June 10, 1930. B. F. OSTROWSKI 1,762,792

ELECTRIC HAIR CURLER

Filed June 8, 1929

Fig. 1.

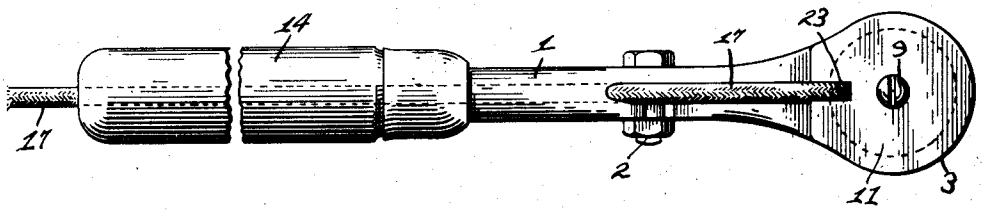


Fig. 2.

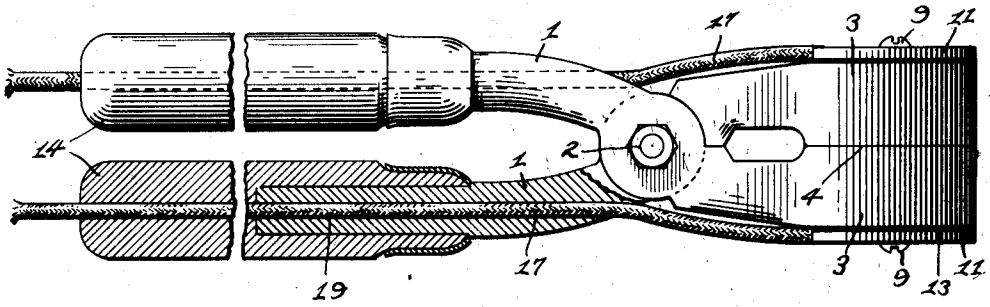


Fig. 3.

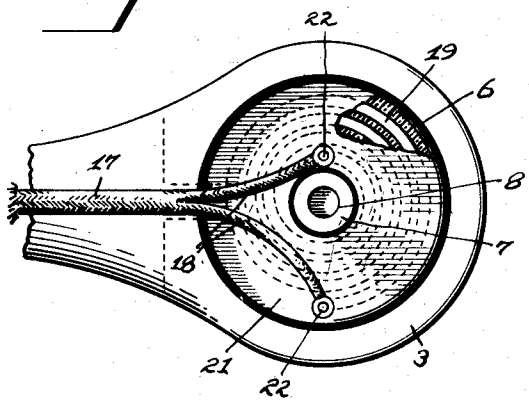
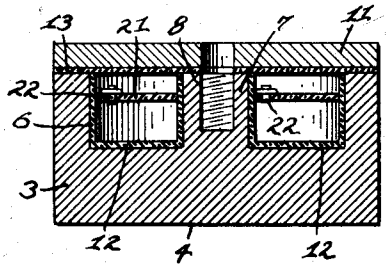


Fig. 4.



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UNITED STATES PATENT OFFICE

BENJAMIN F. OSTROWSKI, OF SAN FRANCISCO, CALIFORNIA

ELECTRIC HAIR CURLER

Application filed June 8, 1929. Serial No. 369,381.

My invention relates to improvements in electric hair curling devices and particularly to the type of curler used in making the so called "paper curls" wherein electrical heating units are enclosed within recesses formed in the backs of the jaws of a pair of curler tongs and connected to a source of electrical energy by flexible conductors extending longitudinally through the handle portions of the tongs for heating the jaws.

The primary object is to provide improved electrically heated tongs for curling hair.

Another object is to provide an improved electric curler for making "paper curls" and the like.

A further object is to provide an improved device of the character described wherein heating elements are enclosed within recesses formed in the backs of a pair of matching jaws movable into proximate relation to apply heat and pressure upon locks of hair to be curled.

Another object is to provide an improved device of the character described wherein electrical conductors are connected through openings formed in the handle portions and connected to heating units mounted within the jaw portions of the tongs without interfering with the normal operation of the tongs and without materially interfering with the manipulation of the tongs by an operator.

A still further object is to provide an improved construction which can be economically manufactured and which is simple and efficient in operation.

I accomplish these and other objects by means of the improved device disclosed in the drawings forming a part of the present application wherein like characters of reference are used to designate similar parts throughout the specification and drawings, and in which,

Fig. 1 is a broken elevation of my improved electric hair curling tongs;

Fig. 2 is a side elevation, drawn upon a larger scale and partly broken away and shown in longitudinal section;

Fig. 3 is a plan view of the back of a jaw portion; and

Fig. 4 is a transverse section of a jaw portion.

Referring to the drawings, the numeral 1 is used to designate a pair of tong members pivotally connected in crossing relation as at 2. The tong members are provided with jaw portions 3, preferably substantially circular in form and having adjacent faces 4 movable into proximate matching relation. Annular recesses 6 are formed in the backs of the jaw portions 3, said recesses forming central posts 7 tapped as at 8 to receive screws 9 and detachable securing plates 11 upon the backs of the jaws. The recesses 6 are lined with suitable insulating material 12 and a disc 13 of insulating material is secured between each plate 11 and its jaw portion 3, said disc 13 extending over the recess 6.

The tong members 1 are provided with suitable handle portions 14 secured thereto and having longitudinal openings 16 extending from the ends of the handle portions through said handle portions and tong members and opening at points adjacent the pivot 2. Flexible electrical conductor cables 17 are extended through the openings 16, said cables each having a pair of conductors insulated from each other and separated to form terminal portions 18 extending into the adjacent jaw recess 6 to be connected to the ends of a suitable electrical heating unit 19 mounted within said recess.

The heating unit 19 may be of any suitable structure shaped to fit within the back of the recess 6 and covered by an insulating partition 21 provided with conductors 22 adapted to receive the terminals of the unit 19 and the terminals 18 of the conductor cable. In applying the cables 17, the terminal ends 18 are carried from the opening 16 of one handle portion to the recess in the back of the jaw portion 3 of the opposite tong member 1 whereby said cables and terminal ends may be extended substantially straight to the corresponding heating unit 19 without crossing at the pivot 2 of the tongs. The plates 11 have notches 23 formed in the edges adjacent the handle portions 16 to admit the terminal portions 18 into the recess 6 for

connection to the conductors 22. The opposite ends of the conductor cables 17 are arranged to be connected in any suitable manner, not shown, to a source of electrical energy.

In operation, electric current flowing through the heating units 19 cause the jaw portions 3 of the tongs to be heated. The heated jaws are then operated to curl locks of hair in the ordinary manner, the heated faces 4 being pressed together upon the hair to be curled by pressing the handles together in the usual way. The units 19 are regulated in any suitable manner to provide a substantially uniform heat of the desired degree whereby the tongs may be used continuously for long periods without the usual delay of reheating the jaws from an external source of heat. The flexible conductors extending from the handles across the pivot point to the opposite jaw portion 3, permit the jaws to be spread to receive the hair to be curled, and to be closed and pressed with the desired pressure upon the hair while subjecting it to heat. The plates 11 effectively enclose the heating elements and terminals within the recesses 6, and the single securing screw 9, by which each plate is mounted, affords a simple means for assembling the device and facilitates the inspection or repair of the contacts and heating units.

Applicant is aware that curling tongs of the general type disclosed are well known, and, therefore, no claim is made to the tongs apart from the specific improvements by which said tongs are arranged to be electrically heated.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. An electric hair curler comprising a pair of tongs provided with jaw portions having adjacent faces movable into proximate matching relation and having annular recesses formed in the backs of the jaw portions and forming central posts within the recesses; handle portions connected to the jaw portions; heating units mounted within the recesses; a cover plate mounted upon the back of each jaw portion, said plates having notches formed therein adjacent the handle portions of the tongs; a screw applied through each plate and threaded into the central posts of the jaw to detachably secure the plates; and flexible electrical conductors connected to the heating units through the handles and extending into the recesses through the notches in the cover plates to connect said units to a source of electrical energy for heating the jaws.

2. An electric hair curler comprising a pair of tongs provided with jaw portions having adjacent faces movable into proximate matching relation and having annular recesses formed in the backs of the jaw portions and forming central posts within the recesses; handle portions connected to the jaw portions and having openings extending longitudinally through the handle portions and opening outwardly immediately back of the pivot point of the tongs; heating elements mounted within the recesses; plates detachably secured upon the backs of the jaws and enclosing the heating units within the recesses, said plates having notches formed in the edges adjacent the handle portions; and flexible electrical conductors extending through the openings in the handle portions and connected to the heating units through the notches in the cover plates to connect said units to a source of electrical energy for heating the jaws.

In witness whereof, I hereunto set my signature.

BENJAMIN F. OSTROWSKI.