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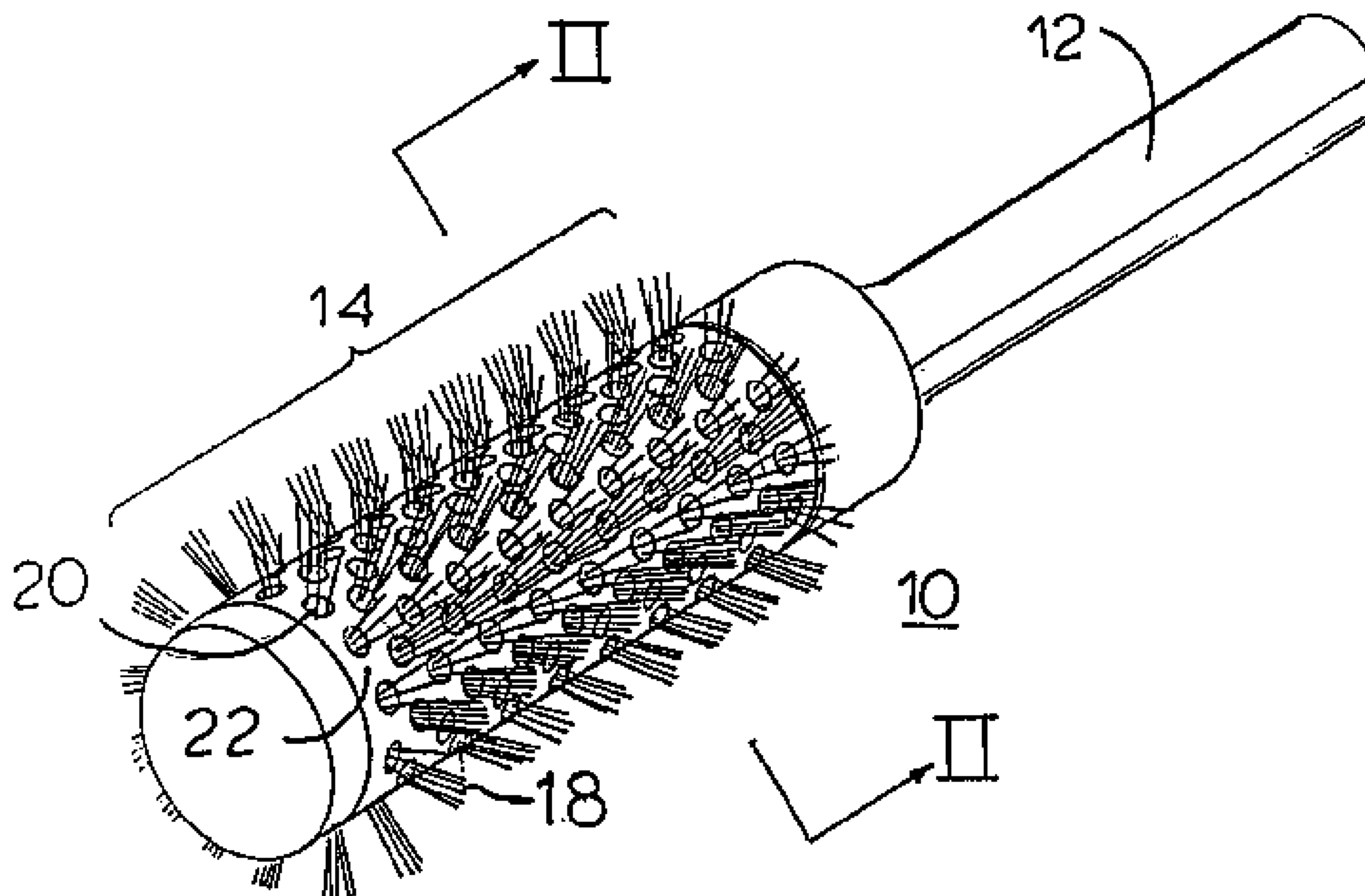
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(54) Titre : BROSSE A CHEVEUX A INDICATION DE TEMPERATURE

(54) Title: TEMPERATURE INDICATING HAIR BRUSH



(57) Abrégé/Abstract:

A hairbrush, the surface of which changes colour with temperature, is used to improve the set of human hair during a grooming process. The bristles of the brush may be of a colour temperature dependent nature as well as the surface on which the bristles are mounted or protrude.

ABSTRACT

A hairbrush, the surface of which changes colour with temperature, is used to improve the set of human hair during a grooming process. The bristles of the brush may be of a colour
5 temperature dependent nature as well as the surface on which the bristles are mounted or protrude.

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COLOUR CHANGING HAIR BRUSH

BACKGROUND OF THE INVENTION

Human hair has been brushed using brushes of various shapes and with a variety of bristles to shape, fashion
5 and groom the hair since the beginning of time. In more recent times, hair grooming procedures have included devices useful in curling hair which tended to be straight, and straightening hair which when left on its own tended to be curly. This application is extremely important to either of the above operations.

10 Before proceeding further, it is important to understand some of the important characteristics of human hair. It is well known that the physical characteristics of human hair change significantly with changes in the surrounding humidity. Human hair has long been used as the driving element in
15 mechanical humidity gauges because of its extreme sensitivity to small changes in humidity.

In certain instances, the characteristics of human hair may be best understood by an analogy with spaghetti strings. When purchased by a consumer spaghetti is most inelastic and of a set length. Upon immersion in water, the spaghetti will
5 stretch significantly and if while in this state, the pliable spaghetti is wound around a collapsible mandrel and the pliable spaghetti is heated by some means when sufficient moisture is removed from the spaghetti and the previously pliable spaghetti is elevated to a predetermined temperature, the spaghetti may now be
10 cooled and the mandrel on which it was wound, now collapsed and removed. The spaghetti will retain its "curled" configuration.

In a similar manner, curly hair may be curled and/or straightened. It is only a matter of combining moisture, heat and cooling to the hair to take advantage of the human hair's natural
15 characteristics to obtain the desired grooming results.

An experienced professional hair designer will instinctively know to take advantage of these natural physical characteristics to obtain the desired result.

For instance, if a client is seeking a hairstyle which
20 involves curling the hair, the experienced designer will begin with

a client whose hair has been washed and properly conditioned and whilst still wet, selected locks of the wet hair are wound around a low density bristle brush and the hair so wound around the brush is heated to a temperature of between about 100° - 5 110°F by blowing hot air on the hair and brush until the designer instinctively knows that this temperature is reached. During this period of time, the hair has decreased in length and begun its "set". The designer now begins to blow cold air on the hair and the brush to lower the temperature of the hair (and the brush) to 10 a temperature of about room temperature to complete the "set".

Similarly, to "straighten" what is generally referred to as naturally curly hair, the designer will choose a high density bristle brush, and taking a curl of hair previously washed and conditioned, wrap the curly hair (whilst still wet) around the high 15 density brush and heat the hair and brush around which the hair is wound to about 150° - 160°F by blowing hot air from a hair dryer onto the hair and brush. The experienced hair designer will now begin to unroll the hair from the brush and while maintaining some tension on the hair with the high density brush, apply a cold 20 stream of air to the hair as it just leaves the hot brush. This cold

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air completes the "set" and the previously curly hair will emerge from the process by now being straight. The hair emerges from the hot brush and is cooled as it emerges from the roll of bristles on the brush.

5 The experienced hair designer must be able to gauge the temperature of the hair (and the brush on which it is wound) to be able to consistently obtain the "best" results for the client. Years of experience are usually required to provide the desired effect in the shortest possible time. The importance of cooling the hair to improve the "set" cannot be overstressed.

10 In particular this application discloses a method of treating human hair comprising, providing a human head with hair growing therefrom, wetting said hair with water, selecting suitable locks of said hair for treatment, progressively winding said selected locks of hair about a hairbrush, the surface of which changes colour when said surface reaches a temperature
15 in the range of about 100-110 degrees Fahrenheit, and heating said hair and hairbrush with a hairdryer until the surface of said brush changes colour, and subsequently blowing unheated air on said previously heated hair and brush until the hair and brush have cooled sufficiently to "set" said hair and where after wetting said hair a suitable fixative is applied to said
20 hair.

 The method of treating human hair also encompasses a method when the surface of the brush exhibits a second colour change when the brush reaches room temperature.

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The invention described herein also relates to a method of treating human hair comprising, providing a human head growing therefrom, wetting said hair with water, selecting suitable locks of said hair for treatment, progressively winding said selected locks of hair about a hairbrush, the surface of which changes colour when said surface reaches a temperature in the range of 150-160 degrees Fahrenheit, and heating said hair and hairbrush with a hairdryer until the surface of said brush changes colour, and subsequently blowing unheated air on said previously heated hair and brush until the hair and brush have cooled sufficiently to "set" said hair. The method may also apply to the situation wherein a suitable fixative is applied to the hair after wetting the hair.

The above method may be utilized in such a manner that the surface of the brush will undergo a second colour change when the brush reaches room temperature.

SUMMARY OF THE INVENTION

It is to improve the skill of the hair designer and home consumer in obtaining the desired hair set that this invention is directed. Most brushes employed by professionals feature forminous cylinders through which the bristles project. This invention utilizes hair brushes where the hair contact surfaces of the brushes have a surface the colour of which varies with the surface temperature of the brush. The bristles of the brush may be made to exhibit a colour change with temperature as well.

Applicant has found that a hair styling brush which changes colour in the range of 100° - 110°F is very effective for curling straight hair and a

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thermochromic material which changes colour in the range of 150° - 160°F will enable a hair stylist to more easily determine when the curly hair wound on this surface is at an acceptable temperature for straightening. It will be
5 understood that the above temperatures are not exact but are included for illustrative purposes only.

While this invention will be a definite asset to the skilled professional hair designer, it will be seen by the amateur hair dresser as a tool for making easy work out of a previously difficult task. It is now possible to provide a
10 brush which will tell the user when the temperature of the hair and brush have reached a level that will permit the hair to take on a definite set. At the same time, the brush will provide an indication that the hair and brush have cooled to the temperature at which the "set" becomes "permanent".

In this manner, the do-it-yourself hair stylist may now know accurately
15 the temperature of the surface of the brush (and the enveloping hair) without have to guess the resultant temperature. In this manner, those less skilled in the art of hairdressing may now produce professional results without having elaborate equipment and prolonged experience in treatment of hair. Similarly, professional hair stylists may utilize the above brushes to educate their clients
20 and save valuable time because of the absolute certainty of the temperature of the hair and brush. In this manner, the efficiency of each stylist may be increased and the embarrassment of an imperfect "set" may be avoided.

It will be found that any hairbrush used for hairstyling could benefit from having a surface and/or bristles which provide a good indication of the surface
25 temperature of the brush and bristles.

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While changes to the invention are obvious once the principles of hair setting have been disclosed, applicant prefers to limit the ambit of protection by the scope of the following claims.

5

AMENDED CLAIMS

1. A hairdressing brush for curling hair comprising a handle and an associated brush head,

said head being attached to said handle and being in the form of a forminous member having an outer shell which is a surface of revolution
5 and wherein,

bristles protrude from said forminous member and,

said surface of said shell is covered with a thermochromic material which exhibits a colour change when said shell is heated to a temperature in the range of about 100°to 110°F.
- 10 2. A hairdressing brush as claimed in claim 1 wherein said bristles also exhibit a colour change with changing temperature in the same range.
3. A method of treating human hair comprising,

providing a human head with hair growing therefrom,

wetting said hair with water,
15 selecting suitable locks of said hair for treatment,

progressively winding said selected locks of hair about a hairbrush, the surface of which is covered with a thermochromic material which changes colour when said surface reaches a temperature in the range of about 100-110° Fahrenheit, and

20 heating said hair and hairbrush with a hairdryer until the surface of said brush changes colour, and

subsequently blowing unheated air on said previously heated hair and brush until the hair and brush have cooled sufficiently to "set" said hair.

4. A method according to claim 3 wherein after wetting said hair, a suitable
5 fixative is applied to said hair.
5. A method as claimed in claim 3 wherein said surface of said brush exhibits a second colour change when said brush reaches room temperature.
6. A method of treating human hair comprising,
providing a human head growing therefrom,
10 wetting said hair with water,
selecting suitable locks of said hair for treatment,
progressively winding said selected locks of hair about a hairbrush, the surface of which changes colour when said surface reaches a temperature in the range of 150-160° Fahrenheit, and
15 heating said hair and hairbrush with a hairdryer until the surface of said brush changes colour, and
subsequently blowing unheated air on said previously heated hair and brush until the hair and brush have cooled sufficiently to "set" said hair.
- 20 7. A method according to claim 6 wherein after wetting said hair, a suitable fixative is applied to said hair.
8. A method as claimed in claim 7 wherein said surface of said brush exhibits a second colour change when said brushes reaches room temperature.

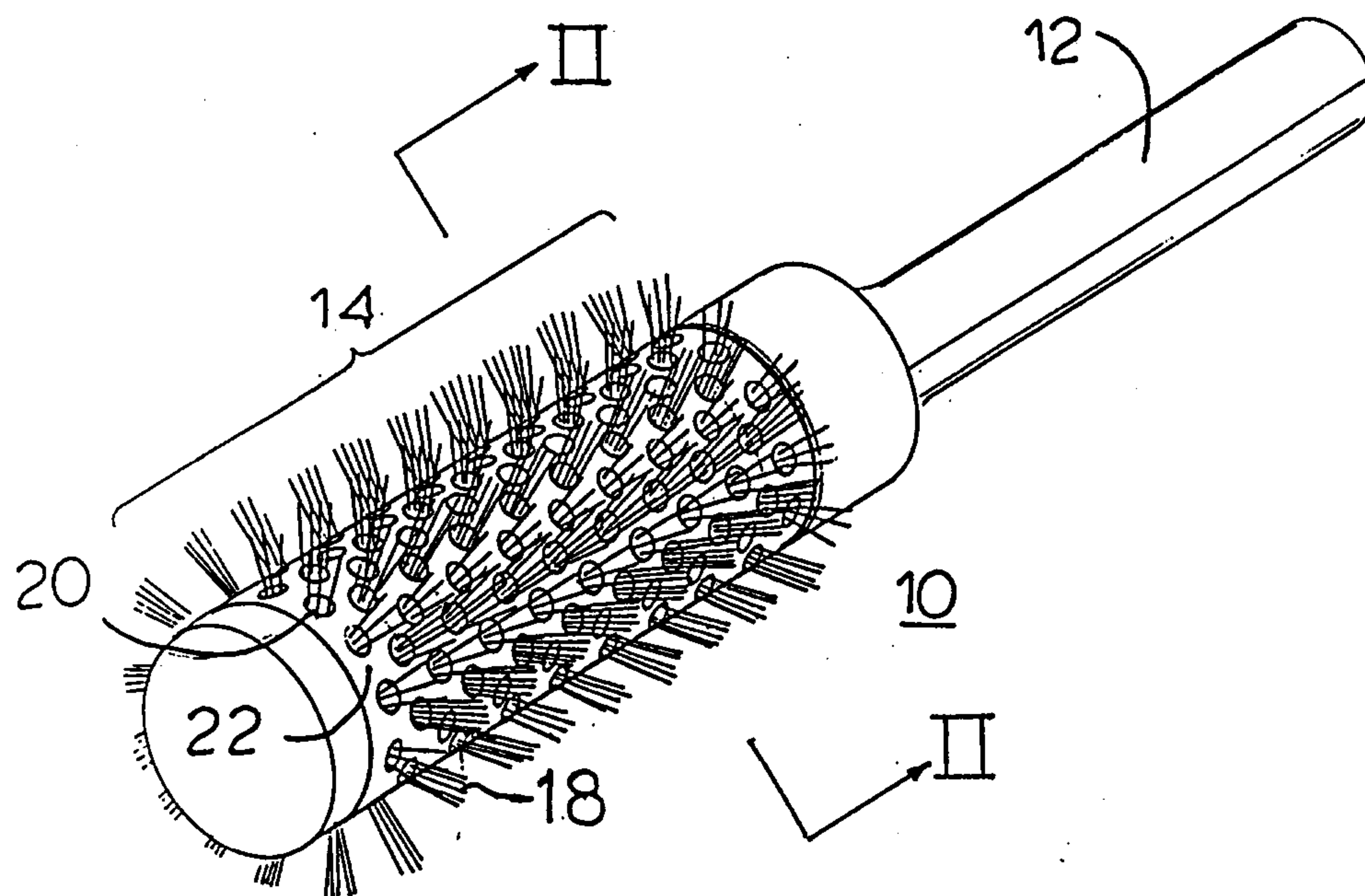


FIG. 1.

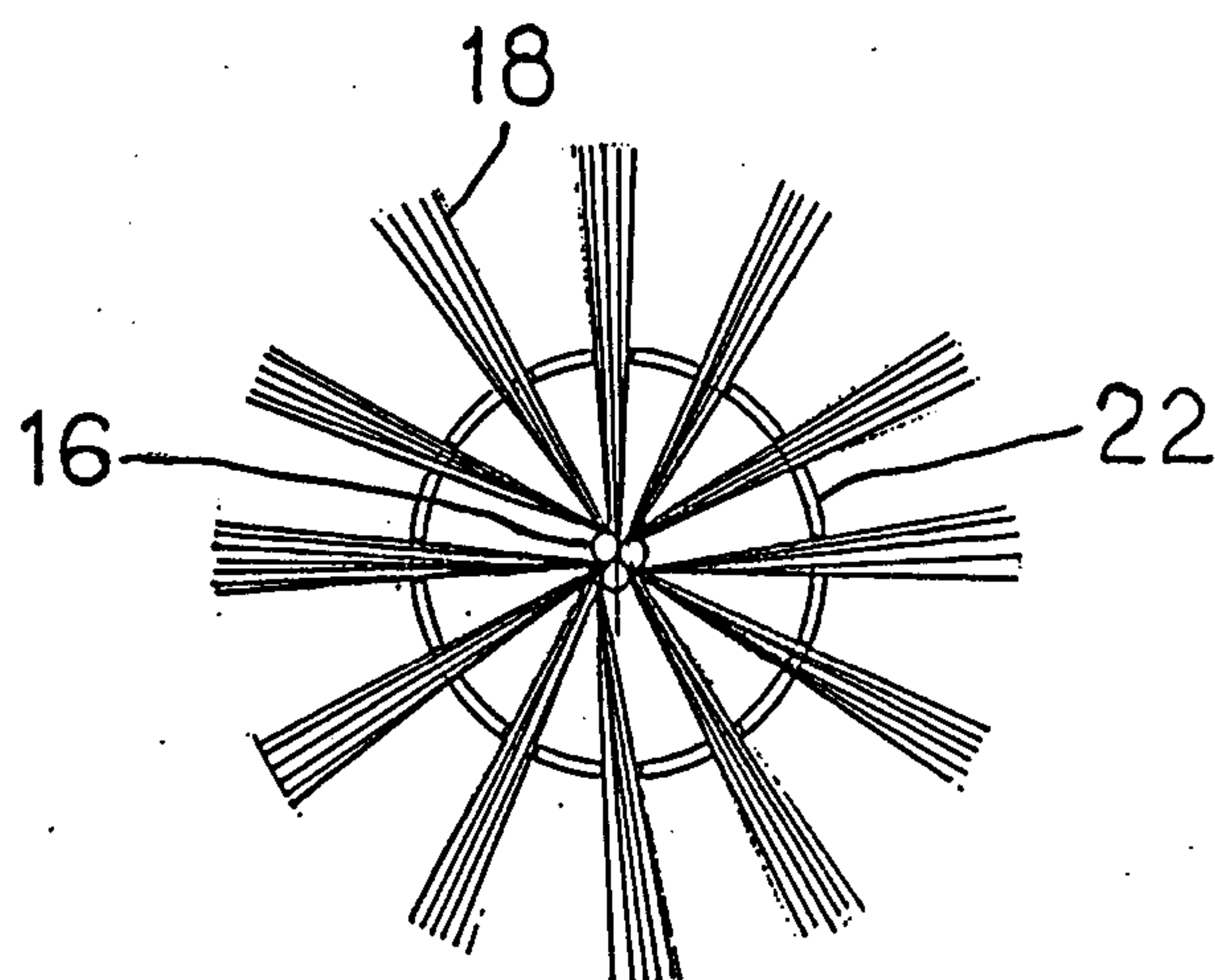


FIG. 2.

