

UNITED STATES PATENT OFFICE.

ALICE, PRINCESS ANDREW OF GREECE, OF ST. CLOUD, FRANCE.

CRIMPER.

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To all whom it may concern:

Be it known that I, ALICE, PRINCESS ANDREW OF GREECE, a subject of Greece, residing at St. Cloud, France, have invented certain new and useful Improvements in Crimpers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to the art of hair dressing and particularly to devices for making the so-called permanent or flat wave in hair and consists primarily in two pairs of tongs lying in different planes and so connected as to be capable of relative movement into substantially the same plane, while maintaining the hair clamped in the tongs.

With such a device the hair between the two pairs of tongs is rotated through an angle of ninety degrees more or less, thus twisting the hairs at the points where they leave one pair of tongs and where they enter the other pair.

This twisting facilitates the setting of the hair and produces a more lasting wave. By twisting the hair in this manner there is also accomplished a relative displacement of adjacent crimps and thereby produces the flat form of wave.

In order that my invention may be fully understood reference will be made to the accompanying drawings, in which like parts are similarly designated, and in which—

Figure 1 is a plan view;

Fig. 2 is a side elevation,

Fig. 3 is a transverse section;

Fig. 4 is a diagram of the operation.

The device comprises two pairs of tongs, A and B having a lower blade 5 or 5^a curved transversely of its length. This lower blade has up-standing ears 6 to which similar ears 6^a on the upper blade 7 or 7^a are pivoted on rivets 8.

The lower blades 5 and 5^a have shanks 9 that are held in handles 10 preferably made of some heat insulating material, such as wood.

The upper blades 7 and 7^a have short shanks 11 that are provided with short thumb pieces 12 so that when the handles 10

are grasped the tongs may be opened by the pressure of the thumb on the thumb pieces 12.

The lower blades 5 and 5^a are connected together by links 13 pivoted on pins 14 inserted in the adjacent longitudinal edges of the lower blades, thereby forming a parallel motion device whereby when the two tongs are held in different parallel planes, one of them may be moved by virtue of the links 13 into the plane of the other so that the tongs lie side by side.

In so doing the hair between the two tongs is given a turn of 90° more or less and the wave is thereby set flat and this flat set remains for a considerable time.

In the diagram, Fig. 4 if 15 be considered as the point where a hair *h* emerges from between the edges of the lower tongs and 16 be considered the point where said hair enters between the adjacent edges of the upper tongs, then by pushing the upper tongs forward until they come to lie beside the lower tongs, the vertical portion *h* of the hair will lie flat in the position *h'* and to the front of point 15, while if the upper tongs be pulled back the position *h''* is assumed. In this manner either crimp, formed between the curved interior and exterior surfaces of the interfitting blades 5 and 7 of a pair of tongs, may be advanced with respect to the other.

The blades are preferably of iron so that they may be heated, although the device may be readily used cold when the hair is moistened.

The blades of the tongs are urged into their closed position by suitable springs 17 here shown as leaf springs.

I claim—

1. In a hair crimper, means to hold the hair at points in different parallel planes, devices to movably connect said means and permit said means to be moved into substantially the same plane whereby the hair between the holding points is rotated and the holding points relatively displaced.

2. A hair crimper including two pair of tongs in different planes, means to connect said tongs for relative parallel movement into a plane substantially common to both of them.

3. A hair crimper including two pairs of hair clamping means, arranged to lie in different planes, links pivotally connecting like members of said clamping means to permit

parallel movement from said parallel planes into substantially the same plane whereby simultaneous rotation and displacement is imparted to the hair to obtain a flat wave.

5 4. A hair crimper including two pairs of tongs each having a pair of interfitting blades, said tongs lying in parallel planes, links pivotally connecting a blade of one
10 pair of tongs with a similar blade of the other pair of tongs, said links permitting relative movement of the tongs into substantially the same plane.

5. A hair crimper including two pairs of

tongs, each having a concave lower blade and a pivoted convex upper blade fitting into the
15 lower blade, a handle on the lower blade of each pair and a thumb piece on the upper blade, a spring to urge said blades into interfitting position, links pivoted to and connecting the adjacent edges of the lower
20 blades, said links arranged to permit relative movement of said tongs from parallel planes into substantially the same plane.

In testimony that I claim the foregoing as my invention, I have signed my name.

ALICE, PRINCESS ANDREW OF GREECE.