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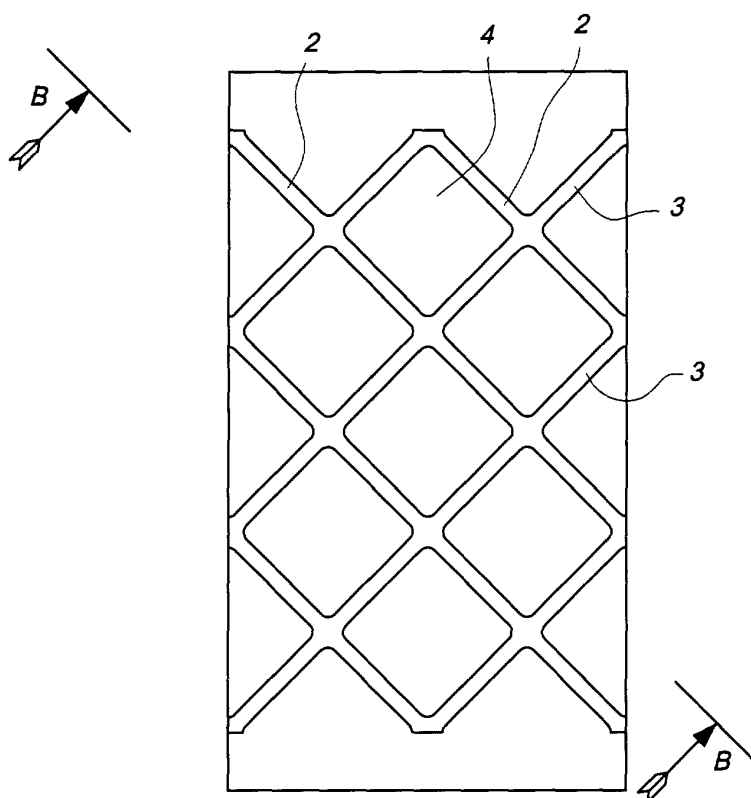
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(54) **Hair styling appliance**

(57) Appliance is described for hairstyling through heating and pressing of the hair, of the kind composed of a pair of interchangeable or fixed heated plates, mounted on a support which opens to allow the introduction of a lock of hair and closes to tighten the plates

on said locks, wherein the shape of the plate surface, consists of several series of rows that cross each other - respectively raised (2;3) on one plate and sunken (2'; 3') on the other - to form a series of raisings on one plate to be inserted in the corresponding housings (4) on the other.

Fig. 1



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Description

[0001] The device, object of this invention is an appliance, more specifically a heated plate, for styling hair.

[0002] Among the equipment and appliances commonly used for styling hair, those for straightening and/or waving hair using heated plates are well known.

[0003] These conventional appliances are normally composed of two heated and opposing plates mounted on an openable support - i.e. of the scissors or back fulcrum type or other - between which it is possible to position and tighten one or more locks of hair which will take on the shape of the plate surface.

[0004] Smooth plates are known for straightening hair, as are plates with surfaces having various shapes, for example a wavy or similar shape to give the hair a wave effect.

[0005] These devices are normally composed of tongs with one or two heated grips which tighten the hair.

[0006] Through the double action of pressure and heating, the desired hairstyle can be achieved.

[0007] The industries operating in this field are constantly on the lookout for innovative solutions that allow new forms and hairstyles to be created, and this innovation is specifically dedicated to them.

[0008] The object of the present invention is a device composed essentially of two thermo heated plates, which thanks to the pressing and heating of the hair is able to give the same a particular style.

[0009] In particular the device in question is characterised by the use of two opposing plates, where one presents a surface with a series of crossing lines forming grooves, and the other, which is the exact negative, features a corresponding series of raised lines designed to be inserted in the grooves of the opposing plate.

[0010] To better understand the important characteristics of the object of the present invention, we can make reference to the following detailed description with particular reference to the tables attached, where:

Figure 1 seen in the design shows one of the two plates;

Figure 2 seen in the design shows the opposing plate;

Figure 3 and 4 show the section of the plates of figure 1 and 2 respectively;

Figure 5 illustrates, by way of an example, the final result that can be achieved using the device according to the present invention.

[0011] 1 shows one of the two plates in question, which presents a series of raised ribs or rows 2 and 3 crossing each other, to set a series of polygon elements or housings 4 in the shape of a regular or irregular polygon, and which in this specific case have the shape of a regular polygon.

[0012] 1' shows the second plate, presenting a series of grooves 2' which cross each other with the respective

grooves 3' also defining a series of raised polygonal elements 4', corresponding exactly to the housings 4' on plate 1 and of such dimensions to be perfectly housed by the last ones.

[0013] These plates will be easily mounted on known, conventional tools, for example on tongs, and associated to heating tools such as heaters or the like, according to known technology.

[0014] With the use of this instrument it will be possible to insert one or more locks of hair between the two plates in such a way as to fix the hair; through adequate heating of the plates it will then be possible to give the lock or locks of hair inserted into the device the shape of the pattern on the plate.

[0015] The rows can go in any direction with respect to the axis of the plate, however for better ease of use the raised rows and the grooves on the plates will preferably be in a diagonal position with respect to the vertical axis of the plate itself to allow a more comfortable use of the plate by the operator, both in a vertical and horizontal position, preventing raised rows 2 and 3 as well as the respective grooves 2' and 3' from positioning along the growth line of the hair.

[0016] In fact this particular situation would make the result less effective in that during the blockage phase of the plates, the hair would tend to place itself in the grooves rather than distribute evenly along the plate.

[0017] In spite of this, the plate can be used in any position, thanks also to the fact that the previously mentioned problem can be easily resolved using additional devices which are not provided for by the present invention, for example combs positioned on the end of the plates so as to collect and distribute the hair evenly and preventing it from moving during the closing phase of the tongs and the relevant heating.

[0018] With particular reference to figure 5 it is clearly stated that the object of the present invention will be used as the operator wishes and in particular by more experienced hairdressers to create unique hairstyles, since they will be able to insert one single lock of hair, more locks of adjoining hair or - through more applications - the entire hair to style.

[0019] Moreover, the particular ability of the user will allow for different style effects which can all be clearly traced back to the use of the plates as described and claimed.

Claims

1. Appliance for hairstyling through heating and pressing of the hair, composed of a pair of interchangeable or fixed heated plates, mounted on a support which opens to allow the introduction of a lock of hair and closes to tighten the plates on said locks, **characterised by** the fact that the shape of the plate surface, consists of several series of rows that cross each other - respectively raised on one plate

and sunken on the other - to form a series of raisings on one plate to be inserted in the corresponding housings on the other.

2. Appliance for hairstyling according to claim 1, wherein one of the two plates forming the pair presents a series of raised parallel lines on the surface that cross each other with as many raised parallel lines, the other plate featuring an identical and negative surface composed of a series of parallel races that cross each other with as many parallel races to form a series of raisings matching the housings on the first plate. 5 10
3. Appliance for hairstyling according to claim 1 or 2 **characterised by** the fact of providing a series of rows positioned diagonally with respect to the axis of the plate. 15
4. Appliance for hairstyling according to claim 1 or 2 **characterised in that** the series of rows are positioned in parallel with respect to the axis of the plate. 20
5. Appliance for hairstyling according to each of the aforementioned claims **characterised by** the fact of providing means to facilitate the distribution of hair and maintain it evenly in position along the plate. 25
6. Appliance for hairstyling according to each of the aforementioned claims **characterised in that** said openable support is of the tongs type. 30

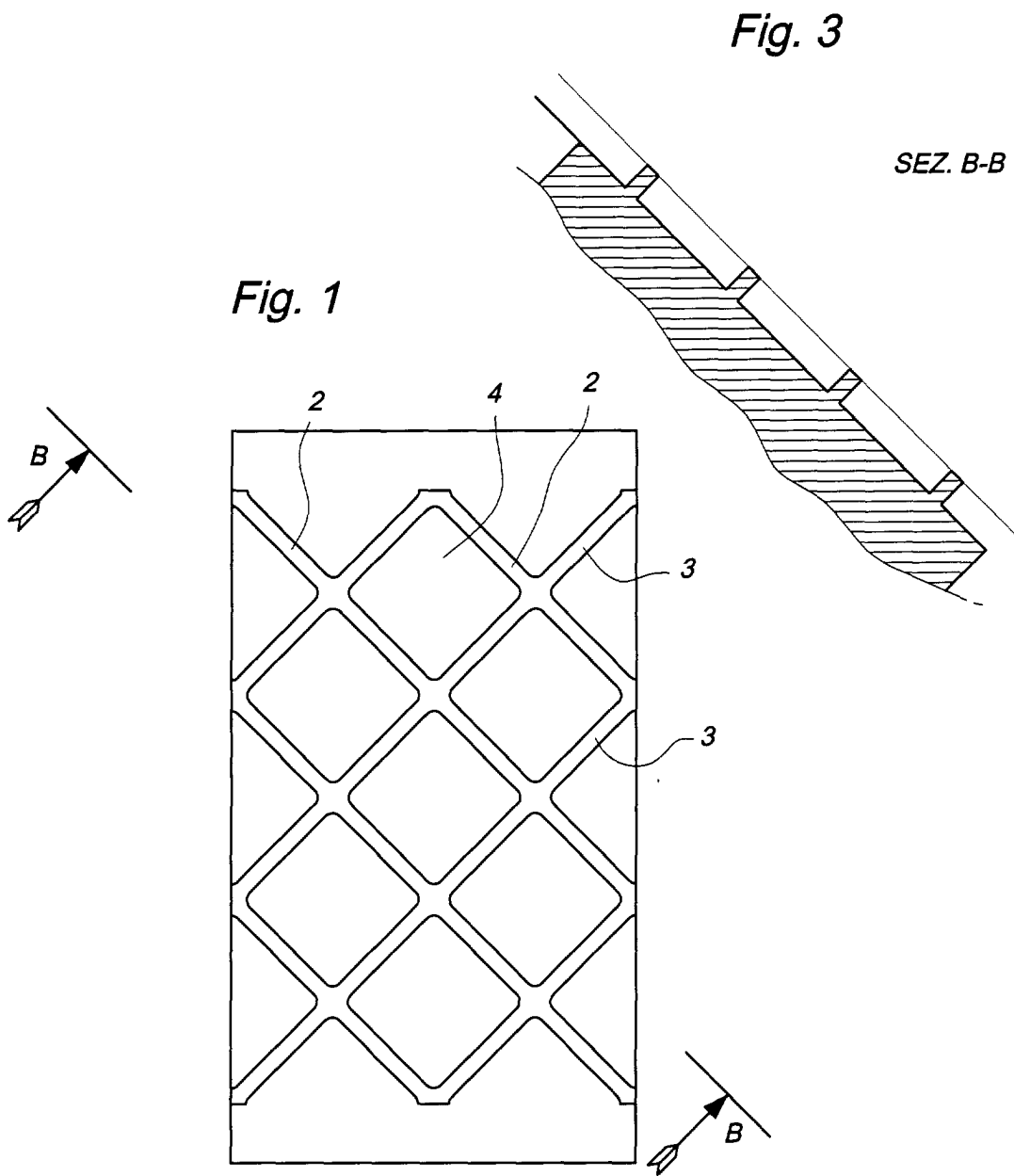
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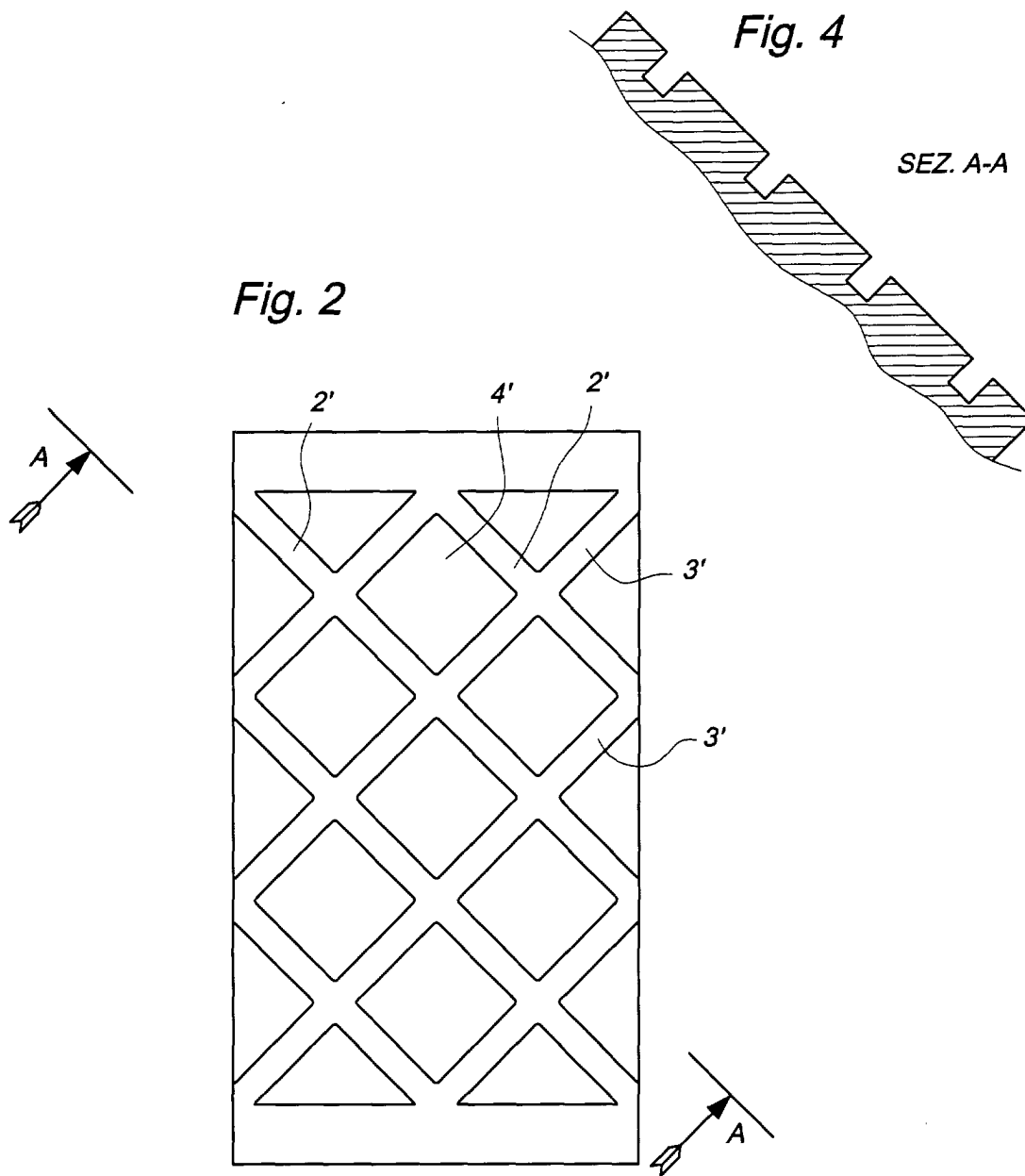
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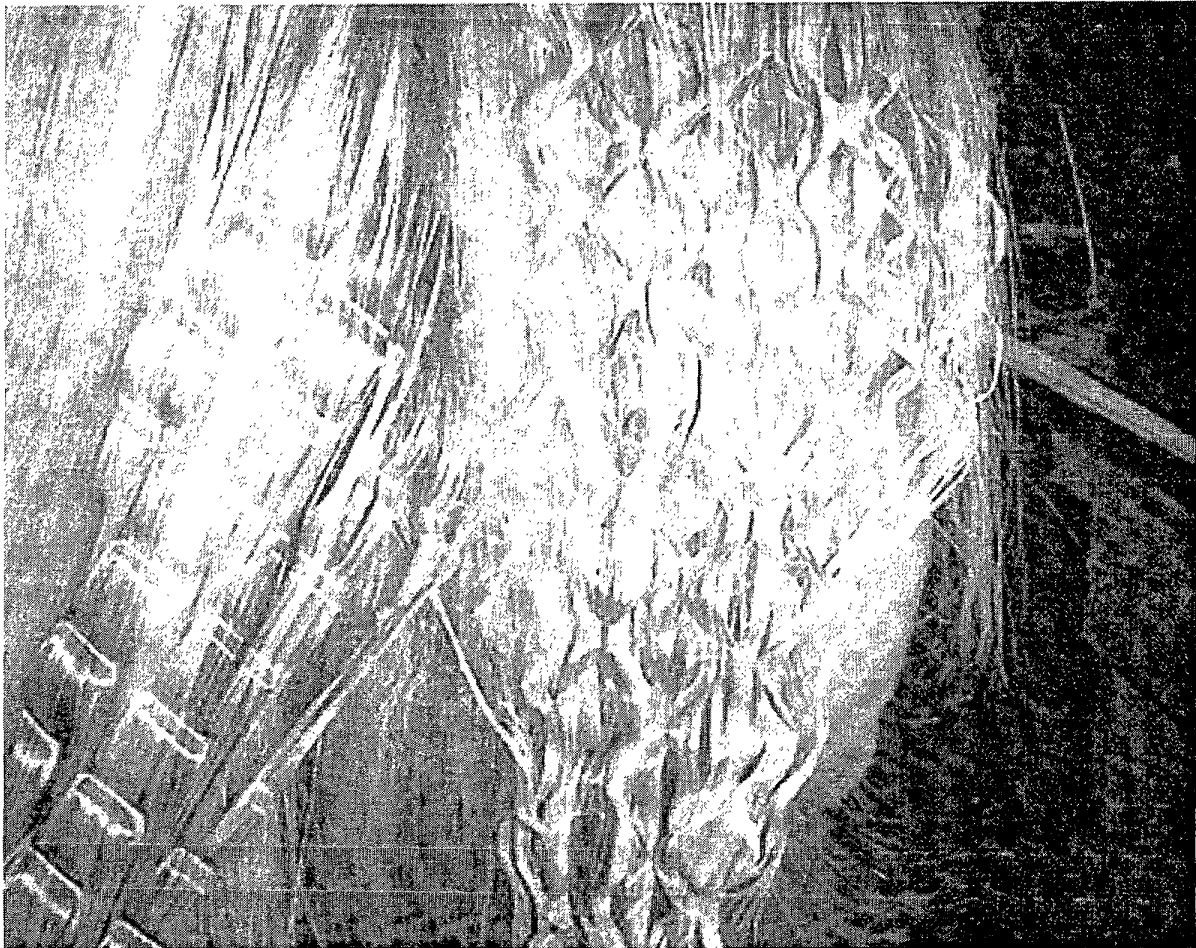


Fig. 5



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EUROPEAN SEARCH REPORT

Application Number
EP 01 11 7994

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.7)
A	US 4 739 151 A (SMAL HENRI) 19 April 1988 (1988-04-19) * figure 6 *	1,4-6	A45D1/06 A45D2/38 A45D2/40
A	US 6 073 635 A (TODD MARK D) 13 June 2000 (2000-06-13) * column 3, line 5 - line 20; figure 1 *	1,5,6	
A	EP 0 346 067 A (CONAIR) 13 December 1989 (1989-12-13) * abstract *	1,5,6	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A45D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 22 November 2001	Examiner Hinrichs, W
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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 11 7994

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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22-11-2001

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4739151	A	19-04-1988	LU 86196 A1	24-07-1987
			AU 584481 B2	25-05-1989
			AU 6610986 A	11-06-1987
			CA 1280662 A1	26-02-1991
			DE 3678397 D1	02-05-1991
			DK 586886 A , B	07-06-1987
			EP 0224970 A2	10-06-1987
			JP 62148604 A	02-07-1987
US 6073635	A	13-06-2000	US 5848599 A	15-12-1998
			US 5823204 A	20-10-1998
			AU 8589098 A	16-02-1999
			EP 1006833 A1	14-06-2000
			US 5913315 A	22-06-1999
			WO 9904665 A1	04-02-1999
			US 6053178 A	25-04-2000
EP 0346067	A	13-12-1989	US 4870250 A	26-09-1989
			CN 1040137 A	07-03-1990
			EP 0346067 A2	13-12-1989