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(71) Applicant (for all designated States except US): **3M INNOVATIVE PROPERTIES COMPANY** [US/US]; 3M Center, Post Office Box 33427, Saint Paul, MN 55133-3427 (US).

(72) Inventors: **RODRIGUEZ, Francisco, J.**; 3M Center, Post Office Box 33427, Saint Paul, MN 55133-3427 (US). **GOSSELIN, Jerome, T.**; 3M Center, Post Office Box 33427, Saint Paul, MN 55133-3427 (US). **MOONEY, Justine, A.**; 3M Center, Post Office Box 33427, Saint Paul, MN 55133-3427 (US). **BEAMER, Brent**; 3M Center, Post Office Box 33427, Saint Paul, MN 55133-3427 (US).

(74) Agents: **GOVER, Melanie, G.** et al.; 3M Center, Office of Intellectual Property Counsel, Post Office Box 33427, Saint Paul, MN 55133-3427 (US).

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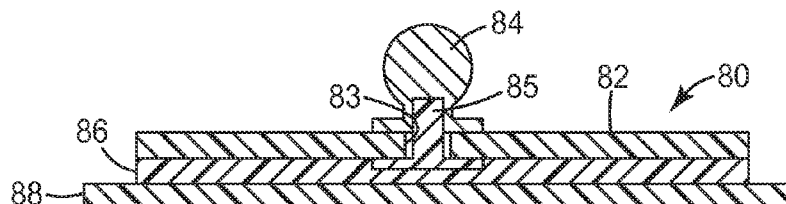


FIG. 6A

(57) Abstract: Provided is an electrode having an insulating backing, a conductive path extending from a first major surface to a second major surface of the insulating backing, and an adhesive on at least one surface of the backing, wherein the electrode is attached to a grounding wire that is in electrical contact with the conductive path of the electrode.



A. CLASSIFICATION OF SUBJECT MATTER***H01R 4/66(2006.01)i, H01R 4/70(2006.01)i, H01R 11/11(2006.01)i***

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)

IPC: H01R, A61B

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

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & keywords: ELECTRODE and ADHERSIVE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5670557 A (TIMOTHY M. DIETZ et al.) 23 September 1997 (1997-09-23) See column 23, line 65 - column 33, line 62 and figures 5 - 12	1 - 20
Y	US 5133356 A (KATHLEEN M. BRYAN et al.) 28 July 1992 (1992-07-28) See column 7, line 46 - column 16, line 8 and figures 1 - 9	1 - 20
A	US 5012810 A (JEROME E. STRAND et al.) 7 May 1991 (1991-05-07) See column 9, line 10 - column 15, line 8 and figures 1 - 8	1 - 20
A	US 5506059 A (WILLIAM B. ROBBINS et al.) 9 April 1996 (1996-04-09) See column 7, line 24 - column 14, line 8 and figures 1 - 7	1 - 20



Further documents are listed in the continuation of Box C.



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Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

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Authorized officer

Hong, Young Uk

Telephone No. 82-42-481-8465



INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5670557 A	23.09.1997	CA 2179907 C	31.07.2007
		CN 1191546 A	26.08.1998
		CN 1098279 C	08.01.2003
		CN 1139946 A	08.01.1997
		CN 1191546 C0	26.08.1998
		EP 0741765 A1	13.11.1996
		EP 0741765 B1	28.04.1999
		JP 09-509196 A	16.09.1997
		JP 3940781 B2	04.07.2007
		JP 11-510530 A	14.09.1999
		US 5952398 A	14.09.1999
		US 5674561 A	07.10.1997
		US 5779632 A	14.07.1998
		US 5853750 A	29.12.1998
		WO 1995-020634 A1	03.08.1995
		WO 1997-005171 A1	13.02.1997
US 5133356 A	28.07.1992	EP 0509704 A3	30.03.1994
		EP 0509704 A2	21.10.1992
		EP 0509704 B1	28.05.1997
		JP 04-131209 U	02.12.1992
		JP 2543804 Y2	25.04.1997
		US 5226225 A	13.07.1993
US 5012810 A	07.05.1991	EP 0509710 A3	05.01.1994
		EP 0360496 A1	28.03.1990
		EP 0360496 B1	14.12.1994
		EP 0509710 A2	21.10.1992
		JP 2045710 U	29.03.1990
		JP 07-007924 Y2	01.03.1995
		JP 05-000104 U	08.01.1993
		JP 2570183 Y2	06.02.1998
		US 5215087 A	01.06.1993
		US 5078138 A	07.01.1992
		US 5133355 A	28.07.1992
US 5506059 A	09.04.1996	CN 1132530 A	02.10.1996
		CN 1132530 A0	01.10.1996
		EP 0698129 A1	28.02.1996
		EP 0698129 B1	19.08.1998
		JP 08-510295 A	29.10.1996
		US 5660892 A	26.08.1997
		WO 1994-026950 A1	24.11.1994