Dec. 3, 1935. M. E. KORNE ET AL 2,023,327

ELECTRIC FLATIRON

Filed Dec. 10, 1934

Fig. 1.

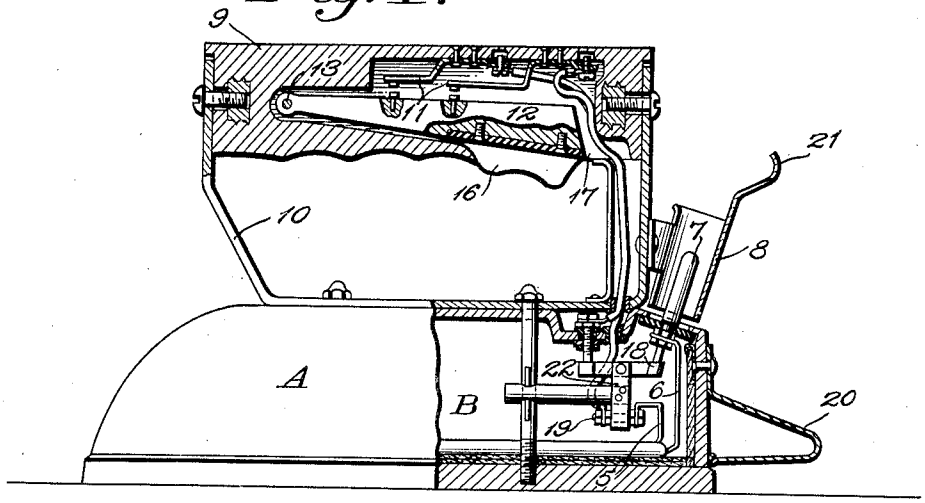


Fig. 2.

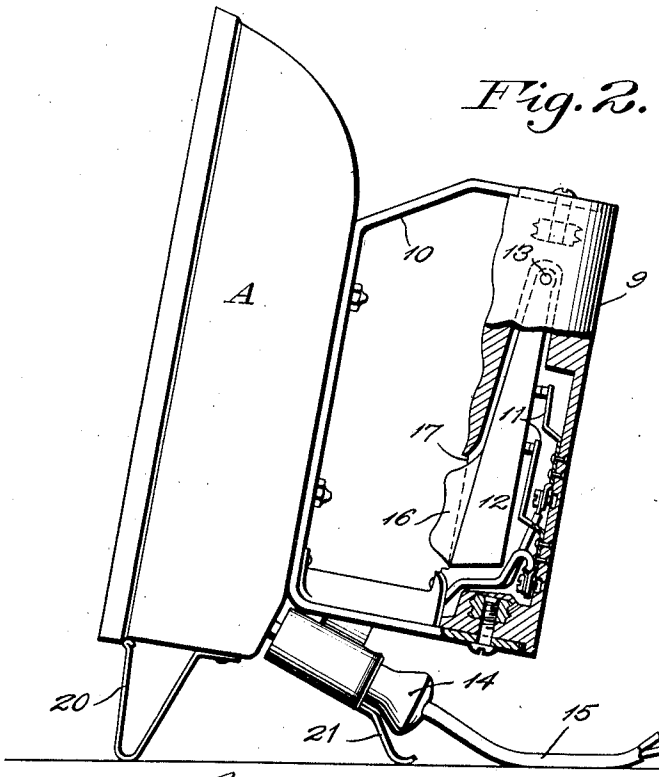
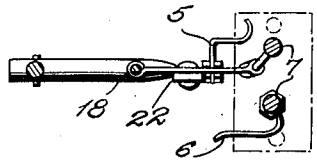


Fig. 3.



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ELECTRIC FLATIRON

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1 Claim. (Cl. 219—25)

The invention relates to electric irons or electric flatirons and more especially to a safety switch for irons of this type.

The primary object of the invention is the provision of a device of this character, wherein the same is in the form of a switch arranged within the circuit for the heating element of the iron, so that should such iron be left standing upon a piece of work, the circuit will automatically open to avoid the burning of such work or the overheating of the iron and on the upsetting at the heel end of the iron the switch will automatically close the circuit to the heating element of said iron for the heating thereof.

Another object of the invention is the provision of a device of this character, wherein the switch, when the iron is in working position for ironing purposes, can be manually controlled for the closing of the circuit to the heating element or the opening of such circuit and thus such iron will be under direct control of the user, yet should the iron be brought to rest in working position, and the user being not in attendance, the circuit to the heating element of said iron will be opened and thus avoiding heating or overheating thereof and the resultant burning of the work if the iron is at rest thereon.

A further object of the invention is the provision of a safety device of this character, which is simple in construction, thoroughly reliable and efficient in its operation, easy of access for manipulation, strong, durable, positive in its automatic working, and inexpensive to manufacture and install.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention, and pointed out in the claim hereunto appended.

In the accompanying drawing:

Figure 1 is a side elevation of an electric iron, the same being partly in section and showing the safety device constructed in accordance with the invention applied thereto.

Figure 2 is a view similar to Figure 1 showing the iron upset or tilted at its heel end to be at rest, with the safety device automatically thrown for the heating of the said iron.

Figure 3 is a fragmentary horizontal sectional view showing in detail the connections with the electric heating element of the iron.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, A designates generally an electric flatiron, this being of any conventional or common type and having in the iron proper an electric heating element B, the wires 5 and 6 of its electric circuit being joined with terminal posts 7, these being located within a plug socket shell 8 made secure to the iron. The wires 5 and 6 of the circuit of the heating element B are trained upwardly into the grip part 9 of a handle 10 carried by said iron and their ends are joined within this grip with spring contacts 11 for an opening and closing switch arm 12 swingingly supported at one end by a pivot 13, the other end being suitably weighted so that when the iron is tilted at its heel end to be disposed angularly off of the perpendicular the said arm 12, by gravity, will move to circuit closing position by contact with the spring contacts 11 in the grip 9 of the handle 10, this being apparent from Figure 2 of the drawing.

Engageable with the terminal posts 7 is the usual separable connector plug 14 of a current supply lead 15 and thus when the connector 14 is engaged with the terminal posts 7 in the arm 12 in circuit closing position, the electric heating unit B will operate for the heating of the iron A on the iron being upset at the heel end and at rest in this position. When the iron is lowered into ironing position, as shown in Figure 1 of the drawing, the switch arm 12, by gravity, will move out of contact with the spring contacts 11 and thus the circuit to the electric heating element B will be opened so that there is no liability of the iron being further heated or becoming overheated with resultant damage to work upon which the iron may be resting.

The switch 12 is formed with a finger grip 16 which is exposed through an opening 17 in the underside of the grip 9 of the handle 10, so that when the iron is in ironing position the user of the iron, by engaging the finger of the hand with the finger grip or hold 16, may manually move the arm 12 to circuit closing position for the heating of the iron by the electric heating element or unit B therein. When the finger pressure is released the arm 12, by gravity, swings to circuit opening position.

The circuit wires 5 and 6 of the heating element or unit B include the connections 18 and 19, respectively, and hanger mountings therefor interiorly of the iron.

The iron A at its heel end carries a rest bracket 20, while the socket shell 8 has the heel rest ex-

tension 21, so that the iron can be supported when upset at the heel end thereof, as is shown in Figure 2 of the drawing, and thus while the iron is being heated by the element or unit B there is no liability of damage to the point of rest of the iron when in this upset position.

When the plug 14 has been separated from the posts 7 it is, of course, apparent that current to the heating element or unit B is shut off and then the iron can be either brought to rest in a horizontal plane or in the upset position, as shown in Figures 1 and 2 of the drawing, as the heating element or unit B is inactive.

The switch arm 12 in the mounting thereof in the grip 9 of the handle 10 functions as a trigger switch when the iron is in ironing position and as a gravity switch when the said iron is upset at the heel end thereof.

By reason of the disposition of the rest extension 21 with relation to the rest bracket 20 the plug 14 can be readily separated from the terminal posts 7 when the iron is in upset position to shut off current to its heating unit or element.

It is, of course, understood that the arm 12 is insulated from the finger-hold or grip 16 and also that the grip 9 of the handle is made of insulated material, as for example, wood, hard rubber or the like.

Furthermore, the connectors 18 and 19 are separated from each other by an insulated piece 22.

What is claimed is:

In an electric iron, a base forming an ironing body and having an electric heating element therein for arrangement in an electric circuit, a U-shaped bracket at the top of said base, a hand grip fitted in said bracket and having a recess therein and an opening through the under side thereof communicating with the recess, spring contacts arranged within said recess and included in the electric circuit for said heating element, a metal switch arm having one end pivotally mounted in the recess and its free end weighted and provided with an insulating finger piece which gravitates through the opening in the hand grip to bring the switch away from the contacts and break the circuit when the body is in ironing position and which switch will swing by gravity against the contacts and close said circuit when the said body is tilted to one side of the perpendicular.

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