

01-14-2002

FORM PTO-1584

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U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

101943015

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

Michael R.S. Hill  
 Gary W. King  
 Thomas J. Mullen  
 Xiaohong Zhou

## 2. Name and address of receiving party(ies):

Name: MEDTRONIC, INC..  
 Internal Address: M.S. LC 340  
 Street Address: 710 Medtronic Parkway  
 City: MINNEAPOLIS State: MN Zip: 55432

Additional name(s) of conveying party(ies) attached? [ ] Yes [X] No

## 3. Nature of conveyance:

[X] Assignment [ ] Merger  
 [ ] Security Agreement [ ] Change of Name  
 [ ] Other \_\_\_\_\_

Execution Date: 10/26/2001 Michael R.S. Hill  
 10/26/2001 Gary W. King  
 10/26/2001 Thomas J. Mullen  
 10/26/2001 Xiaohong Zhou

Additional name(s) &amp; address(es) attached? [ ] Yes [X] No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: October 26, 2001

## A. Patent Application No.(s)

Additional numbers attached? [ ] Yes [X] No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Beth L. McMahon  
 Address: MEDTRONIC, INC.  
 710 Medtronic Parkway  
 M.S. LC 340  
 Minneapolis, Minnesota 55432

## 6. Total number of applications and patents involved:..... 1

## 7. Total fee (37 CFR 3.41):.....\$40.00

[ ] Enclosed  
 [X] Authorized to be charged to deposit account

8. Deposit Account Number: 13-2546  
(Attach duplicate copy of this page)

01/14/2002 AAHME1 00000085 132546 10035319

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## 9. 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.

Beth L. McMahon  
 Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments and document: 6

OMB No. 0651-0011 (exp. 4/94)

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Commissioner of Patents and Trademarks  
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 Washington, D.C. 20231

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PATENT  
 REEL: 012445 FRAME: 0612

## **ASSIGNMENT**

WHEREAS, WE, Michael R.S. Hill, Gary W. King, Thomas J. Mullen, and Xiaohong Zhou, are the inventors of CLOSED-LOOP NEUROMODULATION FOR PREVENTION AND TREATMENT OF CARDIAC CONDITIONS for which we have executed an application for filing in the United States Patent and Trademark Office preparatory to obtaining Letters Patent of the United States on October 26, 2001; therefor; 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, I 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 my 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, for the consideration aforesaid, I materially represent to Corporation, its successors and assigns, that at the time of the execution and delivery of these presents, I am 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 I have good right and lawful authority to sell and convey the same in the manner herein set forth;

AND, for the consideration aforesaid, I 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 of extension of said Letters Patent is lawful and desirable, I, or my 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.

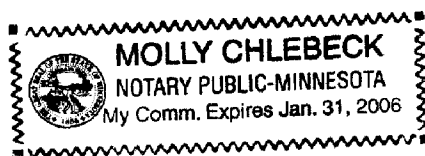
I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 26<sup>th</sup> day of October, 2001.

Michael R.S. Hill  
Michael R.S. Hill

On this 26<sup>th</sup> day of October, 2001, before me personally appeared Michael R.S. Hill, to me known to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same as his 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.



Molly Chlebeck  
Notary Public

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

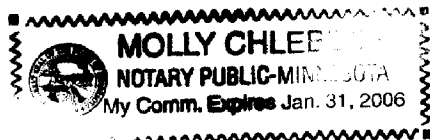
IN WITNESS WHEREOF, I have hereunto set my hand on this 26<sup>th</sup> day of October, 2001.

Gary W. King  
Gary W. King

On this 26<sup>th</sup> day of October, 2001, before me personally appeared Gary W. King, to me known to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same as his 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.

Molly Chlebeck  
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 26<sup>TH</sup> day of OCTOBER, 2001.

  
Thomas J. Mullen

On this 26<sup>th</sup> day of October, 2001, before me personally appeared Thomas J. Mullen, to me known to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same as his 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



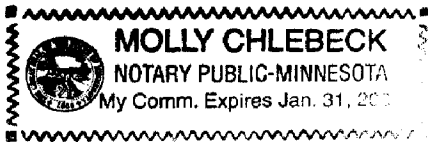
I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 26TH day of October, 2001.

Xiaohong Zhou  
Xiaohong Zhou

On this 26<sup>th</sup> day of October, 2001, before me personally appeared Xiaohong Zhou, to me known to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same as his 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.



Molly Chlebeck  
Notary Public