

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
23 October 2003 (23.10.2003)

PCT

(10) International Publication Number  
WO 2003/087851 A3

- (51) International Patent Classification:  
A61B 5/04 (2006.01)
- (21) International Application Number:  
PCT/US2003/007370
- (22) International Filing Date: 7 March 2003 (07.03.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
10/121,541 12 April 2002 (12.04.2002) US

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, 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, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

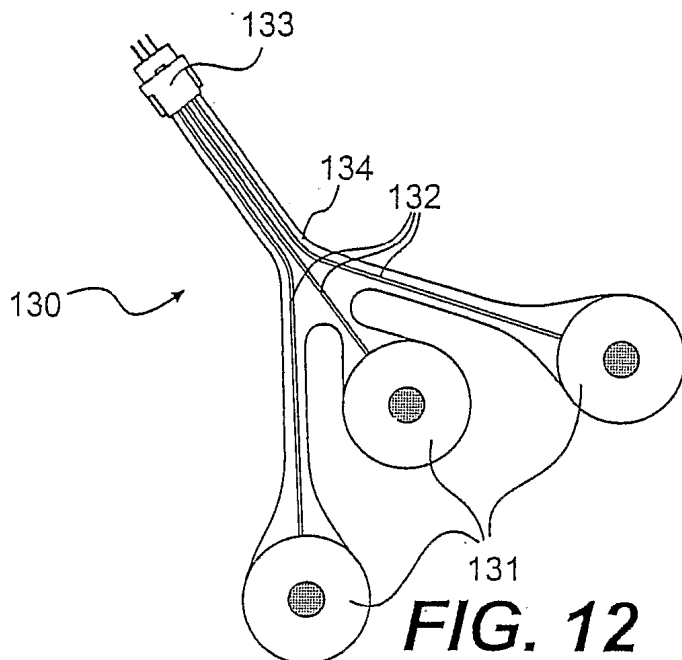
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Published:  
— with international search report

(88) Date of publication of the international search report:  
18 June 2009

(54) Title: SENSOR FOR BIOPOTENTIAL MEASUREMENTS



(57) Abstract: A sensor for biopotential measurements is designed to detect low voltage electrical signals on the subject's skin surface. A plurality of soft elastomeric bristles (13) are arranged about the surface of the skin. Various bristles contain a wick (14, made of polyolefin, polyester or nylon, extending along its center axis with one end protruding from the bristle and another end in contact with a fluid reservoir (12). The wick is saturated with an electrically conductive liquid, such as a salt solution. The solution may contain a surfactant. The rheological properties of the electrically conductive liquid are optimized for predictable flow through the wick onto the skin surface. An electrode (11) is positioned in the vicinity of the wick and the reservoir. Alternatively, a sensor comprises a plurality of hollow, soft elastomeric bristles filled with a hydrogel. An electrically conductive cap provides the electrical contact between the hydrogel and the electrical circuit.

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**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US03/07370

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : A61B 5/04  
 US CL : 600/383, 397; 607/153

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)  
 U.S. : 600/383, 397; 607/153 391-393

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 practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ---	US, 3,862,633 A (ALLISON et al) 28 January 1975, see column 2, lines 19-31	1,4,5,11,13-15
Y		2,3,6,9,10,12,16-20
X ---	US 4,051,842 A (HAZAEI) 04 October 1977, see figure 6	1-3, 10-13, 15
Y		2, 3, 10, 12, 18-20
X	US 4, 166,457 A (JACOBSEN et al) 04 September 1979, see column 5, lines 44-68	1,2,11,12
Y	US 4,526,176 A (BREMER et al) 02 July 1985, see column 9, lines 39-41	6,16,17
Y	GB 2,274,396 A (RUSSELL et al) 27 July 1994, see page 6	9

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 invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

04 November 2003 (04.11.2003)

Date of mailing of the international search report

25 NOV 2003

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