08/17/2017 504507752

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4554457

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BRIAN D. SCHINGS	08/04/2017
BRETT E. SWENSGARD	07/28/2017
RAYMOND E. PARFETT	08/16/2017
JASON L. HARRIS	07/17/2017
FREDERICK E. SHELTON IV	07/17/2017

RECEIVING PARTY DATA

Name:	ETHICON LLC
Street Address:	#475 STREET C, SUITE 401
Internal Address:	LOS FRAILES INDUSTRIAL PARK
City:	GUAYNABO
State/Country:	PUERTO RICO
Postal Code:	00969

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15635628

CORRESPONDENCE DATA

Fax Number: (412)355-6501

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: (412) 355-8276

Email: piuspatents@klgates.com

CARA M. PINTO **Correspondent Name:** 210 SIXTH AVENUE Address Line 1: Address Line 2: **K&L GATES CENTER**

Address Line 4: PITTSBURGH, PENNSYLVANIA 15222-2613

ATTORNEY DOCKET NUMBER:	END8176USNP/170049
NAME OF SUBMITTER:	CARA M. PINTO
SIGNATURE:	/Cara M. Pinto/
DATE SIGNED:	08/17/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

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REEL: 043317 FRAME: 0797 504507752

Total Attachments: 10 source=signed_Combined_Declarations-Assignments#page1.tif source=signed_Combined_Declarations-Assignments#page2.tif source=signed_Combined_Declarations-Assignments#page3.tif source=signed_Combined_Declarations-Assignments#page4.tif source=signed_Combined_Declarations-Assignments#page5.tif source=signed_Combined_Declarations-Assignments#page6.tif source=signed_Combined_Declarations-Assignments#page7.tif source=signed_Combined_Declarations-Assignments#page8.tif source=signed_Combined_Declarations-Assignments#page9.tif source=signed_Combined_Declarations-Assignments#page9.tif

Attorney Docket No.: END8176USNP/170049 US Application No.: 15/635,628
ENMENT

COMBINED DECLARATION AND ASSIG Title of Invention: ARTICULATION STATE DETECTION MECHANISMS This declaration and assignment is directed to: The attached or filed herewith application of (list of named inventors) or X The United States application or PCT international application number 15/635,628 filed on June 28, 2017. Declaration As the below named inventor, I hereby declare that: The above-identified application ("Application") was made or authorized by me. I believe that I am the original inventor or an original inventor of a claimed invention or discovery in the Application. I have reviewed and understood the contents of the Application, including the claims, and I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, the United States Code of Federal Regulations, §1.56 for filings of this Application in the United States of America. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both for filings of this Application in the United States of America. Assignment Ethicon LLC #475 Street C, Suite 401 Los Frailes Industrial Park Guaynabo, Puerto Rico 00969 a Limited Liability Company of Delaware. (hereinafter designated as the "Assignee"), I hereby acknowledge that I have assigned the above-identified invention by previous assignment (attached hereto) to Assignee which is hereby conformed for recordation in the US Patent Office and I confirm I have and do assign and transfer; or For good and valuable consideration, the sufficiency of which is acknowledged, I hereby assign and transfer and/or have assigned and transferred to Assignee: my entire right, title, and interest in, to, and under the Application, including all priority rights for other countries arising therefrom and the right to claim priority to the Application, all inventions or discoveries therein disclosed, and any and all Letters Patent of the United States, European Patent Office and of all other countries, which may be granted for such inventions or discoveries, or any of them, all such inventions or discoveries and all rights in such Application including any and all provisionals, substitutions, divisions, and continuations thereof, and to all Letters Patent that may be granted for said inventions and discoveries, and in and to all extensions, supplementary protection certificates, reexaminations, renewals, and reissues thereof, to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such 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. Page 1 of 2

I shall execute all papers necessary in connection with the Application in the United States Patent and Trademark Office, European Patent Office, any other patent offices, and under the Patent Cooperation Treaty, and any continuing, divisional, or reissue applications thereof, any reexamination of any of such applications, and any patent term extensions or supplementary protection certificates of any such applications and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

I shall execute all papers necessary in connection with any litigation or any other judicial proceeding in the United States or other country, or any administrative proceeding in the United States Patent and Trademark Office, European Patent Office, any other patent office, or under the Patent Cooperation Treaty concerning the Application(s) or any continuation, divisional, or reissue applications thereof, or any reexamination of any such applications, or any Letters Patent issued therefrom or any patent term extensions or supplementary protection certificates of any such applications and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such litigation or proceeding.

I shall execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

I shall do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States, by the European Patent Office and in all other countries where Assignee may desire to have such inventions or discoveries, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

I hereby (i) authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from the Application or any divisional, continuation, or reissue applications thereof, and any reexamination of any of such applications, to Assignee, and (ii) covenant that I have full right to convey the interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

I hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to obtain legal recordation of this document.

Brian D. Schings

LEGAL NAME OF INVENTOR

Signature

Date

18/04/17

	COMBINED	DECLARATION AND ASSIGNMENT
Title o	of Invention: <u>ARTICULATION STAT</u>	E DETECTION MECHANISMS
This de	claration and assignment is directed to:	•
		The attached or filed herewith application of (list of named inventors),
	or	
		The United States application or PCT international application number <u>15/635,628</u> filed on <u>June 28, 2017</u> .
Decla	ration	
	As the below named inventor, I hereby dec	lare that:
	The above-identified application ("Applica	tion") was made or authorized by me.
	I believe that I am the original inventor or	an original inventor of a claimed invention or discovery in the Application.
I have reviewed and understood the contents of the Application, including the claims, and I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, the United States Code of Federal Regulations, §1.56 for filings of this Application in the United States of America.		
impriso	I hereby acknowledge that any willful fals nment of not more than five (5) years, or bo	e statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or the for filings of this Application in the United States of America.
Assign	nment	<u></u>
Î.		Ethicon LLC #475 Street C, Suite 401 Los Frailes Industrial Park Guaynabo, Puerto Rico 00969
	a Li	mited Liability Company of <u>Delaware</u> .
	(he	reinafter designated as the "Assignee"),
□ which i	I hereby acknowledge that I have assigned the best conformed for recordation in the U	I the above-identified invention by previous assignment (attached hereto) to Assignee S Patent Office and I confirm I have and do assign and transfer:
or		
⊠ assigne	For good and valuable consideration, the and transferred to Assignee:	e sufficiency of which is acknowledged, I hereby assign and transfer and/or have
my entire right, title, and interest in, to, and under the Application, including all priority rights for other countries arising therefrom and the right to claim priority to the Application, all inventions or discoveries therein disclosed, and any and all Letters Patent of the United States, European Patent Office and of all other countries, which may be granted for such inventions or discoveries, or any of them, all such inventions or discoveries and all rights in such Application including any and all provisionals, substitutions, divisions, and continuations thereof, and to all Letters Patent that may be granted for said inventions and discoveries, and in and to all extensions, supplementary protection certificates, reexaminations, renewals, and reissues thereof, to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such 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.		
		Page 1 of 7

I shall execute all papers necessary in connection with the Application in the United States Patent and Trademark Office, European Patent Office, any other patent offices, and under the Patent Cooperation Treaty, and any continuing, divisional, or reissue applications thereof, any reexamination of any of such applications, and any patent term extensions or supplementary protection certificates of any such applications and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

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I shall execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

I shall do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States, by the European Patent Office and in all other countries where Assignee may desire to have such inventions or discoveries, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

I hereby (i) authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from the Application or any divisional, continuation, or reissue applications thereof, and any reexamination of any of such applications, to Assignee, and (ii) covenant that I have full right to convey the interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

I hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to obtain legal recordation of this document.

Brett E. Swensgard LEGAL NAME OF INVENTOR

Cianatura

7/28/17 Date

Page 2 of 2

Attorney Docket No.: END8176USNP/170049

Attorney Docket No.: <u>END8176USNP/170049</u> US Application No.: <u>15/635,628</u>

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I hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to obtain legal recordation of this document.

Raymond E. Parfett		
LEGAL NAME OF INVENTOR		
rest ju	08/16/2	017
Signature	Date	

	ent e le L eur de Control de La control de
COMBINED	DECLARATION AND ASSIGNMENT
Title of Invention: <u>ARTICULATION STAT</u>	E DETECTION MECHANISMS
This declaration and assignment is directed to:	
	The attached or filed herewith application of (list of named inventors),
or	
	The United States application or PCT international application number 15/635,628 filed on June 28, 2017.
Declaration	
As the below named inventor, I hereby dec	lare that:
The above-identified application ("Applica	tion") was made or authorized by me.
I believe that I am the original inventor or a	an original inventor of a claimed invention or discovery in the Application.
	nts of the Application, including the claims, and I acknowledge the duty to disclose fined in Title 37, the United States Code of Federal Regulations, §1.56 for filings of
	e statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or h for filings of this Application in the United States of America.
Assignment	Ethicon LLC #475 Street C, Suite 401 Los Frailes Industrial Park Guaynabo, Puerto Rico 00969
a Liı	nited Liability Company of <u>Delaware</u> .
(her	einafter designated as the "Assignee"),
	the above-identified invention by previous assignment (attached hereto) to Assignee Patent Office and I confirm I have and do assign and transfer:
or	
For good and valuable consideration, the assigned and transferred to Assignee:	sufficiency of which is acknowledged, I hereby assign and transfer and/or have
the right to claim priority to the Application, all invistates, European Patent Office and of all other countries in the continuations of discoveries and all rights in scontinuations thereof, and to all Letters Patent that applementary protection certificates, reexamination	he Application, including all priority rights for other countries arising therefrom and centions or discoveries therein disclosed, and any and all Letters Patent of the United antries, which may be granted for such inventions or discoveries, or any of them, all such Application including any and all provisionals, substitutions, divisions, and t may be granted for said inventions and discoveries, and in and to all extensions, as, renewals, and reissues thereof, to be held and enjoyed by Assignee for its own use or which such Letters Patent may be granted, as fully and entirely as the same would cent and sale not been made.
	Page 1 of 2

I shall execute all papers necessary in connection with the Application in the United States Patent and Trademark Office, European Patent Office, any other patent offices, and under the Patent Cooperation Treaty, and any continuing, divisional, or reissue applications thereof, any reexamination of any of such applications, and any patent term extensions or supplementary protection certificates of any such applications and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

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I hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to obtain legal recordation of this document.

Jason L. Harris		
LEGAL NAME OF INVENTOR		
Jam Johnin	7/17/17	
Signature	Date	

Attorney Docket No.: <u>END8176USNP/170049</u> US Application No.: <u>15/635,628</u>

COMBINED	DECLARATION AND ASSIGNMENT	
Title of Invention: ARTICULATION STATE DETECTION MECHANISMS		
This declaration and assignment is directed to:		
	The attached or filed herewith application of (list of named inventors),	
or		
	The United States application or PCT international application number <u>15/635,628</u> filed on <u>June 28, 2017</u> .	
Declaration		
As the below named inventor, I hereby dec	lare that:	
The above-identified application ("Applica	tion") was made or authorized by me.	
I believe that I am the original inventor or	an original inventor of a claimed invention or discovery in the Application.	
I have reviewed and understood the conte information which is material to patentability as de this Application in the United States of America.	ents of the Application, including the claims, and I acknowledge the duty to disclose blined in Title 37, the United States Code of Federal Regulations, §1.56 for filings of	
I hereby acknowledge that any willful fals imprisonment of not more than five (5) years, or bot	the statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or the for filings of this Application in the United States of America.	
Assignment	Ethicon LLC #475 Street C, Suite 401 Los Frailes Industrial Park Guaynabo, Puerto Rico 00969	
a.Li	mited Liability Company of <u>Delaware</u> .	
(her	reinafter designated as the "Assignee"),	
I hereby acknowledge that I have assigned which is hereby conformed for recordation in the U.	I the above-identified invention by previous assignment (attached hereto) to Assignee S Patent Office and I confirm I have and do assign and transfer:	
or		
For good and valuable consideration, the assigned and transferred to Assignee:	e sufficiency of which is acknowledged, I hereby assign and transfer and/or have	
the right to claim priority to the Application, all in States, European Patent Office and of all other co- such inventions or discoveries and all rights in continuations thereof, and to all Letters Patent the supplementary protection certificates, reexamination	the Application, including all priority rights for other countries arising therefrom and ventions or discoveries therein disclosed, and any and all Letters Patent of the United untries, which may be granted for such inventions or discoveries, or any of them, all such Application including any and all provisionals, substitutions, divisions, and it may be granted for said inventions and discoveries, and in and to all extensions, ans, renewals, and reissues thereof, to be held and enjoyed by Assignee for its own use for which such Letters Patent may be granted, as fully and entirely as the same would tent and sale not been made.	
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I hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to obtain legal recordation of this document.

Frederick E. Shelton, IV

LEGAL NAME OF INVENTOR

Signature/

7/17/17 Date

Page 2 of 2