PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5111370

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SEAN P. SKUBITZ	07/16/2018
DANIEL C. OSTER	07/11/2018
JACOB SILVERBERG	07/16/2018
STEPHEN L. BOLEA	07/12/2018
JAYESH R. PATEL	07/16/2018

RECEIVING PARTY DATA

Name:	MEDTRONIC, INC.	
Street Address:	710 MEDTRONIC PARKWAY NE	
City:	MINNEAPOLIS	
State/Country:	MINNESOTA	
Postal Code:	55432-9924	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16039811

CORRESPONDENCE DATA

Fax Number: (651)735-1102

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: 6517351100

Email: pairdocketing@ssiplaw.com SHUMAKER & SIEFFERT P. A. **Correspondent Name:**

Address Line 1: 1625 RADIO DRIVE

Address Line 2: SUITE 100

Address Line 4: WOODBURY, MINNESOTA 55125

ATTORNEY DOCKET NUMBER:	1123-341US02/C015280.USU4
NAME OF SUBMITTER:	KAREN SORENSEN
SIGNATURE:	/Karen Sorensen/
DATE SIGNED:	08/27/2018
	•

Total Attachments: 30

PATENT REEL: 047471 FRAME: 0211

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PATENT REEL: 047471 FRAME: 0212

Attorney Docket No.: 1123-341US01/C00015280.USU2

ASSIGNMENT OF APPLICATION(S)

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

	MEDICAL LEAD WITH SEGMENTED ELECTRODES
	for which an application for a United States Patent or a U.S. Provisional Application is being filed contemporaneously herewith;
\boxtimes	for which an application for a United States Patent identified as U.S. Patent Application No. 16/030,334; was filed on July 9, 2018;
\boxtimes	for which an application for a U.S. Provisional Application No. 62/552,139; was filed on August 30, 2017;
	for which above application claims priority to U.S. Provisional Patent Application No, filed on;
	which application is identified as PCT International Patent Application No; filed;

Whereas, <u>Medtronic, Inc.</u>, a corporation organized and existing under the laws of the State of Minnesota and having a principal 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 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;

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

Assignment

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Attorney Docket No.: 1123-341US01/C00015280.USU2

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]): Sean P.	Family Name or Surname (last r Skubitz	Family Name or Surname (last name): Skubitz	
Inventer's Signature	> Date: /6 J.	uly 2018	
City and State: Forest Lake, Minnesota	Country: USA	Citizenship: USA	

Given Name (first and middle initial [if any]): Daniel C.	Family Name or Surname (last name): Oster		
Inventor's Signature:		Date:	
Residence (City and State): Blaine, Minnesota		Country: USA	Citizenship: USA

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Jacob	Family Name or Surname (last name): Silverberg		
Inventor's Signature:		Date: 7/16/18	
Residence (City and State): Blaine, Minnesota		Country: USA	Citizenship: USA

Page 4 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Stephen L.	Family Name or Surname (last name): Bolea		
Inventor's-Signature:	Date: 12 - July	2018	
Residence (City and State): Watertown, Minnesota	Country: USA	Citizenship: USA	

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Jayesh R.	Family Name or Sumame (last name): Patel	
Inventor's Signature:	Date: 16 JUL	-2018
Residence (City and State): Maple Grove, Minnesota	Country: USA	Citizenship: IN and JP

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Jeffrey M.	Family Name or Surname (last name): Novotny		
Inventor's Signature:	Date: July 16, 2	2018	
Residence (City and State):	Country:	Citizenship:	
Wyoming, Minnesota	USA	USA	

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Justin M.	Family Name or Surname (last name): Claus		
Inventor's Signature:		Date: 07/16/2018	
Residence (City and State): Fridley, Minnesota		Country: USA	Citizenship: USA

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Robert R.	Family Name or Surname (last name): Rowe		
Inventor's Signature:	Date:		
Residence (City and State): Monticello, Minnesota		Country: USA	Citizenship: USA

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Wayne M.	Family Name or Surname (last name): Starkson		
Inventor's Signature:	Date: 7- //-	· 18	
Residence (City and State): Mayer, Minnesota	Country: USA	Citizenship: USA	

	JOANNE ROSE JOHNSON NOTARY PUBLIC MINNESOTA My Commission Expires Jan. 31, 2021	
Joa	nne Rose Johnson	17/11/2018

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Attorney Docket No.: 1123-341US01/C00015280.USU2

ASSIGNMENT OF APPLICATION(S)

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

	MEDICAL LEAD WITH SEGMENTED ELECTRODES				
	for which an application for a United States Patent or a U.S. Provisional Application is contemporaneously herewith;	being filed			
\boxtimes	for which an application for a United States Patent identified as U.S. Patent Application on July 9, 2018;	1 No. 16/030,334 ; v	vas filed		
\boxtimes	for which an application for a U.S. Provisional Application No. 62/552,139; was filed of	on August 30, 2017	' ;		
	for which above application claims priority to U.S. Provisional Patent Application No.		,		
	filed on;				
	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 Min	nnesota a		

Whereas, <u>Medtronic, Inc.</u>, a corporation organized and existing under the laws of the State of Minnesota and having a principal 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 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;

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

Assignment

Page 1 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

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]): Sean P.	Family Name or Surname (last name): Skubitz		
Inventor's Signature:		Date:	
City and State: Forest Lake, Minnesota		Country: USA	Citizenship: USA

Assignment

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Daniel C.	Family Name or Surname (last name): Oster		
Inventor's Signature:		Date: 11 Jul 2018	3
Residence (City and State): Blaine, Minnesota		Country: USA	Citizenship: USA



Jeseph Harold Starbe July 11, 2018

REEL: 047471 FRAME: 0225

Given Name (first and middle initial [if any]): Jacob	Family Name or Surname (last name): Silverberg		
Inventor's Signature:		Date:	
Residence (City and State): Blaine, Minnesota		Country: USA	Citizenship: USA

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Stephen L.	Family Name or Surname (last name): Bolea		
Inventor's Signature:	Date:		
Residence (City and State): Watertown, Minnesota	Country: USA	Citizenship: USA	

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Jayesh R.	Family Name or Surname (last name): Patel		
Inventor's Signature:		Date:	
Residence (City and State): Maple Grove, Minnesota		Country: USA	Citizenship: IN and JP

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Jeffrey M.	Family Name or Surname (last name): Novotny		
Inventor's Signature:		Date:	
Residence (City and State): Wyoming, Minnesota		Country: USA	Citizenship: USA

Page 7 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Justin M.	Family Name or Surname (last name): Claus			
Inventor's Signature:		Date:		
Residence (City and State): Fridley, Minnesota		Country: USA	Citizenship: USA	

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Robert R.	Family Name or Surname (last name): Rowe		
Inventor's Signature:		Date:	
Residence (City and State): Monticello, Minnesota		Country: USA	Citizenship: USA

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Wayne M.	Family Name or Surname (last name): Starkson		
Inventor's Signature:		Date:	
Residence (City and State): Mayer, Minnesota		Country: USA	Citizenship: USA

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Attorney Docket No.: 1123-341US01/C00015280.USU2

Attorney Docket No.: 1123-341US01/C00015280.USU2

ASSIGNMENT OF APPLICATION(S)

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

	MEDICAL LEAD WITH SEGMENTED ELECTRODES		
	for which an application for a United States Patent or a U.S. Provisional Application is b contemporaneously herewith;	eing filed	
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\boxtimes	for which an application for a U.S. Provisional Application No. 62/552,139; was filed or	n August 30, 2017 ;	
	for which above application claims priority to U.S. Provisional Patent Application No;		
		; filed	;
	Whereas Meditonic Inc. a corporation organized and existing under the laws o	f the State of Min	nesota a

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 55432-5604, 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;

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Assignment Page 1 of 10 Attorney Docket No.: 1123-341US01/C00015280.USU2

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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]): Sean P.	Family Name or Surname (last name): Skubitz		t name):
Inventor's Signature:	•	Date:	
City and State: Forest Lake, Minnesota		Country: USA	Citizenship: USA

Assignment

Page 2 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Daniel C.	Family Name or Surname (last name): Oster		
Inventor's Signature:		Date:	
Residence (City and State): Blaine, Minnesota		Country: USA	Citizenship: USA

Page 3 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Jacob	Family Name or Surname (last name): Silverberg		t name):
Inventor's Signature:	_ 	Date:	
Residence (City and State): Blaine, Minnesota		Country: USA	Citizenship: USA

Page 4 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Stephen L.	Family Name or Surname (last Bolea	illy Name or Surname (last name): ea		
Inventor's Signature:	Date:			
Residence (City and State): Watertown, Minnesota	Country: USA	Citizenship: USA		

Page 5 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Jayesh R.	Family Name or Surname (last name): Patel		
Inventor's Signature:		Date:	
Residence (City and State): Maple Grove, Minnesota		Country: USA	Citizenship: IN and JP

Page 6 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Jeffrey M.	Family Name or Surname (last name): Novotny		
Inventor's Signature:		Date:	
Residence (City and State): Wyoming, Minnesota		Country: USA	Citizenship: USA

Page 7 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Justin M.	Family Name or Surname (last name): Claus		
Inventor's Signature:		Date:	
Residence (City and State): Fridley, Minnesota		Country: USA	Citizenship: USA

Page 8 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Robert R.	Family Name or Surname (last name): Rowe		
Inventor's Signature:	Date: July 11,	2018	
Residence (City and State): Monticello, Minnesota	Country: USA	Citizenship: USA	

. Page 9 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Given Name (first and middle initial [if any]): Wayne M.	Family Name or Surname (last name): Starkson		
Inventor's Signature:		Date:	
Residence (City and State): Mayer, Minnesota		Country: USA	Citizenship: USA

Page 10 of 10

Attorney Docket No.: 1123-341US01/C00015280.USU2

Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432

PATENT REEL: 047471 FRAME: 0242