

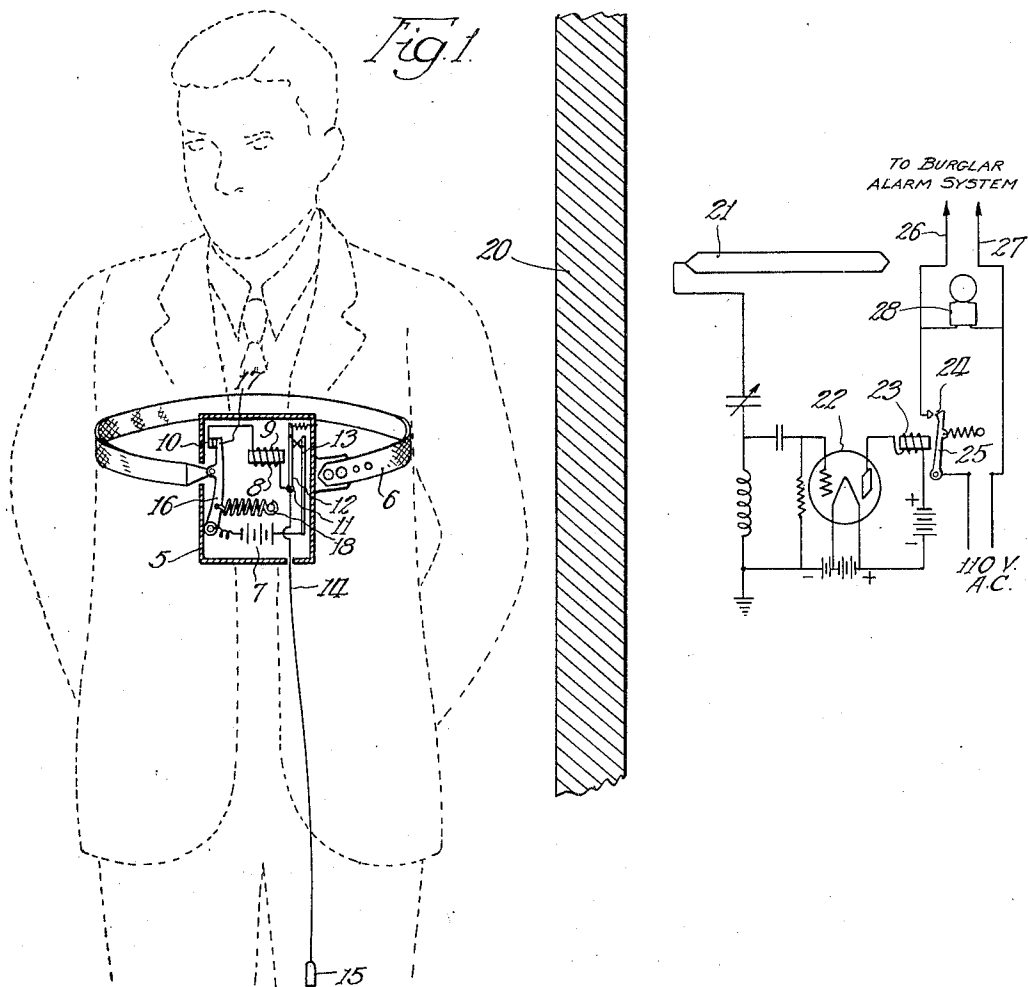
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HOLD-UP ALARM

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HOLD-UP ALARM

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1 Claim. (Cl. 177—314)

My invention relates to holdup alarm devices and has for its principal object the provision of a device of this character which is adapted to be mounted upon the human body and made available upon the need therefor wherever the individual may go in carrying out his duties.

It is the principal purpose of this invention to provide a device of this character which is capable of giving a signal to stationary receiving device within the near vicinity by movement of the individual that cannot be detected by another person in close proximity to the individual carrying the alarm device.

More particularly it is a purpose of this invention to provide a signal emitting device which can be readily attached to the body of the individual and concealed about the clothing which signal device can be readily operated by the individual upon an abnormal movement of some portion of the body.

In its preferred form the invention contemplates providing means whereby an abnormal exaggeration of a normal body movement such as breathing may be caused to actuate the alarm device. The invention contemplates in its scope any such abnormal body movement as may be accomplished without exciting the suspicion of a holdup man and naturally it may include abnormal body expansion or contraction.

I will describe the preferred form of the invention by reference to the accompanying drawing wherein—

Fig. 1 is a somewhat diagrammatic view illustrating the device as applied to the human body; and a receiving apparatus for picking up oscillations transmitted from the equipment carried by the human body.

Referring now in detail to the drawing, the device is illustrated as consisting of a signal box 5 which is preferably attached to the human body by means of a belt or strap 6 which is fastened around the body beneath the outer clothing so that the signal device may be completely concealed, for example, underneath the shirt of the man wearing it. The strap 6 must, of course, be adjustable in length so that the device may be neatly fitted around the body in order that normal breathing will not actuate it.

The box 5 may be made thin and flat as the mechanism therein can be made quite small and still retain sufficient power to perform its function. The box contains a small battery 7 which may be made up of the small flat cells that are now available commercially. In addition a relay 8 is mounted in the box, one end of the relay

coil 9 being connected to the contact 10 and the other end thereof being connected to the terminal 11. This terminal 11 is connected to the armature 12 opposite the stationary contact 13 and is also connected to the antenna wire 14 which extends through the box 5 and hangs downwardly beneath the clothing of the individual, preferably between the under garments and outer garments. A small weight 15 may be attached to the lower end of this wire.

It is evident of course, that if a circuit is closed through the relay coil 9, it will attract its armature 12 and break contact between the stationary contact element 13 and the armature 12. Contact element 13 is connected to one side of the battery 7 and the other side of the battery is connected to the lever 16 which is pivoted in the casing 5 and carries a contact 17 for engagement with the contact 10. The spring 18 normally holds the contacts 17 and 10 separated and the belt 6 is so adjusted that normal breathing operation does not pull the lever 16 enough to bring the contacts 10 and 17 together. However, by expanding just slightly more than is normal, the individual may close the contacts 10 and 17.

When the contacts 10 and 17 are closed, the signal device is put in operation. A circuit is established through the coil 9 of relay 8 over the following path: from one side of the battery 7, through lever 16, contacts 10 and 17, coil 9, terminal 11, armature 12, and stationary contact 13 to other side of the battery. This circuit when established, causes the relay to attract its armature 12 and break the circuit at the stationary contact 13. Then, of course, the relay being deenergized, armature 12 will be retracted and again engage 13 to again complete the circuit. Thus an interrupter circuit is established and results in alternate energizing and deenergizing of the relay coil 9 causing in effect the supplying of waves of energy to the antenna 14. Antenna 14 is connected to the terminal 11 and therefore to that end of the coil 9 opposite its connection to the battery.

I have found that by connecting the antenna 14 at this particular point, I am able to obtain quite a strong radiation of energy from the antenna which can be picked up by an ordinary receiving circuit a short distance away. I have shown at 20 a representation of a wall and on the opposite side of this wall from the mechanism just described, I have illustrated a conventional receiving antenna 21 and a rectifier or detector tube 22 adapted to amplify the signals received by

the antenna 21 and pass them through the coil of the relay 23.

5 The receiving circuit is tuned to the wave length being sent out by the antenna 14 and the receiving circuit may of course by such tuning and proper construction be protected against operation by stray signals or disturbances.

10 The relay 23 is preferably constructed with a retarding means so that sudden discharge would not cause it to close the contacts at 24 by attracting its armature 25. However, upon receiving the sustained oscillations from the signal unit, the relay 23 does attract its armature and does close a circuit connecting power to the burglar
15 alarm system in the building where the individual is working. I have indicated at 26 and 27 the leads to the burglar alarm system and at 28 I have indicated a buzzer or bell which is the simplest form of alarm giving device. The structure of the burglar alarm system is not shown here as it forms no part of the present invention and it is obvious that the present invention may be applied to any existing alarm system that is adapted to be actuated by opening or closing an
20 electrical circuit.

25 The chief advantage of my invention lies in the fact that it places the burglar alarm system within the reach of the individual without it being necessary for him to make a movement which a holdup man can detect. It is therefore not necessary with this device to press a button with the
30 foot or to even move the hands or make any

other movement that would excite suspicion. Furthermore, if the individuals being held up are caused to lie down or are herded into a group by the robbers, the alarm can readily be given by any one of the individuals wearing this device
5 without the robbers becoming aware of this fact.

The oscillation generating device within the box 5 is made practically noiseless so that no sound will indicate to the robber that an alarm
10 has been given.

From the above description, it is believed that the construction and operation of this device will be clear to those skilled in this art and the advantages thereof readily apparent. It is also believed to be obvious that various modifications
15 may be made in the details of the apparatus without departing from the scope of the invention.

Having thus described my invention what I claim as new and desire to secure by Letters Pat-
20 ent is:

In a holdup alarm device, an oscillation generating device adapted to generate oscillations capable of being picked up by a stationary receiving apparatus out of reach of the operator of
25 the generating device, and means for mounting said device in completely concealed position upon the operator's body, including means for actuating said device upon abnormal expansion of the body of the operator.

HARRY O. RUGH.