

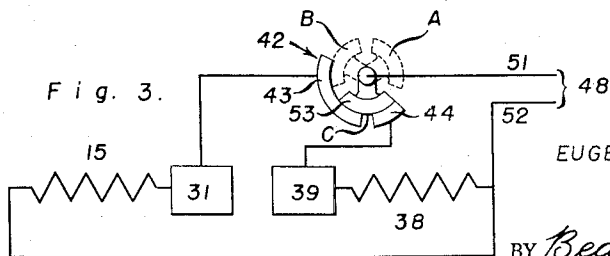
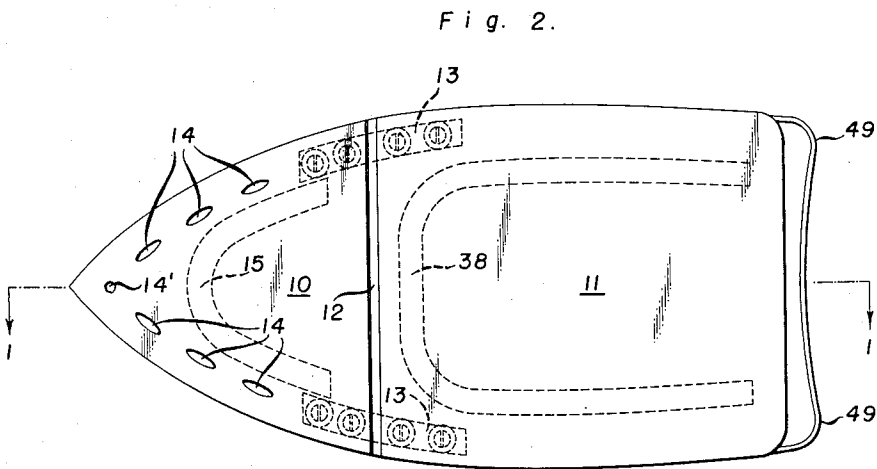
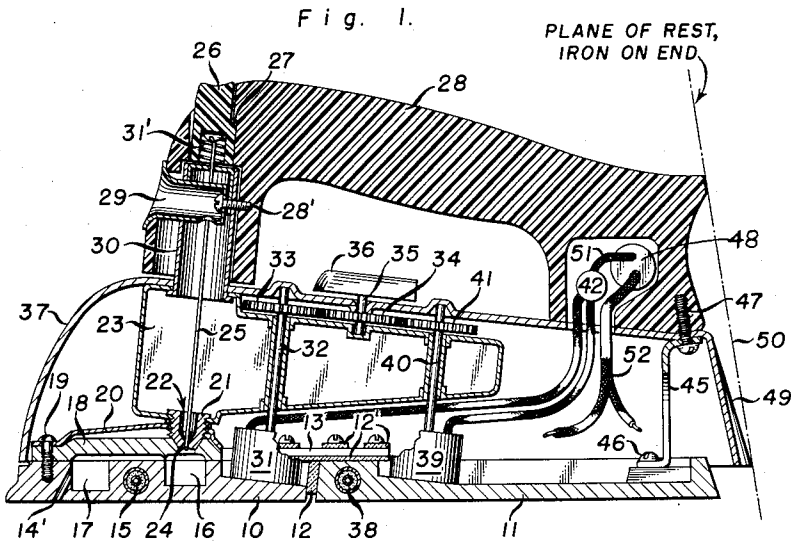
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ELECTRIC IRON

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ELECTRIC IRON

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5 Claims. (Cl. 38—77)

The object of the present invention is to provide an iron, preferably an electric steam or non-steam iron, having a soleplate comprising sections which are rigidly fastened together side by side with their pressing surfaces lying in a common plane, and means for heating any one of the sections alone or all of the sections together, as may be desired.

In ironing certain clothes, for example small, delicate articles, ruffles, baby's or small children's clothes, cuffs, collars, and the like, only the front or pointed part of a conventional iron is used. In ironing items of this kind, heating the rear part of the iron is not only wasteful but results in added risk of scorching the fabric.

In a preferred embodiment of the invention, two soleplate sections are rigidly secured together but heat-insulated from each other so as to provide an overall soleplate of conventional shape with separate front and rear sections, each section having its own heating means and each having its own temperature control means. Means are provided for heating the front or pointed section to a selected temperature, and for heating both sections together to the same temperature when desired. In the preferred embodiment, the front section is a steam iron of known design, so that the front section alone, or the complete iron if desired, may be used as a conventional steam iron; or, if desired, the front section or both sections may be used as a non-steam iron.

Other objects and advantages of the invention will be understood from the following description and from the appended drawings wherein:

Fig. 1 is a vertical longitudinal section through a preferred embodiment of my invention; taken along line 1—1 of Fig. 2;

Fig. 2 is a bottom plan view of the same; and

Fig. 3 is a wiring diagram illustrating the electrical connections.

Referring now to the drawings, wherein like characters indicate the same or similar parts, there is shown an electric steam iron having a sole plate comprising a front section 10 and a rear section 11 which are rigidly fastened together by bars 13—13 and insulated from each other by suitable heat insulating material as indicated at 12 and 12'. Front soleplate 10 has an embedded electric heating element 15 and a steam generating chamber 16 connected to a distribution chamber 17 which in turn is connected to apertures 14, 14' in the ironing surface of the soleplate. A plate 18 provides a top wall for the steam generating and distributing chambers, being held in place by suitable bolts such as 19 and a retainer plate 20 which holds in place the bushing 21 of a valve assembly 22 in the forward bottom portion of a water reservoir 23. An orifice 24 in bushing 21 is normally closed by a valve 25 when control button 26 is depressed to the position illustrated and pushed to the rear, where it is held by a shoulder 27 in handle 28. In this position the iron is a non-steam iron, regardless of whether tank 23 contains water or not. Water may be

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poured into tank 23 through filling tubes 29 and 30. Front soleplate 10 being heated, control button 26 may be pushed to the front to release it from shoulder 27, whereupon spring 31' lifts valve 25 clear of orifice 24, so that water drops into steam generating chamber 16 to supply steam to orifice 14—14', for using the iron as a steam iron. The above-described steam generating filling and control means is no part of the present invention, being shown in the patent to Finlayson No. 2,587,608.

Other known arrangements may be used for supplying steam to orifices 14—14'.

Cover plate 37 and tank 23 are rigidly secured to tube 30 by any convenient means, and the front end of handle 28 is secured to tubes 29 and 30 by a screw 28', thus securely fastening the front end of the handle to the iron. The rear end of cover plate 37 is supported by a bifurcated brace 45, the lower fork ends of which are fastened to adjacent opposite corners of the rear of solepiece 11, as indicated at 46. A screw 47 through the upper end of brace 45 and cover plate 37 and screwed into the rear end of handle 28 rigidly secures the rear end of the handle to the iron. The iron may be stood on end on the rear upper portion of the handle and on the skirt portions 49—49 of cover plate 37 (Fig. 2), as indicated by the line 50 of Fig. 1.

A conventional adjustable thermostatic switch 31 is mounted on soleplate 10 and has a regulating shaft 32 extending upwardly through a tube in tank 23. Fixed adjacent the upper end of shaft 32 is a gear 33 which meshes with the gear 34 and shaft 35 of a temperature regulating knob 36 above the cover plate 37 of the iron. Thermostatic switch 31 is arranged in series with heater element 15, as will be explained below. Thus, the temperature of soleplate 10 may be adjusted by means of knob 36 for a desired setting, according to the kind of fabric to be ironed. In accordance with the usual practice a mark adjacent knob 36 indicates its correct setting for use as a steam iron.

Rear soleplate 11 has an embedded heater element 38 and has mounted thereon a similar conventional adjustable thermostatic switch 39 which has its control shaft 40 extending upwardly through a tube in tank 23. Shaft 40 is connected by a meshing gear 41 with the gear 34 referred to above. Thermostatic switches 31 and 39 are of similar characteristics and are connected together by their shafts and the gears 33, 34 and 41 so that control knob 36 operates them simultaneously and in the same way to maintain solepieces 10 and 11 at the same temperature when heating elements 15 and 38 are both supplied current as described below.

A suitable circuit and switch are provided for supplying electricity either to the front heating element 15 alone, or to both heating elements 15 and 38, as indicated in the wiring diagram of Fig. 3. Power is supplied by a connection through the handle indicated schematically at 48, one lead 51 being connected to the rotary element 53 of a rotary switch 42, the operating knob of which extends through the far side of the handle as seen in Fig. 1. Rotary switch 42 has three positions, in one of which, A, the iron is turned off and no electricity is supplied to either the front or rear plate. In position B, rotary contact 53 is in contact with segment 43 which supplies current through the thermostatic switch of thermostat 31 to the heating element 15 of front soleplate 10. In the position indicated at C rotary switch contact 53 makes contact both with segment 43 and with a segment 44 which supplies current through the automatic switch element of thermostat 39 to heating element 38. The other ends of both resistors 15 and 38 are connected to a common return 52 to the power supply 48.

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It will be seen that the preferred embodiment of my invention may be used either as a steam iron or as a non-steam iron; in either case the front soleplate only may be heated, or both soleplates may be heated; and when both soleplates are heated they will be heated to the same selected temperature. Thus the objects and advantages of my invention are attained.

Various changes and other embodiments within the scope of the appended claims will be obvious to those skilled in the art.

I claim:

1. An electric iron comprising a front soleplate and a rear soleplate extending entirely to the rear of said front sole plate, means rigidly connecting said front and rear soleplates to form a unitary base for said iron, a first heater for said front soleplate, a second heater for said rear soleplate, and means for supplying heat selectively either to said first heater alone or to both said heaters.

2. An electric iron in accordance with claim 1, comprising means substantially heat-insulating said front and rear soleplates from each other.

3. An electric iron in accordance with claim 1, comprising first means including a control knob for adjustably controlling the temperature of said front soleplate and second means substantially identical to said first

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means for adjustably controlling the temperature of said rear soleplate.

4. An electric iron in accordance with claim 3, comprising means linking said first means and said second means together for maintaining both said soleplates at the same temperature.

5. An electric steam iron comprising a front soleplate, means for supplying steam through said front soleplate, a rear soleplate extending entirely to the rear of said front soleplate and rigidly secured to and substantially heat insulated from said front soleplate, whereby said front and rear soleplates form a unitary base for said iron, a front heater for heating said front soleplate, a rear heater for heating said rear soleplate, means for supplying heat to said front heater alone, means for supplying heat to both said heaters, and means when supplying heat to both said heaters for maintaining said front and rear soleplates at substantially the same temperature.

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