H. W. CHRISTIAN.

RHEOSTAT.

APPLICATION FILED JUNE 17, 1918.

1,292,403. Patented Jan. 21, 1919.

Fig. 2.

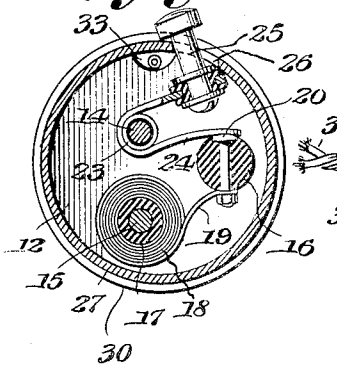
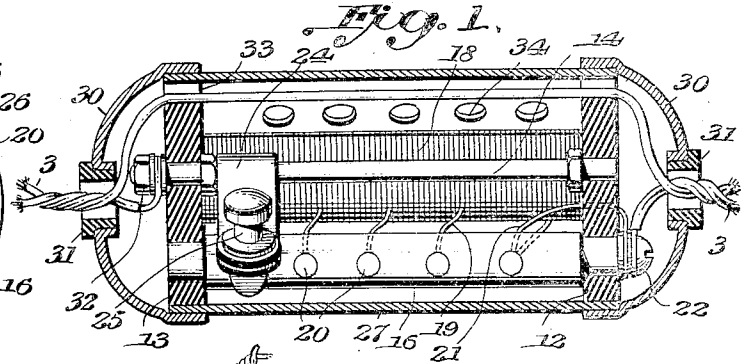


Fig. 1.



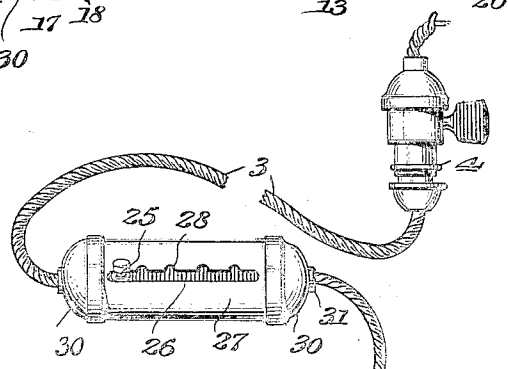


Fig. 3.

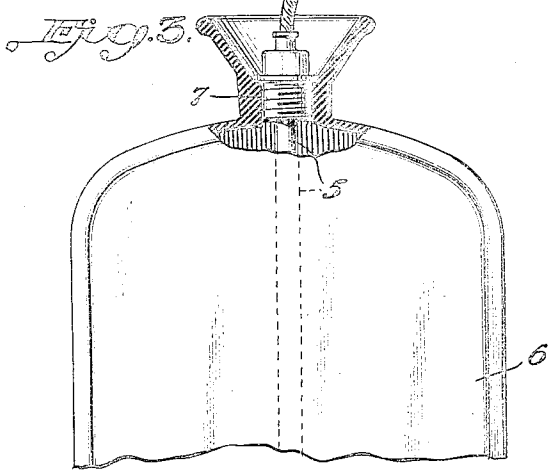
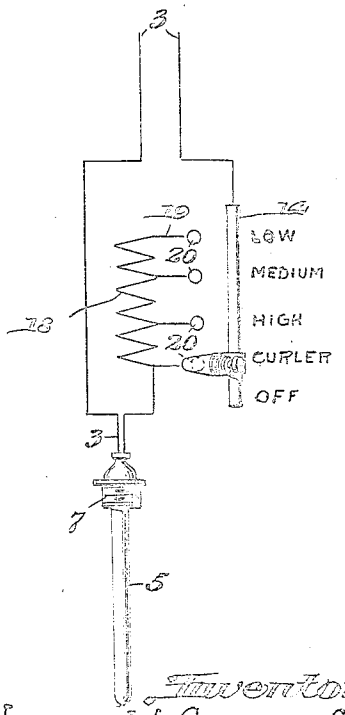


Fig. 4.



Inventor,

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By

Attys.

UNITED STATES PATENT OFFICE.

HERBERT W. CHRISTIAN, OF DETROIT, MICHIGAN.

RHEOSTAT.

1,292,403. Specification of Letters Patent. Patented Jan. 21, 1919.

Application filed June 17, 1918. Serial No. 240,353.

To all whom it may concern:

Be it known that I, HERBERT W. CHRISTIAN, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Rheostats, of which the following is a specification, reference being had therein to the accompanying drawings.

In my pending application for patent filed Feb. 12, 1918, Serial No. 216,707 for a combined curling iron and hot water bottle heater, there is disclosed a simple form of rheostat that may be safely handled for regulating the current to the heating element or unit, when used either in connection with the curling iron or a water bottle. It is through the medium of the rheostat that the curling iron or contents of a bottle may be kept at a desired temperature, while the iron or bottle is in use, and the present invention aims to simplify the construction of the rheostat and provide a more efficient device.

My present invention will be hereinafter described and then claimed, and reference will now be had to the drawing, wherein—

Figure 1 is a longitudinal sectional view of the rheostat;

Fig. 2 is a cross sectional view of the same;

Fig. 3 is a plan of the rheostat, showing the same in connection with a suitable source of electrical energy and a heating element or unit, and

Fig. 4 is a diagrammatic view showing the electrical wiring in connection with the rheostat.

The rheostat comprises two circular heads 12 and 13, preferably made of fiber, and connected to said heads are tie rods 14 and 15, and a contact holder 16, preferably made of fiber or other suitable insulation material. On the tie rod 15 is a core 17 and about said core is a resistance coil 18 having lead-out wires 19 to contacts 20, carried by the insulated holder 16. The resistance coil is connected by a wire 21 to a binding post 22 on the head 12 and said binding post is connected to one of the wires of a cable 3.

Slidable on the tire rod 14 is a guide sleeve 23 provided with a resilient contact member 24 that normally rests on the contact holder 16 and may be shifted over the contacts 20 to cut in and out resistance. The opposite end of the member 24 is provided with a finger piece 25, which is insulated from the contact member 24. The finger piece 25 extends through a longitudinal slot 26 provided therefor in the wall of a cylindrical casing 27 mounted on the heads 12 and 13. A wall of the slot 26 is notched as at 28 and the resiliency of the member 24 is sufficient to maintain the finger piece 25 in frictional engagement with the notched wall or in one of the notches 28, thus preventing the contact member 24 from accidentally shifting in the casing 27.

The cylindrical casing 27 is provided with caps 30 having insulators 31 through which the cable 3 extends, said cable having one of the wires thereof extending through notches 33 in the heads 12 and 13, and another cable is connected to the end of the rod 14, as at 32.

The cylindrical casing 27 is provided with a plurality of openings 34 to prevent over-heating, and said casing may be provided with suitable indicia, somewhat as shown in Fig. 4, to indicate the degree of resistance.

One end of the cable 3 may be connected to an ordinary electric light socket 4, and the opposite end of said cable may be connected to an electric heating element or unit 5 having a screw socket 7, so that it may be detachably mounted in the neck of a water bottle 6.

As shown in Fig. 4, the tie rod 14 is made of sufficient length so that the contact member 24 may be shifted to one end thereof to completely break the electric circuit to the heating element or unit, or may be shifted into engagement with either of the contacts 20 to obtain a desired degree of resistance.

What I claim is:—

1. A rheostat comprising heads, a resistance supported between said heads, a contact holder between said heads and provided with contacts connected to said resistance, a tie rod connecting said heads, a casing on said heads provided with a longitudinal slot, and a resilient contact member slidable on said tie rod and having one end thereof adapted for engagement with the contacts of said contact holder, and the opposite end thereof extending through the slot of said casing.

2. A rheostat comprising heads, a resistance between said heads, a plurality of contacts between said heads in circuit with said resistance, a resilient contact member slid-

able between said heads having one end thereof adapted for engagement with said contacts, a casing on said head provided with a slot, and a finger piece carried by said contact member and extending through the slot of said casing and adapted to be held by a wall of said slot.

3. A rheostat comprising heads, tie rods connecting said heads, a resistance on one of said tie rods, a resilient contact member on the other of said tie rods, a contact holder connecting said heads and provided with a plurality of contacts in circuit with said resistance, a casing on said heads, and means extending through a wall of said casing adapted for adjusting said contact member.

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

HERBERT W. CHRISTIAN.

Witnesses:

ANNA M. DORR,

CHAS. W. STAUFFIGER.