

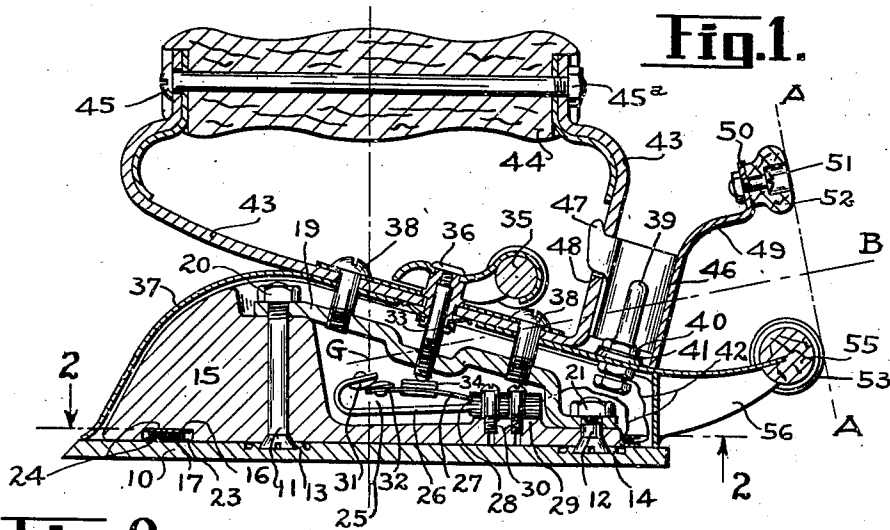
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E. D. PERRY

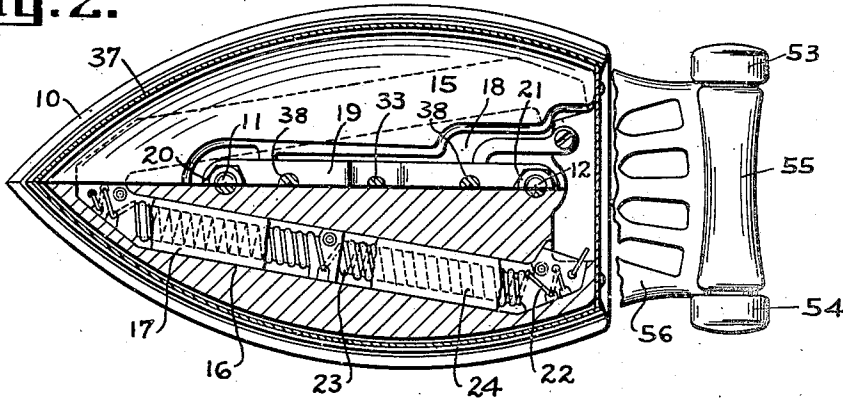
2,140,852

SADIRON

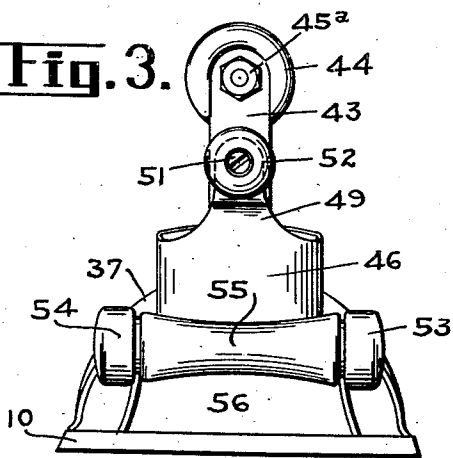
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**Fig. 2.**



**Fig. 3.**



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SADIRON

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Original application October 31, 1932, Serial No. 640,383. Divided and this application April 3, 1936, Serial No. 72,512

2 Claims. (Cl. 38—79)

This invention relates to electrically heated flat irons or sad-irons, and more particularly to the type having a metal sole-plate and an attached stand adapted to hold the iron in an upright position when not in use.

This application is a division of an earlier application by the same inventor, Serial No. 640,383, filed October 31, 1932, and entitled "Electric sad-iron", (patented May 19, 1936, No. 2,041,429).

One object of this invention is to provide an electric sad-iron of the above nature in which the weight is concentrated near the "toe" or point of the iron where the greatest working pressure is required.

A further object is to provide a device of the above nature, which may be placed upright upon its rear end in an elevated position to avoid scorching the surface upon which it rests.

A further object is to provide a device of the above nature which will be simple in construction, inexpensive to manufacture, easy to manipulate, ornamental in appearance, and very efficient and durable in use.

With these and other objects in view, there has been illustrated in the accompanying drawing one form in which the invention may be conveniently embodied in practice.

In the drawing:

Fig. 1 represents a longitudinal sectional view of an electric sad-iron embodying the invention.

Fig. 2 is a half sectional plan view of the same, the lower part of said figure showing a longitudinal section taken on the line 2—2 in Fig. 1, and the upper part a view of the interior of the iron with the handle and hood removed.

Fig. 3 is a rear end view of the sad-iron clearly showing the three-point support for the iron when arranged in an upright position.

It is customary in many electric sad-irons to attach a metal bracket at the rear of the hood, which, together with a projection on or near the plug-guard forms a stand upon which the iron may be rested in an upright position when not in use. Owing to the heat conductivity of the metal of which these parts are usually constructed there is a tendency for the supporting points to become overheated, so that the iron may scorch or burn the surface upon which it rests.

By means of the present invention, the above and other disadvantages have been overcome.

Referring now to the drawing, in which like reference numerals denote corresponding parts throughout the several views, the numeral 10 indicates a metal sole plate made relatively thin so as to facilitate the flow of heat into the ma-

terial being ironed, said sole plate being secured in position on the lower side of a filler block 15, as by bolts 11 and 12. The bolts 11 and 12 are preferably attached to the sole plate 10 by spinning or staking a pair of upstanding annular ribs 13 and 14 inwardly upon the conical heads of the bolts 11 and 12, as fully described in a co-pending application for Letters Patent, Serial No. 554,640, patented June 23, 1935, under Number 2,045,284.

Resting upon and in intimate thermal contact with the sole plate 10 is a relatively heavy metal filler block or weight 15, having perforations for receiving the bolts 11 and 12, and also having upon its lower surface a V-shaped shallow groove 16 adapted to receive a V-shaped flat heating element 17 to be described later. The filler block 15 has a deep stepped longitudinal recess 18 in its upper rear part and slopes downwardly from front to rear so that the center of gravity of the iron will lie well forward of the longitudinal center, and the weight of the block will be concentrated toward the point of the iron. A bridge piece 19 formed from relatively stiff metal is adapted to rest upon flat seats formed in the upper surface of the filler block and is engaged by the bolts 11 and 12 which pass through holes therein near its ends. Nuts 20 and 21 serve to retain the bridge piece 19 securely upon the filler block 15, and at the same time serve to clamp it tightly against the sole plate 10.

The heating element 17 consists of a flat ribbon 22 of nichrome wire or the like, wound upon a narrow V-shaped strip or core 23 of refractory electrically insulating material such as mica, and adapted to fit in the groove 16 on the lower side of the filler block 15. Secured above and below the core strips 23 are a pair of thin plates of mica 24, preferably made slightly wider than the core strips 23, said plates 24 serving to provide electrical insulation between the conducting ribbon 22 and adjacent metal parts of the iron sole plate 10 and the filler block 15. By reason of the V-shaped construction of the heating element 17, as shown in the drawing, it will be seen that there is developed greater intensity of heat per unit area of the sole plate 10 toward the "toe" of the iron than toward the "heel". Also, due to the shape of the filler block, a greater amount of heat will be "stored" at the front than at the rear of the iron.

Automatic control of the temperature of the sad-iron is effected by means of a thermostat 25 positioned in the recess 18, said thermostat consisting of a lower horizontal bimetallic contact arm 26 and an upper metal spring 27 interleaved

with insulating plates 28 and secured to a boss 29 on the filler block 15, as by screws 30. Contacting electrical contacts 31 and 32 carried upon the bent-over extremity of the arm 26 and the end of the spring 27, respectively, are disposed in such a manner that as the temperature of the bimetallic arm 26 rises, the contacts 31 and 32 are caused to separate from each other, thus opening the heating circuit. Regulation of the temperature of the iron is effected by means of an adjusting screw 33, threadedly engaged with the bridge-piece 19 with its point bearing upon an insulated abutment 34 mounted upon the metal spring 27. The adjusting screw 33 projects upward and terminates in a handle 35 secured in place as by a screw 36. The handle 35 is adapted to be manually rotated to change the setting of the spring 27 in relation to the contact arm 26, thus varying the temperature at which the contacts 31 and 32 of the thermostat will separate.

In order to form a cover for the filler block 15, the bridge piece 19, the thermostat 25, and associated parts, provision is made of a thin stamped metal hood 37, the bottom edge of which is adapted to fit against the edge of the sole plate 10, said hood being firmly held in position by screws 38 passing through the hood and threadedly engaged with the bridge piece 19.

For the purpose of establishing electrical connection between the heating element and the outside circuit, provision is made of a pair of contact pins 39, mounted at the rear end of and passing through perforations in the hood 37, to which they are secured as by nuts 40. Insulation is provided by washers 41 of mica or the like. The spacing of the pins 39 is such as to fit a conventional standard socket (not shown) connected to a source of current.

The electrical parts within the sad-iron are connected by suitable conductors 42 in such a manner as to place the heating element 17, the thermostat 25 and the contact pins 39 in series.

Mounted upon the exterior top surface of the hood 37, and secured thereto as by the screws 38, is a formed substantially U-shaped metal frame 43, which, in turn, supports a tubular handle 44 of wood or similar thermal insulating material held in position by a bolt 45 and nut 45a. In order to secure a good operating balance, the handle 44 is positioned well forward, so that its middle point will come substantially in a perpendicular line above the center of gravity G of the assembled sad-iron.

Secured to the upper part of the rear end of the hood 37, is an elliptical metal guard member 46, surrounding the projecting contact pins 39 in such a manner as to form a housing for the electrical socket, and said guard member is prevented from displacement by a forwardly extending upturned lip or hook member 47 engaging in a slot 48 formed in the rear arm of the U-shaped frame 43. Projecting rearwardly and upwardly from the guard member 46 is an inclined tongue 49 formed integral therewith and having a vertical upper end 50 upon which is secured, as by a bolt 51, a knob 52 of wood or similar thermal insulating material, adapted to form one element of a three-point support for the iron when

tipped backward into an upright position. The other two elements of the three-point support are formed by a pair of enlarged ends 53 and 54 of a "spool" 55 of wood or the like, said "spool" being mounted in an inclined bracket 56 formed integral with the rear end of the hood 37. The knob 52 and spool 55 are so positioned relatively to one another that the plane A—A (Fig. 1) is intersected at a point B by a line G—B drawn perpendicular thereto through the center of gravity G of the sad-iron, said line lying well within the triangle formed by the three supporting points 52, 53 and 54, thus assuring a stable support for the sad-iron when placed in a vertical position with the line A—A lying on a horizontal surface, when out of use.

While there has been disclosed in this specification one form in which the invention may be embodied, it is to be understood that this form is shown for the purpose of illustration only, and that the invention is not to be limited to the specific disclosures, but may be modified and embodied in various other forms without departing from its spirit. In short, the invention includes all the modifications and embodiments coming within the scope of the following claims.

Having thus fully described the invention, what is claimed as new, and for which it is desired to secure Letters Patent, is:

1. In a sad-iron, a body structure, said body structure being of relatively great mass and height at the forward end of said sad-iron and being of diminishing mass and height toward the rear of said sad-iron, a sole plate secured to said body structure, a protective hollow downwardly concave hood closely adjacent said body structure and covering said body structure and being located above said sole plate, said hood sloping downwardly toward the rear and following the contour of said body structure, a handle for manipulating said sad-iron, a support for said handle connected to said body structure through said hood, support means extending rearwardly from said handle support, said hood having an integral rearward extension above said sole plate and below said support means, said extension and said support means providing, when the sad-iron is tipped up on end out of use, a stable temporary rest with the mass of said sad-iron concentrated between said support means and said rearward extension.

2. In a sad-iron, a body structure, said body structure being of relatively great height at the forward end of said sad-iron and being of diminishing height toward the rear of said sad-iron, a sole plate secured to said body structure, a protective hollow downwardly concave hood covering said body structure and being located above said sole plate, said hood sloping downwardly toward the rear, a handle for manipulating said sad-iron, a support for said handle connected to said body structure through said hood, support means extending rearwardly from said handle support, said hood having an integral rearward extension above said sole plate and below said support means, said extension and said support means providing a temporary rest when the sad-iron is tipped up on end out of use.

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