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(54) **HAIR STYLING IRON WITH RAISED FINS**

HAARSTYLING-GLÄTTUNGSWERKZEUG MIT ERHÖHTEN RIPPEN

FER À FRISER AVEC DES ERGOTS RELEVÉS

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Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to hand held hair styling devices and, more particularly, to hair styling devices having heated plates.

Description of Related Art

[0002] Various known hair styling irons have heated, flat plates. Certain flat irons have non-flat heated surfaces comprising one or more of raised contours, grooves, pins, and channels. While each has a specialized purpose, such as shaping hair in a particular way, or detangling hair, none provide optimal performance for simultaneously straightening hair, detangling hair, and delivering maximum heat transfer. For example, designs that have mere pins or bristle-like protrusions effectively comb through hair, and in some instances detangle the hair, yet the pins are poor heat conductors and, therefore, do little to transfer heat. The result is that the heat transfer is almost entirely limited to surfaces of the flat iron surfaces that directly contact the hair. Furthermore, pins, particularly if a relatively large number are employed, have a tendency to get stuck in tangled hair and are difficult to pull through, particularly without causing discomfort.

[0003] US 2004/0003824 A1 which constitutes closest prior art with regard to the present invention, discloses a toothed heated hair styling device having a first plate connected to a first housing and a second plate connected to a second housing. The proximal ends of the housings are attached to a first handle member and a second handle member, respectively, which handle members are connected at their respective proximal ends with each other by a hinge. The first plate has a plurality of pins thereon, whereas the second plate is provided with holes which the pins engage when the hair styling device is in its closed position.

[0004] US 1 130 574 describes a brush for removing kinks or curls. The brush is provided with a plurality of metal teeth formed integrally with a back that can be heated.

[0005] EP 1 652 445 A1 is directed to a hair iron with a pair of cases which are hinge-jointed at each one end in order to be freely opened and closed. On the respective opposed end, each case has a heater plate and a fan is provided for blowing air along the hair iron. Comb teeth are provided along one plate for assisting the shaping of the hair.

OBJECTS OF THE PRESENT INVENTION

[0006] It is an object of the present invention to provide a heated hair styling iron that achieves straightening, de-

tangling and optimum heat transfer in a manner that overcomes the shortcomings described above.

BRIEF SUMMARY OF THE PRESENT INVENTION

[0007] According to the present invention, a heated styling iron having two opposed heated surfaces hingedly connected achieves straightening, detangling, and optimum heat transfer by utilizing on one flat heated surface a row of fin-like raised ridges that are spaced apart longitudinally in a single row and that are oriented so that the longer dimension of the fin-like ridges are aligned generally transverse to the longitudinal axis. Thus, as the iron is pulled through the hair the ridges guide the hair along their longer dimensions. The opposing flat heated surface has a channel or groove that extends longitudinally in a manner so that it complementarily receives the row of ridges when the heated surfaces are closed against each other. The sizing and shape of the groove is optimized to receive the ridges while the heated surfaces are closing around a lock of hair.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008]

Fig. 1 is a perspective view of a heated iron according to the present invention, including additional partial views showing various components.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS OF THE INVENTION

[0009] A heated flat iron 1 according to the present invention includes a first member 2 and a second member 3 joined by a hinge 4. An electrical cord 5 extends therefrom for providing electrical energy from an external source. An upper plate 6 is attached to the first member 2, and a lower plate 7 is attached to the second member 3. The upper plate comprises a groove 8 that extends generally longitudinally. The lower plate 7 includes a set of raised ridges 9, each ridge 9 having a length L, a thickness T, and a height H, where L is greater than T. The ridges 9 are aligned in a longitudinally extending row along the lower plate 7 so that the row is aligned with the groove 8. Each ridge 9 is oriented so that its length L is transverse to the longitudinally extending row. The row of ridges may be made on a secondary plate that is inlaid into the lower plate 7, or the ridges may be integrally formed therewith.

[0010] Conventional electric heat elements provide heat to either or both plates 6, 7. Conventional control buttons and dials are used to control settings including heat settings. Various surfaces may be treated, coated or comprised of ceramics, tourmaline, non-metals and other materials. Ion generators and far infra red generators may be included. The iron 1 may be vented for wet and dry applications, it may have a steam generator and

fluid reservoir, and it may be fitted with a fan for blowing air.

[0011] While a preferred embodiment of the present invention has been shown and described herein, various modifications may be made without departing from the scope of the present invention as defined in the appended claims.

Claims

1. An appliance (1) for styling hair, said appliance (1) comprising
an upper plate (6) attached to a first member (2) ;
a lower plate (7) attached to a second member (3);
a hinge (4) pivotally connecting said first member (2) and said second member (3);
a heat element associated with one or both of said first and second members (2, 3) and being adapted to be selectively actuated to heat a respective plate (6, 7) associated with said first or second member (2, 3);
a groove (8) extending generally longitudinally along said upper plate (6);
a set of raised ridges (9) extending from said lower plate (7) in a generally linear row and aligned with said groove (8) so that when said first member (2) is in contact with said second member (3), said ridges (9) enter said groove (8), each ridge (9) having a length L, a thickness T, and a height H, where L is greater than T and each ridge (9) is oriented so that its length L is transverse to the longitudinally extending row.
2. An appliance (1) according to claim 1, wherein said ridges (9) are integrally formed with said lower plate (7).
3. An appliance (1) according to claim 1, wherein said ridges (9) are integrally formed on a secondary plate that is attached to said lower plate (7).

Patentansprüche

1. Gerät (1) zum Haarstyling, wobei das genannte Gerät (1) Folgendes umfasst:
eine obere Platte (6), die an ein erstes Bauteil (2) befestigt ist;
eine untere Platte (7), an ein zweites Bauteil (3) befestigt ist;
ein Gelenk (4), das das genannte erste Bauteil (2) und das genannte zweite Bauteil (3) miteinander schwenkbar verbindet;
ein Heizelement, das einem oder beiden der genannten ersten und zweiten Bauteile (2, 3) zugeordnet ist, und dazu angepasst ist, selektiv

betätigt zu werden, um eine jeweilige Platte (6, 7) zu heizen, die dem genannten ersten oder zweiten Bauteil (2, 3) zugeordnet ist;
eine Nut (8), die im Allgemeinen longitudinal entlang der genannten oberen Platte (6) verläuft;
ein Satz von Erhöhungen (9), die sich von der unteren Platte (7) ausgehend, in einer im Allgemeinen linearen Reihe und mit der genannten Nut (8) ausgerichtet, derart erstrecken, dass, wenn das genannte erste Bauteil (2) mit dem genannten zweiten Bauteil (3) in Kontakt steht, die genannten Erhöhungen (9) in die genannte Nut (8) eintreten, wobei jede Erhöhung (9) eine Länge L, eine Dicke T, und eine Höhe H aufweist, wobei L größer als T ist und wobei jede Erhöhung (9) derart ausgerichtet ist, dass ihre Länge L transversal bezüglich der longitudinal verlaufenden Reihe liegt.

2. Ein Gerät (1) nach Anspruch 1, wobei die genannten Erhöhungen (9) an der genannten unteren Platte (7) angeformt sind.
3. Ein Gerät (1) nach Anspruch 1, wobei die genannten Erhöhungen (9) an einer sekundären Platte angeformt sind, die an der genannten unteren Platte (7) befestigt ist.

Revendications

1. Un appareil (1) pour coiffer (*styling*) les cheveux, le dit appareil (1) comprenant
une plaque supérieure (6) attachée à un premier élément de construction (2) ;
une plaque inférieure (7) attachée à un deuxième élément de construction (3) ;
une articulation (4) raccordant de façon pivotable le dit premier élément de construction (2) et le deuxième élément de construction (3) ;
un élément de chauffe associé à l'un ou aux deux des dits premier et deuxième éléments de construction (2, 3), et étant adapté de manière à être sélectivement actionné pour chauffer respectivement une plaque (6, 7) associée au dit premier ou deuxième élément de construction (2, 3) ;
un sillon (8) s'étendant généralement en direction longitudinale le long de la dite plaque supérieure (6) ;
un ensemble de saillies (9) s'étendant de la dite plaque inférieure (7) en une rangée généralement linéaire et alignée avec le dit sillon (8) de manière que, quand le dit premier élément de construction (2) est en contact avec le dit deuxième élément de construction (3), les dites saillies (9) pénètrent dans le dit sillon (8), chaque saillie (9) présentant une longueur L, une épaisseur T et une hauteur H, sachant que L est supérieur à T et chaque saillie (9) est orientée de manière à ce que sa longueur L soit transver-

sale à la rangée, qui s'étend en direction longitudinale.

2. Un appareil (1) d'après la revendication 1, dans lequel les dites saillies (9) font partie intégrante de la dite plaque inférieure (7). 5
3. Un appareil (1) d'après la revendication 1, dans lequel les dites saillies (9) font partie intégrante d'une plaque secondaire, qui est attachée à la dite plaque inférieure (7). 10

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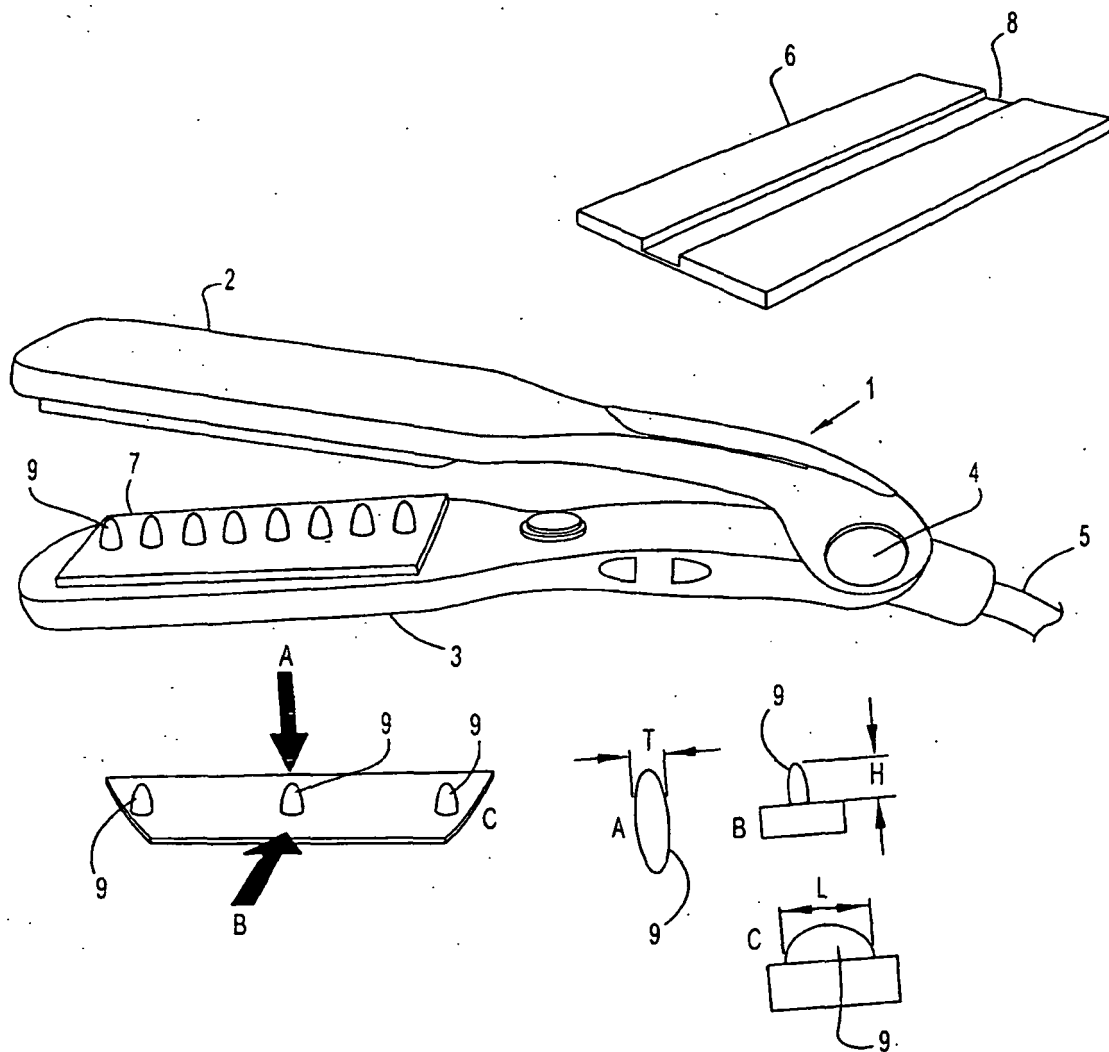


FIG. 1

REFERENCES CITED IN THE DESCRIPTION

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