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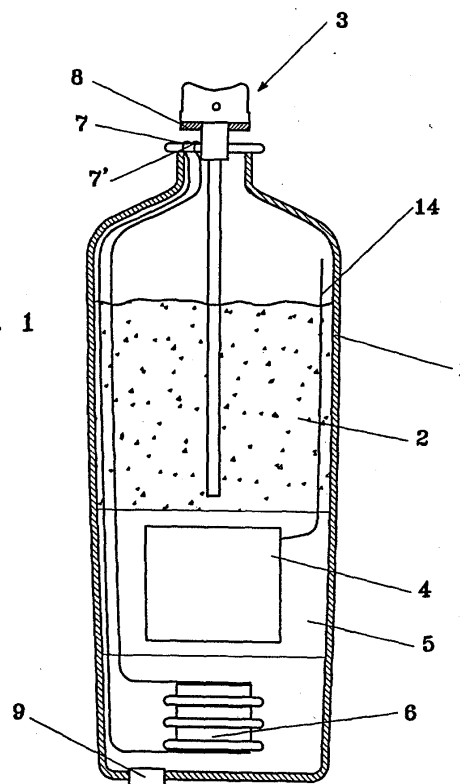
(54) **Anti-snatch device coupled with means able to transmit a sms message**

(57) This invention proposes an anti-snatch device, such as an orticant liquid spray, a siren, a dazzling device or the like, coupled with a transmitter able to be actuated when the anti-snatch device is activated and to transmit a SMS message to one or more numbers previously stored.

The device which generates and transmits the message is preferably built in the same container of the anti-snatch device and hardware or software means are provided for in order to avoid that the message is transmitted by mistake.

The aim of this invention is to realise a device which, in addition to offer a certain level of protection or, anyway, to allow to discourage any prowler, is also able to send a warning message which informs a third party of the situation, as well as to give indications of the place the incident occurs.

Fig. 1



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Description

[0001] This invention proposes an anti-snatch device, such as an orticant liquid spray, a siren, a dazzling device or the like, coupled with a transmitter able to be actuated when the anti-snatch device is activated and to transmit a SMS message to one or more numbers previously stored.

[0002] The device which generates and transmits the message is preferably built in the same container of the anti-snatch device and hardware or software means are provided for in order to avoid that the message is transmitted by mistake.

[0003] For example, the invention provides for a safety catch which can be disconnected or an additional button to be pushed at the same time as the one able to actuated the anti-snatch device to transmit the message, or a software control which allows the transmitter to be activated only if the anti-snatch device is actuated two or more times within a lapse of time fixed beforehand.

[0004] The aim of this invention is to realise a device which, in addition to offer a certain level of protection or, anyway, to allow to discourage any prowler, is also able to send a warning message which informs a third party of the situation, as well as to give indications of the place the incident occurs.

[0005] As everybody knows, due to the considerable increase in assaults and thefts, the safety problem, especially in big cities, is more and more a burning issue.

[0006] Small spray cans containing an orticant or paralysing liquid able to temporarily stun a prowler, to allow the victim to avoid the attack, have been on the market for many years.

[0007] Many other systems, such as sirens supplied by a battery able to be easily contained in a handbag or devices of different kind aiming, at lest, to discourage the prowlers, have been proposed.

[0008] Not always these systems turn out to be efficacious, hence the need to promptly inform someone who may able to render help.

[0009] The present invention introduces in this sector by proposing an anti-snatch device, which is coupled with a transmitter able to generate and send a SMS message to one or more pre-selected telephone numbers and which is actuated as the anti-snatch is activated.

[0010] Preferably the transmitter is of the kind of those used in the cellular telephones, so that it is also possible, if necessary, to spot the area the message has been transmitted from.

[0011] This invention will be now described in detail, by way of example but without any limitation thereto, with reference to the enclosed figures, wherein:

- figure 1 shows schematically a device according to the invention, consisting of an orticant liquid spray coupled with a SMS message transmitter;

- figure 2 is a simplified block diagram of the device according to the invention.

[0012] It is hereby specified that in the description which will follow, reference is made to the specific case of an anti-snatch device composed of an orticant liquid spray can, but that the invention is not limited to this particular case but the protection is extended to all and any kinds of anti-snatch devices, being they either formed of sound devices such as sirens or the like, luminous devices such as dazzling lamps or other, provided that they are coupled with a transmitted able to generate and send preferably SMS messages.

[0013] The device according to the invention shown in figure 1 is formed of a spray 1 containing an orticant liquid 2 under pressure, which can be sprayed through a nozzle 3.

[0014] Spray cans of this kind have been already known on the market for some years.

[0015] The invention is characterised in that it provides for, coupled with the said device, a transmitter, schematically shown and indicated with 4, able to be activated as the spray can is used, which transmits a SMS message, for example a message previously stored, to one or more telephone numbers, previously stored too.

[0016] Preferably the transmitter 4 is of the kind of those used in the cellular telephones, so that it is also possible, if necessary, to spot the area the message has been transmitted from.

[0017] The transmitter 4, preferably built in a compartment 5 obtained on the bottom of the spray can 1 is supplied by a pair of cells or batteries 6, also placed on the bottom of the spray can.

[0018] The transmitter 4 is actuated by activating the device, and to this purpose, according to a possible embodiment, the batteries 6 are inserted in a circuit showing a pair of contacts 7 and 7' placed on the upper edge of the spray can, underneath the spraying head 3.

[0019] The latter shows, in the bottom, a metallic ring 8 or the like, which, when the head or the button to spray the liquid is pressed, engages the contacts 7 and 7' thus closing the circuit, so that the transmitter is supplied by the batteries 6.

[0020] Safety systems aiming to avoid the transmission of the message by mistake are also provided for.

[0021] According to a first preferred embodiment of the invention, said means can be formed of button 9 placed far from the spraying head 3, for example on the bottom of the spray can, which closes the circuit on which the batteries 6 are inserted.

[0022] In this way, in order for the current to supply the transmitter, it is necessary that the head 3 and the button 9 are pressed together to close the supply circuit of the transmitter itself.

[0023] The safety system may also provide for different embodiments. For example the button 9 may be replaced by a safety catch, such as, for example, a tongue made of insulating material or the like, which interrupts

the circuit, or by any other known system.

[0024] Alternatively, it is also possible to use a software-type safety device, as it will be described in detail hereinafter.

[0025] The block diagram of the electronics coupled with the anti-snatch device is shown in figure 2. 5

[0026] The system comprises a transmitter 10, of the kind used in the cellular telephones, connected to a timer 11 and controlled by a microcomputer 12 provided with re-writable memory, for example an EPROM memory indicated with 13. 10

[0027] The number 14 indicates the transmitter antenna, which in the case in point may be formed, for example, of a wire, visible also in figure 1, built in the spray can wall, which may be also advantageously made of plastic. 15

[0028] In the EPROM 13 the message and the telephone numbers said message must be sent to are stored.

[0029] The microcomputer 12 manages the system, by activating the transmitter 10 when the circuit is closed further to, for example, the pressure of the spray head 3. 20

[0030] The microcomputer is also connected to a timer 11 to allow a software management, which avoids the unintentional activation of the transmitter. 25

[0031] For example, the invention may provide for a program that, when the circuit is closed thus connecting the contacts 7 and 7', actuates the timer and causes the computer, in its turn, to activate the transmitter only if, within a certain number of seconds, the circuit is closed for a second time, for example to spray again the orticant liquid. 30

[0032] If this does not happen, the microcomputer takes the signal previously received as a mistake, while if it receives the second signal within the pre-selected time, it actuates, as indicated above, the transmitter. 35

[0033] The person who receives the message is therefore informed of the dangerous situation occurred and is able to call, for example, the police that, since the message is received through the mobile phone network, can also spot the area the message has been transmitted from. 40

[0034] The same idea of solution can be also efficaciously applied to different kind of anti-snatch devices, for example sound devices such a siren, luminous devices such as a dazzling flash or other without being beyond the scope of this invention. 45

[0035] A skilled in the art can also provide for different changes and variations, which shall anyway be considered as everyone included within this invention. 50

Claims

1. Anti-snatch device **characterised in that** it is coupled with means able to transmit, when the device is actuated, a SMS message to one or more pre-selected telephone numbers. 55

2. Anti-snatch device according to the claim 1, **characterised in that** the said means able to transmit a SMS message are formed of a transmitter of the kind used in the mobile telephones, means able to actuate the said transmitter when the anti-snatch device is activated, being provided for.

3. Anti-snatch device according to the claim 2, **characterised in that** it provides for the combination of a system able to spray an orticant liquid by the said means able to transmit a SMS message.

4. Anti-snatch device according to the claim 3, **characterised in that** the transmitter is built in a compartment obtained in the same container of the liquid to be sprayed.

5. Anti-snatch device according to the claim 4, **characterised in that** it provides for means able to close a transmitter supply circuit when the device is activated.

6. Anti-snatch device according to the claim 5, **characterised in that** it provides for, on the button that is pressed to spray the liquid, a layer made of conductive material that, upon the button pressure, closes the transmitter supply circuit.

7. Anti-snatch device according to any of the preceding claims, **characterised in that** it provides for:

- means able to receive a control input signal to activate the said anti-snatch device;
- means able to actuate a timer;
- means able to generate and transmit a SMS message to one or more pre-selected telephone numbers if the said activation control of the anti-snatch device is repeated within a pre-determined lapse of time.

8. Anti-snatch device according to the claim 2 and 5, **characterised in that** the said anti-snatch device coupled with the SMS transmitter is a sound alarm device.

9. Anti-snatch device according to the claim 2 and 5, **characterised in that** the said anti-snatch device coupled with the SMS transmitter is a flash or a bulb able to dazzle a prowler.

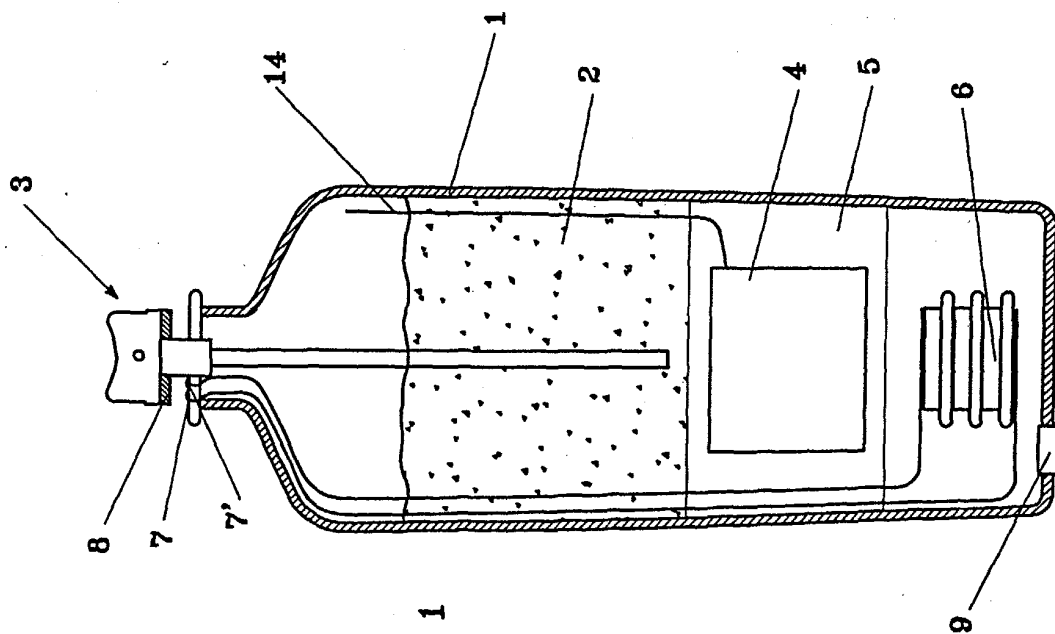


Fig. 1

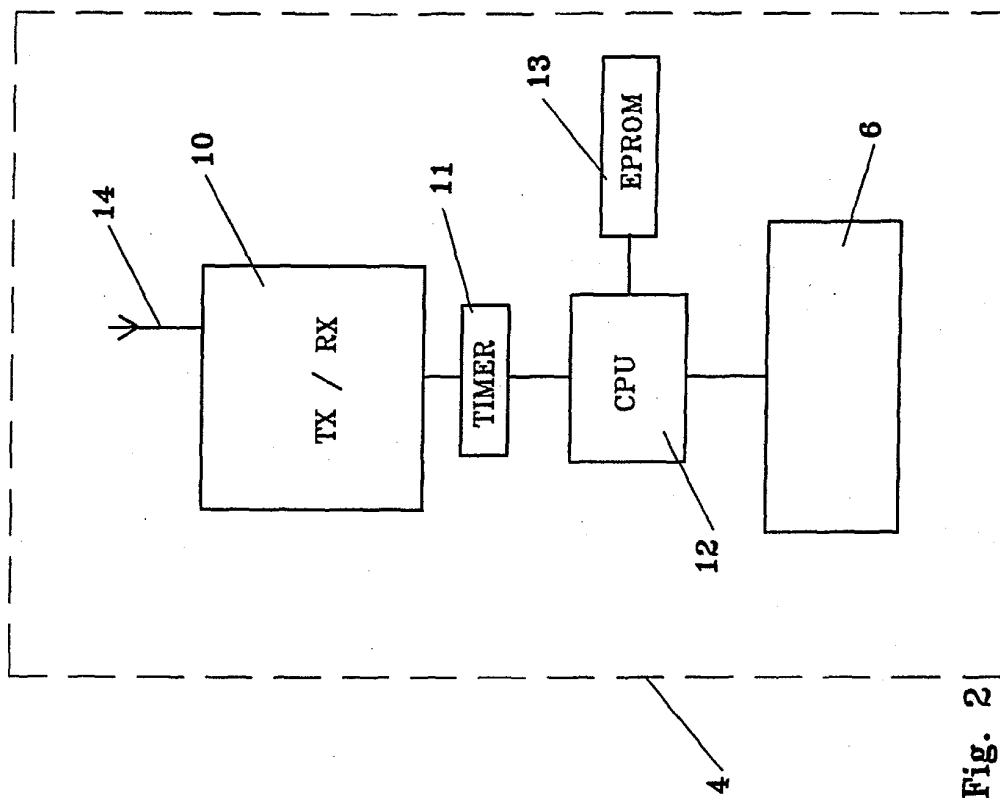


Fig. 2



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EUROPEAN SEARCH REPORT

Application Number
EP 03 00 3262

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	DE 299 19 741 U (KERGER, H.) 29 June 2000 (2000-06-29) * the whole document *	1-9	G08B15/00 G08B21/02
X	DE 100 61 593 A (PAETZOLD MAIKA) 13 June 2002 (2002-06-13) * claims 1-3 *	1-9	
X	US 2002/008620 A1 (WHALEN PATRICK) 24 January 2002 (2002-01-24) * abstract *	1-9	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G08B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 3 October 2003	Examiner Sgura, S
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 03 00 3262

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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03-10-2003

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 29919741	U	29-06-2000	DE 29919741 U1	29-06-2000
DE 10061593	A	13-06-2002	DE 10061593 A1	13-06-2002
US 2002008620	A1	24-01-2002	NONE	