J. F. LAMB.

ELECTRICALLY HEATED SADIRON.

APPLICATION FILED JULY 23, 1921.

1,437,111. Patented Nov. 28, 1922.

Fig. 1.

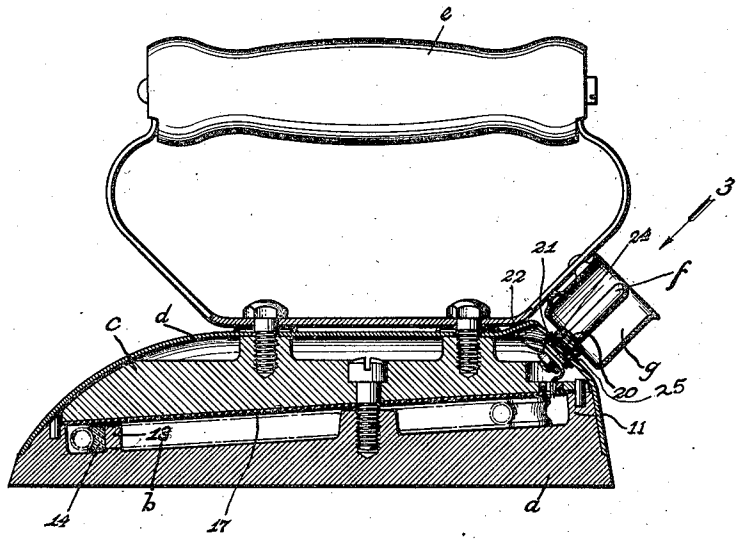


Fig. 3.

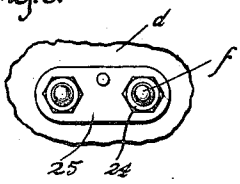
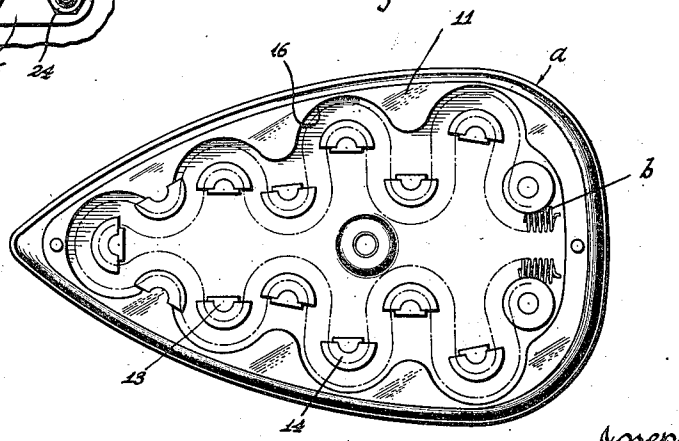


Fig. 2.



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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 July 23, 1921. Serial No. 486,943.

To all whom it may concern:

Be it known that I, JOSEPH F. LAMB, a citizen of the United States, and a resident of New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Electrically-Heated Sadirons, of which the following is a specification.

The object of the present invention is to produce an electrically heated device, such as a sad iron, having various features of novelty and advantage.

More particularly the invention has as its aim to provide a device of this sort wherein the heat generated is so distributed to the mass of metal to be heated as to effect the greatest advantage and efficiency. In the embodiment of the invention here shown for illustrative purposes, the arrangement is such that that portion of the sole or base plate of the sad iron, for instance the toe which is desired to do the most work in pressing, is more quickly heated and retained at a higher temperature than other parts of the sole plate.

In the accompanying drawings:

Fig. 1 is a vertical sectional view taken longitudinally through my improved sad iron.

Fig. 2 is a top plan view of the sole plate with the heating element mounted therein, and

Fig. 3 is a detail view of the terminals looking in the direction of the arrow 3 of Fig. 1.

Referring to the drawings in detail, *a* denotes a sole plate, *b* a heating element carried thereby, *c* a weight, *d* a cover, *e* a handle and *f* terminal plugs connected to the heating element *b* and protected by the guard *g*.

As clearly shown in Fig. 1, the sole or base plate *a* of the iron is of gradually increasing thickness from its toe to its heel, and arising from the edge of this plate is a marginal rib 11. Within the chamber formed by this rib and preferably made integrally with the base plate *a*, are spaced projections 13 against which are positioned heat conducting electrical insulators 14 supporting upon their external surfaces the heating element *b* in the form of a bare coiled resistance wire. Preferably the inner edge of the marginal rib 11 is scalloped as indicated at 16 to bring it more closely adjacent to the winding of the resistor. A layer 17 of insulating material is interposed between the rib 11 and the weight *c* to prevent the heat from flowing to the latter.

It will be seen that with the arrangement thus far described, when the current is turned onto the resistance wire *b* the heat, in part, is radiated directly to the body portion of the base plate and to the marginal rib 11 and, in part, is conducted to the sole plate through the bushings 14 and the projections 13. Since the sole plate is of reduced thickness at its toe portion, this portion of the plate will be first and very quickly brought to the desired temperature. This toe portion of the iron will be maintained at a uniform temperature since the heat is supplied thereto as quickly as it is drawn therefrom by the work. Thus the heat is properly distributed to the sole plate and the portions of this plate will be maintained at such relative temperatures as to effect the greatest efficiency and advantage.

The terminals *f* are in the form of posts or pins having their inner ends of enlarged diameter and threaded as at 20. These posts extend through openings 21 in the cover *d* and have secured to their inner ends, by means of nuts 22, the ends of the resistance wire. The posts are secured in place by nuts 24 secured onto the projecting threaded portions 20 of the posts and against the cover. The mica sheets 25 prevent short circuiting. It will be seen that since the nuts 24 are where they can be easily gotten at, the posts may be very readily and quickly connected and disconnected from the cover.

In assembling the parts, the ends of the resistance wire are connected to the terminals, these terminals are then passed from the inside of the casing through the openings 21 and then the nuts 24 are slipped over the outer ends of the terminals and screwed home against the cover. When it is desired to take off the cover this may be done without disconnecting the terminals from the resistance wire.

It is of course obvious that my invention is susceptible of various modifications and changes which are within the spirit of the invention without departing from the scope

of the following claims, it being understood that the present disclosure of my invention is by way of illustration only and it is not to be taken as restrictive of my conception.

I claim as my invention:—

1. In a device of the character described, a sole plate generally wedge shape in vertical longitudinal section and being of less thickness at its toe than its heel, and a heating element associated therewith.

2. In a device of the character described, a sole plate of varying thickness, spaced projections on the upper surface thereof, a bushing associated with each projection, and a resistance wire supported by said bushings.

3. In a device of the character described, a sole plate varying down in thickness towards its toe and having an upstanding marginal rib and an electrical heating element supported on the upper face of said sole plate in heat conducting relation thereto and also in heat radiating relation with said sole plate and rib.

4. In a device of the character described, a sole plate gradually decreasing in thickness towards its toe, and electrical means for heating said sole plate.

5. In a device of the character described, a sole plate gradually decreasing in diameter towards its toe, and a heating element in heat conducting and in heat radiating relation to said plate.

6. In a device of the character described, a sole plate, a cover therefor having openings, a heating element within said cover, terminal posts having enlarged threaded ends extending through the openings in said cover, means for connecting said heating element to the inner ends of said terminals, and nuts screwed onto the projecting threaded portions of said terminals against said cover.

JOSEPH F. LAMB.