

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
2 March 2006 (02.03.2006)

PCT

(10) International Publication Number
WO 2006/023802 A2

(51) International Patent Classification:
A45D 1/00 (2006.01)

(21) International Application Number:
PCT/US2005/029671

(22) International Filing Date: 22 August 2005 (22.08.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/603,717 23 August 2004 (23.08.2004) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

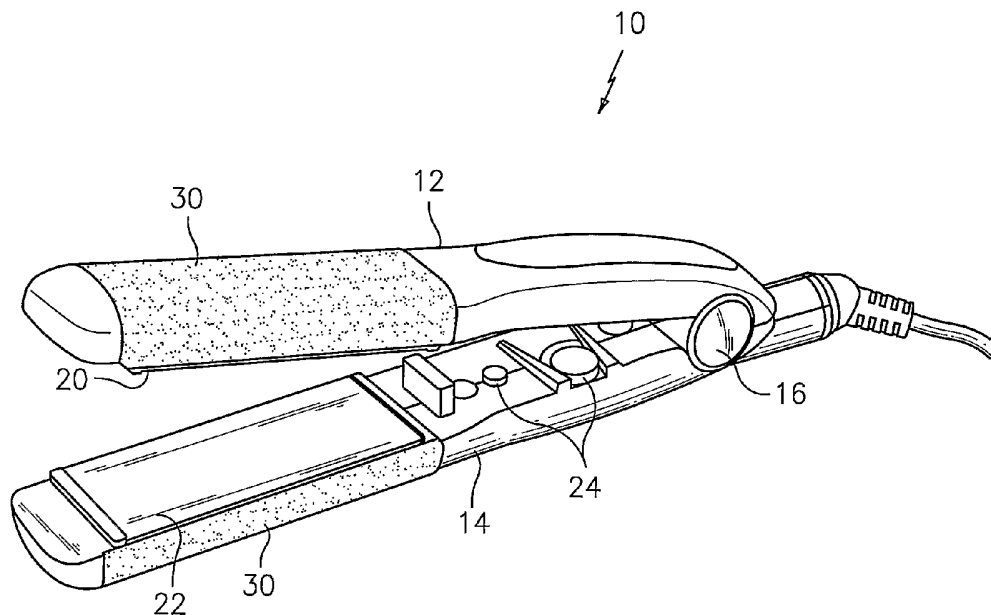
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HAIR STRAIGHTENING APPLIANCE WITH FLOCKED ARMS



(57) Abstract: A hair-straightening device (10) has a pair of opposing arms (12, 14) joined by a hinge (16), which enables the opening and closing of the arm (12, 14). At the ends of the arms, opposite the hinge (16), are plates (20, 22) that are heated to a temperature sufficient to straighten the hair. The outer portion of the ends of the arms (12, 14) that are located opposite the hinge (16) can be covered with a flocking material (30) to provide a cooler touch to allow a user to obtain a firmer grip with both hands on the device (10) for more efficient use. In addition, a user can apply hair products directly to flocked ends of the device and transfer the hair products to hair that is warmer than when the hair products are applied directly to the hair.

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HAIR STRAIGHTENING APPLIANCE WITH FLOCKED ARMS**RELATED APPLICATIONS**

This application claims priority to U.S. Provisional Patent Application Serial No. 60/603,717 filed on August 23, 2004, incorporated herein by reference in its entirety.

BACKGROUND OF THE INVENTION**Field of the Invention**

The present invention relates to hair appliances and, more particularly, to an electrical hair-straightening device, especially of the type having flocked arms to provide a cooler touch to the outer arms to allow a user to maintain a firmer grip on the device with both hands, as well as to allow hair products to be applied to warmer hair for better absorption.

Description of Related Art

It is known in the art to provide a hair-straightening device having a pair of opposing arms joined by a hinge, in which the arms contain heated metal plates that are adapted to grip a strand of hair and straighten the hair between the plates through the use of heat and tension. There have been numerous variations manufactured with combs or brushes added adjacent to the plates and variations having steam or ionic features enhancing the heated plates.

While various known hair-straightening devices exist generally, such known devices have the ends of the arms opposite the hinge heat up to a temperature that is too hot to be comfortably handled by a user. A user of the device will not be able to maintain as firm a grip on the device if he or she cannot hold both the ends adjacent to the hinge as well as the ends opposite the hinge. This unstable grip would require more repetitions of pulling the hair through the device in order to accomplish the same result.

In addition, such known devices do not allow for hair products to be applied directly from the hair-straightening device. Other known devices require the application of hair products directly to the hair, with the subsequent use of the device. This means that the hair products are applied to the hair at a cooler temperature and, therefore, the absorption of such products into the hair is much less efficient.

Such shortcomings make it desirable to provide a hair-straightening device that allows for a user to grip the device both at the ends of the arms near the hinge, as well as the ends of the arms opposite the hinge. It is also desirable to provide such a device that would allow for hair products to be applied directly to the device and then transferred to the hair when the hair is warmer rather than apply the hair products directly to the hair.

OBJECT AND SUMMARY OF THE INVENTION

It is an object of the invention to provide a hair-styling device that overcomes the above-mentioned shortcomings.

It is a further object of the present invention to provide a hair-straightening device that allows a user to obtain a better grip on the device in order to use it more efficiently as well as to allow the user to apply hair products to hair when it is in a condition to be better absorbed. These and other objects are described below or inherent with respect to the present invention.

In the preferred embodiment of the invention, a hair-straightening device comprises a pair of opposing arms joined by a hinge, which enables the opening and closing of the arms. At the ends of the arms, opposite the hinge, are plates made of a material with properties for straightening the hair of a user. Between the arms and the plates are heaters that heat the plates to a temperature sufficient to straighten the hair.

Various controls can be used to turn the device on and off, as well as to set the temperature of the plates.

The outer portion of the ends of the arms that are located opposite the hinge can be covered with a flocking material. This flocking provides a cooler touch than plastic or other similar materials to allow a user to obtain a firmer grip with both hands on the device for more efficient use. In addition, a user can apply hair products directly to the flocked ends of the device and transfer the hair products to hair that is warmer than when the hair products are applied directly to the hair. This increases the absorption of such hair products into the hair.

The flocking material can be placed on a portion of the arms by some type of adhesive such as glue, double-sided tape, spray-adhesive, fastened with snaps, or any other suitable method. The fabric material can then be cut to the appropriate size and pressed onto the arms having adhesive. The flocking material can also be sprayed on. The material can be made of felt, nylon or any other material that would keep the outer portion of the ends of the arms insulated from the heaters within the arms.

The plates can be made from any conductive material such as metal, ceramic or glass. The use of hard glass creates a burnishing effect on the hair and improves the straightening.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of a preferred embodiment of a device according to the present invention.

Fig. 2 is a right side view of the embodiment shown in Fig. 1.

Fig. 3 is a top view of the embodiment shown in Fig. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention is described in the preferred embodiments as directed to a hair-straightening device having heated plates with a portion of the arms opposite a hinge being covered with flocking. This flocking keeps the outer parts of such arms insulated in order to be comfortably held by a user, as well as to allow various hair products to be applied to the device rather than directly to one's hair. It is understood, however, that the present invention is not limited to such applications and, as understood by one skilled in the art, may be adapted for application to other similar uses.

Referring to Figs. 1 through 3, a hair-straightening device 10 comprises a pair of opposing arms 12, 14, which are joined at one end by a hinge 16. The hinge 16 enables the opening and closing of the opposing arms 12, 14. Opposite the hinge 16, the opposing arms 12, 14 hold plates 20, 22, one plate in each arm, made of a material with properties for straightening the hair of a user. Between the arms and the plates are heaters (not shown) that heat the plates 20, 22 to a temperature sufficient to straighten the hair. Various controls 24 can be used to turn the device 10 on and off, as well as to set the temperature of the plates 20, 22.

In order to allow a user of the device to obtain a firmer grip on the hair, the outer portion of the ends of the arms that are located opposite the hinge 16 (i.e. the sides within which the heaters are located) can be flocked. This flocking 30 provides a cooler touch when the arms are gripped, as compared with plastic or some other often used material. Without such flocking 30, the ends of the arms 12, 14 are at a temperature that can be uncomfortable to grip. By providing this flocking 30, the arms 12, 14 are easier to hold and a user can obtain a better grip with both hands, while at the same time, the plates in

contact with the hair can remain at a high temperature. A user having this better grip will be required to slide the hair through the device 10 fewer times.

In addition, this flocking 30 would also allow a user to apply various hair products to hair at a warmer temperature. Many different hair products can be used on hair and are often applied directly to the hair at room temperature. By flocking the ends of the hair-straightening device 10, a user can apply the hair products directly to the flocked ends of the arms 12, 14 and transfer the hair products to the hair while the hair is being heated from the device. Hair products are typically better absorbed when they are placed on the hair when the hair is at a higher temperature. Furthermore, the flocking 30 provides a neat and pleasing appearance.

This flocking material can be applied by first placing some type of adhesive to the arms in order to allow the material to remain on the arms. This can be accomplished using glue, double-sided tape, spray adhesive, fastened with snaps, or any other method suitable for this purpose. The fabric material can then be cut to the appropriate size and pressed onto the arms having adhesive. In another embodiment of the present invention, the flocking material can be sprayed on.

This flocking material can be made of felt, nylon or any other material that would keep the outer portion of the ends of the arms opposite the hinge insulated from the heaters. This flocking could be placed on one or both arms of the device.

The plates 20, 22 can be made from any conductive material such as metal, ceramic, or in one embodiment of the present invention, glass. The use of hard glass creates a burnishing effect on the hair and improves the straightening.

A user of the device would grasp the arms 12, 14 adjacent to the hinge 16 and set the controls 30 to the desired temperature. The user would then place the hair between

the plates 20, 22 and close the arms 12, 14 onto the hair. The user would then repeatedly slide the plates 20, 22 from the root side of the hair to the tip side of the hair. The user can also rotate the device 10 once the hair is placed between the plates 20, 22 so that the hair runs between the plates 20, 22, as well as over the flocked material 30. This would straighten the hair, and allow for the application of various hair products to warmer hair for better absorption.

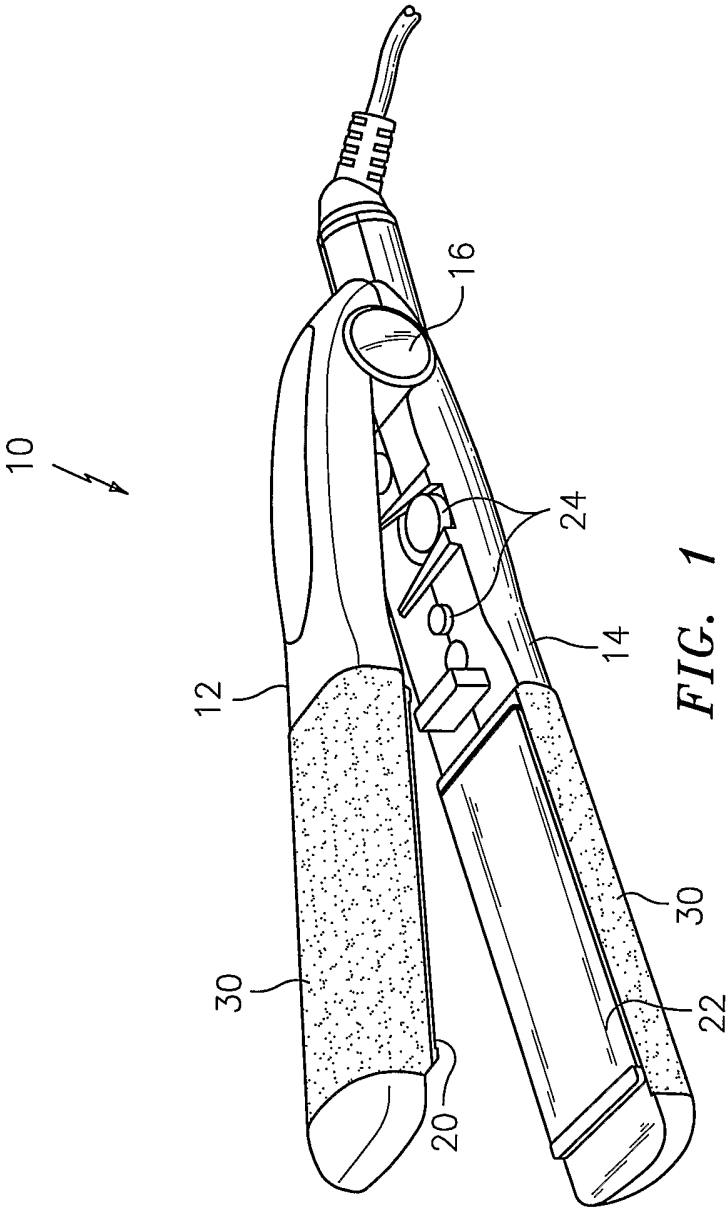
While the preferred embodiments of the present invention have been described herein, various modifications can be made without departing from the scope of the invention.

What is claimed is:

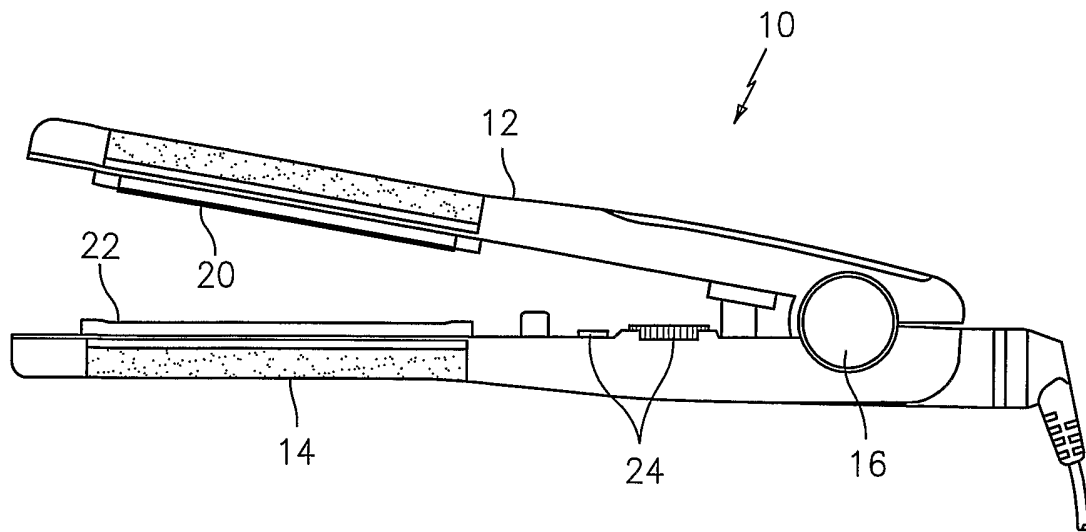
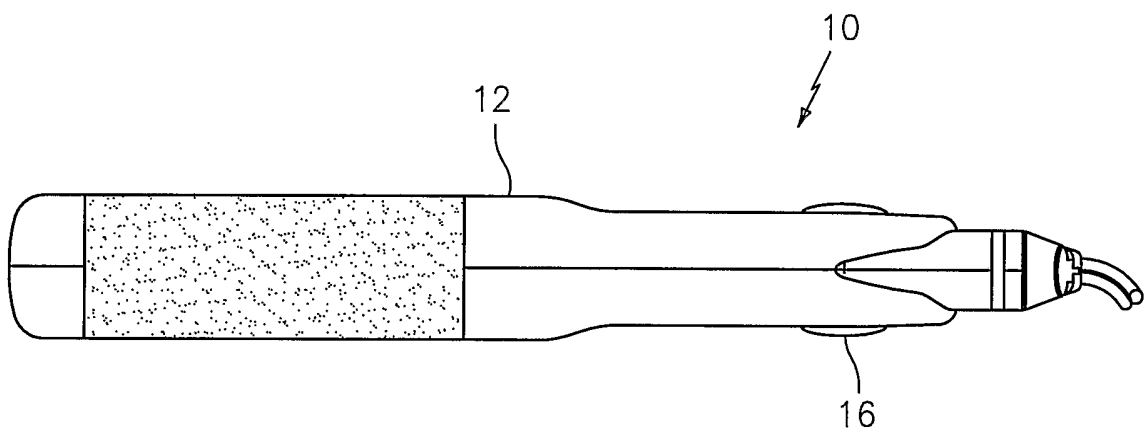
1. A hair styling device comprising:
 - a first arm;
 - a second arm;
 - a hinge connecting said first arm and said second arm;
 - a first heatable plate on said first arm for contacting a user's hair and a second heatable plate on said second arm for contacting a user's hair; and
 - a flocking material covering at least a portion of said first and/or second arms.
2. A hair styling device according to claim 1, further comprising
 - a first heater for heating said first plate and a second heater for heating said second plate.
3. A hair styling device according to claim 1, wherein
 - said flocking material is made from nylon.
4. A hair styling device according to claim 1, wherein
 - said flocking material is made from felt.
5. A hair styling device according to claim 1, further comprising
 - an adhesive to secure said flocking material to said device.
6. A hair styling device according to claim 1, wherein
 - said flocking material is adapted to be sprayed on said first and/or said second arms.
7. A hair styling device according to claim 1, further comprising
 - a button on said device to control said device.
8. A hair styling device according to claim 1, wherein

said first and second plates are made from a conductive material selected from the group consisting of metal, ceramic and glass.

9. A hair styling device according to claim 1, further comprising
a spring within said hinge to bias said first arm and said second arm away from each other.



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*FIG. 2**FIG. 3*