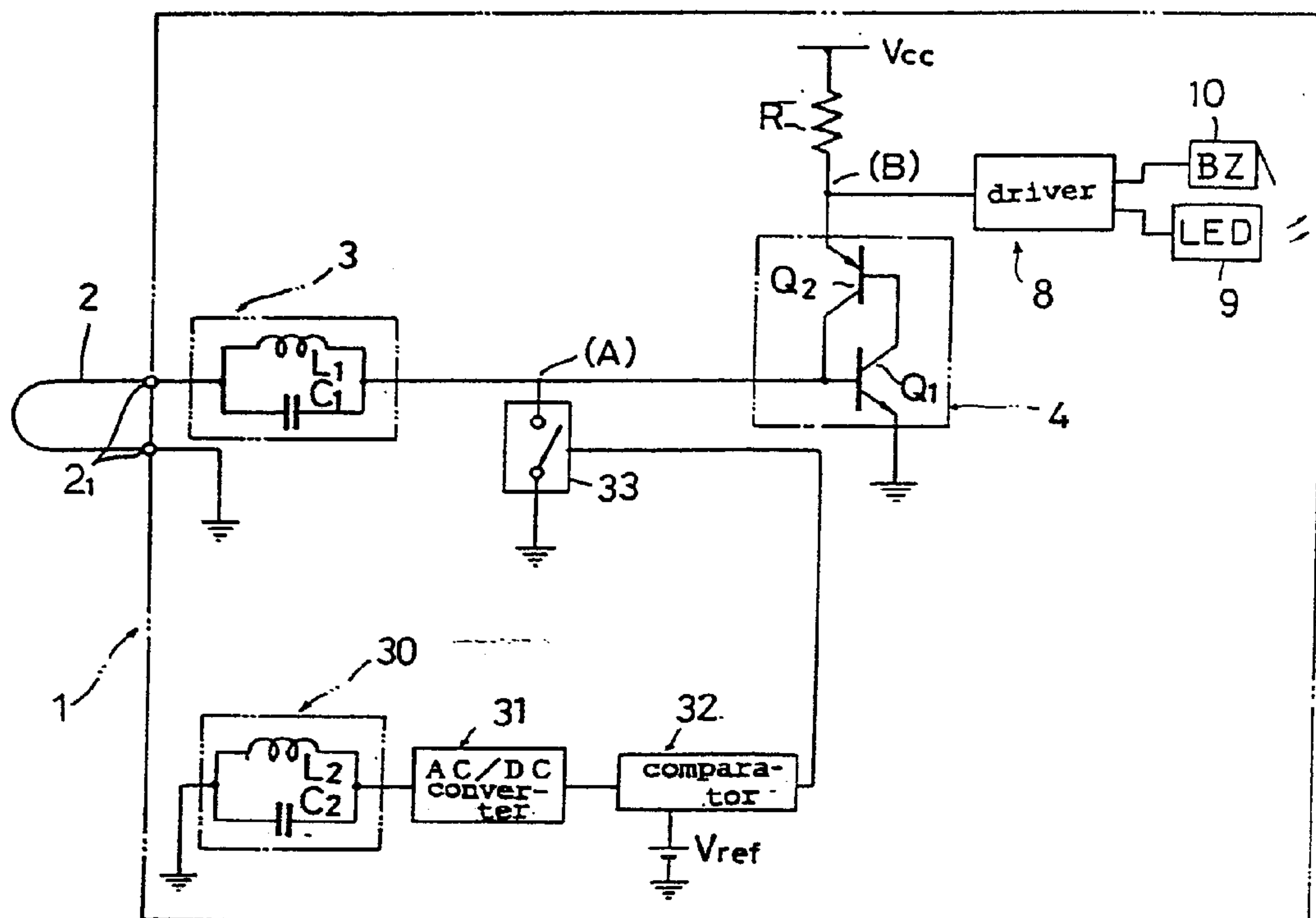




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(72) Takeda, Harumi, JP
(73) TAKEDA Technological Research Co., Ltd., JP
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(54) **ETIQUETTE ANTIVOL**
(54) **SELF-SOUNDING TAG ALARM**



(57) A self-sounding tag alarm apparatus having a tag type main body attached to a commodity and automatically operable to sound an alarm when an attempt is made to steal the commodity. The apparatus includes a coupling such as a wire, pin or the like for detachably attaching the main apparatus body to the commodity, an alarm generator mounted in the main apparatus body, a detector for detecting a signal of a particular frequency produced externally of the main apparatus body and removal of the coupling, a reset signal intake device for taking into the main apparatus body a reset signal applied externally of the main apparatus body, and an alarm control device for rendering the alarm generator operative based on a detection signal received from the detector, and rendering the alarm generator inoperative based on the reset signal received from the reset signal intake device.



ABSTRACT OF THE DISCLOSURE

A self-sounding tag alarm apparatus having a tag type main body attached to a commodity and automatically operable to sound an alarm when an attempt is made to steal the commodity. The apparatus includes a coupling such as a wire, pin or the like for detachably attaching the main apparatus body to the commodity, an alarm generator mounted in the main apparatus body, a detector for detecting a signal of a particular frequency produced externally of the main apparatus body and removal of the coupling, a reset signal intake device for taking into the main apparatus body a reset signal applied externally of the main apparatus body, and an alarm control device for rendering the alarm generator operative based on a detection signal received from the detector, and rendering the alarm generator inoperative based on the reset signal received from the reset signal intake device.

SELF-SOUNDING TAG ALARM

BACKGROUND OF THE INVENTION

(1) Field of the Invention

The present invention relates to an alarm apparatus for use in a shoplift preventive system or the like. More particularly, the invention relates to a self-sounding tag alarm apparatus having a tag type body attached to a commodity and automatically operable to sound an alarm when an attempt is made to steal the commodity.

(2) Description of the Related Art

Conventionally, this type of self-sounding tag alarm apparatus is used in a shoplift preventive system employing a detector having a gate (antenna) of the electromagnetic induction coupling type or the like.

In the shoplift preventive system, the self-sounding tag alarm apparatus is attached to a commodity, e.g. an article of clothing, by means of a wire, pin, adhesive tape or the like, and placed in a salesroom. When a shoplifter, in an attempt to take the commodity without paying, passes through a gate adjacent a cashier's counter, the self-sounding tag alarm apparatus attached to the commodity receives an electromagnetic wave of a particular frequency from the gate.

Then, the alarm apparatus resonates with the electro-magnetic wave, and sounds an alarm. If a shoplifter removes the self-sounding tag alarm apparatus from the commodity before walking off with the commodity, the
5 alarm apparatus detects detachment of the wire or the like and gives an alarm.

In a proper shopping action, a cashier removes the self-sounding tag alarm apparatus from the commodity after canceling the detecting mechanism of the alarm
10 apparatus. Thus, no alarm is given in this case. This canceling operation is carried out mechanically with an alarm cancel key or a special jig.

The conventional alarm apparatus constructed as described above has the following disadvantage.

15 In the conventional apparatus, the mechanically operable alarm cancel key is inserted into a keyhole, or the special jig is fitted, to cancel the alarm by mechanically stopping the internal detecting mechanism. This alarm canceling operation is very troublesome, and
20 tends to retard an accounting process.

SUMMARY OF THE INVENTION

The present invention has been made having regard to the state of the art noted above, and its object is to provide a self-sounding tag alarm apparatus which

facilitates an alarm canceling operation to present no obstruction to an accounting process.

The above object is fulfilled, according to the present invention, by a self-sounding tag alarm apparatus for use on a commodity to prevent shoplifting, the apparatus comprising: a main housing; coupling means for detachably attaching the main housing to the commodity; alarm generating means mounted in said main housing for generating an alarm; detecting means for detecting at least one of a signal of a particular frequency produced externally of said main housing and removal of said coupling means; reset signal input means on said main housing for having a reset signal applied thereto, said reset signal being provided externally of said main housing, said reset signal input means including a resonator circuit for detecting an electromagnetic wave of a predetermined frequency, said electromagnetic wave of a predetermined frequency being different from the signal of a particular frequency produced externally of said main housing, and a comparator, said comparator being enabled when an output of said resonator circuit exceeds a predetermined level; and reset signal generating means for generating the electromagnetic wave of a predetermined frequency, said electromagnetic wave of a predetermined frequency being a reset signal, said reset signal generating means including an oscillator coil disposed in a flat housing.

According to the present invention, when a shoplifter attempts to walk off with a commodity with the main apparatus body attached thereto, the detecting means in the main apparatus body detects the signal of

