United States Patent

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[54] TIME DELAYED THEFT ALARM FOR A CARRYING CASE

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[51] **Int. Cl.** **G08b 13/14**

[58] **Field of Search** 340/283, 279, 272, 280; 200/42, 43, 61.19, 61.85, 61.86, 85; 317/134

[56] **References Cited**

UNITED STATES PATENTS

1,116,276	11/1914	Hoffman et al.	200/61.85
3,564,525	2/1971	Robeson et al.	340/283
919,385	4/1909	Ruthven	200/61.85
2,038,625	4/1936	Adler	340/280
3,053,416	9/1962	Harner	340/283
3,103,660	9/1963	Ticktin	340/279
2,826,656	3/1958	Gordon	340/283

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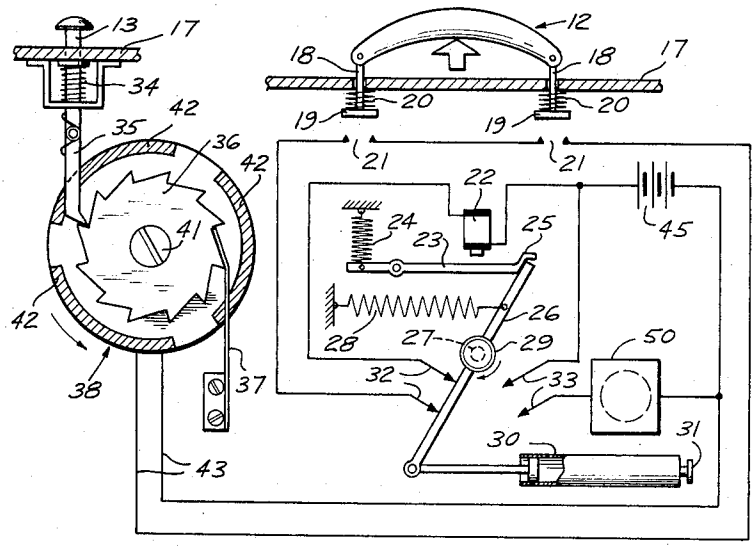
[57] **ABSTRACT**

A carrying case alarm system has a time-delay mechanism for initiating an alarm signal at some predetermined time after theft of the carrying case has occurred, thereby enabling the owner of the case to separate himself from the thief prior to initiation of the alarm signal. The system comprises a first switch positioned for operation by a carrying handle on the case, the switch being connected to energize an electromagnet for actuating a pivotal lever. The lever is pivoted by a spring but impeded in its motion by a dashpot, said lever being positioned to close a second switch for energizing the alarm after a predetermined time depending on the pivotal speed of the lever as limited by the dashpot.

4 Claims, 3 Drawing Figures



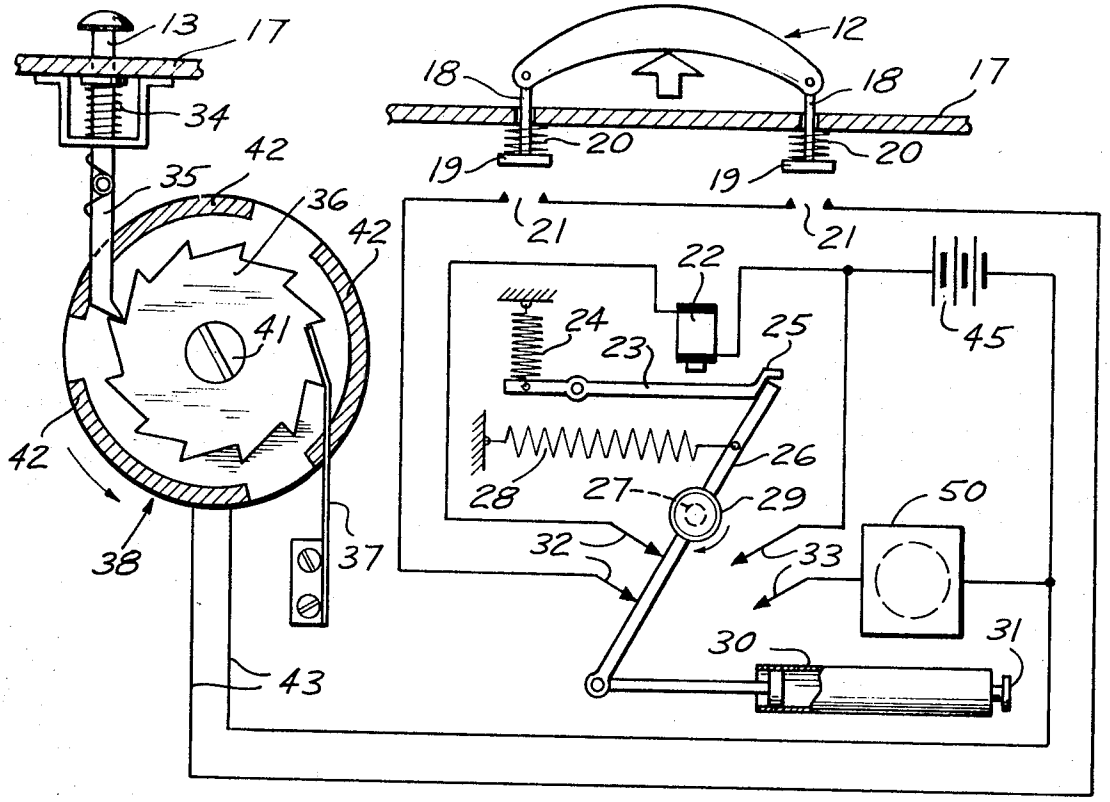


FIG. 1

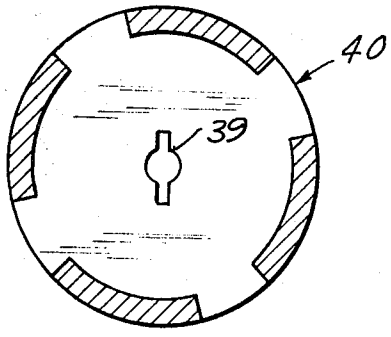


FIG. 2

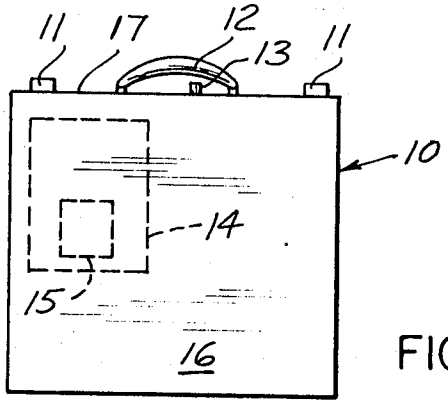


FIG. 3

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TIME DELAYED THEFT ALARM FOR A CARRYING CASE

BACKGROUND OF INVENTION

Various alarm systems for carrying cases are known in the prior art, but such systems include means which set off the alarm device immediately. It has been found that such devices frequently cause a thief to panic, whereupon (hopefully) he may drop the case and run, or in anger he may attempt to harm the individual from whom the case is taken. It is believed that the carrier of the case will be safer if the alarm is delayed for some predetermined time while the thief attempts to escape from the presence of the carrier; whereby, when the alarm commences the thief will be unable to harm the carrier and will merely drop the case and run. Accordingly, it is an object of this invention to provide a reliable burglar alarm device for a carrying case, said alarm device having a time-delay mechanism which can be initiated by the carrier, and which, once initiated, is not controllable from the outside of the case.

SUMMARY OF INVENTION

In accordance with one embodiment of the invention, I provide a carrying case burglar alarm system having a triggering device which is accessible externally of the case; having an alarm device disposed within the case; and having delay means for actuating the alarm device at some predetermined time after operation of the triggering device. The invention further comprises a device for disabling the alarm system at any time prior to operation of the triggering device to prevent an inadvertent sounding of the alarm.

In particular, one embodiment of the invention comprises a case having a carrying handle connected thereto by rods which are slidably movable downwardly into the case for actuating electrical switches. The electrical switches are connected in a series circuit with contacts of a disabling switch, an electromagnet, and a battery for energizing the electromagnet to unlatch a pivotally movable lever. The lever is pivoted under the force of a spring, but is limited in speed of movement by a dashpot, so that the time for lever movement from one point to another can be controlled quite accurately. A siren control switch, actuatable by said lever, is disposed in the path of movement of the lever, and is connected in series with a siren and the battery to switch on the siren after a delay period controlled by a dashpot adjustment.

The disabling device comprises a rotatable disk mounted within the case for stepped movement by means of a push button and ratchet arrangement, said push button being mounted for access externally of the case. The disk has alternating conductive and non-conductive strips about its periphery, and the above-mentioned disabling switch contacts are arranged to contact the disk strips. Thus, when it is desired to disable the circuit, the push button is depressed to advance the disk until at least one of the disabling contacts engages a non-conductive strip on the disk, thereby opening the electromagnetic circuit.

BRIEF DESCRIPTION OF DRAWING

The accompanying drawing illustrates one embodiment of the invention. In such drawing:

FIG. **1** is a schematic diagram of an alarm system embodying the invention;

FIG. **2** is an elevational view of a disk similar to that shown in FIG. **1**; and

FIG. **3** is an elevational view of a carrying case embodying the invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

In one embodiment of the invention, as shown in the drawing, there is provided a carrying case generally designated **10** having conventional locks **11**, a special handle **12**, and a push button **13** accessible from outside the case. Disposed within

the case **10** is a lockable metal box **14**, having a speaker opening **15** disposed flush with an outer wall **16** of the case **10**. The wall **16** is provided with a fabric covering and has a grille covered opening (not shown) aligned with the speaker opening **15** to permit efficient radiation of sound from the case. Handle **12** in top wall **17** of case **10** is hinged to two slidable rods **18** terminating in contact shoes **19**, said rods being biased downwardly by a pair of springs **20**. When handle **12** is tilted with respect to case **10** or conversely when case **10** rocks due to walking momentum, only one or the other of shoes **19** touches its contact **21**. However, if the case **10** is put down, or the handle **10** released, then both shoes **19** touch contacts **21**, thereby completing a series circuit including an electromagnet **22** and a battery **45**.

The electromagnet **22** cooperates with an armature **23**, which is biased in the clockwise direction by a spring **24**. Energization of the electromagnet causes the armature to pivot in the counterclockwise direction against the force of the spring **24**. One end of armature **23** defines a latch **25** for engaging a lever **26** pivoted at a pin **27**, said lever biased counterclockwise by a spring **28**. Mounted above pivot pin **27** is a reset knob **29** for use in latching the lever to the armature **23**. The lower end of lever **26** is linked to a dashpot **30** adjustable by a conventional needle escape port **31** adjusted in cooperation with spring **28**. A conventional one-way valve, not shown, permits rapid return of the assembly to the position shown in FIG. **1** by turning knob **29** in the direction of the arrow. In this position, the mechanism is held by latch **25** and a pair of contacts **32** is bridged by the lever **26**, said contacts **32** forming a part of the electromagnet circuit. On release of lever **26**, contacts **32** are opened and after "t" seconds, determined by the dashpot **30** and spring **28**, another set of contacts **33** are bridged by the lever to energize the alarm which comprises an electrically operable siren **50** connected in series with the contacts **33** and the battery **45**.

Button **13**, biased upward by a spring **34** is linked to a spring biased pawl **35** engaging a ratchet **36**. A leaf spring **37** maintains positive ratchet positioning in a conventional manner. A disk **38** has a key similar to the key **39** shown in reference to an alternate disk **40**, and the key orients the disk rotationally with ratchet **36**, whereby the ratchet and disk are then secured by a screw **41**. Disk **38** has a repeating pattern of contact areas **42**, separated by non-conductive areas, which bridge a pair of contacts **43** also connected in series with the electromagnet circuit.

In the embodiment shown, a 30° ratchet is employed and depression of button **13** three times will put disk **38** in a position that will open contacts **43**, while one additional depression will effectively restore the disk to the position shown by employing the next contact sector. Thus, it can be seen that this construction yields a coded disabling means which may be employed by a messenger. As can be seen in FIG. **2**, disk **40** provides a code wherein the circuitry is disabled by depressing button **13** twice instead of three times, and other variations are of course available depending on disk and ratchet configuration.

In the operation of the system the messenger carrying the case may walk freely, swinging or jarring the case, and if he wishes to put down the case, he follows his coded instruction of pressing button **13** three times. After picking up the case, he presses button **13** once to reactivate the alarm system.

Should the messenger be held up he merely puts down the case, or at least ensures that the handle is pressed downwardly into the case before relinquishing it. Both contacts **21** are then closed, and since contacts **32** and **43** are also closed, the circuit is completed for energizing the magnet **22**. Magnet **22** is only pulsed, because unlatching of the lever **26** at the coupling **25** breaks contact **32** and lever **26** starts to turn. After "t" seconds, contact **33** is closed and battery **45** is used solely for energizing siren **50** which continues to sound for the life of the battery. Furthermore, smashing open case **10** does not make the alarm defeatable since disk **38** and its associated parts are out of the circuit as are contacts **21** and coil **22**, and reset

knob **29** and its associated parts are inside box **14** which can be opened only by its own key.

I claim:

1. A burglar alarm system for a case having a carrying handle, comprising a first switch disposed within the case, means accessible from the outside of the case for actuating said first switch, alarm signal means disposed within the case for actuation to generate an alarm signal, a second switch connected to said alarm signal means for actuating the alarm signal, and means interconnecting said first and second switches for operating said second switch in response to actuation of said first switch, said interconnecting means including delay means for delaying operation of said second switch and thereby delaying actuation of the alarm signal for a predetermined time after actuation of said first switch, said means interconnecting said first and second switches further including an electromagnet electrically connected to said first switch for actuation thereby, an armature having latching means thereon and being pivotally mounted for movement by said electromagnet, a movable lever pivotally mounted within said casing and having a portion engaged and releasably retained by said latching means, means connected to said lever for urging it away from engagement with said latching means, said latching means being releasable by movement of said armature under force of said electromagnet, and wherein said delay means includes a dashpot connected to said lever for limiting the speed of pivotal movement of said lever when the latching means is released, said lever being disposed within said casing at a position adjacent said second switch for actuating said second switch upon a predetermined displacement of said lever.

2. The invention as set forth in claim **1**, further comprising means operable externally of the case for disabling said alarm system prior to actuation of said first switch.

3. The invention as set forth in claim **1** in which said means accessible from the outside of the case for actuating said first switch comprise a rod connecting the carrying handle to the case, said rod having an upper end connected to said handle, and the case having an opening receiving said rod therethrough, said rod having a lower end disposed within the casing for downward movement to close a set of contacts on said first switch.

4. The invention as set forth in claim **1**, in which said alarm system means comprises a siren and an electrical power supply for energizing said siren, and in which said second switch is connected in series combination with said siren and power supply.

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