

July 29, 1952

F. W. CARPENTER

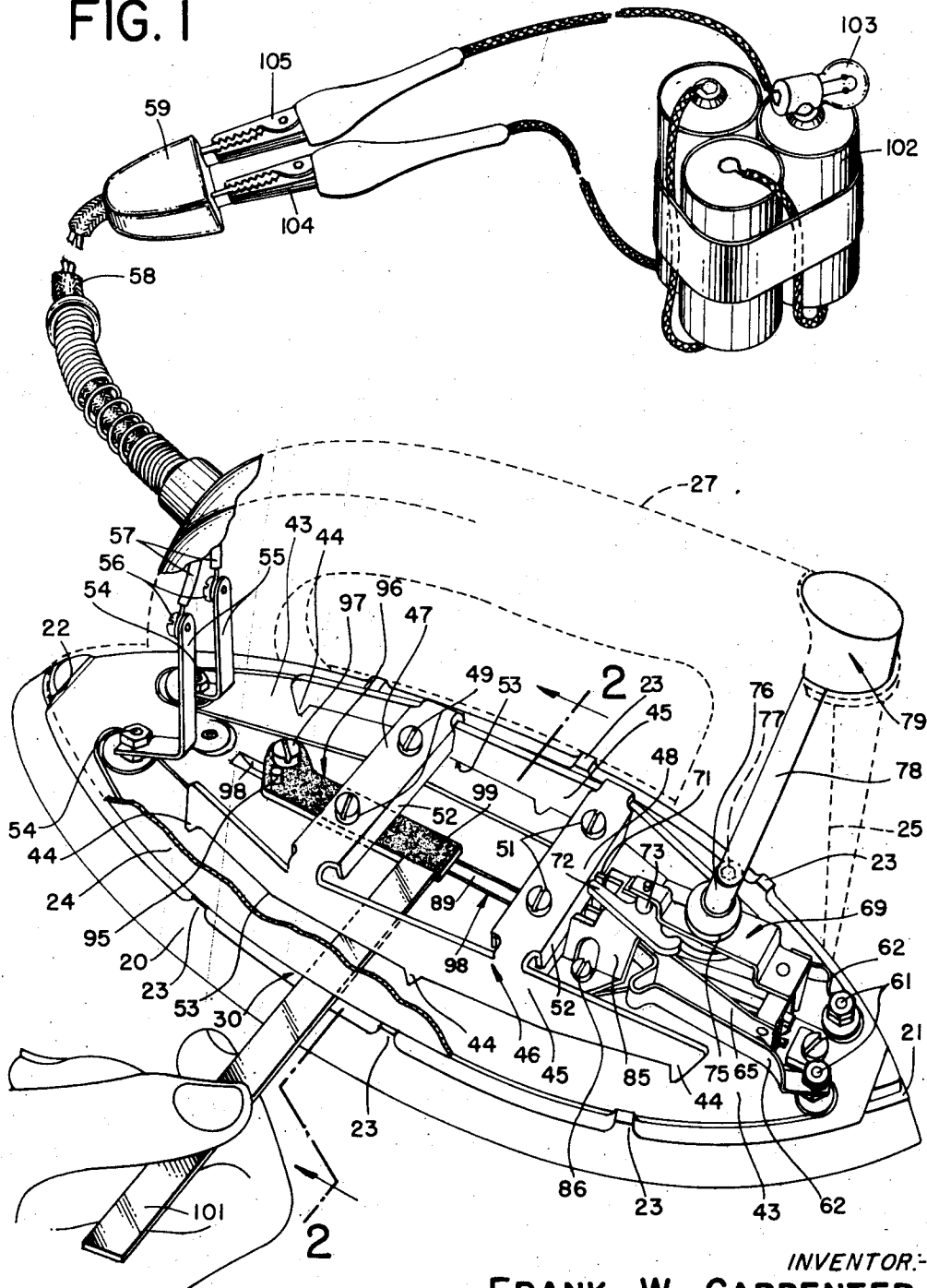
2,605,378

FLATIRON AND METHOD OF PRODUCING SAME

Filed Aug. 21, 1947

3 Sheets-Sheet 1

FIG. 1



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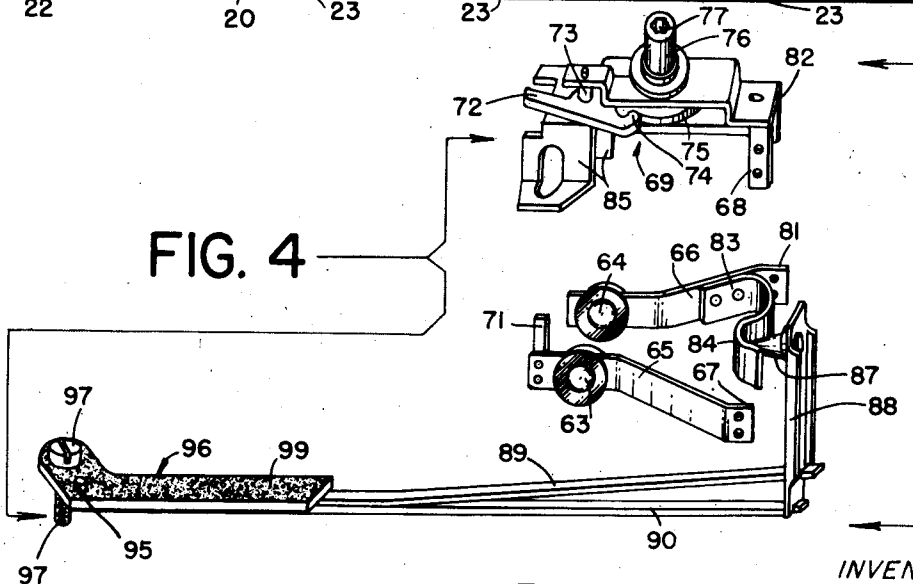
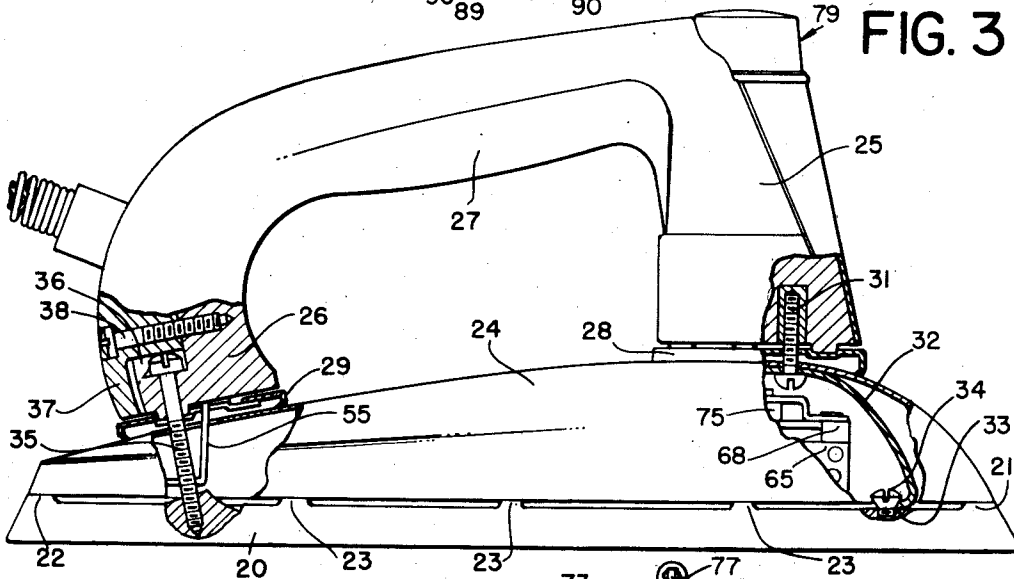
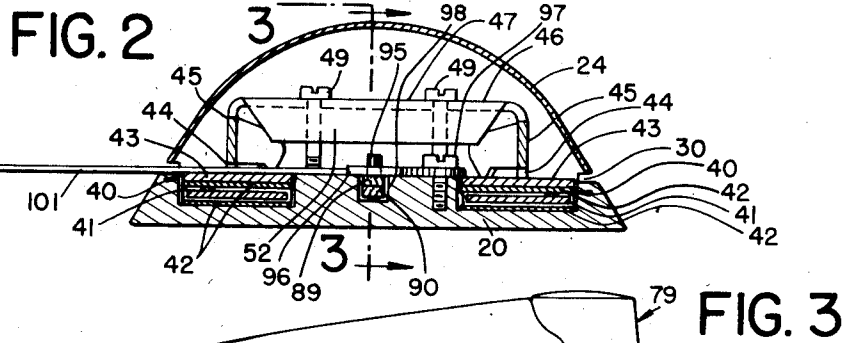
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FLATIRON AND METHOD OF PRODUCING SAME

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3 Sheets-Sheet 2



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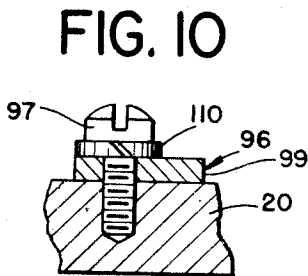
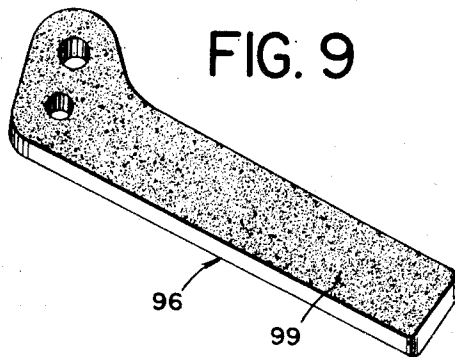
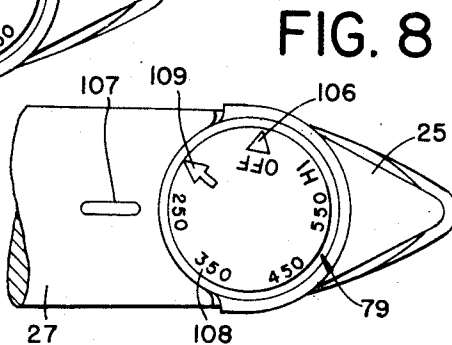
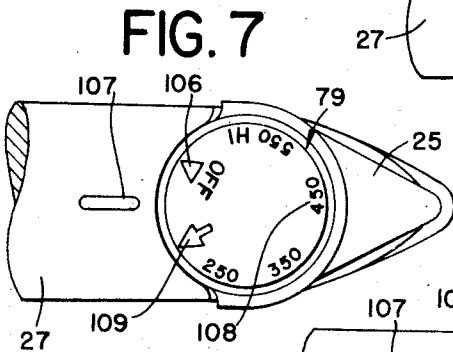
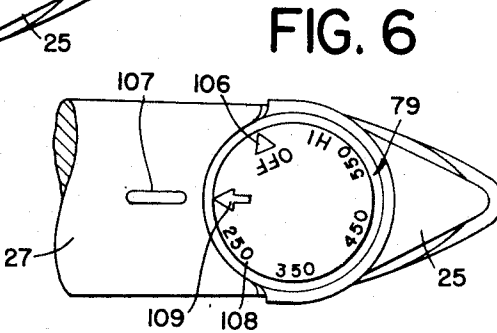
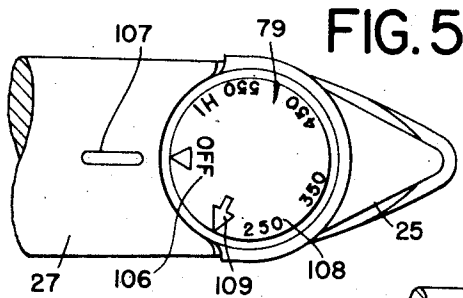
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FLATIRON AND METHOD OF PRODUCING SAME

Filed Aug. 21, 1947

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,605,378

FLATIRON AND METHOD OF PRODUCING
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ware

Application August 21, 1947, Serial No. 769,919

6 Claims. (Cl. 219—25)

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This invention relates to flatirons and more particularly to an improved adjusting mechanism for flatirons of the automatic type.

Flatirons are well known in which an electrical heating element is controlled by a switch responsive to some condition of the flatiron. Thus, in some irons, the switch may be operated by a thermostat in accordance with the temperature reaching said thermostat from the operating parts of the iron. In other types of iron construction the operation of the switch is achieved directly by means of the expansion of the soleplate of the iron.

In either of these cases it is customary to provide an external manually operable adjusting knob which can be set by the operator to whatever predetermined temperature is desired. Such a knob is connected in well known manner to adjust the position of one of the switch contacts or to vary the tension on one of the switch actuating members or in some other manner to achieve the necessary adjustment of the operating range of said switch.

In all these constructions it is desirable to provide some additional method for adjustment of the switch so that variations arising in the production of individual irons can be taken care of by a final factory setting of this additional adjusting member.

In the past such additional adjusting members have been positioned entirely within the cover or housing of the flatiron and it has been necessary either to remove the cover completely or to remove and disassemble some other portion of the flatiron, such as the manual control knob, in order to obtain access to the so-called factory adjustment.

We have found that it is unsatisfactory to adjust the factory setting of the switch in an automatic flatiron when the parts are not fully assembled. Although the setting can be made on such a disassembled iron, after such iron is reassembled, the addition of the other parts often changes the thermal characteristics or the ventilation or the mass of the iron as a whole and therefore results in operating temperatures quite different from those for which the iron was set. Furthermore, adjustments which involve the disassembly of a screw to loosen and reset a manual control knob or scale are often too easily discovered and abused by the inexperienced user.

With these defects of the prior constructions in view, it is one object of the present invention to provide an improved method of assembling and testing a flatiron, in which the adjustment

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of the switch mechanism can be made after complete assembly of the flatiron without removal of any parts.

It is another object of the invention to provide an improved flatiron construction in which such adjustment can be made without partial disassembly or loosening of any part of the iron.

It is still another object of the invention to provide a flatiron construction in which an internal adjusting member for the flatiron switch is accessible through an opening in the flatiron through which force may be applied directly to the adjusting member to set the switch.

It is still another object to provide a flatiron with an internal switch adjusting member which is movably mounted and held in place by means resisting movement of said member except upon application of direct force substantially in excess of that caused by jarring and movement in normal use.

A further object of the invention is the provision of an improved switch adjusting member and clamping means in combination with a plurality of openings in the flatiron permitting access to the adjusting member for application of substantial force to it in either of two directions.

Another object of the invention is the provision of a flatiron in which portions of the cover or housing are spaced slightly from the soleplate and a switch adjusting member is movably mounted inside the cover in substantial alignment with said openings for adjustment of the switch by force applied through the openings.

Still another object is the construction of a flatiron with ventilation openings between the cover and soleplate and with an internal switch adjusting member mounted so as to be accessible through said openings.

Other objects and advantages will be apparent from the following specification.

With these objects in view, I shall now describe one embodiment of my invention, with reference to the accompanying drawings, wherein like reference characters indicate like parts, and in which:

Figure 1 is a perspective view of a flatiron together with a simple testing apparatus and an adjusting device, certain of the parts being broken away and certain other parts being shown in dotted outline for the sake of clarity.

Fig. 2 is a sectional view on the line 2—2 of Fig. 1.

Fig. 3 is a side elevation, with certain parts broken away to the section line 3—3 of Fig. 2,

showing details of the mounting of the cover and handle on a flatiron embodying my invention.

Fig. 4 is an exploded view (in brackets) showing one form of switch mechanism in combination with an adjusting member, according to the present invention.

Fig. 5 is a top view of the control knob and a portion of the handle of the iron with the knob shown in off position.

Fig. 6 is a similar view with the knob shown in the normal testing position.

Fig. 7 is a view similar to Fig. 5 with the knob shown in an abnormal "hot iron" position.

Fig. 8 is a similar view with the knob shown in the position which would indicate an abnormally cool iron setting.

Fig. 9 is a detailed view showing an adjusting member according to the invention, and

Fig. 10 is a partial sectional view showing a modified fastening means for the adjusting member.

As shown in Fig. 1 the invention is used in conjunction with a flatiron having a soleplate 20, the construction of which will be further described below. This soleplate has front and rear abutments 21 and 22 and spaced, correspondingly elevated, side portions 23, said portions 21, 22, and 23 constituting supporting means for a cover or housing 24. As shown in the figure, the edge of the cover rests on the abutments 21, 22, and 23 and is thus spaced slightly from the soleplate to form spaced openings 30 between the respective abutments. These openings serve two important purposes in connection with this embodiment of the invention. First of all, they provide ventilation for the interior of the cover housing and thus assist in cooling of the switch mechanism and internal parts to prevent excessive temperatures. Secondly, the openings are so positioned with respect to the internal switch adjusting mechanism that they permit access thereto for adjustment of the setting of the switch.

With reference to Fig. 3, front and rear handle posts 25 and 26 are positioned above the cover and are joined by a suitable hand rest portion 27. Posts 25 and 26 and grip 27 may be molded of a single piece of suitable plastic material. Spacers 28 and 29 of known construction are positioned beneath the front handle post 25 and rear handle post 26 respectively in order to provide additional heat insulation of these parts from the cover 24, as is well known in the flatiron art. Cover 24 is fastened to the front handle post by a screw or bolt 31. This bolt 31 also passes through a metallic resilient retaining member 32 and fastens said retaining member 32, cover 24, spacer 28, and handle post 25 together as a unit.

The lower end of the resilient fastening member 32 has an intumed notched tip 33 which is adapted to be hooked beneath the tapered head of a screw 34, which is threaded into the front center of the soleplate. It will be apparent that resilient member 32 can thus be hooked under screw 34 and when so hooked will serve to retain the front portion of cover 24 and the associated handle in operative relation to the soleplate with the front edge of the cover firmly seated on abutment 21.

The rear portion of the cover 24 and the rear handle post 26 are in turn fastened to the soleplate by means of a bolt 35. As shown in Fig. 3 this bolt passes downwardly from a recess 36 in the rear handle post with the head of the bolt

engaging the lower portion of the handle post to clamp handle post 26, spacer 29, and the rear portion of cover 24 firmly against rear abutment 22 and side abutments 23 of the soleplate. Bolt 35 is threaded directly into the soleplate, as shown.

The recess 36, which may also serve as a housing for connection of the usual line cord to the terminals of the flatiron heating element, may be closed in any suitable manner as, for example, by a cover 37 held in place by a screw 38 threaded into the solid portion of the handle post 26.

With reference to Fig. 2, the arrangement of the electrical heating element for the iron will now be described. As shown in that figure, the soleplate 20 is provided with a pair of longitudinally disposed channels 40, one at each side of the iron. These channels are designed to contain suitable electrical resistance elements of known construction. The heating elements, for example, may be composed of turns of wire 41 wound on a mica core and having insulating sheets 42 of mica on both top and bottom. The assembled heating resistance and mica insulating sheets are clamped firmly into the bottoms of channels 40 by plates 43 of the same shape as the channels. These plates 43 are designed to fit within the upper portion of channels 40 so that they do not project upwardly any substantial distance above the top of the soleplate. It is preferred that they should either be flush with the top of the soleplate or even slightly lower in order to provide an unobstructed path for a purpose to be described.

These pressure plates 43 are in turn held in place and forced downwardly against the resistance elements and the bottoms of channels 40 by spaced projections 44 on the lateral bars 45 of a clamping bridge designated generally as 46. As will be seen from Figures 1 and 2, there are two of these bars 45, one at each side of the iron, for clamping the respective pressure plates 43 and heating elements in their channels.

The two lateral members 45 are joined by a rear cross piece 47 and a front cross piece 48 which may be formed from the same piece of metal to form a unitary construction. Clamping screws 49 and 51 pass through the rear and the front cross pieces respectively and are screwed into the soleplate to clamp the parts firmly together as described. It should be noted that cross pieces 47 and 48 may have downwardly turned edges 52 to give them a channel shape for greater strength.

By reason of the presence of the spaced projections 44, it is apparent from Fig. 1 in particular that there will be a space or opening 53 between the top of pressure plates 43 and the under side of lateral bars 45. Since the top of the pressure plates is substantially no higher than the upper surface of the soleplate, a clear unobstructed pathway is provided through the opening 30 between the soleplate and cover, across the top of pressure plates 43, and through the spaces 53 between the bridge member 46 and the pressure plates. This pathway permits adjustment of the switch as outlined below.

The electrical circuit by which the parts are connected will next be described with particular reference to Fig. 1. It will be understood, of course, that the resistance elements on their mica cores will be spirally wound in continuous fashion from one end to the other in a manner well known in this art. At one end of the pres-

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sure plates 43, i. e., the rear end of the iron, binding posts 54 are mounted and suitably insulated from the plates. These binding posts are connected to one end of the heating element associated with the respective plate. Connecting terminals 55 of flat strip material are mounted on the binding posts 54 and may project upwardly through the cover 24 and spacer 29 into the recess 36 in the rear handle post. Within this recess wires 57 of the usual line cord 58 are joined to the connectors 55 at 56. Line cord 58 terminates in a plug 59 of normal type, which may be connected to the standard outlets in the electrical circuit of a home.

At the front end of the iron similar terminal posts 61 are provided on each pressure plate 43, and these terminal posts are connected to the other ends of the respective heating resistances. From terminal 61 flexible metallic conductors 62 are used to connect said terminals with the contacts of a suitable switch mechanism.

With reference to Fig. 4, which is a view of the switch mechanism in exploded form, the respective switch contacts are designated as 63 and 64. Contact 63 is mounted on a resilient or spring arm 65 while contact 64 is mounted on a similar resilient supporting arm 66. These contacts 63 and 64 are insulated from their supporting arms in known manner. Contact 64 is resiliently maintained in an equilibrium position (described below) by the spring action of arm 66.

The end 67 of switch arm 65 is riveted or otherwise fastened to a downward projection 68 on the switch bracket generally designated as 69. The other end of switch arm 65 carries an actuating lug 71 adapted to be engaged by one end 72 of a control lever pivoted at 73 to the switch bracket. Because of the resilience of arm 65, contact 63 and lug 71 are urged away from contact 64 and against end 72 of the control lever. The other end 74 of the control lever engages the peripheral surface 75 of a control cam carried by a suitable shaft 76 which is rotatably mounted on the switch bracket 69. Shaft 76 may be provided with a hexagonal socket 77 into which one end of a correspondingly shaped control shaft may be engaged for actuation of the shaft 76 and cam 75.

As indicated in Fig. 1 this control shaft 78 carries a suitable control knob 79 mounted on the top of the front handle post 25. To improve the appearance of the iron, the control shaft 78 may be enclosed within the front handle post.

With reference to Fig. 4 again, the supporting arm 66 for the other switch contact 64 is riveted at one end 81 to another downward projection 82 on switch bracket 69. Projection 82 is substantially similar to projection 68. Contact 64 is resiliently urged to the equilibrium position described below, by the spring action of arm 66. Switch arm 66 also has fastened to it at 83 a substantially non-resilient lateral actuating arm 84 adapted to be engaged by any desired form of switch actuating mechanism for displacement of contact 64 from its equilibrium position.

This equilibrium position of resilient arm 66 and contact 64 is so arranged that, when the latter is in said position, movement of knob 79 (and lever end 72) to one extreme will permit contact 63 to move slightly away from contact 64 to establish an "off" position for the iron. Movement of knob 79 toward its other extreme will then cause contact 63 to move against contact 64 to close the circuit of the iron and to push contact 63 out of said equilibrium position

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to an extent which depends upon the degree of movement of the knob and cam.

Thus the position of contact 63 may be initially adjusted by means of control knob 79, which is accessible on the top of the front handle post for ready manipulation by the operator, to establish the temperature at which the switch will be opened. The actual automatic opening and closing of the switch during operation, after the setting has once been made for a given ironing project, will then be obtained through movement of contact 64 by actuating arm 84.

The switch support 69 is, of course, mounted upon the interior of the iron and for this purpose is provided with two supporting posts 85 (Figures 1 and 4) which are fastened to the soleplate by screws 86.

To actuate the switch arm 66 and actuating arm 84, any desired form of thermally responsive mechanism may be employed. Thus arm 84 could be actuated by a bimetal thermostatic member or an expandable rod or any other known form of switch actuator. For purposes of illustration, however, I have shown in Fig. 4 a lever 88 connected for movement by a pair of longitudinal members 89 and 90 which are fastened at their other end to a stud 95. Member 89 has a relatively lower coefficient of thermal expansion than member 90. The stud 95 is carried by an adjusting member 96 pivoted by a screw 97 to the soleplate of the iron at a point relatively remote from the switch. Thus as lever 88 moves, in response to increase in the temperature of the flatiron, the projection 87 at the upper end of the lever engages arm 84 and displaces it so that contact 64 is moved out of its equilibrium position and away from contact 63 to open the circuit. Similarly, when the temperature of the iron decreases again, projection 87 of lever 88, moves away from arm 84 and permits the spring arm 66 to move contact 64 back toward contact 63 to close the circuit.

It will be apparent from Figs. 1 and 2 that I have provided in the soleplate a central channel 98 to accommodate members 89 and 90 so as to permit the adjusting member 96 to be screwed down firmly in engagement with a substantial area of the top of the soleplate. As shown in the figures, this adjusting member 96 has a relatively long adjusting arm 99 disposed longitudinally of the iron. It will also be noted that the screw 97 on which the adjusting member is pivoted to the soleplate is spaced laterally from the central channel 98 and from the lug 95. The purpose of this spacing is to cause relative longitudinal movement of the stud 95 and members 89 and 90 in channel 98 as adjusting member 96 is rotated about its pivot 97.

Because the adjusting arm 99 extends longitudinally of the iron, and the line from stud 95 to pivot 97 extends substantially laterally of the iron, longitudinal movement of stud 95 and members 89 and 90 may be obtained by lateral movement of the adjusting arm 99. In other words, the adjusting member 96 functions substantially as a bell crank to convert lateral motion of arm 99 into longitudinal motion of stud 95 and members 89 and 90.

With reference to Fig. 1, the purpose of the adjusting arm 99 and aligned openings 30 and 53 will not be apparent. It will be remembered that openings 30 and 53 in combination with the channel arrangement of the heating elements, provide a fairly unobstructed path across the top of soleplate 20. Thus, a suitable adjusting bar

101 may be passed through the opening 30 between soleplate 20 and cover 24, across the top of pressure plate 43, through the space 53 between pressure plate 43 and lateral member 45 and on across the central portion of the soleplate to engage one side of adjusting arm 99. If desired, the end of arm 99 may be bent upwardly for better alignment with the side openings or to provide a larger area for engagement by the adjusting bar.

Since pivot screw 97 engages the adjusting member 96 and since said screw is threaded tightly into the soleplate, it will serve to clamp the lower face of the adjusting member firmly against the upper surface of soleplate 20. This clamping action is facilitated by the friction between the lower surface of the relatively long adjusting arm 99 and the upper surface of the soleplate. A rough finish on these surfaces is desirable, in order to increase this frictional engagement. Also, as shown in Fig. 10, a lock washer or friction washer 110 may be used between the head of screw 97 and the top surface of adjusting member 96 to increase the clamping action and resist rotation of member 96. Hence the adjusting member 96 will be held in any given position so tightly that casual shocks due to jarring during normal use will be insufficient to change said position.

However, when rod 101 is inserted against one side of adjusting arm 99, direct lateral force may be brought to bear against this arm. For this purpose bar 101 may be tapped with a suitable mallet. This direct application of force may be sufficient to overcome the clamping effect of screw 97, and the friction between the parts just described, so that the adjusting arm will change the position of adjusting member 96 in any desired manner.

Since the construction of the iron is symmetrical, the force-applying rod 101 may be inserted from either side of the iron and can, therefore, be used to shift stud 95 either toward the rear of the iron or toward the front. The longitudinal adjustment of stud 95 caused by lateral adjustment of arm 99 will be transmitted to switch actuating members 88, 89 and 90 and will serve to determine the initial position of point 87 and consequently the distance through which that point must move before it will engage arm 84 to open switch contact 64. In other words, the adjustment of arm 99 will vary the temperature at which the switch will operate and may be used to adjust the operating temperature of the iron within the desired limits.

Thus, it is apparent that the entire flatiron may be completely assembled so that the soleplate heating elements, cover, handle posts, handle, and manual operating knob and cord are all in their completely assembled relationship to each other and thereafter the switch actuating mechanism may be adjusted to the desired extent by insertion of a force-applying member 101 from either side of the iron through the spaces 30 and 53 against adjusting arm 99.

In Fig. 1, I have shown a simple device by which the setting of the switch may be checked. In this figure, a group of ordinary dry cells or flash light batteries 102 may be connected in series with a suitable indicating bulb 103 and two test leads 104 and 105. The test leads 104 and 105 may then be clamped to the prongs of the plug 59, with which the appliance is equipped. With this device, it will be apparent that the light 103 will be illuminated whenever

the circuit through the light batteries and test leads is completed, and this circuit will be completed only when contacts 63 and 64 of the flat-iron switch engage each other. Since these switch contacts are not in engagement when the iron is in its off position, the light 103 will not be illuminated when test leads 104 and 105 are fastened to the prongs of plug 59, provided, of course, the iron is in its normal cold condition ready for test, with control knob 79 in its off position as shown in Fig. 5.

With reference to Figs. 5 to 8, the control knob 79 may then be turned so that the off indicator 106 is no longer opposite the index mark 107 on the front handle post. This normal off position is shown in Fig. 5.

The knob 79 will be turned toward the operating position so that the temperature scale or other indicia 108 will approach the index mark 107.

At some point in this movement of the knob 79 the control cam will cause switch contact 63 to engage switch contact 64 and at this point the test light 103 will be illuminated. By providing an arrow 109 or other mark on control knob 79 at the point which should be opposite index 107 when the switch contacts 63 and 64 first make contact in a properly adjusted flatiron, it will be possible for the person making the test to note the position of knob 79 when the light first comes on and compare the position of indicating arrow 109 and index 107 to see if the iron is properly set. Such a proper setting is shown, for example, in Fig. 6 where the test arrow 109 is directly opposite handle index 107.

While a certain amount of tolerance in the position of this arrow on either side of index 107 can be permitted, it will be obvious that any substantial deviation from this position indicates that the iron is out of adjustment. Thus, for example, if, when the test light first comes on, the parts are in the position of Fig. 7, it will be apparent that the test arrow 109 has not yet approached index 107 and therefore the switch contacts have closed too soon. This would mean that in actual operation, if the control knob 79 were set at a given temperature, contact 63 would have been pushed too far against contact 64. Thus, a relatively greater movement of contact 64 would be required to open the switch than should normally be the case at that setting. Or in other words, the iron would operate at temperatures substantially higher than those indicated by the scale 108.

To correct this situation, it is only necessary to turn knob 79 so that the test arrow 109 is directly opposite index 107 and then insert the force-applying rod through openings 30 and 53 against adjusting arm 99 to apply force to that arm in a direction which will change the position of switch contact 64 so that the test light is no longer illuminated. In other words, adjusting arm 99 will be moved until the parts are so adjusted that movement of the knob from the off position toward the operating position will cause the test light to become illuminated just as the testing arrow 109 arrives opposite index 107.

Similarly, in the event that the test light is first illuminated only when the knob 79 reaches the position of Fig. 8, the parts should again be adjusted to achieve normal operation. In the situation of Fig. 8, it is apparent that the contacts 63 and 64 did not engage each other until the test arrow 109 had been turned a consider-

able distance beyond the index mark 107. Thus, the contacts are engaging each other too late for normal operation. This would result in the production of operating temperatures substantially lower than those indicated by the scale 108. The proper adjustment in this case may be made in the manner just described with reference to Fig. 7 except that the movement of the adjusting member 96 would, of course, be primarily in the opposite direction.

It will be obvious that the index mark 109 can be of any desired type. A mere dot, or a certain portion of the knob structure or design, or a specific point on the regular temperature scale could be made to serve the same purpose. It is only necessary to know what position of the knob corresponds to the closing of the contacts on a properly adjusted iron. The switch may then be adjusted so that the contacts close at that particular knob position.

The simple test and adjustment just described is particularly useful for dealers and distributors to whom irons are brought directly by the customer and who can make the necessary visual check and adjustment without disassembly of the iron and without expensive testing equipment.

It will be apparent also that the method of adjustment and the flatiron structure which permits such adjustment will have even greater usefulness in connection with more complicated testing apparatus. Thus in fact testing of such flatirons on the production line, it is customary to place the iron on a pyrometer or other device which will measure directly the temperature of the soleplate. The iron is connected to a source of current and control knob 79 is then turned so that any given temperature reading on scale 108 is directly opposite index mark 107. Should the pyrometer indicate that the soleplate varies from the indicated temperature by more than the permissible manufacturing tolerance, then it is a simple matter to insert the force-applying member and change the position of adjusting arm 99 so that the soleplate temperature will correspond accurately to the temperature indicated on the control knob. Such a test, of course, is far more accurate than the more simple visual check previously described, in which the parts are adjusted without actually raising the temperature of the soleplate to correspond to normal ironing conditions.

Furthermore, since such a pyrometer test can be made after the iron is completely assembled and ready for shipment, it will be apparent that the test results will indicate accurately the performance of the iron in the hands of the ultimate user. This would not be the case if the test and adjustment had to be made as is normally the case, with the flatiron or some part thereof in a disassembled condition, since the reassembly of the iron might so alter the thermal relationship and characteristics of the parts that the reassembled iron would not operate at the temperatures or with the accuracy indicated during adjustment and test in the partially disassembled condition. The advantages of this method of testing and adjusting the iron made possible by structure of the type herein described will be readily apparent, since the practice of the present invention makes it possible to insure greater accuracy in the operating temperatures of the flatiron during use by the ultimate consumer.

Thus it will be apparent that a flatiron structure has been provided in which the operating

range of the switch mechanism may be adjusted after the iron has been completely assembled by direct application of force through openings in the flatiron itself against a movably mounted adjusting member on the interior of the iron. This adjustment is possible without disassembly of the cover from the soleplate and without even the necessity of loosening or moving the manual control knob 79 or any other part of the assembled iron.

While I have shown in the drawings and foregoing specification a particular embodiment of this invention, various changes and modifications of the specific structure will be readily apparent to those persons skilled in the art. For example, the particular shape and mounting of the adjusting member could be substantially varied without departure from the essential teachings of the present invention. Likewise, the specific location of the openings which permit access to the interior of the iron and to the adjusting member could be varied within reasonable limits without departure from the spirit and teachings of my invention. It is my intention that all such changes and modifications as are readily apparent to skilled workers in this field should be considered within the scope of the appended claims.

Now, therefore, I claim:

1. In a flatiron having a soleplate, an electric heating element, and a control switch for said element, the combination of a cover associated with said soleplate and enclosing said switch, a portion of the edge of said cover being spaced slightly from said soleplate to form a relatively narrow peripheral ventilation opening therebetween at a level above said heating element, and an adjusting member connected to said switch for adjustment of the latter, said adjusting member being mounted and located substantially wholly within said cover and having a movable portion opposite said opening at a level above said heating element, the space between said opening and movable portion being substantially unobstructed for adjustment of said member by force applied to said portion through said opening without disassembly of any part of the flatiron.

2. In a flatiron having a soleplate, an electric heating element, a control switch for said element and a cover associated with said soleplate and enclosing said switch, the improvement comprising an adjusting member operatively associated with said switch for adjustment of the latter, said member being movably mounted within said cover, and restraining means operatively associated with the member and preventing movement of said member except upon application of direct force substantially in excess of that caused by jarring due to normal use of the iron, said flatiron being provided with a pair of openings located in the plane of movement of said member and at opposite sides thereof for direct application of force to said member in two selective directions.

3. In a flatiron having a soleplate, an electric heating element, a control switch for the element, a cover associated with the soleplate and enclosing the switch with a portion of the edge of said cover spaced slightly above the soleplate thereby forming a relatively long and narrow peripheral ventilation opening therebetween, and an external manually operable control member connected to the switch, the improvement comprising an internal adjusting member movably mounted and located entirely inside the cover

and operatively connected to the switch for independent adjustment of the ironing temperature without movement of the external control member, said adjusting member having a portion movable in opposite directions in substantially the plane of said ventilation opening, and clamping means frictionally restraining the adjusting member against movement from any given adjusted position during normal use of the iron, the adjusting member being movable against the action of the restraining means by direct application of force through said peripheral ventilation opening.

4. A flatiron according to claim 3 in which said movable adjusting member portion includes a flat lever arm engaging the upper surface of the soleplate and provided with a vertical pivot opening, and in which said restraining means includes a combination clamping and pivot screw passing through the opening and threaded into the soleplate and having a head engaging the upper surface of the lever arm and holding the arm in tight frictional engagement with the soleplate.

5. A flatiron comprising a soleplate having a top surface, a control switch mounted at one end of the soleplate, a cover associated with the soleplate and enclosing the switch, with a major portion of the lower edge of the cover spaced slightly above the soleplate thereby forming a relatively long and narrow peripheral ventilation opening therebetween, an external manually operable control knob connected to the switch for selection of the desired operating temperature, a thermal control member mounted on said soleplate and having one end operatively connected to the switch for operation of the latter, and an internal adjusting member connected to portions of the control member and soleplate spaced from the switch, said internal adjusting member being movably mounted on the top surface of the soleplate and having an arm movable substantially in the plane of said top surface and ventilation opening in response to direct application of force through said ventilation opening for independent adjustment of the position of the control member and hence of the operating temperature of the iron, and means clamping the internal adjusting member and control member against accidental movement from their adjusted positions.

6. A flatiron comprising a soleplate having a

top surface with a longitudinal channel therein, a control switch mounted at one end of the soleplate, a cover associated with the soleplate and enclosing the switch, with a major portion of the lower edge of the cover spaced slightly above the soleplate thereby forming a relatively long and narrow peripheral ventilation opening therebetween, an external manually operable control knob connected to the switch for selection of the desired operating temperature, a thermal control member mounted in said channel and having one end operatively connected to the switch for operation of the latter, and an internal adjusting member connected to portions of the control member and soleplate spaced from the switch, said internal adjusting member being movably mounted on the top surface of the soleplate above the channel and control member and having a vertical pivot connection to the soleplate at one side of the channel, a pivotal connection to the control member within the channel, and a lever arm extending along said top surface and movable substantially in the plane of said top surface and ventilation opening in response to direct application of force through said opening, said vertical pivot connection including means clamping the adjusting member and lever arm in frictional engagement with the top surface of the soleplate thereby clamping the lever arm and control member against accidental movement from their adjusted positions.

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