March 26, 1929. D. ZORGO 1,706,834

ELECTRIC FLATIRON

Filed March 26, 1926

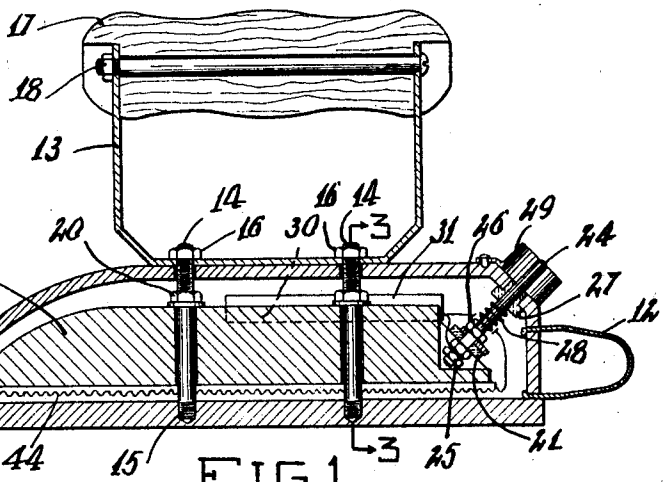


FIG. 1

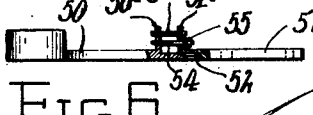


FIG. 6

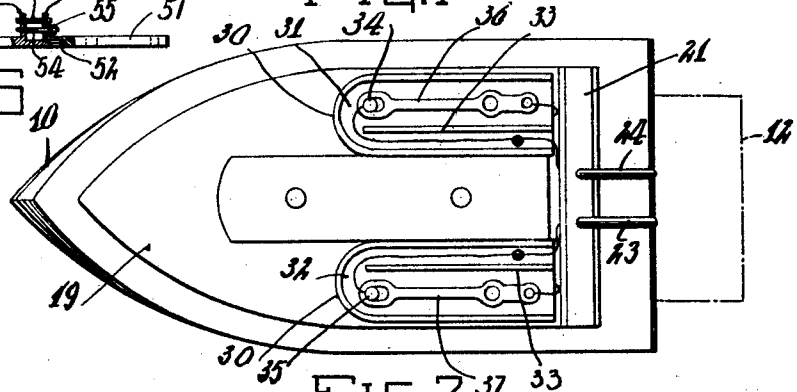


FIG. 2

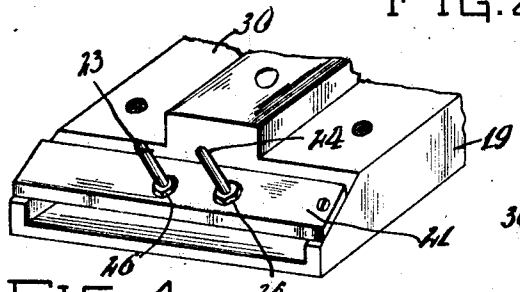


FIG. 4

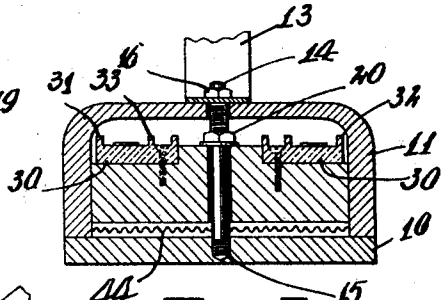


FIG. 3

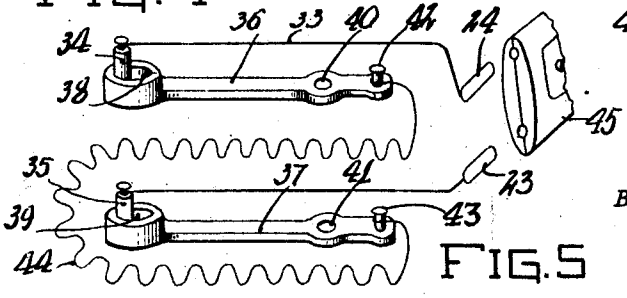


FIG. 5

INVENTOR
Desider Zorgo
BY
ATTORNEY

Patented Mar. 26, 1929. 1,706,834

UNITED STATES PATENT OFFICE.

DESIDER ZORGO, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR OF ONE-FOURTH TO MIKLOS SZAKACS, OF BROOKLYN, NEW YORK.

ELECTRIC FLATIRON.

Application filed March 26, 1926. Serial No. 97,544.

This invention relates to improvements in electric flat irons, and the invention has for an object the provision of a novel automatic cutout to prevent overheating.

A further object of the invention being the provision of a simple, inexpensive device, expanding upon being heated, and designed to cut off the electric current supplied to heat the flat iron, upon the reaching of a certain predetermined temperature.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

Referring to the drawing forming a material part of this disclosure:

Fig. 1 is a central vertical sectional view of a flat iron constructed according to this invention.

Fig. 2 is a plan view thereof with the handle and cover removed.

Fig. 3 is a transverse vertical sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a fragmentary perspective detail view of the inner body.

Fig. 5 is a schematic diagram of the wiring connections.

Fig. 6 is a modification showing an adjustable expansion connector.

The bottom plate 10 of customary construction, is provided with a cover 11, having a name plate 12 attached to the back thereof. On the top face of said cover, a handle support 13 is fastened by means of bolts 14 threadedly engaging at their lower ends the bottom plate 10, as indicated at 15, and having nut 16 at their upper ends. The handle 17 is fastened to the upper end of handle support 13, by means of a bolt and nut 18.

The inner body 19 is held in place by nuts 20, engaged on the body of said bolts 14. An insulation cross support 21 is fastened to said inner body by screws 22, and carries a pair of terminal posts 23 and 24, each of which has a pair of terminal support nuts 25 on the lower ends, co-acting with nut 26 above said cross support 21, to hold said post in an upwardly inclined position. The terminal posts are of sufficient length to project through the cover 11, and insulated therefrom by insulation bushing 27, which is urged into its correct position by the action of an expansion spring 28. A guard 29 fastened to said cover 11, encircles and protects the projecting terminal ends.

The inner body 19 is provided with two upper recesses 30, accommodating a pair of insulation members 31 and 32, formed with partitions 33, establishing separate channels. From terminal 24 a wire 33 leads to a connection post 34, and from terminal 23 a wire leads to connection post 35, said posts being located in one of the channels of each insulation members 31 and 32. Connection members 36 and 37, made of conducting material of a high coefficient of heat expansion, are formed with large apertures 38 and 39, which engage over the posts 34 and 35 respectively. These connecting members have apertures 40 and 41 to receive screws for fastening said members to the insulations 31 and 32, and are also provided with terminal connections 42 and 43, which connect in series with a heating winding 44 housed between the upper face of the bottom plate 10, and the lower face of the inner body 19, in the customary way. A customary socket 45 connected with live electric leads is engageable with the posts 23 and 24.

When the socket 45 is engaged on the terminals 23 and 24, an electric current is caused to flow, say, from the terminal 24 through lead 33 to the post 34, which makes contact with 36, allowing the current to reach 42, thereafter flowing through the heating winding 44, to terminal 43, through connection 37, contacting with post 35, flowing thereon to terminal 23. The heating coils soon begin to glow, and when a certain predetermined temperature is reached, depending on the construction of members 36 and 37, the members 36 and 37 are caused to expand, thereby breaking the electrical circuit due to disconnection between the posts 34 and 35, and the expansion members 36 and 37. Breaking the circuit stops the current, allowing a cooling of the heating coil, and therefor a contraction of expansion members 36 and 37, which will cause the circuit to be again closed between the posts 34, 35, and the members 36, 37, whereby an overheating of the iron is prevented.

In the modification shown in Fig. 6, the expansion member is adjustable, so as to permit a setting for the making and breaking of the electrical circuit at different temperatures. The expansion member is formed of

two parts 50 and 51, joined by a dove-tailed connection 52. Part 50 is provided with flange 50^a, aligning with a similar flange 51^a of part 51. A stud 53 having a right hand thread on one end, and a left hand thread on the other end, engages respectively both flanges. Another stud 54 is fixed in flange 50^a, passes loosely through flange 51^a, and is thereafter provided with locking nuts 55. The desired adjustment of the member is accomplished by stud 53, and locking thereof is accomplished by stud 54 and nuts 55.

While I have described my invention with some degree of particularity, I realize that in practice various alterations therein may be made. I therefore reserve the right and privilege of changing the form of the details of construction, or otherwise altering the arrangement of the correlated parts without departing from the spirit or the scope of the appended claims.

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

1. A device of the class described, an insulation member having fastened thereon at one point an expansion member formed at one end with a large opening, engaging over a terminal post, the wall of said opening normally forming electrical connection with said terminal post, said expansion member being formed at its other end with a binding post, whereby an electrical circuit exists between said terminal post and said binding post, and upon the expansion of said expansion member due to heating to a predetermined temperature, said electrical circuit is broken.

2. A device of the class described, an insulation member having fastened thereon at one point an expansion member formed at one end with a large opening, engaging over a terminal post depending from said insulation member, the wall of said opening normally forming electrical connection with said terminal post, said expansion member being formed at its other end with a binding post, whereby an electrical circuit exists between said terminal post and said binding post, and upon the expansion of said expansion member due to heating to a predetermined temperature, said electrical circuit is broken.

3. An adjustable expansion member, for an electric iron of the class described, comprising a front and rear portion joined by a dove-tailed connection, each portion being provided with a flange, said flanges being aligned with each other, a stud having a right hand thread on one end, engaging one of said flanges, and a left hand thread on the other end, engaging the other of said flanges, and another stud fixed to one of said flanges, passing loosely through the other of said flanges, and engaged at the free end with locking nuts.

In testimony whereof I have affixed my signature.

DESIDER ZORGO.