Jan. 15, 1924. 1,481,103

J. F. LAMB

ELECTRICALLY HEATED SADIRON

Filed June 6, 1922 2 Sheets-Sheet 1

Fig. 1.

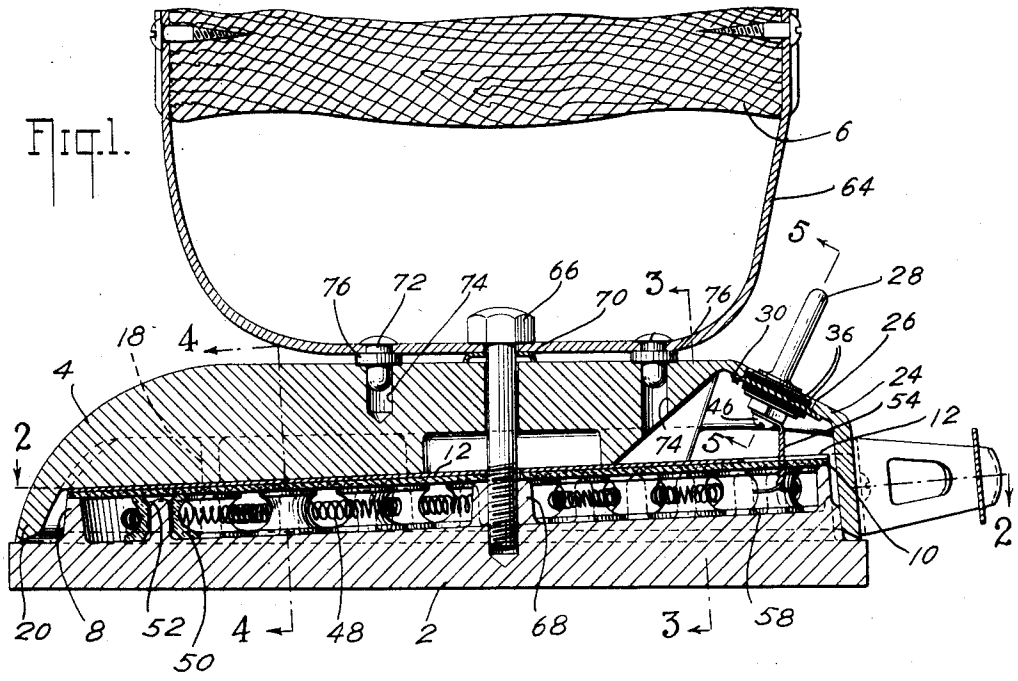
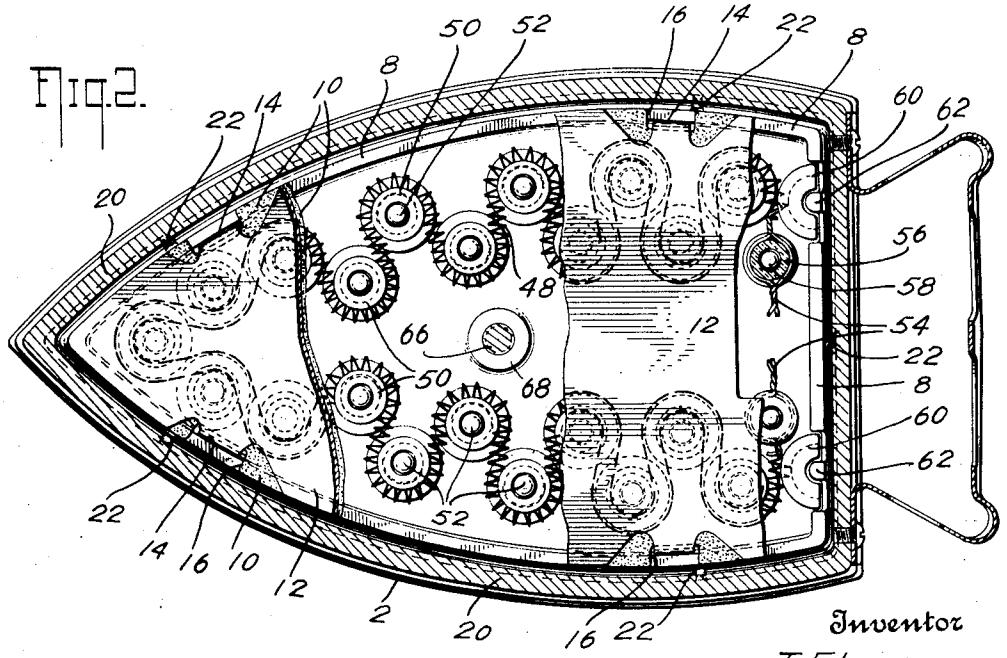


Fig. 2.



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Fig. 3.

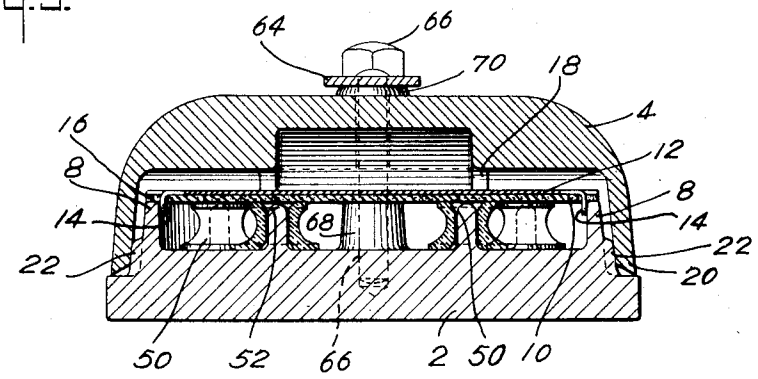


Fig. 6.

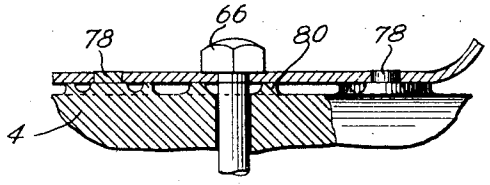


Fig. 4.

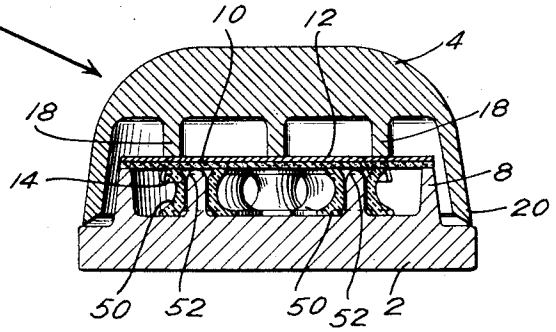
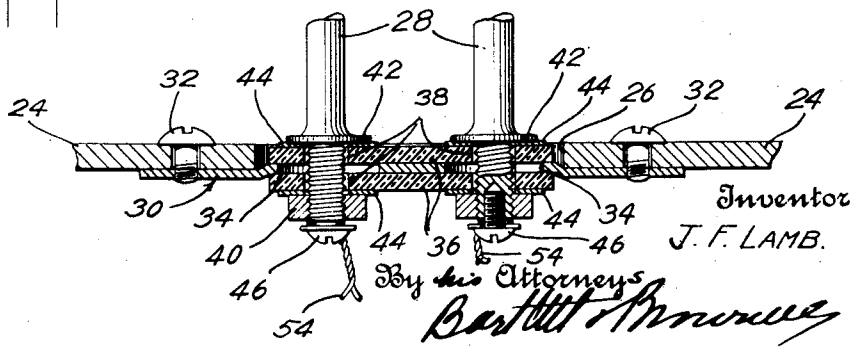


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOSEPH F. LAMB, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO LANDERS, FRARY & CLARK, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

ELECTRICALLY-HEATED SADIRON.

Application filed June 6, 1922. Serial No. 566,272.

To all whom it may concern:

Be it known that I, JOSEPH F. LAMB, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented a certain new and useful Improvement in Electrically-Heated Sadirons, of which the following is a full, clear, and exact description.

My invention relates to electrically heated sad irons, and has for its object to provide a novel and improved device of this character which is simple, strong and durable in construction and may be easily assembled and taken apart.

The several features of the invention will be clearly understood from the following description and accompanying drawings, in which,—

Figure 1 is a longitudinal sectional view, partly in elevation, of an electrically heated sad iron embodying the features of the invention in their preferred form;

Fig. 2 is a sectional plan view taken on the line 2—2 of Fig. 1 with certain parts broken away;

Figs. 3 and 4 are vertical sectional views taken on the lines 3—3 and 4—4 of Fig. 1, respectively;

Fig. 5 is a detailed sectional view, partly in elevation and on an enlarged scale, taken on the line 5—5 of Fig. 1; and

Fig. 6 is a longitudinal section of a portion of an iron of a modified construction.

The electrically heated sad iron illustrated in the drawings is provided with a base part 2, a top part or cover 4, and an operating handle 6. The base part 2 is provided with an upwardly extending marginal flange 8 which is spaced from the edge of the base part. A sheet 10 of asbestos or other heat insulating material rests on the upper edge of the flange and a sheet metal plate 12 is positioned over the asbestos sheet and is provided with a plurality of depending lugs 14 which extend through slots 16 in the edge of the sheet 10 and engage the inner side of the flange 8 so as to hold the sheet in position over the flange and to protect it. The sheet 10 and metal plate 12 cooperate with the flange to form a heating chamber in which an electrical heating element hereinafter described is located.

The top part 4 of the sad iron is provided with a plurality of depending ribs 18 having a honey-comb arrangement so as to provide air spaces between the top part and the heating chamber. The top part or cover is provided with a depending peripheral lip 20 which surrounds and is spaced from the flange 8 of the base part. The flange 8 is provided with a series of spacing lugs 22 which fit the inner wall of the lip 20. The lower edge of the lip 20 is bevelled inwardly and upwardly from the marginal surface of the base part. The spacing of the lip from the flange 8 and said bevelling of the edge of the lip reduce the conduction of heat from the base part to the top part by reason of the air spaces thus formed.

The rear portion of the top part is of hollow construction and is provided with a rearwardly and downwardly inclined wall 24 having an elongated opening 26 extending transversely of the wall through which extend terminal posts 28 for engagement with the socket member of an electrical conducting cord, (Figs. 1 and 5). The mounting of the terminal posts 28 in the opening 26 comprises a metal strip 30 which is secured at its ends by screws 32 to the wall 24, extends over the opening 26, and is provided with spaced apertures 34. Two strips 36 of insulating material are positioned on opposite sides of the metal strip 30 and provided with apertures 38 of smaller diameter than and in alinement with the apertures 34. The inner ends of the terminal posts 28 are reduced in diameter and extend through said apertures in the strips 30 and 36, and nuts 40 are screwed on the inner ends of the terminal posts to cooperate with flanges 42 on the posts to clamp the posts to the strips 30 and 36, washers 44 being interposed between the flanges 42 and the outer strip 36 and between the inner strip 36 and the nuts 40. Binding screws 46 are screw-threaded in the sockets in the inner ends of the terminal posts 28 which are adapted to be connected with the heating element of the iron. With this construction the terminal posts 28 and their mounting may be removed as a unit from the top part 4 of the iron upon removing the screws 32.

The heating element of the iron comprises a coiled resistance wire 48 of suitable alloy which is mounted on a series of annular spool shaped blocks 50 loosely mounted on pins 52 projecting upwardly from the top

surface of the base part 2 of the iron within the flange 8. The blocks 52 are arranged in staggered relation in rows diverging toward the rear of the iron and the heating wire 48 is looped about the blocks and connected by conductors 54 with the binding screws 46 of the terminal posts 28. Each of the conductors 54 consists of two wires twisted together and tightly embracing an annular block 56 of insulating material loosely mounted on a pin 58 projecting upwardly from the top surface of the base part. The several annular blocks 50 and the two annular blocks 56 are held on their pins by the closure for the heating chamber consisting of the asbestos sheet 10 and the metal plate 12 which engage the upper ends of the blocks. The blocks 50 are provided with peripheral grooves forming flanges which hold the coiled resistance or heating wire in position on the blocks, and the blocks 56 are provided with similar grooves forming flanges for holding the conductors 54 in position. To prevent any danger of the end portions of the coiled heating wire coming in contact with the metal of the iron, semi-cylindrical annular blocks 60 are loosely mounted on projections 62 on the rear wall of the flange and are so positioned as to engage said end portions of the heating wire and hold it against their blocks 50.

The sad iron handle comprises a U-shaped metal strap 64 having its ends connected by the usual wooden handle. The handle and the top and base parts of the iron are secured together by means of a bolt 66 which extends through an aperture in the U-shaped metal strap 64, an aperture in the top part 4, and apertures in the asbestos sheet 10 and metal plate 12 and is screw-threaded into a boss 68 on the base part, an inverted cup-shaped spacing washer 70 being interposed between the strap 64 of the handle and the top of the top part 4 and surrounding the shank of the bolt. The handle is prevented from turning relatively to the top part by means of shouldered studs 72 riveted to its strap 64 at opposite sides of the bolt 66 and extending into apertures or sockets 74 in the top part, the studs being provided with spacing flanges 76 interposed between the handle strap and the top part.

With this construction it will be apparent that upon removing the screws 32 that secure the terminal posts and their mounting to the top part and by unscrewing the bolt 66 from the base part the handle and top part of the iron may be removed from the base and separated from one another. By removing the closures 10 and 12 from the flange 8 access may be had to the heating element 48, and the mounting of the heating element is such, as above described, that it may be easily removed and replaced. As there are no projecting parts on the outer surface of the top part of the iron this surface may be easily polished.

Instead of making the studs 72 fast to the handle they may be cast upon the cover portion as shown at 78 in Fig. 6, a boss 80 integral with the cover taking the place of the washer 70.

In order to compensate for the hollow construction of the rear portion of the top part of the cover which brings its center of gravity to the front of its central portion, and so as to bring the center of gravity of the iron as a whole near the center of the iron, the top surface of the base part of the iron is inclined upwardly and rearwardly as shown so as to thicken the rear portion of the base part and bring its center of gravity to the rear of its central portion.

From the foregoing it will be apparent that a simple, strong and well-balanced iron is provided in which all of the parts thereof may be easily assembled and taken apart.

While it is preferred to employ the specific construction and arrangement of parts illustrated and described, it is to be understood that this construction and arrangement is not essential except so far as specified in the claims and may be changed or modified without departing from the broader features of the invention.

What I claim is:

1. A sad iron having, in combination, a base part having an upwardly extending marginal flange spaced from the edge thereof, a top part covering the flange and having a depending lip surrounding and spaced from the flange and engaging the margin of the base part with its lower edge bevelled inwardly and upwardly from said margin, an electrical heating element interposed between the top and base parts within said flange, and means for detachably securing the top and base parts together.

2. A sad iron having, in combination, a base part, an upwardly extending marginal flange spaced from the edge thereof, a closure resting on the flange and co-operating with the flange to form a heating chamber, an electrical heating element located in the heating chamber, a top part having a lip surrounding said flange and engaging the margin of the base part, and having a plurality of downwardly extending ribs engaging said closure to provide spaces between said closure and the top part, and means for detachably securing the top and base parts together.

3. A sad iron having, in combination, a base part having an upwardly extending marginal flange, a closure engaging said flange to cooperate therewith to form a heating chamber, a plurality of blocks of

insulated material arranged in staggered relation on the base part within said heating chamber, a top part engaging said closure, electrical terminals mounted on the top part, a heating element comprising a coiled wire successively looped about said blocks and having its ends connected with said terminals, respectively, and means for securing the top and base parts together.

4. A sad iron having, in combination, a base part having an upwardly extending marginal flange spaced from the edge thereof, a sheet of insulating material resting on said flange to cooperate therewith to form a heating chamber, an electrical heating element located in said heating chamber, a plate of sheet metal resting on said sheet of insulating material and having a plurality of depending lips extending through slots in said insulated material and engaging the inner wall of said flange to hold the insulating material in place, a top part having a depending lip surrounding said flange and engaging the margin of the base part, and means for securing the top and base parts together.

5. A sad iron having, in combination, a base part, a top part having its rear portion of hollow construction with a portion of the wall thereof inclined downwardly and rearwardly and provided with a transverse slot, an electrical heating element between said base and top parts, means for detachably securing the base and top parts together, a supporting strip arranged on the inner side of said wall, screws extending inwardly through said wall for detachably securing said supporting strip to said wall, terminals in the form of posts carried by and insulated from said strip, the same being for engagement with the socket member of an electrical conducting cord, and means for electrically connecting the inner ends of said terminal posts and the ends of said heating element.

6. A sad iron having, in combination, a base part, an electrical heating element supported on the top surface of said base part, a top part enclosing said heating element and having its center of gravity in front of its central portion, and means for detachably securing the base and top parts together, said base part having its center of gravity in the rear of its central portion so as to bring the center of gravity of the iron as a whole at approximately the center of the iron.

7. A sad iron having, in combination, a base part having an upwardly extending marginal flange spaced from the edge thereof, a top part covering the flange and having a depending lip surrounding and spaced from the flange and covering the margin of the base part, an electrical heating element interposed between the top and base parts within said flange, a handle part, and a single removable means for detachably securing the top and base parts together.

JOSEPH F. LAMB.