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ELECTRIC HEATING ELEMENT.
APPLICATION FILED SEPT. 21, 1920.

1,402,889.

Patented Jan. 10, 1922.

Fig. 1.

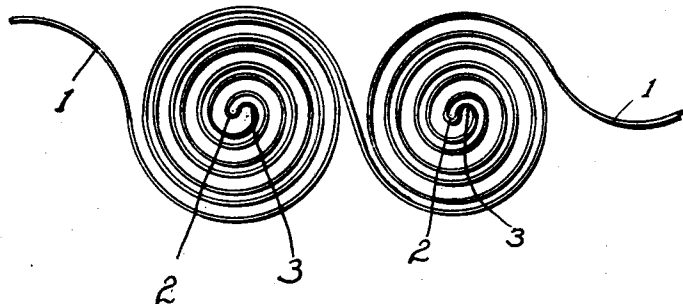


Fig. 3.

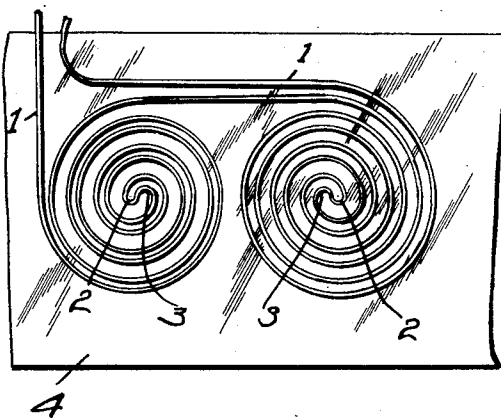
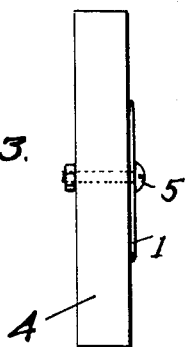


Fig. 2.

Fig. 4.



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Specification of Letters Patent. Patented Jan. 10, 1922.

Application filed September 21, 1920. Serial No. 411,715.

To all whom it may concern:

Be it known that I, GEORGE POTSTADA, citizen of the United States, residing at Oakland, in the county of Alameda, State of California, have invented a new and useful Electric Heating Element, of which the following is a specification in such full and clear terms as will enable those skilled in the art to construct and use the same.

10 This invention relates to a heating unit for electric heaters and its object is to provide a heating coil which will have the maximum length in a very small area.

Another object of the invention is to produce a flat coil which will have its parts completely insulated from one another while at the same time it is so arranged as to lie flat upon a suitable insulated block.

It will be understood by those skilled in the art that in the production of heating elements for all sorts of purposes that some insulating base must be provided for the wire, and ordinarily this wire is wound around a piece of mica or porcelain, but in the present instance the wire is wound in spirals to lie upon a flat surface and each individual spiral is held in place by a screw or pin at its center. The wire having sufficient inherent strength to hold the outer coils separate from one another.

Other objects of the invention will appear as the description proceeds.

An embodiment of the invention is shown in the accompanying drawings in which the same reference numeral is applied to the same portion throughout, but I am aware that there may be modifications thereof.

Figure 1 is a plan view of two of the coils.

Fig. 2 is a plan view of the block to which two of the coils have been applied.

Fig. 3 is a side elevation of the block and one of the coils as they appear when secured in place.

Fig. 4 is an end view of the block showing one of the coils as it appears prior to being fastened thereto.

The numeral 1 consists of any suitable re-

sistance wire of well known form which is caught up by an instrument forming two loops in the wire as indicated at 2 and 3, this instrument turns rapidly and forms any desired number of double turns of the wire and it is so shaped that when the spiral is complete, it stands up as indicated in the side elevation of Fig. 4.

After the coils have been produced they are secured to a block of asbestos or other suitable heat resisting insulating material 4 by means of a screw 5 passing through the center of each coil, and as the screw presses down upon the center coil the entire spiral is flattened as indicated in Fig. 3. As many spirals may be used as is deemed convenient or necessary and they may be arranged in any desired form on a suitable flat supporting surface but, of course, the size of the coil is limited by the inherent strength of the wire when red hot, that is, the size of the coil must always be small enough so that the wires when red hot will not contact with each other.

What I claim is as follows, but various modifications may be made in the construction shown in the drawings and above particularly described form, within the purview of my invention:

1. A heating element for electric heaters comprising a double flat spiral the wire of which is wound with an endless loop at the center of the spiral, both terminals being at the periphery of the spirals.

2. A heating element for electric heaters comprising a wire wound in a double spiral all of the parts of which lie in a single plane.

3. A heating element for electric heaters comprising a double flat spiral all of the wires of which lie in a single plane and means at the center of each spiral for holding the spiral against the insulating block.

In testimony whereof I have hereunto set my hand this 14th day of Sept., A. D. 1920.

GEORGE POTSTADA.