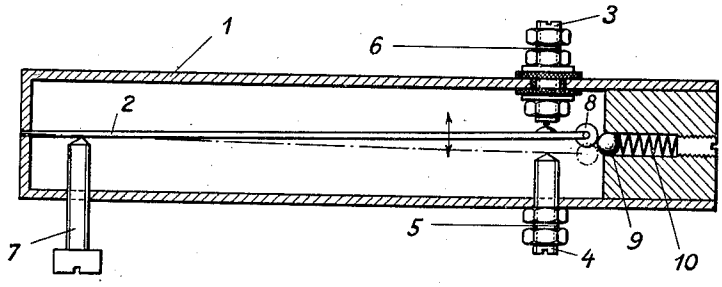
July 17, 1928. 1,677,710

A. DÄNIKER

TEMPERATURE REGULATOR

Filed Feb. 18, 1927



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UNITED STATES PATENT OFFICE.

ALFRED DÄNIKER, OF ZURICH, SWITZERLAND.

TEMPERATURE REGULATOR.

Application filed February 18, 1927, Serial No. 169,333, and in Germany February 26, 1926.

The object of this invention is a temperature regulator for electrically fed apparatus, in which the motion of the contact parts opening and closing the current is induced by an element sensitive to temperature.

The invention is characterized by the fact that the free extremity of the sensitive element which is arranged to move between contacts of the electric line is supported on a yieldingly mounted body in the shape of an arc. As soon as the oscillation of the free extremity of the sensitive element causes the latter to overstep the tipping point of the body on which it is supported, a sudden switching is obtained.

In the drawing the object of the invention is represented as an example of execution in a longitudinal section.

1 is the case, 2 the sensitive element or thermostatic strip, 3 and 4 are the adjustable conductor contacts, 3 being electrically insulated from the case 1, 5 and 6 are the line connections, 7 is a set-screw for tensioning the strip 2. In the example the free extremity of this strip is provided with a roller 8 supported on a spring bed 9. Instead of the spring 10 for instance, another elastic body could be employed, and instead of the ball 9 a roller may be used, just as the roller 8 could be replaced by a ball which would be mounted in a socket of the free extremity of the strip 2.

The action of these regulators is the known one. When the sensitive strip 2 is heated, or cooled, it oscillates in the direction of the arrow, and as soon as the roller 8 has exceeded the tipping position, there is a sudden switching.

The strip 2 may possibly be constructed as a spring, so that the support 9 need not be yieldingly mounted.

I claim:

1. In a temperature regulator for electrically heated devices the combination with a casing, two electric contacts mounted in the casing substantially opposite one another and one of which is insulated from the casing, a thermostatic strip in the casing and means for adjusting the tension of said strip, said strip arranged between the contacts; of an anti-friction member mounted on one end of the strip and an anti-friction member mounted in the casing and cooperating with the former member to produce rolling engagement during a snap action of the strip from one contact to the other when the strip is heated, and means to provide relative yielding of one member with respect to the other during the movement of the strip.

2. In a temperature regulator for electrically heated devices, the combination with a casing, two electric contacts mounted in the casing substantially opposite one another and one of which is insulated from the casing, a thermostatic strip, anti-friction means arranged on the strip and a device for adjusting the strip; of resiliently mounted means for engaging the aforesaid means, one of said means including a roller and the other a ball, said ball and roller being maintained in contact and effecting a snap action of the strip member from one contact to the other when heated.

In testimony that I claim the foregoing as my invention, I have signed my name.

ALFRED DÄNIKER.