

Feb. 21, 1939.

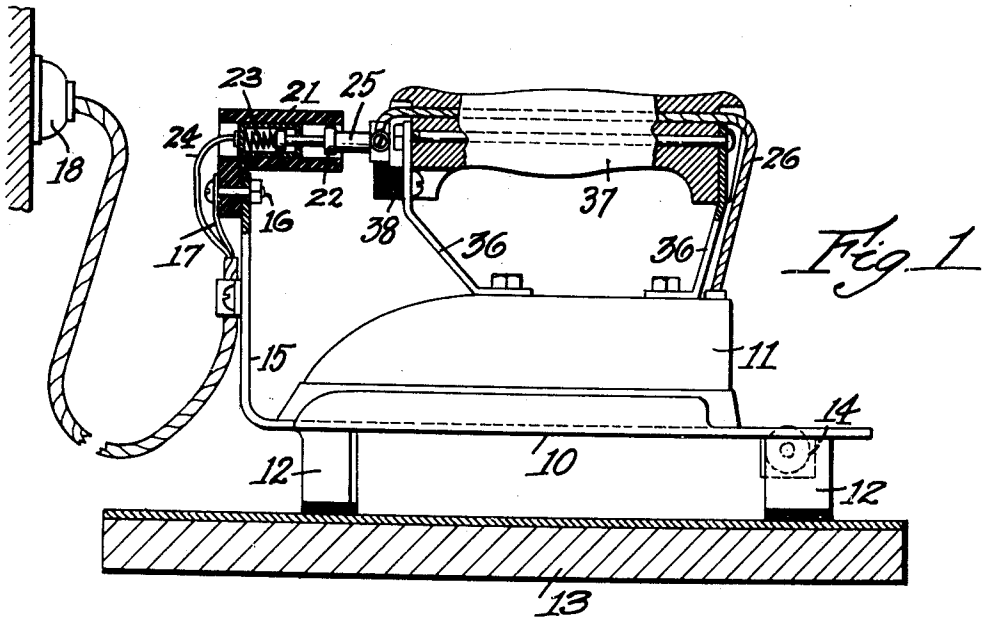
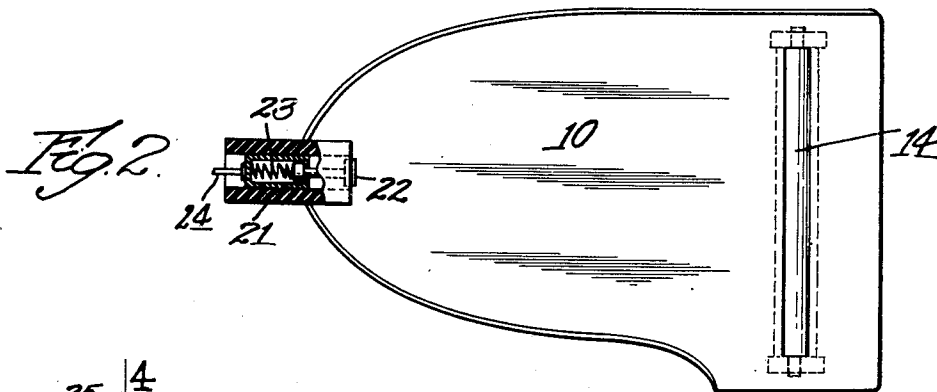
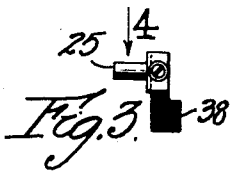
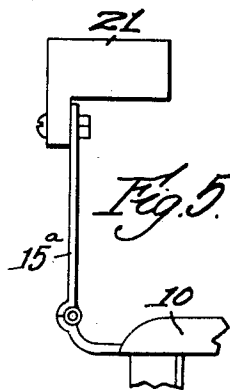
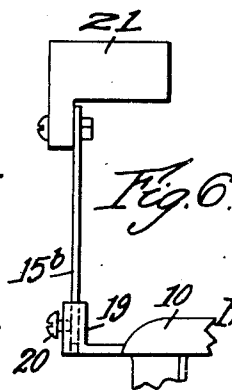
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2,148,083

ELECTRIC IRON

Filed June 3, 1938

2 Sheets-Sheet 1



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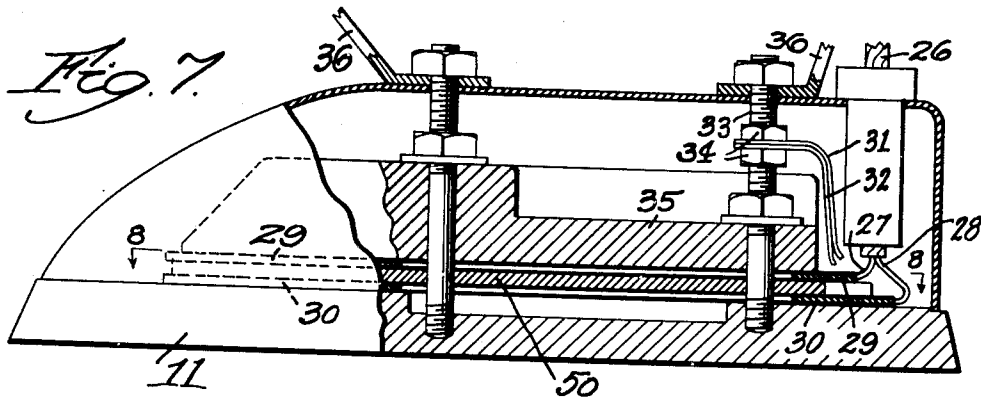
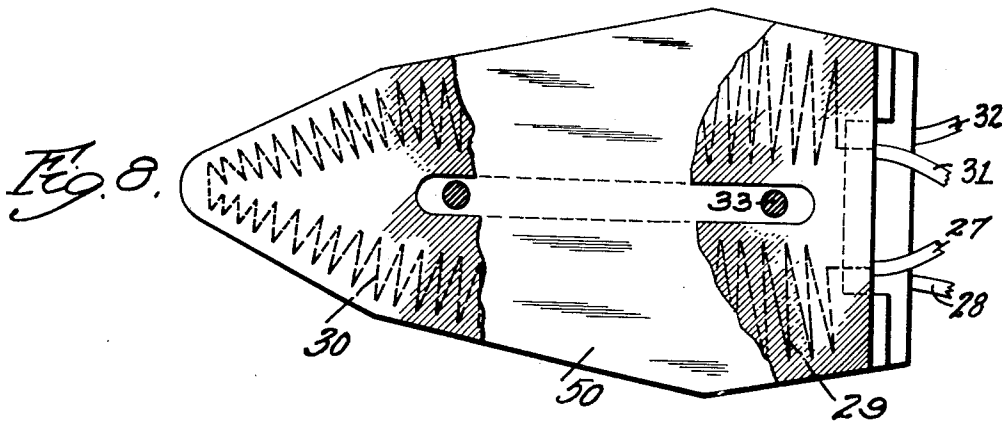
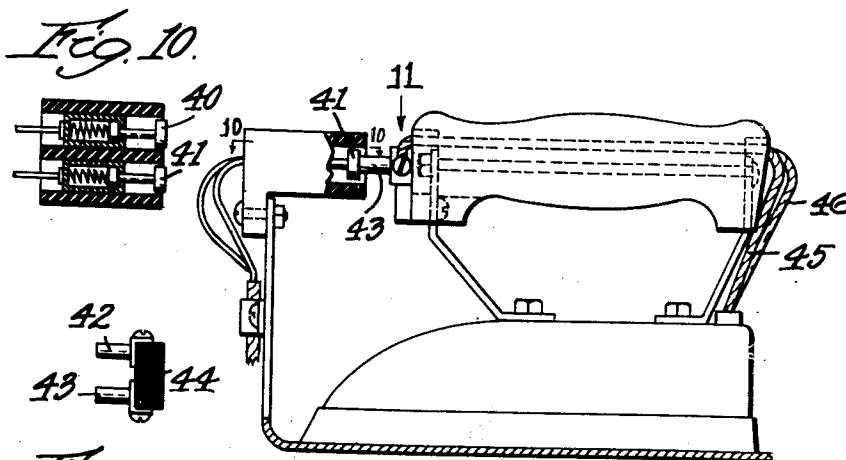
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2,148,083

ELECTRIC IRON

Filed June 3, 1938

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,148,083

ELECTRIC IRON

Frederick W. Nilson, Worcester, Mass.

Application June 3, 1938, Serial No. 211,629

8 Claims. (Cl. 219—25)

This invention relates to an electric iron and a means for supplying electricity to the heating units therein.

The principal objects of the invention are to provide a cordless iron, thus doing away with the difficulty of the cord engaging the clothing when being ironed and allowing the operator to move the iron the full length of the ironing board freely and also using the ironing board in any place desired; to provide means for adequately heating the iron when in place on the stand which supports the iron and thereby saving electricity on account of the fact that the iron stays hot a long time and does not need to be connected with the electricity as often as heretofore; to provide a construction in which the energizing of the heating units of the iron is accomplished merely by setting the iron in the proper place on the stand; to provide an exposed contact at the level of the handle of the iron so it will not interfere with any other feature; and to provide an arm which extends up from a supporting plate and provides the connection for the return circuit so that it can be folded down or otherwise manipulated to get it out of the way when the iron is not in use or when it is being moved.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which

Fig. 1 is a side view, partly in section, of an electric iron shown in connection with the stand for the iron and in electrical connection with a source of power in accordance with this invention;

Fig. 2 is a plan of the iron support shown partly in section;

Fig. 3 is a side view of a metallic terminal and a depending insulator;

Fig. 4 is a plan view of the same;

Figs. 5 and 6 are side views of two forms of upwardly extending brackets which can be used in accordance with this invention in place of the one shown in Fig. 1;

Fig. 7 is a side view partly in longitudinal central section showing the inside of the iron;

Fig. 8 is a sectional view on the horizontal line 8—8 of Fig. 7 looking in the direction of the arrow;

Fig. 9 is a view similar to Fig. 1 showing another form of the invention;

Fig. 10 is a sectional view on the line 10—10 of Fig. 9, and

Fig. 11 is a plan of a small part of the inven-

tion looking in the direction of the arrow 11 in Fig. 9.

The first form of the invention shown involves a support 10 in the form preferably of a steel plate for an electric iron 11. This support is carried on legs 12 which are supported on the ironing board 13 in any convenient place. In other words, this support preferably is stationary. It is provided with a freely rotating roller 14 which projects up through an opening 10 in it and raises the iron 11 slightly off the surface 10 as it is moved up to proper position on the support.

The iron support 10 is provided with an upwardly extending bracket 15 at the front end. This, of course, constitutes a stop for the iron 11 and it also is provided with a conducting bolt 16 which connects with a terminal 17 which, with its companion terminal, is fastened to the upright 15 and connected to a plug 18. This plug is put into position or pulled out and this controls the entire operation of the heating of the iron.

The upright 15 can be replaced by uprights 15a or 15b shown in Figs. 5 and 6, the first of which is hinged at the bottom and the second of which is shown as fixed in a socket 19 and secured in position by a screw 20.

The socket 19 may open through the bottom, as shown, so that this upright can be forced straight down or the screw may be loosened and the upright taken out and laid aside for transportation, or the like. In either case the bracket 15, 15a, or 15b, is provided with an insulating member 21 having a horizontal passage there- through or a metal, or carbon terminal, 22, carbon being preferred. This terminal is in the bore through the member 21 backed up by a spring 23. This terminal is connected with the plug 18, as shown, through a wire 24.

When the iron 11 is placed on the support or plate 10 and moved forwardly so that a metallic contact 25 thereon engages the terminal 22, a current is set up through the wire 24, terminal 22, contact 25, cable 26, two wires 27 and 28 to two heating units 29 and 30. Two heating units are employed in this place because they will absorb and retain more heat than one, because they will heat up the iron quicker and retain their heat longer, and because the iron will stay hot longer.

The heating units are connected with two wires 27 and 28 in parallel by two wires 31 and 32 through a screw-threaded rod 33 and secured in position by nuts 34. This rod is connected

with the cast iron portion 33 of the iron itself and thereby this iron constitutes means for conducting the current through the steel plate 10 on which this iron is supported. This completes the circuit.

Therefore, it will be seen that when the iron 11 is moved up so that the contact 25 engages the terminal 22 the current is completed in the manner set forth and both heating units are energized. When the iron is heated enough it is only necessary to draw it back a very slight distance from the terminal 22 in order to break the contact and stop the flow of current. There is a metal plate 50 between the two heating units.

It will be seen that this iron can be moved along throughout a long ironing board 13, or even moved off it to some other support, without the least difficulty because there is no cord connected with it that can get in the way. The only cord is the cable made up of the wires 17 and 24 and that stays in the same position at all times. The contact 25 is separated from the metal frame 36 which supports the wooden handle 37 by means of insulators 38 fixed on the end of the contact 25.

It will also be seen that the forms shown in Figs. 5 and 6 constitute convenient means by which the upright 15, or the like, can be moved down out of the way when the device is not being used.

In the form shown in Figs. 9, 10 and 11 a two wire construction is shown which will be obvious except that it is necessary to explain that one wire goes to a terminal 40 and to another terminal 41 parallel therewith which terminates contact with two terminals 42 and 43 separated by two insulators 44. These two wires are conducted through the two heating units separately and the details of the further connection are not shown in full except to indicate that the two circuits are kept separate in the wires 45 and 46.

In this way a very convenient iron is secured which is more efficient than other forms of irons because of the fact that there is no danger of accidentally catching the cord and perhaps disconnecting the current or resulting in the dropping or displacement of the iron and the further fact, as has been explained, in connection with the two heating units, that the iron heats up rapidly and cools slowly.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. As an article of manufacture, an electric iron comprising a hollow base, a heating unit therein electrically connected with the base so that said base constitutes one terminal of an electric circuit, a frame mechanically connected with the top of said base, an insulating operating handle carried by the frame, a contact carried by the frame at the extreme front end thereof but insulated therefrom, a conductor carried by the handle and connected at one end to the contact and at the other to the heating unit.

2. As an article of manufacture, an electric iron comprising a base of heavy metal, a heating unit mounted thereon and insulated therefrom, a second heating unit located in the base and insulated from the base and first heating unit, a non-conducting operating handle carried above

the base, parallel connections from the two heating units carried by the handle, an exposed contact carried by the front end of the handle and electrically connected with said parallel connections, and a threaded metal rod carried by the base and electrically connected with the two units, whereby the base is electrically connected with said contact through the heating units.

3. The combination with a support and heating stand, of an electric iron adapted to be supported thereon, an upright carried at the front end of said stand and projecting upwardly therefrom, an operating handle on the iron, an electric contact at the front of said handle, a terminal on said upright at the same level as said contact and connected with a source of power, means for connecting the other end of said source of power with the upright, and consequently with said stand and the iron when on the stand, and a heating unit in the iron electrically connected with said contact.

4. The combination with a horizontal support and heating stand, of an electric iron adapted to be supported thereon, an upright carried at the front end of said stand and projecting upwardly therefrom, an operating handle on the iron, an electric contact at the front of said handle, a terminal at the top of said upright at the same level as said contact and connected with a source of power, means for connecting the other end of said source of power with the upright at the top and consequently with said stand and the iron when on the stand, a connection from said contact to the inside of the iron, and a double heating unit in the iron electrically connected with said connection.

5. In a stand for an electric iron, the combination with a steel plate on which the iron can rest, an upright at the front end of the plate, an electric current supplying cable carried by said upright, and insulated means for supplying current to the upright and therefore, to said plate, to be transmitted to an iron resting thereon.

6. In a stand for an electric iron, the combination with a steel plate on which the iron can rest, an upright at the front end of the plate which is movable from upright to horizontal position, an electric current supplying cable carried by said upright, insulated means for supplying current to the upright and therefore, to said plate, to be transmitted to an iron resting thereon.

7. In a stand for an electric iron, the combination with a steel plate on which the iron can rest, a pivotally mounted upright at the front end of the plate, an electric current supplying cable carried by said upright, and insulated means for supplying current to the upright and therefore, to said plate, to be transmitted to an iron resting thereon.

8. In a stand for an electric iron, the combination with a steel plate on which the iron can rest, a vertically movable upright at the front end of the plate, an electric current supplying cable carried by said upright, and insulated means for supplying current to the upright and therefore, to said plate, to be transmitted to an iron resting thereon.

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