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C. A. SPENKS

THERMOSTATIC CIRCUIT CLOSER

Filed July 23, 1924

Fig. 1.

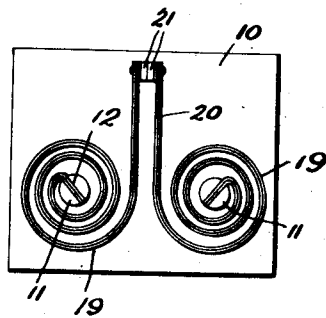


Fig. 3.

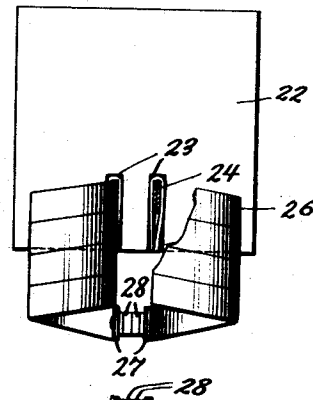


Fig. 2.

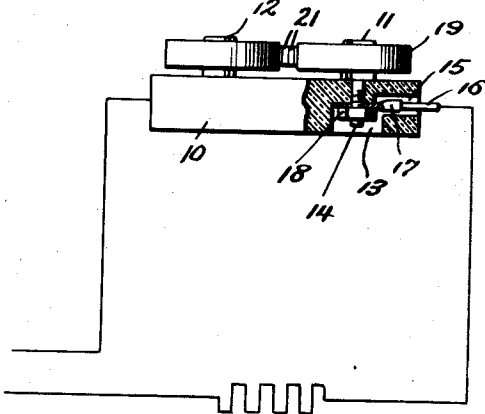
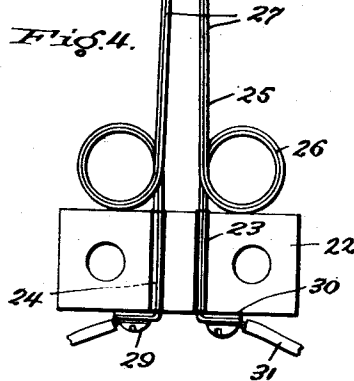


Fig. 4.



WITNESS:

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THERMOSTATIC CIRCUIT CLOSER.

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This invention relates to circuit closers, particularly those of the thermostatic type, and has for its object the provision of a novel thermostatic circuit closer adapted for use in connection with signals, heating devices or in fact many other different kinds of apparatus whereby to close and open a circuit automatically depending upon the temperature.

10 An important object is the provision of a device of this character which will be extremely simple and inexpensive in manufacture, easy to mount and set, efficient in service, durable and a general improvement
15 in the art.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which:—

Figure 1 is a plan view of one form of the device;

25 Figure 2 is a side elevation with a part broken away, and in section;

Figure 3 is a plan view of a modified form, and

Figure 4 is a side elevation thereof.

Referring more particularly to the drawings, and especially Figures 1 and 2, the numeral 10 designates a base of suitable insulating material and of any desired size and shape depending upon the nature of the work to be done by the device. Mounted
30 upon this base are two posts 11 which are naturally constructed of metal and which have their heads formed with kerfs or slits 12 for a purpose to be described.

At its underside, the base 10 is formed
40 with recesses 13 into which extend reduced threaded extensions 14 on the posts, and the base is formed with passages 15 leading into the recesses 13, within which passages are located terminal wires 16 carrying terminal
45 lugs 17 of an eye-like nature engaged upon the threaded extensions 14 and held thereon by means of nuts 18. By this means it is quite apparent that the two posts form the terminals for the circuit closer device as a
50 whole.

I also provide two elongated strips 19 of some metal having a high coefficient of expansion, which strips are bent into the spiral shape as shown and which are mounted upon
55 the posts by having their inner ends en-

gaged within the kerfs or slits 12. The other ends of the strips 19, designated at 20, are free and constitute terminal arms upon the ends of which are secured contacts 21 riveted or otherwise fastened in place.

In the form of the invention illustrated
60 in Figures 3 and 4, I provide a base 22 which is likewise constructed of some suitable insulating material and of any desired size and shape. However, in this form, the base
65 is formed with a pair of spaced slots 23 having mounted therein clips 23^a within which are engaged the end portions 24 of elongated metallic strips 25 which have their
70 intermediate portions coiled into spiral shape as shown at 26 and which have their other ends free to define arms 27 on the terminals of which are secured contacts 28.

The terminal connections in this case may consist of screws 29 which pass through
75 laterally extended ends 30 of the clips and into the base, the wires 31 being suitably engaged by these screws.

In the operation of either form it will be apparent that under the influence of heat
80 the metallic strips will expand and this will naturally result in moving the free ends of the strips outwardly so as to break the engagement of the contacts carried thereby. Reversely, the strips upon contracting under
85 the influence of a reduced temperature, will bring the contacts into engagement for closing whatever circuit the device is used in connection with.

From the foregoing description and a
90 study of the drawings, it will be apparent that I have thus provided an extremely simple and inexpensive thermostatic circuit closer which is capable of use for a wide variety of purposes and in many arts, there
95 being no particular limitation in this respect. Owing to the extreme simplicity of the device it is obvious that it should have great durability and naturally a long life.

While I have shown and described the
100 preferred embodiment of the invention, it should be understood that I reserve the right to make such changes in the form, construction and arrangement of parts as will not depart from the spirit of the invention or
105 the scope of the subjoined claim.

Having thus described the invention, I claim:—

In a device of the character described, a base of insulating material formed with a
110

pair of slots, metallic clips located within said slots, a pair of thermostatic metal strips engaged within said clips and having their intermediate portions coiled into a plurality of helical convolutions, contacts on one end of said strips, laterally directed lugs on the other end of said strips engaging against one side of the base, said helical convolutions engaging against the opposite side of the base for yieldably holding the thermostatic strips in position, and terminal members carried by said laterally directed lugs.

In testimony whereof I affix my signature.
CHARLES A. SPENKS.