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HAIR SETTING DEVICE

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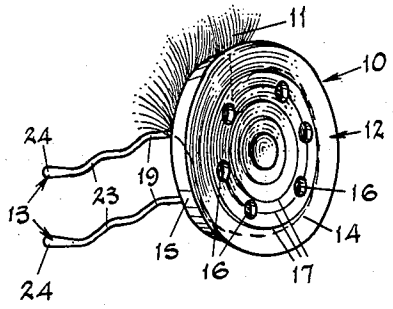


Fig. 1

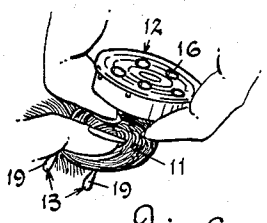


Fig. 6

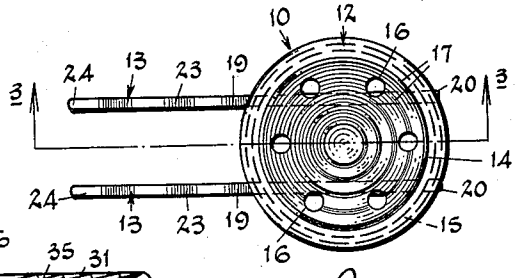


Fig. 2

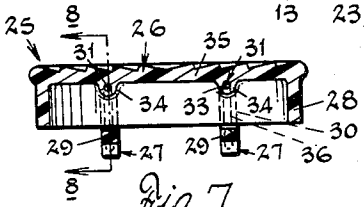


Fig. 7

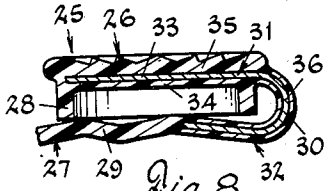


Fig. 8

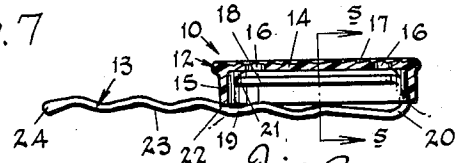


Fig. 3

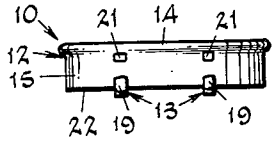


Fig. 4

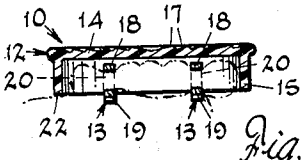


Fig. 5

INVENTORS
Charles I. Van Dusen
BY and Paul S. Olson
Noble & Swope
ATTORNEYS

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HAIR SETTING DEVICE

Charles I. Van Dusen, 5541 E. Rowland Road, and Paul G. Olson, 1755 Glenross St., both of Toledo, Ohio

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10 Claims. (Cl. 132—40)

This invention relates broadly to the art of setting hair and more particularly to an improved hair curling device for gathering and restraining grouped strands of hair during the setting of a curl therein.

Considerable interest and attention has always been directed to the styling of a woman's hair, and where a particular arrangement has been desired attempts have been made individually through the use of the well-known curler and a variety of especially shaped pins. These were suitably positioned in recently washed or wetted hair and worn until, upon drying, the hair retained the pleasantly appearing wavy or curled effect. However, the majority of curlers and/or pins, such as the well-known "bobby" pin, vary often have been found to be individually ineffective to retain the wet hair in a tight coil with the result that several pins have been required to hold the hair until dry. This crisscrossing of several pins to produce a single curl must be repetitiously carried out over the entire head to gain the desired effect and consequently a lengthy period of preparation is required and a following period of discomfort during which the hair is more or less pulled from its normal line of growth and the pins uncomfortably rub or are forced against or into the scalp. Recently various preparations have become popular to train the hair into a so-called "permanent" wave or curl and these require application onto the several strands of hair so they are coiled into a curl arrangement. Since oils of some nature constitute a major part of the hair setting preparation, the coating of the hair requires further attention and a greater number of pins have been needed to guard against their displacement and slippage from the oily hair surfaces.

It is also realized that hair setting accessories have been advocated whereby a coil of hair is clampingly engaged between movable hinged members. Such devices of course dispense with the need for a plurality of pins but practically all are bulky and difficult to manipulate as well as being subject to failure by loosening of the parts relative to each other, irreparable bending whereby the clamping effect is impaired or loss of one or more parts as the accessory becomes worn. More than this, unless care is employed in the selection of the material from which the device is produced, it is subject to reaction from the hair preparation which reduces its utility and may even be injurious to the hair or scalp of the user. To provide a hair setting device adapted to overcome the above-mentioned undesirable features, it is proposed to provide a unitary structure comprising a hair coil retaining, cup-shaped element having suitable flexible fingers or prongs carried thereby. These fingers or prongs constitute clamping members which are adapted to gather a coiled arrangement of hair along the roots thereof, to guide the same into the cup member and then clampingly retain the same therein when properly positioned.

A primary object of the invention is to provide an improved hair setting device whereby coiled strands of hair may be circularly confined while being developed into a tightly arranged curl.

Another object of the invention is to provide a hair setting device which may be easily and quickly inserted in place and subsequently removed without disturbing the curled strands of hair, and which also lends itself to quick drying of the hair.

Another object of the invention is to provide a hair setting device which is simple and inexpensive of construction, strong and durable for long life, and quick and easy to manipulate.

Another object of the invention is to provide a hair setting device including a cup-like element and clamping members integrally associated therewith and adapted to enclose coiled strands of hair while the same are clampingly held in a tightly coiled relation.

A further object of the invention is to provide a hair setting device in which the clamping members comprise resilient fingers or prongs arranged to spaced parallel relation across the open face of the cup member whereby the coiled strands of hair can be completely gathered and held within said cup member.

A further object of the invention is to provide a hair setting device of unitary character adapted to, during a single operation, engage coiled strands of hair, locate the same in a cup-like member and then clampingly retain the said strands therein.

Other objects and advantages of the invention will become more apparent during the course of the following description when taken in connection with the accompanying drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the same:

Fig. 1 is a perspective view of a hair setting device constructed in accordance with this invention;

Fig. 2 is a top view of the hair setting device;

Fig. 3 is a longitudinal section of the device as taken on line 3—3 of Fig. 2;

Fig. 4 is an end view of the device;

Fig. 5 is a transverse section as taken on line 5—5 of Fig. 3;

Fig. 6 is a perspective view of the hair setting device showing how it is positioned;

Fig. 7 is transverse section, similar to Fig. 5, illustrating a modified form of the invention; and

Fig. 8 is a transverse vertical section taken on line 8—8 of Fig. 7.

Referring now more particularly to the drawings, the hair setting device of this invention is designated in its entirety by the numeral 10 and in Fig. 1 the device is illustrated in fixed relation with gathered strands of hair 11, the lengths of which have been suitably coiled into a curled formation. This coiling of the hair into a tight ringlet may be aided by the use of any of the many preparations which are offered to women who prefer to individually style their hair into an attractive coiffure. These preparations are intended to coat each of the several strands of hair and thereby effect a so-called permanency of curl or wave appearance.

Now in order to retain groups of such strands until the influence of the preparation can become more or less "set," the user has, with a comb or the fingers, gathered several strands and coiled the same into a curled effect and then fixed them in such relation by means of the well-known "bobby-pin." Those acquainted with such a procedure will readily appreciate that considerable time and nerve energy is expended in affixing a plurality of these pins in position with respect to each coiled arrangement. Quite apparently, and depending upon a mirrored image of the area of the head presently being acted upon, several pins become a necessity not only to secure the coiled up hair in place but also to substantially interlock the pins with one another, so that they do not separate and destroy the desired effect.

In order to obtain the advantages of the invention as herein set forth, two resilient clamping members in the form of prongs or fingers are substantially rigidly positioned in parallelism and are carried by a specially formed cap or cup member to the end that the strands of hair are engaged by the clamping members and held in their coiled arrangement within the cup member. By means of the cup member, the clamping members are adapted to be flexed in and along the vicinity of the scalp surface until the coiled hair is confined within the cup member. This locates the coil in its entirety in a closed circular area wherein, and in one operation, it is confined until the effects of the employed preparation have been impressed on the hair strands.

More particularly, the hair setting device **10** comprises a cap or cup-like member **12** and a pair of clamping members **13**. The cup member **12** is of circular form and comprises a planular top wall **14** and an integral annular side wall **15**. The top wall **14** is provided with one or more holes **16** and the outer surface thereof is preferably shaped with concentrically arranged ridges **17** to be hereinafter more particularly described. The side wall **15** provides the mounting for the clamping members **13** which are substantially U-shape in configuration and each of which embodies spaced substantially parallel leg portions **18** and **19** joined by a curved or bight portion **20**. The clamping members **13** may be formed of a light spring metal, plastic or other materials. If of metal, it is preferred that they be coated, as by dipping, with a suitable plastic material to afford a protective sheath for the metal against any chemical reaction of the preparation used and which might ultimately result in injury to or discoloration of the hair.

The clamping members **13** are fixed in position during the molding of the cup member **12**, which is of any suitable plastic composition that will retain some degree of flexibility. To this end, the leg portions **18** are positioned, during the casting or molding operation, so that the free ends **21** thereof will become embedded in one area of the annular wall **15** while the portion of each leg **18** adjoining the bight portion **20** will be embedded in a second area of said wall. This will simultaneously accomplish several purposes; in the first place, such positioning positively locates the clamping members **13** with respect to each other and to the cup member when the cup is formed; secondly, the leg **18** of each member **13** will be disposed within the cup closely adjacent the top wall **14** to co-act with the leg portion **19**, and lastly, since each leg **18** is anchored at two points in the wall **15**, a considerable amount of flexibility is afforded in the leg portion **19** as it is flexed or bent with reference to the cup **12**. Of course, this bending motion is absorbed in and lightly resisted by the curved or bight portion **20**.

The legs **19** extend across the open face of the cup member and are preferably shaped to present an undulating or slightly corrugated effect throughout their length so as to more easily gather the strands of hair while being pushed therethrough. The legs **19** extend beyond the cup member to provide finger gripping portions **23**, the outer ends **24** of which are suitably rounded to reduce any tendency toward scratching or other annoyance as they are urged along and in the vicinity of the scalp.

In use, it is believed that the simplicity of a device, as produced in accordance with this invention, will become apparent. More particularly, and as shown in Fig. 6, when a group of hair strands **11** have been coated with the desired wave preparation and coiled up into a curl, the legs **19** are flexed away from the cup member **12** by insertion of the finger tips lightly therebetween. This permits the ends of the legs **19** of clamping members **13** to be simultaneously inserted along the roots of the gathered hair and accordingly collect the entire group of strands in one action. When the legs **19** have been sufficiently inserted, the coiled up arrangement will be disposed between the legs **19** and the legs **18**; more particularly within the confines of the cup member **12**. During such manipulation of the hair setting device, the ridges **17** on top wall **14** afford adequate gripping surfaces to facilitate handling of the device as it is being positioned.

When the coiled strands have been gathered in their entirety by the legs **19** of clamping members **13**, the coiled up strands **11** will be completely enclosed and confined within the cup member. Consequently, during the drying period, the hair strands cannot be disturbed and the loose ends thereof will be held within the coil. The desired movement of air through the hair to accelerate drying is made possible by the several openings **16** in the cup wall **14**.

In Figs. 7 and 8 is illustrated a modified form of the invention embodying a unitary structure in which the cup member and clamping members are molded of a plastic material. As shown in Fig. 7, the device **25** comprises a cup member **26** and the two clamping members **27** arranged in spaced parallel relation. The clamping members **27** are integrally formed with the annular wall **28** of the cup member and each comprises a leg **29**, similar to the previously described legs **19**, and which is secured at one end to the annular wall **28** by a resilient bight portion **30**. The leg **29** and bight portion **30** are formed of a plastic material and to strengthen the bight portion there is embedded therein a suitable reinforcing element **31** which may consist of a U-shaped spring wire. This wire is embedded in the bight portion **30** and preferably extends into the entrant portion **32** of the leg **29**.

In order to suitably anchor the reinforcing element **31** in place, it includes a base portion **33** that is molded in ribs **34** formed on the under side of the planular wall **35** of the cup member (Fig. 7). The base portions **33** of the reinforcing elements are positioned to extend parallel with the legs **29** and are shaped as at **36** with a bight portion conforming in curvature to the plastic bight portion **30**. The modified form of hair setting device **25** is manipulated in the same way as the preferred form of the invention described above and thus affords all of the advantages thereof.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred embodiment of the same, but that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

We claim:

1. A hair setting device, comprising a cup member of moldable plastic material having a circular flat top wall and an annular side wall integral with and extending at right angles to said top wall and defining therewith a hair-receiving area in the cup member, a clamping member embedded at one end in the cup member and having a portion thereof extending across the open face of the cup member and projecting outwardly beyond said side wall to provide a finger gripping portion by which said clamping member may be flexed about the embedded end thereof relative to said cup member.

2. A hair setting device as defined in claim 1, in which the outwardly directed surface of the flat top wall is formed with concentrically arranged finger engageable ridges, and also in which a plurality of holes are provided in the top wall to permit substantially free movement of air into the hair-receiving area of the cup member.

3. A hair setting device as defined in claim 1, in which the clamping member is substantially U-shaped and includes spaced substantially parallel leg portions and an integral curved medial portion, one of said leg portions being disposed in spaced parallel relation to the inner surface of the flat top wall and embedded in the integral side wall, and in which the second leg portion extends across the open face of the cup member and projects beyond said side wall to provide a finger gripping portion by which said second leg portion can be flexed at the

curved medial portion toward and away from the cup member.

4. A hair setting device as defined in claim 3, in which the U-shaped clamping member is of metal and in which the said second leg portion thereof is of corrugated formation and is provided with a protective coating to render said leg portion impervious to moisture.

5. A hair setting device as defined in claim 1, in which the said clamping member is of a plastic material integrally formed with the cup member, and including reinforcing means in said clamping member.

6. A hair setting device as defined in claim 5, in which the reinforcing means comprises a U-shaped spring member, one leg portion of the spring member being embedded in the said top wall and the second leg portion being embedded in the said clamping member.

7. A hair setting device, comprising an annular cup member of moldable plastic material including a top wall and a side wall, and a pair of clamping members in the form of spaced parallel substantially straight resilient fingers extending across the open face of the cup member and integral therewith at one end, the opposite free ends thereof being movable toward and away from the cup member and projecting beyond said cup member to provide finger gripping portions.

8. A hair setting device, comprising an annular cup member of moldable plastic material including a top wall and a side wall, and a pair of substantially U-shaped clamping members including spaced substantially parallel legs, one of the legs of each clamping member being anchored within the cup member and the second leg extending across the open face of the cup member and being movable relative thereto, the free ends of the second legs projecting beyond said cup member to provide finger gripping portions.

9. A hair setting device, comprising an annular cup member of modable plastic material including a top wall and a side wall, and a pair of substantially U-shaped clamping members including spaced substantially parallel legs, one of the legs of each clamping member being received within the cup member and fixedly secured at its opposite ends thereto and the second leg of each clamping member extending across the open face of the cup member and being movable relative thereto, the free ends of said second legs projecting beyond said cup member to provide finger gripping portions.

10. A hair setting device, comprising an annular cup member of moldable plastic material including a top wall and a side wall, and a pair of substantially U-shaped clamping members including spaced substantially parallel legs, one of the legs of each clamping member being embedded in the top wall of the cup member and the other leg extending across the open face of the cup member and being movable relative thereto, the free end of each other leg projecting beyond said cup member to provide a finger gripping portion.

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