

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 August 2008 (14.08.2008)

PCT

(10) International Publication Number
WO 2008/097518 A3

(51) International Patent Classification:
A61N 1/04 (2006.01)

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(21) International Application Number:
PCT/US2008/001471

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, 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, ME, 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, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(22) International Filing Date: 4 February 2008 (04.02.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/887,879 2 February 2007 (02.02.2007) US

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(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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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Published:
— with international search report

(88) Date of publication of the international search report:
6 November 2008

(54) Title: SKIN SCREW ELECTRODE

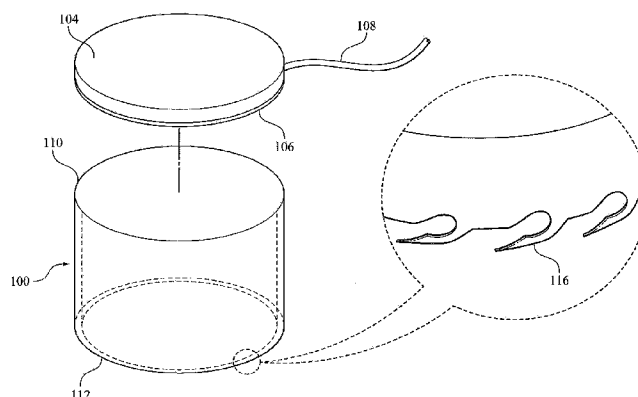


FIG. 1

(57) Abstract: Electrodes providing excellent recording and physical stability. The present invention encompasses electrodes that include a plurality of small teeth that possess a novel design shape and orientation. The shallow and relatively long teeth preferably run parallel to the rim of the electrode that presses against the patient's skin. When the electrode is twisted onto skin, the tiny teeth penetrate the stratum corneum and move nearly horizontally under the stratum corneum, thus anchoring the electrode securely to the skin. The electrodes of the present invention cause minimal discomfort to the patient since the small teeth do not extend to the pain fibers which are located in deeper layers of the skin. The electrodes may house a wide diversity of electronic components to enable numerous experimental and medical implementations. The electrodes the present invention may also be used wirelessly either singularly or as an array so that no electrode leads extend away from the patients body. The electrodes of the present invention may be fabricated using precision photo-chemical etching techniques that are well known in the art. The present invention also includes an electrode installation device that preferably employs the electrodes of the present invention.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 08/01471

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61N 1/04

USPC - 607/142

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)
607/142Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC 607/2, 115, 128, 600/372, 600/386, 600/393Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWEST(USPT,PGPB,EPAB,JPAB); Google: Electrode; @pd<20070202; EEG; fixation of electrode; attachment of electrode; teeth; stratum corneum; pain; conductive material; tack weld; position sensor; wire lead; RF; location; dispenser; wireless; spring; gear; button

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2007/0015984 A1 (Yeo, et. al.) 18 Jan 2007 (18.01.2007); Fig. 2 - 7; para [0009]-[0012], [0025],[0027],[0030]-[0034].	1,2,3,6,8,10,11,15,16 ----- 4,5,7,9,12-14,17,18,26-28
X -- Y	US 2005/0145491 A1 (Amano, et. al.) 7 Jul 2005 (07.07.2005); para [0022],[0029],[0062],[0111], [0142],[0154]-[0155].	23,24 -- 25
Y	US 6782283 B2 (Schmidt, et. al.) 24 Aug 2004 (24.08.2004); Fig 4; claim 6; col 6, ln 6 - 26.	5,7,19-22
Y	US 6201982 B1 (Menkes, et.al.) 13 Mar 2001 (13.03.2001); Fig 6-7	18
Y	US 7397364 B2 (Govari) 12 May 2005 (12.05.2005); para [0025].	25
Y	US 20060074336 A1 (Grieve, et. al.) 6 Apr 2006 (06.04.2006); Fig 1, para [0076].	28
Y	US 20060293723 A1 (Whitehurst, et. al.) 28 Dec 2006 (28.12.2006); Fig 3; para [0100]-[0101], para [0087]-[0088].	26-28
Y	US 6690959 B2 (Thompson) 10 Feb 2004 (10.02.2004); col 6, ln 1 - 6; col 4, ln 1 - 10.	4,9
Y	US 6438413 B1 (Taheri) 20 Aug 2002 (20.08.2002); Fig 4 and 5; col 9, ln 37; col 11, ln 45-65; col 13, ln 8-15; col 4, ln 34 - 38; col 9, ln 45 ? 51; Fig. 11; col 8, ln 21 - 40.	12-14,17,28
Y	US 6491647 B1 (Bridger, et. al.) 10 Dec 2002 (10.12.2002); Fig 1-18; col 15-16.	19-22

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Date of the actual completion of the international search

16 Jul 2008 (16.07.2008)

Date of mailing of the international search report

22 JUL 2008

Name and mailing address of the ISA/US

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