(19) World Intellectual Property Organization

International Bureau



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(43) International Publication Date 22 June 2006 (22.06.2006)

PCT

(10) International Publication Number WO 2006/065159 A3

(51) International Patent Classification: *A46B 15/00* (2006.01) *A46B 5/00* (2006.01)

(21) International Application Number:

PCT/PL2005/000080

(22) International Filing Date:

13 December 2005 (13.12.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

P-371703 13 December 2004 (13.12.2004) PL

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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, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, 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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

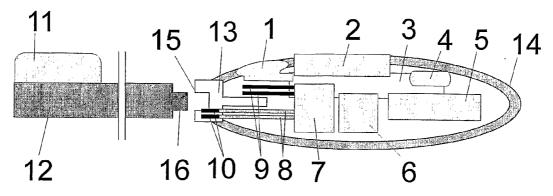
Published:

- 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:

21 September 2006

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: THE ELECTRONIC TOOTHBRUSH



(57) Abstract: The electronic toothbrush according to invention in the individual toothbrush model has a handle (14) with the electronic match, which it ended by the wrist (13) with the joint's nest (15) and the Interchangeable end (12) with the joint profile (16) and the fibers cleaning (11). In the external surface of the handle (14) it's visible the switch (1) and the display (2), on which are displayed the toothbrush functions. In the family model - the memory block (6) it's in the end (12) of toothbrush. The handle (14) has also the flap, which causes the exchange source of supplying (5) and / or the socket on plug-in, which enabling loading the toothbrush. The manner of measurement of real time the tooth washing, determination and signaling the end of usefulness of fibers cleaning according to inventions it relies on cooperation between the steering match (7) with clock function, the memory block (6) and the wrist (13) of the toothbrush for measurement of real time the tooth washing and determination the expected time of usefulness of fibers cleaning (11).

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INTERNATIONAL SEARCH REPORT

International application No PCT/PL2005/000080

a. classification of subject matter INV. A46B15/00 ADD. A46B5/00 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) A46B A61C 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 practical, search terms used) EPO-Internal, WPI Data, PAJ C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Category* Citation of document, with indication, where appropriate, of the relevant passages US 2003/115694 A1 (PACE JOHN) 1,5 Υ 26 June 2003 (2003-06-26) paragraph [0009] - paragraph [0012] paragraph [0015]; figure 1 US 4 450 599 A (SCHELLER ET AL) 1,5 γ 29 May 1984 (1984-05-29) column 1, line 57 - column 2, line 24 2 column 2, line 38 - line 61; figure DE 39 35 554 A1 (AUGUSTIN, HANS-ULRICH) 1 2 May 1991 (1991-05-02) column 1, line 10 - column 2, line 14 1,2,4,5 US 6 735 802 B1 (LUNDELL WILLIAM G ET AL) Α 18 May 2004 (2004-05-18) column 1, line 35 - line 47 -/--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 "A" document defining the general state of the art which is not considered to be of particular relevance invention earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date 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. document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 11/07/2006 30 June 2006 Name and mailing address of the ISA/ Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016 Dindorf, J

INTERNATIONAL SEARCH REPORT

International application No
PCT/PL2005/000080

| C(Continua | tion). DOCUMENTS CONSIDERED TO BE RELEVANT | PC1/PL2005/000080 |
|------------|---|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | FR 2 724 298 A (GRAZIANO ANGELO) 15 March 1996 (1996-03-15) abstract; figure 1 | 1 |
| A | EP 0 634 151 A (KONINKLIJKE PHILIPS ELECTRONICS N.V; PHILIPS ELECTRONICS N.V) 18 January 1995 (1995-01-18) column 1, line 21 - column 2, line 18 column 3, line 47 - column 4, line 43 column 4, line 53 - column 5, line 4 column 6, line 40 - column 7, line 7 column 8, line 56 - column 9, line 40; figures 2,3 | 1,2 |
| A | DE 196 28 574 A1 (STEINLE, MICHAEL) 27 March 1997 (1997-03-27) claim | 2 |
| A | US 5 544 382 A (GIULIANI ET AL) 13 August 1996 (1996-08-13) column 1, line 32 - line 39 | 3 |
| A | DE 101 12 601 A1 (BRAUN GMBH) 19 September 2002 (2002-09-19) paragraph [0036] - paragraph [0040] | 1,4,5 |
| | | |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/PL2005/000080

| | | | | i i | | |
|--|----|---------------------|--|---|--|--|
| Patent document cited in search report | | Publication date | | Patent family member(s) | | Publication date |
| US 2003115694 | A1 | 26-06-2003 | AU CN EP WO JP | 2002366881 1628315 1459238 03054771 2005512708 | A A1 A1 | 09-07-2003 15-06-2005 22-09-2004 03-07-2003 12-05-2005 |
| US 4450599 | A | 29-05-1984 | BE CA DE GB | 893018 1179106 3117160 2097663 | A1 A1 | 29-10-1982 11-12-1984 18-11-1982 10-11-1982 |
| DE 3935554 | A1 | 02-05-1991 | NONE | | | |
| US 6735802 | B1 | 18-05-2004 | CN DE DE WO EP JP | 1386061 60111844 60111844 0185055 1280476 2003532487 | D1 T2 A2 A2 | 18-12-2002 11-08-2005 27-04-2006 15-11-2001 05-02-2003 05-11-2003 |
| FR 2724298 | Α | 15-03-1996 | NONE | | | |
| EP 0634151 | Α | 18-01-1995 | NONE | | | |
| DE 19628574 | A1 | 27-03-1997 | NONE | | | |
| US 5544382 | A | 13-08-1996 | AT AU CA DE DE EP ES JP WO | 281093 694557 3498695 2199970 69533721 69533721 0781105 2231790 10508765 9608181 | B2 A A1 D1 T2 A2 T3 T | 15-11-2004 23-07-1998 29-03-1996 21-03-1996 09-12-2004 10-11-2005 02-07-1997 16-05-2005 02-09-1998 21-03-1996 |
| DE 10112601 | A1 | 19-09-2002 | NONE | | | — |