505343898 02/25/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5390681

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BRUCE R. MEHDIZADEH	10/08/2011
BRIAN T. STOLZ	10/12/2011
MICHAEL R. KLARDIE	10/11/2011
MICHAEL J. KERN	10/10/2011
JAMES M. OLSEN	10/11/2011
RICHARD T. STONE	10/11/2011
CHAD Q. CAI	10/11/2011
MARK J. CONROY	10/11/2011
TIMOTHY R. ABRAHAM	10/11/2011
SPENCER FODNESS-BONDHUS	11/06/2018

RECEIVING PARTY DATA

Name:	MEDTRONIC, INC.
Street Address:	710 MEDTRONIC PARKWAY N.E.
City:	MINNEAPOLIS
State/Country:	MINNESOTA
Postal Code:	55432-5604

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16264651

CORRESPONDENCE DATA

Fax Number: (770)643-8913

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 7706438912

Email: jeramie@witherskeys.com

Correspondent Name: MEDTRONIC - WK **Address Line 1:** P.O. BOX 71355

Address Line 4: MCDONOUGH, GEORGIA 30007

NAME OF SUBMITTER: JERAMIE J. KEYS

PATENT REEL: 048423 FRAME: 0439

505343898

SIGNATURE: /Jeramie J. Keys/ **DATE SIGNED:** 02/25/2019 **Total Attachments: 14** source=P0034146 USN2assignment#page1.tif source=P0034146 USN2assignment#page2.tif source=P0034146_USN2assignment#page3.tif source=P0034146 USN2assignment#page4.tif source=P0034146_USN2assignment#page5.tif source=P0034146_USN2assignment#page6.tif source=P0034146 USN2assignment#page7.tif source=P0034146 USN2assignment#page8.tif source=P0034146_USN2assignment#page9.tif source=P0034146_USN2assignment#page10.tif source=P0034146 USN2assignment#page11.tif source=P0034146 USN2assignment#page12.tif

source=20031-0036USD2-P34146-USV9-executed-Assignment-Fodness-Bondhus#page1.tif source=20031-0036USD2-P34146-USV9-executed-Assignment-Fodness-Bondhus#page2.tif

PATENT REEL: 048423 FRAME: 0440

Attorney Docket No.: P0034146.USN2

ASSIGNMENT OF APPLICATION

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

<u> </u>	TERMINATION OF A SHIELD WITHIN AN IMPLANTABLE MEDICAL LEAD
\boxtimes	for which an application for a United States Patent is being filed contemporaneously herewith;
	for which an application for a United States Patent identified as U.S. Patent Application No. ; was filed on ;
\boxtimes	for which above application claims priority to U.S. Provisional Patent Application Nos. 61/174,204, filed April 30, 2009; 61/174,216, filed April 30, 2009; 61/174,224, filed April 30, 2009; 61/174,234, filed April 30, 2009; 61/174,247, filed April 30, 2009; 61/174,254, filed April 30, 2009; 61/174,262, filed April 30, 2009; 61/174,287, filed April 30, 2009; and 61/174,296, filed April 30, 2009;
\boxtimes	which application is identified as PCT International Patent Application No. PCT/US10/032526, filed April 27, 2010;

Whereas, <u>Medtronic</u>, <u>Inc.</u>, a corporation organized and existing under the laws of the State of Minnesota and having a principle place of business at <u>710 Medtronic Parkway N.E.</u>, <u>Minneapolis</u>, <u>Minnesota 55432-5604</u>, 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 therefore;

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 therefore 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 benefit and use and benefit 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, including the right to enforce such Letters Patent as fully and entirely as the same would have been held and enjoyed by the assignors if this assignment had not been made; together with all claims by assignors for damages by reason of past infringement or for provisional rights and including the right to sue for, and collect the same for its own use and benefit, and for the use and benefit of its successors, assigns, and other legal representatives;

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, 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 of 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/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 said Medtronic, Inc., as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

Given Name (first and middle initial [if any]): Bruce R.	Family Name or Surname (last name): Mehdizadeh		
Inventor's Signature:		Date:	
Residence (City and State): Boise, ID		Country: US	Citizenship: US
Witness Signature	Witness	Signature	
Witness Printed Name	Witness 1	Printed Name	
Given Name (first and middle initial [if any]): Brian T.	Family N Stolz	ame or Surname (la	st name):
Inventor's Signature:		Date:	
City and State: Bloomington, MN		Country: USA	Citizenship: US
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA)	:		
On this 12 day of <u>OKOGO</u> , 201 who executed the foregoing instrument, as said po	11, before merson's free	e personally appeare act and deed, on the	day and year aforesaid.
(Dom)		Notary Public	

Fiven Name (first and middle initial [if any]): Family Name or Surname (last name): Klardie		
Inventor's Signature: Note: A there's the the there's the there's the there's the there's the there's the the there's the the the the the the the the there's the there's the there's the	Date: Oct 11, 2011	
City and State: Plymouth, MN	Country: USA	Citizenship: US
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this 1		
(Seal) (Seal) (Seal)	James CJO Notary Public	

Given Name (first and middle initial [if any]): Michael J.	Family Name or Surname (last name): Kern		
Inventor's Signature:	Date: 10 October	2011	
City and State: St. Louis Park, MN	Country: USA	Citizenship: US	
	STATE OF MINNESOTA) SS. COUNTY OF ANOKA On this 1000 day of 00000 , 2011, before me personally appeared the above-named Michael J. Kern, and who gas, appeared the favor aforesaid. Who gas, applies foregoing instruments assigned person's free act and deed, on the day and year aforesaid. THERESA C. TO \$ Norman Public Minnesota \$		

Given Name (first and middle initial [if any]): James M.	Family Name or Surname (last name): Olsen			
Inventor's Signature 4	Date:	of. //,	20//	
City and State: Plymouth, MN	Country: USA	Citiz US	zenship:	
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA)				
On this // day of Ochoco , 2011, before me personally appeared the above-named James M. Olsen, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.				
(Seal)	<u>JUNUS</u> Notary Pu	a C. Do		

Given Name (first and middle initial [if any]): Richard T.	Family Name or Surname (last name): Stone		
Javenior's Stayman.	Date:	Samuella 2	
City and State:	Country:	No. 1	izenship:
Minneapolis, MN	USA	US	
STATE OF MINNESOTA)			1
) ss. COUNTY OF ANOKA)			
On this //とい day of 💇 といっ, 201			
who executed the foregoing instrument, as said pe	rson's free act and deed,	on the day and year at	foresaid.
A MERENA C. TO			
(Seal)	Mull Notary Pub	sa CW	

Given Name (first and middle initial [if any]): Chad Q.	Family Name or Surname (last name): Cai		
Inventor's Signature:	Date: / D /	111/204	
City and State: Woodbury, MN	Country: USA	Citizenship: US	
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this		d year aforesaid.	

Given Name (first and middle initial [if any]): Spencer M.	Family Name or Surname (last Bondhus	t name):
Inventor's Signature:	Date: D / U,	/2011
City and State: Columbia Heights, MN	Country: USA	Citizenship: US
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this // b day of // color , 20 and who executed the foregoing instrument, as sa		
(Seal)	<u>Jhulsa C</u> Notary Public	

Given Name (first an Mark J.	en Name (first and middle initial [if any]): Family Name or Surname (last name): Conroy				
Inventor's Signature	Vins/	Comoy	Date:		************
City and State:			Country:	Citizenship:	
St. Louis Park, MN			USA	US	
STATE OF MINNES					
) ss. COUNTY OF ANOKA On this / ff day of October, 2011, before me personally appeared the above-named Mark J. Conroy, and					
who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.					
(Seal) <u>Andre Colo</u> Notary Public					

Given Name (first and middle initial [if any]): Timothy R.	Family Name or Surname (last n	name):		
Inventor's Signature:	Date:			
City and State:	Country:	Citizenship:		
Lino Lakes, MN	USA	US		
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this // th day of October, 2011, before me personally appeared the above-named Timothy R. Abraham, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.				
(Seal) THERESA C. TO Notary Public-Minneso My Gammission Expires Jan 31,				

Attorney Docket No.: P0034146.USN2

ASSIGNMENT OF APPLICATION

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

	TERMINATION OF A SHIELD WITHIN AN IMPLANTABLE MEDICAL LEAD
\boxtimes	for which an application for a United States Patent is being filed contemporaneously herewith;
	for which an application for a United States Patent identified as U.S. Patent Application No. ; was filed on ;
	for which above application claims priority to U.S. Provisional Patent Application Nos. 61/174,204, filed April 30, 2009; 61/174,216, filed April 30, 2009; 61/174,224, filed April 30, 2009; 61/174,234, filed April 30, 2009; 61/174,247, filed April 30, 2009; 61/174,254, filed April 30, 2009; 61/174,262, filed April 30, 2009; 61/174,287, filed April 30, 2009; and 61/174,296, filed April 30, 2009;
	which application is identified as PCT International Patent Application No. PCT/US10/032526, filed April 27, 2010;

Whereas, <u>Medtronic</u>, <u>Inc.</u>, a corporation organized and existing under the laws of the State of Minnesota and having a principle place of business at <u>710 Medtronic Parkway N.E.</u>, <u>Minneapolis</u>, <u>Minnesota 55432-5604</u>, 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 therefore;

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 therefore 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 benefit and use and benefit 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, including the right to enforce such Letters Patent as fully and entirely as the same would have been held and enjoyed by the assignors if this assignment had not been made; together with all claims by assignors for damages by reason of past infringement or for provisional rights and including the right to sue for, and collect the same for its own use and benefit, and for the use and benefit of its successors, assigns, and other legal representatives;

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, 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

Assignment

Page 1 of 6
Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432

proceedings, is lawful and desirable, or that a reissue of 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/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 said Medtronic, Inc., as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

Given Name (first and middle initial [if any]):

Given Name (first and middle initial [if any]):	Family Name or Surname (last name):		
Bruce R.	Mehdizad	eh	
Investor's Sinhatenes:		Date: /8007	2011
Residence (City and State)		Country:	Citizenship:
Boise, ID	-	US	US
Witness Signature //mothy D. Dra/ Witness Printed Name	Witness S Witness Pr	ignature A inted Name	ud End
Given Name (first and middle initial [if any]): Brian T.	Family Na	me or Surname (la	st name):
Inventor's Signature:		Date:	
City and State:		Country:	Citizenship:
Bloomington, MN		USA	US
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this day of, 201 who executed the foregoing instrument, as said po			
(Seal)		Notary Public	
		110tary 1 done	

, and the second se	ahamaanaanaa	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
\		Name or Surname (last name):		
Michael R. Klardie				
Inventor's Signature:		Date:		
		<u> </u>		
City and State:		Country:	Citizenshîp:	
Plymouth, MN		USA	US	
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this day of, 201 and who executed the foregoing instrument, as sa			ed the above-named Michael R. Klardie, n the day and year aforesaid.	
(Seal)		Notary Public		
Given Name (first and middle initial [if any]): Michael J.	Family N Kern	ame or Surname (las	st name):	20000
	1	15.		
Inventor's Signature:		Date:		
City and State:		Constant	VCKki-	
St. Louis Park, MN		Country: USA	Citizenship: US	
		I		
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this day of, 201 who executed the foregoing instrument, as said pe			ed the above-named Michael J. Kern, and day and year aforesaid.	

(Seal)

Notary Public

Given Name (first and middle initial [if any]): James M.	Family Name or Surname (last Olsen	name):
Inventor's Signature:	Date:	
City and State: Plymouth, MN	Country: USA	Citizenship: US
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this day of, 20 who executed the foregoing instrument, as said p		I the above-named James M. Olsen, and ay and year aforesaid.

Given Name (first and middle initial [if any]): Richard T.	Family Name or Surname (last name): Stone		
Inventor's Signature:	Date:		
City and State: Minneapolis, MN	Country: USA	Citizenship: US	
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this day of, 20 who executed the foregoing instrument, as said p		d the above-named Richard T. Stone, and lay and year aforesaid.	
(Seal)	Notary Public		

Given Name (first and middle initial [if any]): Chad Q.	Family Name or Sumame (last name): Cai			
Inventor's Signature:		Date:		
City and State: Woodbury, MN		Country: USA		Citizenship: US
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this day of, 2011, before me personally appeared the above-named Chad Q. Cai, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid. (Seal) Notary Public				
Given Name (first and middle initial [if any]):		ame or Surname (l	ast name):	
Spencer M.	Bondhus			
Inventor's Signature:		Date:		
City and State: Columbia Heights, MN		Country: USA		Citizenship: US
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this day of , 201 and who executed the foregoing instrument, as sa				-named Spencer M. Bondhus, I year aforesaid.

(Seal)

Notary Public

Given Name (first and middle initial [if any]): Mark J.	Family Name or Surname (last name): Conroy		
Inventor's Signature:	Date:		
City and State: St. Louis Park, MN	Country: USA	Citizenship: US	
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this day of, 20 who executed the foregoing instrument, as said p	I1, before me personally appeare erson's free act and deed, on the o	d the above-named Mark J. Conroy, and day and year aforesaid.	
(Seal)	Notary Public		

Given Name (first and middle initial [if any]): Timothy R.	Family Name or Surname (last name): Abraham		
Inventor's Signature:	Date:		
City and State: Lino Lakes, MN	Country: USA	Citizenship: US	
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this day of, 20 and who executed the foregoing instrument, as sa (Seal)			
	Notary Public		

Attorney Docket No.: P0034146.USV9

ASSIGNMENT OF APPLICATION(S)

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

TERMINATION OF A SHIELD WITHIN AN IMPLANTABLE MEDICAL LEAD
for which an application for a United States Patent or a U.S. Provisional Application is being filed contemporaneously herewith;
of for which an application for a United States Patent identified as U.S. Patent Application No. 15/252,677; was filed on August 31, 2016;
for which an application for a U.S. Provisional Application No; was filed on;
for which above application claims priority to U.S. Provisional Patent Application No;
which application is identified as PCT International Patent Application No; filed;
Whereas, Medtronic, Inc., a corporation organized and existing under the laws of the State of Minnesota and basing a principal place of hydrogen at 710 Medtronic Parkeys N.F. Minnesota
Minnesota and having a principal place of business at 710 Medtronic Parkway N.E., Minneapolis Minnesota 55432-5604, 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 therefore;

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 application(s) identified above and in and to any application claiming benefit thereto 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 therefore including our rights under the International Convention for the Protection of Industrial Property, which include the right to claim priority based on the filing date of said application(s), 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 benefit and use and benefit 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. including the right to enforce such Letters Patent as fully and entirely as the same would have been held and enjoyed by the assignors if this assignment had not been made; together with all claims by assignors for damages by reason of past infringement or for provisional rights and including the right to sue for, and collect the same for its own use and benefit, and for the use and benefit of its successors, assigns, and other legal representatives;

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;

Assignment

Page 1 of 2 Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432 Attorney Docket No.: P0034146.USV9

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 of 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/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 said Medtronic, Inc., as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

Given Name (first and middle initial [if any]): Spencer	Family Name or Surname Fodness-Bondhus	(last name):
Inventor's Signature:	Date: 2018-NOV	-06
City and State: Columbia Heights, MN	Country: USA	Citizenship: USA

Page 2 of 2 Attorney Docket No.: P0034146.USV9

PATENT REEL: 048423 FRAME: 0454

Assignment

RECORDED: 02/25/2019