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(54) **HEAT CONDUCTING MECHANISM FOR PERSONAL CARE DEVICE AND PERSONAL CARE DEVICE**

(57) A heat conducting mechanism for a personal care device comprising: a heat conductor and a mounting rack, wherein, the heat conductor is fixedly mounted on the mounting rack. The heat conductor is an aluminum plate, and a bamboo fiber layer or a carbon fiber layer is arranged at a working face of the heat conductor. According to the disclosure, the aluminum plate and bamboo fibers are combined, and the aluminum plate is easy

to form, low in machining requirements and low in material cost. For example, for a using face, the bamboo fibers are additionally arranged at a surface of the aluminum plate. The bamboo fibers have good breathability and high wear resistance, and have the functions of natural antibiosis, bacteriostasis, mite removal, deodorizing and ultraviolet ray resistance, and thus the effect of environmental protection is achieved.

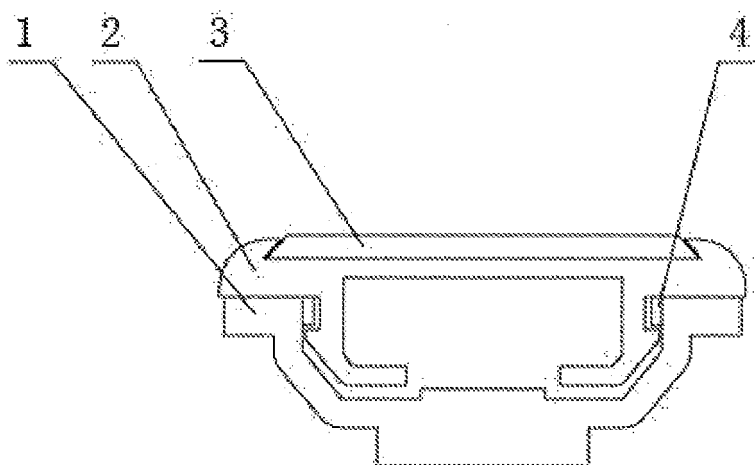


FIG. 2

Description

FIELD OF THE INVENTION

[0001] The disclosure relates to cosmetology and hair-dressing appliances, and particularly to a heat conducting mechanism for a personal care device and a personal care device.

BACKGROUND

[0002] For an existing personal care device, mostly, its heating plate is directly made of an aluminum plate. However, the aluminum plate is lower in strength, is easy to wear, and is not high in heat resistance.

SUMMARY

[0003] To solve the defects in the background, an object of the disclosure is to provide a heat conducting mechanism for a personal care device and a personal care device using the heat conducting mechanism.

[0004] The technical solutions used by the disclosure to solve the technical problem thereof are as follows.

[0005] A heat conducting mechanism for a personal care device includes: a heat conductor and a mounting rack, wherein, the heat conductor is fixedly mounted on the mounting rack, the heat conductor is an aluminum plate, and a bamboo fiber layer or a carbon fiber layer is arranged at a working face of the heat conductor.

[0006] Preferably, the bamboo fiber layer or the carbon fiber layer and the heat conductor are independent respectively, and the bamboo fiber layer or the carbon fiber layer is matched with the heat conductor in an insertion way.

[0007] Preferably, cone-shaped grooves are formed at the surface of the heat conductor, two sides of the bamboo fiber layer or the carbon fiber layer are fitted with the cone-shaped grooves, and the bamboo fiber layer or the carbon fiber layer is inserted into the cone-shaped grooves.

[0008] Preferably, convex clamping blocks are arranged on inner topper sides of a groove of the mounting rack, and concave grooves fitted with the clamping blocks are arranged at the outer surface of the heat conductor.

[0009] Preferably, a surface of the bamboo fiber layer or the carbon fiber layer is higher than the surface of the heat conductor.

[0010] A personal care device using the heat conducting mechanism includes: a pair of holding components, tails of which are hinged, wherein, the heat conducting mechanism is arranged inside the holding components, a heating body is embedded in the heat conducting mechanism, and the heat conducting mechanism is in contact with the heating body.

[0011] The beneficial effects of the disclosure are as follows. The aluminum plate and bamboo fibers are combined, and the aluminum plate is easy to form, low in

machining requirements and low in material cost. For example, for a using face, the bamboo fibers are additionally arranged at a surface of the aluminum plate. The bamboo fibers have good breathability and high wear resistance, and have the functions of natural antibiosis, bacteriostasis, mite removal, deodorizing and ultraviolet ray resistance, and thus the effect of environmental protection is achieved.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012]

Figure 1 is a stereoscopic structural diagram of a heat conducting mechanism according to the disclosure.

Figure 2 is a front view of the heat conducting mechanism according to the disclosure.

Figure 3 is a stereoscopic diagram of a personal care device made by using the heat conducting mechanism.

DETAILED DESCRIPTION

[0013] The disclosure is further explained below in conjunction with the drawings.

[0014] Referred to Figures 1 and 2, the disclosure includes a heat conductor 2 and a mounting rack 1, wherein, the heat conductor 2 is fixedly mounted on the mounting rack 1, and wherein, the heat conductor 2 is an aluminum plate, and a bamboo fiber layer or a carbon fiber layer 3 is arranged at a working face of the heat conductor 2. The bamboo fiber layer or the carbon fiber layer 3 is laid at the working surface of the heat conductor 2, allowing a part in contact with hair in a working process to be the bamboo fiber layer or a carbon fiber layer 3.

[0015] The bamboo fiber layer or the carbon fiber layer 3 and the heat conductor 2 are independent respectively, and the bamboo fiber layer or the carbon fiber layer 3 is matched with the heat conductor 2 in an insertion way. Cone-shaped grooves are formed at the surface of the heat conductor 2, two sides of the bamboo fiber layer or the carbon fiber layer 3 are fitted with the cone-shaped grooves, and the bamboo fiber layer or the carbon fiber layer 3 is inserted into the cone-shaped grooves. The bamboo fiber layer or the carbon fiber layer 3 may also be fixed to the heat conductor 2 in a sticking way, only if it is ensured that the bamboo fiber layer or the carbon fiber layer 3 can not drop down.

[0016] Convex clamping blocks 4 are arranged on inner topper sides of a groove of the mounting rack 1, concave grooves fitted with the clamping blocks 4 are arranged at the outer surface of the heat conductor 2. The clamping blocks 4 are clamped in the concave grooves of the heat conductor 2, so that the heat conductor 2 is fixed in the mounting rack 1 and a phenomenon that the

heat conductor 2 drops down is prevented from occurring.

[0017] A surface of the bamboo fiber layer or the carbon fiber layer 3 is higher than the surface of the heat conductor 2, and the bamboo fiber layer or the carbon fiber layer 3 has elasticity. Therefore, in a tightly holding process, in the case that the surface of the bamboo fiber layer or the carbon fiber layer 3 is higher than the surface of the heat conductor 2, the bamboo fiber layer or the carbon fiber layer 3 allows a position which is held tightly to be tighter and allows holding or perming of hair to be better in effect.

[0018] Bamboo fibers are of cellulosic fibers extracted from a bamboo growing naturally. The bamboo fibers have properties of good breathability, instant water absorption, stronger wear resistance and the like, and also have the functions of natural antibiosis, bacteriostasis, mite removal, deodorizing and ultraviolet ray resistance. Experts point out that the bamboo fibers are of natural environment-friendly green fibers in the real sense, and the bamboo fibers have high-quality inverse elasticity, wear resistance, and flame resistance. The natural bamboo fibers can absorb water which is 20 percentage of weight of themselves, are highest in water absorption among other fiber fabric of the same density, and have excellent inverse elasticity and flame resistance.

[0019] The bamboo fibers and the aluminum plate are combined, that is, the advantages that the aluminum plate is easy to form, low in machining requirements and low in material cost are utilized. The bamboo fibers are used at the surface of the aluminum plate, also the advantages that the bamboo fibers have high strength, moderate elasticity modulus, good heat resistance, light weight, wear resistance and the like are utilized, and the heat conducting mechanism is allowed to be more resistant to heat and have no deformation.

[0020] Referred to Figure 3, a personal care device using the heat conducting mechanism includes a pair of holding components, tails of which are hinged, wherein, the heat conducting mechanism is arranged inside the holding components, a heating body is embedded in the heat conducting mechanism, and the heat conducting mechanism is in contact with the heating body. Through using the heat conducting mechanism where the bamboo fiber layer or the carbon fiber layer 3 and the aluminum plate are combined, and through allowing the bamboo fiber layer or the carbon fiber layer 3 to be the working face, the defects that the aluminum plate has no heat resistance and no wear resistance in the past are solved.

[0021] The embodiments should not be regarded as limitation of the disclosure, and moreover any improvement made based on the spirit of the disclosure should be contained in the protection scope of the disclosure.

Claims

1. A heat conducting mechanism for a personal care

device, comprising: a heat conductor (2) and a mounting rack (1), wherein, the heat conductor (2) is fixedly mounted on the mounting rack (1), and wherein, the heat conductor (2) is an aluminum plate, and a bamboo fiber layer or a carbon fiber layer (3) is arranged at a working face of the heat conductor (2).

2. The heat conducting mechanism for the personal care device according to claim 1, wherein, the bamboo fiber layer or the carbon fiber layer (3) and the heat conductor are independent respectively, and the bamboo fiber layer or the carbon fiber layer (3) is matched with the heat conductor in an insertion way.

3. The heat conducting mechanism for the personal care device according to claim 2, wherein, cone-shaped grooves are formed at the surface of the heat conductor (2), two sides of the bamboo fiber layer or the carbon fiber layer (3) are fitted with the cone-shaped grooves, and the bamboo fiber layer or the carbon fiber layer (3) is inserted into the cone-shaped grooves.

4. The heat conducting mechanism for the personal care device according to claim 1, wherein, convex clamping blocks (4) are arranged on inner topper sides of a groove of the mounting rack (1), and concave grooves fitted with the clamping blocks (4) are arranged at the outer surface of the heat conductor (2).

5. The heat conducting mechanism for the personal care device according to claim 1, wherein, a surface of the bamboo fiber layer or the carbon fiber layer (3) is higher than the surface of the heat conductor (2).

6. A personal care device using the heat conducting mechanism according to claim 1, comprising: a pair of holding components, tails of which are hinged, wherein, the heat conducting mechanism is arranged inside the holding components, a heating body is embedded in the heat conducting mechanism, and the heat conducting mechanism is in contact with the heating body.

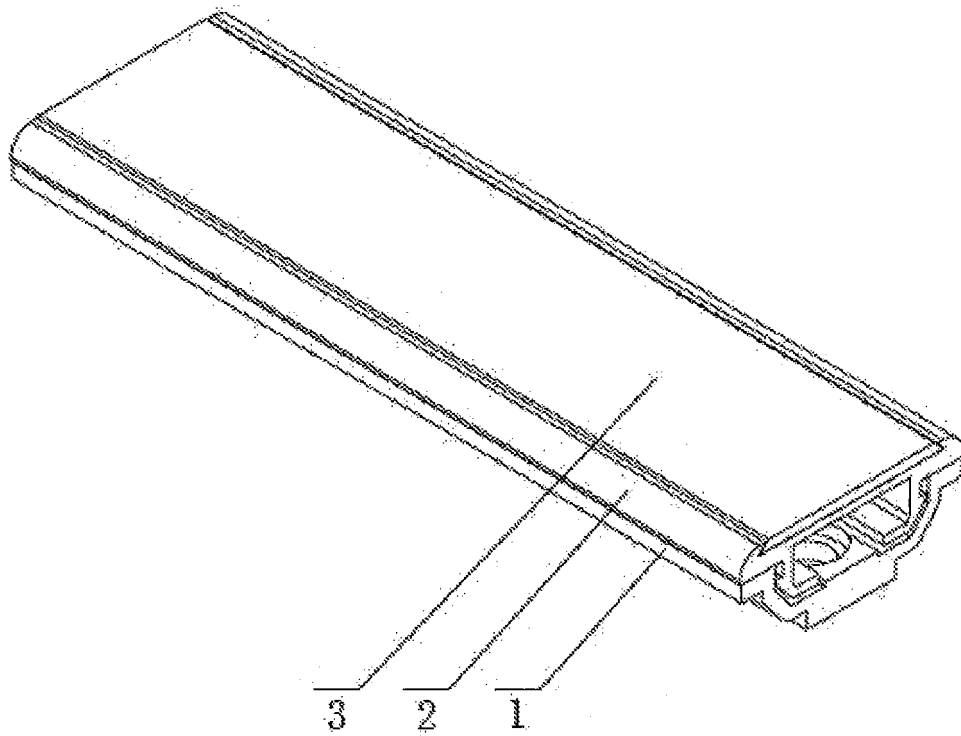


FIG.1

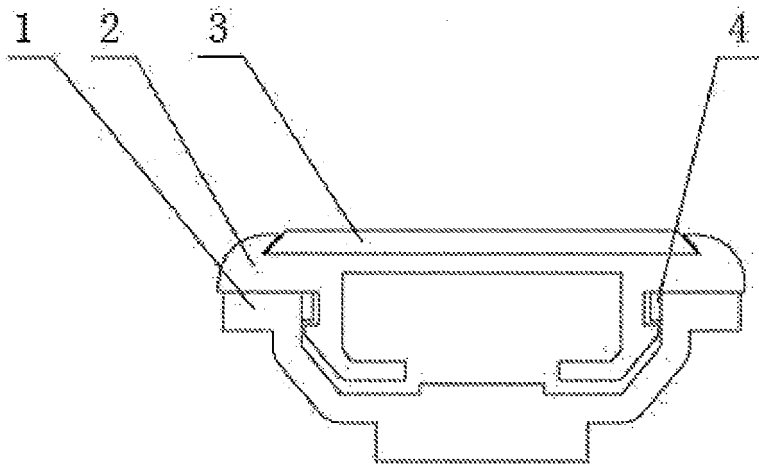


FIG.2

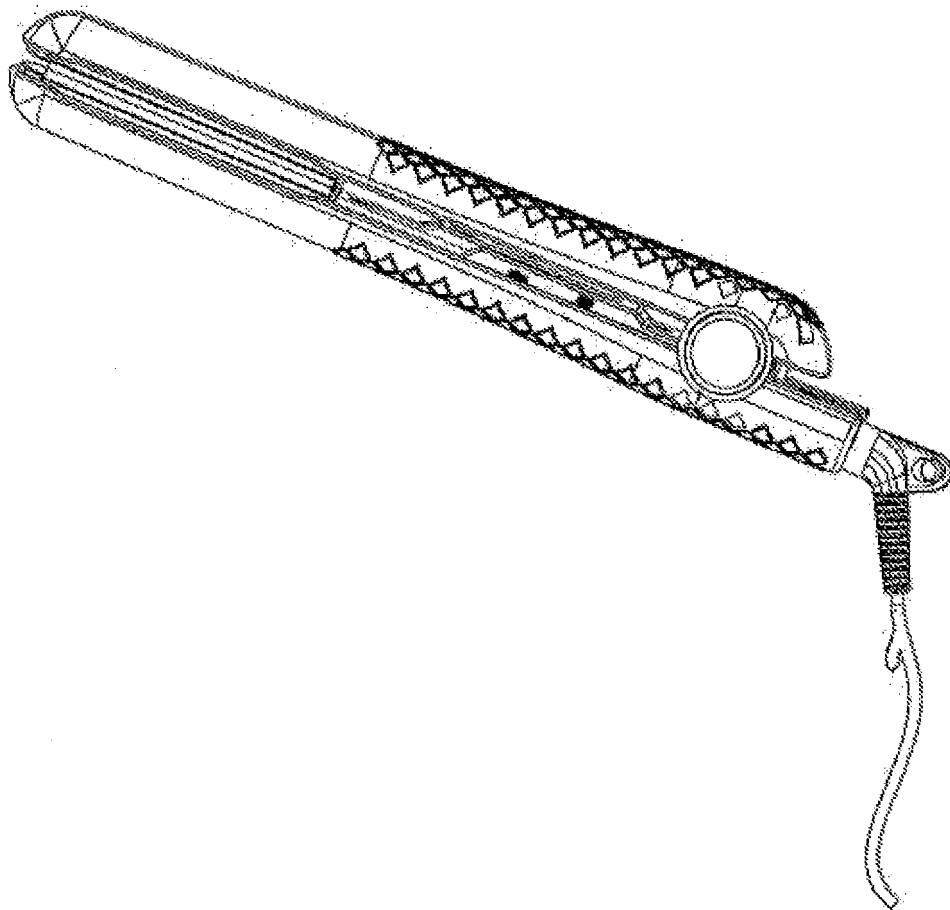


FIG. 3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2014/084258

A. CLASSIFICATION OF SUBJECT MATTER

A45D 4/00 (2006.01) i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A45D 4/-; A45D 2/-

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CNPAT, CNKI, WPI, EPODOC: heat conduction, heat transmission, heat preservation, socket, insert, hairdressing, perm, straight hair, heat, temperature, frame, bracket, aluminum, hair, iron, fiber, transfer, deliver

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	CN 103330371 A (ZHEJIANG PAITER ELECTRIC CO., LTD.), 02 October 2013 (02.10.2013), claims 1-6	1-6
PX	CN 103431616 A (ZHEJIANG PAITER ELECTRIC CO., LTD.), 11 December 2013 (11.12.2013), claims 1-6	1-6
PX	CN 203378685 U (ZHEJIANG PAITER ELECTRIC CO., LTD.), 08 January 2014 (08.01.2014), claims 1-6	1-6
X	CN 201337071 Y (KUANG, Liu), 04 November 2009 (04.11.2009), description, page 3, lines 1-15, and figures 2-4	1-6
A	JP 2000101003 A (MITSUBISHI HEAVY INDUSTRIES, LTD), 07 April 2000 (07.04.2000), the whole document	1-6
A	CN 102811642 A (BRAUN GMBH), 05 December 2012 (05.12.2012), the whole document	1-6

☐ Further documents are listed in the continuation of Box C.
 ☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

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Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 103330371 A	02 October 2013	None	
CN 103431616 A	11 December 2013	None	
CN 203378685 U	08 January 2014	None	
CN 201337071 Y	04 November 2009	None	
JP 2000101003 A	07 April 2000	None	
CN 102811642 A	05 December 2012	WO 2011111001 A1	15 September 2011
		RU 2012138120 A	20 April 2014
		EP 2364609 A1	14 September 2011
		JP 2013521921 A	13 June 2013
		US 2011162672 A1	07 July 2011

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