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## (54) Safety system

(57) An object to be safeguarded in the form of a house 3 is connected to a security system 1. There is a movement detector 5 in the house, which is connected to a communication unit 7. In the event of a burglary, the movement detector will detect a movement upon which the communication unit will send an alarm signal.

The security system 1 also comprises a control device 9 (mobile telephone), to receive the alarm signal and send an action signal to an alarm device 11.

If the owner of the house receives the alarm signal, he can use the control device 9 to send an action signal immediately to the alarm device 11 or he can first check if it is a false alarm.

If the alarm device 11 receives an action signal from a control device, it will search for which safeguarded object it refers to and which authorities have to be warned.

This security system can therefore warn the correct authorities quickly and efficiently.

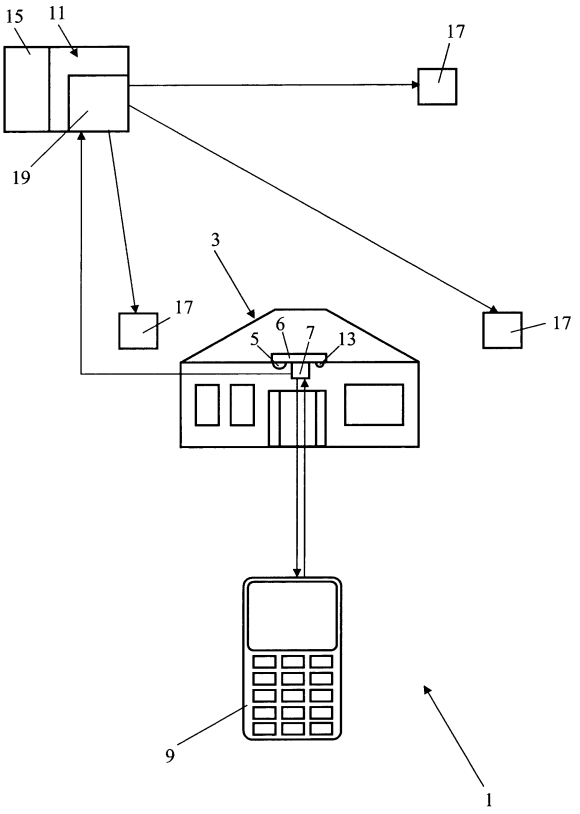


FIG. 1

EP 1 847 973 A2

## Description

BACKGROUND OF THE INVENTION:

### Field of the invention

**[0001]** The invention relates to a security system comprising at least one detection device present in or near an object to be safeguarded to detect an undesirable situation, a communication unit that is connected to the detection device to send an alarm signal if the detection device detects an undesirable situation, and at least one control device to receive the alarm signal and send an action signal.

**[0002]** The object to be safeguarded can for example be a building, an aircraft or a person and the undesirable situation can for example be a theft, burglary, fire or an unsafe personal situation, such as an act of senseless violence.

**[0003]** The detection device can for example comprise a movement detector and/or a smoke detector and/or a glass break detector. The detection device can also be portable, for example a mobile telephone with an alarm button, so that if the alarm button is pressed a signal is given of an undesirable situation.

**[0004]** The control device can for example also be a mobile telephone or other portable apparatus, so that the reception of an alarm signal and transmission of an action signal occurs without a wire connection. An action signal could be a telephone call to a security service, emergency service (hospital, fire brigade) or the police.

### Prior art

**[0005]** Such a security system is known from WO 00/17021. The known security system has a detection device, which sends an SMS message to the user's GSM telephone on detecting an irregularity and thus informs the user about its nature. The disadvantage of this is that the user must himself decide which authorities (security service, emergency services, police) to inform on receiving the message and he also has to inform these bodies about the nature (burglary, fire, violence) of the undesirable occurrence. This costs time and risks incorrect transfer of information.

### Summary of the invention

**[0006]** An objective of the invention is to provide a security system of the sort described in the preamble with which the correct authorities are warned quickly and effectively. For this purpose the security system according to the invention is characterised in that it also comprises an alarm device, which is provided with a further communication unit, to receive an action signal and send at least one warning signal, and at least one receiver, which is present in the vicinity of the object, to receive the warning signal.

**[0007]** The action signal can for example be sent by keying in a code on a mobile telephone, which can then be sent. To prevent a false alarm as much as possible the user of the control device can preferably himself decide whether or not an action signal is sent. The user can be aware of the false alarm because for example he has accidentally activated the detection device himself or because he has himself first checked the object after receiving the alarm signal.

**[0008]** The receivers can for example be in use with the emergency services, such as a hospital, fire brigade, police or persons near the object, or be incorporated in observation devices, such as cameras, in the vicinity of the object. The alarm device is preferably a central computer system, but can also be integrated in an apparatus, for example the control device.

**[0009]** The action signal received by the alarm device can be the one sent by the control device. Preferably, however, the security system also comprises a basic unit that is present in or by the object to be safeguarded and to which the detection device and the communication unit are connected, so that the control device sends the action signal to the communication unit, which sends the action signal to the basic unit, which then sends a further action signal via the communication unit to the alarm device. The basic unit translates the code that is sent by the control device into a further action signal for the alarm unit.

**[0010]** An embodiment of the security system according to the invention is characterised in that the security system also comprises further receivers and the alarm device comprises a data file containing the identity (emergency services, police, persons, cameras) and position (directly near or at a distance from the object) of the receivers.

**[0011]** A further embodiment of the security system according to the invention is characterised in that the alarm device is made so that it sends a warning signal or signals to the receiver or receivers near and/or at a distance from the object, depending on the alarm signal sent by the control device. Preferably, the user of the control device can choose from various possible action signals, for example warning signals to receivers directly near the object or at a distance from the object.

**[0012]** A still further embodiment of the security system according to the invention is characterised in that the security system also comprises at least one further control device and the communication unit is made so that if it cannot connect with the control device it will then try to connect with the further control device. Preferably, there are sufficient control devices so that a connection can virtually always be made with one of them.

**[0013]** Preferably, the security system also comprises an observation apparatus and the control device is made so that it can connect with the observation apparatus. To prevent a false alarm the user can thus check the object from a distance via the observation apparatus, for example with a microphone and/or surveillance camera.

## Brief description of the drawings

**[0014]** The invention will be elucidated more fully below on the basis of a drawing in which an embodiment of the security system according to the invention is shown.

## Detailed description of the drawings

**[0015]** Figure 1 shows an embodiment of the security system 1 according to the invention. Various objects are connected to the security system 1. One of the objects is shown in this figure in the form of a house 3. There is a detection device in the form of a movement detector 5 in the house. This movement detector is connected to a basic unit 6 to which a communication unit 7 is also connected. In the event of a burglary, the movement detector will detect an undesirable movement and emit a signal to the basic unit, which will send an alarm signal via the communication unit.

**[0016]** The security system 1 also comprises several control devices 9, here in the form of mobile telephones, to receive the alarm signal and to send an action signal to an alarm device 11, which is also part of the security system. The communication unit 7 will first try to connect with a first control device 9. This is usually the telephone of the owner of the house 3, who at the moment of a burglary will usually not be present in the house.

**[0017]** If the house owner can be contacted and he receives the alarm signal, he can use the control device 9 to send an action signal immediately to the basic unit 6 or he can first check that it is not a false alarm. He can do this by connecting with a microphone 13 in the house. For this purpose the microphone can be provided with its own communication unit or it can be connected to the communication unit 7 already present in the house.

**[0018]** After the owner has assured himself that it is not a false alarm, he sends an action signal to the basic unit 6. He has for this purpose a choice out of various action signals, for example a first option in which only an emergency service is warned, a second option in which both the emergency service and the police are warned, and a third option in which the residents of the houses in the direct vicinity of his own house are also warned.

**[0019]** If the communication unit 7 cannot connect with the house owner, it will then try to connect with a second, third, etc., control device of for example a family member, friend or acquaintance of the owner, until a connection has been made with one of these.

**[0020]** If the basic unit 6 receives an action signal from a control device, it will then send a further action signal to the alarm device 11. The action signal can for example be a short two figure code, which the basic unit 6 then translates into a further action signal, which for example indicates that both the emergency services and the police have to be warned. The alarm device 11 then searches for which safeguarded object the further action signal refers to and which authorities have to be warned. For this purpose the alarm device 11 of the security system comprises a data file 15, which stores data concerning all the objects to be safeguarded that are connected to the security system, such as the location and identity (buildings, vehicles, persons) of the objects and all receivers 17 connected to the security system, such as the location and identity of the objects (cameras, persons, vehicles) in which or by which the receivers are installed. The data file also contains information about which authorities have to be warned with which action signal for each safeguarded object.

**[0021]** The reception of action signals and transmission of warning signals is done by a further communication unit 19, which is part of the alarm device 11. The communication between the further communication unit 9 and the receivers 17 preferably occurs via satellite connections. The receivers 17 of the warning signals can be mobile telephones or other communication units of for example other cameras.

**[0022]** This security system can therefore warn the correct authorities quickly and efficiently.

**[0023]** Although in the above the invention is explained on the basis of a drawing, it should be noted that the invention is in no way limited to the embodiment shown in the drawing. The invention also extends to all embodiments deviating from the embodiment shown in the drawing within the context defined by the claims. Thus, the communication unit can also directly contact the alarm device, which then connects with one of the control devices. In that case the communication unit must always only contact the alarm device, which will always succeed, so it can therefore be made more simply.

## Claims

**1.** Security system comprising:

- at least one detection device present in or near an object to be safeguarded to detect an undesirable situation,
- a communication unit that is connected to the detection device to send an alarm signal if the detection device detects an undesirable situation, and
- at least one control device to receive the alarm signal and send an action signal,

**characterised in that**

- the security system also comprises an alarm device, which is provided with a further communication unit to receive an action signal and send at least one warning signal, and
- at least one receiver, which is present in the vicinity of the object, to receive the warning signal.

2. Security system according to claim 1, **characterised in that** the security system also comprises a basic unit that is present in or by the object to be safeguarded and to which the detection device and the communication unit are connected, so that the control device sends the action signal to the communication unit, which sends it to the basic unit, which then sends a further action signal via the communication unit to the alarm device.

3. Security system according to claim 1 or 2, **characterised in that** the security system also comprises further receivers and the alarm device comprises a data file, which contains the identity and position of the receivers.

4. Security system according to claim 1, 2 or 3, **characterised in that** the alarm device is made so that it sends a warning signal or signals to the receiver or receivers near and/or at a distance from the object, depending on the alarm signal sent by the control device.

5. Security system according to one of the preceding claims, **characterised in that** the security system also comprises at least one further control device and the communication unit is made so that if it cannot connect with the control device it will then try to connect with the further control device.

6. Security system according to one of the preceding claims, **characterised in that** the security system also comprises an observation apparatus and the control device is made so that it can connect with the observation apparatus.

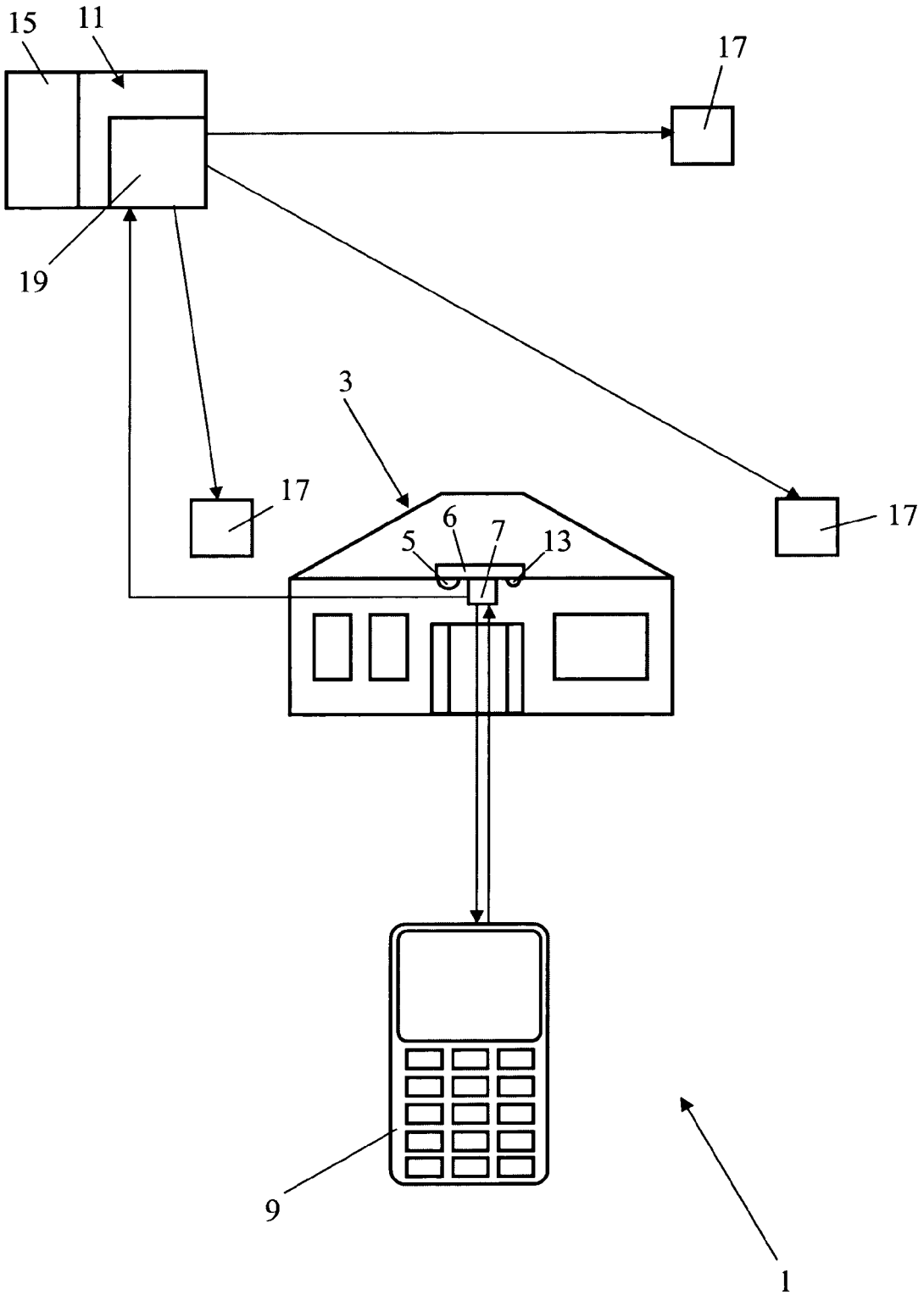


FIG. 1

## REFERENCES CITED IN THE DESCRIPTION

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### Patent documents cited in the description


- WO 0017021 A **[0005]**