



(19)

Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 721 747 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
17.07.1996 Bulletin 1996/29

(51) Int. Cl.⁶: **A45D 2/18**

(21) Application number: **95108609.9**

(22) Date of filing: **06.06.1995**

(84) Designated Contracting States:
DE ES FR GB IT

(30) Priority: **11.01.1995 CH 66/95**

(71) Applicant: **Brenn-Albertoni, Gemma**
CH-6500 Bellinzona (CH)

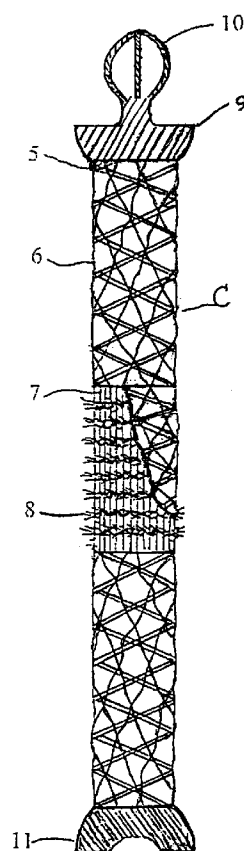
(72) Inventor: **Brenn-Albertoni, Gemma**
CH-6500 Bellinzona (CH)

(74) Representative: **Marietti, Giuseppe**
MARIETTI e GISLON S.r.l.
Via Larga, 16
I-20122 Milano (IT)

(54) Hair curler

(57) A hair curler with an elongated body (c) for setting waves in wet, damp or dry hair; the aerated and elastic body (c) is covered in whole or in part by an aerated elastic sheath (6) provided in its central part with protruding filament-like elements (8) to facilitate winding hair onto the curler. The ends (9,11;19,20) of the curler body are fitted with interlocking elements (10;22) which allow the curler to be locked into a circular or semi-circular shape after the hair has been wound onto it.

Fig. 1



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Description

The present invention relates to hair curlers in general and in particular to a type of curler which grips the hair while facilitating winding the same onto it to produce waves that look natural and are not uni-directional.

Aerated hair curlers which grip the hair to facilitate rolling and setting the same are already known in the art. Such hair curlers have good aeration and grip characteristics, but they do not allow a large quantity of hair or very long hair to be wound onto them and they can only produce uni-directional waves.

There are also curlers in the form of long cylindrical rollers made of foam-rubber with a flexible metal core.

They are fixed to the head by bending the extremities into a U-shape after the hair has been wound on to them. Due to their nature, these curlers cannot be aerated and accordingly they must be usually used with dry or slightly damp hair, and the "natural" waves have no real consistency.

There are also curlers formed of metal springs covered by a soft fabric; after the hair has been wound onto them, these rollers are affixed to the head by bending them back on themselves up to obtain a circle and clipping the two extremities together by means of shaped interlocking parts. These curlers allow natural, non uni-directional waves to be formed, differently from the traditional curlers. However, they are not aerated either, and can be used only on dry or slightly damp hair. Furthermore, their surface is usually smooth, making it difficult to wind hair (especially short hair) on; it is also not easy to wind large quantities of hair onto such rollers.

Other types of roller similar to the described ones suffer from similar drawbacks.

The present invention overcomes these drawbacks and provides an extremely aerated curler which facilitates winding on the hair and gripping it in such a way as to produce natural and not uni-directional waves, as well as corkscrew-shaped hair or waves limited at the free terminal part of the hair.

The curler according to the present invention is of the type comprising an elongated, cylindrical body which can be bent back on itself from a position in which its axis is rectilinear to a position in which it forms a closed ring or a semicircle, and carrying at its ends attachment means to maintain such last position, characterized in that said cylindrical body is hollow and aerated and in that hair retaining elements project in an essentially radial direction in at least one area of its length.

The present invention will now be described in more detail with reference to preferred embodiments given only as illustrative and therefore not limiting examples, as shown in the attached drawings, in which:

Fig. 1 is a view with parts in section of a first embodiment of the curler;

Fig.2 is a view of the curler of fig. 1 when fixed in position after the hair has been wound onto it;

Fig.3 is a cutaway view with parts in section of the curler, showing in its interior a support element for means to grip the hair, which projects through the curler body and sheath;

Fig.4 is a plan view of a portion of a material used to cover the curler body according to an embodiment of the present invention;

Fig.5 is a view of a curler fixed in the form of a semicircle after the hair has been wound onto it.

As it can be seen from fig.1, in which a partly cutaway curler is shown, a curler cylindrical body C is formed by helically wound strips 5, which cross over and are mutually fixed at their crossing points, to form a very aerated and flexible support. This support is covered by a net sheath 6, which prevents the hair from getting between the helical elements 5. Around the central part of the curler an aerated, flexible fabric 7 is wound, said fabric carrying filament-like protruding elements 8 to grip the hair. Such filament-like elements 8 project in a substantially radial direction from the aerated fabric 7.

A male snap-locking element 9 (formed by a series of plastic strips 10 which join together to form a very elastic helissoidic body) projects from one end of the curler. At the other end of the curler a ring 11 forms the female part of a snap lock. The male element 9, when it is inserted with its elastic strips 10 into the ring 11 at the other end of the curler, closes and locks the curler in the form of a closed circle after the hair has been wound on it, as it can be seen from fig.2.

Fig.2 shows, in a view of the curler of Fig 1 with cutaway parts, the strips 10 of the male element 9 snap-locked inside the female locking ring 11 of the body C after the hair 12 has been wound on it. The two ends of the curler remain locked together holding the curler in place, due to the resilience of the elastic strips 10.

Fig.3 shows a partially cutaway view of another embodiment of the present invention. The area presenting the filament-like protruding elements 8 has tubular inserts 13 with zig-zag connecting elements 14 - which make the inserts flexible - and holes 15 which aerate the same, said tubular inserts 13 being equipped with hair-gripping elements 8 projecting between the helical parts 5 forming the basic structure of the curler, and projecting also through the overlying net sheath 6.

Fig.4 shows a material used to form the sheath of a curler according to the present invention. It is formed by lines of chain-links 16 held by keeper-rings 17 which slide between the interstices of the chain-links 16 to warrant a highly flexible structure. Some of the central chain-links 16 have filament-like protruding elements 8 which grip the hair and facilitate winding it on.

Fig. 5 shows another embodiment of the present invention in which the curler is maintained in a semi-circular shape after the hair 12 has been wound on. The curler is held in the desired position by an elastic or rigid band 22 retained by a knot 18, or a mobile or rotatable ball, in a cap 19 inserted into one end of the curler and

hooked over the element 20 inserted into the other end of the curler hollow body C.

Besides the embodiments described above, the hollow body C of the curler according to the present invention can be formed according to many further embodiments; it could be formed by a spiral-shaped spring or by a rigid central ring and two flexible side parts, or by strips of a flexible plastic material inserted into a sheath, or it may be formed in whole or in part of articulated aerated sections. The hollow body could also be formed by bellows with aeration holes in it.

The filament-like hair-gripping elements 8, instead of being carried by a flexible aerated fabric 7, could project directly from the body C of the curler, or they could be woven directly into the elastic sheath.

Furthermore, the sheath which covers the body C of the curler could comprise a net of rough and "rubbery" material, to facilitate winding the hair onto it.

The curling attachment means to maintain the same in its curved position could be carried-out according to different designs: they could be rigid locking pieces or could be attached to the body C of the curler by bellows which could lengthen or shorten the curler as needed. The curler could also be kept in the required shape by a bar or a unextendable or elastic element which connect the two ends of the same.

From the foregoing it appears that large quantities of long hair can be wound onto the curler according to the present invention to produce naturally-shaped hair waves due to the circular or semi-circular form assumed when the curler is retained on the head. The curler is particularly suited to wet hair due to the high level of aeration made possible, so that the hot air from an hair-drier can circulate freely and thus the waves setting times are short. The setting time is also reduced by the fact that the filament-like elements comb the hair and facilitate winding it onto the curlers. Hairstyles which have been set using the curlers according to the present invention look modern and naturally waved. The curlers can be used to give a last-minute curl to the ends of hair that has already been put up.

Claims

1. An hair curler to produce natural waving of hair, of the type comprising an elongated, cylindrical body which can be bent back on itself from a position in which its axis is rectilinear to a position in which it forms a closed ring or a semicircle, and carrying at its ends attachment means to maintain such last position, characterized in that said cylindrical body is hollow and aerated and in that hair retaining elements project in a substantially radial direction from at least one area of its length.
2. A curler according to Claim 1, characterized in that said hair retaining projections are filament-like elements projecting from an aerated fabric placed at least in the curler central portion.

3. A curler according to Claim 1, characterized in that said aerated, hollow cylindrical body is covered, in whole or in part, by an aerated elastic sheath.
4. A curler according to Claim 3, characterized in that said sheath covering said aerated, hollow cylindrical body is formed by a knitted material obtained by lines of chain-links and keeper-rings which run in the spaces between said chain-links.
5. A curler according to Claim 3, characterized in that said sheath covering said aerated, hollow cylindrical body is in the form of a rough, "rubbery" material to facilitate winding hair onto it.
6. A curler according to Claims 2 and 3, characterized in that said filament-like elements are woven directly into said elastic sheath.
7. A curler according to Claim 1 or 2, characterized in that said hair-gripping elements project from a supporting element placed in the inner cavity of said aerated, hollow cylindrical body.
8. A curler according to Claim 1 or 2, characterized in that said hair-gripping elements directly project from said aerated, hollow cylindrical body.
9. A curler according to Claim 1, characterized in that said attachment means comprise direct or indirect interlocking parts between the ends of said cylindrical body.
10. A curler according to claim 1 or 9, characterized in that bellows elements form part of said cylindrical body or of said attachment means, to allow for a lengthening or shortening of said curler as required.
11. A curler according to claim 1, characterized in that said aerated, hollow cylindrical body is formed by one or more helical elements in the form of a spring or crossing over and joined at the cross-over points.
12. A curler according to claim 1, characterized in that said aerated hollow cylindrical body is formed by a central rigid ring and by two flexible or articulated side parts.

Fig. 1

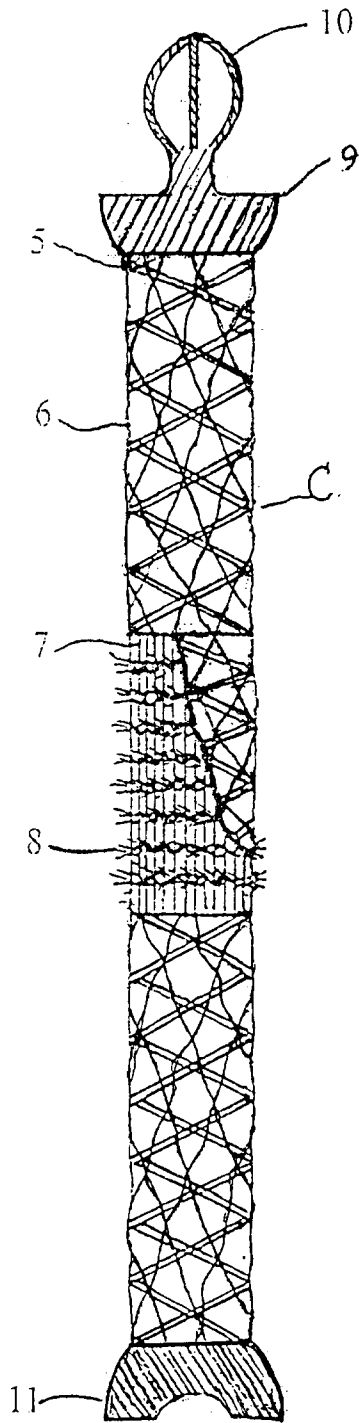


Fig. 2

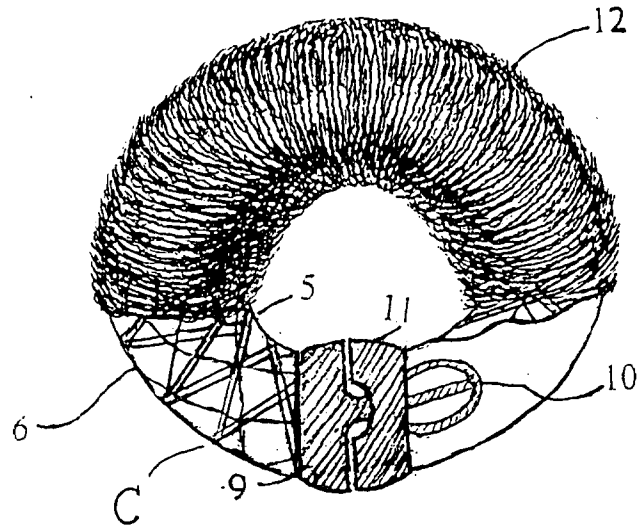


Fig. 3

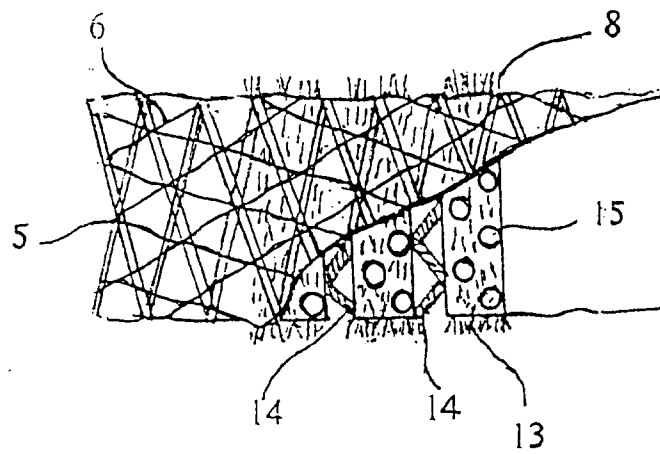


Fig. 4

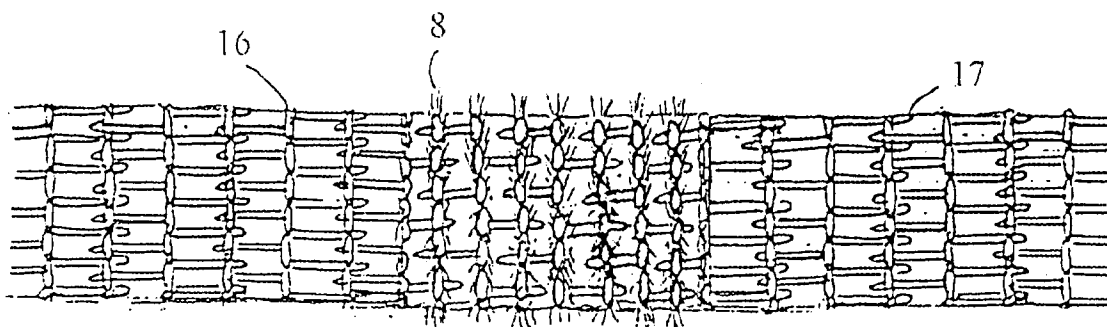
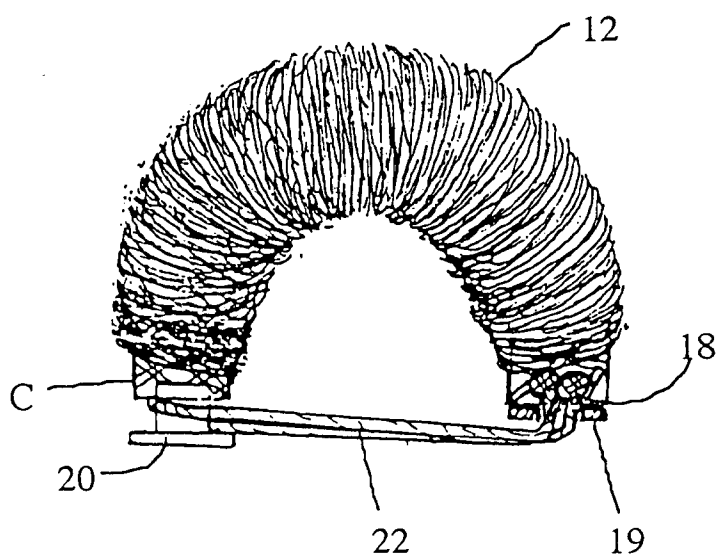


Fig. 5





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EUROPEAN SEARCH REPORT

Application Number
EP 95 10 8609

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Y	FR-A-687 623 (P.-H. CHEVALIER) * page 1, line 1 - line 6; figures 1,2 * ---	1-3,9	A45D2/18
Y	FR-A-1 248 464 (M.-G. BENAIS) * page 1, left column, last paragraph - right column, paragraph 9; figure 1 * ---	1-3,9	
A	FR-A-705 559 (B. CAHN) * page FLE; claim; figures 1,3 * ---	1	
A	US-A-3 718 144 (M. JENNIS) * abstract; figures 5,8 * ---	4,7	
A	FR-A-2 503 996 (G. BRENN-ALBERTONI) * page 3, line 28 - line 35; figure 3 * ---	5,6	
A	FR-A-2 382 212 (G. BRENN-ALBERTONI) * page 6, line 37 - page 7, line 10; figures 10-12 * ---	8	
A	FR-A-1 414 913 (G. LONGHINI) * page 1, right column, last paragraph; figures 2,4 * ---	11	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
A	US-A-2 549 446 (S. FRISHBERG) * column 1, line 25 - line 41; figures 1-5 * ---	12	A45D
A	DE-C-449 542 (F. GRIESER) -----		
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		17 April 1996	Schmitt, J
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