Dec. 9, 1924. 1,518,442

H. OSTERMANN

ELECTRIC CURLING IRON

Filed Oct. 4, 1922

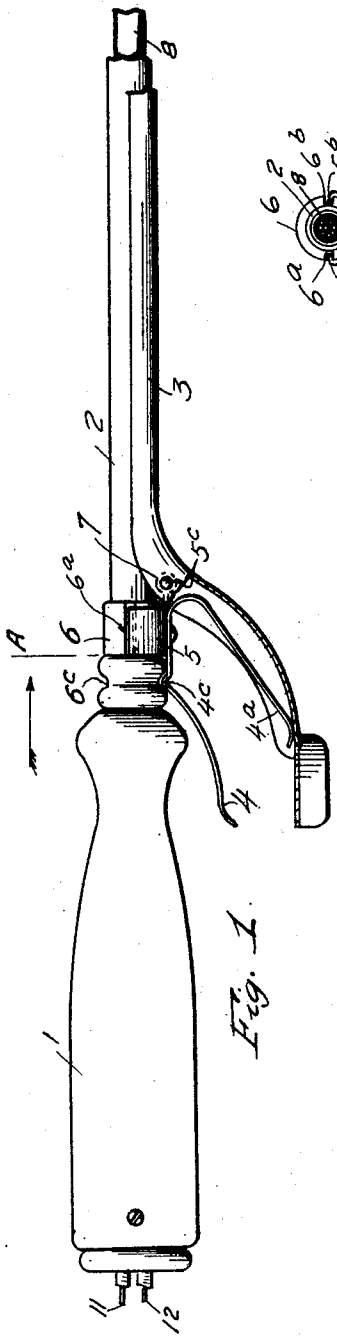


Fig. 1.

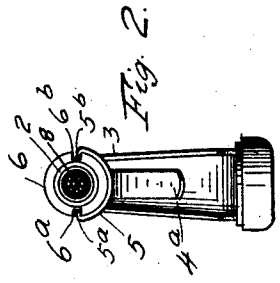


Fig. 2.

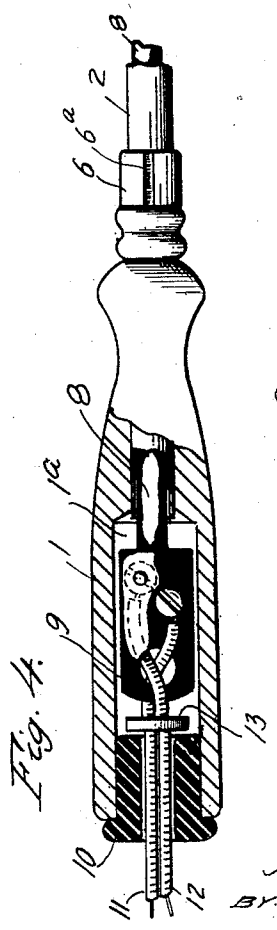


Fig. 4.

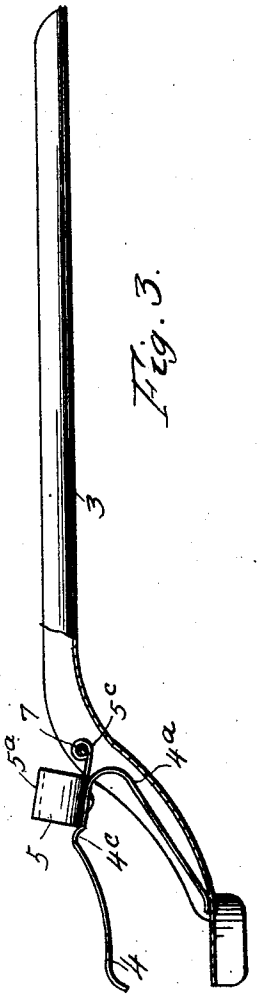


Fig. 3.

INVENTOR:

Henry Ostermann,

BY: Oliver O. Martin,

HIS ATTORNEY.

Patented Dec. 9, 1924. 1,518,442

UNITED STATES PATENT OFFICE.

HENRY OSTERMANN, OF CHICAGO, ILLINOIS.

ELECTRIC CURLING IRON.

Application filed October 4, 1922. Serial No. 592,319.

To all whom it may concern:

Be it known that I, HENRY OSTERMANN, a citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Electric Curling Irons, of which the following is a specification.

This invention has relation to a curling iron, and has particular reference to an electrically heated curling iron.

Devices of this character usually comprise a handle from which extends a hollow shank, within which a heating element is placed. Pivoted relative to the shank is a channelled lever, which lever is spring-held against the shank for the purpose of holding the hair tightly wound around the shank. In late years, however, a new method of hair curling has been evolved for producing what may be termed, and by the trade is termed a permanent wave, and for this purpose a device is employed which is not fitted with such spring-held lever.

The object of the present invention is the provision of a simple, convenient and inexpensive device of the character above referred to. A further object is to provide a device equipped with a detachable lever in order that the structure may be equally adapted for ordinary hair curling and for use in making such permanent waves. Another object is to provide a swiveled terminal for the wire connections of the structure capable of preventing twisting and consequent breaking of the connecting wires. With these objects in view my invention consists in the combinations hereinafter fully described and illustrated in the accompanying drawing, of which:

Fig. 1 is a general view of the structure of my invention,

Fig. 2 is a cross sectional view through the handle portion of the device and taken substantially on a line A of Fig. 1, looking in the direction of the arrow,

Fig. 3 shows the lever of the structure as it appears when detached, and

Fig. 4 illustrates the handle portion of the structure on a larger scale, and shown partly in section in order to disclose the construction of the wire terminals.

At first glance the outward appearance of the device presents the usual form of electric curling iron, comprising a handle 1, which is shown to support a hollow shank 2, and a spring held lever 3 is found mounted in the customary manner. Upon closer examination, however, attention is quickly drawn to a finger piece 4, which is shown mounted on a semicircular clamping piece 5, by means of which the lever 3 is attached to the main portion of the device. Around the front end of the handle is secured a ferrule 6, and this ferrule is made with diametrally opposite axial grooves 6^a, 6^b, for the accommodation of inwardly bent edges 5^a, 5^b of the clamping piece 5. The clamping piece is made with an extension terminating in a formed eye 5^c, and the latter fits loosely over a fulcrum pin 7. The finger piece 4 is riveted or otherwise suitably fastened on the back of the clamping piece 5, whence it is bent back to form a spring 4^a lying within the channel of the lever and adapted to maintain the lever normally closed on the shank 2.

Comparing now Fig. 3 with Fig. 1 it is noticed that, when released, as indicated in Fig. 3, the clamping piece 5 takes an oblique position relative to the lever, and that in Fig. 1 it is drawn up parallel with the lever and handle, the finger piece 4 being used for this purpose. When the clamping piece is drawn back parallel with the handle it is found that it may be pulled on to the ferrule or pushed off this ferrule, as the case may be, and without effort, but the moment the finger piece 4 is released, it is found that the clamping piece is urged to return to its oblique position, causing its bent edges 5^a, 5^b to tilt in the slots 6^a, 6^b and thereby to wedge in the slots and to clamp the lever against longitudinal displacement by the operator's hand.

The aforenamed clamping mechanism is sufficient to maintain the lever in position, while the apparatus is in use, against all ordinary displacement pressures, but I prefer to introduce a more positive locking mechanism for emergency purposes. To this end it is noticed that the ferrule 6 is made with an annular groove 6^c, and that the finger piece 4 is provided with a tooth shaped bend 4^c, adapted to ride in this annular groove. When the finger piece is drawn back this tooth moves out of engagement with the groove and the clamp can be pushed out of engagement with the ferrule, but the tooth snaps into position the moment the finger piece is released, and locks the lever positively in position.

The handle is bored lengthwise to support

the shank 2, and the rear end of this perforation is enlarged to form a cylindrical chamber 1^a. The heating element of the device comprises a long slender cylindrical rod 8, made of insulating material into which the thermal wires are imbedded, and an insulated terminal block 9 is rigidly affixed to the end of the rod. The latter is of such small diameter that it is free to rotate within the hollow shank 2, and the terminal block is likewise of a size to turn freely within the chamber 1^a. The end of this chamber is closed by a plug 10, and this plug is perforated to receive wires 11 and 12, which wires extend to the terminal block and carry the current from some source of electric energy (not shown). The hole through the plug 10 is large enough to permit the wires to turn freely. From the foregoing it is seen, then, that the heating element, the terminal block and the wire connections all are held rotatable in the handle and shank. This is an important feature, as it serves to prevent the occurrence of kinks, twists and breaks in the wire connections, while the device is being turned and twisted in the course of the curling operation. The pull of the connecting wires often is relatively great, and for this reason it is well to place an insulating washer 13 tightly on the wires intermediate the plug 10 and the terminal block 9, as the constant pulling and twisting otherwise may cause the wires to rub hard enough against the inner edge of the plug perforation to wear through the insulation and to cause a short circuit of the wires. But as the washer fits tightly on the wires it is found that it rides against and turns on the inner face of the plug, thereby taking all wear and protecting the wires.

I claim:

1. In an electric iron, a hollow handle carrying a heating element, a cylindrical shank on said handle and covering said heating element, a ferrule maintaining the shank on the handle and made with axial grooves diametrally opposed, a channeled lever, a semi-cylindrical sleeve having bent edges engaging said grooves, and a resilient member combining the semi-cylindrical sleeve and the lever, said resilient member maintaining the lever yieldingly closed on the shank.

2. In an electric iron, a hollow handle, a hollow shank on the handle, a heating element within the handle and shank, a ferrule maintaining the shank on the handle and provided with axial grooves diametrally opposed, said handle having behind said ferrule a peripheral groove, a semi-cylindrical shoe shaped to engage said axial grooves, a channeled lever, and a resilient member on said shoe, said member shaped with an eye in which said lever is pivotally mounted, one end of said member yieldingly pressing the lever against the said shank, the other end of the member engaging said peripheral groove and terminating in a fingerpiece for releasing the shoe to detach the lever.

3. An electric iron comprising, a handle provided with axial grooves, a hollow shank projecting from said handle, a heating element in said shank, a detachable lever, and a resilient member pivoted on said lever and capable of engaging the grooves of said handle to lock the lever on the handle.

4. In an electric iron, a handle, a cylindrical shank on the handle, said handle adjacent to said shank made with axial grooves, a detachable channeled lever, a resilient member pivoted on the lever and shaped to engage the grooves of said handle to hold the lever in place, said member urging the channeled portion of the lever against said shank.

5. An electric iron comprising, a cylindrical shank and an extending handle, a ferrule on said handle provided with axial grooves, a detachable channel lever, and a spring member pivoted in the channel of the lever, said member shaped to engage said grooves and made with a finger piece for releasing the lever from the shank, the member made with an arm urging the lever against the shank.

In testimony whereof I have hereunto affixed my signature.

HENRY OSTERMANN.