| PATENT ASSIGNMENT RECORDA 05-03-1999 — | |
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| To the Honorable Commissioner of Patents and Trademarks: | |
| Please record the attached original document or copy t | |
| Name of conveying party(ies): Nelson B. O'Bryan Robert R. Kieschke Joel S. Peiffer Additional names of conveying party(ies) attached? Yes No Nature of conveyance: Assignment Execution Date(s): April 14, 1999; April 14, 1999; April 8, 1999 | 2. Name and addition 101026699 3M Innovative Properties Company P.O. Box 33427 St. Paul, Minnesota 55133-3427 |
| Application number or patent number: This document is being filed with a new patent a | pplication on . |
| This document is to be recorded against the follows. Name and address of party to whom correspondence concerning document | owing patent application or patent: 09/241,817 |
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8. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy

is a true copy of the original document.

Doreen S. L. Gwin

April 15, 1999

Printed Name of Attorney Signature

Date

Total number of pages including cover sheet, attachments, and document:

Form Rec-Asn.doc Rev. 6/11/96

Mail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments, Washington, D.C. 20231

PATENT REEL: 9913 FRAME: 0140

ASSIGNMENT

Whereas we, the below named inventors, with residences and citizenships as indicated below; have made an invention in

PASSIVE ELECTRICAL ARTICLE, CIRCUIT ARTICLES THEREOF, AND CIRCUIT ARTICLES COMPRISING A PASSIVE ELECTRICAL ARTICLE

and have executed an application for Letters Patent of the United States of America based thereon; which application is identified in the United States Patent and Trademark Office as U.S. Application Serial No. 09/241,817, filed February 1, 1999;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, we have individually and jointly agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly owned subsidiary of MINNESOTA MINING AND MANUFACTURING COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by us or any of us or made jointly with others (provided any such improvement is made during, or within one year after the termination of, the employment by Minnesota Mining and Manufacturing Company and any of its existing or future subsidiaries of whichever of us, solely or jointly with one or more others, has made the same), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by us or any of us had this assignment and transfer not been made,

We do further agree for ourselves and for our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as we lawfully may, that may be deemed necessary by the said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries;

And we do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to the said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

3M Office of Intellectual Property Counsel, P.O. Box 33427, St. Paul, Minnesota 55133-3427 U.S.A.

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PATENT m-j/061198

REEL: 9913 FRAME: 0141

Docket No. 54587USA8A Robert R. Kieschke Residence: Woodbury, Minnesota U.S.A. Citizenship: British STATE OF MINNESOTA) **COUNTY OF RAMSEY** 1997, before me personally On this MPril day of appeared the above-named Robert R. Kieschke, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that he executed the same as his free act and deed, on the day and year aforesaid. RESNETE A. JOHNSON NOTARY PUBLIC - MINNESOTA RAMSEY COUNTY Notary Public My Comm. Expires Jan. 31, 2000 Residence: Maplewood, Minnesota U.S.A. Citizenship: United States of America STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY 19 97 before me personally On this day of 1977 before me personally appeared the above-named Joel S. Peiffer, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that he executed the same as his free act and deed, on the day and year aforesaid.

SCALENEE A. JOHNSON NOTARY PUBLIC - MINNESOTA RAMSEY COUNTY My Comm. Expires Jan. 31, 2000

Notary Public

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PATENT REEL: 9913 FRAME: 0142

RECORDED: 04/23/1999