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(54) Title: SHIELDED BIOMEDICAL ELECTRODE PATCH

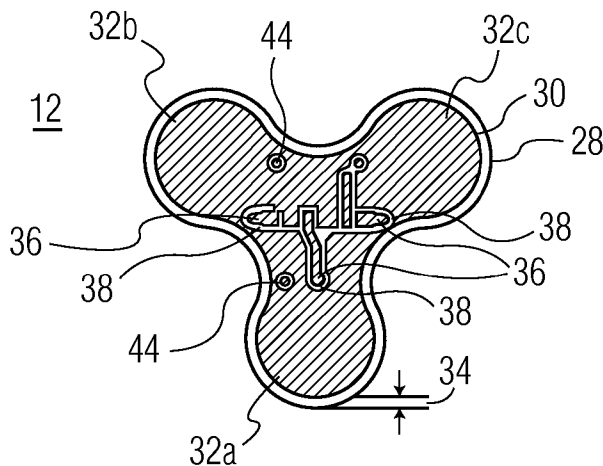


FIG. 2

(57) Abstract: A biomedical electrode patch having improved resistance to capacitive coupling to extraneous electric fields. The patch includes a conductive shield and a contact portion formed on an upper surface thereof. The contact portion extends through the film layer and contacts an electrode formed of a material suitable for conducting electrical signals from a patient. Conductive traces formed on the lower surface of the tab extend to contact pads. A nonconductive layer is printed over the traces and can have a shield formed thereon.

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | WO 99/56619 A (R Z COMPARATIVE DIAGNOSTICS LT [IL]; FRIEDMAN MARK M [IL]; ROGEL DAN []) 11 November 1999 (1999-11-11) abstract; figures 1a,1b,2,3 page 8, lines 9-30 page 10, lines 1-9 | 1-4, 14 |
| Y | ----- | 5-13, 15 |
| Y | WO 03/047427 A (GMP COMPANIES INC [US] GMP WIRELESS MEDICINE INC [US]) 12 June 2003 (2003-06-12) page 4, lines 3-17; figure 2 ----- -/-- | 5, 12, 13 |

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| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|--|---|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| Y | WO 2007/063436 A (KONINKL PHILIPS ELECTRONICS NV [NL]; CROSS BRETT [US]; HUGH STEVEN C []) 7 June 2007 (2007-06-07) abstract; figures 1,2,5 page 5, lines 9-11 page 7, lines 15-24 ----- | 6-11,15 |
| A | WO 2007/060609 A (KONINKL PHILIPS ELECTRONICS NV [NL]; PASVEER WILLEM F [NL]; OUWERKERK) 31 May 2007 (2007-05-31) the whole document ----- | 1-7, 12-15 |
| A | GB 2 185 403 A (CHERNE IND CHERNE IND [US]) 22 July 1987 (1987-07-22) page 4, lines 21-121; figure 7 ----- | 1-5,8-15 |
| A | EP 1 752 093 A (FUKUDA DENSHI KK [JP]) 14 February 2007 (2007-02-14) abstract; figure 4 ----- | 1-5,8-15 |

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2008/052645

| Patent document cited in search report | | Publication date | Patent family member(s) | | Publication date |
|---|---|---------------------|----------------------------|----|---------------------|
| WO 9956619 | A | 11-11-1999 | AU 3771899 | A | 23-11-1999 |
| | | | US 6076003 | A | 13-06-2000 |
| WO 03047427 | A | 12-06-2003 | AT 412368 | T | 15-11-2008 |
| | | | AU 2002359515 | A1 | 17-06-2003 |
| | | | CA 2468530 | A1 | 12-06-2003 |
| | | | EP 1467651 | A2 | 20-10-2004 |
| | | | JP 2006500964 | T | 12-01-2006 |
| | | | MX PA04005165 | A | 17-02-2005 |
| | | | US 2005177052 | A1 | 11-08-2005 |
| | | | US 2003105403 | A1 | 05-06-2003 |
| WO 2007063436 | A | 07-06-2007 | EP 1956973 | A1 | 20-08-2008 |
| | | | US 2008288026 | A1 | 20-11-2008 |
| WO 2007060609 | A | 31-05-2007 | EP 1956974 | A2 | 20-08-2008 |
| | | | US 2008287767 | A1 | 20-11-2008 |
| GB 2185403 | A | 22-07-1987 | CA 1291792 | C | 05-11-1991 |
| | | | DE 3637956 | A1 | 11-06-1987 |
| EP 1752093 | A | 14-02-2007 | AU 2006203339 | A1 | 01-03-2007 |
| | | | CN 1911167 | A | 14-02-2007 |
| | | | JP 2007044208 | A | 22-02-2007 |
| | | | US 2007088227 | A1 | 19-04-2007 |