

May 29, 1923.

1,456,950

R. S. TOWER

SWITCH

Filed Nov. 17, 1920

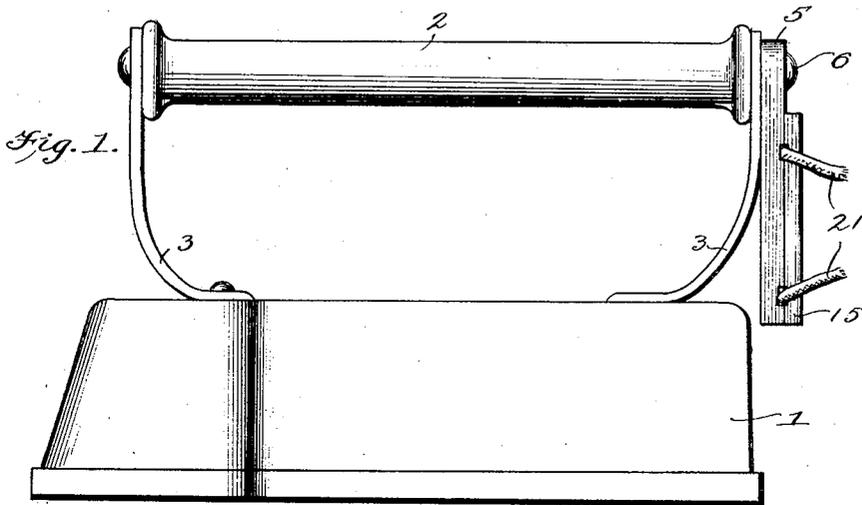


Fig. 2.

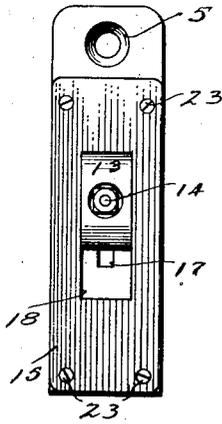


Fig. 3.

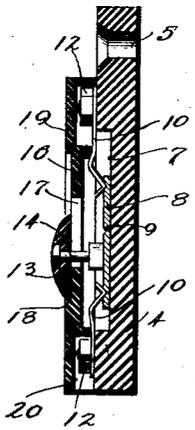


Fig. 4.

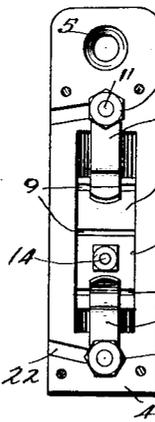
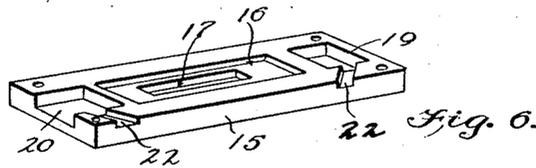
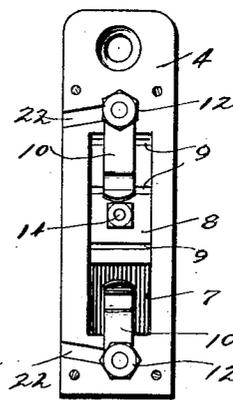


Fig. 5.



WITNESSES
Edw. H. ...
G. E. Trainor,

INVENTOR
Ralph S. Tower,
BY *Mum ...*
ATTORNEYS

UNITED STATES PATENT OFFICE.

RALPH SMITH TOWER, OF COTTAGE GROVE, OREGON.

SWITCH.

Application filed November 17, 1920. Serial No. 424,621.

To all whom it may concern:

Be it known that I, RALPH S. TOWER, a citizen of the United States, and a resident of Cottage Grove, in the county of Lane and State of Oregon, have invented certain new and useful Improvements in Switches, of which the following is a specification.

My invention is an improvement in switches, and has for its object to provide a switch especially adapted for controlling the circuit of electrically heated irons, wherein the switch is of simple and inexpensive construction, and capable of being applied to the usual form of iron, without change in the iron. A further object is to space the said connection away from the heated portion of the iron, to prevent injury to the switch from the heat.

In the drawings:

Figure 1 is a side view of an electrically heated iron having the improved switch,

Figure 2 is a plan view of the switch detached,

Figure 3 is a longitudinal section,

Figure 4 is a front view of the base with the cover plate and thumb-piece removed showing the parts in one position,

Figure 5 is a similar view showing the parts in another position,

Figure 6 is a perspective view of the cover plate looking from within.

The present embodiment of the invention is shown in connection with an electrically heated iron of the usual type, comprising the body 1 and the grip 2 connected to the body by the arms 3.

The switch comprises a base 4 of suitable insulating material having at one end a reamed opening 5 for receiving a screw 6 to connect the switch to one end of the grip. The base 4 is recessed on its upper face intermediate its ends as indicated at 7 to receive a sliding switch plate 8. This plate as shown, is slidable in the recess, and on the upper face thereof it is provided with three transverse grooves 9, a central and two lateral grooves. These grooves are adapted for engagement by spring contact plates 10 which are secured to the ends of the base by means of threaded stems 11 and nuts 12, and the spring plates extend over the recess at the ends thereof, and the ends of the plates are bent as shown in Figure 3, to form catches for engaging the notches 9 to hold the sliding plate in adjusted position. The plate 8 is moved by means of a thumb-

piece 13 which is connected to the plate 8 by the stem indicated at 14, and this stem extends through a cover plate 15, which is secured to the base over the recess 7. This cover plate as shown in Figure 6 has a central recess 16 similar to the recess 7 in base 4, and a slot 17 extending longitudinally of the cover plate at the center of the recess 16.

The stem 14 before mentioned moves in this slot, and the upper or outer surface of the plate 15 is also recessed as shown at 18 to provide a guide for the thumb-piece 13. Each end of the cover plate on the under face is recessed as shown at 19 and 20 for receiving the nuts and bolts 11—12, and conducting wires indicated at 21 are connected with the contact plates by the nuts and bolts. These wires extend out through lateral grooves 22 on the cover plate. The cover plate is held to the base by means of screws 23 as shown.

When the switch plate 8 is in the position of Figure 5, the circuit is broken, and the plate is held in such position by the upper contact plate 10. When it is desired to close the circuit, the thumb-piece is pushed downward, carrying with it the switch plate. The two end grooves 9 are now engaged by the contact plates 10, and the circuit is closed. When the switch plate is moved up the contact plate engages the central groove of the switch plate.

I claim:

1. A control switch for electrically heated irons, comprising in combination, a base plate, a slidable conductor plate thereon, guide means for said conductor plate, a spring contact plate positioned adjacent each end of the base plate, said spring plates projecting toward each other and adapted to frictionally engage said conductor plate when moved therebeneath.

2. A control switch for electrically heated irons, comprising in combination, a base plate, a conductor plate thereon, guide means for said conductor plate, a spring contact plate positioned adjacent each end of the base plate, said spring plates projecting toward each other, adapted to frictionally engage said conductor plate when moved therebeneath, means by which an electric circuit may be established when said contact plates are connected by the conductor plate, a thumb-piece carried by said conductor plate for manipulating the same and

a cover for said conductor plate and contact plates, said cover having a slot through which said thumb piece may move when positioning the conductor plate.

5 3. A control switch for electrically heated irons, comprising a base plate having means for connecting the same to the handle of the iron, a switch plate mounted to move longitudinally of the base and having a thumb-
10 piece for moving the same, resilient contact plates arranged at the ends of the base, the switch plate having transverse grooves and the contact plates having catches for en-
15 gaging the grooves to hold the plate for connecting or disconnecting said contact plates,

and said cover plate having a slot for permitting the required movement of said thumb-piece.

4. A control switch for electrically heated irons, comprising a base plate, means for 20 connecting said base plate to the handle of an iron, a switch plate mounted to move longitudinally of the base, a thumb-piece for moving said switch plate, resilient contact 25 plates arranged at the ends of the base, the switch plate having transverse grooves to hold the plate in position for connecting or disconnecting said contact plates.

RALPH SMITH TOWER.