

(12) **EUROPEAN PATENT APPLICATION**

(21) Application number: **84306694.5**

(22) Date of filing: **01.10.84**

(51) Int. Cl.<sup>4</sup>: **A 46 B 5/00**  
**A 46 B 5/02, A 46 B 9/02**  
**A 46 B 15/00, A 46 B 1/00**  
**A 46 D 1/00**

(30) Priority: **01.10.83 GB 8326379**

(43) Date of publication of application:  
**15.05.85 Bulletin 85/20**

(84) Designated Contracting States:  
**IT**

(71) Applicant: **DENROY PLASTICS LIMITED**  
**Clandeboyne Road Bangor**  
**County Down Northern Ireland(GB)**

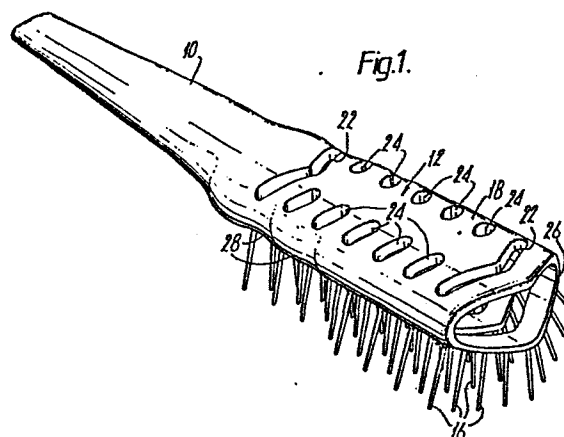
(72) Inventor: **Steadman, Alan E.**  
**85 Brighton Road**  
**Surbiton Surrey KT6 5NX(GB)**

(72) Inventor: **Burridge, Christopher A.**  
**85 Brighton Road**  
**Surbiton Surrey KT6 5NX(GB)**

(74) Representative: **Huskinson, Frank Mackie et al,**  
**FITZPATRICKS 4 West Regent Street**  
**Glasgow G2 1RS Scotland(GB)**

(54) **A hair brush.**

(57) A hair brush of one-piece construction has a handle (10) and an elongate bristle-carrying head (12). The head (12) is of tubular shape and of oval cross-section, and is open-ended at its handle-remote end (26). The oval shape provides two opposed arcuate major walls (14, 18) of which wall (14) is bristle-carrying. Both walls (14, 18) have seven vents (20 and 22, 24), vents 20 and 22 being of full chevron shape and in a parallel sequence with each other and with the open-end (26) which is also of chevron shape. The bristles (16) are in eight chevron rows, and on each side of each vent (20). The bristles (16) radiate outwardly from wall (14).



0141532

A HAIR BRUSH

This invention relates to a hair brush particularly, but not exclusively, for use by professional hairdressers in blow-drying hair with a hand-held blower or dryer. Blowing and drying simultaneously is necessary to bring  
5 out the body of the hair to create or restore the style which has been designed to suit an individual's own hair type and head shape. Hereinafter, the term 'bristle' is used to include not only natural bristle but, also bristle or bristle pins of plastics material, and includes pins  
10 moulded integrally with a head and handle of plastics material. A problem which occurs is that the hair brush in use blocks the dissipation of used hot air from the blower or dryer from the scalp and hair when being brushed, the normal brushing method being to catch hair in the  
15 bristles and rotate the brush thereby presenting the hair direct to the hot air from the blower or dryer. The blocking of the dissipation of hot air causes the scalp to become uncomfortably hot.

An object of the present invention is to obviate or  
20 mitigate this problem.

In accordance with the present invention, a hair brush has a handle, and an elongate bristle-carrying head which is of tubular shape and open-ended at its handle-remote end, the head having two opposed major  
25 walls one of which is bristle-carrying with the bristles extending outwardly in a direction remote from the opposed wall, and each major wall being provided with vents.

The vents in use of the brush are to permit used air to pass into the tubular passage of said head and  
30 dissipate therefrom through the vents in the other major wall and through the open-end of the head. This use is distinct from a solid-backed vent brush which is used to allow air to reach the scalp and hair to facilitate drying and/or styling, the tubular passage being provided  
35 to induce flow from the wet or bristled side of the brush

through the one major wall into said passage and to atmosphere.

Preferably, the vents in the bristle-carrying wall are of chevron shape and extend widthwise across the wall.

5 Preferably also, the handle-remote end of the head is of chevron shape.

Preferably further, a series of seven vents are provided on the bristle-carrying wall.

10 The vents on the other wall are preferably of an equal number as in the bristle-carrying wall with only the first and seventh being of full chevron shape, the others being similar to each other and comprising only the outer portions of the chevron limbs.

15 An embodiment of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:-

Fig. 1 is a perspective view of a hair brush according to the present invention, the view being from above and one side;

20 Fig. 2 is a side elevation of the brush;

Fig. 3 is an underneath plan view;

Fig. 4 is a front view; and

Fig. 5 is a rear view.

25 Referring to the drawings, a hair brush comprises a handle 10 and an elongate bristle-carrying head 12. The head 12 is of a tubular shape and of a symmetrical oval cross-section presenting two opposed major elongate walls of arcuate cross-section as shown. The head 12 is open-ended at its handle-remote end. One of said major  
30 walls 14 is bristle-carrying with the bristles 16 extending outwardly therefrom in a direction remote from the opposed major wall 18. The bristles 16 extend radially from said wall 12. Each major wall is provided with vents  
20 to permit, in use of the brush, used air to pass  
35 through said head 12 for dissipation of the used air away from the scalp and hair. The vents 20 in the wall 14 are seven in number, are of chevron shape extending width-wise across the wall 14, and are in a parallel

0141532

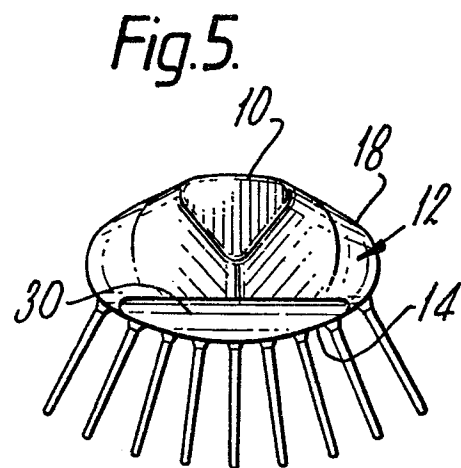
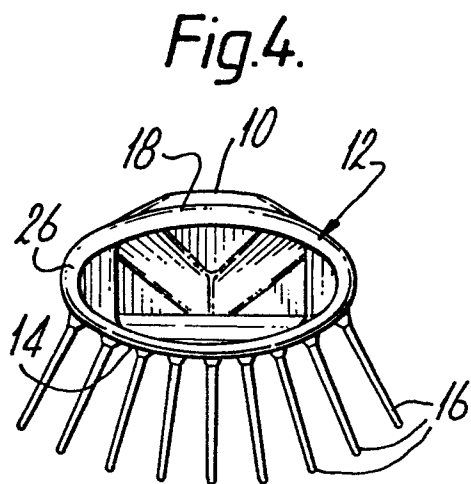
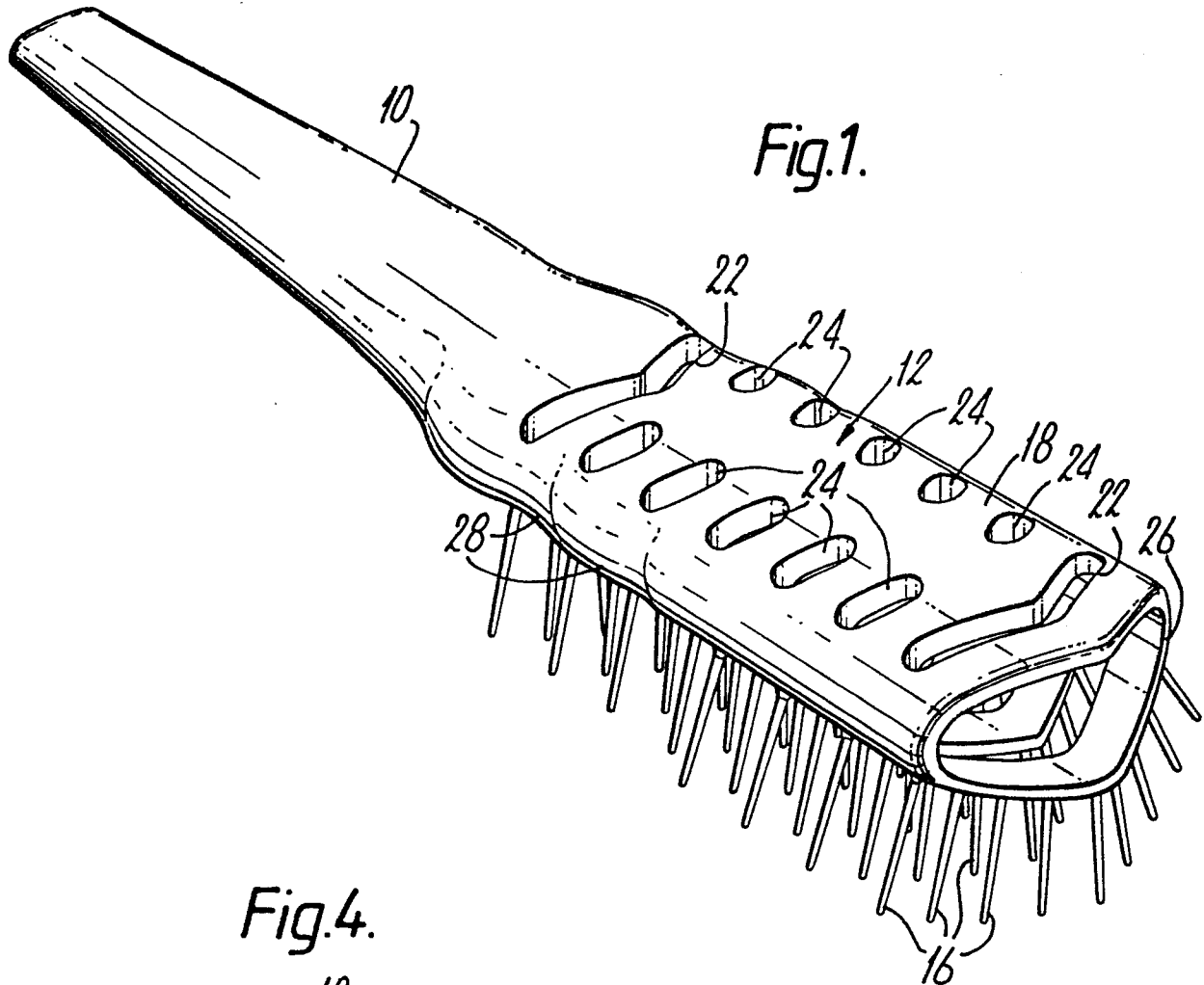
sequence. The bristles 16 are arranged in eight chevron rows of seven bristles, one row on each side of each vent 20, and the bristles, in the rows, are arranged in columns longitudinally of the head. Two additional  
5 bristles are provided one at each outer end of each of the four rows thereby forming two additional columns of four bristles as shown. The vents on the wall 18 are also seven in number. However the first and seventh vents 22 are of full chevron shape: the other intervening  
10 five vents 24 are similar to each other and each comprises only the outer portions of the chevron limbs, said portions being symmetrical above the longitudinal axis of the brush. The vents 22 and 24 are parallelly aligned with corresponding vents 20 in wall 14. The purpose of  
15 this reduced vent area in the wall 18 is to improve pressure differential. The handle-remote end 26 of the head 12 is of chevron shape as shown. Air from a hand-held blower or dryer passes through vents 20 into the tubular passage and exhaust therefrom through vents 22  
20 and 24 and also out through the open-end 26 of the passage. Finger grips 28 are provided as shown on the opposite lateral minor walls for the purpose of giving improved, control and hand stability when the brush is being held at the finger grips rather than at the handle. Also a  
25 thumb plate 30 is provided as shown particularly in Fig. 3 for use when gripping the brush normally by the handle.

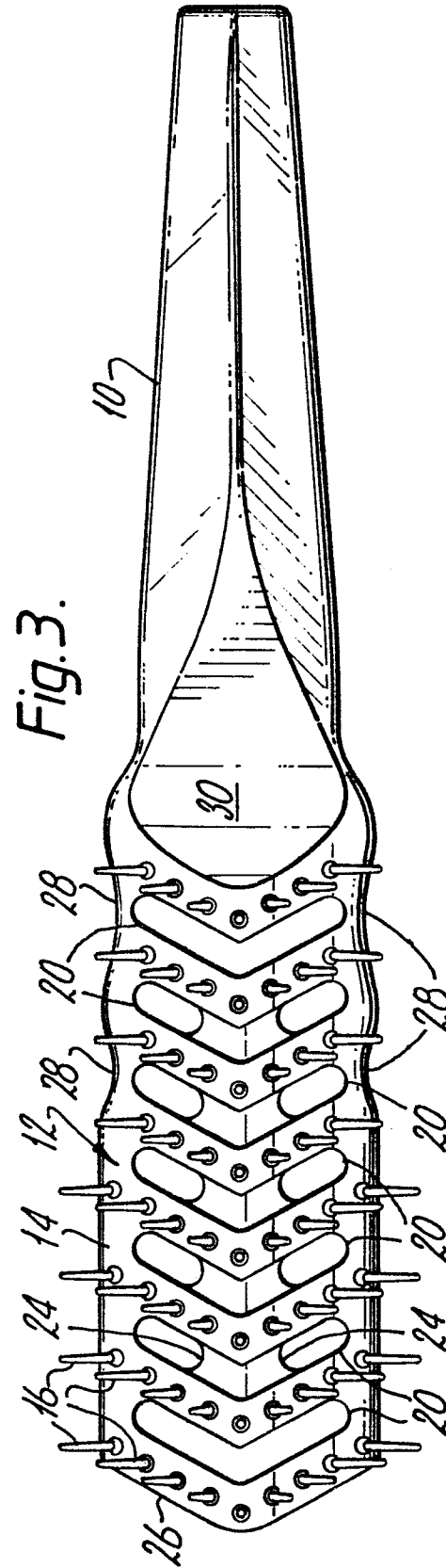
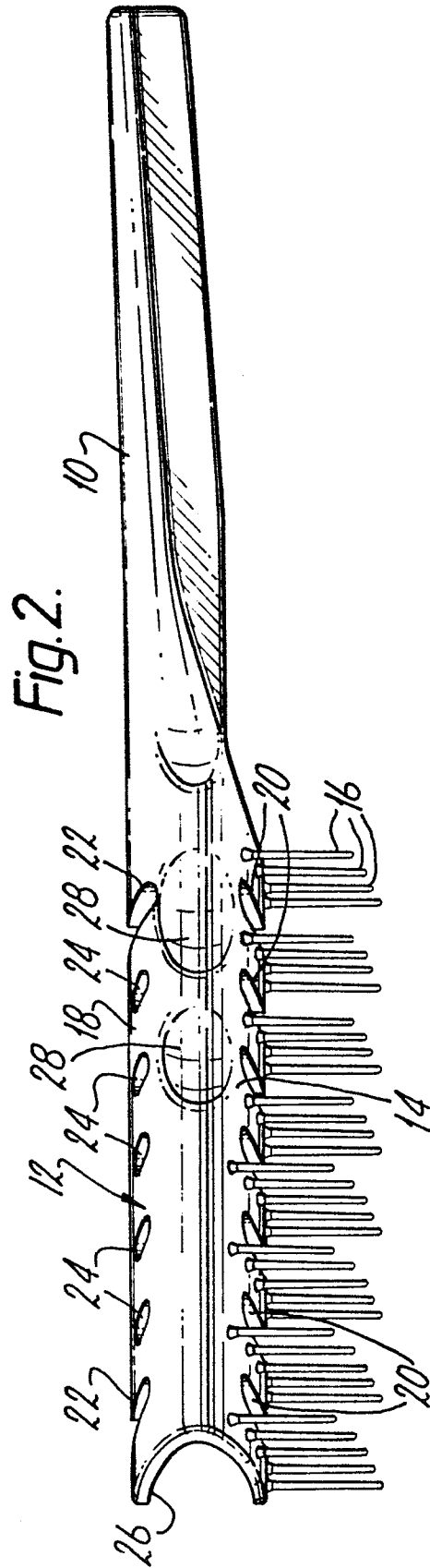
The oval shape of the head is intended to give improved styling characteristics to the brush in use, however cross-sectional shapes other than oval can be  
30 used. Also, the vents 24 may be of full chevron shape similar to vents 22.

The outer tips of the bristles may be made bulbous by dipping in a hot solution which sets hard on cooling.

CLAIMS

1. A hair brush having a handle (10) and an elongate bristle-carrying head (12) characterised in that the head (12) is of tubular shape and open-ended at its handle-remote end (26) the head (12) having two opposed major walls (14, 18) one of which is bristle-carrying with the bristles extending outwardly in a direction remote from the opposed wall, and each major wall being provided with vents (20,22,24).
2. A hair brush as claimed in Claim 1, characterised in that the vents (20) in the bristle-carrying wall (14) are of chevron shape and extend widthwise across the wall (14).
3. A hair brush as claimed in Claim 1 or 2, characterised in that the handle-remote end (26) of the head (12) is of chevron shape.
4. A hair brush as claimed in Claim 2, characterised in that a series of seven vents (20) are provided in the bristle-carrying wall (14).
5. A hair brush as claimed in Claim 3, characterised in that the vents (22,24) on the other wall (18) are of an equal number as in the bristle-carrying wall (14).
6. A hair brush as claimed in Claim 5, characterised in that the first and seventh vents (22) are of full chevron shape and the other vents (24) are similar to each other and comprise only the outer portions of the chevron limbs.
7. A hair brush as claimed in any one of the preceding claims characterised in that the handle (10) and head (12) with bristles (16) are of one-piece construction.
8. A hair brush as claimed in any one of the preceding claims characterised in that finger grips (28) are provided on opposite lateral minor walls of the head (12) adjacent to the handle (10).
9. A hair brush as claimed in any one of the preceding claims characterised in that a thumb plate (30) is provided on the handle (10) adjacent to the head (12).
10. A hair brush as claimed in any one of the preceding claims characterised in that the outer tips of the bristle (16) are made bulbous.







European Patent  
Office

# EUROPEAN SEARCH REPORT

0141532

Application number

EP 84 30 6694

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.4)
X	US-A-4 076 032 (MISERCOLA) *The whole document*	1	A 46 B 5/00 A 46 B 5/02 A 46 B 9/02 A 46 B 15/00 A 46 B 1/00 A 46 D 1/00
A	---	2-10	
A	US-A-4 030 158 (BLAIR et al.) *The whole document*	1-10	
A	---	1-6	
A	US-A-3 253 292 (HERSCHENSOHN) *Claim 1; figures 1,5,7*	1-6	
A	---	1-6,10	
	PATENTS ABSTRACTS OF JAPAN, vol. 2, no. 103, 24th August 1978, page 3156 M 78; & JP - A - 53 71 971 (MATSUSHITA DENKO K.K.)(26-06-1978)	1-6,10	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	US-A-2 827 060 (MARTY) *Column 2, lines 46-52; claim 1; figures 2-5*	1-6	A 46 B A 45 D
A	---	1-6,10	
A	FR-A-2 368 915 (MATSUSHITA) *Claims; figures 4-9*	1-6,10	
A	---	7	
	US-A-2 889 567 (SOLOMON) *Claim 1; figures 1,2*	7	
	---		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 11-12-1984	Examiner BOURSEAU A.M.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	





European Patent  
Office

# EUROPEAN SEARCH REPORT

0141532

Application number

EP 84 30 6694

Page 2

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. 4)
A	US-A-2 633 591 (SERVILLA) *Column 4, lines 44-60; figures 1-3*	8, 9	
P, X	GB-A-2 118 029 (L'OREAL) *Page 3, lines 14-36; claim 1; figures 5, 6*	1	
A		2-10	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 11-12-1984	Examiner BOURSEAU A.M.
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  O : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  &amp; : member of the same patent family, corresponding document</p>			