July 26, 1938. A. RUELLAND 2,124,713

ELECTRIC IRON AND IMPROVEMENT IN THE HANDLE PORTION THEREOF

Filed Jan. 19, 1937

Fig. 1.

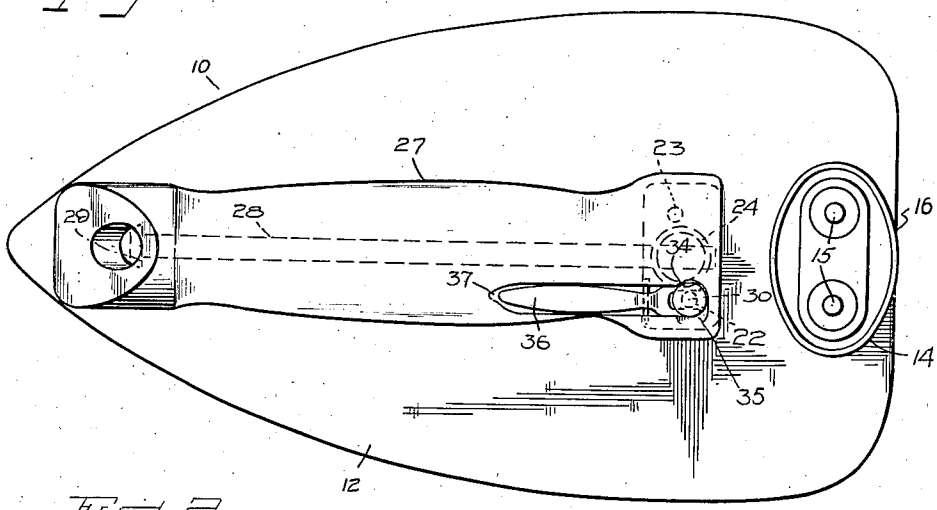
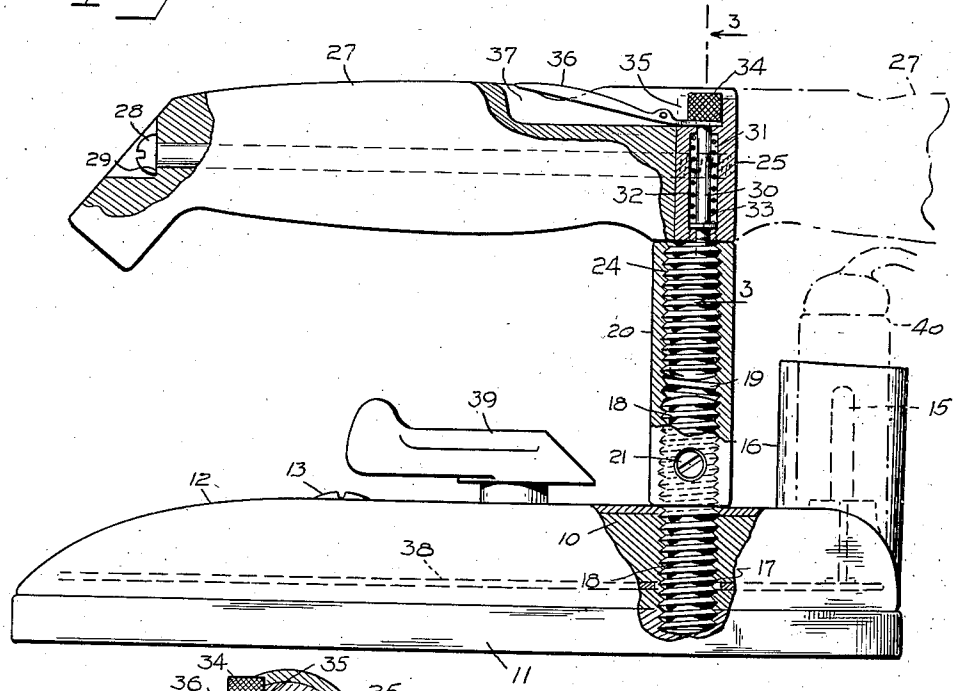


Fig. 2.



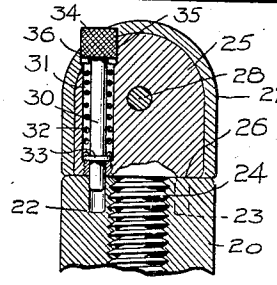


Fig. 3.

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UNITED STATES PATENT OFFICE

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ELECTRIC IRON AND IMPROVEMENT IN THE HANDLE PORTION THEREOF

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3 Claims. (Cl. 38—90)

My invention relates to electric irons and has reference particularly to improvements in the construction of the handle portion of a type, which is disposed in a plane apart from that of the heated surface, and which is adapted to swing around in this plane and be locked in its extreme forward and rearward positions with respect to the body portion of the iron.

Irons of this character, which include a handle portion adjustable in a plane parallel with that of the ironing surface, have been devised and several embodiments of the idea have been disclosed in my Letters Patents numbered 1,708,957; Re. 18,592; 1,958,592 and 2,013,854, but in each construction it will be found that the handle and electric plug connections consist of a special fitting, which, while efficient in operation, is extremely expensive to manufacture and will not accommodate any of the general plug constructions in common use with electric irons.

With the foregoing in mind, it is the purpose of the present invention to provide an electric iron of any well known construction and design having the socket fitting for the plug in the heel of the iron and mounting an upright handle post in the body of the latter forward and independent of the socket fitting to carry a handle portion free at one end and pivotally mounted at the other end in the post, whereby the handle is capable of swinging from one lateral position to another with respect to the iron portion and without interfering with or otherwise affecting the electric plug and socket connection.

Another object of this invention is to provide suitable locking means between the grip portion of the handle and the post thereof, to insure against relative movement of the grip except when adjustment is intended.

I accomplish these objects by means of certain combinations and arrangements of elements hereinafter described, set forth in the claims and illustratively exemplified in the accompanying drawing in which:

Figure 1 is a top plan view of an electric iron equipped with my improved handle;

Figure 2 is a side elevational view of the same showing parts in section;

Figure 3 is a substantially longitudinal sectional view taken on line 3—3 of Figure 2.

Referring to the drawing, in detail, the electric iron comprises a body portion 10 and sole plate 11 and the body portion is provided with a cover plate 12, the latter being fixed to the body 10 towards the toe thereof by a screw 13, which also screws into the sole plate 11 to hold it firmly to the body. The cover plate 12 at heel portion of the iron is provided with an opening 14 to accommodate the upwardly projecting contact terminal posts 15 of the electrical connection with the heating element. A socket fitting 16 surrounds the posts 15 and is permanently fixed in the cover plate 12 about the opening 14. The socket connection may be of any of the common types now in use for the purpose.

The body 10 of the iron forwardly of the socket 16 is provided with a threaded bore 17, which projects well into the sole plate 11, and which receives one end of a threaded bolt or union 18, the upper end thereof being screwed into a threaded bore 19 disposed axially of an upright post 20. The post 20 is rectangular in transverse section and adjacent the lower end the post is provided with a set screw 21 adapted to engage the union 18 and firmly affix the latter and post together. The upper end of the post 20 on opposite sides of the bore 17 and offset slightly on opposite sides of a line cutting the major transverse axis of the post, is provided with small bores 22 and 23 projecting parallel to the bore 19 and to a convenient depth into the post.

The upper end of the bore 19 receives the threaded shank 24 of a handle block 25, which comprises a flat portion beyond the shank 24 having a straight flat shoulder 26 at its under side to abut the upper end of the post 20 when the shank is screwed down in the bore 19. The block 25 carries a wood or composition handle or grip 27 which extends horizontally and is held to the block 25 by means of a screw 28 projecting axially of the grip and threaded at its inner end to screw into the block, the outer end having a head seated against a recessed shoulder 29 in the end of the grip.

According to the present invention, the grip portion 27 of the handle is devised to be locked or otherwise rigidly engaged with post 20 in its two extreme opposite positions, i. e. directly over the body of the iron or rearwardly thereof. The means used to effect the locked positions, comprises an upright bolt 30 mounted in the block 25 in a bore 31 disposed at one side and rearwardly of the axis of the shank 24, so as to mesh or align itself with one or the other of the small bores 22 and 23, the bolt 30 being adapted to project into one of the latter. The bore 31 is enlarged at its mid-portion to accommodate a spring 32 yieldingly engaging a collar 33 on the bolt and tending to project the latter downwardly. The upper end of the bolt 30 is provided with a knob 34 seating in a depression 35

in the grip 27 and block 25 and resting on the forked end of a lever 36 which is pivotally mounted in a longitudinal surface groove 37 in the upper side of the grip. The outer end of the lever 36 is flush with the surface of the grip in the normal lowered locked position of the bolt so as to prevent the lever from being unintentionally depressed when the iron is in use. The iron contains the usual electric heating element 38 and thermostatic control 39 therefor and accommodates the usual plug connections 40 for the terminal posts 15.

In operation, the grip 27 is either positioned over the body of the iron, as shown in full lines of Figure 2 or in the direct reverse position of the dotted lines of the same figure. To effect the change in position of the handle with respect to the base, the lever 36 is depressed and the bolt 30 is thereby projected upwardly to withdraw its inner end out of the bore 22 or 23 and free of engagement with the post. The grip is then turned about on the shank 24, which is screwed in the bore 19, until the bolt 30 reaches the other bore 22 or 23 and is projected therein by action of spring 32. It is particularly important that these adjustments of the handle may be made without interfering with the plug electrical connection to the iron.

The many uses to which an iron of this character may be put are well known and have been completely described in the above-mentioned patents. Therefore it will suffice to say that the present iron although extremely simple in construction, possesses all of the desirable features of the more elaborate and expensive devices, without exposing the moving parts to extreme heat and consequent deterioration, as is the case in many irons having the so-called bayonet type handle.

It is to be noted also that since the connections between the body of the iron and the post and between the post and the grip are effected by means of threaded shanks and bolts, there is practically no likelihood that the parts may become separated. To further insure against such a possibility the pitch of the threads used is very small so that it would require a great number of turns before the threads could be disengaged and the parts separated.

Having described my invention and the manner in which the same is operated what I claim and desire to secure by Letters Patent is:—

1. A swingable handle for a sad-iron, comprising an upright post adapted to be fixed to the body of any normal iron adjacent the heel thereof and being provided with an axially threaded bore, a horizontal arm having a threaded shank at right angles thereto and at one end thereof, said shank being screwed into said bore in the post to permit adjustable positioning of the arm thereon, and a withdrawable bolt arranged in said arm to engage with depressions in said post for locking the arm against rotary movement.

2. A swingable handle for a sad-iron, comprising an upright threaded member adapted to be screwed into a threaded hole provided in the body of any normal iron adjacent the heel thereof, a post provided with a threaded longitudinal bore screwed over said member, a set screw to fix the post to said member, and a horizontal arm having a threaded shank at right angles thereto and at one end thereof screwed into the upper end of the threaded bore of the post, and a lock bolt adjustable in said arm to engage spaced depressions in the post on either side of the shank to lock the arm in diametrically opposite positions.

3. A swingable handle for a sad-iron, comprising an upright threaded bolt adapted to be screwed into a threaded hole provided in the body of any normal iron, a post having a threaded bore, screwed on said bolt, a horizontal arm provided with a threaded shank at right angles thereto screwed into the upper end of the bore in the post, a spring depressed lock bolt arranged in the horizontal arm parallel to and offset laterally from the shank and capable of being aligned with depressions in the upper end of the post at opposite sides of the threaded bore to project into one or the other of said depressions and lock the arm against rotary movement, and means mounted in the arm to temporarily lift the lock bolt against the spring tension to release it from a depression and allow the arm to be swung to another position and the lock bolt to engage in the other depression.

ALBERTINE RUELLAND.