May 2, 1939. R. W. FLINN 2,156,808

MEANS FOR TENSIONING HAIR

Filed July 10, 1937

Fig. 1.

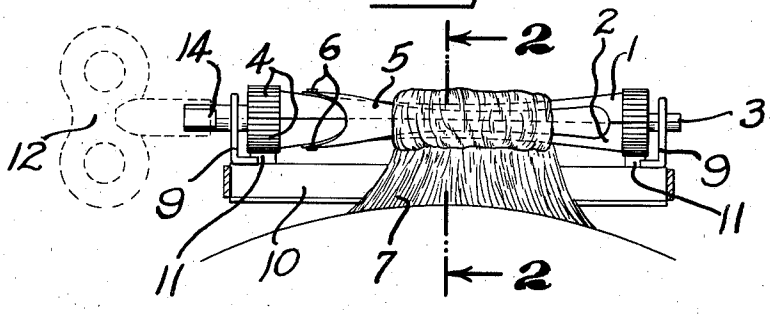


Fig. 2.

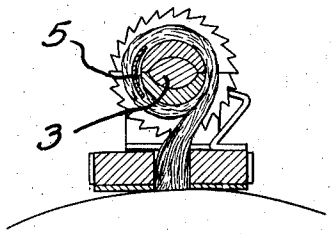
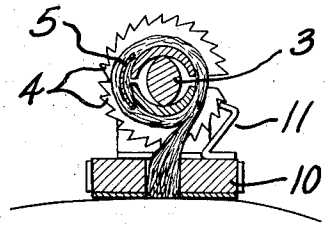


Fig. 3.



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Patented May 2, 1939 2,156,808

UNITED STATES PATENT OFFICE

2,156,808

MEANS FOR TENSIONING HAIR

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Application July 10, 1937, Serial No. 152,987

1 Claim. (Cl. 132—33)

My invention relates to a means for tensioning hair, and more particularly to a means for placing human hair under tension preliminary to the heat treatment thereof to produce what are commonly known as permanent waves therein.

Among the objects of my invention are: To provide a means for tensioning human hair without pulling on the scalp; to provide a means for tensioning hair without the clamping thereof adjacent the scalp; to provide a means for imparting a radial stress of any intensity desired to coil hair; and to provide a simple and efficient means for coiling and tensioning hair, preparatory to the heat treatment thereof to produce a wave therein.

My invention possesses numerous other objects and features of advantage, some of which, together with the foregoing, will be set forth in the following description of specific apparatus embodying my invention. It is therefore to be understood that I do not limit myself, in any way, to the apparatus of the present application, as I may adopt various other apparatus embodiments within the scope of the appended claim.

In the drawing:

Figure 1 is a side view of the hair bobbin of my invention having a lock of hair wound thereon, the bobbin holder being shown diagrammatically inasmuch as it is no part of the present invention.

Figure 2 is a cross-sectional view taken as indicated by the line 2—2 of Figure 1, and

Figure 3 is a view similar to Figure 2 showing how the hair is placed under a radial tension.

In creating permanent waves in human hair it is customary for the hair to be wound upon a solid bobbin and then placed in a holder which rests on the scalp. As the hair is wound on the bobbin the bobbin naturally approaches closer and closer to the holder, which in most cases is split to form a clamp tightly gripping the hair adjacent the scalp. As the twisting of the bobbin continues the bobbin drops into bearings on the holder, the holder having a ratchet mounted thereon engaging teeth on the bobbin to prevent the bobbin from unwinding. A key is then used to tension the hair by turning the bobbin against the hair-hold of the clamp. At some time during this procedure pads wet with various waving solutions are positioned around the coiled lock, and after the tension has been applied these cloths are heated in one manner or another to set the hair while under tension and while coiled.

I have found that the length of time such a wave will remain in the hair depends to a large extent upon the tension placed upon the hair before the heating takes place, and I have also found that it is not possible to obtain maximum tension by rotating the bobbin against the hold of the clamp, because the more tension that is applied to the clamp the greater chance there is for hair to slip in the clamp and pull on the scalp, and even the use of the clamp itself tends to pull the hair if any great amount of hair is included in the lock.

My invention, therefore, is directed toward a means for applying tension to the hair without any pull either against a clamp or against the scalp. This means may be more fully understood by direct reference to the drawing.

Here, a bobbin is provided comprising identical halves 1 and 2. These half bobbins fit around a central axle 3. However, the central axle, as shown in Figure 2, is of oval cross-section, and the central channels in the halves 1 and 2 are of similar contour, so that when the axle 3 properly fits the channels the halves contact each other to form the equivalent of a solid mandrel member upon which hair may be wound. Usually, the cross-section in the center of the bobbin is slightly smaller than at the outer edges. Each end of the halves is provided with half ratchet gears 4, normally registering to form a complete ratchet gear. The two halves are held together about the axle by a hair clip 5 attached to each half by pins 6.

In operation, the end of a lock of hair 7 is tucked under the hair clip 5 and the hair wound loosely around the bobbin, no particular pains being taken to have it tightly wound thereon. As the bobbin approaches the scalp it is then dropped into bearings 9 on each end of a holder 10, which may, if desired, be in two parts; these two parts however do not need to approach each other to form any clamp on the hair adjacent the scalp but merely provide a means for spacing the bobbin from the scalp, a support for the bobbin and also a barrier to prevent excessive heat from reaching the scalp. After the bobbin is positioned in the bearings 9 it is maintained from unwinding by ratchet 11.

Up to the present time no appreciable tension has been placed upon the hair and the rolled lock is ready for tensioning. A key 12 is applied to the key end 14 of the axle 3 and the axle is rotated one-quarter turn, thus, by cam action forcibly separating the two halves of the bobbin. The bobbin is thus expanded and circumferentially enlarged, thereby placing a heavy tension thereon. It is obvious that by changing the

camming contour of the interior axle, greater or less tension may be applied to the hair, as desired.

After the axle has made its quarter turn and the hair has been tensioned, then the hair may be treated in any usual manner for setting the wave.

I have provided, therefore, a means for tensioning hair to any desired degree, or even approaching the breaking point, if desired, to the end that the waves produced by such heavy tension tend to last longer than those produced by light tensions, and this tension is produced without any pull whatsoever upon the scalp of the person whose hair is being waved.

It should be distinctly understood that my bobbin may be used if desired with other prior art holders where the hair is clamped, but that such clamping does not affect the operation of my expanding bobbin in any way, nor is it necessary to utilize the clamping effect in any manner to exercise my invention.

It is also obvious that I do not wish to be limited to the exact type of expanding bobbin illustrated and described herein merely as an example of my invention within the scope of the appended claim.

I claim:

A hair waving bobbin comprising a pair of segments cooperating to form a mandrel member of substantially circular cross-section upon which hair may be wound, each of said sections having a central channel therein of elliptical contour, and a longitudinal cam member fitting in said channel and of such a cross-section as to force said segments apart when rotated, said cam being restrained from longitudinal movement.

ROLAND W. FLINN.