June 18, 1929. O. TEEL 1,717,529

THERMOSTATIC CIRCUIT CLOSER

Filed April 23, 1925

Fig. 2

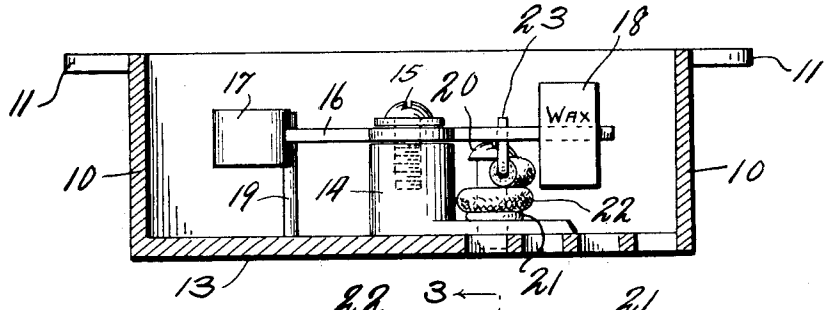


Fig. 1

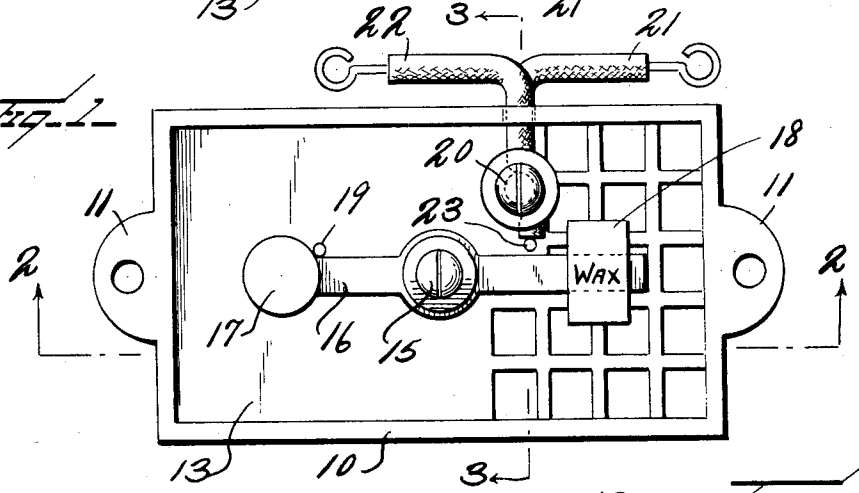


Fig. 4

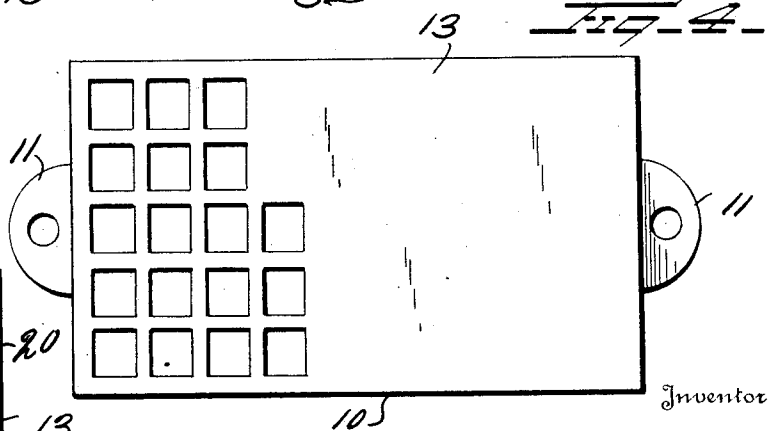
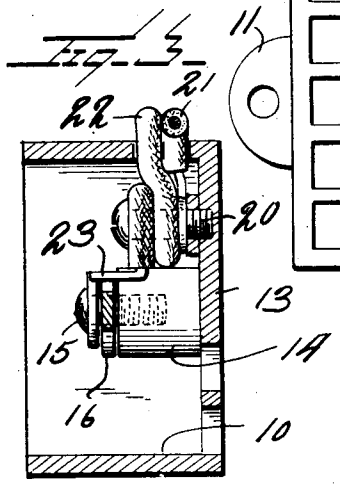


Fig. 3



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UNITED STATES PATENT OFFICE.

OD TEEL, OF ECHO, OREGON.

THERMOSTATIC CIRCUIT CLOSER.

Application filed April 23, 1925. Serial No. 25,318.

This invention relates to thermostatic circuit closers, and particularly to a circuit closer rendered operative by heat above a certain predetermined degree and acting to close a circuit through a signal.

The general object of the invention is to provide an attachment which is adapted to be applied in connection with a telehpone circuit, which is of such a nature that in case of fire in the vicinity of the instrument a circuit will be closed through the telephone system in exactly the same manner as if a receiver had been removed from the hook of a regular telephone, thus transmitting an understood signal to the operator, either the operator at a hotel switchboard or an operator in a central station.

A further object is to provide a device of this character which is very simple, which may be readily put in place in connection with a house or room telephone and which includes a fusible weight normally acting to press a contact but which, when melted, permits the contact to shift into a circuit-closing position.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a rear face view of my improved thermostatic alarm;

Figure 2 is a vertical section on the line 2—2 of Figure 1;

Figure 3 is a transverse section on the line 3—3 of Figure 1;

Figure 4 is a face view of the box;

Referring to the drawings, 10 designates a box or casing having ears 11, this box or casing being generally rectangular in plan and preferably open at one end 12 and having at the other end a web or plate 13 which is preferably perforated or grate-like in form.

Projecting inward from the side of the box is a supporting stud 14 interiorly screw-threaded to receive a screw 15, and oscillatably mounted upon this screw 15 is a bar 16 which at one end carries a weight 17. Mounted upon the other end of this bar is a counterbalancing weight 18 which is of wax or other readily fusible material. This fusible weight 18 overbalances the weight 17 so as to cause the right hand side of the arm or bar 16 to be depressed in Figure 1. This raises the permanently weighted end of the lever 16 into contact with a stop pin 19. Also projecting in from the side wall of the casing is a pin 20 preferably having the form of a screw, this being disposed above the arm or lever 16.

Extending into the box are the wires 21 and 22, each of which is formed with an eye at one extremity. The wire 21 adjacent the screw 20 has its insulating covering removed and is engaged with the screw 20 so that this wire is electrically engaged with the case 10 and thus with the screw 15 and the contact arm or lever 16. The wire 22 has a portion of its insulation removed, as shown at 23, this portion being bent over to provide a contacting element with which the metallic arm 16 engages when the wax 18 melts and the rear end of the arm rises. The wires 21 and 22 are of sufficient length to be attached to the posts of the regular telephone and at their extremities attached to the telephone have the insulation removed, as shown.

The wax 18 is of such a composition that it will melt at an abnormal temperature of approximately 140° F. It will be understood now that when there is sufficient temperature to melt the composition weight 18, the weight 17 will descend, thus bringing the contact member 16 into contact with the portion 23 of wire 22, thereby closing the circuit through the telephone system and bringing about a like condition to that when the receiver of the telephone is removed from its hook, thus sending a signal through to central or to the operator at a hotel switchboard, for instance. If central answers this signal and receives no reply, it will be obvious to the operator that this fire alarm mechanism has been actuated and she will then be able to give an alarm.

The device is intended to be used in connection with regular telephones now in use either as a private arrangement, as in the case of hotels, apartment houses and the like where a private central exchange is provided, or in cooperation with a public central exchange where such service may be arranged for. The invention provides a simple and inexpensive device which will function in case of fire in the vicinity of the instrument, thus transmitting a signal to the operator at a central station.

It will be noted that the instrument as described may be used in series on a circuit independently of any telephone for the purpose of actuating a signal bell. Thus, for

instance, an establishment having a number of rooms may provide a circuit with these instruments installed at intervals on the circuit, the circuit extending throughout the entire establishment and there being an electrically operated signal bell in the office in said circuit. I do not wish to be limited, therefore, to the use of this device in connection with a telephone circuit.

While I have illustrated certain details of construction and arrangement of parts which have been found effective in practice, I do not wish to be limited thereto as these might be modified to some extent without departing from the spirit of the invention.

I claim:—

A fire alarm signalling attachment comprising a metallic case open on its rear face and having a boss projecting inwardly, a metallic arm pivotally supported within the case upon said boss and grounded thereto and having at one end a permanent weight and at the opposite end a fusible weight counterbalancing the permanent weight, a stop disposed in the path of movement of the arm and limiting the movement of the arm under the action of the fusible weight, a post projecting inwardly from the front of the case, a conducting wire having electrical engagement with the metallic case and supported by the post, and a second conducting wire entering the case and extending around the post and supported thereby but insulated therefrom and having a portion thereof bared and disposed in the path of movement of the arm when the arm is shifted under the action of the permanent weight to thereby close the circuit through the two wires.

In testimony whereof I hereunto affix my signature.

OD TEEL.