



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 036 522 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
20.09.2000 Bulletin 2000/38

(51) Int. Cl.⁷: **A46B 15/00**

(21) Application number: **00200753.2**

(22) Date of filing: **03.03.2000**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **13.03.1999 GB 9905673**

(71) Applicant: **Smith, Henry**
Hayling Island, Hampshire PO11 9PT (GB)

(72) Inventor: **Smith, Henry**
Hayling Island, Hampshire PO11 9PT (GB)

(74) Representative:
Brooks, Nigel Samuel
Hill Hampton
East Meon
Petersfield Hampshire GU32 1QN (GB)

(54) **Hair brush or comb with suction**

(57) A hair brush for removing headlice, dandruff or the like from the hair comprising a body having at least one row of bristles, an aperture adjacent to the teeth or bristles, a passageway through the body from the aper-

ture and a connector to a suction source. Normally the suction source will be a domestic vacuum cleaner.

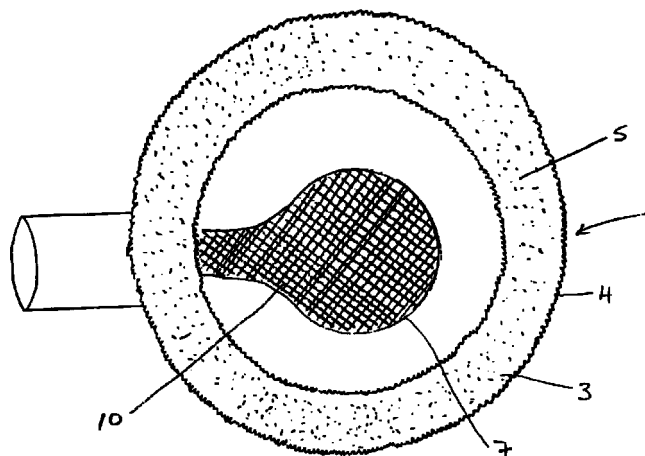


FIGURE 1

EP 1 036 522 A2

Description

[0001] The present invention relates to a hair brush or comb for the removal of small particles from the hair, particularly dandruff and head lice.

[0002] Head lice is a considerable problem, particularly among small children. Children may easily get head lice and in a group of children, for example in a playgroup or a school, one infected child often passes the lice to many others in the group. If left untreated the lice may cause serious problems to the child. One method of removal of the lice and their eggs is to use an insecticide shampoo on infected hair. Insecticides are often also toxic to humans and so it is important not to allow any of the shampoo to contact the eyes of the child or be ingested. This is often difficult with a young child. Furthermore even absorption through the skin can cause problems.

[0003] The other frequently used method of removing head lice and eggs is to comb them out of the hair with a very fine toothed comb. Again it can be difficult to persuade a small child to sit still long enough to ensure that the head lice have been removed, and it is often painful. If any of the lice or eggs are left in the hair, they quickly multiply again. Moreover, once the head lice are combed out of the hair, they simply fall to the floor, where they could easily infect another person.

[0004] The object of the present invention is to provide apparatus and a method for the safe removal of head lice and the like.

[0005] According to the present invention there is provided a hair brush or comb, having a body, including:-

at least one row of teeth or bristles;
an aperture adjacent to the teeth or bristles;
a passageway through the body from the aperture;
connection means from the passageway for connection to a suction source.

[0006] In use the brush or comb will be attached to a suction source, for example a domestic vacuum cleaner. The brush or comb can then be used to brush or comb the hair in the usual manner, and any debris loosened by the brushing action and by the teeth or bristles will be sucked into the brush and further into the suction source. The bristles or teeth insure that the aperture is not forced against the head of the user through suction and the action of brushing removes particles including head lice, their eggs, and dandruff from the hair which is then removed by the suction apparatus.

[0007] Preferably the brush will include a filter for filtering the particles removed from the hair, to prevent them entering the suction means and to enable them to be inspected.

[0008] In some embodiments spacers are provided between the bristles or teeth to prevent deformation of

the bristles or teeth causing the aperture to be forced against the scalp of a user. In some embodiments the aperture is covered by a fine mesh to prevent the hair from being sucked into the passageway.

[0009] According to a second aspect of the present invention there is provided a method for the removal of head lice and/or dandruff from the hair comprising:-

brushing the hair, with a brush or comb having at least one row of bristles or teeth; and
applying suction adjacent to the teeth or bristles.

[0010] To help understanding of the invention, embodiments thereof will now be described with reference to the accompanying drawings, in which:

Figure 1 is a underneath view of a first embodiment of the invention;

Figure 2 is a side view of the embodiment shown in Figure 1;

Figure 3 is a side perspective view of a second embodiment of the invention; and

Figure 4 is a front view of a third embodiment according to the invention.

[0011] Referring first to Figures 1 and 2, the hair-brush 1 thereshown has a hollow domed body 2, with a circular underside 3. Mound the circumference 4 of the underside 5 there is a ring of bristles 6. As shown these are standard nylon bristles found in many hair brushes, but alternatively may be natural bristles found in other standard hair brushes, or thicker moulded bristles again commonly found in hair brushes. Centrally of the underside 3, there is an aperture 7 into the body 2. The aperture is covered with a grid 10. Connected to the body is an attachment tube 8, and over the body there is a handle 9.

[0012] In use the nozzle of a domestic vacuum cleaner is connected over the attachment tube 8, causing air to be sucked through the aperture 7 and into the body of the brush 1. The brush is gripped by the handle 9 and used to brush the hair in the normal manner. As the brush is passed through the hair, any particulates in the hair, in particular head lice, their eggs, and dandruff is loosened from the hair and is sucked into the body of the brush and into the vacuum cleaner. The grid 10 prevents the hair from being sucked into the brush and becoming entangled.

[0013] Referring now to Figure 3, the hair brush 20 thereshown has a cylindrical body 21. One end 22 of the cylinder 21 is formed as a handle 23, with the distal end 24 acting as an attachment member 25 for a suction hose, for example a vacuum cleaner. The other end of the hair brush 20 is provided with two rows of teeth 26. Between the rows of teeth there is a channel aperture 27 leading into the body 21 and to the attachment member 25. Between the handle 23 and the teeth 26, there is a slot 28 in the body 21 into which is slidably fitted a fil-

ter 29.

[0014] In use, as with the first embodiment, the hose of a standard domestic vacuum cleaner is pushed over the attachment member 25 resulting in suction along the aperture 27. As the teeth 26 are pulled through a users hair, any dandruff, head lice, their eggs, or other foreign bodies are dislodged and draw into the body 21 of the brush 20. They are then sucked onto the filter 49. After use, the filter can be removed and examined to determine whether the user was infected with head lice for example. The filter 49 can then be cleaned before the brush is user by another person.

[0015] Turning now to Figure 4, the hair brush 40 there shown has a hollow body, which is shaped like a narrow, flat funnel 41, which has been bent into a curved shape. The entrance 42 to the funnel is configured as a brush with a series of teeth 43 around the circumference. At each end 44 there is a spacer 45 to space the brush from the head of a user. The end of the funnel 41 is configured as an attachment member 46 for attachment to suction means. Near the end of the funnel 41 there is a slot 47 into which is fitted a filter 48 for trapping and particulates removed from the hair. This is slidably removable from the slot for inspection after use, and cleaning. In use air is sucked into the funnel through the central aperture 49, though the filter and the attachment member 46 into the vacuum cleaner.

[0016] If a wet/dry vacuum cleaner is used, then any of the above described embodiments can be used to dry the hair. This avoids any scorching often caused by hot air dryers.

[0017] The invention is not limited to the above embodiments. For example the brushes and combs may be differently shaped and may use other types of bristles.

Claims

1. A hair brush or comb (1), having a body (2), including:-
 - at least one row of teeth or bristles (6);
 - an aperture (7) adjacent to the teeth or bristles;
 - a passageway through the body (2) from the aperture;
 - connection means (8) from the passageway for connection to a suction source.
2. A brush or comb as claimed in claim 1, characterised in that the suction source is a domestic vacuum cleaner.
3. A brush or comb as claimed in claim 1 or claim 2, including a filter (10) in the connection means for trapping particles, to prevent them entering the suction means and to enable them to be inspected.
4. A brush or comb as claimed in claim 1, claim 2, or

claim 3, including spacers between the bristles or teeth to prevent deformation of the bristles or teeth.

5. A brush or comb as claimed in claim any preceding claim, further including a fine mesh (10) covering the aperture to prevent hair from being sucked into the passageway.
6. A method for the removal of head lice and/or dandruff from hair comprising:-
 - brushing the hair, with a brush or comb (1) having at least one row of bristles or teeth (6); and
 - applying suction adjacent to the teeth or bristles (6).
7. A method for the removal of head lice and/or dandruff as claimed in claim 6, characterised in that the suction is provided by a domestic vacuum cleaner.

