March 7, 1939. A. W. FRENCH 2,150,029

ELECTRIC IRON

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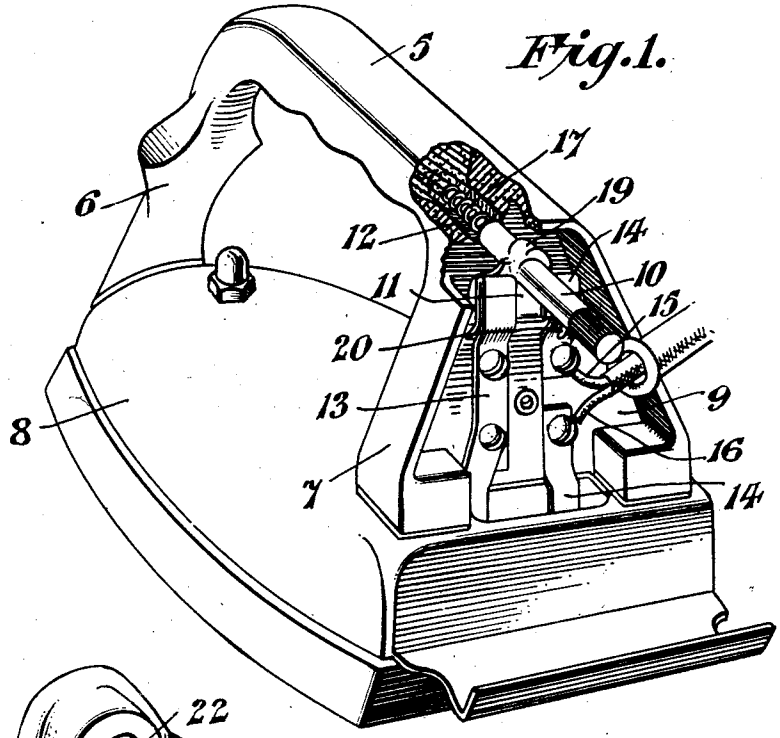


Fig. 1.

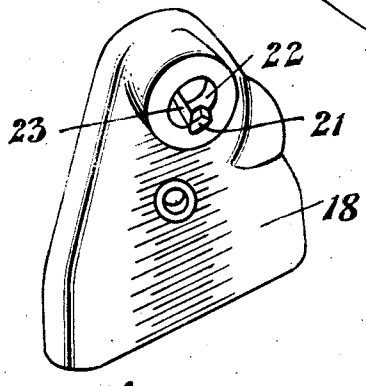


Fig. 2.

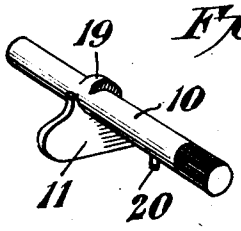


Fig. 3.

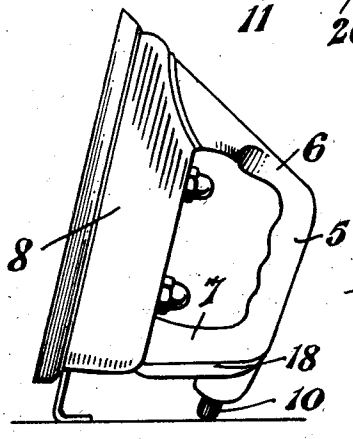


Fig. 4.

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ELECTRIC IRON

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2 Claims. (Cl. 219—25)

This invention comprises improvements connected with electric irons and has for its object to provide a switch combined with an insulating handle, so that when the iron is placed in its usual resting position the current can be automatically cut off. A further object is to arrange said switch so that it can be controlled to maintain the circuit to the heating element of the iron as for instance when the iron is being initially heated or to maintain the switch in a cut off position no matter in what position the iron is placed.

Referring to the drawing:

Figure 1 is a perspective view of an electric iron according to this invention, with the switch cover removed.

Figure 2 is a perspective view of the switch cover.

Figure 3 is a perspective view of the switch plunger removed, whilst,

Figure 4 is an elevation of the electric iron shown in Figure 1 in a resting position, with the switch plunger depressed and the circuit broken.

In carrying the present invention into practice, as shown upon the accompanying drawing, the handle 5 is preferably moulded integral with the vertical members 6, 7 which are adapted to be connected to the body 8 of the iron from one of the synthetic resin or like insulating materials.

At the rear of the handle 5 and preferably on the axis of same is formed a recess 9 in which is positioned a switch. Said switch consists of an insulated plunger 10 in which is positioned a contact member 11.

Secured within the recess 9 in the handle are two switch contact members 13, 14 which are connected to the leads of the heating element in the iron. The contact member 14 is broken, the two sides of which are connected to the two leads 15, 16 of the flexible connection. The contact members 13, 14 are connected when the contact member 11 mounted on the switch plunger 10 is in contact with same as shown in Figure 1.

Positioned at the rear of the plunger 10 within the recess 12 in the handle is a compression spring 17 which normally retains the contact member 11 on the plunger 10 in contact with the fixed contacts 13, 14 in the handle 5 to complete the circuit.

The plunger 10 is of a sufficient length to extend beyond the switch cover 18 of the recess 9 formed in the end of the handle and may be formed with a shoulder 19 on same which is adapted to engage the rear side of the cover 18 to limit its movement.

It will be seen that when the iron is turned onto its end as shown in Figure 4, the bottom of the iron is in a substantially vertical position, the plunger 10 resting on the surface on which the iron is positioned and the weight of the iron will overcome the resistance of the compression spring 17 and break the circuit to the heating element by moving the contact 11 out of contact with the contact members 13 and 14. The circuit will be automatically restored on the iron being positioned into its ironing position, the spring 17 returning the plunger 10 to its normal position when the contact member 11 is brought into contact with the contact members 13, 14 to complete the circuit.

If it is desired to retain a closed circuit to the heating element, when the iron is turned into its vertical position, such as for instance, when the iron is being initially heated, provision is provided for this by positioning a peg 20 on the plunger 10 which is adapted to be turned into engagement with a bayonet slot 21 formed within the cover 18 in which is provided a hole 22 in which said plunger 10 operates, so that the contact member 11 on the plunger 10 is retained in contact with the contact members 13, 14 within the recess 9 in the handle 5 when the iron is turned into its substantially vertical position as shown in Figure 4.

The rear edge of the hole 22 in the cover 18 is preferably provided with a similar bayonet slot to 21, the two bayonet slots being connected by the slot 23 in which the peg 20 can pass, so that when it is desired to break the circuit and retain it in its broken position, when the iron is in the ironing position, the plunger 10 is pushed in against the action of the compression spring 17, the peg 20 passing along the slot 23 and the plunger slightly rotated to engage the bayonet slot at the rear of the cover 18 when the contact member 11 will be held out of contact with the contact members 13, 14 and the circuit retained in its open position.

I claim:

1. In an electric iron a cut out comprising in combination, a spring actuated plunger disposed in the handle of the iron, a contact member mounted on said plunger, a recess formed in the rear vertical member of the handle, fixed contact members mounted in said recess which are normally engaged by the contact member mounted on the spring actuated plunger, a cover mounted on said recess through which said spring actuated plunger passes, a stop mounted on said spring actuated plunger for limiting the move-

ment of said plunger, a guide member mounted on said spring actuated plunger, a guide formed in said cover in which said guide member is normally positioned and a radial slot formed in said cover in which the guide member can be located to retain the movable contact member out of contact with the fixed contacts positioned in the recess of the handle.

2. In an electric iron a cut out comprising in combination, a spring actuated plunger disposed in the handle of the iron, a contact member mounted on said plunger, a recess formed in the rear vertical member of the handle, fixed contact members mounted in said recess which are normally engaged by the contact member mounted on the spring actuated plunger, a cover mounted on said recess through which said spring actuated plunger passes, a stop mounted on said spring actuated plunger for limiting the movement of said plunger, a guide member mounted on said spring actuated plunger, a guide formed in said cover in which said guide member is normally positioned, a radial slot formed in said cover in which the guide member can be located to retain the movable contact member out of contact with the fixed contacts and a radial slot formed on the inner side of the cover to retain the movable contact in contact with the fixed contacts positioned in the recess of the handle.

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