

Nov. 24, 1936.

H. H. ECKSTEIN
PERMANENT WAVE CURLER.

2,061,998

Filed July 16, 1934

2 Sheets-Sheet 1

Fig. 1.

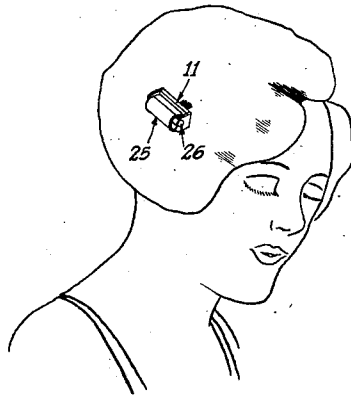


Fig. 2.

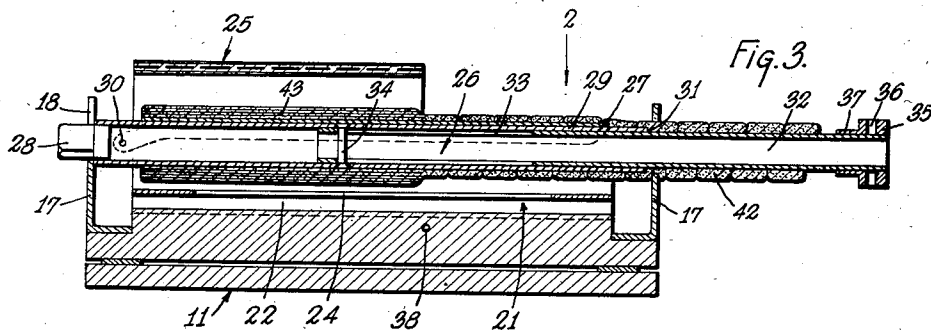
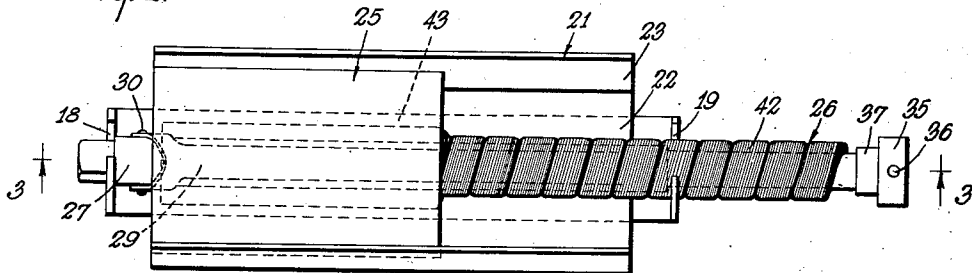


Fig. 3.

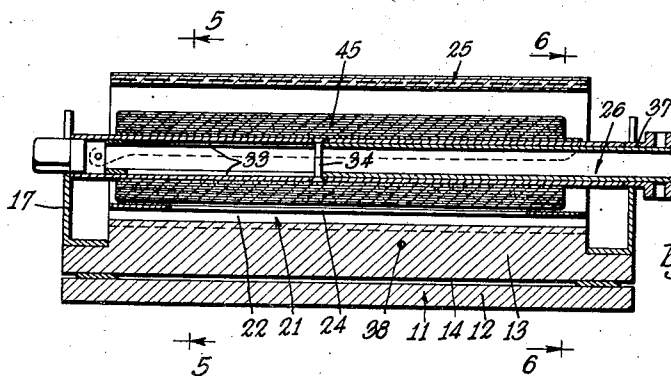


Fig. 4.

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Fig. 5.

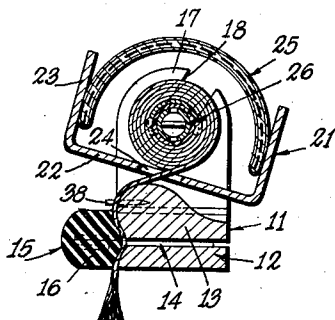


Fig. 6.

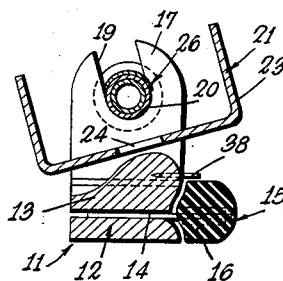


Fig. 7.

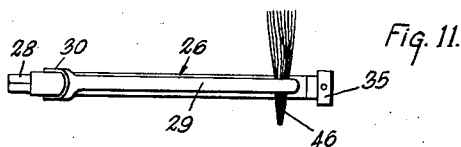
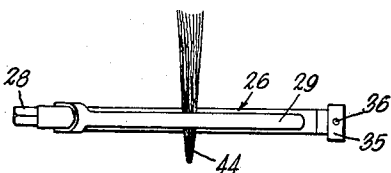


Fig. 8.

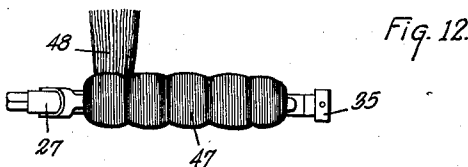
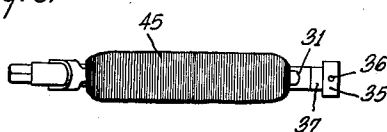


Fig. 9.

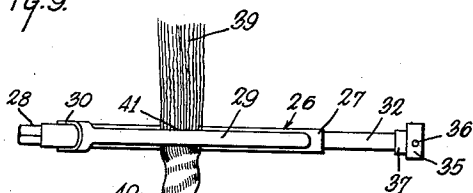
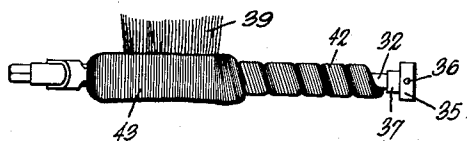


Fig. 10.



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UNITED STATES PATENT OFFICE

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PERMANENT WAVE CURLER

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Application July 16, 1934, Serial No. 735,303

16 Claims. (Cl. 132—36)

My invention relates to devices used in making so-called permanent hair waves. There are many devices used for making the so-called permanent hair waves, of different types, but as the hair grows, the permanent wave is only left in the old hair, the new growth having no waves or curls unless natural, in which case, the person would hardly ever have a permanent wave.

In most of the prior procedures in which new hair is to receive a permanent wave it has been customary and also necessary to also re-wave the old hair which still has a permanent wave left therein. This procedure of repeatedly giving a permanent wave in the usual manner to the end portions of the hair is injurious to the hair, and therefore it is desirable to only give the permanent wave to the new growth.

My invention relates to an apparatus particularly designed to give a new permanent wave to a new growth of hair and having a curling means to retain the formerly permanently waved hair in a curl but removed from the influence of a heating element, or the like, used to give the permanent wave to the new hair.

My invention also relates to a type of curling rod in which hair may be wound or coiled and held tight for winding or twisting thereon, for forming the permanent wave, and in order to accommodate the new growth hair, I form the curling rod of a telescopic type. Such rod is preferably made tubular and has a telescopic extension on which the new hair is wound or twisted on the main or stationary portion of the tube and the end portions having the formerly permanently waved part of the hair may be wound or coiled on one end of the fixed curler rod section and on the telescopic section which may be pulled out. Therefore, when used with a holder and heating appliance, the new hair only is subjected to the heat for giving a permanent wave.

My invention also relates to a combination assembly with a clamp or holding device which is attached to the hair and on which clamp the curling rod is mounted and held in place. This clamp has a guide element preferably in the form of a pin which restricts the spread of the hair longitudinally of the clamp so that the hair may be held at one end of the clamp and the new hair coiled on the curling rod, and the end portions which have been formerly permanently waved may be wound on the opposite end of the main section of the curling rod and the telescopic extension.

Another feature of my invention relates to the combination assembly of the holder or clamp for the hair, the telescopic curling rod and the use of a steam pad mounted in a holder centering the heat developed by this pad when moistened, to heat only the new growth hair wound on the curling rod and leaving the coiled or wound ends which have formerly been permanently waved on the rod remote from the influence of the heat of the steam pad. Such steaming pads are well known in the art and develop a heat after being moistened.

My invention is applicable to form typical croquignole waves, it being particularly adapted for forming this type of wave on short hair. I may also form a spiral croquignole combination wave which is particularly adapted for waving long hair, and a type of wave known as reverse spiral which is better adapted for hair of medium length.

My invention further relates to detailed features of construction, for instance, the curling rod has been mentioned and may have the usual spring held plug at the end for exerting a twisting tension on the rod, the inner telescopic section is preferably longitudinally slotted, and has the pin extending through the diametrically opposite slots, the pin being countersunk in the fixed tube. The sockets or holes are provided by a head on the end of the telescopic section so that the whole length of the expansible rod may be rotated to give a tying twist to the hair.

With my invention as regards the clamp, I employ a guide pin which is used to confine the new hair to one end of the device when the permanent wave is to be made only in the new hair.

In making a full croquignole wave on all the hair, the tip of the hair is first attached to the curling rod by jaw in the usual manner, and the hair is spread and wound complete on the rod between the end brackets of the clamp or support. In this case the hair straddles on both sides of the stop pin. With my invention, a heat guard is used between the hair wound on the curling rod and the clamp, and the steaming pad is supported in this guard over the top and outside of the curling rod and the hair wound therein. In forming a partial permanent or croquignole wave on the new hair, this is gripped at about the junction line of the new hair and the former permanent wave, the ends of the hair having the old wave are given a helical twist by hand around the expansible curling rod, and then the new hair is wound on the curling rod and the procedure done as above described.

In making a reverse spiral the tip end of the hair is gripped adjacent one end of the curling iron and is wound in a helical twist lengthwise of this curling iron so that in the full croquignole wave or reverse spiral the heating pad extends the full length of the hair to be waved, but in giving the croquignole or permanent wave on the new hair only the steaming pad is of sufficient length to cover only this new hair.

My invention is illustrated in connection with the accompanying drawings, in which:

Fig. 1 is an illustration of a person having one of my devices attached to the hair.

Fig. 2 is a plane taken in the direction of the arrow 2 of Fig. 3, showing making a permanent wave on the new hair only, the hair having the former wave being helically twisted on the telescopic curling rod.

Fig. 3 is a longitudinal section on the line 3—3 of Fig. 2 in the direction of the arrows.

Fig. 4 is a section similar to Fig. 3 but with the telescopic end of the rod forced inwardly for making complete croquignole or reverse spiral permanent waves.

Fig. 5 is a transverse section on the line 5—5 of Fig. 4 in the direction of the arrows showing the strand of hair gripped by the clamp and wound on the curling rod and the heating pad mounted in place.

Fig. 6 is a transverse section on the line 6—6 of Fig. 4 in the direction of the arrows, the end portion of the heating pad being omitted.

Fig. 7 is an illustration of the curling rod in its contracted position showing the initial grip on the end of a strand of hair prior to winding the hair to form a croquignole wave.

Fig. 8 is a view similar to Fig. 7 showing the hair completely wound in place for forming a croquignole permanent wave.

Fig. 9 is a view similar to Fig. 7 showing the manner of attaching a strand of hair to the telescopic curling rod at the junction line between the end having the former permanent wave and the new hair.

Fig. 10 is a view similar to Fig. 9 showing new hair wound on the curling rod to form a croquignole wave and the ends of the hair having the former wave twisted on the extended curling rod in a helical twist.

Fig. 11 is a view similar to Fig. 7 showing the initial grip of the ends of a strand of hair on the curling rod to form a reverse spiral wave.

Fig. 12 is a view similar to Fig. 11 showing the strand of hair wound in a helical twist on the curling iron for forming a reverse spiral permanent wave.

In order to understand my invention it is necessary to describe certain structures which are old, and now used, to which my invention is applied.

In the old structure there is clamp 11 which has a fixed jaw member 12 formed of a block 13 with a slot 14 therethrough to accommodate hinges and latch of the movable jaw 15. This movable jaw generally has a covering 16 of rubber, or the like, and the fixed jaw is made of wood or fibre.

There are two brackets 17 secured to the fixed jaw structure, one at each end, and one bracket has a slot 18 with a square bottom construction for a purpose hereinunder detailed. The other bracket has a slot 19 rounded at the bottom as indicated at 20, these slots being for the purpose of accommodating the curling rod to be hereunder detailed. With this construction I use also, part

of the old features including a trough-shaped holder and heat deflector 21 which has a base 22, side flanges 23 and a longitudinal slot 24 through which the hair to be curled or waved extends. The heating pad 25 is of a type now used but I make provision for using a shorter length of this in some cases. This pad when moistened develops heat sufficient to steam and heat the hair while being given the different forms of permanent wave.

My immediate invention resides in the telescopic curling rod designated generally by the assembly numeral 26. This rod has an outer fixed tubular section 27 with a square plug 28 at one end. This plug is designed to engage in a slot 18 having a squared bottom as this prevents the plug from rotating, and is used to develop a twist in the curling rod when hair is wound thereon, this being an old construction in detail. The gripping finger 29 is pivoted at 30 to its fixed tubular section and lies along the surface of the bottom portion 27 when the hair is being wound thereon. This tubular section is open at the end 31 remote from the plug end 28.

The telescopic section 32 is also preferably tubular and slides through the open end 31 of the tube 27. There are diametrically opposite slots 33 in the telescopic tube 32 and through these slots extends a rivet 34, the rivet being secured to the outer tube 27 and having counter-sunk heads. This forms a guide for the sliding motion of the outer or telescopic section and allows a twist to be communicated by the medium of the head 35 which has pin holes 36 for engaging a pin type of wrench which may be used to obtain a tight twist on the hair when wound on the curling rod.

It will be noted that the end 31 of the outer tube fits inside of the bracket 17 having the circular bottom 20. When the outer telescopic end is thrust inwardly the neck 37 of the head may ride in this slot as indicated at Fig. 4, but when the rod is pulled out and the hair is twisted or wound on the main portion 27 of the extension, this twisted hair rides in the slot 19 of the bracket 17.

Another feature of my invention relates to a guide pin 38 which is inserted in the fixed jaw of the holder construction and is located between the plates where the hair is gripped by the two jaws and the bottom 22 of the holder and heat deflector 21. This guide pin is approximately in a midposition between the two end brackets 17.

In using my invention to make croquignole type of permanent wave on the new growth hair only, leaving the former permanent wave on the end portion of the hair without curling, the procedure is as follows, having reference to Figs. 3, 9, and 10.

In Fig. 9, the new growth hair is indicated by the numeral 39 and the former permanent wave 40 portion on the end part of the hair by the numeral 40. The hair is then gripped on the curling rod at the line 41 between the new growth hair and the formerly waved portion. This part of the hair is also retained on the left hand end of the curling rod as shown in Fig. 3 by the guide pin 38 which is secured to the clamp. The former permanent wave portion 40 is twisted and coiled in a helical curl indicated at 42 in Fig. 3, by hand, on the main portion 27 of the curling rod and the extension end which is drawn out as shown in Figs. 9, 10, and 3. The new growth hair 39 is thus wound on the curling rod with a spiral wind indicated at 43. (Figs. 3 and 9). With the curl-

ing rod then adjusted in the brackets of the holder, a short heating pad 25 is inserted in the holding and heat deflecting plate 21 and this is only of such length that it will cover and apply moist heat to the new growth hair when this pad is moistened and thus becomes heat. It will be noted by reference to Fig. 3 that the formerly waved portion of the hair indicated by the helically twisted part 42 is not subject to heat.

If it is desired to make a croquignole type of permanent wave on the whole of the hair, the procedure is illustrated in connection with Figs. 4, 7, and 8. Fig. 7 shows a tip portion 44 of a strand of hair being gripped and attached to the curling rod at about its central section and thus strand wound by a spiral type of winding 45 which develops a croquignole type of wave. In this case the hair straddles the guide pin 38 and is spread practically the entire length of the holder between the ends of the pad holder 21. The heating pad 25 in this case is thus used full length and heats, when dampened, the completely wound hair. In this instance the extension or telescopic end of the curling rod may be thrust inwardly as it is not necessary to coil the hair thereon.

In making a so-called reverse spiral type of permanent wave the procedure illustrated in Figs. 11 and 12 is adopted. In this case the tip end 46 of a strand of hair is gripped on the curling rod adjacent one end and the hair is wound in a helical twist as indicated at 47 on the rod. The end of the strand of hair is adjacent the clamp and holder and thus the scalp is at one end of the rod when so wound as indicated at 48. In this case, the telescopic end of the rod is thrust inwardly as the hair is not wound thereon. The curling rod is properly adjusted in the hair and the heating pad 25 extends the full length of the hair to be treated and thus all of the hair is subject to the moist heat while retained in a helical winding on the curling rod and thus develops what is known as a reverse spiral permanent wave.

It will thus be seen that with my new type of telescopic curling rod, together with the use of the guide pin on the holder, I may give a croquignole type of wave on only the new growth of hair, leaving the formerly waved end portions for application of heat. I may also use the curling rod to give a croquignole type of wave on the whole of the hair from the tip of a strand to the portion gripped in the holder adjacent the scalp, or I may also, with the same device, give a permanent wave of the reverse spiral type.

When the hair is twisted into a so-called spiral twist on the extended mandrel as shown in Figs. 2, 3, and 7, such end which is adjacent the head 35 is tied with a string or the equivalent. This is a common procedure. Where the end of the hair is engaged by the gripping finger 29 as shown in Fig. 7, manifestly such end is held on the curling rod and is overlapped in making either a spiral or croquignole type of wind. Moreover, the hair is wet when wound on the curling rod and on the extension and therefore when supported in the notches 18 and 19 of the clamp or holder, the hair does not unwind.

The guide pin 38 is, as above mentioned, secured in the clamp and is designed to retain a portion of the hair at one side of the guide pin, this being at the left hand side for the croquignole wound portion as indicated in Fig. 3. Manifestly as the root portions of the hair are engaged by

the clamp the hair is thus retained tightly wound on the curling rod.

Various changes may be made in the details of construction without departing from the scope of the invention as defined by the appended claims.

I claim:

1. A permanent wave curler comprising, in combination, a clamp having at least two elements to clamp a strand of hair and having a pair of brackets, a tubular curling rod having a telescopic extension slidable therein, means to transmit a twisting force from the extension to the tubular portion of the rod, the said rod being mounted in the said brackets and adapted to have the hair to be curled wound thereon on one portion of the main part of the rod and having the hair to be left uncurled twisted on another portion of the rod and on the said telescopic extension when in its extended position, and means to apply a heating element to the end portion of the rod only, having the hair to be curled wound thereon, the means to apply heat comprising a holder and a heat deflector, and a heating pad mounted therein, the said pad extending longitudinally of the rod and covering only the portion of the rod having the hair to be curled on such rod.

2. A permanent wave curler as claimed in claim 1, a guide pin secured to the clamp at about the mid position between the brackets to retain a strand of hair between the pin and one of the brackets.

3. A permanent wave curler comprising, in combination, a clamp having a relatively fixed portion and a movable jaw to clamp a strand of hair, a pair of brackets secured to the fixed portion, a tubular curling rod having an internal pin, a telescopic section slidable in the tubular rod and having a slot, the said pin extending through the slot, means on the end of the extension to exert a twist on the rod as a whole, the said rod being mounted in the said brackets.

4. A permanent wave curler as claimed in claim 3, a guide pin secured to the relatively fixed portion of the clamp to retain a strand of hair between the pin and one of the brackets, the portion of the curling rod between the pin and the same bracket being adapted for winding hair to be curled, the remaining portion of the curling rod and the extension being adapted for twisting the hair to be left uncurled thereon in a helical twist.

5. A permanent wave curler as claimed in claim 3, the holder and heat deflector and a heating pad surrounding the said curling rod, the pad extending between the guide pin and the bracket and adapted to heat the hair to be curled wound on the rod.

6. In a permanent wave curler, a tubular curling rod having an internal pin therein, a rod extension slidable in one end having a slot, the pin extending through the said slot, the tubular rod being adapted for winding hair thereon in a spiral wind and the said extension being adapted for coiling hair thereon in a helical twist, and a hair gripping finger hinged to the tubular curling rod.

7. In a permanent wave curler as claimed in claim 6, the curling rod being combined with and mounted on a hair clamp having brackets at its opposite end, the tubular curling rod having means engaging one of the brackets to retain the rod with hair wound thereon, the other

bracket having a slot to engage the extension rod with the hair twisted thereon and means on the extension for exerting a twist on the extension and the curling rod.

8. A permanent wave curler comprising in combination, a clamp having at least two elements to clamp a strand of hair, a first bracket on one end of the clamp, a curling rod having one end engaged in the first bracket to retain the rod in position with hair wound thereon, the opposite end of the rod having a bearing in a second bracket with a head located outside of the latter bracket for twisting the rod, said rod having a finger for gripping a strand of hair, a portion of the rod between the brackets being adapted for winding hair in the spiral wind for a croquignole type of wave, the remainder of the rod between the spirally wound hair and the second bracket and between the second bracket and said head being adapted to retain hair in a helical twist, and means to apply heat to a portion of the rod between the brackets having the hair spirally wound thereon, the bearing in the second bracket being adapted to support a portion of a rod which extends beyond the second bracket, such portion being adapted to have hair twisted thereon.

9. A permanent wave curler as claimed in claim 8, the clamp having a guide means located between the brackets to confine the spirally wound hair between the said guide means and the first bracket.

10. A permanent wave curler, comprising in combination a clamp and holder for hair adapted to clamp a strand of hair adjacent its roots, a pair of brackets on the clamp and holder, each bracket having means to support a curling rod, a telescopic curling rod having an outer section located between the brackets and an inner extension section adapted to extend beyond the first bracket, means on the end of the extension for twisting the curling rod, means interconnecting the inner and outer portions of the rod to communicate a twist to the outer portion of the rod, interengaging means between the second bracket and the end of the rod having the outer portion to restrain said rod from rotation when hair is coiled or twisted thereon, the first bracket being adapted to support the extension portion of the rod extending beyond the first bracket with hair twisted on the extension portion of the rod.

11. A permanent wave curler as claimed in claim 10, a heat applying device having a holder for a pad of heating material, a heat deflector, the said pad being located between the brackets and covering only part of the curling rod between the brackets.

12. A permanent wave curler, comprising in combination a clamp and holder for hair adapted to clamp a strand of hair adjacent its roots, a curling rod, a first bracket, an interengaging means between the first bracket and the curling rod to restrain the rod from rotation, a second bracket having a slot, the said rod having a tube and an inner telescopic section slidable in the tube, there being a slot in the second bracket to engage and support the extension section of

the rod, means on the outer end of the extension section of the rod to rotate the extension section, an interengaging means between the extension section of the rod and the tube to communicate rotation from the extension to the tube, the tube being adapted to have a strand of hair wound in a spiral turn thereon on a portion of the tube, the remainder of the tube and the extension of the rod being adapted to have the remainder of the strand of hair twisted in a helical turn thereon, the said slot of the second bracket being adapted to accommodate a portion of the strand of hair twisted on the extension of the rod passing through the said slot.

13. A permanent wave curler as claimed in claim 12, a heating pad mounted in the holder and surrounding the tube portion of the rod having the hair wound in a spiral wind thereon, the said heating pad being of shorter length than the distance between the first and second brackets.

14. A permanent wave curler as claimed in claim 12, a guide pin secured to the clamp and holder between the brackets, said guide pin being adapted to engage a strand of hair and confine the portion of the hair adapted to be wound with the spiral turn on the curling rod.

15. A permanent wave curler, comprising in combination a holding structure having a pair of brackets, a curling rod, an interconnecting means between one end of the rod and a first bracket, the rod having a tube and an extension slidably housed therein, the extension having a neck, the outside diameter of the neck being the same as that of the outside of the tube and the housed portion of the extension being of less diameter than the outside of the tube, the second bracket having a slot to engage the neck when the extension is in its innermost position, the extension having means on its end whereby said extension may be turned, a connection between the tube and the extension for turning the tube portion of the rod, the rod being adapted for coiling and twisting hair thereon, the slot in the second bracket being adapted to engage hair twisted on the extension when drawn outwardly from the tube and whereby the hair twisted on the extension spaces the extension the same distance from the slot of the bracket as the spacing caused by the said neck engaging the said slot.

16. A permanent wave curler comprising in combination a clamp and holder for hair, a telescopic curling rod about which hair to be curled is adapted to be wound on a portion of such rod, the rod having an extension forming part of the telescope, whereby the part of the hair which is to be left uncurled may be twisted on the said extension, the holder having means to cooperate with the curling rod to support the rod with the hair wound thereon, a heating medium mounted in the holder and located to apply heat only to the part of the hair wound on the rod and which is to be curled, and a guide means on the clamp to guide and restrict the location of the hair to be curled in one portion of the clamp and on one portion of the curling rod.

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