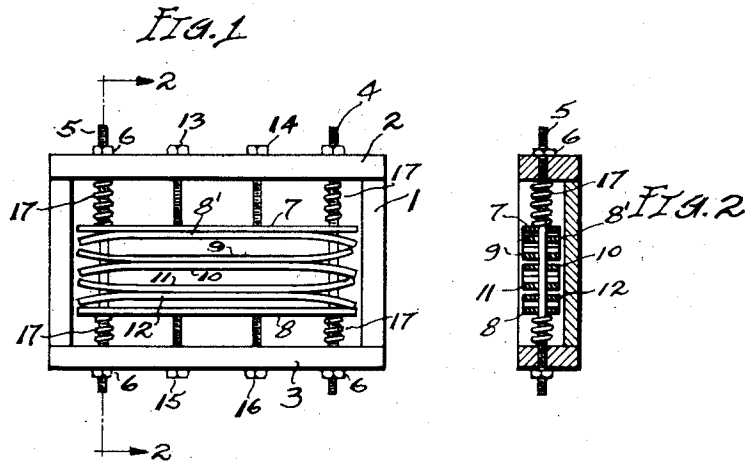
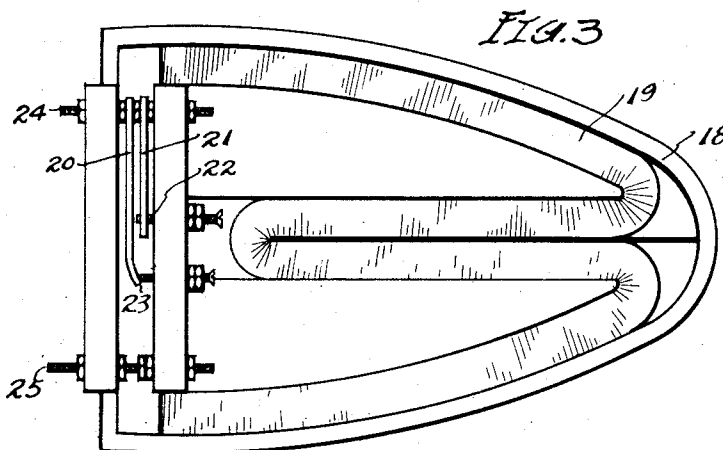
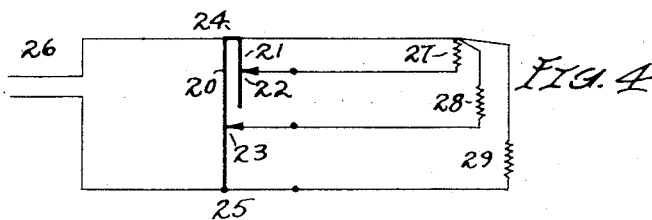


E. J. ROHNE.
THERMOSTAT AND THERMOSTATIC CONTROL DEVICE.
APPLICATION FILED JUNE 10, 1920.

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THERMOSTAT AND THERMOSTATIC CONTROL DEVICE.

Application filed June 10, 1920. Serial No. 388,071.

To all whom it may concern:

Be it known that I, EVEN J. ROHNE, a citizen of the United States, and a resident of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Thermostats and Thermostatic Control Devices, of which the following is a specification.

One object of my invention is to provide in a thermostat improved means for breaking a contact so as to provide a longer break.

Another object is to provide improved means for controlling circuits in a heating device.

With these and incidental objects in view, the invention consists of certain novel features of construction and combination of parts, the essential elements of which are hereinafter described with reference to the drawing which accompanies and forms a part of this specification.

In the drawing, Figure 1 is a plan view of my improved thermostat; Figure 2 is a section taken on the line 2-2, Figure 1; Figure 3 is a plan view of a flat iron with the cover removed, showing a modified form of thermostat and my improved circuit; Figure 4 is a wiring diagram of the device shown in Figure 3.

As shown in the drawing, the frame 1 is of general channel section, and terminal blocks 2 and 3 are provided at each end thereof.

Headless screws 4 and 5 pass through the two terminal blocks and are clamped thereto by nuts 6.

Contact bars 7 and 8 are mounted loosely on the studs 4 and 5 through suitable apertures, and oppositely disposed arch-shaped thermostatic elements 8, 9, 10, 11, and 12 are similarly mounted on the studs 4 and 5.

Contact screws 13, 14, 15, and 16 are provided to co-operate with the contact bars 7 and 8.

Springs 17 are provided for clamping the contact bars and thermostatic elements together.

It is apparent that as the thermostatic elements straighten out under increased temperature the contacts will be opened and numerous circuits may be controlled through the four contacts provided.

As the arch-shaped elements straighten out it is evident that a bigger break will be made at the contacts than if the action was controlled by a single thermostatic element.

In the view shown in Figure 3 the flat iron 18 has a heating element 19 comprised of three separate circuits.

The thermostat comprises two thermostatic elements 20 and 21, of unequal length, and contacts 22 and 23 are provided for the thermostatic elements.

In wiring up the circuit the outside connection would be made to studs 24 and 25, and one of the three coils of the heating element 19 would be permanently attached to these terminal posts.

One of the other coils would be attached from the post 24 to the contact screw 22, and the third coil would be connected from the terminal post 24 to the contact screw 23.

This is better shown in Figure 4, in which the outside circuit is represented by conductors 26. One coil 27 is connected from the terminal post 24 to contact 22, the second coil 28 from the terminal post 24 to the contact 23, and the third coil 29 is connected from the terminal post 24 to the terminal post 25, so as to be always in circuit when the flat iron is in use.

Inasmuch as the thermostatic elements are of different lengths, the contacts are naturally open at different degrees of temperature.

While I have described my invention and illustrated it in one particular design, I do not wish it understood that I limit myself to this construction, as it is evident that the application of the invention may be varied in many ways within the scope of the following claims:

1. In a thermostat the combination of a frame, two oppositely disposed terminal blocks, connecting studs between said terminal blocks, a plurality of oppositely disposed arch-shaped thermostatic elements loosely carried by said studs, through apertures in said thermostatic elements, and contacts for said thermostatic elements.

2. In a thermostat the combination of a frame, two oppositely disposed terminal blocks, connecting studs between said terminal blocks, a plurality of oppositely disposed arch-shaped thermostatic elements loosely carried by said studs, through apertures in said thermostatic elements, and contacts for said thermostatic elements, and resilient means for clamping said thermostatic elements together.

3. In a thermostat the combination of a frame, two oppositely disposed terminal

blocks, a plurality of oppositely disposed arch-shaped thermostatic elements, means carried by said terminal blocks for supporting said elements, and contacts for said

5 thermostatic elements.

4. In a thermostat the combination of a frame, two oppositely disposed terminal blocks, a plurality of oppositely disposed arch-shaped thermostatic elements, means

10 carried by said terminal blocks for supporting said elements, and contacts for said thermostatic elements, and resilient means for clamping said elements together.

5. In a thermostat the combination of a

15 frame, two oppositely disposed terminal blocks, studs connecting said terminal blocks, contact bars loosely mounted on said studs, a plurality of oppositely disposed arch-shaped thermostatic elements loosely mount-

ed on said studs intermediate of said con- 20 tact bars, and a plurality of contact points carried by said terminal bars and coacting with said contact bars.

6. The combination with a thermostat hav-
ing a plurality of thermostatic elements of 25
differing lengths, and a contact point for
each of said elements, of a plurality of cir-
cuits, including heating coils, one of said
circuits being connected across the direct
terminals of said heating device, and the 30
other of said circuits being connected on one
side to one of the terminals of the heating
device, and the other ends to said contacts
whereby said heating coils will be controlled
independently by the individual thermo- 35
static elements.

EVEN J. ROHNE.