May 6, 1952 E. M. GRAHAM 2,595,844

HAIR CURLER

Filed Aug. 22, 1950

Fig. 1

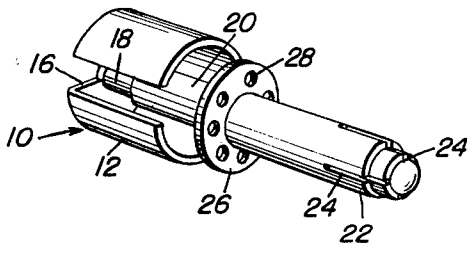


Fig. 2

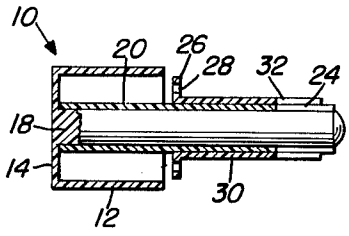


Fig. 3

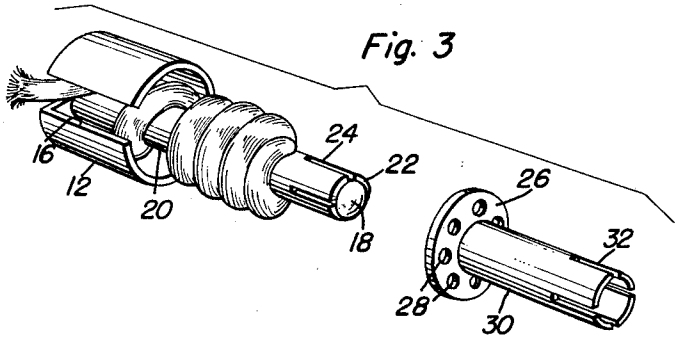


Fig. 4

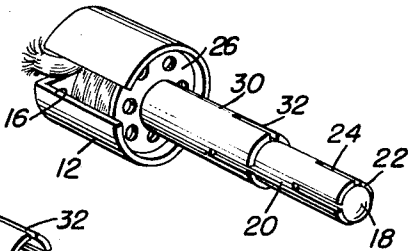
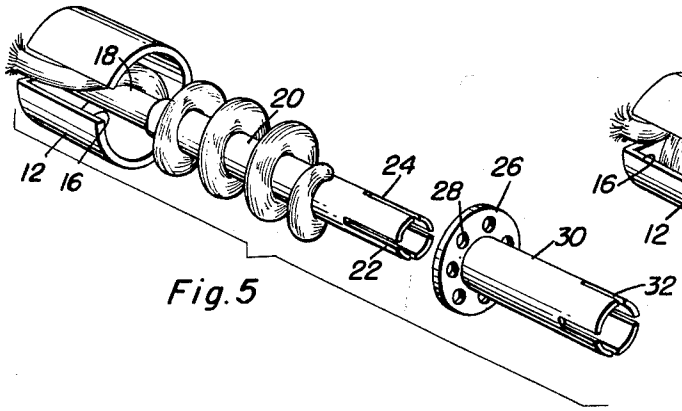


Fig. 5



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HAIR CURLER

Edith M. Graham, Fayetteville, N. C.

Application August 22, 1950, Serial No. 180,773

1 Claim. (Cl. 132—33)

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This invention relates to a hair shaping device, particularly adapted for curling the hair in pin curls.

It is a primary object of this invention to provide a simple device whereby hair may be quickly wound into the necessary spiral curl or coils and supported in place upon the head during the curling of the hair.

Another object of this invention is to provide a device of the character mentioned above which can be manipulated by inexperienced persons with a minimum liability of damage to the hair, and a minimum liability of causing discomfort.

Yet another object of this invention is to provide a device for curling the hair, which in the hands of hairdressers may be operated with great rapidity, and an attractive coiffure achieved as a result of a few minutes work.

Yet another object of this invention is to provide a device for production of pin curls, wherein the application of solution to the curls is facilitated, and whereby the application is made possible at the exact location necessary to assure a perfect setting of the curls.

A specific object of this invention, of no less importance than the preceding objects, is to provide improved means for releasing the coil of hair after the curling operation has been completed.

A still further object of this invention is to provide a device for producing pin curls, wherein means is provided to prevent breaking of the hair during the use of the device.

A last object to be mentioned specifically is to provide a device of this character which is relatively inexpensive and practical to manufacture, which is easily manipulatable due to its light weight and simple construction and the simplicity of the actual compressing and releasing of the coils of hair, the lightness of weight being achieved by producing the device from plastic material which is slightly resilient, one such plastic material being Lucite, although any suitable plastic material which is unaffected by solution used in setting hair may be used.

With these objects definitely in view, this invention resides in certain novel features of construction, combination and arrangement of elements and portions as will be hereinafter described in detail in the specification, and particularly pointed out in the appended claim, and illustrated in the accompanying drawings which form a material part of this application, and in which:

Figure 1 is a view in perspective of the assembled device, the sleeve being partly withdrawn and the disc with its tubular handle being also partly withdrawn from the cup;

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Figure 2 is a vertical sectional view taken on a longitudinal center line;

Figure 3 is an exploded view of the device, showing a lock of hair coiled around the sleeve and representing an initial step in the process of producing a pin curl by the employment of this invention;

Figure 4 is a view of the device with a lock of hair compressed within the cup, preparatory to the application of setting solution to the hair; and

Figure 5 is a similar view showing how the sleeve is used to release the coil of hair from the cup, after the setting operation has been completed.

Similar characters of reference designate similar or identical elements and portions throughout the specification and throughout the different views in the drawings.

Referring now to the drawings in detail, this invention includes a cup generally indicated at 10 and comprising a hollow cylinder with a side wall 12 and an end plate 14. A longitudinal slot 16 is provided in the side wall 12 and this slot is continued radially into the end plate 14. This slot allows the insertion of a lock of hair into the cup 10. An axial spindle 18 is rigidly or integrally secured to the inner surface of the end plate 14 and extends well beyond the mouth of the cup 10. Upon this spindle 18 is a sleeve 20, the sleeve being axially and frictionally slidably mounted on the spindle so that the sleeve will remain in adjusted position relative to the spindle while allowing reasonably easy removal thereof, as during the release of the coils of hair from the cup 10 in the last stages of the setting operation. The sleeve 20 may be of a length comparable to the length of the spindle 18 and must be considerably longer than the longitudinal depth dimension of the cup 10. The outer end of the sleeve 20, indicated by the numeral 22, is longitudinally slitted as indicated at 24, this slitting of the end portion 22 of the sleeve facilitating the attainment of a proper frictional coefficient between the sleeve and the spindle 18.

A disc 26 of a diameter only slightly less than the internal diameter of the cup 10 is provided with a plurality of apertures 28 and this disc is preferably integral with a tubular handle 30. The tubular handle 30 is axially and frictionally slidably mounted upon the sleeve 20, the outer end of the handle 30 being slitted at 32. It is an

important feature of this invention that the coefficient of friction between the tubular handle **30** and the sleeve **20** must be less than the coefficient of friction between the sleeve **20** and the spindle **18**, so that in the removal of the device from the hair, the tubular handle and disc will easily slide from the sleeve, leaving the sleeve substantially in the position indicated in Figure 3 until the tubular handle and disc are completely removed from the device, whereafter the sleeve **20** is pulled axially to facilitate the uncoiling of the hair from the cup **10**.

The operation of this invention will be clearly understood from a consideration of the foregoing description of the mechanical details thereof, taken in connection with the above recited objects and the illustrative drawing. In recapitulation, and by way of further explanation, the method of use of this invention involves the following steps, in the order named. The lock of hair is first wrapped around the sleeve with the fingers, the sleeve being positioned on the spindle **18**, in the position indicated in Figure 3, which figure may be considered as representing the first step in this process. The coils of hair are then pressed into the cup **10**, this being accomplished manually. The next step is the insertion of the disc **26** and tubular handle **30** upon the sleeve, the disc forcing the coils of hair into the cup as indicated in Figure 4. Solution is then applied to the coils through the slot in the cup and through the apertures **28** in the disc **26**. The second last step is the removal of the disc **26** and tubular sleeve **30**, this step being accomplished, of course, after a certain length of time has elapsed to allow the hair to set. Finally, the coils of hair, which may now be properly considered as curls, are released by pulling the sleeve **20** axially from the spindle **18**, as illustrated in Figure 5. The action of the sleeve **20** is, as mentioned above, an important feature of this invention inasmuch as the releasing of the curls can be difficult to accomplish unless a special means is provided to pull the curl from the cup without damaging the hair, a function achieved perfectly by the sleeve **20**.

Obviously minor variations from the embodiment of this invention illustrated and described herein may be resorted to without departure from the spirit of this invention.

Having described the invention, what is claimed as new is:

A hair shaping device including a cylindrical cup comprising an end plate and a side wall, and a mouth opposite said end plate, said side wall and end plate having a slot with an open end at said mouth, a spindle secured to the inner face of said end plate and extending axially of the cup beyond said mouth, a sleeve axially and frictionally slidably mounted on said spindle and of a length greater than the longitudinal depth of said cup, a flat, apertured disc of a diameter slightly less than the internal diameter of the cup, and a tubular handle axially and frictionally slidably mounted on said sleeve and carrying said disc on the end of the tubular handle adjacent the end plate of the cup, the coefficient of friction between the tubular handle and said sleeve being less than the coefficient of friction between the sleeve and the spindle.

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