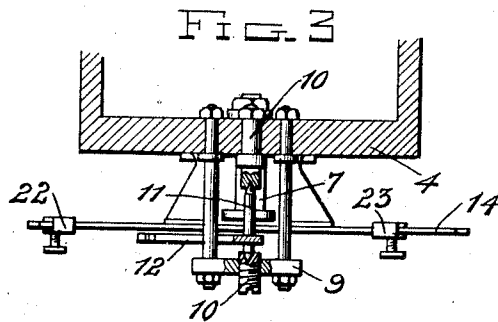
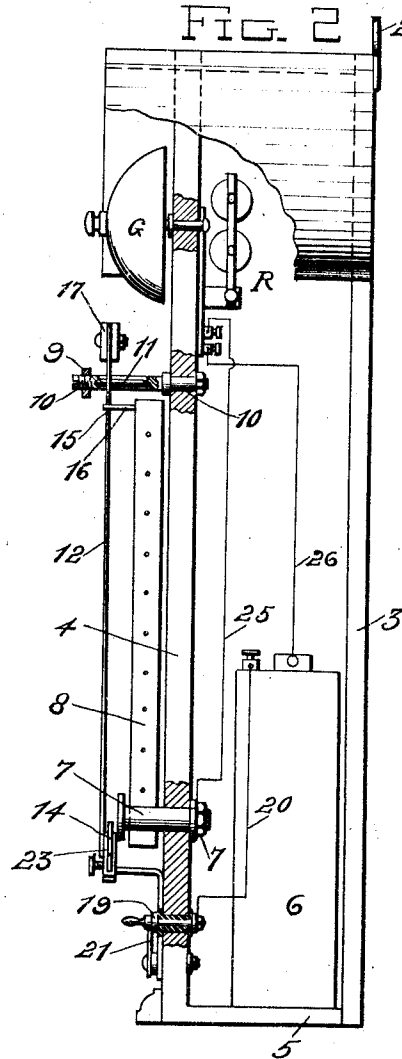
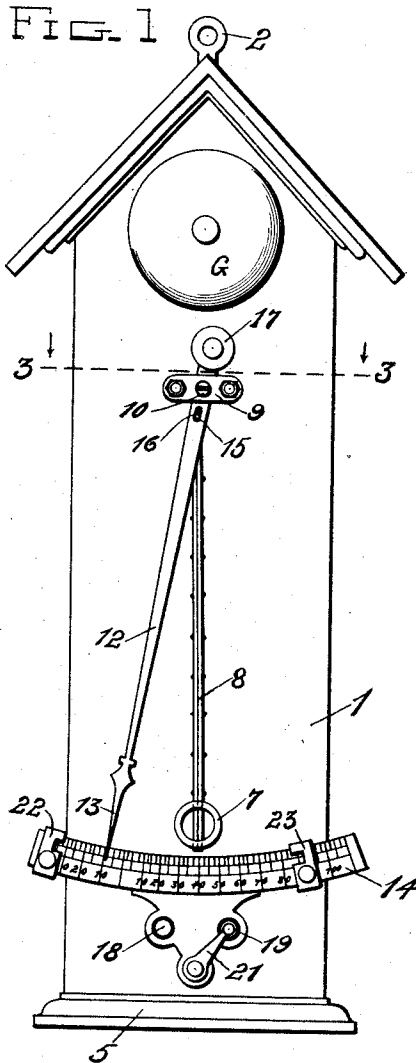


R. HEDDLE.
ELECTRICAL ALARM THERMOMETER.
APPLICATION FILED JUNE 21, 1909.

983,443.

Patented Feb. 7, 1911.



Witnesses
W. H. H. H. H.
C. H. Griesbauer.

Inventor
R. HEDDLE
by *A. B. Wilson & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

ROBERT HEDDLE, OF NELSON, BRITISH COLUMBIA, CANADA.

ELECTRICAL ALARM-THERMOMETER.

983,443.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed June 21, 1909. Serial No. 503,499.

To all whom it may concern:

Be it known that I, ROBERT HEDDLE, a subject of the King of Great Britain, residing at Nelson, British Columbia, Canada, have invented certain new and useful Improvements in Electrical Alarm-Thermometers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to thermometers and particularly to electrical alarm thermometers.

The object of the invention is to provide a unitary structure which may be transported from place to place without breaking any connections or making any adjustments and which will act at certain predetermined temperatures to give an alarm.

A still further object of the invention is the provision of means whereby a thermometer alarm may be adjusted to act at different temperatures of heat or cold. For instance, if it is desired to keep a room within certain degrees of temperature, the device may be set so that when either one of the extremes of heat or cold is reached on the limit set, an alarm will be given to notify the occupants of the room of the temperature condition of atmosphere therein.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claim.

In the drawings, Figure 1 is a front elevation of the device; Fig. 2 is a side elevation thereof with the casing removed so as to clearly show the inner portion of the thermometer, parts being shown in section; and Fig. 3 is a horizontal sectional view taken on the line 3—3 of Fig. 1.

Referring more especially to the drawing, 1 represents a suitable casing which is adapted to be suspended upon a wall or other suitable support by an eye piece 2 secured to the upper rear end of the casing. The interior portion of the casing as defined by the back 3, front 4 and bottom 5, is occupied by the battery 6 which rests upon the bottom and by the magnet coils of the ringer R. The gong post of this ringer projects through the front plate 4 of the casing and has a gong plate G secured thereto.

Passing through the front plate adjacent its bottom, is a slotted screw bolt 7, adapted to receive the thermostat 8, which in this instance is shown to be a pair of metallic bars riveted together, which have different coefficients of expansion. Under normal conditions or with the thermostat subjected to medium temperatures, it remains in the vertical position parallel with the side edges of the front plate 4.

Immediately above the upper end of the thermostat, there is secured to the front plate 4, a pivoting frame 9, which is provided with a pair of cupped adjusting screws 10, upon which the indicator pivot 11, is carried. This indicator extends downwardly in front of the thermostat 8, and has its pointed end 13, adapted to travel over a graduated scale 14, which is perfectly insulated so as to prevent electrical connection between the same and the indicator 12. In the upper portion of the indicator, immediately below its pivotal section, there is provided a slot 15, adapted to be engaged by a laterally extending pin 16, carried upon the upper end of the thermostat and immediately above the pivotal section of the indicator, is provided a balance weight 17.

The lower end of the graduated scale 14, is secured to the front plate 4 by screws 18 and 19, the latter of which forms a terminal for the conductor 20, from one pole of the battery 6 and is adapted to engage the exposed metallic portion of the scale and thereby forms electrical communication with their upper contacting portions. The screws 18 and 19, are of course insulated from the scale 14, and current only flows to the scale when the switch 21, which is in electrical contact with the scale is resting upon the terminal screw 19, which is connected, as shown, by way of conductor 20 to the battery. One terminal of the ringer is connected to the set screw 7, by way of wire 25 and the opposite ringer terminal is connected to the battery by wire 26. When the switch arm 21, is in engagement with the contact screw 19, and the indicator hand 12, is in contact with one of the slidable contacts 22 or 23, the circuit from battery is as follows: wire 20, screw 19, scale 14, either contact 22 or 23, indicator finger 12, thermostat 8, screw 7, to the ringer R, over the conductor 25, and back to battery over wire 26. Thus the ringer is caused to operate to indi-

cate that the temperature of the room is either too cold or too warm.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Having thus described my invention, what I claim is:—

- 10 An electrical alarm thermometer comprising a casing with a graduated insulated scale provided with adjustable sliding contacts thereon, a thermostat comprising a plurality of bars secured together, said bars having
15 different coefficients of expansion, a pin laterally extended from said thermostat, a slotted screw bolt secured to the casing to support the lower end of the thermostat, a frame

having an indicator provided with a pointed end which is adapted to engage either of the sliding contacts when the thermostat is operated, said indicator having an elongated slot near the upper end adapted to be engaged by the laterally extended pin, a battery carried by said casing, a ringer also carried by the casing having electrical connection with said battery and contact, and a switch in the circuits carried by the scale.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT HEDDIE.

Witnesses:

LOUISE A. ALLISON,
EDWARD A. CREASE.