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(54) Warning device

(57) A warning device consists of a transmitting device (not shown) operable by means of a switch (not shown) and a receiving device 16 adapted to be mounted on a person's body, the receiving device including an actuator 24 disposed in contact with the person's skin, the actuator being arranged to vibrate and attract the person's attention when the receiving device receives a signal from the transmitting device. The signal may be an electromagnetic signal or a sonic or ultrasonic signal.

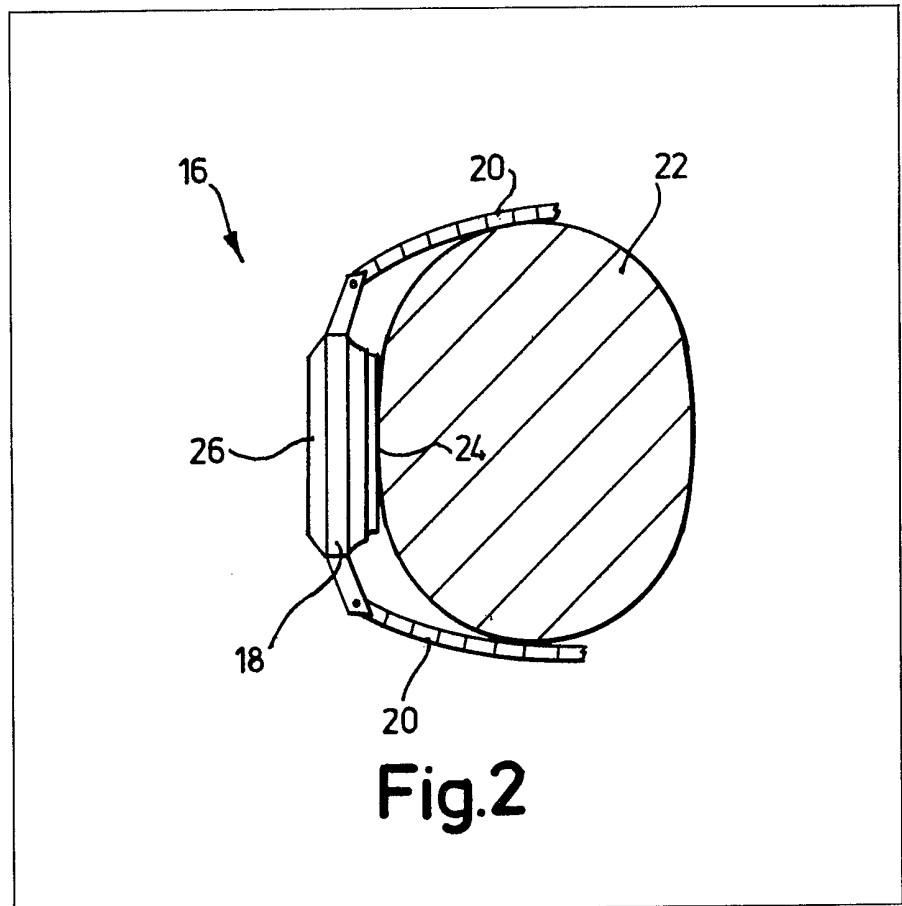


Fig.2

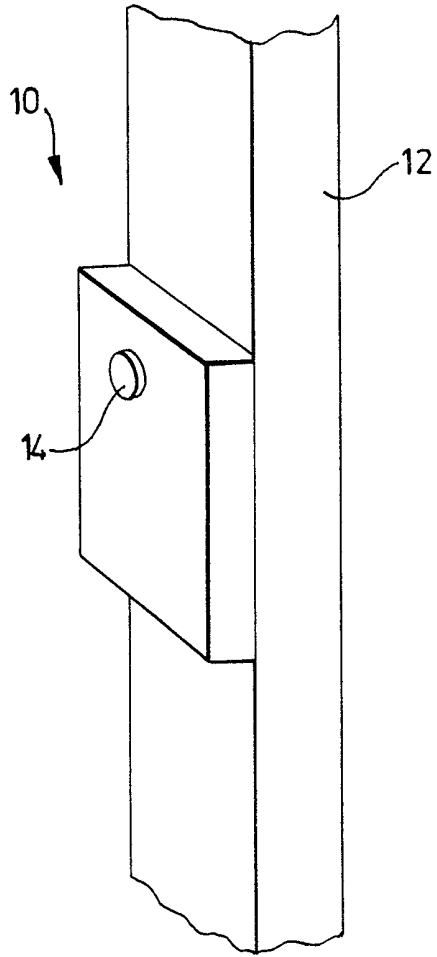


Fig.1.

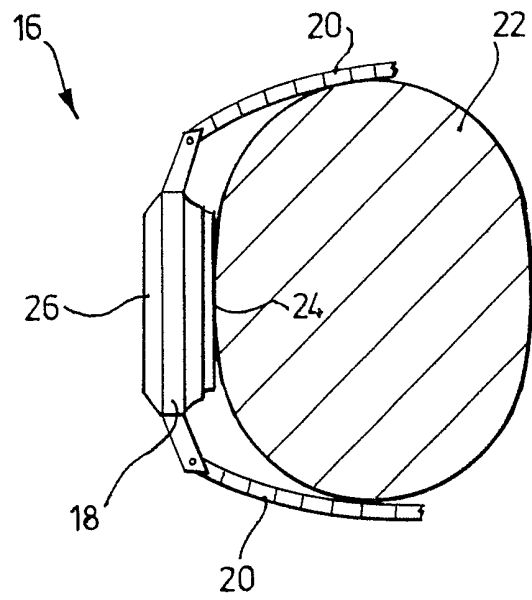


Fig.2

SPECIFICATION

An improved warning device

5 This invention relates to a warning device and more particularly, but not exclusively, to a device for attracting the attention of a person who is deaf or partially deaf.

10 Previously, devices for attracting the attention of a person who suffers from a hearing defect have relied upon utilising the visual senses of the person. Such devices have taken the form of equipping the persons house with a flashing light in one or more rooms which is actuated by, for example, a door bell
15 switch at the external door of the house, so that when the switch is actuated the light commences to flash and draws attention to the presence of someone at the door who is waiting to be admitted. Such flashing light warning devices may also be connected to other actuating switches such as a fire alarm or the like. However, this known type of warning device suffers from the disadvantages that it is necessary to provide a light in every room of a house, which makes it necessary to carry out
20 extensive electrical wiring, and also, as a persons visual senses are directional, unless the light is within the persons range of vision, even if the light is in the same room as the person, it may still not attract attention. The object of this invention is therefore to provide a warning device which does not suffer from the above disadvantages of the known type of device.

According to this invention, a warning device comprises a transmitting device, switch means to
35 effect operation of the transmitting device and a receiving device capable of being mounted on or attached to a persons body which on receipt of a signal from the transmitting device is adapted to attract the persons attention by stimulation of the persons tactile senses.

40 Preferably, the transmitting device comprises a transmitter for transmitting a signal of electro-magnetic radiation on conventional radio wavelengths such as VHF or UHF or, alternatively, the device may comprise a transmitter for transmitting a sound wave signal on audible wavelengths or ultrasonic wavelengths.

45 Preferably, also, the receiving device comprises a receiver for receiving an electromagnetic radiation or sound wave signal and an actuator for producing a vibration on receipt of a signal by the receiver. The actuator, preferably, comprises an audio or mechanical vibrator such as an electrically-operated vibrating diaphragm.

50 Preferably, the receiving device is provided with a strap arrangement to enable the device to be secured to a persons wrist and the actuator is formed on the portion of the surface of the device which is in contact with the persons skin. Preferably,
55 also, the receiving device is provided with a light emitting device which is energised on receipt of a signal by the receiver from the transmitting device.

A preferred embodiment of this invention will now be described, by way of example only, with reference to the accompanying drawings of which:-

Figure 1 is a diagrammatic perspective view of a transmitting device mounted on a door jamb; and *Figure 2* is a diagrammatic side elevation of a receiving device.

70 Referring now to the drawings, a warning device which is particularly suitable for attracting the attention of a person who is deaf or partially deaf comprises a transmitting device indicated generally at 10 which is adapted to be mounted on a door jamb
75 12 adjacent to an external door providing entry to a house. The transmitting device 10 is provided with a manually operable switch 14 by means of which the transmitting device is energised and a transmitter (not shown) contained therein emits a signal of electro-magnetic radiation on a conventional radio wavelength such as VHF or UHF. Alternatively, the transmitter in the device 10 can be arranged to emit a sound wave signal on either an audible wavelength or an ultrasonic wavelength.

80 The warning device also comprises a receiving device indicated generally at 16 and the receiving device comprises a casing 18 provided with a wrist strap 20 by means of which the casing is attached to a persons wrist 22 in the same manner as a wrist watch. The casing 18 has a receiver (not shown) mounted therein which is adapted to receive the signal emitted by the transmitting device 10 over a predetermined limited range which is adjusted so as to be adequate for the receiver to be operated no matter where the person is positioned in the house.
85 On receipt of the signal from the transmitting device 10, the receiver actuates a mechanical vibrator in the form of an electrically operated vibrating diaphragm 24 which is positioned on the rear surface of the casing 18 and is in contact with the persons wrist 22 when the receiving device 16 is strapped thereon. The vibrator of the diaphragm 24 thus stimulates the persons tactile sense and draws attention to the fact that the transmitting device 10 has been operated.

90 The receiving device 16 is also provided with a transparent front cover 26 on the casing 18 and beneath this cover 26 there is mounted the display unit of either an electronic or mechanical time piece so that the receiving device can perform a dual function. In addition, a light emitting device such as a bulb (not shown) is mounted beneath the cover 26 and is arranged to be energised when the receiving device 16 is actuated to also provide a visual indication that the transmitting device 10 has been actuated. This visual indication is of particular usefulness if for any reason the receiving device 16 has been removed from the persons wrist 22.

95 It will be appreciated that the receiving device 16 can be incorporated into other types of articles normally worn by a person such as a pendant or locket and the transmitting device can be incorporated into and actuated by other warning systems such as a fire alarm or a burglar alarm system without departing from the scope of this invention.

100 In addition, although the warning device is particularly suitable for installation in the home of and for use by a person who is deaf or partially deaf, it could be used by persons who do not have defective hearing.

CLAIMS

1. A warning device comprising a transmitting device, switch means to effect operation of the transmitting device and a receiving device capable of being mounted on or attached to a persons body which on receipt of a signal from the transmitting device is adapted to attract the persons attention by stimulation of the persons tactile senses.
2. A warning device according to Claim 1, wherein the transmitting device comprises a transmitter for transmitting a signal of electromagnetic radiation on conventional radio wavelengths.
3. A warning device according to Claim 1, wherein the transmitting device comprises a transmitter for transmitting a sound wave signal on audible wavelengths or ultrasonic wavelengths.
4. A warning device according to any one of the preceding claims, wherein the receiving device comprises a receiver for receiving an electromagnetic radiation or sound wave signal and an actuator for producing a vibration on receipt of a signal by the receiver.
5. A warning device according to Claim 4, wherein the actuator comprises an audio or mechanical vibrator.
6. A warning device according to Claim 5, wherein the audio or mechanical vibrator comprises an electrically-operated vibrating diaphragm.
7. A warning device according to any one of Claims 4 to 6, wherein the receiving device is provided with a strap arrangement to enable the device to be secured to a persons wrist and the actuator is formed on the portion of the surface of the device which is in contact with the persons skin.
8. A warning device according to any one of the preceding claims, wherein the receiving device is provided with a light emitting device which is energised on receipt of a signal by the receiver from the transmitting device.
9. A warning device, constructed, arranged and adapted to operate substantially as hereinbefore described with reference to, and as illustrated by, the accompanying drawings.