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Aktenzeichen / Case Number / N° du recours : T 202/88 - 3.2.2

Anmeldenummer / Filing No / N° de la demande : 83 903 310.7

Veröffentlichungs-Nr. / Publication No / N° de la publication : 0 126 159

Bezeichnung der Erfindung: Method and device of forming permanent waves on  
Title of invention: hair  
Titre de l'invention :

Klassifikation / Classification / Classement : A45D 7/04

**ENTSCHEIDUNG / DECISION**

vom / of / du 30 May 1989

Anmelder / Applicant / Demandeur : YAMAMOTO; Hisahiro

Patentinhaber / Proprietor of the patent /  
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPÜ / EPC / CBE Articles 54 and 56

Schlagwort / Keyword / Mot clé : "Novelty - yes"  
"Inventive step - yes"

**Leitsatz / Headnote / Sommaire**

Europäisches  
Patentamt

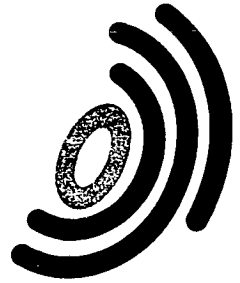
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European Patent  
Office

Boards of Appeal

Office européen  
des brevets

Chambres de recours



Case Number : T 202/88 - 3.2.2

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.2  
of 30 May 1989

**Appellant :** YAMAMOTO, Hisahiro  
504, Sannuodai Manshon 7-3-22  
Sannou, Akita-shi  
Akita 010 (JP)

**Representative :** Lecca, Jean et al.  
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**Decision under appeal :** Decision of Examining Division 120  
of the European Patent Office  
dated 15 January 1988 refusing  
European patent application  
No. 83 903 310.7 pursuant to  
Article 97(1) EPC

**Composition of the Board :**

**Chairman :** G. Szabo  
**Members :** C. Andries  
L. Mancini

## Summary of Facts and Submissions

- I. European patent application No. 83 903 310.7 (publication No. 0 126 159), filed as an International application No. PCT/JP83/00381 (publication No. WO 84/01699), on 26 October 1983 was refused by a decision of the Examining Division 120 dated 15 January 1988.
- II. The reason given for the refusal was that the subject-matter of method Claims 1 and 2 did not involve an inventive step and that the subject-matter of the apparatus Claim 3 was not novel, in view of the prior art disclosed in:  
  
D1: GB-A-1 272 554; and  
D2: US-A-2 819 722.
- III. By telexes dated 14 March 1988 and duly confirmed by letter received on 16 March 1988, the Appellant filed a Notice of Appeal against this decision. The prescribed fee was paid on 16 March 1988. The Statement of Grounds was submitted on 23 April 1988.
- IV. In reply to communications of the Board pursuant to Article 110(2) EPC, the Appellant submitted a revised description (pages 1, 2, 2a and 4), together with a new set of claims (Claims 1 and 2) which were filed on 26 April 1989.

V. Independent Claims 1 and 2 on file read as follows:

Claim 1:

"A method of forming permanent waves on hair, comprising the steps of:

- (a) clamping a bundle of hair between a pair of complementary fitting, corrugated curling members, each having a required area and alternate ridges and grooves at a predetermined pitch with a predetermined curvature, at least one of said corrugated curling members having a plurality of holes defined therethrough;
- (b) treating said bundle of hair, clamped between said corrugated curling members, with a permanent waving solution, thereby forming successive permanent waves on said bundle of hair;

and characterized by transversely attaching a plurality of rods to the lower corrugated curling member and complementarily fastening together said pair of corrugated curling members by a plurality of rubber bands, looped around said rods and extending across said upper corrugated curling members, and by immersing said bundle of hair, clamped between said corrugated curling members, in a neutralizing solution after said treating step."

Claim 2:

"A device for forming permanent waves on hair, for embodying the method according to Claim 1 and characterized by comprising in combination:

- a pair of complementary fitting, corrugated curling members (2, 2'), each having a required area and

alternate ridges and grooves (5) at a predetermined pitch with a predetermined curvature, at least one of said corrugated curling members having a plurality of holes (6) defined therethrough;

- a plurality of rods (3) adapted to penetrate in said grooves, substantially along the length thereof; and
- a plurality of rubber bands (4) adapted to fasten together said pair of corrugated curling members when looped around said rods."

VI. The Appellant requests that the decision under appeal should be set aside and that a patent should be granted on the basis of the following documents:

Description: page 1 as filed on 30 July 1986;  
pages 2 and 2a as filed on 26 April 1989;  
page 3 as published; and  
page 4 as filed on 13 May 1989;

Claims: Claims 1 and 2 as filed on 26 April 1989;

Drawings: Figures 1 and 2 as published.

#### Reasons for the Decision

1. The appeal is admissible.
2. There are no formal objections under Article 123 EPC to the present text of the application, since the proposed amendments in the description and in the claims are adequately supported by the application as originally filed.

Indeed, present Claim 1 differs from Claim 1 as originally filed in that the features of Claim 2 as originally filed, as well as the content of lines 8 and 9 on page 2 and lines 9 to 14 of page 3 of the description as originally filed are introduced into the wording of present Claim 1.

Present Claim 2 is supported by Figures 1 and 2 as originally filed and by the corresponding description of the application as originally filed.

The amendments in the description relate, apart from the correction of clerical errors, only to a more precise description of the state of the art, a definition of the technical problem to be solved and an adaptation of the description to the newly filed Claims 1 and 2.

### 3. Novelty.

- 3.1 Document D1 describes hair reforming devices comprising either a body portion and a mating cooperating member (Figures 1 and 2) or a body portion and a cooperating member made of a frame (7) provided with tubes (6) (Figure 4).

A combination, and its use, of two corrugated curling members, rods, and rubber bands as indicated in present Claims 1 and 2 is not disclosed in document D1, either explicitly or implicitly.

Indeed, even the indication in document D1 (page 3, lines 69 to 73) that, in order to achieve cooperation between the body portion and a cooperating member, it is also possible to use fasteners such as elastic bands, clips, buttons, etc. instead of the preferred utilisation of the natural resilience of the material from which the

device is fabricated, does, according to the Board, not indicate the use of rods in combination with two corrugated curling members as implied by the wording of Claims 1 and 2.

- 3.2 Document D2 describes a method and an apparatus for treating strands of hair in situ. The apparatus does not describe corrugated curling members.
- 3.3 The remaining cited documents do not come closer to the subject-matter of either Claim 1 or Claim 2.
- 3.4 Therefore, the subject-matter as set forth in Claims 1 and 2 is to be considered novel within the meaning of Article 54 EPC.
4. Inventive step.
- 4.1 According to the precharacterising portion of Claim 1, the application relates to a method of forming permanent waves on hair, whereby a bundle of hair is clamped between a pair of complementary fitting, corrugated curling members, whereafter said bundle of hair is treated with a permanent waving solution.
- 4.2 Such a method as well as an apparatus for carrying out that method are known from document D1 (Figures 1, 2 and 5), which is considered by the Board as representing the closest prior art.
- 4.3 According to the teaching of document D1 (Claims 1 and 18) the hair reforming surface comprises a series of waves such that the distance between at least a portion of adjacent wave crests is less than the maximum length of the wave trough therebetween (Figure 2: x and y). Due to that specific form of the corrugated curling members, it is not

possible to sandwich and release each bundle of hair without causing tension to the hair.

It is indicated in document D1 (page 3, lines 57 to 63) that the dimensions of the complementary fitting, corrugated curling members have to be chosen to provide for efficient clamping of a tress of hair over the shaping surface of the device without applying too great a constrictive force thereto such as could cause breaking of the hair.

Minimising the tension to the hair, as suggested by this above indicated passage of the description, leads to a device which does not securely clamp the bundle of hair between the pair of corrugated curling members.

It is also indicated in document D1 that the amount of treating fluid may be controlled and that its application to the hair may be achieved by means of sprays, pads or brush as desired. Such a process is, according to the description of the present European application, uneconomical, ineffective and harmful to hair when a neutralizing solution is used.

- 4.4 The technical problem to be solved consists therefore in providing a method and a device for surely and shapely forming permanent waves on hair which allow thereby an improved neutralizing process.

The so defined problem differs from that mentioned in the description of the present European application (page 2, lines 11 to 13) in that it summarises what is objectively to be solved by the features according to Claims 1 and 2.

- 4.5 The Board accepts that this problem is solved by the features mentioned either in Claim 1 or in Claim 2.

Indeed, by using the cooperation between the pair of specific corrugated members, and the plurality of rods and rubber bands as defined in both Claims 1 and 2, it becomes possible to surely clamp the cooperative curling members together, without causing tension to the hair. Furthermore, immersing the whole bundle of hair in a neutralizing improves the neutralizing step. Since the different features of a device according to Claim 2 are fastened surely together, immersing of the device-hair entity is easily possible.

- 4.6 A person skilled in the art, starting from a method and a device according to document D1, trying to obtain a method and a device for surely and shapely forming permanent waves on hair, which allow an improved neutralizing process, could not find, however, an indication or encouragement in the cited documents to use the specific features mentioned in the characterising portions of Claims 1 and 2.

- 4.6.1 Document 1 only indicates, with respect to the embodiment (Figures 1 and 2) using two cooperating corrugated curling members, and in order to hold these members together, to utilise either (preferably) the natural resilience of the material from which the device is fabricated, or fasteners as elastic bands, clips, buttons or other detents (page 3, lines 64 to 73) so that in order to surely clamp together the two corrugated clamping members, document D1 suggest to a person skilled in the art to use additional elastic bands. Furthermore, it is indicated not only that application of the hair treating fluid to the hair can be

controlled, e.g. the hair nearest to the free ends of the hair may be treated with a lesser amount of the treating solution (page 4, lines 1 to 21), but also that the application can be achieved by means of sprays, pads or brush (page 4, lines 31 to 34). This information leads a person skilled in the art to the recognition that the treating solution has to be locally applied in a controlled manner, rather than applying it by immersion. Furthermore, immersing in a neutralizing solution is neither described nor suggested.

Although it is true that the embodiment according to Figure 4, consisting of only one corrugated curling member cooperating with rods (tubes 6) and a frame (7), can be held together with the help of elastic bands as suggested in the above indicated passage of the description, there is neither an indication nor a suggestion in document D1 which leads a person skilled in the art to a cooperation in the meaning of the invention of two corrugated curling members, a plurality of rods and a plurality of rubber bands.

- 4.6.2 Document D2 describes the treatment of a strand of hair by immersing it in a treating solution. Even if the teaching of this document would lead a person skilled in the art to immerse the device according to Figure 1 of document D1 in a treating solution, it certainly does not suggest to use the combination of two corrugated curling members, a plurality of rods, let alone a plurality of rubber bands according to present Claims 1 and 2.
- 4.6.3 The Board has also considered the further documents cited in the proceedings and found them not prejudicial to the present Claims 1 or 2 neither alone nor in combination with the documents cited above.

4.6.4 Therefore, the subject-matter of Claims 1 and 2 involves an inventive step within the meaning of Article 56 EPC.

5. Based upon such claims, the modified description as well as the published drawings, a patent may be granted on the basis of the Appellant's request.

#### Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance to grant a patent on the basis of the following documents:  
Description: page 1 as filed on 30 July 1986;  
pages 2 and 2a as filed on 26 April 1989;  
page 3 as published; and  
page 4 as filed on 13 May 1989;  
Claims: Claims 1 and 2 as filed on 26 April 1989;  
Drawings: Figures 1 and 2 as published.

The Registrar:

*J. Zahari*

*Conrad Cant*  
*Luzonci*

The Chairman:

*Alpho*