

12

EUROPEAN PATENT APPLICATION

21 Application number: **82830156.4**

51 Int. Cl.²: **A 45 D 20/08**

22 Date of filing: **03.06.82**

30 Priority: **07.05.82 IT 4836482**

71 Applicant: **Giorgis, Roberto, Via Casilina Vecchia, 27, I-00182 Roma (IT)**

43 Date of publication of application: **16.11.83**
Bulletin 83/46

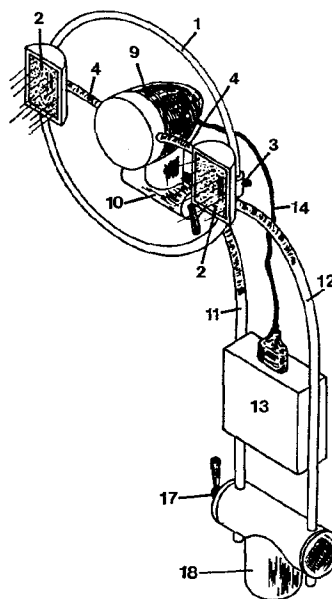
72 Inventor: **Giorgis, Roberto, Via Casilina Vecchia, 27, I-00182 Roma (IT)**

84 Designated Contracting States: **AT BE CH DE FR GB LI NL SE**

74 Representative: **Mascioli, Alessandro, Prof.Dr., c/o A.N.D.I. Associazione Nazionale degli Inventori Via Lima, 35, I-00198 Roma (IT)**

54 **Apparatus for drying hair with rotating heat sources.**

57 Apparatus for drying hair consisting of a circular, or any other shape, tubular support with two or more adjustable infrared lamps on hinges placed symmetrically along its edge, with said support joined, via two possibly adjustable rods or the like, along its axis to an electric motor with reducer, which gives rise to continuous and timed rotation and allows the axis of rotation of the support to be moved in space, via a cam or similar device, in a type of nutation, so as to allow said lamps to reach every point of the head underneath with their heat emission.



Apparatus for drying hair with rotating heat sources

Roberto GIORGIS, Via Casilina Vecchia 27, Rome Italy

This invention concerns an apparatus for drying hair, mainly for use by hairdressers and the like, equipped with rotating heat sources.

5 Hairdressers currently dry hair and fix various preparations by using hot air hair dryers which are annoying and uncomfortable for many subjects in that they surround the entire head, are noisy and require long exposure times as well.

10

A current alternative involves the use of several infrared heat lamps to be oriented manually around the head. These obviously require careful placement and continuous changes in position, and at the same time do not
15 give uniform heat distribution, but rather localized application. This is annoying and leads to unavoidable dead spots.

The aim of this invention is to realize a completely automatic apparatus which uniformly distributes the electrically produced heat so as to shorten exposure times.
20

This aim is achieved with a device consisting of a circular, or any other shape, tubular support with two or more
25 adjustable infrared lamps on hinges placed symmetrically

- along its edge, with said support joined, via two possibly adjustable rods or the like, along its axis to an electric motor with reducer, which gives rise to continuous and timed rotation and allows the axis of rotation of the
- 5 support to be moved in space, via a cam or similar device, in a type of nutation, so as to allow said lamps to reach every point of the head underneath with their heat emission.
- 10 The electric motor with reducer is connected, at an adjustable angle with respect to one or more mounts which in turn slide telescopically, so that its height may be regulated, to a support resting on the floor, which may be equipped with small wheels for moving it; in this way,
- 15 the lamps may be placed very precisely so as to cover any dead spots during operation.

A preferred embodiment of the invention is shown in the attached drawings, showing:

- 20 figure 1, an axonometric view;
figure 2, details of the cam connection between motor and support;
figure 3, the nutation motion in space;
figure 4, the sliding electric contact;
25 figure 5, a possible electric scheme.

The figures show in detail the circular, elliptical or other shape support 1, with 2, 3 or more quartz lamps attached and infrared red filters 2, adjustable and lockable

with pivots 3 so as to concentrate and localize the heat emitted; said support can also be rotated with respect to the axis passing through connection rods 4, which rotate joined with shaft 5 of the motor and reducer 4 and so are moved by sliding spring pivot 7 in the groove or cam 8 so as to achieve the various movements in space shown with exemplifying positions A, B and C of the nutation of support 1 and so of lamps 2, which cover a rotational ellipse around the user's head.

10

Body 9 of the container for motor 6 can in turn be adjusted by rotating it around its axis on horizontal pivot 10, with respect to sliding telescopic mounts 11 and 12, which may be fixed with device 17 at variable heights with respect to bearing structure 18.

The control unit 13 supplies current to motor 6 via wire 14 as well as, through the sliding contact established with ring-like plates 15 and electrodes 16, to lamps 2; said lamps, as mentioned above, rotate with respect to body 9 of the container, joined to said mounts 11, 12.

In operational variants, the lamps 2 may rotate continuously or for timed periods or may be left in a fixed position, as a function of the controls at unit 13, equipped with general switch I_G , double switch D_1 (able to exclude the timer, with switch I_T and motor M_T , for the lamps 2), switch D_2 to exclude the motor 6 from the timer, current adjuster VL for the light intensity, and

warning lights L_1 , L_2 and L_3 , relating respectively to the timer in direct operation, the central motor, and the general motor.

- 5 Operation of the apparatus according to this invention is obvious: lamps 2 are positioned via pivots 3, the inclination of support 1 with respect to the axis of rods 4, body 9 of the container with respect to pivot 10, and the height of mounts 11 and 12 with respect to base
- 10 18. Motor 6 is placed in operation so that lamps 2 follow their spatial trajectory and cover any dead spot to be heated.

In one variation said quartz lamps 2 with infrared fil-

15 ters may be replaced with non-luminous infrared resistances or with normal lamps with red covers.

Moreover, circular or elliptical support 1 may even be eliminated by securing said lamps 2 directly to rods 4

20 even in greater numbers (i.e., more than 2) or to a transverse rod, while container 9 may contain loudspeakers for music or the like.

Said lamps 2 may have a fan incorporated, so heat emission may be accompanied by air flow, as needed in some

25 cases.

Claims:

1. Apparatus for drying hair with rotating adjustable heat sources, powered by an electric motor with reducer.

5

2. Apparatus for drying hair as claimed in claim 1, consisting of a circular, or any other shape, tubular support with two or more adjustable infrared lamps on hinges placed symmetrically along its edge, with said support joined, via two possibly adjustable rods or the like, along its axis to an electric motor with reducer, which gives rise to continuous and timed rotation and allows the axis of rotation of the support to be moved in space, via a cam or similar device, in a type of nutation, so as to allow said lamps to reach every point of the head underneath with their heat emission.

15

3. Apparatus for drying hair as claimed in the preceding claims, wherein the electric motor with reducer is connected, at an adjustable angle with respect to one or more mounts which in turn slide telescopically, so that its height may be regulated, to a support resting on the floor, which may be equipped with small wheels for moving it, so that the lamps may be placed very precisely so as to cover any dead spots during operation.

25

4. Apparatus for drying hair as claimed in the preceding claims, with the circular, elliptical or other shape support 1, with 2, 3 or more quartz lamps attached and infra-

red filters 2, adjustable and lockable with pivots 3 so as to concentrate and localize the heat emitted; said support can also be rotated with respect to the axis passing through connection rods 4, which rotate joined
5 with shaft 5 of the motor and reducer 4 and so are moved by sliding spring pivot 7 in the groove or cam 8 so as to achieve the various movements in space shown with exemplifying positions A, B and C of the nutation of support 1 and so of lamps 2, which cover a rotational ellipse around the user's head; body 9 of the container
10 for motor 6 may in turn be adjusted by rotating it around its axis on horizontal pivot 10, with respect to sliding telescopic mounts 11 and 12, which may be fixed with device 17 at variable heights with respect to bearing structure 18.
15

5. Apparatus for drying hair as claimed in the preceding claims, wherein control unit 13 supplies current to motor 6 via wire 14 as well as, through the sliding contact established with ring-like plates 15 and electrodes
20 16, to lamps 2, which rotate with respect to body 9 of the container, joined to said mounts 11, 12.

6. Apparatus for drying hair as claimed in the preceding
25 claims, wherein lamps 2 may rotate continuously or for timed periods or may be left in a fixed position, as a function of the controls at unit 13, equipped with general switch I_G , double switch D_1 (able to exclude the timer, with switch I_T and motor M_T , for lamps 2), switch

D₂ to exclude the motor 6 from the timer, current adjustor VL for the light intensity, and warning lights L1, L2 and L3, relating respectively to the timer in direct operation, the central motor, and the general motor.

5

7. Apparatus for drying hair as claimed in the preceding claims, wherein said quartz lamps 2 with infrared filters may be replaced with non-luminous infrared resistances or with normal lamps with red covers.

10

8. Apparatus for drying hair as claimed in the preceding claims, wherein the circular or elliptical support 1 may be eliminated by securing said lamps 2 directly to rods 4 even in greater numbers (i.e., more than 2) or to a transverse rod.

15

9. Apparatus for drying hair as claimed in the preceding claims, wherein said lamps 2 may have a fan incorporated, so heat emission may be accompanied by air flow, as needed in some cases.

20

