(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 21 December 2007 (21.12.2007)

(10) International Publication Number WO 2007/146475 A3

(51) International Patent Classification: A45D 6/02 (2006.01) A45D 6/04 (2006.01)

(21) International Application Number:

PCT/US2007/065432

(22) International Filing Date: 29 March 2007 (29.03.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/422,558 6 June 2006 (06.06.2006) US

(71) Applicant and

(72) Inventor: WHITMAN, Michael, J. [US/US]; 580 East Mclean Way, Sparks, NV 89431 (US).

(74) Agents: STARKWEATHER, Michael, W. et al.; 9035 South 1300 East, Suite 200, Sandy, UT 84094 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH,

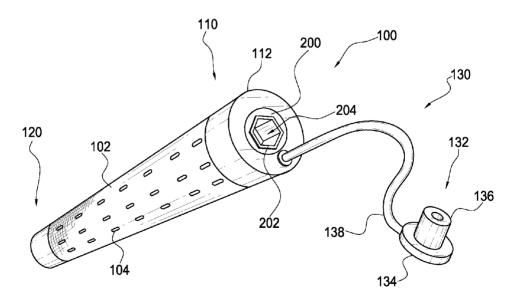
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, MT, 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:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 17 April 2008

(54) Title: HAIR CURLING SYSTEM



(57) Abstract: A hair curling system for curling or waving hair. The system includes: a frustoconical rolling member with first and second ends; a latching member coupled thereto; a motivated rotating device removably coupleable to the frustoconical rolling member and having: a motor and a coupling member removably mechanically coupleable to the frustoconical rolling member. The coupling member is removably mechanically coupled to the motivating device and has a hexagonal cross-section. The motivated rotating device includes: a tension sensor and a clutch that disengages when the tension sensor measures a tension outside a predetermined range. There is an annular member encircling the first end and rotatably coupled thereto. There is a frustoconical textile member coupled about an exterior of the frustoconical rolling member to provide a layer of absorbent material thereon.



INTERNATIONAL SEARCH REPORT

International application No. PCT/US 07/65432

B FIFLDS SEARCHED		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) IPC(8): A45D 6/02,6/04 (2007.10) USPC: 132/238		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC: 132/223,226,231,232,237,239		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Google Scholar, Google Patents, pubWEST Search Terms Used: motor, driver, driven, hair, curler, frusto-conical, frustoconical, frustrum, frustum, cover, tension, sensor, limit, adjustable,		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to cla	im No.	
Y US 4,884,583 A (Long, Jr.) 05 December 1989 (05.12.1989). Fig. 1-4; col 2, in 25-41; col 3, in 57-63; col 4, in 1-6; col 4, in 53-58		
Y US 3,739,788 A (Keldmann) 19 June 1973 (19.06.1973). Col 2, ln 25-31		
Y US 4,789,107 A (Hauser et al.) 06 December 1988 (06.12.1988). 3-5 and 13-15 Col 3, In 1-10		
Y US 5,884,635 A (O'Brien et al.) 23 March 1999 (23.03.1999). 8 and 19 Fig. 6		
Y US 2,525,750 A (Spencer) 10 October 1950 (10.10.1950). 9 and 20 Col 1, In 11-15		
Further documents are listed in the continuation of Box C.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "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		
"E" earlier application or patent but published on or after the international "X" document of particular relevance; the claimed invention filing date "E" earlier application or patent but published on or after the international "X" document of particular relevance; the claimed invention considered novel or cannot be considered to involve an	ation or patent but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive	
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		
"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 "End document member of the same patent family		
Date of the actual completion of the international search 30 December 2007 (30.12.2007) Date of mailing of the international search report 21 FEB 2008		
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201 Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774		