Jan. 25, 1955 M. IRELAND 2,700,237

SADIRON

Filed Sept. 25, 1950

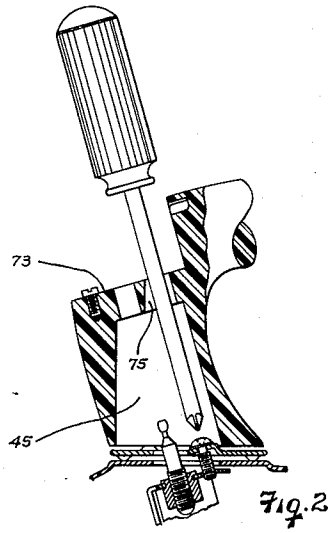


Fig. 2

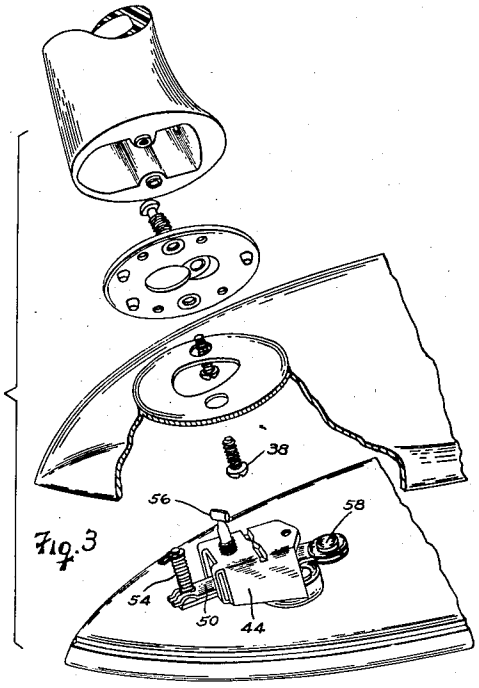


Fig. 3

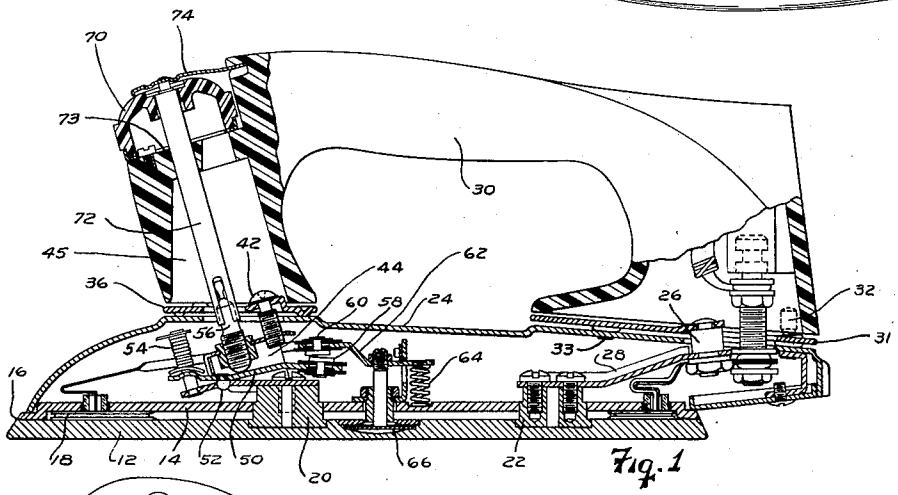


Fig. 1

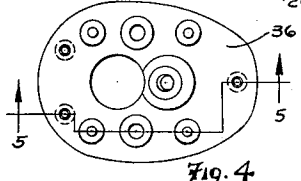


Fig. 4

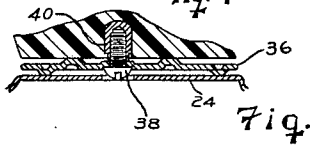


Fig. 5

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2,700,237

SADIRON

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Application September 25, 1950, Serial No. 186,592

8 Claims. (Cl. 38—88)

The present invention relates to the construction of sad irons.

In order to give an iron a pleasing modern appearance and sleek, comfortable feel of smooth unbroken surfaces, it is desirable to conceal screws, bolts and other fastenings. At one time the usual sad iron construction included a bolt or cap screw extending down through the shell into the sole plate or heated part of the iron for holding the shell and handle to the heated part, the head of the bolt being left exposed and accessible. Later constructions avoided exposed bolts at the top of the shell or near the front of the iron, but attached the front of the handle with special concealed fastenings such as keyed sockets or other slip connectors. Such constructions were unduly expensive, and not always rigid.

In my present invention I take advantage of the necessity for a manually movable control member for the thermostat and also of the convenience of having it near the upper front part of the handle of the iron. I utilize the control knob for concealing a fastening for the handle, and so make the fastener conveniently accessible so that a screw or other cheap and simple structure can be used for making a rigid and secure but disengageable connection.

Objects of the invention include the provision of an improved fastening for the handle of a sad iron, the provision of a concealed fastening that is simple, cheap, rigid, and accessible, and the provision of an improved smooth-surfaced construction for an iron. These and other objects and advantages will appear from the following description of the specific embodiment which I now prefer, and which illustrates the manner in which the invention can be practiced. In the drawings:

Figure 1 is an elevational view in section of an electric sad iron embodying the present invention;

Fig. 2 is a detail sectional view illustrating a step in the process of assembling the iron of Fig. 1;

Fig. 3 is a partial exploded view of the iron of Fig. 1;

Fig. 4 is a plan view of one of the pieces of the iron of Fig. 1; and

Fig. 5 is a sectional elevation of a part of the assembly of Fig. 1 taken substantially on a cut that follows the broken line 5—5 indicated in Fig. 4.

In the iron of Fig. 1, a sole plate assembly includes a sole plate 12 and a top plate 14 brazed together at their marginal edge 16, and a flat heating element 18 between them. Central metal plugs 20 and 22 provide both thermal and mechanical connection between the plates 12 and 14 near their center and provide fastening points for other parts of the iron. A shell 24 sets over the sole plate assembly and is fastened at 26 to a bracket 28 supported on the central plug 22. A handle 30 is fastened at 32 to the rear end of a cooling fin 31 which is fastened at 33 to the shell 24. The front post of the handle carries a cooling fin or plate 36 (see also Figs. 4 and 5) fastened to it by screws 38 in inserts 40 which are molded into the handle. A screw 42 carried in this plate screws into a bracket 44 mounted directly on the central plug 20. As may be seen from Figs. 1 and 5, the front end of the shell 24 is not fastened to either the handle or the sole plate but rather is clamped between them. The screw 42 has a groove or undercut portion under its head, and its hole in the plate 36 is threaded. This arrangement permits the screw 42 to be threaded into the plate 36 and then retained there loose during the assembly of plate 36 to the handle 30, etc. The head of screw 42 lies in a cavity 45 where it can be reached by a screw-driver as shown in Fig. 2.

Bracket 44 also carries an adjusting mechanism for a thermostat for controlling the temperature of the iron. A switch lever 50 rocks at 52 and is held by a spring 54 against an adjusting screw 56. This lever carries a contact 58 which cooperates with another contact 60 carried by a lever 62 which is controlled by a spring 64 and a bimetal disc 66.

The thermostat adjusting screw 56 is controlled by a manual knob 70 located at the upper front corner of the handle and is connected thereto by a shaft 72. This control is described in more detail and is claimed in my copending application Ser. No. 186,591, filed September 25, 1950, now Patent No. 2,674,133. The knob 70 sets on a shelf-like part 73 of the handle molding and is held in place by the shaft 72 which in turn is held by a spring clip 74, which also serves as a pointer for cooperating with legends (not shown) on the knob for indicating the setting.

During the assembly of the iron, the front cooling plate 36 carrying under-cut screw 42 is attached to the front column of the handle 30, and the shell 24 and cooling fin 31 are attached at 32 to the rear portion of the handle. This sub-assembly is set over the sole plate, on which the thermostat switch and adjusting screw 56 have already been installed. It is fastened at the rear by bolt 26 and at the front by screw 42 which is reached, as shown in Fig. 2, by a screw-driver inserted from the top of the front column through a hole 75 in the seat 73. Thereafter, as is described in my co-pending application already referred to, the adjusting knob 70 is set in place, the shaft 72 is inserted far enough to engage the T-shaped top of adjusting screw 56, the knob 70 is rotated to the proper position for indicating the thermostat setting, the shaft 72 is lowered so that its heading sets in the top counterbore of the knob 70, and the spring clip 74 is snapped into place.

When it becomes necessary to disassemble the iron the spring clip is lifted to disengage it from the shaft 72 and is removed so that the knob 70 and shaft 72 may be removed to make the screw 42 accessible. It is seen that the present construction provides a firm fastening which is simple, reliable and cheaper, and which is completely concealed so as not to interrupt the ornamental uniformity and comfortable smoothness of the handle.

The invention is capable of modifications and variations within the scope of the claims.

I claim:

1. In a sad iron comprising in combination a body, a handle therefor, means for fastening said handle to said body, and a control knob mounted on said handle and manipulatable thereon for controlling an operation of the iron, the improvement wherein said handle has a cavity therein near said body and a port opening out of said cavity, said fastening means bearing on a handle portion within said cavity and accessible through said port and operable therethrough and wherein said control knob constitutes a cover for covering said port and thereby concealing said cavity, and removable for exposing said cavity and giving access to said handle fastening means.

2. The combination of claim 1 wherein said body includes a sole-plate assembly and a shell for covering it, and wherein said fastening means extends from said handle through said shell to said sole-plate assembly and said handle and sole-plate assembly clamp said shell between them.

3. In a sad iron comprising, in combination, a body, a handle therefor including a front column, means for fastening said front column to said body, and a control knob mountable on the top of said front column and there manipulatable for controlling the operation of said iron, the improvement wherein said front column has an elongated cavity extending longitudinally thereof and opening through a port concealed by said knob, wherein at least a part of said fastening means bears on a handle portion within said cavity and accessible through said port and operable therethrough, wherein said control knob constitutes a cover for said port, said knob being removable for permitting access to said cavity for operation of said fastening means, and wherein there is included externally manipulatable fastening means for securing said control knob in place.

4. In combination a sad iron, a body, a column rising above said body, means at the bottom of said column for fastening it to said body, a hole through said column through which said fastening means is accessible and operable for fastening said column to said body, said fastening means bearing on a portion of said column within said hole, a control knob manipulatable for controlling said iron, said knob being mounted on said column and constituting a cover for closing said hole and thereby concealing said fastening means, and a fastener external of said column and control knob for securing said knob in place on said column.

5. The combination of claim 4 wherein said body includes a heated base and a shell thereover, and wherein said fastening means also holds said shell on said base.

6. In combination in a sad iron, a body comprising a sole-plate structure and a shell, a molded insulating piece on said body and attachable to the shell thereof, a control knob on said insulating piece, said insulating piece being so formed as to leave a cavity therein, said cavity being concealed by said knob and insulating piece when said knob is in place, fastening means having at least a part thereof in said cavity bearing on said insulating piece within said cavity for fastening said insulating piece to said body, said fastening means being accessible for operation when said control knob is removed from said insulating piece for exposing said cavity and a fastener for securing said knob to said insulating piece, said fastener having a part accessible outside said assembled insulating piece and knob for operating it.

7. The combination of claim 4 wherein said fastening means for said column includes a screw having a head within said hole.

8. In a sad iron comprising, in combination, a body, a handle therefor including a front column, means for fastening said front column to said body, and a control knob mountable on the top of said front column and there manipulatable for controlling the operation of said iron, the improvement wherein said front column has an elongated cavity extending longitudinally thereof and opening through a port concealed by said knob, wherein at least a part of said fastening means is in said cavity, wherein said control knob constitutes a cover for said port, said knob being removable for permitting access to said cavity for operation of said fastening means, and wherein there is included externally manipulatable fastening means for securing said control knob in place, wherein said handle is of molded insulating material, wherein a metal plate covers the bottom of the front column and is fastened thereto, and wherein a screw having a head above said plate and in said cavity extends through said plate and engages said body for holding said handle thereto.

References Cited in the file of this patent

UNITED STATES PATENTS

2,333,521	Clark et al.	Nov. 2, 1943
2,518,503	Sparklin	Aug. 15, 1950

FOREIGN PATENTS

600,051	Great Britain	Mar. 30, 1948