

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT | | | | | | | | | | | | | | |
|---|-----------------------|---------------|-----------------|---------------------|-----------------------|--------------------|------------|------------------------|-------------|------------------------|------------|--------------------|------------|----------------------|------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | | | | | | | | | | | | | |
| EFFECTIVE DATE: | 12/02/2005 | | | | | | | | | | | | | | |
| CONVEYING PARTY DATA | | | | | | | | | | | | | | | |
| <table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Mr. Rajesh V. Iyer</td><td>12/02/2005</td></tr><tr><td>Mr. Ryan J. Jensen</td><td>12/02/2005</td></tr><tr><td>Mr. Curtis E. Burgardt</td><td>12/02/2005</td></tr><tr><td>Ms. Susan A. Tettenner</td><td>12/02/2005</td></tr><tr><td>Mr. Daniel J. Koch</td><td>12/02/2005</td></tr><tr><td>Mr. Simon E. Goldman</td><td>12/02/2005</td></tr></tbody></table> | | Name | Execution Date | Mr. Rajesh V. Iyer | 12/02/2005 | Mr. Ryan J. Jensen | 12/02/2005 | Mr. Curtis E. Burgardt | 12/02/2005 | Ms. Susan A. Tettenner | 12/02/2005 | Mr. Daniel J. Koch | 12/02/2005 | Mr. Simon E. Goldman | 12/02/2005 |
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| Mr. Daniel J. Koch | 12/02/2005 | | | | | | | | | | | | | | |
| Mr. Simon E. Goldman | 12/02/2005 | | | | | | | | | | | | | | |
| RECEIVING PARTY DATA | | | | | | | | | | | | | | | |
| <table border="1"><tr><td>Name:</td><td>Medtronic, Inc.</td></tr><tr><td>Street Address:</td><td>710 Medtronic Parkway</td></tr><tr><td>Internal Address:</td><td>LC-340</td></tr><tr><td>City:</td><td>Minneapolis</td></tr><tr><td>State/Country:</td><td>MINNESOTA</td></tr><tr><td>Postal Code:</td><td>55432</td></tr></table> | | Name: | Medtronic, Inc. | Street Address: | 710 Medtronic Parkway | Internal Address: | LC-340 | City: | Minneapolis | State/Country: | MINNESOTA | Postal Code: | 55432 | | |
| Name: | Medtronic, Inc. | | | | | | | | | | | | | | |
| Street Address: | 710 Medtronic Parkway | | | | | | | | | | | | | | |
| Internal Address: | LC-340 | | | | | | | | | | | | | | |
| City: | Minneapolis | | | | | | | | | | | | | | |
| State/Country: | MINNESOTA | | | | | | | | | | | | | | |
| Postal Code: | 55432 | | | | | | | | | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | | | | | | | | | |
| <table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>11235944</td></tr></tbody></table> | | Property Type | Number | Application Number: | 11235944 | | | | | | | | | | |
| Property Type | Number | | | | | | | | | | | | | | |
| Application Number: | 11235944 | | | | | | | | | | | | | | |
| CORRESPONDENCE DATA | | | | | | | | | | | | | | | |
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| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> | | | | | | | | | | | | | | | |
| Phone: 763.514.4673 | | | | | | | | | | | | | | | |
| Email: molly.a.mcclellan@medtronic.com | | | | | | | | | | | | | | | |
| Correspondent Name: Carol F. Barry | | | | | | | | | | | | | | | |
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| Address Line 2: LC-340 | | | | | | | | | | | | | | | |
| Address Line 4: Minneapolis, MINNESOTA 55432 | | | | | | | | | | | | | | | |

PATENT

500134909

REEL: 018057 FRAME: 0067

CH \$40.00 11235944

ATTORNEY DOCKET NUMBER:

P22029.00

NAME OF SUBMITTER:

Carol F. Barry

Total Attachments: 7

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ASSIGNMENT

WHEREAS, WE, Rajesh V. Iyer, Ryan J. Jensen, Curtis E. Burgardt, Susan A. Tettemer, Daniel J. Koch and Simon E. Goldman, are the inventors of DETERMINATION OF EQUIVALENT SERIES RESISTANCE, for which an application for a United States Patent was filed on September 27, 2005, under Serial No. 11/235,944; and

WHEREAS, MEDTRONIC, INC., a corporation organized and existing under the laws of the State of Minnesota and having a principal place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5640, hereinafter referred to as "Corporation," is desirous of acquiring the entire right, title and interest in and to said invention for the United States and for all foreign countries and in and to any and all foreign and domestic Letters Patent which may be granted therefor;

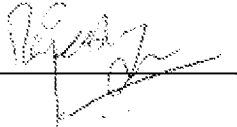
NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, we have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Corporation, its successors and assigns, the entire right, title and interest in and to said invention and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor including our rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Letters Patent that may be granted, the same to be held and enjoyed by Corporation for its own use and behoof and use and behoof of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made, and also hereby authorize Corporation and its employees to fill in the serial number and filing date above after this document has been executed;

AND, for the consideration aforesaid, we materially represent to Corporation, its successors and assigns, that at the time of the execution and delivery of these presents, we are the sole lawful owners of the entire right, title and interest in and to the invention, application and Letters Patent above mentioned, and that the same are unencumbered, and that we have good right and lawful authority to sell and convey the same in the manner herein set forth, and hereby grant Corporation the right to fill in the serial number and filing date in this document upon their receipt;

AND, for the consideration aforesaid, we hereby individually covenant and agree to and with Corporation, its successors and assigns, that whenever its counsel or the counsel of its successors or assigns, learned in the law, shall advise that an amendment or division of, or continuation or any continuation-in-part thereof, or any other proceeding in connection with the filing or prosecution of said domestic or foreign patent applications, including interference proceedings, is lawful and desirable, or that a reissue or extension of said Letters Patent is lawful and desirable, we, or our executors, administrators or assigns will sign all papers and drawings, take all rightful oaths, and do all acts necessary or required to be done for the procurement of valid Letters Patent for said invention, or for the reissue or extension of the same, without charge to Corporation, its successors or assigns, but at Corporation's expense.

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this second day of December, 2005.

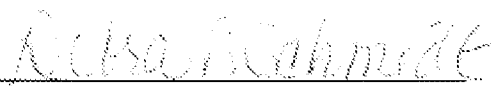

Rajesh V. Iyer

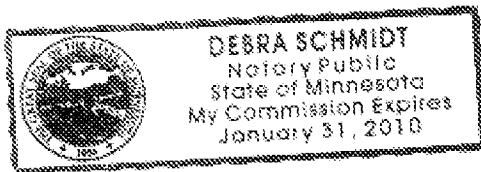
STATE OF MINNESOTA

COUNTY OF Hennepin

On this 2 day of December, 2005, before me personally appeared Rajesh V. Iyer, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.


Notary Public



I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 02 day of Dec, 2005.

Ryan J. Jensen
Ryan J. Jensen

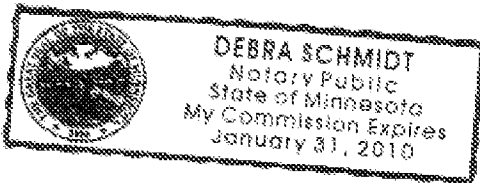
STATE OF MINNESOTA

COUNTY OF Hennepin

On this 2 day of December, 2005, before me personally appeared Ryan J. Jensen, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Debra Schmidt
Notary Public



I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 2nd day of December, 2005.

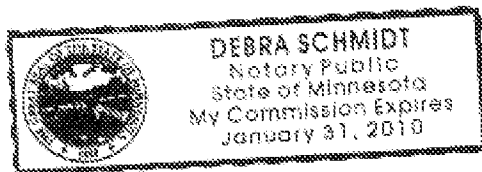
Curtis E. Burgardt
Curtis E. Burgardt

STATE OF MINNESOTA

COUNTY OF Hennepin

On this 2 day of December, 2005, before me personally appeared Curtis E. Burgardt, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.


IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Debra B. Schmidt
Notary Public

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 2 day of December, 2005.


Susan A. Tettemer

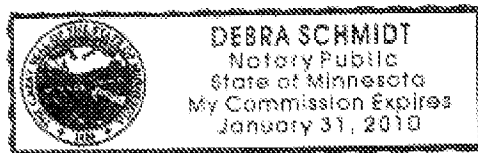
STATE OF MINNESOTA

COUNTY OF Leppin

On this 2 day of December, 2005, before me personally appeared Susan A. Tettemer, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.


Notary Public



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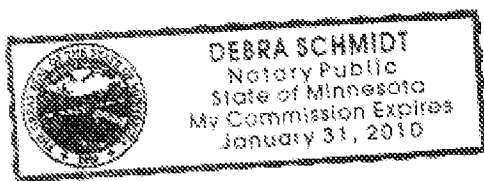
Daniel J. Koch
Daniel J. Koch

STATE OF MINNESOTA

COUNTY OF Hennepin

On this 2 day of December, 2005, before me personally appeared Daniel J. Koch, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

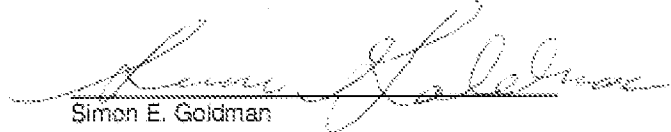
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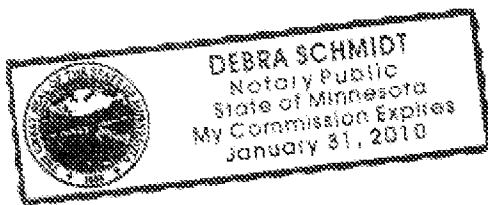

Simon E. Goldman


STATE OF MINNESOTA

COUNTY OF Hennepin

On this 2 day of December, 2005, before me personally appeared Simon E. Goldman, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.




Notary Public