

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT2852490

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
DAVID A. WITT	02/20/2014
ZHIFAN F. HUANG	02/20/2014
TIMOTHY G. DIETZ	03/06/2014
RAYMOND M. BANKS	04/26/2014
JEFFREY L. ALDRIDGE	02/20/2014
STEVE G. BERNATH	03/10/2014
DAVID K. NORVELL	02/20/2014
PATRICK A. WEIZMAN	02/20/2014
JASON L. HARRIS	02/12/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ETHICON ENDO-SURGERY, INC.
<b>Street Address:</b>	4545 CREEK ROAD
<b>City:</b>	CINCINNATI
<b>State/Country:</b>	OHIO
<b>Postal Code:</b>	45242
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14171035
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(412)355-6501
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	(412) 355-8690
<b>Email:</b>	piuspatents@klgates.com
<b>Correspondent Name:</b>	K&L GATES LLP - RAGAE M. GHABRIAL
<b>Address Line 1:</b>	210 SIXTH AVENUE
<b>Address Line 2:</b>	K&L GATES CENTER
<b>Address Line 4:</b>	PITTSBURGH, PENNSYLVANIA 15222-2613
<b>ATTORNEY DOCKET NUMBER:</b>	END6660USCNT1/090299CON1
<b>NAME OF SUBMITTER:</b>	RAGAE M. GHABRIAL

PATENT

<b>SIGNATURE:</b>	/Ragae M. Ghabrial/
<b>DATE SIGNED:</b>	05/13/2014
<b>Total Attachments: 25</b> source=05-09-2014_Assignment#page1.tif source=05-09-2014_Assignment#page2.tif source=05-09-2014_Assignment#page3.tif source=05-09-2014_Assignment#page4.tif source=05-09-2014_Assignment#page5.tif source=05-09-2014_Assignment#page6.tif source=05-09-2014_Assignment#page7.tif source=05-09-2014_Assignment#page8.tif source=05-09-2014_Assignment#page9.tif source=05-09-2014_Assignment#page10.tif source=05-09-2014_Assignment#page11.tif source=05-09-2014_Assignment#page12.tif source=05-09-2014_Assignment#page13.tif source=05-09-2014_Assignment#page14.tif source=05-09-2014_Assignment#page15.tif source=05-09-2014_Assignment#page16.tif source=05-09-2014_Assignment#page17.tif source=05-09-2014_Assignment#page18.tif source=05-09-2014_Assignment#page19.tif source=05-09-2014_Assignment#page20.tif source=05-09-2014_Assignment#page21.tif source=05-09-2014_Assignment#page22.tif source=05-09-2014_Assignment#page23.tif source=05-09-2014_Assignment#page24.tif source=05-09-2014_Assignment#page25.tif	

## ASSIGNMENT

Serial No. 14/171,035Filed: February 3, 2014

WHEREAS, David A. Witt, a citizen of the United States, residing at 1187 Chaucer Place, Maineville, Ohio 45039; Zhifan F. Huang, a citizen of the United States, residing at 4378 Serpentine Way, Mason, Ohio 45040; Timothy G. Dietz, a citizen of the United States, residing at 428 West Avenue, Wayne, Pennsylvania 19087; Raymond M. Banks, a citizen of the United States, residing at 22303 Regnart Road, Cupertino, California 95014; Jeffrey L. Aldridge, a citizen of the United States, residing at 106 W. Concord Drive, Lebanon, Ohio 45036; Steven G. Bernath, a citizen of the United States, residing at 275 Welburn Avenue, Unit E, Gilroy, California 95020; David K. Norvell, a citizen of the United States, residing at 570 Doverdale Drive, Monroe, Ohio 45050; Patrick A. Weizman, a citizen of the United States, residing at 6528 Michele Lane, Liberty Township, Ohio 45044; and Jason L. Harris, a citizen of the United States, residing at 5435 Hamilton Road, Lebanon, Ohio 45036; (hereinafter called "Assignors"), have made certain new and useful inventions or discoveries relating to:

## SURGICAL INSTRUMENTS AND END EFFECTORS THEREFOR

for which they have this day executed an application for Letters Patent of the United States; and

WHEREAS, Ethicon Endo-Surgery, Inc., a corporation formed under the laws of the State of Ohio, (hereinafter called "Assignee"), is desirous of acquiring Assignors' entire right, title, and interest therein:

NOW, THEREFORE, BE IT KNOWN that for and in consideration of the sum of One Dollar and other valuable considerations to them moving, the receipt of which is hereby acknowledged, Assignors have sold, assigned, and transferred, and do hereby sell, assign and transfer unto said Assignee their entire right, title and interest in and to all said inventions and discoveries disclosed in said application whose identification above by serial number and filing date, when available is hereby authorized, and in and to said application, all substitutions, divisions, and continuations thereof, and in and to all Letters Patent, United States and foreign, that may be granted for said inventions and discoveries, and in and to all extensions, renewals, and reissues thereof, the same to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignors if this Assignment and sale had not been made;

And Assignors hereby authorize and request the Commissioner of Patents of the United States to issue said Letters Patent in accordance with this Assignment;

And for the consideration aforesaid, Assignors covenant and agree with said Assignee that he has a full and unencumbered title to the inventions and discoveries above described and hereby assigned, which title they warrant unto said Assignee, its successors and assigns;

And for the consideration aforesaid, Assignors further covenant and agree that they will, whenever requested, but without cost to them promptly communicate to said Assignee or its representatives any facts known to them relating to said inventions and discoveries, testify in any interference or legal proceedings involving said inventions and discoveries, and execute any additional papers that may be necessary to enable said Assignee or its representatives, successors, nominees, or assigns to secure full and complete protection for the said inventions and discoveries or that may be necessary to vest in said Assignee the complete title to the said inventions and discoveries and patents hereby conveyed and to enable it to record said title.

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this 20 day of FEB, 2014.

David A. Witt (L.S.)  
David A. Witt

STATE OF Ohio )  
COUNTY OF Hamilton ) ss.

BE IT REMEMBERED, That on this 20th day of February, 2014, before me, a Notary Public, personally appeared David A. Witt, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.



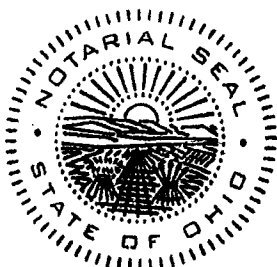
Virginia A. Van Den Burg  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this 20 day of Feb, 2014.

Zhifan F. Huang (L.S.)  
Zhifan F. Huang

STATE OF Ohio )  
COUNTY OF Hamilton ) ss.

BE IT REMEMBERED, That on this 20th day of February, 2014, before me, a Notary Public, personally appeared Zhifan F. Huang, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.



KARA N. TULANKO  
NOTARY PUBLIC  
STATE OF OHIO  
Recorded in  
Hamilton County  
My Comm. Exp. 5/31/14

Kara N. Tulanko  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**Timothy G. Dietz** (L.S.)

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Timothy G. Dietz**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**Raymond M. Banks** (L.S.)

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss.

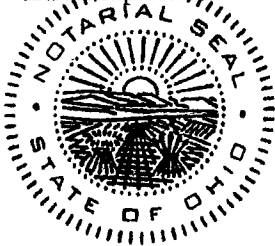
BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Raymond M. Banks**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this 20<sup>th</sup> day of FEBRUARY, 2014.  
Jeffrey L. Aldridge (L.S.)  
Jeffrey L. Aldridge

STATE OF Ohio )  
COUNTY OF Hamilton ) ss.

BE IT REMEMBERED, That on this 20<sup>th</sup> day of February, 2014, before me, a Notary Public, personally appeared Jeffrey L. Aldridge, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.



KARA N. TULANKO  
NOTARY PUBLIC  
STATE OF OHIO  
Recorded in  
Hamilton County  
My Comm. Exp. 5/31/14

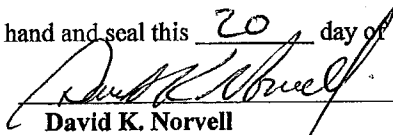
Kara N. Tulanko  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.  
\_\_\_\_\_  
Steven G. Bernath (L.S.)

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared Steven G. Bernath, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

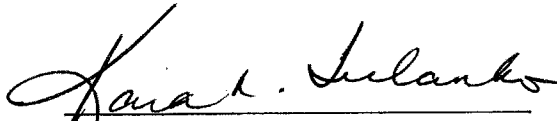
IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this 20 day of FEB, 2014.  
 (L.S.)  
David K. Norvell

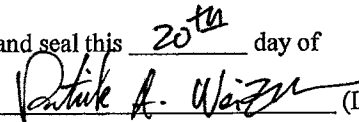
STATE OF Ohio )  
COUNTY OF Hamilton ) ss.

BE IT REMEMBERED, That on this 20<sup>th</sup> day of February, 2014, before me, a Notary Public, personally appeared David K. Norvell, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.



KARA N. TULANKO  
NOTARY PUBLIC  
STATE OF OHIO  
Recorded in  
Hamilton County  
My Comm. Exp. 5/31/14

  
Notary Public

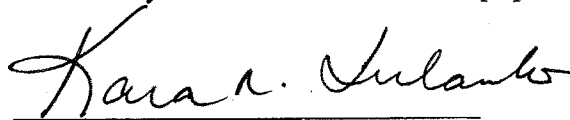
IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this 20<sup>th</sup> day of FEB, 2014.  
 (L.S.)  
Patrick A. Weizman

STATE OF Ohio )  
COUNTY OF Hamilton ) ss.

BE IT REMEMBERED, That on this 20<sup>th</sup> day of February, 2014, before me, a Notary Public, personally appeared Patrick A. Weizman, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.



KARA N. TULANKO  
NOTARY PUBLIC  
STATE OF OHIO  
Recorded in  
Hamilton County  
My Comm. Exp. 5/31/14

  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this 12<sup>th</sup> day of February, 2014.  
Jason L. Harris (L.S.)  
Jason L. Harris

STATE OF Ohio )  
COUNTY OF Hamilton ) ss.

BE IT REMEMBERED, That on this 12<sup>th</sup> day of February, 2014, before me, a Notary Public, personally appeared Jason L. Harris, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.



KIMBERLY MELLISSA MOSES  
Notary Public, State of Ohio  
My Commission Expires  
September 23, 2016

Kimberly Melissa Moses  
Notary Public



## A S S I G N M E N T

Serial No. 14/171,035Filed: February 3, 2014

WHEREAS, **David A. Witt**, a citizen of the United States, residing at 1187 Chaucer Place, Maineville, Ohio 45039; **Zhifan F. Huang**, a citizen of the United States, residing at 4378 Serpentine Way, Mason, Ohio 45040; **Timothy G. Dietz**, a citizen of the United States, residing at 428 West Avenue, Wayne, Pennsylvania 19087; **Raymond M. Banks**, a citizen of the United States, residing at 22303 Regnart Road, Cupertino, California 95014; **Jeffrey L. Aldridge**, a citizen of the United States, residing at 106 W. Concord Drive, Lebanon, Ohio 45036; **Steven G. Bernath**, a citizen of the United States, residing at 275 Welburn Avenue, Unit E, Gilroy, California 95020; **David K. Norvell**, a citizen of the United States, residing at 570 Doverdale Drive, Monroe, Ohio 45050; **Patrick A. Weizman**, a citizen of the United States, residing at 6528 Michele Lane, Liberty Township, Ohio 45044; and **Jason L. Harris**, a citizen of the United States, residing at 5435 Hamilton Road, Lebanon, Ohio 45036; (hereinafter called "Assignors"), have made certain new and useful inventions or discoveries relating to:

## SURGICAL INSTRUMENTS AND END EFFECTORS THEREFOR

for which they have this day executed an application for Letters Patent of the United States; and

WHEREAS, **Ethicon Endo-Surgery, Inc.**, a corporation formed under the laws of the State of Ohio, (hereinafter called "Assignee"), is desirous of acquiring Assignors' entire right, title, and interest therein:

NOW, THEREFORE, BE IT KNOWN that for and in consideration of the sum of One Dollar and other valuable considerations to them moving, the receipt of which is hereby acknowledged, Assignors have sold, assigned, and transferred, and do hereby sell, assign and transfer unto said Assignee their entire right, title and interest in and to all said inventions and discoveries disclosed in said application whose identification above by serial number and filing date, when available is hereby authorized, and in and to said application, all substitutions, divisions, and continuations thereof, and in and to all Letters Patent, United States and foreign, that may be granted for said inventions and discoveries, and in and to all extensions, renewals, and reissues thereof, the same to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignors if this Assignment and sale had not been made;

And Assignors hereby authorize and request the Commissioner of Patents of the United States to issue said Letters Patent in accordance with this Assignment;

And for the consideration aforesaid, Assignors covenant and agree with said Assignee that he has a full and unencumbered title to the inventions and discoveries above described and hereby assigned, which title they warrant unto said Assignee, its successors and assigns;

And for the consideration aforesaid, Assignors further covenant and agree that they will, whenever requested, but without cost to them promptly communicate to said Assignee or its representatives any facts known to them relating to said inventions and discoveries, testify in any interference or legal proceedings involving said inventions and discoveries, and execute any additional papers that may be necessary to enable said Assignee or its representatives, successors, nominees, or assigns to secure full and complete protection for the said inventions and discoveries or that may be necessary to vest in said Assignee the complete title to the said inventions and discoveries and patents hereby conveyed and to enable it to record said title.

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**David A. Witt** (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **David A. Witt**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**Zhifan F. Huang** (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Zhifan F. Huang**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this 6<sup>th</sup> day of  
MARCH, 2014.

Timothy G. Dietz (L.S.)  
Timothy G. Dietz

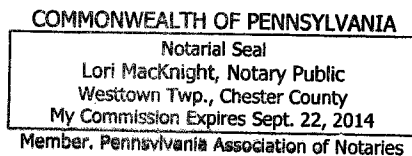
STATE OF

COUNTY OF

Pennsylvania )  
Delaware )

ss.

BE IT REMEMBERED, That on this 6<sup>th</sup> day of March, 2014, before me, a Notary Public, personally appeared Timothy G. Dietz, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.



Lori MacKnight  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Raymond M. Banks (L.S.)

STATE OF

COUNTY OF

\_\_\_\_\_)  
\_\_\_\_\_)  
\_\_\_\_\_)

ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared Raymond M. Banks, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**Jeffrey L. Aldridge** (L.S.)

STATE OF Ohio )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Jeffrey L. Aldridge**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**Steven G. Bernath** (L.S.)

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Steven G. Bernath**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
David K. Norvell (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **David K. Norvell**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Patrick A. Weizman (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Patrick A. Weizman**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Jason L. Harris (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Jason L. Harris**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

ASSIGNMENT

Serial No. 14/171,035

Filed: February 3, 2014

WHEREAS, **David A. Witt**, a citizen of the United States, residing at 1187 Chaucer Place, Maineville, Ohio 45039; **Zhifan F. Huang**, a citizen of the United States, residing at 4378 Serpentine Way, Mason, Ohio 45040; **Timothy G. Dietz**, a citizen of the United States, residing at 428 West Avenue, Wayne, Pennsylvania 19087; **Raymond M. Banks**, a citizen of the United States, residing at 22303 Regnart Road, Cupertino, California 95014; **Jeffrey L. Aldridge**, a citizen of the United States, residing at 106 W. Concord Drive, Lebanon, Ohio 45036; **Steven G. Bernath**, a citizen of the United States, residing at 275 Welburn Avenue, Unit E, Gilroy, California 95020; **David K. Norvell**, a citizen of the United States, residing at 570 Doverdale Drive, Monroe, Ohio 45050; **Patrick A. Weizman**, a citizen of the United States, residing at 6528 Michele Lane, Liberty Township, Ohio 45044; and **Jason L. Harris**, a citizen of the United States, residing at 5435 Hamilton Road, Lebanon, Ohio 45036; (hereinafter called "Assignors"), have made certain new and useful inventions or discoveries relating to:

SURGICAL INSTRUMENTS AND END EFFECTORS THEREFOR

for which they have this day executed an application for Letters Patent of the United States; and

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NOW, THEREFORE, BE IT KNOWN that for and in consideration of the sum of One Dollar and other valuable considerations to them moving, the receipt of which is hereby acknowledged, Assignors have sold, assigned, and transferred, and do hereby sell, assign and transfer unto said Assignee their entire right, title and interest in and to all said inventions and discoveries disclosed in said application whose identification above by serial number and filing date, when available is hereby authorized, and in and to said application, all substitutions, divisions, and continuations thereof, and in and to all Letters Patent, United States and foreign, that may be granted for said inventions and discoveries, and in and to all extensions, renewals, and reissues thereof, the same to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignors if this Assignment and sale had not been made;

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IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
David A. Witt (L.S.)

STATE OF Ohio )  
COUNTY OF ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **David A. Witt**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Zhifan F. Huang (L.S.)

STATE OF Ohio )  
COUNTY OF ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Zhifan F. Huang**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public



IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Timothy G. Dietz (L.S.)

STATE OF \_\_\_\_\_ )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Timothy G. Dietz**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

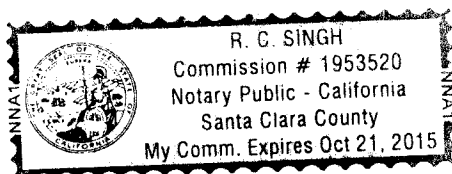
IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this 26<sup>TH</sup> day of APRIL, 2014.

  
Raymond M. Banks (L.S.)

STATE OF \_\_\_\_\_ )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Raymond M. Banks**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public



State of California County of SANTA CLARA ss.  
On 04/25/2014 before me R. C. Singh, Notary Public,  
personally appeared RAYMOND M. BANKS,  
who proved to me on the basis of satisfactory evidence to be the  
person(s) whose name(s) is/are subscribed to the within instrument and  
acknowledged to me that he/she/they executed the same in  
his/her/their authorized capacity(ies), and that by his/her/their  
signature(s) on the instrument the person(s), or the entity upon behalf of  
which the person(s) acted, executed the instrument. I certify under  
PENALTY OF PERJURY under the laws of the State of California that  
the foregoing paragraph is true and correct.  
WITNESS my hand and official seal.



PATENT

REEL: 032876 FRAME: 0017

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**Jeffrey L. Aldridge** (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Jeffrey L. Aldridge**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**Steven G. Bernath** (L.S.)

STATE OF \_\_\_\_\_ )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Steven G. Bernath**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
David K. Norvell (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **David K. Norvell**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Patrick A. Weizman (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Patrick A. Weizman**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**Jason L. Harris** (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Jason L. Harris**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

## ASSIGNMENT

Serial No. 14/171,035Filed: February 3, 2014

WHEREAS, David A. Witt, a citizen of the United States, residing at 1187 Chaucer Place, Maineville, Ohio 45039; Zhifan F. Huang, a citizen of the United States, residing at 4378 Serpentine Way, Mason, Ohio 45040; Timothy G. Dietz, a citizen of the United States, residing at 428 West Avenue, Wayne, Pennsylvania 19087; Raymond M. Banks, a citizen of the United States, residing at 22303 Regnart Road, Cupertino, California 95014; Jeffrey L. Aldridge, a citizen of the United States, residing at 106 W. Concord Drive, Lebanon, Ohio 45036; ~~Steven G. Bernath~~, a citizen of the United States, residing at 275 Welburn Avenue, Unit E, Gilroy, California 95020; David K. Norvell, a citizen of the United States, residing at 570 Doverdale Drive, Monroe, Ohio 45050; Patrick A. Weizman, a citizen of the United States, residing at 6528 Michele Lane, Liberty Township, Ohio 45044; and Jason L. Harris, a citizen of the United States, residing at 5435 Hamilton Road, Lebanon, Ohio 45036; (hereinafter called "Assignors"), have made certain new and useful inventions or discoveries relating to:

## SURGICAL INSTRUMENTS AND END EFFECTORS THEREFOR

for which they have this day executed an application for Letters Patent of the United States; and

WHEREAS, Ethicon Endo-Surgery, Inc., a corporation formed under the laws of the State of Ohio, (hereinafter called "Assignee"), is desirous of acquiring Assignors' entire right, title, and interest therein:

NOW, THEREFORE, BE IT KNOWN that for and in consideration of the sum of One Dollar and other valuable considerations to them moving, the receipt of which is hereby acknowledged, Assignors have sold, assigned, and transferred, and do hereby sell, assign and transfer unto said Assignee their entire right, title and interest in and to all said inventions and discoveries disclosed in said application whose identification above by serial number and filing date, when available is hereby authorized, and in and to said application, all substitutions, divisions, and continuations thereof, and in and to all Letters Patent, United States and foreign, that may be granted for said inventions and discoveries, and in and to all extensions, renewals, and reissues thereof, the same to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignors if this Assignment and sale had not been made;

And Assignors hereby authorize and request the Commissioner of Patents of the United States to issue said Letters Patent in accordance with this Assignment;

And for the consideration aforesaid, Assignors covenant and agree with said Assignee that he has a full and unencumbered title to the inventions and discoveries above described and hereby assigned, which title they warrant unto said Assignee, its successors and assigns;

And for the consideration aforesaid, Assignors further covenant and agree that they will, whenever requested, but without cost to them promptly communicate to said Assignee or its representatives any facts known to them relating to said inventions and discoveries, testify in any interference or legal proceedings involving said inventions and discoveries, and execute any additional papers that may be necessary to enable said Assignee or its representatives, successors, nominees, or assigns to secure full and complete protection for the said inventions and discoveries or that may be necessary to vest in said Assignee the complete title to the said inventions and discoveries and patents hereby conveyed and to enable it to record said title.

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**David A. Witt** (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **David A. Witt**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**Zhifan F. Huang** (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Zhifan F. Huang**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Timothy G. Dietz (L.S.)

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Timothy G. Dietz**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Raymond M. Banks (L.S.)

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Raymond M. Banks**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Jeffrey L. Aldridge (L.S.)


STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ )

ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared Jeffrey L. Aldridge, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

*Steve*  \_\_\_\_\_ (L.S.)  
Steven G. Bernath  
03/10/14

STATE OF \_\_\_\_\_ )  
 )  
COUNTY OF \_\_\_\_\_ )

ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared Steven G. Bernath, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

See attached notarial certificate

See attached notarial certificate

\_\_\_\_\_  
Notary Public



# CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

State of California

County of Santa Clara

On March 10, 2014 before me, Lolita Heer, a Notary Public

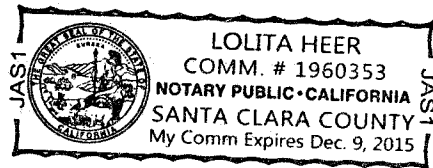
Personally appeared Steve G. Bernath  
Name(s) of Signer(s)

Who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to within instruments and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instruments.

I certify under Penalty of Perjury under the laws of the State of California that the forgoing paragraph is true and correct.

Witness my hand and official seal

Signature Lolita Heer  
Notary Public



## OPTIONAL

Description of Attached Document

Title of Type of Document Assignment

Document Date: \_\_\_\_\_ Number of Pages: 6

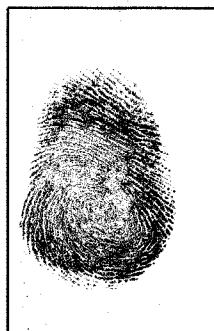
Signer(s) Other Than Name Above: \_\_\_\_\_

Capacity(ies) Claimed by Signer(s)

Signer(s) Name Steve G. Bernath

Signer(s) Name \_\_\_\_\_

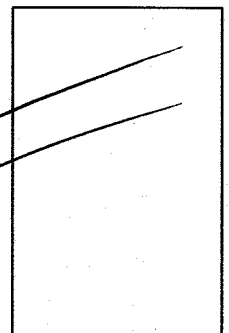
☒ Individual  
☐ Corporate Officer  
Title(s) \_\_\_\_\_  
☐ Partner: Limited or General  
☐ Attorney-in-Fact  
☐ Trustee  
☐ Guardian or Conservator  
Other: \_\_\_\_\_



Signer is Representing Self

☐ Individual  
☐ Corporate Officer  
Title(s) \_\_\_\_\_  
☐ Partner: Limited or General  
☐ Attorney-in-Fact  
☐ Trustee  
☐ Guardian or Conservator  
Other: \_\_\_\_\_

Signer is Representing \_\_\_\_\_



IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
David K. Norvell (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **David K. Norvell**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Patrick A. Weizman (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Patrick A. Weizman**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public

IN TESTIMONY WHEREOF, Assignor has hereunto set his hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
**Jason L. Harris** (L.S.)

STATE OF Ohio )  
 )  
COUNTY OF \_\_\_\_\_ ) ss.

BE IT REMEMBERED, That on this \_\_\_\_\_ day of \_\_\_\_\_, 2014, before me, a Notary Public, personally appeared **Jason L. Harris**, who I am satisfied is the person named in and who executed the foregoing instrument in my presence, and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed, and delivered the same as his voluntary act and deed for the uses and purposes therein expressed.

\_\_\_\_\_  
Notary Public