PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 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

PATENT

503097718 REEL: 034485 FRAME: 0011

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

Fax Number: (703)712-5050

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: 703-712-5352

Email: jmiller@mcguirewoods.com

Correspondent Name: JOYCE MILLER

Address Line 1: 1750 TYSONS BLVD.

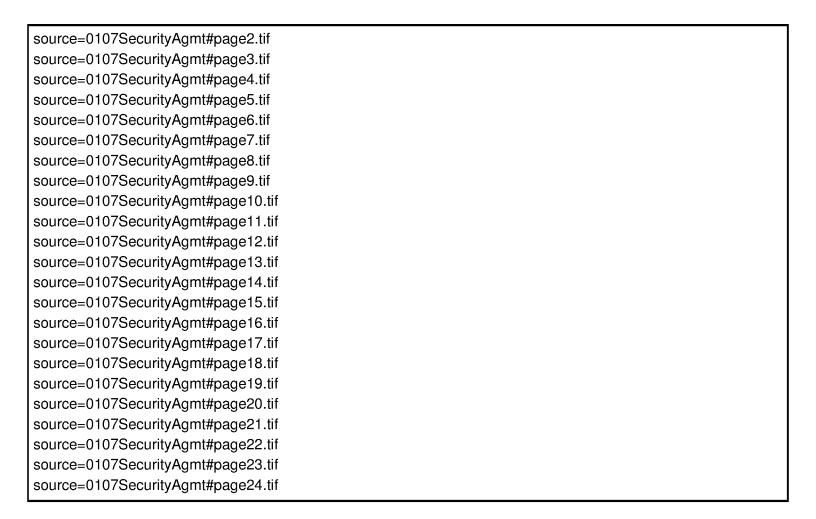
Address Line 2: SUITE 1800

Address Line 4: TYSONS CORNER, VIRGINIA 22102

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).

WITNESSETH:

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

Name: David C, Milne

Title: Chief Administrative Officer, SVP, General

Counsel and Corporate Secretary

SPECIALTY SURGICAL INSTRUMENTATION, INC.,

as a Orapter

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

Name! David C. Miline

Title: Chief Administrative Officer, SVP,

General Counsel and Corporate

Secretary

SYMMETRY SURGICAL INTERNATIONAL, INC., as

a Grantor

Name: David C. Milne

Title: Chief Administrative Officer, SVP, General

Counsel and Corporate Secretary

SYMMETRY SURGICAL INC. PATENT SECURITY AGREEMENT SIGNATURE PAGE

ACCEPTED AND AGREED as of the date first above written:

GENERAL ELECTRIC CAPITAL// CORPORATION, 25 Agost

Ву: Name/Jason Dufour

Kitle/Duly Authorized Signatery

SYMMETRY SURGICALING. PATENT SECURITY AGREEMENT SIGNATURE PAGE

SCHEDULE I TO PATENT SECURITY AGREEMENT

Patent Registrations

I. REGISTERED PATENTS

Docume				Priority	File	Publish/ Grant	Expiratio
nt No.	Title	Abstract	Inventors	Date	Date	Date	n Date
			Jacene,				
			Michael;				
			Griffiths,				
			Jerry R.;				
			Johnson,				
			Christoph				
******	Metal		er M.;		24.42		
USD708	bellow		Kiapour,	6/24/2012	8/24/20	7/8/201	2/0/2020
758	valve	A	Ali	8/24/2012	12	4	7/8/2028
		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					
	Ronge	and a distal end. The proximal					
	ur	end has a reduced diameter post.					
	with	In the selectively connected					
	detach	position, the reduced diameter				- / /	
US86578	able	post of the second tip is received	Agbodoe,	12/12/201	12/12/2	2/25/20	0/05/0010
23	tips	in a bore of the crossbar.	Victor B.	1	011	14	2/25/2018
		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					
	Medic	clamping relative to one another.	Staggs,				
US85799	al	The belt is connected to the	Stephen		7/7/201	11/12/2	11/12/201
25	clamp	lower arm assembly and the	M.	7/7/2010	1	013	7

C\240320.1

[upper arm assembly and is					
		configured for forming a loop					
		therebetween.					
		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					
	Gastri	movable jaw is closed thereby					
	c band	securely capturing the front end					
	inserti	of the gastric band. The shaft					
	on	and the captured gastric band are					
US83337	instru	inserted through a laparoscopic	Griffiths,	12/22/200	6/11/20	12/18/2	12/18/201
75	ment	port into the patient's abdomen.	Jerry R.	5	10	012	6
		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					
	Gastri	movable jaw is closed thereby					
	c band	securely capturing the front end					
	inserti	of the gastric band. The shaft					
	on	and the captured gastric band are					
US77714	instru	inserted through a laparoscopic	Griffiths,		12/22/2	8/10/20	a # 0 /
39	ment	port into the patient's abdomen.	Jerry R.	2/4/2005	005	10	8/10/2018
			Agbodoe,				
LICDAOS			Victor B.;		6/22/20	0/7/200	
USD495 807	Tray		Richardso n, Gary	6/23/2003	6/23/20 03	9/7/200 4	9/7/2018
90/	11ay	PROBLEM TO BE SOLVED:	11, U111	UI WALLANDY J	v J	7	21112U10
		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 rongent 10					
		has one or more drainage holes					
	RON	88 passing through its shank 12					
	GEUR	into a space between the shank					
	WITH	and a crossbar 20 to enable the					
JP20031	DRAI	discharge of fluid while	Agbodoe,	10/10/200	10/9/20	6/10/20	
64460	NAGE	promoting cleaning and	Victor B.	1	02	03	

		sterilization.COPYRIGHT:					
		(C)2003,JPO					
EP13021 68	Ronge ur with draina ge	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.	10/10/200 1	10/9/20 02	12/12/2 007	
EP13021 68	Ronge ur with draina ge	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.	10/10/200 1	10/9/20 02	4/16/20 03	
CA2407 023	RON GEUR WITH DRAI NAGE	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.	AGBOD OE VICTOR B	10/10/200 1	10/9/20 02	4/10/20 03	
CA2407 023	RON GEUR WITH DRAI NAGE	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.	AGBOD OE VICTOR B	10/10/200 1	10/9/20 02	12/7/20 10	
MXPA0 2009981	RON GEUR WITH DRAI NAGE	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.	AGBOD OE VICTOR B	10/10/200 1	10/9/20 02	12/19/2 005	
DE60223 978	Chirurgi Ablaufv		AGBOD OE VICTOR B	10/10/200 1	10/9/20 02	1/24/20 08	
DE60223 978	Schneid:	zange mit Ablauf	Agbodoe, Victor B.	10/10/200 1	10/9/20 02		
AU2002 301343		with drainage	AGBOD OE VICTOR B	10/10/200 1	10/7/20 02	2/15/20 07	
US66200 97	Three-dimen sional tilt ratchet mecha nism	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	Bookwalt er, John R.; Cabrera, Rene; Mcmorro w, John; Moore, Kyle; Torres, Nelson	3/29/2002	3/29/20 02	9/16/20 03	9/16/2015

F	1	[]					
		member is vertically pivotable					
		with respect to the second					
	İ	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					
	İ	rotator indexing body.					
	<u> </u>	A rongeur has one or more	<i></i>		~~~~~~~~~		
	Ronge	drainage holes through its shank					
	ur	into a space between its shank					
Traccon	with	and crossbar to allow drainage of	4 1 1	10/10/200	10/10/2	10/00/0	10/00/00
US66382	draina	fluid therefrom and to enhance	Agbodoe,	10/10/200	10/10/2	10/28/2	10/28/201
80	ge	cleaning and sterilization.	Victor B.	1	001	003	5
		A rongeur has a detachable					
		crossbar to enhance cleaning and					
	Ronge	sterilization. A pin in a slot on					
	ur	one of the rongeur's handles is	Agbodoe,				
	with	moveable out of the slot to	Victor B.;				
	detach	permit extended retraction of the	Richardso				
	able	crossbar to a position in which it	n, Gary;				
US66857	crossb	may disengage from the shank of	Torres,	10/10/200	10/10/2	2/3/200	
10	ar	the rongeur.	Nelson P.	1	001	4	2/3/2016
ļ		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	Bookwalt				
		a retraction direction parallel to					
			er, John				
		the axis of the shaft. The	R.;				
	l	interchangeable blades may have	Cabrera,				
	Surgic	different sizes between	Rene J.;				
	al	approximately 5 and 15	Walker,				
	retract	centimeters length, and are	Wesley				
TICKERSS	or	manually affixed to the handle to	C., Hayes,		C11 10 0 0	0/15/50	
US65308	assem blv	set the reach and scope of the retractor for a particular	Kenneth	10/2/1000	6/1/200	3/11/20	6/1/2021
83		retractor for a particular	R.	10/6/1999	1	03	6-71/211/1

	·		,				
		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.					
		1					
		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.					
		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					
	Carraia						
	Surgic	(310) has at least one elongated	Bookwalt				
	al	surface ridge (311) such that the	!				
	retract	shaft (310) rotates freely within	er, John				
	or	a limited range in said channel	R.;				
	assem	(42) for self alignment when	Cabrera,				
	bly	contacting tissue and the shaft	Rene J.;				
	with	(310) jams against the channel	Walker,				
	contro	(42) by interference of said ridge	Wesley				
	lled	(311) with said channel (42) to	C.; Hayes,				
EP10905	rotatio	automatically limit a range of	Kenneth		10/5/20	4/11/20	
89	n	rotation of the shaft (310).	R.	10/6/1999	00	01	
		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					
		1					
	C	sectional shape wherein the shaft					
	Surgic	(310) has at least one elongated	73 a.a.l14				
	al	surface ridge (311) such that the	Bookwalt				
	retract	shaft (310) rotates freely within	er, John				
	or	a limited range in said channel	R.;				
	assem	(42) for self alignment when	Cabrera,				
	bly	contacting tissue and the shaft	Rene J.;				
	with	(310) jams against the channel	Walker,				
	contro	(42) by interference of said ridge	Wesley				
	lled	(311) with said channel (42) to	C.; Hayes,				
EP10905	rotatio	automatically limit a range of	Kenneth		10/5/20	2/28/20	
89	n	rotation of the shaft (310).	R.	10/6/1999	00	07	
	Surgic	A retractor blade mounts on a	Bookwalt				
	al	shaft having a controlled degree	er, John				
	retract	of rotation and swings down to	R.;				
US62416	or	grip and retract tissue from bone	Cabrera,		10/6/19	6/5/200	
59	assem	or a hard tissue structure. The	Rene J.;	10/6/1999	99	1	10/6/2019
L	1	1		20,0,2///		±	

	bly with contro	retractor blade includes a blade portion and a handle portion which may be integrally joined	Walker, Wesley C.; Hayes,				
	lled rotatio	or may fit together in a modular way to allow different blades to	Kenneth R.				
	n	be removably and	11,				
		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.					
Issue Number:	RON						
DI63049	GEUR						
52-0 Issue	TRAY RON						
Number:	GEUR						
036180 Issue	TRAY						
Number: 4030822	RON GEUR						
3,4	TRAY						
Issue Number:	RON						
4030822 3.4	GEUR TRAY						
US20130	RETR	A retractor ring assembly	Agbodoe,				
082157	ACTO R	includes a ring holder that has a first selectively engaged	Victor; Storz,		9/30/20	4/4/201	US20130
Issued:	RING	connection and a second	Olaf:	9/30/2011	11	3	082157

8,894,02 9	HOLD ER	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	Bookwalt er, John R.				
		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					
	IMPR OVED END EFFE CTOR MEC HANI SM FOR	ring configuration. Improved end effector mechanisms for a surgical instrument used in minima lly invasive surgical instruments as well as instruments for general surgery or as part of robotically controlled end effectors. These end effector mech anisms include multiple grasping elements paired with drive links.	DIFRAN				
CA2680 258	A SURG ICAL INST RUM ENT	Each gras ping element also serves as a stabilizing link for the next most distal gras ping element, forcing it to maintain its relative angle with respect to the opposing grasping elements.	CESCO FRANCIS J; GRIFFIT HS JERRY R	3/20/2007	10/19/2 007	9/25/20 08	
CA2680 258	IMPR OVED END EFFE CTOR MEC HANI SM FOR A SURG ICAL INST RUM ENT	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.	GRIFFIT HS JERRY R; DIFRAN CESCO FRANCIS J	3/20/2007	10/19/2 007	3/20/20 12	
US77760 65	End effecto r mecha nism for a surgic al	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.; Diftances co, Francis J.	3/20/2007	9/24/20 07	8/17/20 10	8/17/2018

	T :	Landella announing de la contraction	T	ı			
	instru	multiple grasping elements					
	ment	paired with drive links. Each					
		grasping element also serves as a		1 1 1			
		stabilizing link for the next most					
		distal grasping element, forcing		! ! !			
		it to maintain its relative angle					
		with respect to the opposing					
		grasping elements.					
		An endoscopic suturing device					
				i i			
		having an interlocking trigger					
		assembly for preventing					
		premature needle deployment.					
		The suturing device comprises a					
	l	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					
	Interlo	jaw. The activation of the trigger					
	cking	causes deployment of the					
	trigger	needle/suture mechanism. The					
	assem	interlocking mechanism ensures					
	bly for	that the needle/suture is	Difrances				
	a	deployed only when the upper	co.				
	suturin	jaw is below a maximum	Francis J.;				
11070300				i i	2/26/20	5/10/20	
US79388	g	allowable distance from the	Griffiths,	6/13/3003	2/26/20	5/10/20	5/10/2015
39	device	lower jaw.	Jerry R.	6/13/2003	04	11	5/10/2015
		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					
	İ	with a second arcuate projection					
		and a concuetric cutout on its					
		opposite side from the second					
		arcuate projection to engage the					
	İ	fixed jaw member and provide a					
	l	pivot point. The actuator					
	Pin-	member drives the movable jaw					
	less	member in a pivoting motion		l			
	!		į	1			
	surgic	within a throughgoing slot					
	surgic al	within a throughgoing slot formed in the fixed jaw member					
US65993	surgic	within a throughgoing slot	Gilman,		8/22/20	7/29/20	

		[1	<u> </u>	ı			
		between extended and retracted					
		positions for effecting selective					
		user controlled working					
		movement.					
		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					
	Lapar	open or close. The linkage					
	oscopi	assembly further having a pair of					
	c	stabilizing links, which at one					
	instru	end are pivotally anchored to a					
	ment	non-reciprocal movement					
	with	member, and at an opposite end					
	paralle	interconnected with the jaws to					
	1	maintain the opposing serrated					
	actuat	grasping surfaces of the jaws in a					
US62384	ed	parallel relationship to each	Griffiths,		1/20/20	5/29/20	
14	jaws	other.	Jerry R.	1/20/2000	00	01	1/20/2020
		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					
	Endos	stationary handle and a pivoting					
	copic	handle. The socket comprising a					
	instru	plurality of resilient prongs to					
	ment	create a friction fit that can be					
	with	disengaged by the surgeon					
	remov	retracting the pivoting thumb					
	able	handle. The socket disposed in					
US60772	front	the base and linkage provided	Marini,		9/10/19	6/20/20	
90	end	for actuating the instrument.	Louis J.	9/10/1999	99	00	9/10/2019
		A detachable and replaceable					
	Surgic	end effector assembly. The					
	al	detachable mechanism is made	O'connor,				
	instru	of standard end effectors	Paul D.,				
	ment	attached to an actuating tip and	Batchelde				
	with	pinned inside a yoke assembly.	r,				
	replac	Replacement is made by pulling	Christoph				
	eable	back a spring loaded radial lock	er M.;				
	jaw	90, to disengage two rear tabs 51	Lombardo				
US58938	assem	on the outer tip 50. The yoke	,	10/7/1200	5/15/19	4/13/19	* /3 * /a ~
75	bly	assembly is then rotated 90	Giuseppe	10/7/1994	97	99	5/15/2017

			I				
		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.					
		A handle-activated retrograde					
		1					
		endoscopic instrument with an					
		extension shaft rotatably					
		connected to a fixed handle, the					
		rotation limited by a spring-					
		loaded lock into shaft detents					
	Retrog	corresponding to rotational					
	rade	position options, and with an					
	surgic	extension of an outer tip and					
	al	reduction of open range of	Lombardo				
US57557	instru	effector movement to shield any	,		4/18/19	5/26/19	
23	ment	pinch area.	Giuseppe	4/18/1997	97	98	4/18/2017
	Elong						
	ated						
	thumb						
	loop		Difrances				
	for	A handle for endoscopic surgical	co.				
	surgic	instruments with an elongated	Francis J.;				
	al	thumb loop optimized for	Reay-				
US58490	instru	providing support and driving	young,		4/18/19	12/15/1	
21	ment	force in endoscopic surgery.	Clive B.	4/18/1997	97	998	4/18/2017
	Integr	A articulating tip structure with a	CALT & AST	17 1 07 1 2 2 7	***************************************		
	al log	pivot lug and a rotatable jaw					
	linkag	with a pivot seat which wraps					
	e for	around the lug in normal	Difrances				
US58687	micro-	operation and provides a gap for			4/10/10	2/0/100	
	instru	disengagement of the lug to	co,	4/10/1007	4/18/19	2/9/199	1/10/2017
86	ment	allow disassembly and assembly.	Francis J.	4/18/1997	97	9	4/18/2017
	Rotary	A foundly and did a secolar t					
	drive	A handle and drive mechanism					
	mecha	for providing a reciprocating					
	nism	rotary action of a driveshaft, first	.c. 1.00' :				
	for	in one rotational direction and	Griffiths,				
	instru	then reversing the rotational	Jerry R.;				
US57281	ment	direction, suitable for suturing	Young Jr.,		3/20/19	3/17/19	
08	handle	and other endoscopic operations.	John	3/20/1997	97	98	3/20/2017
		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					
	Rotata	the distal end of the drive					
	ble	member wherein the drive					
	linkag	member is enclosed in an					
	e for	elongated housing on which the					
	micro-	jaws are mounted which may be	Griffiths,				
US60154	instru	rotated relative to the drive	Jerry		2/27/19	1/18/20	
UDUUIDT	!	member on a bearing by rotation	Richard	7/13/1994	97	00	2/27/2017
26	ment						

		of the housing	g.			I					
US60197 80	Dual pin and groove pivot for micro- instru ment Sterili	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.			Gius Difra co, Fran Giln Bria: Burk	a W.;	1/30/19	į	0/19 97	2/1/200 0	1/30/2017
US55247 55	zation contai ner	Deeds, Charles D.	3/14/1 994	5/22/1 995	6/11/ 1996	5/22/ 2015					
US56037 24	Suctio n punch	A cutting-sumicro-surgery jaws, that is provide a channel axial for removal o	y includ: n closed sucti lly throug	ing closing d position, ioning/fluid gh the jaws		unor, D.	2/13/1 995	2/13/1 995	2/18 199°	i	
USRE36 666	Micro- instru ment	A microsurgi opposing jaw to one anot integral to a one jaw for jaw and a li jaw rotatably jaw wherei surface of against a sur moved.	her using frame rotating nkage to toward in a that ja	ble relative ng a pivot comprising the other o push one s the other distal-most w pushes	Dece , C P.; I legal repre tive; Roge Burk Roge	esenta by er M.; te, er M.; ver,	5/31/1 990	10/6/1 994	4/18 2000		
Issue Number: D371203	Sterili zation Contai ner (Ultra Contai ner vent holes)	Medical Devi Missing assig		ms, Inc.1				3/14/1 994	Issur Date 6/25 1996	ε 7	

II. PENDING PATENTS

Document			Inventor	Priority		Publish/Gra
No.	Title	Abstract	8	Date	File Date	nt Date
		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				
	7 73 773 1 75	the handle. The linear slide				
	LINEAR	indicator is configured to				
7710 (4011)	SLIDE	indicate a magnified value				
WO/2014/0	INDICATO	of an actual traveled linear	ATTAR,			C (T (D C T)
85718	R	distance of the end effector.	Matthew	11/29/2012	11/27/2013	6/5/2014
		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				
	THREE	relative to the retractor				
	DIMENSIO	blade holder. The retractor				
	NAL TILT	blade holder is mated to the				
	RACHET	housing member and is				
	WITH	vertically pivotable with				
	SELF	respect to the housing				
	RETAININ	member to enable selective	Bookwalt			
	G	vertical pivoting adjustment	er, John;			
US2014017	MECHANI	of the retractor blade	Redmond			
1748	SM	relative to the housing	, Kevin	11/28/2012	11/26/2013	6/19/2014
1/70	L	1 results to the mousting,	, and the	11/20/2012	1 112012013	0/13/2017

C\240320.1

member. The rotating indexer is matted to the housing member, and the housing member is rotatable with respect to the rotating indexer so that the retractor blade housing member and the retractor blade are able to selectively rotate about the longitudinal axis of the rotating indexer. The rotating indexer. The rotating indexer is shaped and dimensioned to mount onto a rim of a suspical support. The self-retaining mechanism simultaneously locks or annotes the position of the housing member relative to the rotating indexer and the entire rathet assembly onto the rim of the surgical support. The self-retaining indexer and the position of the housing member relative to the rotating indexer and the position of the rotating indexer and the surgical support. The present invention provides a linear slide indicator used in connection with a molecula device to indicate arodal expansion or hinear translation of a component within the device. The medical instrument includes a slaft, a landle, an end effector and a linear slide indicator. The slaft extends along a slaft axis and is configured to travel linearly along the slaft axis. The landle is configured to travel linearly along the slaft axis. The landle is configured to estatehed to a growinal end of the slaft and to rotate around the skaft axis. The cast effector is configured to be attached to a fixed linearly with the shaft along the shaft axis. The landle is configured to the andele. The linear slide indicator is configured to the attached to a disast end the and effector in a hone includes a dull bit guidance device. The landle is configured to the andele. The linear slide indicator is configured to the andele. The linear slide indicator is configured to the andele. The linear slide indicator and the saft action of the slaft axis. The cast effector is configured to the andele. The linear slide indicator is configured to the antenhed to a disast end the end effector. LINEAR SLIDE US2014-017 INTEL axis and an elongated in an about the saft and an elongated in a b		,	·		,		
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 holder, the housing member and the retractor blade are able to selectively rotate about the longitudual axis of the rotating indexer. The rotating adexer is stapped 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 position of the rotating indexer and the position of the rotating indexer and the position of the rotating indexer and the centre ratched assembly onto the rim of the sungical support. The present invention provides a linear slide indicator used in connection with a medical intervention with a medical device to indicate radial expansion or linear translation of a component within the device. The medical instrument includes a shaft, a landle, an end effector and a linear slide indicator. The shaft extends along a siarit axis and is configured to a proximal end of the shaft and to travel linearly along the shaft axis the end effector is configured to be attached to a proximal and of the shaft and not ravel linearly with the shaft along the shaft axis the end effector is configured to be attached to a proximal and of the shaft and to rotate around the shaft and to rotate around the shaft and the shaft along the shaft axis the end effector is configured to be attached to a lock and the shaft and the shaft along the shaft axis the end effector is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to microare is configured to micr			member. The rotating				
housing member is totatable 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 longindinal axis of the rotating indexer. The rotating indexer is shaped and dimensioned to mount onto a rim of a surgical support. The sufficiently locks or unlocks the position of the housing member relative to the rotating indexer and the position of the housing member relative to the rotating indexer and the entire ratchet assembly onto the rim of the surgical support. 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 slaft, a lundle, an end effector and a linear slide indicator. The slaft excluded to travel linearly along the shaft axis The landle is configured to he attached to a proximal end of the shaft and to rotate around the shaft and to rotate around the shaft and or travel linearly with the eshaft along the shaft axis is ree and effector is configured to be attached to a distal end of the shaft and to rotate around the shaft and and to reavel linearly with the eshaft along the shaft axis is ree and effector is configured to be attached to a distal end of the shaft and to rotate around the shaft and and to retract linearly with the eshaft along the shaft axis is ree and effector is configured to be attached to a distal end of the shaft and to rotate around the shaft and to rotate around the shaft and to rotate around the shaft and or travel linearly with the eshaft along the shaft axis is the end effector. INDICATO A drill system for forming a curved tunnel in a bone includes a drill bit guidance. GRIFFIT House slide indicate magnified value around the shaft condition and the end offector. A curved tunnel in a bone includes a drill bit guidance. GRIFFIT House slide indicate includes and long affect for the provided and condition of the end effector. A			indexer is mated to the				
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1949 R distance of the end effector. J. 11/29/2012 11/26/2013 6/19/2014	1100014010	l					
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METHOD includes a drill bit guidance GRIFFIT FOR device. The drill bit HS, FORMING guidance device includes an Jerry, R.; A elongated stationary outer FERNA WO/2014/0 CURVED tube extending along a first NDEZ,		!					
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FORMING guidance device includes an A elongated stationary outer FERNA WO/2014/0 CURVED tube extending along a first NDEZ,		!					
WO/2014/0 A elongated stationary outer FERNA WO/2014/0 CURVED tube extending along a first NDEZ,			•				
WO/2014/0 CURVED tube extending along a first NDEZ,		ı					
		I					
81759 TUNNEL axis and an elongated inner Jose 11/20/2012 11/20/2013 5/30/2014	WO/2014/0	CURVED	tube extending along a first	NDEZ,			
	81759	TUNNEL	axis and an elongated inner	Jose	11/20/2012	11/20/2013	5/30/2014

	Ţ	7	Ţ			
	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				
		1				
		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.				
		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				
	SYSTEM	perpendicular to the first				
	AND	axis. Each slot is configured				
	METHOD	to collapse inward in the				
	FOR	slot direction when exiting				
	FORMING	the distal end of the				
	A	elongated outer tube,	Griffiths,			
	CURVED	thereby curving the distal	Jerry R.;			
US2014017	TUNNEL	end portion of the elongated	Fernande			
1948	IN BONE	inner tube.	z, Jose	11/20/2012	11/19/2013	6/19/2014
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	33.1 22.3 33.13.2	A valve apparatus and	25, 7000	11/20/2012	13/12/12/03/	0/3.7/2034
		methods associated thereof				
		are provided. The valve				
	COMETRIC	apparatus includes a valve housing structure. A first				
	CONSTRIC					
	TING	valve portion is connected				
	PRESSURE	to the valve housing				
	VALVE	structure, wherein the first				
	APPARAT	valve portion has a sealing				
77/0/0010/3	US AND	edge. A second valve				
WO/2013/1	METHODS	portion is positioned at least	2/0/2012	9/21/20	0/10/2012	
34493	THEREOF	partially within the valve	3/9/2012	3/7/2013	9/12/2013	

F	[T 1				i
		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.				
		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				
	RONGEUR	position, the reduced	AGBOD			
	WITH	diameter post of the second				
WO/2013/0	DETACHA	tip is received in a bore of	Victor,			
89959	BLE TIPS	the crossbar.	B.	12/12/2011	11/14/2012	6/20/2013
		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	ACDOD			
		permits the selective	AGBOD			
	I I I I I I I I I I I I I I I I I I I	rotation of each one of the	OE,			
THO (001010	UNIVERS	plurality of clamps by 360	Victor;			
WO/2013/0	AL ARM	with respect to the distal end	STORZ,	10/01/001	10/10/2012	4 /0 ~ /0 0 3 ~
59640	SYSTEM	of the universal arm.	Olaf	10/21/2011	10/19/2012	4/25/2013

			Gordon, Charles			
US2012015			Samuel			
0213	MEDICAL C	OMPRESSION DEVICE	Squire Gordon,	12/10/2010	12/9/2011	6/14/2012
			Charles			
EP2648626	A MEDICAL	COMPRESSION DEVICE	Samuel	12/10/2010	12/9/2011	10/16/2013
	Medical	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	GORDO N CHARL ES SAMUE			
TW201235 001	n device	relative to an anatomical location.	L SQUIRE	12/10/2010	12/9/2011	9/1/2012
US2013009	UNIVERS AL ARM	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	Agbodoe , Victor; Storz,			
9081	SYSTEM	of the universal arm.	Olaf	10/21/2011	12/8/2011	4/25/2013
SMI0203.U S Serial No. 14/020,446	FEMORAL ELEVATO R				September 6, 2013	
SMI0203.E P Serial No. 41470878.4	FEMORAL ELEVATO R	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/US201 3/072352	Three Dimensiona I 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			Inventor	Priority		Publish/Gra
No.	Title	Abstract	8	Date	File Date	nt Date
No.	INSTRUM ENT WITH	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			File Date	
WO/2013/1 01918	REMOVA BLE TIP	to secure the end effector to the tube.		12/27/2011	12/27/2012	7/4/2013
US2013011 8324	METHOD FOR FASTENIN G A TOOL HANDLE TO A TOOL SHAFT	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
		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	GRIFFIT			
WO/2014/0 03746	SUTURE CUTTER	moving cutting blade and the inclined stationary	HS, Jerry, R.	6/27/2012	6/28/2012	1/3/2014

		blade.				
		An improved suture cutter				
		for cutting high strength				
		sutures used in arthroscopic surgeries includes a				
		surgeries includes a movable handle that moves				
		1				
		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				
US2014000	SUTURE	the inclined stationary	Griffiths,			
5689	CUTTER	blade.	Jerry R.	6/27/2012	6/27/2012	1/2/2014
		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	Attar.			
		second elements pivotably	Matthew			
		coupled to one another; an	J.;			
		anchor coupled to the tube	Jacene.			
		and a pivot point of the end	Michael,			
		effector to restrict axial	Griffiths,			
		movement of the end	Jerry R.;			
		effector; and a sleeve	Gowin,			
		movably coupled to the	Leo;			
		tube, where the sleeve is	Johnson,			
	INSTRUM	slidable across at least a	Christop			
US2013016	ENT WITH	portion of the end effector to secure the end effector to	her,			
5907	REMOVA		Marini,	12/27/2011	12/27/2011	6/27/2012
390/	BLE TIP	the tube. An endoscopic surgical	Louis J.	12/2//2011	12/27/2011	6/27/2013
		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				
	ermora.	rotary motion of an inner	Taua.			
	SURGICA L ROTARY	shaft. The jaws are used to	Jones, Daniel			
	CAPTURE	gasp securely and push the tube end of the gastric band	B.;			
	INSTRUM	after it has been threaded	Griffiths,			
	ENT FOR	through the buckle end of	Jeny R.;			
	GASTRIC	the band. A hook instrument	Difrance			
US2009015	BAND	is used to hold the buckle	SCO,			
7104	CLOSING	end securely while the	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.			
	SURGICA				
File No.	L ROTARY				
TNCO-28	CAPTURE				
Serial No.	INSTRUM				
12/370,956	ENT FOR				
Issue No.	GASTRIC	On Appeal Awaiting			
2009015710	BAND	Decision by the Board of			
4	CLOSING	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

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RECORDED: 12/12/2014