Dec. 8, 1925. 1,564,371

J. W. SLATE ET AL

ELECTRIC IRON

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Fig. 1.

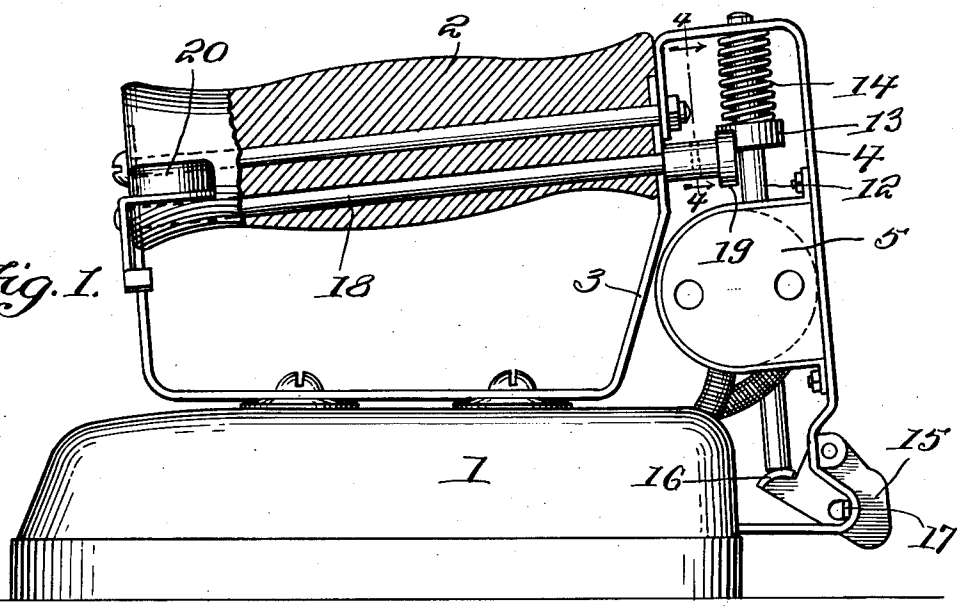


Fig. 5.

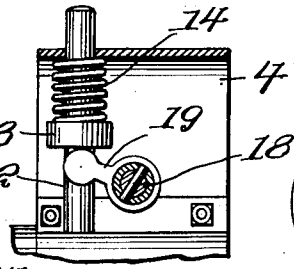


Fig. 3.

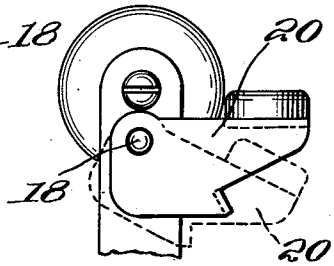


Fig. 2.

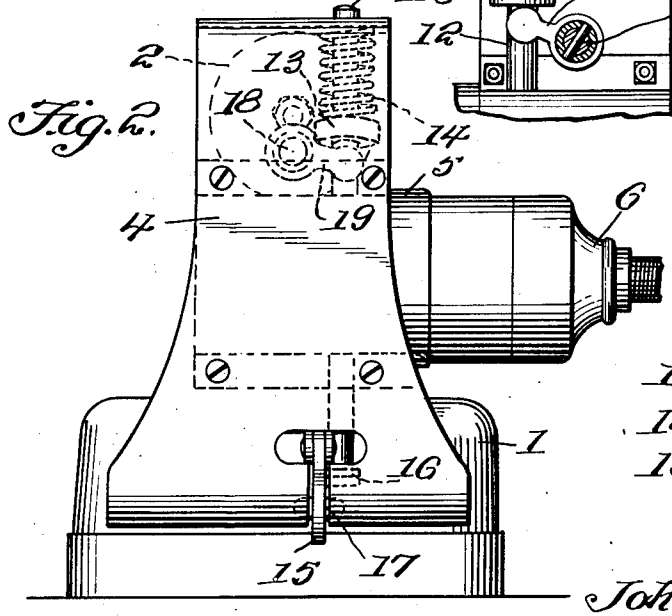
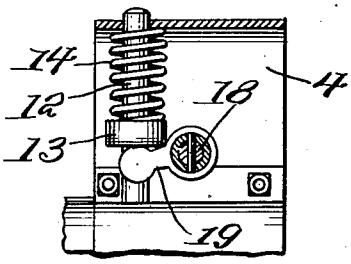


Fig. 4.



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ELECTRIC IRON

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Fig. 6.

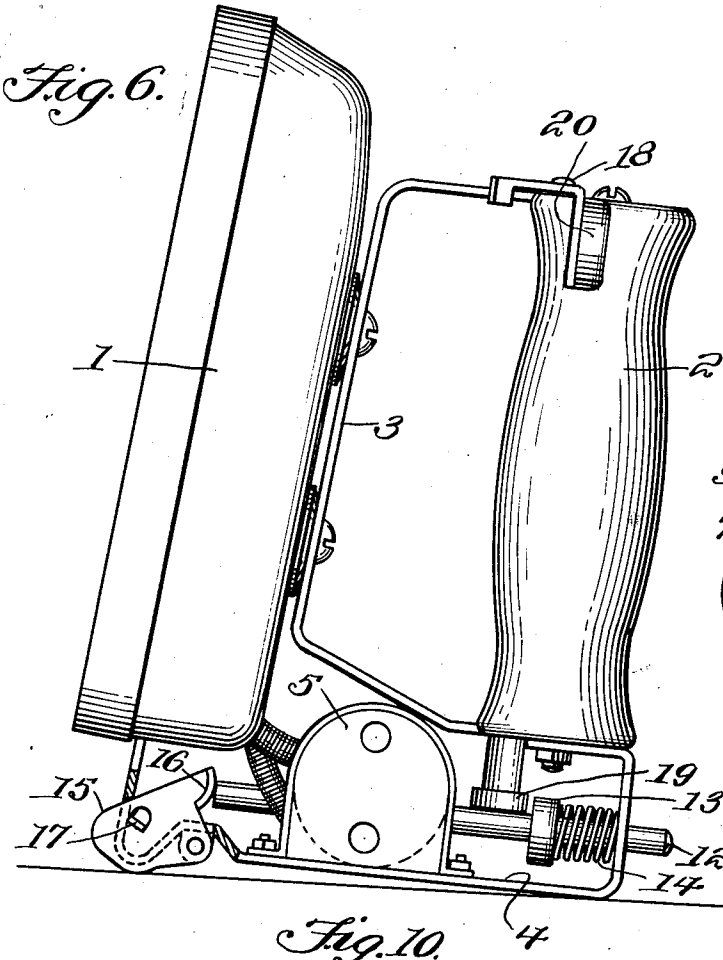


Fig. 8.

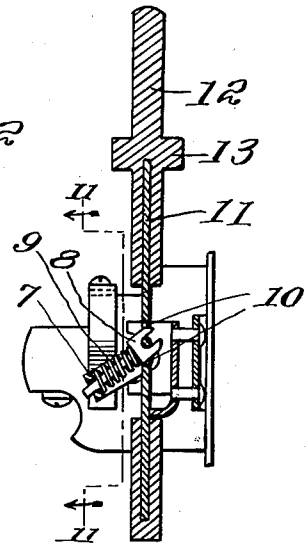


Fig. 7.

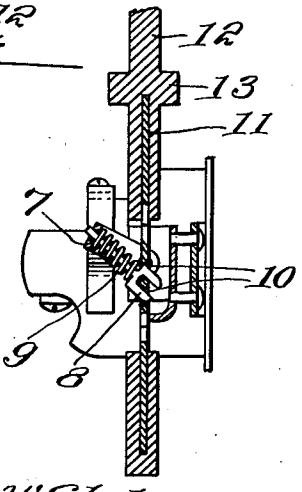


Fig. 10.

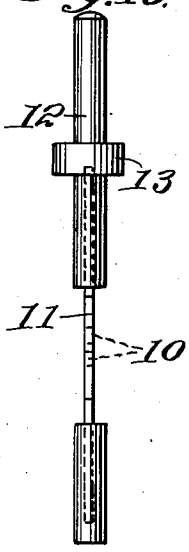


Fig. 9.

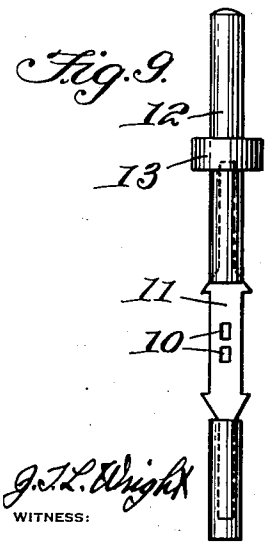
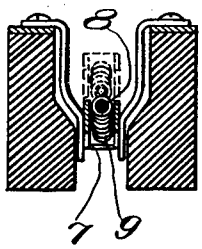


Fig. 11.



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UNITED STATES PATENT OFFICE.

JOHN W. SLATE AND HERBERT L. MITCHELL, OF HIGH POINT, NORTH CAROLINA.

ELECTRIC IRON.

Application filed January 29, 1924. Serial No. 689,315.

To all whom it may concern:

Be it known that we, JOHN W. SLATE and HERBERT L. MITCHELL, citizens of the United States, residing at High Point, in the county of Guilford and State of North Carolina, have invented new and useful Improvements in Electric Irons, of which the following is a specification.

This invention relates to improvements in electric irons, the general object of the invention being to provide means whereby the current can be easily controlled by the thumb or finger of the hand engaging the handle of the iron.

Another object of the invention is to provide means for closing the circuit when the iron is placed on one end.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which;—

Figure 1 is an elevation of the invention, with parts in section.

Figure 2 is an end view.

Figure 3 is a view of a portion of the front end of the handle part of the iron.

Figure 4 is a section on line 4—4 of Figure 1.

Figure 5 is a similar view but showing the parts in a different position.

Figure 6 is a view showing the iron resting upon one end.

Figure 7 is a sectional detail view of the switch.

Figure 8 is a similar view but showing the parts in a different position.

Figures 9 and 10 are views of the switch operating member.

Figure 11 is a section on line 11—11 of Figure 8.

In these views, 1 indicates the iron, 2 the handle and 3 the bracket or frame which connects the handle with the iron. In carrying out our invention we provide a frame or bracket 4 at the rear of the iron which is connected with the body and with the rear end of the handle and this frame carries the switch casing 5 which is provided with the sockets for receiving the terminals of the usual plug 6 which is electrically connected with a source of supply. The switch is of the usual "snap" construction and includes the U-shaped movable part 7 and the forked rod 8 which passes through a hole in the bight of the U-shaped part and has a spring 9 thereon for giving the U-shaped member its "snap" action. The prongs of the fork engage holes 10 formed in the central part of the reciprocating member 11 which passes through the casing and which has its ends formed of insulated parts 12, the upper one of which is provided with a collar 13 and has its end passing through a hole in the top part of the frame 4. A spring 14 is arranged in this upper part and has its ends bearing against the frame 4 and the collar 13 so as to hold the member in its lowest position with the switch in open position. A plate 15 is pivoted to the lower part of the frame, and has a cam 16 thereon which engages the lower end of the reciprocating member, the plate being provided with a stop 17 for limiting its outward movement under the influence of the spring actuated reciprocating member. The plate projects beyond the frame in such a manner that when the iron is turned upon its end, as shown in Figure 6, the plate is forced upwardly so that the cam part 16 will force the reciprocating member outwardly against the action of its spring and thus close the switch so that the circuit to the iron will be closed as long as the iron is resting upon one end. As soon as the iron is turned over the spring will move the parts to a position to open the switch again and thus current will not flow to the heating elements of the iron.

We also provide means for closing the switch by hand and such means consists of a rod 18 passing through the handle of the iron and having an arm 19 thereon having a rounded end for engaging the collar 13 of the reciprocating member. The end of the rod has a finger piece 20 thereon which has a portion lying adjacent the end of the handle so that it can be depressed by the thumb or finger of the hand grasping the handle so as to rock the rod 18 and cause its arm 19 to move the collar and thus move the member 11 upwardly against the action of the spring to close the switch. When the thumb or finger is removed from the finger piece the spring will return the parts to switch opening position.

It will thus be seen that we have provided spring means for normally holding the switch opened so that current will not flow to the heating elements of the iron and means for closing the switch by the thumb or finger of the hand grasping the handle of the iron or by means rendered operable by placing the iron upon its end. Thus the temperature of the iron can be easily controlled without rendering it necessary to actuate the usual switch which is located at a distance from the iron. This invention permits the iron to be kept at the most efficient temperature with the minimum amount of electric current.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

We desire it to be understood that we may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What we claim is:—

An electric iron comprising a frame at the rear end thereof, a switch carried by the frame, a vertically arranged rod connected with the switch for actuating the same when the rod is reciprocated, a shoulder on the rod, a spring engaging the shoulder and the top of the rod for holding the rod in a position with the switch open, a plate pivoted to the frame and having a cam part engaging the bottom of the rod, a stop on the plate for limiting its movement by the rod, said plate extending beyond the frame so that when the iron is supported by the frame the plate will be moved inwardly and thus raise the rod to close the switch, a rod passing through the handle of the iron, an arm on one end of said rod engaging the shoulder on the first arm and a thin finger member on the front end of the rod passing through the handle of the iron.

HERBERT L. MITCHELL.
JOHN W. SLATE.