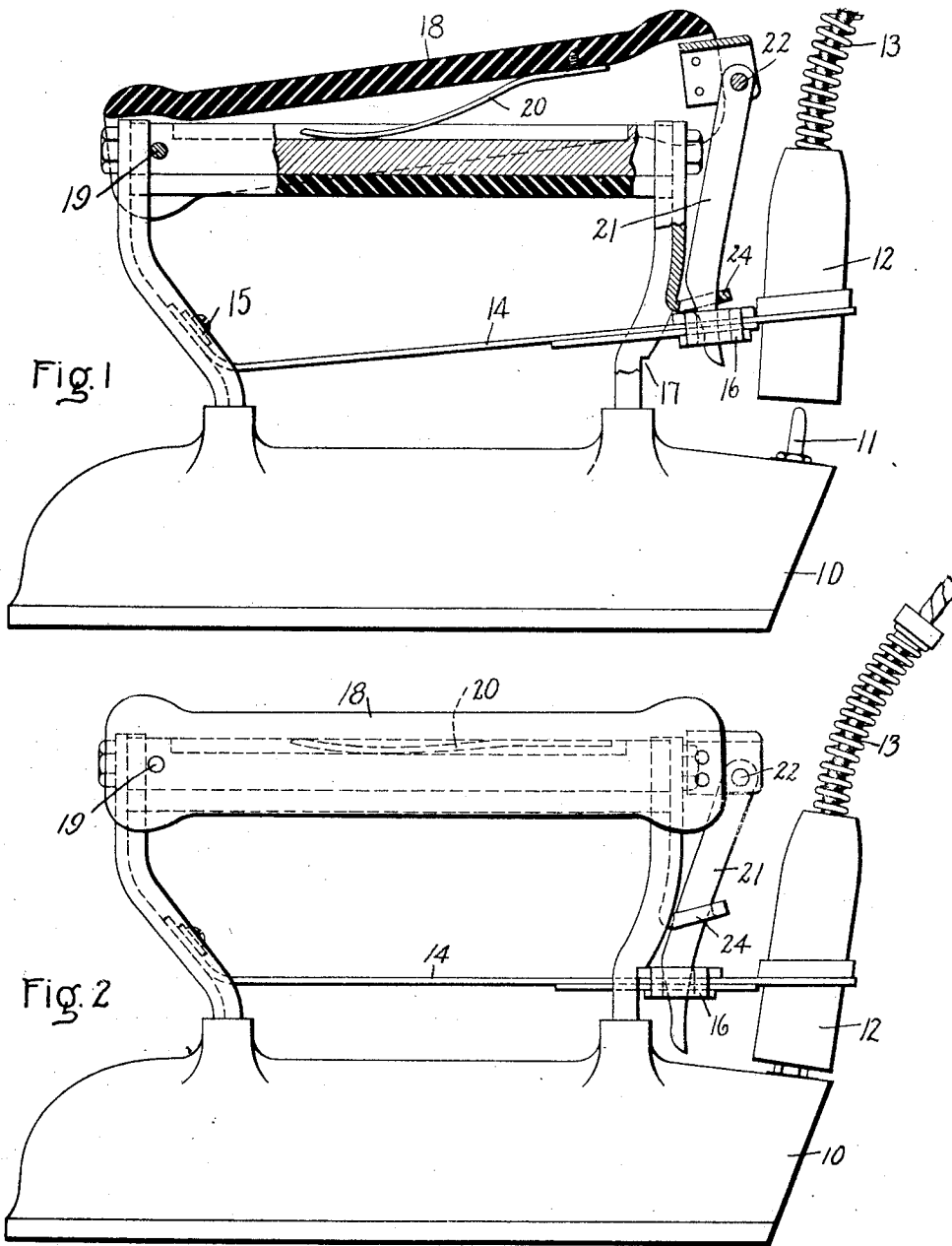


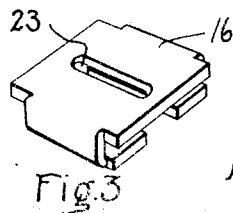
G. E. STEVENS.  
ELECTRICALLY HEATED TOOL.  
APPLICATION FILED AUG. 4, 1908.

943,483.

Patented Dec. 14, 1909.



Witnesses:  
Lloyd C. Bush  
J. Ellis Elen.



Inventor:  
George E. Stevens.  
By *Alfred Davis* Att'y.

# UNITED STATES PATENT OFFICE.

GEORGE E. STEVENS, OF LYNN, MASSACHUSETTS, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

## ELECTRICALLY-HEATED TOOL.

943,483.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed August 4, 1898. Serial No. 446,842.

*To all whom it may concern:*

Be it known that I, GEORGE E. STEVENS, a citizen of the United States, residing at Lynn, county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Electrically-Heated Tools, of which the following is a specification.

This invention relates to electrically-heated tools and the like and has for its object the provision of a device of this character in which the electric current is automatically cut off when the tool is not in use in a simple and efficient manner.

One of the objects of my invention is to provide an electrically-heated tool in which the current is applied when the handle of the tool is grasped and automatically cut off when the handle is released.

In order that the pressure of the automatic cut-off switch will not be upon the hand while the tool is in use, I provide means whereby the circuit is latched closed, the arrangement being such that the circuit will only be opened when the handle is entirely released while permitting the partial removal of the pressure without affecting the switch.

Another object of my invention is to utilize the connecting plug which is commonly used on tools of this character so that the connecting plug will be moved toward and from the fixed terminals to make and break the circuit as the handle is grasped and released.

Other objects of my invention will appear in the course of the following specification in which I have shown my invention embodied in concrete form for purposes of illustration.

In the accompanying drawing in which I have shown my invention in connection with a flat-iron, Figure 1 represents a side elevation partly in section of my flat-iron with the switch open; Fig. 2 represents a side elevation with the switch closed; and Fig. 3 is a perspective view of the latch.

Referring to the drawing, 10 represents an electrically-heated flat-iron provided with fixed terminals 11. The particular construction of this flat-iron forms no part of my invention but for purposes of illustration I have shown an iron such as is shown and described in the patent to Vogel, No. 839,343. Cooperating with the fixed terminals 11 is

a connecting member 12 to which are secured the flexible leads 13 for connecting with a source of current. This member 12 may be of any suitable construction, such for instance as that disclosed in my application Serial No. 424,543. This member 12 is supported upon a spring member 14 secured to the handle at 15 so that the member 12 will be normally pressed away from the terminals 11. A latch 16 is slidably mounted on the spring so as to engage a shoulder 17 on the handle and latch the member 12 in engagement with the terminals 11 to close the circuit. The spring 14 is forced downward and latched by an actuating device in connection with the handle of the iron consisting of a member 18, preferably of insulating material, shaped so as to be easily grasped by the hand. This member is pivoted to the fixed portion of the iron at 19 and is spring-pressed away from the fixed portion of the handle by a spring 20, preferably lighter than the spring 14. A finger 21 is pivoted to the end of member 18 at 22 so that its free end passes through the member 14 and through a slot 23 in the latch. This finger is so shaped at its free end that as it is forced downward it slides the latch toward the shoulder 17 and at the same time forces the spring 14 downward. A guide 24 for the finger is fixed to the handle so as to control the movement of the finger. Upon its return movement the finger 21 moves independently of the latch for a certain distance due to the shape of the finger so that when the member 14 and finger 21 reach the position shown in Fig. 1, the latch is tripped. When the operator grasps the handle the member 18 is forced downward against the tension of the spring 20. This forces the spring 14 downward so that the connector 12 engages the terminal 11. When the parts reach the position shown in Fig. 2, the latch 16 is moved into engagement with shoulder 17 so as to hold them in this position. Pressure on the member 18 may now be reduced and the operator need not grasp the handle so firmly. The spring 20 being light, the member 18 presses lightly against the hand of the operator. If, however, the operator should entirely release the handle, the member 18 would move to the outer limit of its movement and trip the latch to open the circuit.

While I have described my invention in

connection with a specific form of tool and as operating in a definite way, it should be understood that I do not limit my invention thereto since various modifications will suggest themselves to those skilled in the art without departing from the spirit of my invention, the scope of which is set forth in the annexed claims.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. The combination with an electrically-heated tool, of a circuit controlling switch therefor arranged to be moved to operative position when the handle of said tool is grasped, a device for latching said switch in operative position, and means whereby said latch is released when all the pressure is removed from the handle while permitting partial removal of the pressure without affecting the latch.

2. The combination with an electrically-heated tool, of a normally open switch therefor, a device for latching said switch closed when the handle of said tool is grasped, and means whereby said latch is tripped to open the switch when the handle is released but remains latched during the application of any slight pressure.

3. The combination with an electrically heated tool, of a switch spring-pressed to open position, a latch for holding the switch

in closed position and a tripping device for moving the latch in two directions, said device being movable independently a predetermined amount before moving the latch in a direction to trip the same.

4. The combination with an electrically heated flat iron, of a circuit controlling switch spring-pressed to open position, a latch for locking the same in closed position and a spring pressed member for moving said latch in two directions to lock and release said switch, said member being movable a predetermined amount in response to the spring tension before moving the latch to release the switch.

5. The combination with an electrically heated flat iron provided with terminal pins, of a spring member secured thereto, an attaching plug carried by said member and normally out of engagement with said pins, a latch movable upon said member into and out of engagement with a fixed part of the iron to lock and release the same, and a spring pressed member associated with the handle for moving said latch.

In witness whereof, I have hereunto set my hand this first day of August, 1908.

GEO. E. STEVENS.

Witnesses:

JOHN A. McMANUS, Jr.,  
ROBERT SHAND.