Dec. 19, 1922. 1,439,121.

A. E. REIMERS.

HEATING UNIT FOR SADIRONS.

FILED DEC. 13, 1920.

Fig. 1,

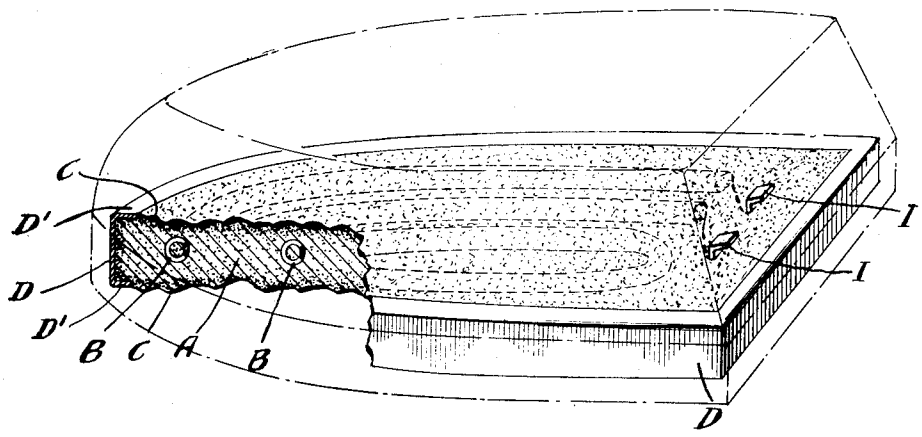


Fig. 2,

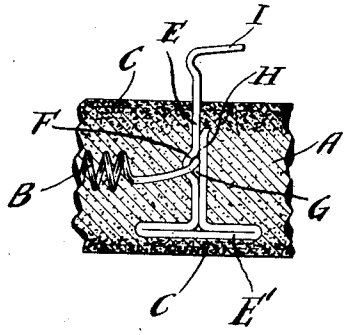
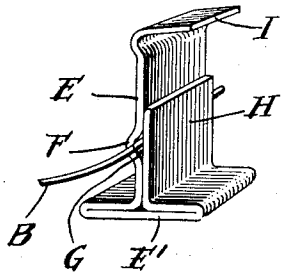


Fig. 3,



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UNITED STATES PATENT OFFICE.

ALFRED E. REIMERS, OF MIDDLETOWN, NEW YORK.

HEATING UNIT FOR SADIRONS.

Application filed December 13, 1920. Serial No. 430,120.

To all whom it may concern:

Be it known that ALFRED E. REIMERS, citizen of the United States, and resident of Middletown, in the State of New York, has invented certain new and useful Improvements in Heating Units for Sadirons, of which the following is a specification.

My invention relates to sad irons and especially to electrically heated irons of this character. The object of my invention is to provide a heating unit for sad irons that can be made and sold as an independent article of manufacture and adapted to fit closely in the body portion of an iron.

A further object is to provide means for strengthening the heating unit so that it will not be easily broken.

Referring to the drawings, which form a part of this specification,

Fig. 1 is a perspective view of a heating unit embodying my invention and shown partly in section;

Fig. 2 is a cross-section through a part of the unit adjacent a binding post and illustrating the means employed to connect the end of the resistance wire embedded in the element to the binding post also embedded therein, the upper end of which projects above the plastic material of the unit to form a terminal contact spring.

Fig. 3 is a perspective view of the binding post and spring terminal.

A indicates a plastic material that is a good insulator for the heating coils B embedded therein and is also a good conductor of heat. There are a number of different plastic materials and compounds used by the various makers of sad irons but the best material for the purpose are composed of certain furnace slags—oxides and clays, which are very friable, porous and granular, and easily broken. I have therefore conceived a method of strengthening this material consisting in impregnating the outer position indicated by C—C, etc., with silicate of sodium after it has been molded to proper form and then baking the mass, thus stiffening and strengthening the entire element.

I also prefer to encase the edges of the plastic with a metal casing D which overlaps the top and bottom surface of the plastic for a short distance as illustrated at D′, D′, and is disposed flush with the plane surfaces of said material. By this construction I am able to provide a unit that will fit accurately in the chamber formed in the cast iron base of the sad iron and contact the inner side portions thereof to transmit the heat from the heating unit by conduction thereto. The plastic material is pressed into the casing or frame D and formed to provide plastic surfaces before it is baked to set the plastic and silicate. The binding post E is made of sheet metal and provided with a flanged base E′ to afford stability, and bent at F to provide a conduit G to receive and hold the end of the heating coil B, the spring action of the leaf H serving to securely clamp the wire in position. The upper end I is bent or offset at a right angle to the vertically disposed portion E to provide a spring contact terminal for engagement with the terminal pin carried by the cover portion of the sad iron. It will be observed that the clamp portion of the binding post and end of the heating coil are embedded firmly in the plastic material, and that the end of the heating element may be instantly connected or disconnected from the binding post.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A heating unit comprising a plastic body, of friable material, a heating element embedded therein, and a casing adapted to fit into the body of a sad iron, extending around the plastic material to protect the same.

2. A new article of manufacture comprising a unit having a body portion made of friable material the exposed surfaces of which are impregnated with strengthening material and having terminal contact posts embedded therein, the upper ends of which are exposed; said unit being shaped to fit into the chamber of the body portion of a sad iron and freely removable therefrom.

3. A new article of manufacture comprising a unit having a body portion made of friable material, the exposed surfaces of which are impregnated with strengthening material and having terminal contact posts embedded therein, the upper ends of which are exposed; and a casing extending around the plastic material to protect the same; said unit being shaped to fit into the chamber of the body portion of a sad iron and freely removable therefrom.

4. A heating unit comprising a plastic body of friable material having a heating

element embedded therein, and the surface of which is impregnated with a strengthening ingredient, and a binding post embedded in said plastic body having a spring clamp adapted to hold one end of the heating element in detachable relation.

5. A heating unit comprising a plastic body of friable material having a heating element embedded therein, and the surface of which is impregnated with a strengthening ingredient, a binding post embedded in said plastic body having a spring clamp adapted to hold one end of the heating element in detachable relation, and the upper end of which is exposed and formed to yield under pressure.

6. A heating unit comprising a plastic body of friable material having a heating element embedded therein, and the surface of which is impregnated with a strengthening ingredient, a binding post embedded in said plastic body having a flanged base and a spring clamp adapted to hold one end of the heating element in detachable relation.

7. A new article of manufacture comprising a unit having the combination of a body portion formed of plastic material having a heating element embedded therein and two terminals, two binding posts connected to said terminals the tops of which are exposed, and means for reinforcing said friable material; said unit being formed to fit into a chamber formed in a sad iron and freely removable therefrom.

8. A heating unit comprising a plastic body of friable material having a heating element embedded therein, and the surface of which is impregnated with a strengthening ingredient, and a binding post embedded in said plastic body having a clamp adapted to hold one end of the heating element in detachable relation.

Signed at New York city, in the county of New York and State of New York, this seventh day of December A. D. 1920.

ALFRED E. REIMERS.

Witness:

FRANK M. ASHLEY.