver is likely to be leaving the vehicle unattended.

The system can be activated by an attempt to turn the engine off, by removing the keys from the ignition, by activating the emergency brake, by locking the vehicle, by touching a predetermined symbol on the graphic device, by activating a code sequence, by any other conventional means of activating software, and by any combination thereof.

In preferred embodiments, activation is either by an attempt to turn the engine off or by removing the key from the ignition. In other embodiments, the driver can activate the system at any time via the controller or via a touchscreen in the display system.

The means of discouraging the driver from leaving the vehicle unattended include, but are not limited to, preventing the door locks from working until the locking device has been activated, locking the doors of the vehicle until the locking device has been activated, preventing the engine from stopping until the locking device has been activated, and any combination thereof.

In preferred embodiments, the system is coupled to the vehicle's battery

In some embodiments, the system can have a remote display, connected wirelessly to the sensors and controller, enabling remote use of the system.

In preferred embodiments, the system is connectable to the vehicle via the vehicle's battery.

In reference to Fig. 2, in some embodiments (200), the system comprises a locking device (280), preferably a keypad, at the rear of the interior of the vehicle (210). The locking device is enabled to communicate with a controller (260) interconnectable with the operating system of the vehicle.

In these embodiments, it is made undesirable to leave the vehicle unattended until the driver changes the state of the locking device (280). The locking device (180) is of a kind that requires either physical contact or close proximity in order to have its state altered. Since the locking device is at the rear of the vehicle, this forces the driver to go through the vehicle to the rear and encourages the driver, during the traverse through the vehicle, to check for items (290) left in the vehicle.

In preferred embodiments of the system with a locking device at the rear of the interior of the vehicle, the system comprises the controller and the locking device, but does not comprise the sensors or display screen.

The locking device is selected from a group comprising a keypad and predefined code, a locking mechanism and key, a switch, any other conventional locking device, and any combination thereof.

The means of discouraging the driver from leaving the vehicle unattended include, but are not limited to, preventing the door locks from working until the locking device has been activated,

locking the doors of the vehicle until the locking device has been activated, preventing the engine from stopping until the locking device has been activated, and any combination thereof. In preferred embodiments, the doors can not be locked until the predefined code has been entered on the keypad.

The system can be activated by turning the engine off, by removing the keys from the ignition, by activating the emergency brake, by locking the vehicle, by touching a predetermined symbol on the graphic device, by activating a code sequence, by any other conventional means of activating software, and by any combination thereof. In preferred embodiments, activation is either by turning the engine off or by removing the key from the ignition.

In preferred embodiments, the system is connectable to the vehicle via the vehicle's battery.

CLAIMS:

1. A system for determining whether items occupy seating locations of a vehicle, comprising:
 - a. at least one sensor, said sensor enabled to sense the presence of at least one item on at least one said seating location;
 - b. a controller enabled to communicate with said sensor, said controller activating said sensor and receiving data therefrom; and
 - c. a display enabled to communicate with said controller and enabled to display the location of each said item;wherein said system is activated such that a driver can monitor said occupancy.
2. The system of claim 1, wherein said system is adapted to be activated at such time as the vehicle is to be left unattended.
3. The system of claim 1, wherein said system is adapted to be activated by an attempt to turn the engine off, by removing the keys from the ignition, by activating the emergency brake, by locking the vehicle, by touching a predetermined symbol on the graphic device, by activating a code sequence, by any other conventional means of activating software, and by any combination thereof.
4. The system of claim 1, wherein said system is adapted to be activated from a remote location.
5. The system of claim 1, wherein said display is at a remote location.
6. The system of claim 1, additionally comprising an alarm adapted to provide a warning if the presence of at least one said item is detected at the time of activation of said system.
7. The system of claim 3, wherein said alarm is selected from a group consisting of a constant intensity light, a varying intensity light, a constant color light, a varying color light, visible text, a constant intensity sound, a varying intensity sound, a constant pitch sound, a varying pitch sound, audible predetermined words, sending the driver an SMS, sending the driver an e-mail, sending the driver a voicemail message, and any combination thereof
8. The system of claim 1, wherein said sensor is selected from a group consisting of ultrasound transmitters and detectors, mass sensors, photon detectors, at least one photon source and at least one photon detector, pressure sensors, piezoelectric sensors, heat sensors and any combination thereof.
9. The system of claim 5, wherein said photon source is an IR source and said photon detector is an IR detector.
10. The system of claim 1, wherein, for each seating location, there is at least one sensor.

11. The system of claim 1, wherein said sensor is located in a position selected from a group consisting of: beneath said item on said seating location, behind said item on said seating location, in front of said item on said seating location, and above said item on said seating location.
12. The system of claim 1, additionally comprising a locking device at the rear of the vehicle.
13. The system of claim 12 wherein said locking device is selected from a group consisting of a keypad with predefined code, a lock and key, a switch, a depressable button, a slider, and any combination thereof.
14. The system of claim 12, wherein, until the state of said locking device is altered, at least one of the following is prevented: turning the vehicle's engine off, locking the doors of the vehicle, unlocking the doors of the vehicle, extinguishing the vehicle's interior lights, extinguishing the vehicle's exterior lights, and stopping the vehicle's interior climate control system.
15. The system of claim 1, wherein said vehicle is a private vehicle or is a commercial vehicle.
16. The system of claim 1, wherein said system is coupled to said vehicle's battery.
17. The system of claim 1, wherein activation of said system is enabled by an attempt to turn off the engine.
18. The system of claim 1, wherein activation of said system is enabled by removal of the key from the ignition.
19. A method of determining whether items occupy seating locations of a vehicle, comprising steps of:
 - a. providing a system for determining whether items occupy seating locations of a vehicle, comprising:
 - i. at least one sensor, said sensor enabled to sense the presence of at least one item on at least one said seating location;
 - ii. a controller enabled to communicate with said sensor, said controller activating said sensor and receiving data therefrom; and
 - iii. a graphic display enabled to communicate with said controller and enabled to display the location of each said item; and
 - b. activating said system;thereby informing the driver of items in the vehicle.
20. The method of claim 19, comprising an additional step of activating the system at such time as the vehicle is to be left unattended.
21. The method of claim 19, comprising an additional step of activating the system by an attempt

to turn the engine off, by removing the keys from the ignition, by activating the emergency brake, by locking the vehicle, by touching a predetermined symbol on the graphic device, by activating a code sequence, by any other conventional means of activating software, and by any combination thereof.

22. The method of claim 19, comprising an additional step of activating the system from a remote location.
23. The method of claim 19, comprising an additional step of providing a display at a remote location.
24. The method of claim 19, comprising an additional step of providing an alarm adapted to provide a warning if the presence of at least one said item is detected at the time of activation of said system.
25. The method of claim 24, comprising an additional step of selecting said alarm from a group consisting of a constant intensity light, a varying intensity light, a constant color light, a varying color light, visible text, a constant intensity sound, a varying intensity sound, a constant pitch sound, a varying pitch sound, audible predetermined words, sending the driver an SMS, sending the driver an e-mail, sending the driver a voicemail message, and any combination thereof
26. The method of claim 19, comprising an additional step of selecting said sensor from a group consisting of ultrasound transmitters and detectors, mass sensors, photon detectors, at least one photon source and at least one photon detector, pressure sensors, piezoelectric sensors, heat sensors and any combination thereof.
27. The method of claim 26, comprising an additional step of selecting an IR source for said photon source and an IR detector for said photon detector.
28. The method of claim 19, comprising an additional step of providing at least on sensor for each seating location.
29. The method of claim 19, comprising an additional step of locating said sensor in a position selected from a group consisting of: beneath said item on said seating location, behind said item on said seating location, in front of said item on said seating location, and above said item on said seating location.
30. The method of claim 19, comprising an additional step of locating said sensor in a position selected from a group consisting of: beneath said item on said seating location, behind said item on said seating location, in front of said item on said seating location, and above said item on said seating location.
31. The method of claim 30, comprising an additional step of providing a locking device at the

- rear of the vehicle.
32. The method of claim 30, comprising an additional step of selecting said locking device from a group consisting of a keypad with predefined code, a lock and key, a switch, a depressable button, a slider, and any combination thereof.
 33. The method of claim 30, comprising an additional step of preventing, until the state of said locking device is altered, at least one of the following: turning the vehicle's engine off, locking the doors of the vehicle, unlocking the doors of the vehicle, extinguishing the vehicle's interior lights, extinguishing the vehicle's exterior lights, and stopping the vehicle's interior climate control system.
 34. The method of claim 19, comprising an additional step of selecting said vehicle to be a private vehicle or is a commercial vehicle.
 35. The method of claim 19, comprising an additional step of coupling said system to said vehicle's battery.
 36. The method of claim 19, comprising an additional step of activating said system by an attempt to turn off the engine.
 37. The method of claim 19, comprising an additional step of activating said system by removal of the key from the ignition.
 38. A system for encouraging a driver to check whether items have been left on seating locations of a vehicle, comprising
 - a. a locking device at the rear of the vehicle; and
 - b. a controller interconnectable with the operating system of the vehicle and enabled to affect said operating systemwherein said vehicle can not be put in a state such that it can be left unattended until the state of the locking device has been altered.
 39. The system of claim 38, wherein said locking device is selected from a group consisting of a keypad with predefined code, a lock and key, a switch, a depressable button, a slider, and any combination thereof.
 40. The system of claim 38, wherein said system is adapted to be activated by an attempt to turn the engine off, by removing the keys from the ignition, by activating the emergency brake, by locking the vehicle, by touching a predetermined symbol on the graphic device, by activating a code sequence, by any other conventional means of activating software, and by any combination thereof.
 41. The system of claim 38, wherein, until said system is activated, at least one of the following is prevented: turning the vehicle's engine off, locking the doors of the vehicle, unlocking the

- doors of the vehicle, extinguishing the vehicle's interior lights, extinguishing the vehicle's exterior lights, and stopping the vehicle's interior climate control system. .
42. The system of claim 38, wherein said vehicle is a private vehicle or is a commercial vehicle.
 43. The system of claim 38, wherein said system is coupled to said vehicle's battery.
 44. The system of claim 38, wherein activation of said system is enabled by an attempt to turn off the engine.
 45. The system of claim 38, wherein activation of said system is enabled by removal of the key from the ignition.
 46. A method for encouraging a driver to check whether items have been left on seating locations of a vehicle, comprising steps of:
 - a. providing a system for encouraging a driver to check whether items have been left on seating locations of a vehicle, comprising
 - i. a locking device at the rear of the vehicle; and
 - ii. a controller interconnectable with the operating system of the vehicle and enabled to affect said operating system;
 - b. activating said system;
 - c. changing the state of the locking devicethereby requiring said driver to traverse said vehicle before leaving it unattended.
 47. The method of claim 46, additionally comprising a step of selecting said locking device from a group consisting of a keypad with predefined code, a lock and key, a switch, a depressable button, a slider, and any combination thereof.
 48. The method of claim 46, additionally comprising a step of activating said system by turning the engine off, by removing the keys from the ignition, by activating the emergency brake, by locking the vehicle, by touching a predetermined symbol on the graphic device, by activating a code sequence, by any other conventional means of activating software, and by any combination thereof.
 49. The method of claim 46, comprising an additional step of selecting said vehicle to be a private vehicle or is a commercial vehicle.
 50. The method of claim 46, comprising an additional step of coupling said system to said vehicle's battery.
 51. The method of claim 46, comprising an additional step of activating said system by an attempt to turn off the engine.
 52. The method of claim 46, comprising an additional step of activating said system by removal of the key from the ignition.

1/2

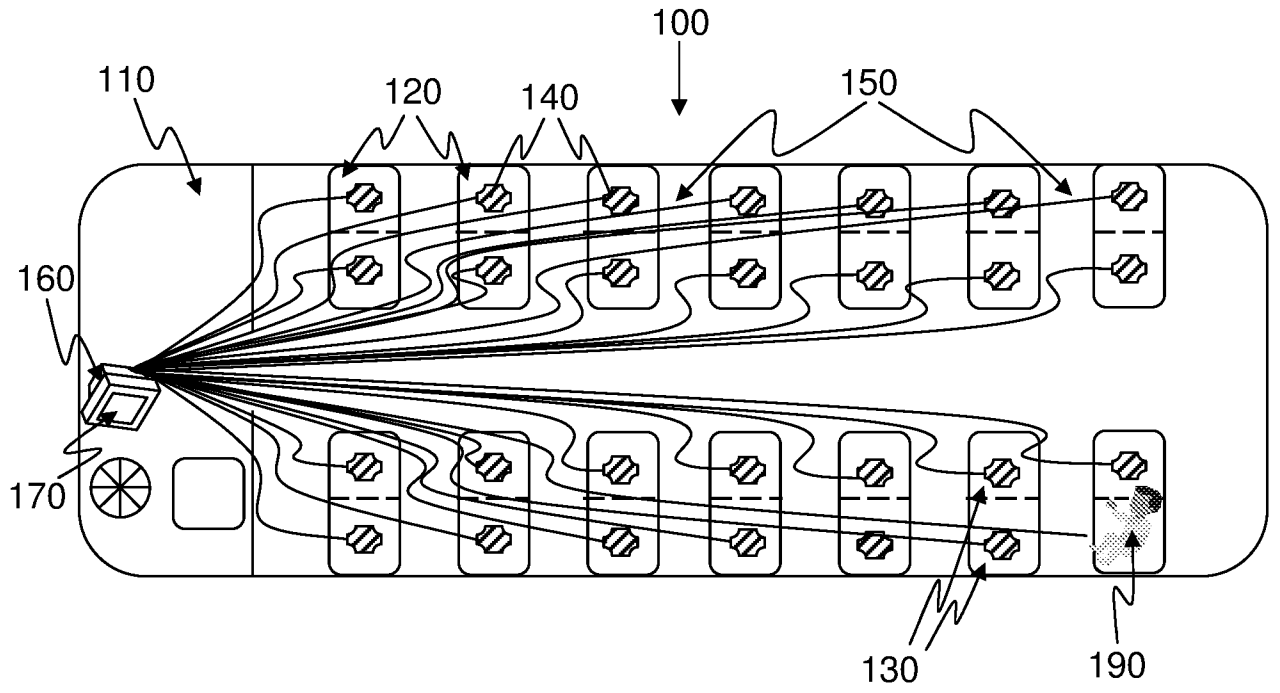


Figure 1

2/2

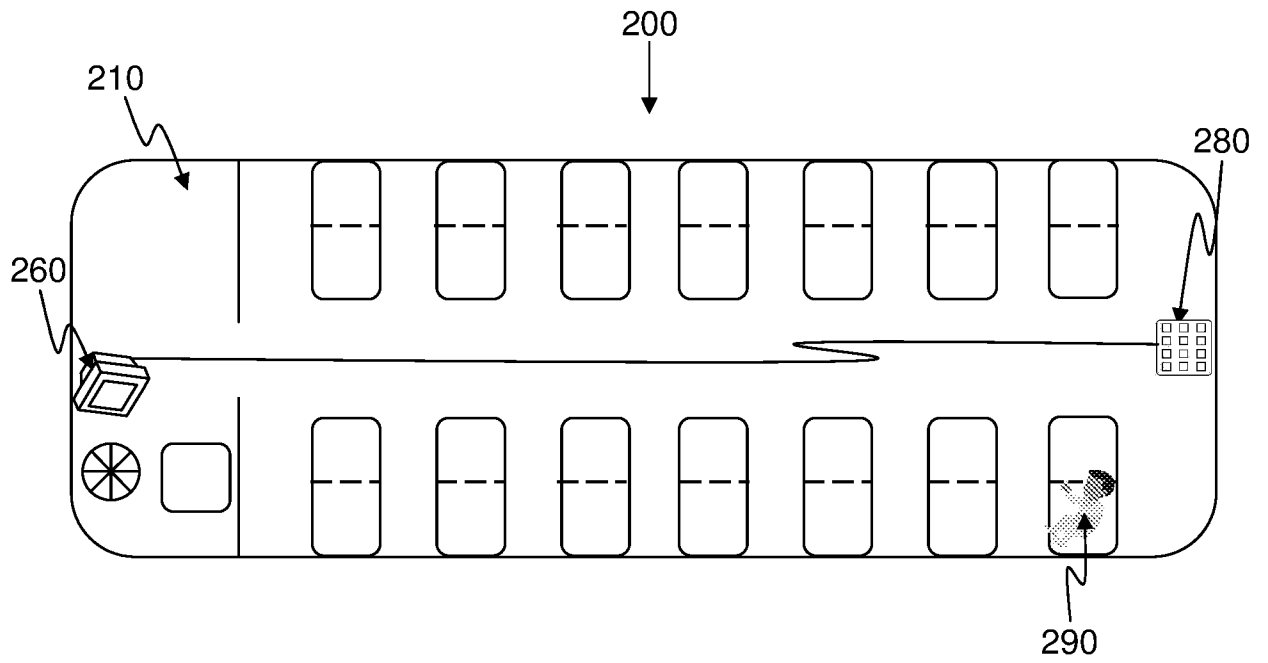


Figure 2

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL2013/050911

A. CLASSIFICATION OF SUBJECT MATTER IPC (2014.01) B60Q 9/00, G08B 21/22, B60N 2/26		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) IPC (2014.01) B60Q 9/00, G08B 21/22		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Databases consulted: THOMSON INNOVATION, Esp@cenet, Google Patents, FamPat database Search terms used: bus, sensor, seat, child, display, monitor		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012242492 A1 Grunfeld 27 Sep 2012 (2012/09/27) entire document especially paragraph 0043	1-11,15-30,34-37
Y	entire document	12-14,31-33
X	US 6259358 B1 Fjordbotten 10 Jul 2001 (2001/07/10) entire document	38-52
Y	entire document	11-14,31-33
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 10 Mar 2014		Date of mailing of the international search report 10 Mar 2014
Name and mailing address of the ISA: Israel Patent Office Technology Park, Bldg.5, Malcha, Jerusalem, 9695101, Israel Facsimile No. 972-2-5651616		Authorized officer ROASH Yoaela Telephone No. 972-2-5657807

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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

See extra sheet.

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

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet):

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

Invention/s 1	A system for determining whether items occupy seating location of a vehicle	Claim/s 1-37
Invention/s 2	A system for encouraging a driver to check whether items have been left on seating locations of a vehicle	Claim/s 38-52

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IL2013/050911

Patent document cited search report	Publication date	Patent family member(s)	Publication Date
US 2012242492 A1	27 Sep 2012	CA 2314063 A1	16 May 2001
US 6259358 B1	10 Jul 2001	NONE	