Nov. 23, 1943. N. S. BRIGHT 2,335,039

AUTOMATIC ALARM DEVICE

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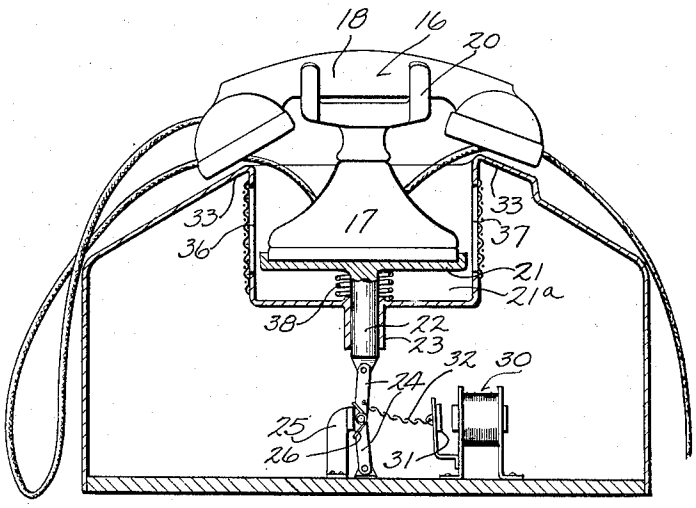


Fig. 1.

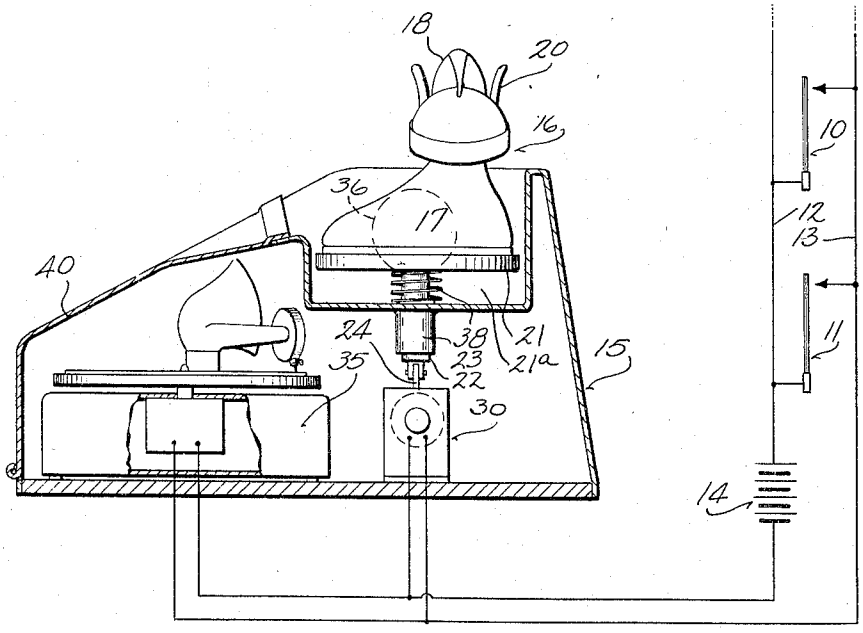


Fig. 2.

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AUTOMATIC ALARM DEVICE

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9 Claims. (Cl. 179—5)

My invention relates to improvements in automatic alarm devices.

The primary object of my invention is to so connect and so mount an ordinary conventional telephone in an alarm system that the telephone will be in condition for instantaneous transmittal of an alarm message.

Another object of my invention is to provide facilities for normal telephone use and still assure the establishment of the telephone in position for alarm purposes, necessitating nothing more than a release mechanism to permit gravity to motivate the telephone mechanism.

In the drawing:

Figure 1 is a vertical section through my telephone stand and gravity telephone pedestal, the telephone instrument thereon being in front elevation.

Figure 2 is a section on line 2—2 of Figure 1, with a wiring diagram of a conventional electric fire alarm system connected to my sound device shown in my telephone stand.

Like parts are designated by the same reference characters throughout the several views.

In my automatic alarm device any form of alarm circuit may be used to establish an electric impulse in an electric circuit to initiate the alarm. In the drawing a typical thermostatically controlled fire alarm circuit is shown, although it will be obvious from the following description that a burglar alarm or any other form of signalling system may be used to set my "sound effect" alarm and telephone set in operation. In Figure 2 I show, diagrammatically, spaced bimetal thermally responsive elements 10 and 11, each disposed to close a circuit including wires 12 and 13. These wires are the main leads for a circuit including a source of electric current at 14. Thermostats 10 and 11 may be placed strategically to be influenced by excessive heat indicating a conflagration, and when the circuit 12—13—14 is closed my alarm device is given sufficient current to institute and maintain its operation.

My alarm device is housed as shown at 15 to provide a telephone stand for a conventional telephone instrument 16 having a base 17, transmitter and ear phone or handset 18, the characteristic equipment including a master switch, not shown, which is closed to complete the telephone circuit when the handset 18 or "receiver" is lifted a short distance in its cradle or hook 20.

It will be noted as an important part of my invention that I have shaped my telephone stand 15 so that there is no other surface to securely receive the telephone instrument over than platform 21 in pocket 21a formed in the upper surface of the stand. All other surfaces are curved and inclined to prevent careless misplacement of the telephone instrument.

The platform 21 is supported on a pedestal or stem 22 extending through a vertical bearing 23, and the stem 22 is in turn supported on a toggle 24 which, when in the position shown in Figure 1, against the stop post 25, firmly supports the telephone instrument sufficiently high above any portion of the stand that the handset or receiver will be firmly in position in the cradle 20 with the master switch open.

At 26 I provide a light spring connected to and biased with respect to the toggle to urge it to the position shown in Figure 1, but only with sufficient strength to resist displacement from ordinary jostling of the stand 15.

30 is an electro-magnet in the main circuit 12—13 with a spring mounted armature 31 connected by a chain 32 to the toggle (see Figure 1). When one of the thermostats closes the circuit 12—13 the armature is pulled to the magnet, the chain pulls the toggle "over center" and gravity drops the platform 21 and instrument 16. The shape of the stand at 33 is such, however, that the handset or receiver 18 is supported by the stand and the master switch of the telephone is closed, thus placing the telephone 16 in communication with the general telephone circuit.

Within the stand 15 I mount any form of phonograph instrument or other "sound effect" device 35 to be energized and motivated by the current in circuit 12—13—14, thus causing any alarm sound effect to emanate from the stand 15, and I provide screened openings at 36 and 37 to pass the sound effect to the telephone handset 18 which will transmit the alarm to the telephone operator, or anyone available on the telephone circuit.

Thus I provide a reliable signalling or alarm device, the phone being always in position to take the alarm and gravity being the force resorted to to place the phone in operative condition to transmit the "message." The phonograph record may call for "help" or it may give complete directions as to location and means of access to the building when its phone is located.

Beneath the pedestal I provide a spring 38 sufficiently strong to support the platform and the parts which move with it provided the telephone instrument is not on the platform, therefore, when the instrument is removed the parts will assume the position shown in Figure 1. The

toggle spring 26 is biased to tilt the toggle against post 25. The entire device therefore "resets" itself so that removal and replacement of the telephone instrument on the platform is all that is required to prepare the signal device for another signalling or alarm operation. The phonograph is easily accessible through hinged cover 40 for an exchange of records or resetting of the phonograph needle.

I claim:

1. A signalling device including a sound effect producing unit and an adjacent telephone instrument supporting device, a release mechanism forming part of said supporting device and positioned when in releasing position to permit the instrument to lower by gravity, a handset for the instrument and a member in fixed position to support the handset when the telephone is lowered, and an electric circuit with electric responsive devices positioned to substantially simultaneously energize the unit and the release mechanism.

2. In a device of the character described, a telephone stand contoured to provide a single restricted platform for a telephone instrument and a fixed member adjacent thereto in position to support a switch operating portion of the instrument, a pedestal beneath the platform, said pedestal being provided with a toggle support, and an electric motive element connected to the toggle whereby upon motivation thereof to withdraw the toggle and permit the platform to drop and leave the switch operation portion in supported switch closing position and place the instrument in operation, and a telephone on the platform provided with a switch and switching operating portion.

3. In an alarm device for use with a conventional telephone instrument having a base provided with a cradle and master switch and a hand set with a mouthpiece and receiver and adapted to rest in the cradle to hold such switch open; said device comprising the combination with a downwardly yieldable support for the instrument base, and releasable means normally carrying said support against downward yielding movement, of relatively fixed supports disposed at opposite sides of the yieldable support and positioned to be beneath the handset mouthpiece and receiver and normally in closely vertically spaced relation thereto, whereby the hand set is usable in a normal way and unimpeded but is held up by said relatively fixed supports to permit the opening of the master switch when said yieldable support yields downwardly to lower the base, upon release of said means.

4. The structure of claim 3 wherein the relatively fixed support for the mouthpiece comprises a housing and is provided with phonographic alarm means in operative proximity to the position of the mouthpiece when the yieldable support yields.

5. The structure of claim 3 wherein a housing surrounds the releasable means and provides the relatively fixed supports and has guide means for the relatively yieldable support. together with phonographic alarm means in the housing with a speaker in operative proximity to the position of the mouthpiece on its fixed support, and an alarm system comprising an actuator for the release of said means and a control for said phonographic means.

6. An alarm device for use with a conventional telephone instrument having a base and a hand set with mouthpiece and receiver portions; said device comprising separate supports for the base and the hand set so offset vertically that only the base normally rests on its support, the hand set support being slightly below the hand set as normally carried by the base and the hand set being unencumbered in position for normal use, means mounting at least one of said supports for vertical movement relative to the other in a direction such as to engage the hand set upon its support to lift it from the base, and means controlling such relative movement.

7. The device of claim 6 in which the relatively movable support is biased for movement in said direction and the control means comprises a stop normally opposing such movement and mechanism including an electromagnet for retracting said stop to permit such movement.

8. The device of claim 6 in which the support for the hand set comprises relatively spaced parts interconnected about the support for the base and positioned to engage the mouthpiece and receiver portions of the hand set individually.

9. The device of claim 6 in which the support for the hand set comprises a housing having parts engageable individually with the mouthpiece and receiver portions of the hand set and spaced at opposite side of the base-support, said housing comprising a phonograph wholly free of the telephone instrument and having a speaker portion in operative proximity to the part of the hand set support upon which the mouthpiece is engaged, whereby to be adapted to deliver a message to the hand set mouthpiece when the hand set is raised from the base, said phonograph having means controlling its operation and connected to the means controlling relative movement of said supports, whereby said phonograph operation and the lifting of said hand set are concurrently effected.

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