Attachment for a Hand Held Appliance

This invention relates to an attachment for a hand held appliance, in particular a hair care appliance such as a hot styling brush.

In a conventional hot styling brush, air is sucked into an inlet by a fan unit and directed towards the hair by an attachment or head. Depending on the style desired, the air may or may not be heated. The head or attachment often includes bristles onto which hair is wrapped and held for styling. The air is generally blown out of the head or attachment normal to the surface of the head.

The present invention provides an attachment for a hand held appliance comprising a body having a first wall, the first wall having a first edge and a second edge; a second wall, the second wall being moveable relative to the first wall and extending between the first edge and the second edge of the first wall; a slot formed along at least part of the length of the attachment, wherein a first side of the slot is the first edge of the first wall and a second side of the slot is a surface of the second wall.

Preferably, the first wall is generally tubular.

It is preferred that the surface of the second wall is substantially linear.

Preferably, the second wall extends out from the first wall. Fluid that exits from the outlet will flow along the second wall and pull hair towards the second wall increasing drying speed and helping to align the individual hair strands.

It is preferred that the second wall is moveable relative to the first wall. Preferably, the second wall is rotatable with respect to the first wall.

It is preferred that the second wall is generally triangular.

Preferably, two slots are provided and the second wall separates the two slots.

It is preferred that the second wall divides the slot into two. It is preferred that a slot is provided either side of the second wall.

Alternatively, the slot is formed on one side of the second wall or the other side of the second wall.

Preferably, the second wall has a first indexed position defining a first slot position.

It is preferred that the second wall has a second indexed position defining a second slot position.

Preferably, an indexed position is defined by a detent mechanism. It is preferred that the detent mechanism includes an actuator biased into a recess. Preferably, the actuator is a ball bearing. It is preferred that the actuator is biased by a spring.

Preferably, an external surface of the attachment includes at least one row of bristles. It is preferred that the external surface is an external surface of the first wall. Preferably, the external surface comprises a first set of bristles comprising at least one row of bristles and a second set of bristles comprising at least one row of bristles.

It is preferred that the first set of bristles and the second set of bristles are spaced apart on the external surface. Preferably, the external surface is forms at least part of the circumference of a circle and the first set of bristles is radially spaced from the second set of bristles.

According to a second aspect, the invention provides a hand held appliance comprising a handle having a fluid flow path from a fluid inlet to a fluid outlet and a fan unit for drawing fluid into the fluid inlet and an attachment for attaching to the handle, the

attachment comprising a body having a first wall, the first wall having a first edge and a second edge; a second wall, the second wall being moveable relative to the first wall; and extending between the first edge and the second edge of the first wall; a slot formed along at least part of the length of the attachment, wherein a first side of the slot is the first edge of the first wall and a second side of the slot is a surface of the second wall.

In one embodiment the appliance is a hair care appliance.

In another embodiment the appliance is a hot styling brush.

The invention will now be described by example, with reference to the accompanying drawings, of which:

Figure 1a shows an example of an appliance according to the invention;

Figure 1b shows a cross section through the appliance shown in Figure 1a;

Figure 2a shows an exploded view of some of the handle components of the device of Figure 1a;

Figure 2b shows an enlarged section of the fluid inlet;

Figures 3a and 3b show an isometric view and an isometric cross section through a first attachment;

Figures 4a and 4b show a side view and a side view cross section through the first attachment;

Figures 5a and 5b show cross sections through the first attachment;

Figures 6a and 6b show an isometric view and a side view through a second attachment;

Figure 7a shows an isometric view through another attachment;

The handle 20 has an outer wall 26 and an inner wall 60, the outer wall 26 slides over the inner wall 60 to form the finished product. The inner wall 60 is a duct which surrounds and defines a fluid flow path 50 through the appliance. The outer wall 26 includes a grippable portion and in these examples, includes the fluid inlet 40 into the fluid flow path 50. An insulting layer of material 28 is provided within the inner wall 60. The insulating layer is a foam or a felt and insulates the handle from noise produced by the fan unit 70, heat produced by the operation of the appliance, vibrations caused by the fan unit and noise produced within the appliance by the flow of fluid through the fluid flow path 50. The insulating layer absorbs energy including airborne noise.

The inner wall 60 provides a housing 62 in which a fan unit 70 is disposed. The housing 62 is cylindrical and has an inwardly protruding ledge 64,66 disposed one at each end of the housing 62 which maintain the position of the fan unit 70 within the handle 20. The inner wall 60 is made from two parts a first part 60a and a second part 60b which is moulded separately. This enables easier assembly of the fan unit 70 within the handle 20 than a one piece inner wall. A similar pair of inwardly protruding ledges 68, 72 maintains the position of the heater 80 within the handle 20.

Although the outer wall 26 of the handle 20 has been described as being made from an extruded tube or a rolled sheet of metal, alternatives methods of manufacture and materials could be used; these include, but are not limited to, a plastic extrusion/moulded tube or a composite tube such as carbon fibre reinforced plastic.

It should be noted that the attachments shown in Figure 3a through to Figure 9b do not comprise part of the present invention.

The fluid outlet 100 of the head 30 will now be described in more detail, referring in particular to Figures 3a, 3b, 4a, 4b, 5a and 5b. The head 30 is essentially cylindrical and has a first end 32 for connection to a handle 20 and a second end 36 distal to the first end 32. The head 30 extends longitudinally from the first end 32 to the second end 26 continuing a line described by the handle 20 (Figure 1a) so is approximately the same diameter as the handle. Within the head 30 is an inner cavity 38 and fluid that has been

CLAIMS

1. An attachment for a hand held appliance comprising a body having:

a first wall, the first wall having a first edge and a second edge;

a second wall, the second wall being moveable relative to the first wall and extending between the first edge and the second edge of the first wall;

a slot formed along at least part of the length of the attachment, wherein a first side of the slot is the first edge of the first wall and a second side of the slot is a surface of the second wall.

2. An attachment according to claim 1, wherein the first wall is generally tubular.

3. An attachment according to claim 1 or claim 2, wherein the surface of the second wall is substantially linear.

4. An attachment according to any preceding claim, wherein the second wall is rotatable with respect to the first wall.

5. An attachment according to any preceding claim, wherein two slots are provided and the second wall separates the two slots.

6. An attachment according to claim 1, wherein the second wall divides the slot into two.

7. An attachment according to any of claims 1 to 4, wherein the slot is formed on one side of the second wall or the other side of the second wall.

8. An attachment according to claim 5, wherein a slot is provided either side of the second wall.

9. An attachment according to any of claim 5 to 8, wherein the second wall has a first indexed position defining a first slot position.

10. An attachment according to any of claims 5 to 9, wherein the second wall has a second indexed position defining a second slot position.

11. An attachment according to claim 9 or 10, wherein an indexed position is defined by a detent mechanism.

12. An attachment according to claim 11, wherein the detent mechanism includes an actuator biased into a recess.

13. An attachment according to claim 11, wherein the actuator is biased by a spring.

14. An attachment according to any preceding claim, wherein an external surface of the attachment includes at least one row of bristles.

15. An attachment according to claim 14, wherein the external surface is an external surface of the first wall.

16. An attachment according to claim 15, wherein the external surface comprises a first set of bristles comprising at least one row of bristles and a second set of bristles comprising at least one row of bristles.

17. An attachment according to claim 16, wherein the first set of bristles and the second set of bristles are spaced apart on the external surface.

18. An attachment according to claim 17, wherein the external surface is forms at least part of the circumference of a circle and the first set of bristles is radially spaced from the second set of bristles.

19. A hand held appliance comprising a handle having a fluid flow path from a fluid inlet to a fluid outlet and a fan unit for drawing fluid into the fluid inlet and an attachment for attaching to the handle, the attachment as claimed in any preceding claim.

20. An appliance according to claim 19, wherein the appliance is a hair care appliance.

21. An appliance according to claim 19, wherein the appliance is a hot styling brush.