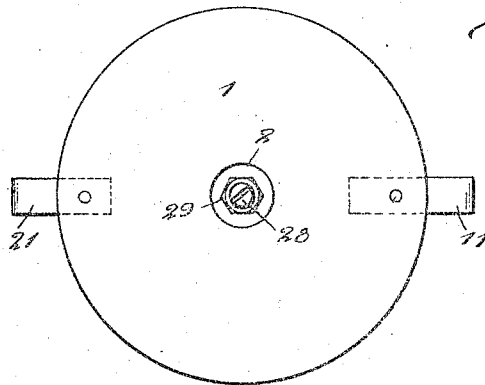
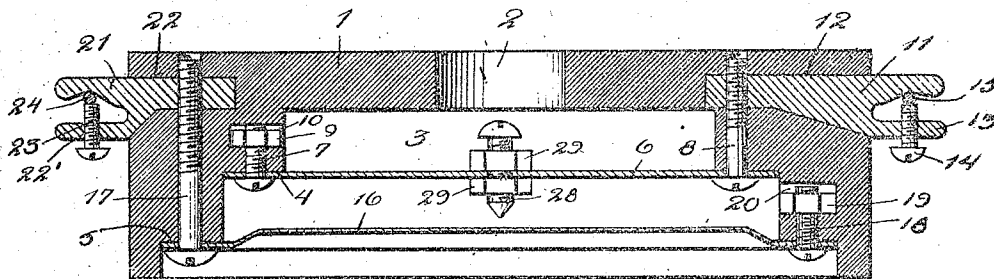
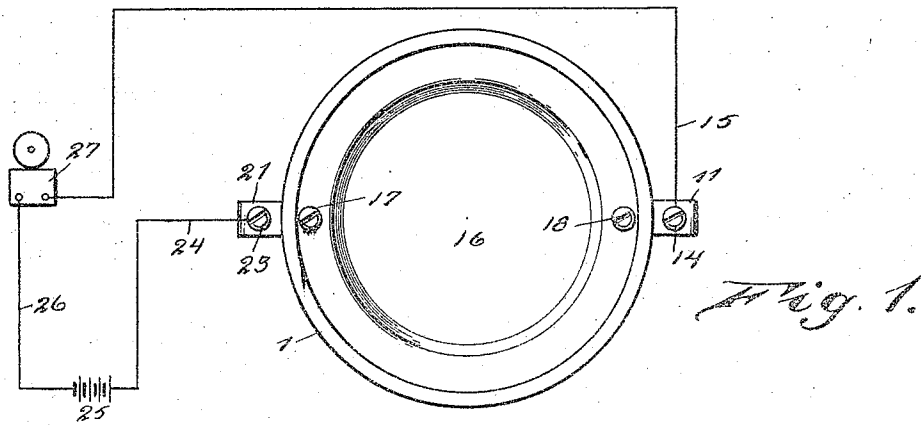


L. W. ZETTLER.
THERMOSTAT.
APPLICATION FILED JAN. 8, 1912.

1,043,382.

Patented Nov. 5, 1912.



Inventor
Louis W. Zettler.

Witnesses

J. Milton Jester
B. J. Johnson

By

C. R. Parker.
Attorney

UNITED STATES PATENT OFFICE.

LOUIS W. ZETTLER, OF LOUISVILLE, KENTUCKY.

THERMOSTAT.

1,043,382.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed January 8, 1912. Serial No. 670,064.

To all whom it may concern:

Be it known that I, LOUIS W. ZETTLER, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Thermostats, of which the following is a specification.

The present invention relates to a thermostat for use in connection with an electrical circuit, for automatically closing the same for different purposes.

An important object of my invention is to generally improve the construction of thermostats, and provide such a device which is formed of few and simple parts.

A further object of my invention is to provide novel adjustable means for determining the degree of heat at which the device will operate for closing a circuit.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same, Figure 1 is a bottom plan view of the device, showing it connected in circuit, Fig. 2 is a transverse sectional view through the same, and Fig. 3 is a plan view of the same.

In the drawings wherein is illustrated a preferred embodiment of my invention, the numeral 1 designates the main or body portion of the thermostat, which is preferably cylindrical and formed of insulating material, such as hard rubber, porcelain or glass. This body portion is provided through its upper end with a central opening 2, which leads into a lower cavity or recess 3, as shown. The recess 3 has its side wall in the form of steps, providing annular shoulders 4 and 5. Disposed within the recess 3 and in engagement with the shoulder 4 is an upper metal plate 6, securely held in place by screws or bolts 7 and 8. The bolt 7 carries a nut 9, which fits in a pocket or opening 10, as shown. The screw 8 extends upwardly through the body portion 1 and passes through a metal clamp 11, having its outer end forked, as shown. This metal clamp extends through an opening 12 formed in the body portion 1. One tine 13 of the clamp 11 has an opening formed there-

through for receiving a clamping screw 14, adapted to engage a wire 15.

Disposed below the metal plate 6 and spaced therefrom is an expansible metal plate 16, which is much thinner than the plate 6 and much more sensitive to heat. The metal plate 16 has its inner or central portion bent upwardly, as shown. Means are provided to fixedly hold the outer portion of this expansible plate 16, comprising screws or bolts 17 and 18. The bolt 18 is provided with a nut 19, disposed in a pocket or opening 20. The screw 17 extends upwardly through the body portion 1 and passes through a metal clamp 21, fitting in an opening 22, which is formed in the body portion 1. The metal clamp 21 has its outer end forked, as shown, and one tine thereof is provided with an opening 22' for receiving a clamping screw 23, which engages a wire 24. It is thus seen that the screws 8 and 17 serve the double purpose of holding respectively the plates 6 and 16 in place and electrically connecting them with the clamps 11 and 21.

The wire 24 is connected with one pole of a source of current 25, the opposite pole of which is connected with a wire 26, having connection with a bell 27 or other device to be operated upon the closing of the circuit. The wire 15 is also connected with the bell 27.

The plate 6 is preferably provided centrally thereof with an opening for receiving a contact screw 28, having its lower engaging end preferably tapered or pointed, as shown. The screw 28 carries upon opposite sides of the plate 6, locking nuts 29, to clamp the screw in adjustment at different positions to the plate 6. It is thus seen that by proper manipulation of the contact screw 28 and nuts 29, the distance between the pointed end of the screw and the plate 16 may be varied, thus changing the heat degree at which plate 16 will engage said screw.

The operation of the device is as follows:—When the plate 16 is subjected to heat, it tends to expand longitudinally and having its end portions held fast it will bend or buckle and make contact with the adjustable screw 28, to close the circuit. In this circuit current will flow through the wire 26 from the source of current 25, bell 27,

wire 15, clamp 11, screw 8, plate 6, contact screw 28, plate 16, screw 17, clamp 21, and through the wire 24 back to the source of current. As above stated the heat degree at which the device will operate may be regulated by proper manipulation of the adjustable contact screw 28.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that certain changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:—

1. In a device of the character described, a body portion formed of insulating material and having a cavity formed therein provided with a side wall having shoulders, spaced metal plates disposed on said shoulders, metal clamps extending into said body

portion, screws connecting said metal plates and clamps, and a contact element carried by one metal plate.

2. In a device of the character described, an integral body portion formed of insulating material and having a central opening formed through one end leading into a main cavity, said cavity having its side wall provided with shoulders, spaced metal plates disposed upon said shoulders, metal connecting elements extending into said body portion, screws connecting the metal plates with the metal connecting elements, an adjustable contact screw carried by one metal plate and disposed near the central opening to provide ready access to the same, and a circuit connected with said connecting elements.

In testimony whereof I affix my signature in presence of two witnesses.

LOUIS W. ZETTLER.

Witnesses:

NELLIE P. SULLIVAN,
HART HUHLEIN.