Nov. 13, 1928. 1,691,291

J. K. KAHALEOHU

SWITCH

Filed Feb. 19, 1927 2 Sheets-Sheet 1

Fig. 1.

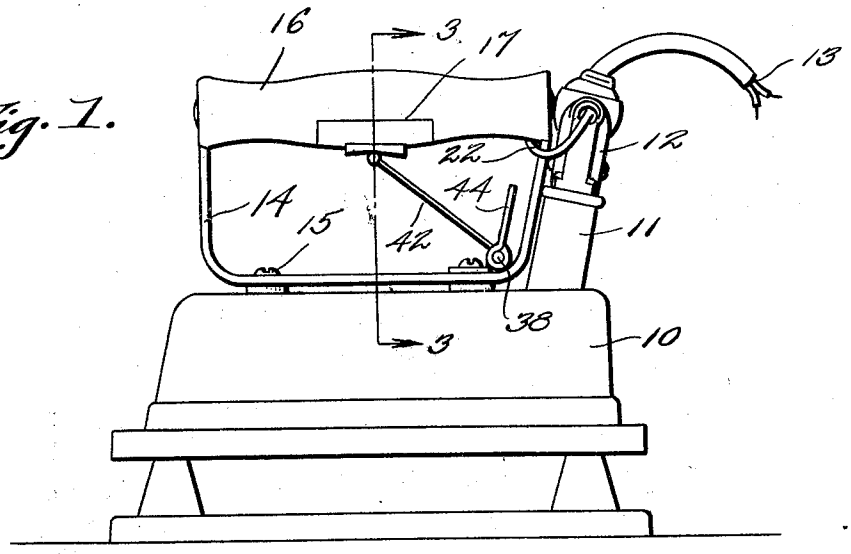


Fig. 2.

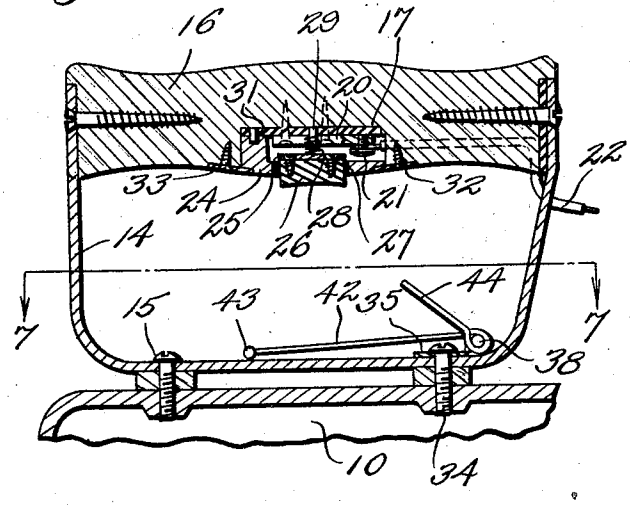
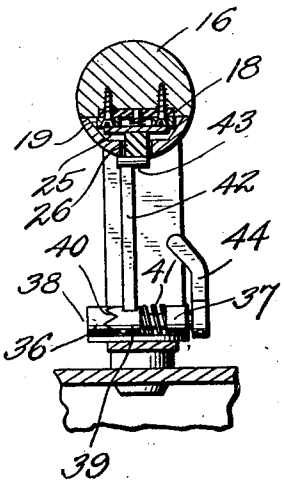


Fig. 3.



Joseph Kauwe Kahaleohu
INVENTOR

BY Victor J. Evans
ATTORNEY

A. E. Wise

WITNESS:

Nov. 13, 1928. 1,691,291

J. K. KAHALEOHU

SWITCH

Filed Feb. 19, 1927 2 Sheets-Sheet 2

Fig. 4.

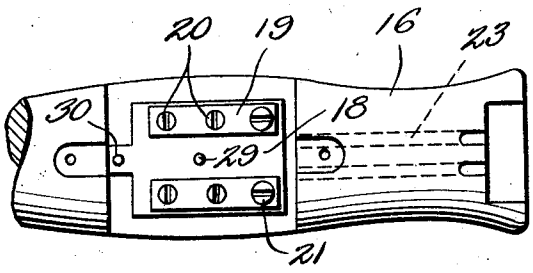


Fig. 5.

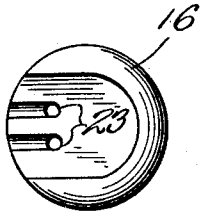


Fig. 6.

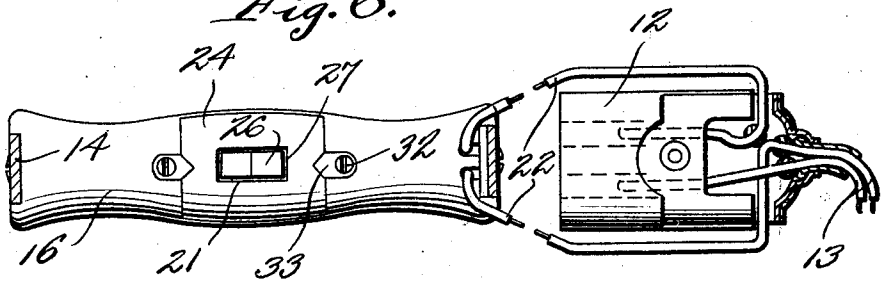
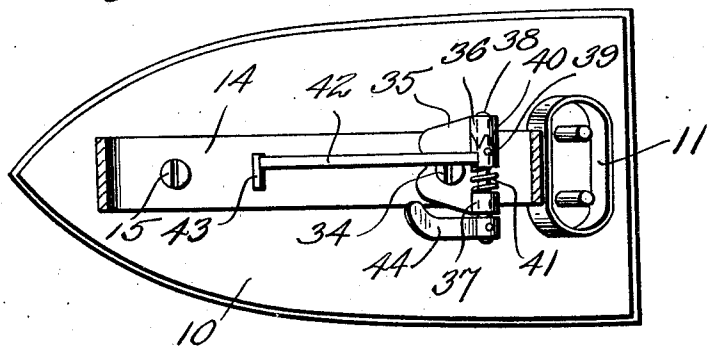


Fig. 7.



Joseph Kauwe Kahaleohu

INVENTOR

BY Victor J. Evans

ATTORNEY

R. E. Wise

WITNESS:

Patented Nov. 13, 1928. 1,691,291

UNITED STATES PATENT OFFICE.

JOSEPH KAUWE KAHALEOHU, OF HONOLULU, TERRITORY OF HAWAII.

SWITCH.

Application filed February 19, 1927. Serial No. 169,649.

This invention relates to circuit controlling devices especially adapted for use upon electric irons, an object being to provide a novel form of electric switch which may be installed in an iron handle or grip and yieldingly held in open position, and closed by the pressure of the hand of the user, so that the switch will be open when the iron is not in use, and closed when in use.

Another object of the invention is the provision of means for holding the switch closed when desired, and is especially adapted for use when the iron is being initially heated.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:—

Figure 1 is a side elevation of an electric iron illustrating the invention.

Figure 2 is an enlarged fragmentary section taken longitudinally through the handle.

Figure 3 is an enlarged section on the line 3—3 of Figure 1.

Figure 4 is a fragmentary view of the handle with the switch cover removed.

Figure 5 is an end view of the handle.

Figure 6 is a detail sectional view taken substantially on the line 7—7 of Figure 2 but looking in a direction opposite that indicated by the arrows, the view also showing the plug which detachably engages the electric terminals of the iron, a portion of the plug being broken away and shown in section.

Figure 7 is a section taken substantially on the line 7—7 of Figure 2 with the iron in plan and the plug removed from the socket.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates an electric iron which is provided with the usual socket 11 for the reception of a plug 12, by means of which the iron may be connected to a source of current through conductor wires 13. The iron further comprises a handle which includes a yoke-shaped member 14 connected with the iron as indicated at 15 and provided with a handle or grip 16 of suitable material.

The handle or grip 16 is provided with a recess 17 for receiving an electric switch. This switch comprises an insulated base 18 upon which are mounted spaced contacts 19. Screws 20 secure these contacts to the base 17 and also serve to secure the base within the recess. The contacts 19 carry binding screws 21, by means of which conductor wires 22 from the plug 12 are connected to the contacts, the said conductor wires extending through bores 23 provided in the handle or grip 16.

The switch further includes a cover plate 24 which is made of suitable material and which is spaced from the contacts 19, while located within the recess between the cover plate and base 18 is a contact plate 25. The contact plate 25 carries a finger piece 26 which extends through an opening 27 provided in the cover plate 24 and which is adapted to engage and bridge the contacts 19 to complete a circuit through the conductor wires 22. The contact plate 25 is yieldingly held spaced from the contacts 19 by means of a spring 28. The base is provided with a pin 29 which extends into the spring 28 and acts to hold the latter in position. A pin 30 also extends from the base for entrance into a socket 31 provided in one end of the plate 24. The plate is thus properly positioned within the recess. In order to removably hold the plate in place there is secured to the handle or grip at each end of the plate 24 by means of screws 32, plates 33 which engage over the adjacent ends of the cover plate. The latter may thus be readily removed for inspection of the switch and thereafter easily replaced.

From the foregoing description and accompanying drawings, it will be seen that the invention provides a normally open switch so that when the iron is not in use no current will flow through the heating element. When it is desired to use the iron, the hand which grips the handle or grip 16 will press the finger piece or button 26 inward so as to close the switch and permit current to flow through the heating element. Thus, if the user forgets to shut off the current, the circuit will be automatically opened.

Secured to the yoke 14 by means of a screw 34 is a plate 35 which carries spaced bearings 36 and 37, and mounted for rotary movement in these bearings is a shaft 38. Secured to this shaft is a collar 39 and this collar and the bearing 36 are provided upon their opposed faces with teeth 40. A spring 41 mounted upon the shaft between the collar 39 and the bearing 37 acts to yieldingly hold the teeth in engaged position so as to prevent accidental movement of the collar. Extending from the collar 39 is an arm 42 which

carries at its outer end an arm 43. This last mentioned arm is adapted to engage the finger piece or button 26 when the arm 42 is moved upward as shown in Figure 1 of the drawings. An operating finger 44 is secured to one end of the shaft 38 and provides a convenient means whereby the shaft may be moved. Normally, the arm 42 is positioned as illustrated in Figure 2 of the drawings so that the switch will remain open. When it is desired to close the switch without holding the grip 16, the arm 42 may be swung upward to engage the arm 43 with the finger piece or button 26 and hold the switch in closed position. The spring 41 yieldingly holds the teeth 40 engaged, so that pressure upon the finger piece 24 will permit the shaft 38 and consequently the arm 42 to move. The arm 42 is preferably formed of spring metal so as to provide proper contact between the contact 25 and the contacts 19.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is hereby reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. The combination with a hand grip having a recess therein, of a switch comprising an insulated base positioned within the recess, spaced contacts mounted upon the base and adapted to be connected in an electric circuit, a cover plate spaced from the base and having an opening therein, a spring resisted movable contact located between the cover plate and base and normally spaced from the base carried contacts and a finger piece carried by the movable contact and extending through the opening in the cover plate and holding plates secured to the grip at opposite ends of and engaging the cover plate to removably hold the latter in place.

2. In an electric iron, a handle carried normally open switch including a spring actuated button, an arm mounted for pivotal and lateral movement adjacent the handle and adapted to engage the button and press the latter inward to close the switch, means located laterally of the arm to hold the arm in adjusted position, means to yieldingly force the arm to engage the holding means and an operating member for the arm.

3. In an electric iron, a handle carried normally open switch including a spring actuated button, a plate mounted below the handle and provided with spaced bearings, a rock shaft mounted in said bearings, a collar secured to the shaft and adapted to engage one of the bearings to hold the shaft against rotary movement, means to yieldingly hold the collar in engaged position and an arm extending from the collar to engage the button and hold the switch in closed position.

4. In an electric iron, a handle carried normally open switch including a spring actuated button, a plate mounted below the handle and provided with spaced bearings, a rock shaft mounted in said bearings, a collar secured to the shaft and adapted to engage one of the bearings to hold the shaft against rotary movement, means to yieldingly hold the collar in engaged position, an arm extending from the collar to engage the button and hold the switch in closed position and an operating finger for the shaft.

In testimony whereof I affix my signature.

JOSEPH K. KAHALEOHU.