E. V. MANZELLA.

ELECTRICALLY HEATED SAD IRON.

APPLICATION FILED AUG. 25, 1916.

1,212,082.

Patented Jan. 9, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

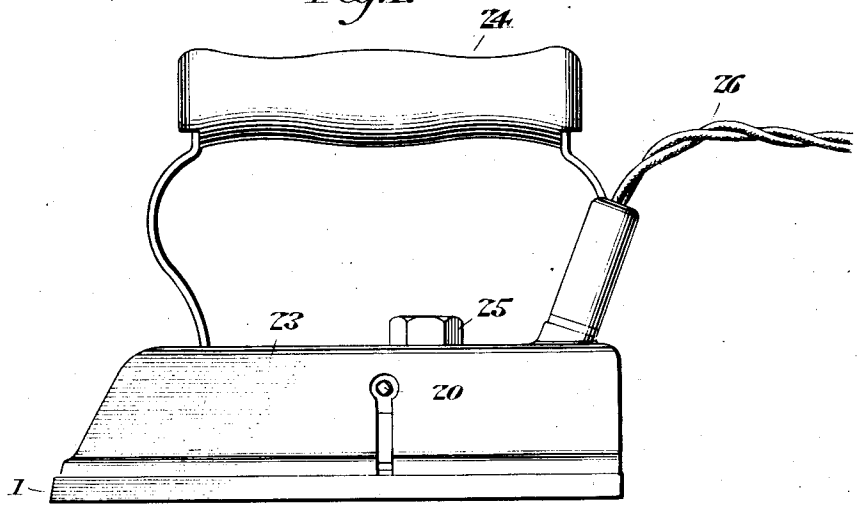
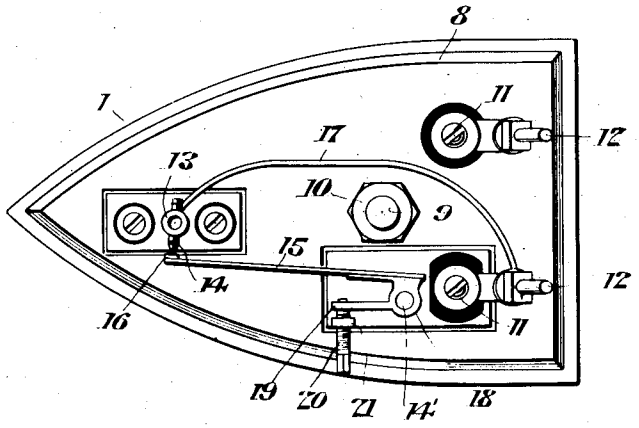


Fig. 2.



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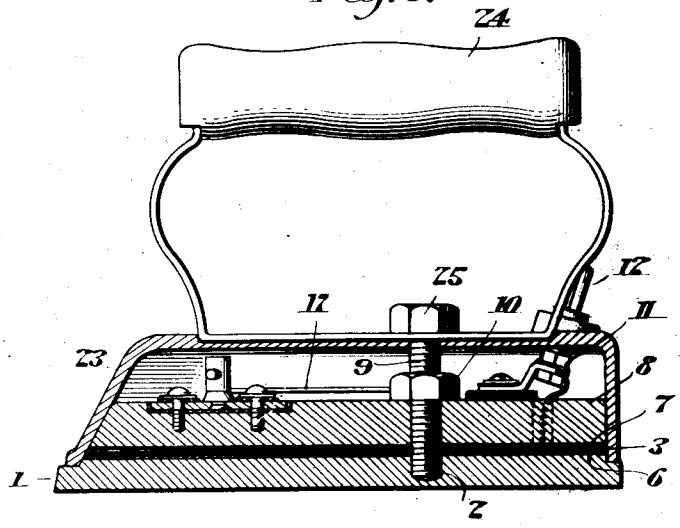
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2 SHEETS—SHEET 2.

Fig. 3.



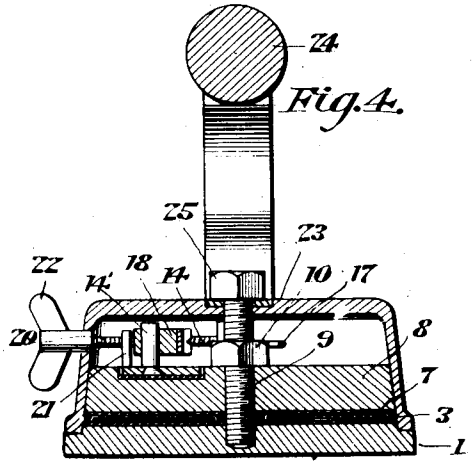
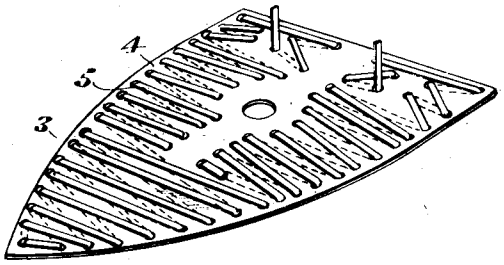


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

ERNEST V. MANZELLA, OF CHICAGO, ILLINOIS.

ELECTRICALLY-HEATED SAD-IRON.

1,212,082. Specification of Letters Patent. Patented Jan. 9, 1917.

Application filed August 25, 1916. Serial No. 116,893.

To all whom it may concern:

Be it known that I, ERNEST V. MANZELLA, a subject of the King of Italy, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Electrically-Heated Sad-Irons, of which the following is a specification.

This invention relates to improvements in electrically heated sad irons and has particular application to a sad iron wherein the electric current is thermostatically controlled.

In carrying out the present invention, it is my purpose to provide a thermostatically controlled electric iron wherein the current will be automatically cut off in the event of the iron overheating, and the circuit re-established upon the cooling of the iron, and wherein the thermostatic element may be adjusted to respond to any temperature in order to open the circuit.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts hereinafter set forth in and falling within the scope of the claim.

In the accompanying drawings; Figure 1 is a view in side elevation of a sad iron constructed in accordance with the present invention. Fig. 2 is a top plan view of the iron, the cover being removed. Fig. 3 is a longitudinal sectional view through the iron. Fig. 4 is a cross sectional view through the same. Fig. 5 is a perspective view of the heating element.

Referring now to the drawings in detail, 1 designates the base of an iron shaped as usual and having the upper surface formed with a threaded depression 2. Mounted upon the upper surface of the base is a heating element 3 shaped after the fashion of the base and embodying a sheet of mica 4 or similar material and a resistance wire 5 threaded through openings in the mica 4 so that the various portions of the wire will be insulated from one another to prevent short circuiting. Interposed between the heating element 3 and the upper surface of the base of the iron is a sheet of mica 6, while arranged upon the top of the heating element is a sheet of mica 7 and these sheets of mica are shaped to conform to the configuration of the heating element and envelop such element in order to protect the resistance wire from the metal parts of the sad iron.

Arranged upon the top sheet of mica 7 is a metal plate 8 corresponding in shape to the base 1 and of less width and length than the base. The plate 8 is formed with an opening that alines with the depression 2 and passed through the opening and threaded into the depression 2 is a stud bolt 9, while threaded upon the bolt is a nut 10 acting to hold the plate 8 clamped to the base 1 and the heating element in position between the plate and the base.

Fastened to the upper surface of the plate 8 adjacent to the heel of the base are binding posts 11, 11 and connected to the binding posts 11, 11 and projecting upwardly therefrom are terminal posts 12. The binding posts 11 are insulated from the plate 8 and also mounted upon the plate 8 adjacent to the toe end of the base is a post 13 insulated from the plate. Adjustably mounted in the post 13 is a contact screw 14 and connected to a stud 14′ adjacent to one of the binding posts 11 is one end of a thermostatic strip 15 having the other end equipped with a contact point 16 designed to engage the contact screw 14. The stud 14′ is connected to one terminal of the resistance wire 5 and the other terminal of such wire is connected to the remote binding post 11. Connected to the binding post 11 adjacent to the stud 14′ is one end of a wire 17 and the other end of this wire is connected to the post 13.

In practice, the terminal posts 12 are connected with a source of energy and current flows through one of such posts 12, the binding post 11 connected thereto, the wire 17, contact screw 14, thermostatic strip 15, the stud 14′, the resistance wire 5 and then back to the other side of the circuit by way of the binding post 11 and terminal post 12. The current follows this path under normal conditions so that the iron will be properly heated. When, however, the iron overheats, the thermostatic strip 15 expands and disengages the contact strip 14, thereby breaking the circuit through the resistance wire 5 to cut off the flow of current and when the iron is cool, the thermostatic strip 15 contracts and again closes the circuit through the resistance wire.

In order that the thermostatic strip 15 may be adjusted to respond to different temperatures, I employ an arm 18 having one end formed with an offset securing plate 19 that is secured to the thermostatic strip 15 adjacent to the stud 14'. Swiveled to the other end of the arm 18 is one end of an adjusting screw 20 threaded through a bearing lug 21 upstanding from the plate 8. The outer end of the screw 20 is angular in cross section to receive a key 22 whereby the screw may be turned to increase and decrease the tension on the thermostatic strip.

Inclosing the plate 8 and resting upon the edge of the base that projects beyond the plate 8 is a cover 23 having the upper wall formed with an opening through which the upper end of the stud bolt 9 projects, and with openings through which the terminal posts 12 project. One side of the cover 23 is formed with an opening in line with the shaft 20 so that the shank of the key 22 may be engaged with the shaft.

24 designates a handle mounted upon the upper surface of the cover and formed with an opening through which the stud bolt 9 passes and threaded upon the outer end of the stud bolt is a nut 25 acting to hold the handle upon the cover and the cover to the base.

26 designates an electric current carrying cord having one end equipped with a plug and the other end equipped with socket members adapted to receive the projecting ends of the respective posts 12 whereby current may be conveyed to the heating element.

While I have herein shown and described the preferred forms of my invention by way of illustration, I wish it to be understood that I do not limit or confine myself to the precise details of construction herein described and delineated, as modification and variation may be made within the scope of the claim and without departing from the spirit of the invention.

I claim:

In an electrically heated sad iron, a base, a metal plate mounted upon the base, a heating element interposed between said plate and base and insulated therefrom, terminal posts mounted upon said plate, a connection between one of said terminal posts and one end of said heating element, a post upstanding from said plate, a wire connection between said post and the other terminal post, a contact screw carried by the upstanding post, a thermostatic strip, a stud to which one end of said strip is secured, said stud being connected to the other terminal of said heating element, the remaining end of said thermostatic strip engaging said contact screw whereby current may flow through said heating element from said terminal posts, a cover inclosing said plate and secured to said base, and a handle carried by said cover.

In testimony whereof I affix my signature.

ERNEST V. MANZELLA.