



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**10.03.2021 Bulletin 2021/10**

(51) Int Cl.:  
**A45D 1/04 (2006.01)**

(43) Date of publication A2:  
**03.03.2021 Bulletin 2021/09**

(21) Application number: **20192596.3**

(22) Date of filing: **25.08.2020**

(84) Designated Contracting States:  
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**  
Designated Extension States:  
**BA ME**  
Designated Validation States:  
**KH MA MD TN**

(30) Priority: **29.08.2019 JP 2019156739**

(71) Applicant: **Panasonic Intellectual Property Management Co., Ltd.**  
**Osaka-shi, Osaka 540-6207 (JP)**

(72) Inventors:  
• **MURAKAMI, Satoshi**  
**Osaka-shi,, Osaka 540-6207 (JP)**  
• **KITA, Yui**  
**Osaka-shi,, Osaka 540-6207 (JP)**

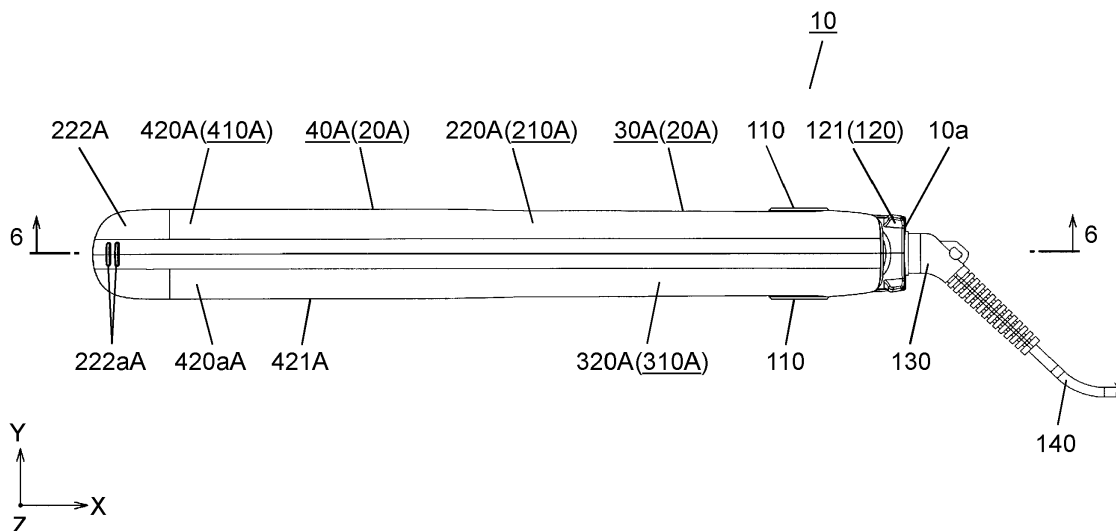
(74) Representative: **Grünecker Patent- und Rechtsanwälte PartG mbB**  
**Leopoldstraße 4**  
**80802 München (DE)**

(54) **HAIR IRON**

(57) A hair iron includes a first hair holding part including a first hair holding surface and a second hair holding part including a second hair holding surface configured to face the first hair holding surface. The hair iron holds hair with the first hair holding surface and the second hair holding surface facing each other. The hair iron further includes a discharge device that generates ions

and an ion ejection port that ejects the ions thus generated. The discharge device is disposed at a portion of the first hair holding part that does not overlap the first hair holding surface. This can provide the hair iron that can be downsized in the thickness direction while increasing hair care effects.

**FIG. 1**





## EUROPEAN SEARCH REPORT

Application Number  
EP 20 19 2596

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 2 110 040 A2 (BLUECERAMIC CO LTD [KR]) 21 October 2009 (2009-10-21)	1-3	INV. A45D1/04
Y	* abstract * * paragraph [0031] * * figures *	4	
X	----- CN 203 388 434 U (CHEN BINGCHANG) 15 January 2014 (2014-01-15)	1,2	
Y	* the whole document *	4	
X	----- CA 2 562 330 A1 (BAYARI HOLDINGS S A [AR]) 3 April 2008 (2008-04-03)	1,2	
	* abstract * * figures *		
X	----- US 2005/224091 A1 (CAFARO MICHAEL [US] ET AL) 13 October 2005 (2005-10-13)	1,2	
	* the whole document *		
			TECHNICAL FIELDS SEARCHED (IPC)
			A45D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 29 January 2021	Examiner Zetzsche, Brigitta
<p>CATEGORY OF CITED DOCUMENTS</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>			

 1  
EPO FORM 1503 03.82 (P04C01)

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

EP 20 19 2596

5 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  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

29-01-2021

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 2110040 A2	21-10-2009	CN 101558935 A	21-10-2009
		EP 2110040 A2	21-10-2009
		JP 2009254796 A	05-11-2009
		KR 100858028 B1	10-09-2008
		US 2009260650 A1	22-10-2009
-----			
CN 203388434 U	15-01-2014	NONE	
-----			
CA 2562330 A1	03-04-2008	NONE	
-----			
US 2005224091 A1	13-10-2005	AU 2005235147 A1	03-11-2005
		EP 1732412 A2	20-12-2006
		JP 2007532177 A	15-11-2007
		US 2005224091 A1	13-10-2005
		WO 2005102100 A2	03-11-2005
-----			