PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT3144324

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
SYMMETRY SURGICAL INC.	12/05/2014
SPECIALTY SURGICAL INSTRUMENTATION, INC.	12/05/2014
OLSEN MEDICAL, LLC	12/05/2014
SYMMETRY MEDICAL SSI REAL ESTATE, LLC	12/05/2014
SYMMETRY SURGICAL INTERNATIONAL, INC.	12/05/2014

RECEIVING PARTY DATA

Name:	GENERAL ELECTRIC CAPITAL CORPORATION, AS ADMINISTRATIVE AGENT
Street Address:	2 BETHESDA METRO CENTER
Internal Address:	SUITE 600
City:	BETHESDA
State/Country:	MARYLAND
Postal Code:	20814

PROPERTY NUMBERS Total: 38

Property Type	Number
Patent Number:	D708758
Patent Number:	8657823
Patent Number:	8579925
Patent Number:	8333775
Patent Number:	7771439
Patent Number:	D495807
Patent Number:	6620097
Patent Number:	6638280
Patent Number:	6685710
Patent Number:	6530883
Patent Number:	6241659
Patent Number:	7776065
Patent Number:	7938839
Patent Number:	6599309
Patent Number:	6238414

Property Type	Number
Patent Number:	6077290
Patent Number:	5893875
Patent Number:	5755723
Patent Number:	5849021
Patent Number:	5868786
Patent Number:	5728108
Patent Number:	6015426
Patent Number:	6019780
Patent Number:	5524755
Patent Number:	RE36666
Patent Number:	D371203
Application Number:	14089975
Application Number:	14090082
Application Number:	14084460
Application Number:	13314973
Application Number:	14020446
Application Number:	13669592
Application Number:	13534378
Application Number:	13337530
Application Number:	12370956
Patent Number:	5603724
Application Number:	61730536
Patent Number:	8894029

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	2060236-0107
NAME OF SUBMITTER:	JOYCE MILLER
SIGNATURE:	/Joyce Miller/
DATE SIGNED:	12/12/2014

Total Attachments: 24
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PATENT SECURITY AGREEMENT

THIS PATENT SECURITY AGREEMENT, dated as of December 5, 2014, is made by each of the entities listed on the signature pages hereof (each a "Grantor" and, collectively, the "Grantors"), in favor of General Electric Capital Corporation ("GE Capital"), as administrative agent (in such capacity, together with its successors and permitted assigns, "Agent") for the Secured Parties (as defined in the Credit Agreement referred to below).

W I T N E S S E T H:

WHEREAS, pursuant to the Credit Agreement, dated as of December 5, 2014 (as amended, restated or supplemented from time to time, the "Credit Agreement"), by and among **SYMMETRY SURGICAL INC.**, a Delaware corporation ("Symmetry"), **SPECIALTY SURGICAL INSTRUMENTATION, INC.**, a Tennessee corporation ("SSI"), **OLSEN MEDICAL, LLC**, a Delaware limited liability company ("Olsen") (Symmetry, SSI and Olsen are sometimes referred to herein collectively as "Borrowers" and individually as a "Borrower"), the other Credit Parties party thereto, Lenders and L/C Issuers from time to time party thereto and GE Capital, as Agent, Lenders and L/C Issuers have severally agreed to make extensions of credit to Borrowers upon the terms and subject to the conditions set forth therein;

WHEREAS, each Grantor has agreed, pursuant to that certain Guaranty and Security Agreement of even date herewith in favor of Agent (as amended, restated, supplemented or otherwise modified from time to time, the "Guaranty and Security Agreement"), to guarantee the Obligations (as defined in the Credit Agreement) of each Borrower; and

WHEREAS, all of Grantors are party to the Guaranty and Security Agreement pursuant to which Grantors are required to execute and deliver this Patent Security Agreement;

NOW, THEREFORE, in consideration of the premises and to induce Lenders, L/C Issuers and Agent to enter into the Credit Agreement and to induce Lenders and L/C Issuers to make their respective extensions of credit to Borrowers thereunder, each Grantor hereby agrees with Agent as follows:

Section 1. Defined Terms. Capitalized terms used herein without definition are used as defined in the Guaranty and Security Agreement.

Section 2. Grant of Security Interest in Patent Collateral. Each Grantor, as collateral security for the prompt and complete payment and performance when due (whether at stated maturity, by acceleration or otherwise) of the Secured Obligations of such Grantor, hereby mortgages, pledges and hypothecates to Agent for the benefit of the Secured Parties, and grants to Agent for the benefit of the Secured Parties a Lien on and security interest in, all of its right, title and interest in, to and under the following Collateral of such Grantor (the "Patent Collateral"):

(a) all of its Patents and all IP Licenses providing for the grant by or to such Grantor of any right under any Patent, including, without limitation, those referred to on Schedule 1 hereto;

(b) all reissues, reexaminations, continuations, continuations-in-part, divisionals, renewals and extensions of the foregoing; and

(c) all income, royalties, proceeds and Liabilities at any time due or payable or asserted under and with respect to any of the foregoing, including, without limitation, all rights to sue and recover at law or in equity for any past, present and future infringement, misappropriation, dilution, violation or other impairment thereof.

Section 3. Guaranty and Security Agreement. The security interest granted pursuant to this Patent Security Agreement is granted in conjunction with the security interest granted to Agent pursuant to the Guaranty and Security Agreement and each Grantor hereby acknowledges and agrees that the rights and remedies of Agent with respect to the security interest in the Patent Collateral made and granted hereby are more fully set forth in the Guaranty and Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein.

Section 4. Grantor Remains Liable. Each Grantor hereby agrees that, anything herein to the contrary notwithstanding, such Grantor shall assume full and complete responsibility for the prosecution, defense, enforcement or any other necessary or desirable actions in connection with their Patents and IP Licenses subject to a security interest hereunder.

Section 5. Counterparts. This Patent Security Agreement may be executed in any number of counterparts and by different parties in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Signature pages may be detached from multiple separate counterparts and attached to a single counterpart.

Section 6. Governing Law. This Patent Security Agreement and the rights and obligations of the parties hereto shall be governed by, and construed and interpreted in accordance with, the law of the State of Illinois.

[Signature pages follow]

IN WITNESS WHEREOF, each Grantor has caused this Patent Security Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

SYMMETRY SURGICAL INC., as a Grantor

By: _____
Name: David C. Milne
Title: Chief Administrative Officer, SVP, General Counsel and Corporate Secretary

SPECIALTY SURGICAL INSTRUMENTATION, INC., as a Grantor

By: _____
Name: David C. Milne
Title: Chief Administrative Officer, SVP, General Counsel and Corporate Secretary

OLSEN MEDICAL, LLC, as a Grantor

By: Specialty Surgical Instrumentation, Inc., as its Member

By: _____
Name: David C. Milne
Title: Chief Administrative Officer, SVP, General Counsel and Corporate Secretary

SYMMETRY MEDICAL SSI REAL ESTATE, LLC, as a Grantor

By: Specialty Surgical Instrumentation, Inc., as its Member

By: _____
Name: David C. Milne
Title: Chief Administrative Officer, SVP, General Counsel and Corporate Secretary

SYMMETRY SURGICAL INTERNATIONAL, INC. , as a Grantor

By: _____
Name: David C. Milne
Title: Chief Administrative Officer, SVP, General Counsel and Corporate Secretary

ACCEPTED AND AGREED
as of the date first above written:

GENERAL ELECTRIC CAPITAL CORPORATION, as Agent

By: _____
Name: Jason Dufour
Title: Duly Authorized Signatory

SCHEDULE I
TO
PATENT SECURITY AGREEMENT

Patent Registrations

I. REGISTERED PATENTS

Document No.	Title	Abstract	Inventors	Priority Date	File Date	Publish/ Grant Date	Expiration Date
USD708758	Metal bellow valve		Jacene, Michael; Griffiths, Jerry R.; Johnson, Christopher M.; Kiapour, Ali	8/24/2012	8/24/2012	7/8/2014	7/8/2028
US8657823	Rongeur with detachable tips	A rongeur has an elongated shank having a distal end and a proximal end. An elongated crossbar, which moves between a retracted position and a tissue capturing position position, has a distal end and a proximal end and reciprocates axially with respect to the shank. A first tip is selectively connected to the shank. The first tip has a proximal end and a distal end. The proximal end has a reduced diameter post. In the selectively connected position, the reduced diameter post of the first tip is received in a bore of the shank. A second tip is selectively connected to the crossbar. The second tip has a proximal end and a distal end. The proximal end has a reduced diameter post. In the selectively connected position, the reduced diameter post of the second tip is received in a bore of the crossbar.	Agbodoe, Victor B.	12/12/2011	12/12/2011	2/25/2014	2/25/2018
US8579925	Medical clamp	A medical clamp includes a lower arm assembly, an upper arm assembly, and a belt. The upper arm assembly is pivotally connected to the lower arm assembly. The lower arm assembly and the upper arm assembly are configured for clamping relative to one another. The belt is connected to the lower arm assembly and the	Staggs, Stephen M.	7/7/2010	7/7/2011	11/12/2013	11/12/2017

		upper arm assembly and is configured for forming a loop therebetween.					
US8333775	Gastric band insertion instrument	An endoscopic surgical instrument is used in minimally invasive laparoscopic surgery for inserting a gastric band into a patient's abdomen through a laparoscopic port. The gastric band insertion instrument includes a handle, an elongated shaft and a distal end assembly. The elongated shaft includes an actuator rod that opens and closes a movable jaw at the distal end. A pin at the distal end assembly engages a hole in the front of the gastric band, and the movable jaw is closed thereby securely capturing the front end of the gastric band. The shaft and the captured gastric band are inserted through a laparoscopic port into the patient's abdomen.	Griffiths, Jerry R.	12/22/2005	6/11/2010	12/18/2012	12/18/2016
US7771439	Gastric band insertion instrument	An endoscopic surgical instrument is used in minimally invasive laparoscopic surgery for inserting a gastric band into a patient's abdomen through a laparoscopic port. The gastric band insertion instrument includes a handle, an elongated shaft and a distal end assembly. The elongated shaft includes an actuator rod that opens and closes a movable jaw at the distal end. A pin at the distal end assembly engages a hole in the front of the gastric band, and the movable jaw is closed thereby securely capturing the front end of the gastric band. The shaft and the captured gastric band are inserted through a laparoscopic port into the patient's abdomen.	Griffiths, Jerry R.	2/4/2005	12/22/2005	8/10/2010	8/10/2018
USD495807	Tray		Agbodoe, Victor B.; Richardson, Gary	6/23/2003	6/23/2003	9/7/2004	9/7/2018
JP2003164460	RONGEUR WITH DRAINAGE	PROBLEM TO BE SOLVED: To provide a rongeur enabling the approach of a sterilizer or the like to component parts during cleaning or sterilization, and a method of sterilizing it.SOLUTION: The rongeur 10 has one or more drainage holes 88 passing through its shank 12 into a space between the shank and a crossbar 20 to enable the discharge of fluid while promoting cleaning and	Agbodoe, Victor B.	10/10/2001	10/9/2002	6/10/2003	

		sterilization.COPYRIGHT: (C)2003,JPO					
EP1302168	Rongeur with drainage	Abstract of EP1302168 A rongeur (10) has one or more drainage holes (88) through its shank (12) into a space between its shank (12) and crossbar (20) to allow drainage of fluid therefrom and to enhance cleaning and sterilization.	Agbodoe, Victor B.	10/10/2001	10/9/2002	12/12/2007	
EP1302168	Rongeur with drainage	A rongeur (10) has one or more drainage holes (88) through its shank (12) into a space between its shank (12) and crossbar (20) to allow drainage of fluid therefrom and to enhance cleaning and sterilization.	Agbodoe, Victor B.	10/10/2001	10/9/2002	4/16/2003	
CA2407023	RONGEUR WITH DRAINAGE	A rongeur has one or more drainage holes through its shank into a space between its shank and crossbar to allow drainage of fluid therefrom and to enhance cleaning and sterilization.	AGBODOE VICTOR B	10/10/2001	10/9/2002	4/10/2003	
CA2407023	RONGEUR WITH DRAINAGE	A rongeur has one or more drainage holes through its shank into a space between its shank and crossbar to allow drainage of fluid therefrom and to enhance cleaning and sterilization.	AGBODOE VICTOR B	10/10/2001	10/9/2002	12/7/2010	
MXPA02009981	RONGEUR WITH DRAINAGE.	A rongeur has one or more drainage holes through its shank into a space between its shank and crossbar to allow drainage of fluid therefrom and to enhance cleaning and sterilization.	AGBODOE VICTOR B	10/10/2001	10/9/2002	12/19/2005	
DE60223978	Chirurgische Schneidzange mit Ablaufvorrichtung		AGBODOE VICTOR B	10/10/2001	10/9/2002	1/24/2008	
DE60223978	Schneidzange mit Ablauf		Agbodoe, Victor B.	10/10/2001	10/9/2002		
AU2002301343	Rongeur with drainage		AGBODOE VICTOR B	10/10/2001	10/7/2002	2/15/2007	
US6620097	Three-dimensional tilt ratchet mechanism	A three-dimensional tilt ratchet mechanism that is able to rotate, pivot, and bend forwards or backwards with ease is provided. The mechanism includes a device for multi-dimensional movement and placement of a retractor blade which comprises a first member adapted to receive a stem of a retractor blade. The first member has a locking mechanism effective to enable selective lateral adjustment of the retractor blade relative to the first member. Also provided is a second member to which the first member is mated. The first	Bookwalter, John R.; Cabrera, Rene; Memorrow, John; Moore, Kyle; Torres, Nelson	3/29/2002	3/29/2002	9/16/2003	9/16/2015

		member is vertically pivotable with respect to the second member to enable selective vertical pivoting adjustment of the retractor blade relative to the second member. A rotator indexing body is mated to the second member and is adapted to mount onto a rim of a surgical support. The second member is rotatable with respect to the rotator indexing body such that the first member, the second member and the retractor blade are able to selectively rotate about the longitudinal axis of the rotator indexing body.					
US6638280	Rongeur with drainage	A rongeur has one or more drainage holes through its shank into a space between its shank and crossbar to allow drainage of fluid therefrom and to enhance cleaning and sterilization.	Agbodoe, Victor B.	10/10/2001	10/10/2001	10/28/2003	10/28/2015
US6685710	Rongeur with detachable crossbar	A rongeur has a detachable crossbar to enhance cleaning and sterilization. A pin in a slot on one of the rongeur's handles is moveable out of the slot to permit extended retraction of the crossbar to a position in which it may disengage from the shank of the rongeur.	Agbodoe, Victor B.; Richardson, Gary; Torres, Nelson P.	10/10/2001	10/10/2001	2/3/2004	2/3/2016
US6530883	Surgical retractor assembly	A retractor systems includes a retractor blade with a blade portion and a handle portion that fit together in a modular way to allow different blades to be removably and interchangeably affixed to the handle assembly. A dovetail mounts the blade in a plane substantially transverse or perpendicular to the shaft. Preferably, the handle assembly translates within a multi-position locking mechanism to allow adjustment of the handle extension along one or more axes, while the in-plane swing of the blade about the shaft conveniently positions the tip of the blade under tissue to be retracted when bone or hard tissue may impede access along a retraction direction parallel to the axis of the shaft. The interchangeable blades may have different sizes between approximately 5 and 15 centimeters length, and are manually affixed to the handle to set the reach and scope of the retractor for a particular	Bookwalter, John R.; Cabrera, Rene J.; Walker, Wesley C.; Hayes, Kenneth R.	10/6/1999	6/1/2001	3/11/2003	6/1/2021

		operation. Preferably a blade is formed of a radiolucent polymer, permitting unobstructed imaging when the retractor is occluded during surgery on a joint, or during an anterior approach to the spine. The blade may be formed with its surface dished or curved in one or more directions, or may have a lip or flare adapted for a contacting or retracting a particular tissue or structure. The surface of the blade swings down to engage muscle along a path substantially tangent to a hard tissue structure or bone from which the tissue is to be retracted.					
EP1090589	Surgical retractor assembly with controlled rotation	A retractor assembly (20) for positioning tissue in a surgical arena, such retractor assembly (20) comprising a shaft (310) adapted for longitudinal movement in a clamp channel (42) of non-circular cross-sectional shape wherein the shaft (310) has at least one elongated surface ridge (311) such that the shaft (310) rotates freely within a limited range in said channel (42) for self alignment when contacting tissue and the shaft (310) jams against the channel (42) by interference of said ridge (311) with said channel (42) to automatically limit a range of rotation of the shaft (310).	Bookwalter, John R.; Cabrera, Rene J.; Walker, Wesley C.; Hayes, Kenneth R.	10/6/1999	10/5/2000	4/11/2001	
EP1090589	Surgical retractor assembly with controlled rotation	Abstract of EP1090589 A retractor assembly (20) for positioning tissue in a surgical arena, such retractor assembly (20) comprising a shaft (310) adapted for longitudinal movement in a clamp channel (42) of non-circular cross-sectional shape wherein the shaft (310) has at least one elongated surface ridge (311) such that the shaft (310) rotates freely within a limited range in said channel (42) for self alignment when contacting tissue and the shaft (310) jams against the channel (42) by interference of said ridge (311) with said channel (42) to automatically limit a range of rotation of the shaft (310).	Bookwalter, John R.; Cabrera, Rene J.; Walker, Wesley C.; Hayes, Kenneth R.	10/6/1999	10/5/2000	2/28/2007	
US6241659	Surgical retractor assem	A retractor blade mounts on a shaft having a controlled degree of rotation and swings down to grip and retract tissue from bone or a hard tissue structure. The	Bookwalter, John R.; Cabrera, Rene J.;	10/6/1999	10/6/1999	6/5/2001	10/6/2019

	bly with controlled rotation	retractor blade includes a blade portion and a handle portion which may be integrally joined or may fit together in a modular way to allow different blades to be removably and interchangeably affixed to the handle assembly. A dovetail may mount the blade in a plane substantially transverse or perpendicular to the shaft. The shaft translates within a multi-position locking mechanism to allow adjustment of the handle extension along one or more axes, while the in-plane swing of the blade about the shaft conveniently positions the tip of the blade under tissue to be retracted when bone or hard tissue impedes access along the retraction direction parallel to the axis of the shaft. The retractor handle has a regular cross-section with one or more protruding lobes or ridges extending along the axial direction such that the edge-to-edge diameter of the handle varies with angular position about the axis, and peaks at one or more lobes or opposed pairs of lobes so that the ridges jam by interference against the walls of a channel in a clamping assembly. Preferably the blade is formed of a radiolucent polymer and may have its surface dished or curved in one or more directions, or may have a lip or flare adapted for contacting or retracting a particular tissue or structure.	Walker, Wesley C.; Hayes, Kenneth R.				
Issue Number: DI6304952-0	RONGEURTRAY						
Issue Number: 036180	RONGEURTRAY						
Issue Number: 40308223.4	RONGEURTRAY						
Issue Number: 40308223.4	RONGEURTRAY						
US20130082157 Issued:	RETRACTOR RING	A retractor ring assembly includes a ring holder that has a first selectively engaged connection and a second	Agbodoe, Victor; Storz, Olaf;	9/30/2011	9/30/2011	4/4/2013	US20130082157

8,894,029	HOLDER	selectively engaged connection. A first and second ring portion each has a proximal end and a distal end. The proximal end of the first and second ring portions are selectively connected to the respective first and second selectively engaged connections of the ring holder. The distal end of the first ring portion has a third selectively engaged connection. The distal end of the second ring portion has a fourth selectively engaged connection. The third selectively engaged connection and the fourth selectively engaged connection are connectable to form a reinforced closed ring configuration, and are disconnectable to form an open ring configuration.	Bookwalter, John R.				
CA2680258	IMPROVED END EFFECTOR MECHANISM FOR A SURGICAL INSTRUMENT	Improved end effector mechanisms for a surgical instrument used in minimally invasive surgical instruments as well as instruments for general surgery or as part of robotically controlled end effectors. These end effector mechanisms include multiple grasping elements paired with drive links. Each grasping element also serves as a stabilizing link for the next most distal grasping element, forcing it to maintain its relative angle with respect to the opposing grasping elements.	DIFRANCESCO FRANCIS J; GRIFFITHS JERRY R	3/20/2007	10/19/2007	9/25/2008	
CA2680258	IMPROVED END EFFECTOR MECHANISM FOR A SURGICAL INSTRUMENT	Improved end effector mechanisms for a surgical instrument used in minimally invasive surgical instruments as well as instruments for general surgery or as part of robotically controlled end effectors. These end effector mechanisms include multiple grasping elements paired with drive links. Each grasping element also serves as a stabilizing link for the next most distal grasping element, forcing it to maintain its relative angle with respect to the opposing grasping elements.	GRIFFITHS JERRY R; DIFRANCESCO FRANCIS J	3/20/2007	10/19/2007	3/20/2012	
US7776065	End effector mechanism for a surgical	Improved end effector mechanisms for a surgical instrument used in minimally invasive surgical instruments as well as instruments for general surgery or as part of robotically controlled end effectors. These end effector mechanisms include	Griffiths, Jerry R.; Difrancesco, Francis J.	3/20/2007	9/24/2007	8/17/2010	8/17/2018

	instrument	multiple grasping elements paired with drive links. Each grasping element also serves as a stabilizing link for the next most distal grasping element, forcing it to maintain its relative angle with respect to the opposing grasping elements.					
US7938839	Interlocking trigger assembly for a suturing device	An endoscopic suturing device having an interlocking trigger assembly for preventing premature needle deployment. The suturing device comprises a handle assembly that includes a movable handle interlocking with a trigger. The suturing device further comprises an end effector having an upper jaw, a lower jaw and a needle/suture mechanism. The motion of the movable handle causes the upper jaw to move relative to the lower jaw. The activation of the trigger causes deployment of the needle/suture mechanism. The interlocking mechanism ensures that the needle/suture is deployed only when the upper jaw is below a maximum allowable distance from the lower jaw.	Difrancesco, Francis J.; Griffiths, Jerry R.	6/13/2003	2/26/2004	5/10/2011	5/10/2015
US6599309	Pin-less surgical instrument	A miniature articulated tip instrument for surgical and like uses, comprising: a thumb housing with an elongated fixed jaw assembly mounted thereto and extending therefrom. A movable jaw actuator member is slidably mounted in a groove formed in the said fixed jaw assembly, the proximal end of the actuator member being seated in a finger housing which is mounted to and spring biased from the thumb housing. A movable jaw defining at least one arcuate projection extending therefrom for pivotal engagement with the actuator member is additionally provided with a second arcuate projection and a concnetric cutout on its opposite side from the second arcuate projection to engage the fixed jaw member and provide a pivot point. The actuator member drives the movable jaw member in a pivoting motion within a throughgoing slot formed in the fixed jaw member within a range of movement with respect to the fixed jaw assembly	Gilman, Brian W.	9/9/1999	8/22/2000	7/29/2003	7/29/2015

		between extended and retracted positions for effecting selective user controlled working movement.					
US6238414	Laparoscopic instrument with parallel actuated jaws	A surgical instrument including a handle assembly, and end effector mechanism including jaws, an elongated shaft assembly having a longitudinal actuation rod linearly reciprocating within a hollow sheath, slidably connecting the handle assembly to the jaws. Jaws having first and second grasping members have a mechanically controlled linkage assembly enabling the jaws to be adapted such that they can only open in parallel relationship to each other. The linkage assembly having a pair of toggle links which are rotatively connected to a linear translation member to cause the jaws to open or close. The linkage assembly further having a pair of stabilizing links, which at one end are pivotally anchored to a non-reciprocal movement member, and at an opposite end interconnected with the jaws to maintain the opposing serrated grasping surfaces of the jaws in a parallel relationship to each other.	Griffiths, Jerry R.	1/20/2000	1/20/2000	5/29/2001	1/20/2020
US6077290	Endoscopic instrument with removable front end	An endoscopic instrument having a ball and socket connection for releasably attaching a front end assembly to an actuating handle assembly comprising of a base having a downwardly extending stationary handle and a pivoting handle. The socket comprising a plurality of resilient prongs to create a friction fit that can be disengaged by the surgeon retracting the pivoting thumb handle. The socket disposed in the base and linkage provided for actuating the instrument.	Marini, Louis J.	9/10/1999	9/10/1999	6/20/2000	9/10/2019
US5893875	Surgical instrument with replaceable jaw assembly	A detachable and replaceable end effector assembly. The detachable mechanism is made of standard end effectors attached to an actuating tip and pinned inside a yoke assembly. Replacement is made by pulling back a spring loaded radial lock 90, to disengage two rear tabs 51 on the outer tip 50. The yoke assembly is then rotated 90	O'connor, Paul D.; Batchelder, Christopher M.; Lombardo, Giuseppe	10/7/1994	5/15/1997	4/13/1999	5/15/2017

		degrees to disengage the rear yoke pin 9 from the tubular shaft 70. This rotation of 90 degrees also unlocks the T-bar 45 from the front "T" slot of the long actuator 80. The end effector or jaw assembly is then free to be pulled away from the remainder of the shaft. In addition there is a bayonet connection to hold the parts together and prevent accidental disconnection.					
US5755723	Retrograde surgical instrument	A handle-activated retrograde endoscopic instrument with an extension shaft rotatably connected to a fixed handle, the rotation limited by a spring-loaded lock into shaft detents corresponding to rotational position options, and with an extension of an outer tip and reduction of open range of effector movement to shield any pinch area.	Lombardo, Giuseppe	4/18/1997	4/18/1997	5/26/1998	4/18/2017
US5849021	Elongated thumb loop for surgical instrument	A handle for endoscopic surgical instruments with an elongated thumb loop optimized for providing support and driving force in endoscopic surgery.	Difrancesco, Francis J.; Reay-young, Clive B.	4/18/1997	4/18/1997	12/15/1998	4/18/2017
US5868786	Integral log linkage for micro-instrument	A articulating tip structure with a pivot lug and a rotatable jaw with a pivot seat which wraps around the lug in normal operation and provides a gap for disengagement of the lug to allow disassembly and assembly.	Difrancesco, Francis J.	4/18/1997	4/18/1997	2/9/1999	4/18/2017
US5728108	Rotary drive mechanism for instrument handle	A handle and drive mechanism for providing a reciprocating rotary action of a driveshaft, first in one rotational direction and then reversing the rotational direction, suitable for suturing and other endoscopic operations.	Griffiths, Jerry R.; Young Jr., John	3/20/1997	3/20/1997	3/17/1998	3/20/2017
US6015426	Rotatable linkage for micro-instrument	A rotatable linkage for use in handling small objects at a distance, for example, in endoscopic surgery, by converting the longitudinal motion of a drive member to the opening and closing of jaws at the distal end of the drive member wherein the drive member is enclosed in an elongated housing on which the jaws are mounted which may be rotated relative to the drive member on a bearing by rotation	Griffiths, Jerry Richard	7/13/1994	2/27/1997	1/18/2000	2/27/2017

		of the housing.						
US6019780	Dual pin and groove pivot for micro-instrument	A miniature articulating tip for an endoscopic instrument comprising a jaw with a curved slot through which two pivot lugs pass and are anchored in or integral to a fixed outer tip. The two pivot lugs guide the jaw over a path defined by the curved slot and provide stops at the ends of the curve.	Lombardo, Giuseppe; Difrancesco, Francis J.; Gilman, Brian W.; Burke, Roger M.	1/30/1997	1/30/1997	2/1/2000	1/30/2017	
US5524755	Sterilization container	Deeds, Charles D.	3/14/1994	5/22/1995	6/11/1996	5/22/2015		
US5603724	Suction punch	A cutting-suctioning tool for micro-surgery including closing jaws, that in closed position, provide a suctioning/fluid channel axially through the jaws for removal of tissue and fluids.	O'connor, Paul D.	2/13/1995	2/13/1995	2/18/1997	2/13/2015	
USRE36666	Micro-instrument	A microsurgical instrument with opposing jaws rotatable relative to one another using a pivot integral to a frame comprising one jaw for rotating the other jaw and a linkage to push one jaw rotatably towards the other jaw wherein a distal-most surface of that jaw pushes against a surface of jaw to be moved.	Honkanen Deceased., George P.; Burke, legal representative; by Roger M.; Burke, Roger M.; Weaver, Paul C.	5/31/1990	10/6/1994	4/18/2000	4/18/2017	
Issue Number: D371203	Sterilization Container (Ultra Container vent holes)	Medical Device Systems, Inc.I Missing assignment			3/14/1994	Issue Date: 6/25/1996		

II. PENDING PATENTS

Document No.	Title	Abstract	Inventors	Priority Date	File Date	Publish/Grant Date
WO/2014/085718	LINEAR SLIDE INDICATOR	The present invention provides a linear slide indicator used in connection with a medical device to indicate radial expansion or linear translation of a component within the device. The medical instrument includes a shaft, a handle, an end effector and a linear slide indicator. The shaft extends along a shaft axis and is configured to travel linearly along the shaft axis. The handle is configured to be attached to a proximal end of the shaft and to rotate around the shaft axis. The end effector is configured to be attached to a distal end of the shaft and to travel linearly with the shaft along the shaft axis via the rotational motion of the handle. The linear slide indicator is configured to indicate a magnified value of an actual traveled linear distance of the end effector.	ATTAR, Matthew	11/29/2012	11/27/2013	6/5/2014
US2014017748	THREE DIMENSIONAL TILT RACHET WITH SELF RETAINING MECHANISM	A ratchet assembly for multi-dimensional movement and placement of a retractor blade includes a retractor blade holder, a housing member, a rotating indexer and a self-retaining locking mechanism. The retractor blade holder is shaped and dimensioned to receive a stem of a retractor blade and includes a locking mechanism that enables selective lateral adjustment of the retractor blade relative to the retractor blade holder. The retractor blade holder is mated to the housing member and is vertically pivotable with respect to the housing member to enable selective vertical pivoting adjustment of the retractor blade relative to the housing	Bookwalter, John; Redmond, Kevin	11/28/2012	11/26/2013	6/19/2014

		member. The rotating indexer is mated to the housing member, and the housing member is rotatable with respect to the rotating indexer so that the retractor blade holder, the housing member and the retractor blade are able to selectively rotate about the longitudinal axis of the rotating indexer. The rotating indexer is shaped and dimensioned to mount onto a rim of a surgical support. The self-retaining locking mechanism simultaneously locks or unlocks the position of the housing member relative to the rotating indexer and the position of the rotating indexer and the entire ratchet assembly onto the rim of the surgical support.				
US20140171949	LINEAR SLIDE INDICATOR	The present invention provides a linear slide indicator used in connection with a medical device to indicate radial expansion or linear translation of a component within the device. The medical instrument includes a shaft, a handle, an end effector and a linear slide indicator. The shaft extends along a shaft axis and is configured to travel linearly along the shaft axis. The handle is configured to be attached to a proximal end of the shaft and to rotate around the shaft axis. The end effector is configured to be attached to a distal end of the shaft and to travel linearly with the shaft along the shaft axis via the rotational motion of the handle. The linear slide indicator is configured to indicate a magnified value of an actual traveled linear distance of the end effector.	Attar, Matthew J.	11/29/2012	11/26/2013	6/19/2014
WO/2014/081759	SYSTEM AND METHOD FOR FORMING A CURVED TUNNEL	A drill system for forming a curved tunnel in a bone includes a drill bit guidance device. The drill bit guidance device includes an elongated stationary outer tube extending along a first axis and an elongated inner	GRIFFITHS, Jerry, R.; FERNANDEZ, Jose	11/20/2012	11/20/2013	5/30/2014

	IN BONE	tube. The elongated inner tube is configured to slidably move within the elongated stationary outer tube along the first axis and to exit from a distal end of the elongated outer tube. The elongated inner tube has a partially slotted distal end portion including a plurality of semi-cross-sectional slots extending perpendicular to the first axis. Each slot is configured to collapse inward in the slot direction when exiting the distal end of the elongated outer tube, thereby curving the distal end portion of the elongated inner tube.				
US2014017 1948	SYSTEM AND METHOD FOR FORMING A CURVED TUNNEL IN BONE	A drill system for forming a curved tunnel in a bone includes a drill bit guidance device. The drill bit guidance device includes an elongated stationary outer tube extending along a first axis and an elongated inner tube. The elongated inner tube is configured to slidably move within the elongated stationary outer tube along the first axis and to exit from a distal end of the elongated outer tube. The elongated inner tube has a partially slotted distal end portion including a plurality of semi-cross-sectional slots extending perpendicular to the first axis. Each slot is configured to collapse inward in the slot direction when exiting the distal end of the elongated outer tube, thereby curving the distal end portion of the elongated inner tube.	Griffiths, Jerry R.; Fernande z, Jose	11/20/2012	11/19/2013	6/19/2014
WO/2013/1 34493	CONSTRIC TING PRESSURE VALVE APPARAT US AND METHODS THEREOF	A valve apparatus and methods associated thereof are provided. The valve apparatus includes a valve housing structure. A first valve portion is connected to the valve housing structure, wherein the first valve portion has a sealing edge. A second valve portion is positioned at least partially within the valve	3/9/2012	3/7/2013	9/12/2013	

		housing structure. A constrictable membrane has a pressurizable interior compartment, wherein the constrictable membrane supported by the second valve portion and positioned proximate to the first valve portion, wherein at least a portion of the constrictable membrane is movable to engageable with the sealing edge of the first valve portion.				
WO/2013/089959	RONGEUR WITH DETACHABLE TIPS	A rongeur has an elongated shank having a distal end and a proximal end. An elongated crossbar, which moves between a retracted position and a tissue capturing position position, has a distal end and a proximal end and reciprocates axially with respect to the shank. A first tip is selectively connected to the shank. The first tip has a proximal end and a distal end. The proximal end has a reduced diameter post. In the selectively connected position, the reduced diameter post of the first tip is received in a bore of the shank. A second tip is selectively connected to the crossbar. The second tip has a proximal end and a distal end. The proximal end has a reduced diameter post. In the selectively connected position, the reduced diameter post of the second tip is received in a bore of the crossbar.	AGBODOE, Victor, B.	12/12/2011	11/14/2012	6/20/2013
WO/2013/059640	UNIVERSAL ARM SYSTEM	A universal arm has a proximal end, a distal end and a middle portion therebetween. The middle portion has a plurality of interconnected ball and socket pieces. A plurality of clamps are selectively fixedly connected to the distal end of the universal arm by a connection that permits the selective rotation of each one of the plurality of clamps by 360 with respect to the distal end of the universal arm.	AGBODOE, Victor; STORZ, Olaf	10/21/2011	10/19/2012	4/25/2013

US20120150213	MEDICAL COMPRESSION DEVICE		Gordon, Charles Samuel Squire	12/10/2010	12/9/2011	6/14/2012
EP2648626	A MEDICAL COMPRESSION DEVICE		Gordon, Charles Samuel	12/10/2010	12/9/2011	10/16/2013
TW201235001	Medical compression device	A compression apparatus having a tension device configured to be secured relative to a work area. A compression member is adjustably coupled to the tension device. The compression member having a contact surface configured to apply pressure relative to an anatomical location.	GORDON CHARLES SAMUEL SQUIRE	12/10/2010	12/9/2011	9/1/2012
US20130099081	UNIVERSAL ARM SYSTEM	A universal arm has a proximal end, a distal end and a middle portion therebetween. The middle portion has a plurality of interconnected ball and socket pieces. A plurality of clamps are selectively fixedly connected to the distal end of the universal arm by a connection that permits the selective rotation of each one of the plurality of clamps by 360° with respect to the distal end of the universal arm.	Agbodoe, Victor; Storz, Olaf	10/21/2011	12/8/2011	4/25/2013
SMI0203.US Serial No. 14/020,446	FEMORAL ELEVATOR				September 6, 2013	
SMI0203.EP Serial No. 41470878.4	FEMORAL ELEVATOR	We wish to file foreign protection in the countries listed below. 1. UK 2. France 3. Switzerland 4. Germany 5. Italy 6. Spain			June 3, 2014	
File No. SM-41 PCT Serial No. 61/730,536 Application Number PCT/US2013/072352	Three Dimensional Tilt Ratchet with Self Retaining Mechanism (Ro-Tilt)	PCT filing receipt for the above mentioned patent application as filed on 11/27/2013. An Application Number PCT/US2013/072352 was assigned. The 30 month deadline for entering national phases is 5/28/2015.			Nov 28,2012	

Document No.	Title	Abstract	Inventors	Priority Date	File Date	Publish/Grant Date
WO/2013/101918	INSTRUMENT WITH REMOVABLE TIP	A laparoscopic instrument (10) is disclosed, including an elongated tube (12) defining a proximal portion and a distal portion; an end effector (14) removably coupled to the distal portion, the end effector including first and second elements pivotably coupled to one another; an anchor (20) coupled to the tube and a pivot point (22) of the end effector to restrict axial movement of the end effector; and a sleeve (30) movably coupled to the tube, where the sleeve is slidable across at least a portion of the end effector to secure the end effector to the tube.		12/27/2011	12/27/2012	7/4/2013
US20130118324	METHOD FOR FASTENING A TOOL HANDLE TO A TOOL SHAFT	A method for fastening a tool handle to a tool shaft includes the following steps. First, providing a tool shaft comprising an elongated body having a proximal end and a distal end. Next, providing a tool handle comprising a distal end, a proximal end and a socket formed at the distal end. Next, inserting the proximal end of the tool shaft into the socket of the tool handle, and then staking the proximal end of the tool shaft to the tool handle from two opposite directions.	Gowin Jr., Leo F.	11/10/2011	11/6/2012	5/16/2013
WO/2014/003746	SUTURE CUTTER	An improved suture cutter for cutting high strength sutures used in arthroscopic surgeries includes a movable handle that moves rotationally around a pivot. This rotational motion is translated through a linkage into near linear movement at the distal end of a moving member. At the distal end, the moving member pushes a cutting blade onto an inclined stationary blade and thereby cuts a suture captured between the moving cutting blade and the inclined stationary	GRIFFITHS, Jerry, R.	6/27/2012	6/28/2012	1/3/2014

		blade.				
US20140005689	SUTURE CUTTER	An improved suture cutter for cutting high strength sutures used in arthroscopic surgeries includes a movable handle that moves rotationally around a pivot. This rotational motion is translated through a linkage into near linear movement at the distal end of a moving member. At the distal end, the moving member pushes a cutting blade onto an inclined stationary blade and thereby cuts a suture captured between the moving cutting blade and the inclined stationary blade.	Griffiths, Jerry R.	6/27/2012	6/27/2012	1/2/2014
US20130165907	INSTRUMENT WITH REMOVABLE TIP	A laparoscopic instrument is disclosed, including an elongated tube defining a proximal portion and a distal portion; an end effector removably coupled to the distal portion, the end effector including first and second elements pivotably coupled to one another; an anchor coupled to the tube and a pivot point of the end effector to restrict axial movement of the end effector; and a sleeve movably coupled to the tube, where the sleeve is slidable across at least a portion of the end effector to secure the end effector to the tube.	Attar, Matthew J.; Jacene, Michael; Griffiths, Jerry R.; Gowin, Leo; Johnson, Christopher; Marini, Louis J.	12/27/2011	12/27/2011	6/27/2013
US20090157104	SURGICAL ROTARY CAPTURE INSTRUMENT FOR GASTRIC BAND CLOSING	An endoscopic surgical rotary capture instrument is used in minimally invasive laparoscopic surgery for closing a gastric band having a buckle end a free end. The rotary capture instrument includes a pusher end that has a stationary jaw and a movable jaw. The movable jaw is actuated by rotary motion of an inner shaft. The jaws are used to gasp securely and push the tube end of the gastric band after it has been threaded through the buckle end of the band. A hook instrument is used to hold the buckle end securely while the	Jones, Daniel B.; Griffiths, Jerry R.; Difrancesco, Francis J.	12/22/2005	2/13/2009	6/18/2009

		rotary capture instrument is used to push the free end of the gastric band.				
File No. TNCO-28 Serial No. 12/370,956 Issue No. 20090157104	SURGICAL ROTARY CAPTURE INSTRUMENT FOR GASTRIC BAND CLOSING	On Appeal -- Awaiting Decision by the Board of Appeals - 8-22-2013			2/13/2009	

LICENSES

BOOKWALTER LICENSE AGREEMENT	**LICENSING**	**3/1/2005**
BOOKWALER AMENDMENT	**LICENSING**	**11/1/2007**
GREENBERG LICENSE AGREEMENT	**LICENSING**	**10/1/2006**
HARDY LICENSE AGREEMENT	**LICENSING**	**4/12/2002**
MAGRINA LICENSE AGREEMENT	**LICENSING**	**7/1/1989**
RHOTAN LICENSE AGREEMENT	**LICENSING**	**10/2/1975**
HARDY AMENDMENT	**LICENSING**	**12/1/2011**
RHOTAN AMENDMENT	**LICENSING**	**2/9/2006**
SYNERGETICS LICENSE AGREEMENT	**LICENSING**	**1/1/2009**
SPETZLER LICENSE AGREEMENT	**LICENSING**	**1/8/1987**
HILLWAY LICENSE AGREEMENT	**LICENSING**	**5/24/1996**
RHOTAN AMENDMENT	**LICENSING**	**12/8/2011**
HARDY AMENDMENT	**LICENSING**	**12/1/2011**
BOOKWALTER AMENDMENT	**LICENSING**	**12/8/2011**
STERILIZATION CONTAINER ASSIGNMENT	**LICENSING**	**6/7/2011**
HILLWAY LICENSE AGREEMENT	**LICENSING**	**8/30/1988**
HEMITEK	**LICENSING**	**12/29/1995**