

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 July 2005 (21.07.2005)

PCT

(10) International Publication Number
WO 2005/065251 A3

(51) International Patent Classification⁷: **A61F 7/00**

(21) International Application Number:
PCT/US2004/043205

(22) International Filing Date:
21 December 2004 (21.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/746,418 24 December 2003 (24.12.2003) US

(71) Applicant: **JAY, Harvey, H.** [US/US]; 45 East 62nd
Street, New York, NY 10021 (US).

(74) Agent: **SUDOL, Neil, R.**; Coleman Sudol Sapone, P.C.,
714 Colorado Avenue, Bridgeport, CT 06605-1601 (US).

(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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, 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, 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:

- 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:
15 September 2005

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: AIR TREATMENT APPARATUS

(57) Abstract: A hand held device generates a predetermined number of pulses of light having a predetermined electromagnetic spectrum, a predetermined duration, a predetermined interpulse interval, and a predetermined total energy. The pulse sequence is delivered to a skin surface to stimulate hair growth by energizing the hair follicles. The light may be absorbed by endogenous chromophores of the dermal tissues and/or by exogenous chromophores delivered to the dermal tissues. The device is utilizable to periodically apply the pulses of light to the selected skin surface at total energy levels per session that are much lower than the energies used in hair removal treatments.

WO 2005/065251 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/43205

<p>A. CLASSIFICATION OF SUBJECT MATTER</p> <p>IPC(7) : A 61 F 7/00 US CL : 607/090</p> <p>According to International Patent Classification (IPC) or to both national classification and IPC</p>																				
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) U.S. : 607/090, 088; 128/898</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)</p>																				
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category *</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>US 2003/0004499 A1 (MCDANIEL) 02 June 2003 (02.01.2003), Para 0097-0098, 0152, 0015, 0014.</td> <td>1-5, 7-10</td> </tr> <tr> <td>X</td> <td>US 6,251,100 B1 (FLOCK et al) 26 June 2001 (26.06.2001), Col. 28, lines 34, Fig 2, Col. 20, lines 40-50.</td> <td>13-16</td> </tr> <tr> <td>---</td> <td></td> <td>-----</td> </tr> <tr> <td>Y</td> <td></td> <td>6</td> </tr> <tr> <td>Y</td> <td>US 6,050,990 A (TANKOVICH et al) 18 April 2000 (18.04.2000), Col. 18 lines 35-40.</td> <td>11</td> </tr> </tbody> </table>			Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 2003/0004499 A1 (MCDANIEL) 02 June 2003 (02.01.2003), Para 0097-0098, 0152, 0015, 0014.	1-5, 7-10	X	US 6,251,100 B1 (FLOCK et al) 26 June 2001 (26.06.2001), Col. 28, lines 34, Fig 2, Col. 20, lines 40-50.	13-16	---		-----	Y		6	Y	US 6,050,990 A (TANKOVICH et al) 18 April 2000 (18.04.2000), Col. 18 lines 35-40.	11
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																		
X	US 2003/0004499 A1 (MCDANIEL) 02 June 2003 (02.01.2003), Para 0097-0098, 0152, 0015, 0014.	1-5, 7-10																		
X	US 6,251,100 B1 (FLOCK et al) 26 June 2001 (26.06.2001), Col. 28, lines 34, Fig 2, Col. 20, lines 40-50.	13-16																		
---		-----																		
Y		6																		
Y	US 6,050,990 A (TANKOVICH et al) 18 April 2000 (18.04.2000), Col. 18 lines 35-40.	11																		
<p><input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.</p>																				
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"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</td> </tr> <tr> <td>"E" earlier application or patent published on or after the international filing date</td> <td>"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</td> </tr> <tr> <td>"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)</td> <td>"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</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			"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 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	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed									
"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 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	"&" document member of the same patent family																			
"P" document published prior to the international filing date but later than the priority date claimed																				
<p>Date of the actual completion of the international search</p> <p>22 June 2005 (22.06.2005)</p>		<p>Date of mailing of the international search report</p> <p>22 JUL 2005</p>																		
<p>Name and mailing address of the ISA/US</p> <p>Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230</p>		<p>Authorized officer</p> <p>Henry M. Johnson, III</p> <p>Telephone No. None</p>																		