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Costa

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[54] **PURSE ALARM**

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[52] **U.S. Cl.**..... **340/280,** 200/DIG. 2, 340/255, 340/283

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

[58] **Field of Search** 340/280, 276, 283, 255; 200/DIG. 2, 61.85

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[57] **ABSTRACT**

An alarm device is provided to inhibit purse snatching. A battery-operated sound emitting device is provided for placement in the purse and secured thereto as by a pin. A flexible cord is connected at one end to the device and the other end forms into a wrist strap looped about the wearer's wrist. The cord includes a separable jack connection forming part of an arming circuit. The device is actuated if the bag is snatched and the jack connections broken in the cord. The alarm device cannot be turned off except by re-connecting the jack and actuating a relatively inaccessable reset switch.

3 Claims, 3 Drawing Figures

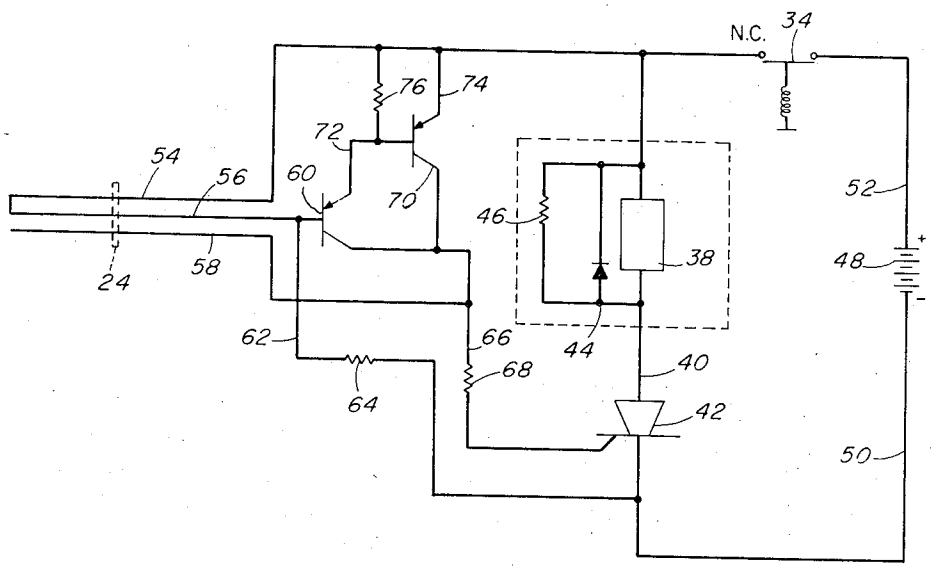


FIG. 1

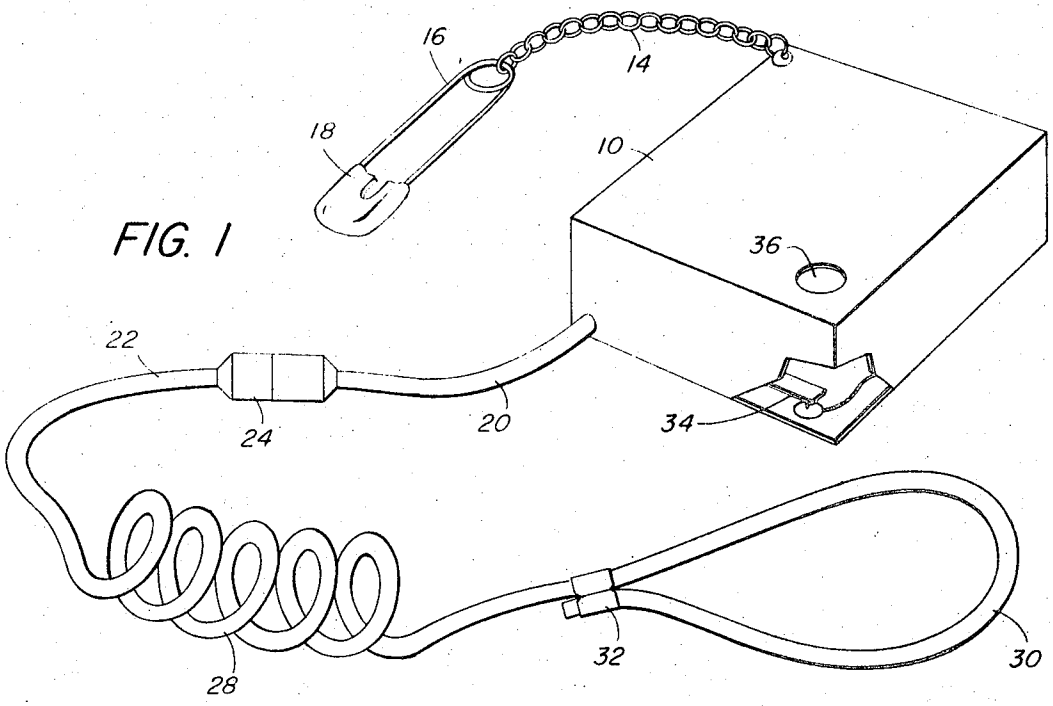


FIG. 2

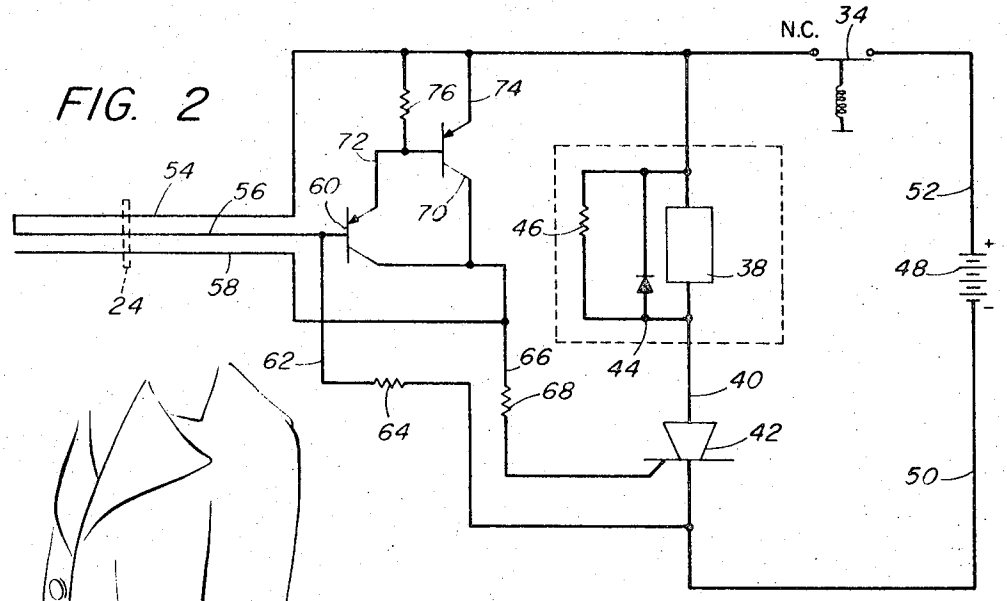
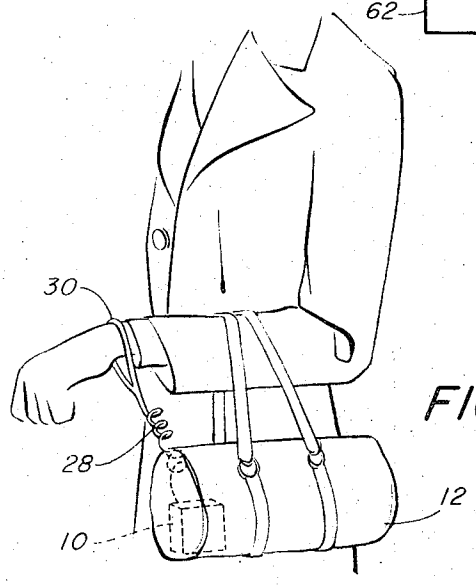


FIG. 3



PURSE ALARM

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates generally to anti-theft devices and more particularly is directed towards a portable alarm device to inhibit purse snatching.

2. Description of the Prior Art

A large percentage of women carry a purse or handbag in which they keep money and personal effects when traveling and shopping. Since the bag or purse often contains money and other valuable items, it has become a frequent object of theft. Purse snatchers will grab the handbag and run with it to a secluded place where the bag will be searched for valuables and then discarded. Purse-snatching has reached serious proportions, particularly in urban areas, and is of particular concern because of frequent injury sustained by the victims, particularly elderly women. While various types of alarm devices have been developed heretofore, these have not been particularly suitable for inhibiting purse-snatchers because of their cost, size and efficiency and also because of the relatively complex steps that must be followed to set and wear the device.

Accordingly, it is an object of the present invention to provide a low cost, efficient alarm device for use in inhibiting purse-snatching. Another object of this invention is to provide an anti-purse-snatching device of simple design and construction and one which is conveniently set and worn by the wearer but which is substantially tamper-proof and cannot be readily disabled by the thief.

SUMMARY OF THE INVENTION

This invention features a purse alarm comprising an electronic alarm unit adapted to be placed in and secured to a purse or handbag and a cord connected at one end to the alram unit and at the other end formed with a simple loop that is slipped on and off the wrist of the wearer without tripping the alarm, the cord forming part of the circuit for the alarm unit. The cord includes a jack connection which, when separated as when the purse is pulled away by a thief, closes a circuit to the alarm causing it to go off. The alarm unit in the bag includes a relatively inaccessable reset button which must be closed together with the reconnection of the jack connections before the alarm can be de-energized.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a view in perspective, partially cut away showing a purse alarm made according to the invention,

FIG. **2** is a circuit diagram of the alarm unit, and,

FIG. **3** is a view in perspective showing the device in use.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, the purse alarm unit is generally organized about a box or housing **10** containing the electronic alarm components and adapted to be placed in a purse **12** carried by a wearer. The box **10** is secured within the purse by means of a chain **14** connected at one end to the box and the other end to a safety pin **16**, preferably of the type with an enlarged

head **18** such as used for infants and which is relatively difficult to open. The pin may be fastened to the lining of the purse to prevent a thief from readily removing the box **10** and discarding it after it is actuated. Also connected to the box **10** are sections of insulated electrical cords **20** and **22** detachably connected to one another by means of a plug or jack connector **24** which, in practice, should separate under a pull of perhaps ten pounds. The flexible cords **20** and **22** contain three electrical wires which travel the full length of the cord and the plug connector **24** is provided with three prongs, one for each wire. The cord section **22** preferably forms into a resilient coil section **28** and terminates in a loop **30** at its free end, which loop is passed over the wrist or forearm of the wearer.

The resilient coil section **28** offers a certain freedom of movement with the bag, permitting it to be placed on a counter, for example, allowing the wearer to use both hands without too great a restriction and also prevents the cord from drooping. An adjustable clip **32** is used to form the loop and to permit changes in sizes of the loop opening. The circuit in the cord is not continuous around the loop so that the loop can be opened or adjusted without tripping the alarm. In practice, the loop will be adjusted so that it can be slipped on and off the wrist by the wearer yet if pulled by a thief will cause the jacks to separate before coming off the wrist.

The box **10** is quite compact and preferably about the size of a package of cigarettes. It is of relatively rugged construction being formed of a metal stamping, molded of plastic, or the like. The box is closed on all sides but with one wall held in place by screws to permit access to the interior of the box to service the unit or to replace the battery. Preferably the screws should be sufficiently small and difficult to manipulate so as to make it practically impossible for a thief to open the box while running. Philips screws or other relatively uncommon connecting devices may thus be used to advantage. The box is also provided with reset switch **34** which is deeply recessed within the box opposite a relatively small opening **36.** The switch can be actuated only by means of a small, thin instrument inserted through the opening **36** and will be effective in turning off the alarm only if the jacks **24** have been connected. This further inhibits the thief from turning off the alarm once it has been triggered.

Referring now more particularly to FIG. **2** of the drawings, a detailed description of the circuit will be given. The circuit is generally organized about a DC operated alarm buzzer **38** connected by lead **40** to a silicon controlled rectifier (SCR) **42.** A voltage suppression rectifier **44** and a current sustaining resistor **46** are connected in parallel across the buzzer **38.** Also, connected in parallel to the buzzer **38** and to the SCR **42** is a battery **48.** Preferably a nine volt battery is employed and is connected by leads **50** and **52** to the lead **40.** The reset switch **34** is connected in the lead **52** and is a normally closed, spring-loaded switch, the function of which will be described below. The cord sections **20** and **22** each includes three leads **54, 56** and **58** with the lead **54** connected to the lead **40** and to the lead **52** while the lead **56** is connected to the base of a PNP silicon transistor **60.** A lead **62** connects the base of the transistor **60** to the cathode contact of the SCR **42** and is provided with a base supply resistor **64.** The lead **58** connects to a lead **66** which, in turn, is connected to the gate contact of the SCR **42.** The lead **66** is provided

with a current limiting resistor **68** and also connects to the collector of the transistor **60** as well as to the collector of another PNP silicon transitor **70.** The base of the transistor **70** is connected by lead **72** to the emitter of the transistor **60.** The emitter of the transistor **70** is connected by lead **74** to the lead **54** and a base leakage resistor **76** is connected between the lead **72** and the lead **54.**

The circuit configuration is such that the system is always armed or on, yet its on state does not result in the drawing of any significant power from the battery **48.** The reason for maintaining the circuit on at all times is; first, that it is necessary to keep current flowing in the flexible cord since the triggering mechanism is the breaking of the circuit, which in this instance, is a disconnection of the plug jacks **24.** Secondly, if an ON-OFF switch were provided, it would be possible for the user to forget to switch the device on when the purse or handbag is in use and thus the system would offer no protection.

As long as the plug **24** is connected, the transistors **60** and **70** will remain cut off. As a result the silicon control rectifier **42** will not have any gate current and also will be cut off. This will prevent any current from flowing through the buzzer **38.**

Should the plug **24** be disconnected or the flexible cord cut, the connection between the base of the transistor **60** and the positive supply is broken and base current then flows to the transistor **60** through the resistor **64.** The transistor **60** thus turns on and also turns on the transistor **70.** Gate current then flows to the SCR **42** through the resistor **68** and the SCR is then turned on. The current thereupon flows through the alarm buzzer **38** and the alarm is sounded.

It is the nature of a silicon controlled rectifier, such as the SCR **42,** that if the plug is reconnected and, in turn, the gate current to the SCR **42** stops flowing the SCR will continue to be in an ON state and the alarm will continue to sound. only the breaking of the connection to the battery, using the normally closed spring contact switch **34,** will shut off the alarm.

Accordingly, if the bag-snatcher wishes to escape, he must either; (**1**) run with the alarm sounding in the bag he has snatched, (**2**) he must shut off the alarm but, as explained above, this requires an object thinner than a pencil and a two-hand operation in addition to having a jack connection available and in place, or (**3**) he must rip or tear the alarm box from the lining of the handbag. In the first case, a thief will certainly be the center of attraction, particularly in an urban area and the likelihood of his capture is increased. To this extent the device becomes a deterrent. In the second and third situations, these operations are virtually impossible to perform while the thief is running and if he slows or stops, this again will make his capture more likely.

In addition to the foregoing features, several other advantages are present in the system. For example, if the thief wishes to stop the alarm, once tripped, he must have both jack connectors and try to re-insert the plug connected to the alarm box. However, from the operation of the circuit described above, it will be seen that once the alarm is tripped, only the reset button **34** inside the box can be used to shut off the alarm and this is effective only if the plug has been reconnected. Should the thief try to cut the wires before snatching, the alarm will sound since the electric circuit has been broken. Should the thief try to short the circuit at some point in the cable between the plug and the alarm box by piercing the cable with a sharp metallic object, then he will short the third wire and this will trip the alarm.

The unit is readily interchangeable from one handbag to another. Perhaps the most important feature of the unit is the fact that the cord running from the wrist into the bag, although not so conspicuous as to be ugly, is sufficiently conspicuous as to be noticed by a potential thief. The device will, therefore, serve effectively as a deterrent.

While the system has been described with particular reference to the illustrated embodiment, numerous modifications thereto will appear to those skilled in the art. For example, if a woman makes a practice of keeping most of her money in a handbag, a pick-pocket could remove the wallet from the handbag without her tripping the alarm. In this case, an extra chain and pin can be attached to the device running from the flexible cord on the wrist side to the wallet. Thus, if the wallet was snatched from the handbag, the plug would be disconnected and the alarm would sound.

Also, instead of using an SCR as the triggering switch device, other circuits may be employed which draw no significant current from the battery. For example, a circuit using field effect transistors may be employed. Preferably any such circuit should utilize high impedance, semi-conductive components.

Having thus described the invention what I claim and desire to obtain by Letters Patent of the United States is:

1. An alarm for purses and the like, comprising

a. a transferable housing,

b. detachable connecting means attached to said housing for securing said housing to said purse,

c. an electrically conductive flexible cord having at least three leads connected at one end to said housing and at the other end being formed with a fixed closed loop.

d. at least a portion of said core being detachable from said housing,

e. an alarm, a battery and a normally armed switching circuit including a transistor mounted in said housing and electrically connected to said cord and normally providing a small and continuous flow of current through said cord,

f. current control means including a silicon controlled rectifier connected to said alarm, said battery, and to said transistor in said circuit whereby disconnection of said cord will actuate said circuit to thereby cause said rectifier to conduct current through said alarm,

g. said housing being formed with a restricted opening therein and a normally closed reset switch mounted recessed within said housing in registration with said opening,

h. a pair of said leads in said cord normally completing a circuit between one side of said battery, the base of said transistor and the cathode of said rectifier, a third lead in said cord being connected to the collector of said transistor and the gate of said rectifier whereby a short circuit between said third lead and one of said leads in said pair of leads will bias said rectifier into a conducting state.

2. An alarm according to claim **1** including a male and female plug connected to said cord.

3. An alarm according to claim **1** wherein said connecting means includes a safety pin.

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