Number of documents: 15

CA2776755	Medical ultrasound instrument with articulated jaws COVIDIEN TYCO HEALTHCARE
US20130197511	Ultrasonic medical instrument with a curved waveguide COVIDIEN
US20120296324	Optical energy-based methods and apparatus for tissue sealing COVIDIEN
US20120123413	Method and apparatus for vascular tissue sealing with active cooling of jaws at the end of the sealing cycle COVIDIEN
CA2758426	Method and apparatus for vascular tissue sealing with reduced energy consumption COVIDIEN TYCO HEALTHCARE
US20120296332	Thread-like knife for tissue cutting COVIDIEN
US20120296317	Optical energy-based methods and apparatus for tissue sealing COVIDIEN
EP2524663	Electrosurgical system with jaws and with means for imparting mechanical perturbations to a jaw COVIDIEN TYCO HEALTHCARE
WO201309623	Stand alone energy-based tissue clips COVIDIEN
US20130121366	Methods of measuring conditions of an ultrasonic instrument COVIDIEN
US20120296323	Optical Energy-Based Methods and Apparatus for Tissue Sealing COVIDIEN
WO2012158777	System for energy-based sealing of tissue with optical feedback CHERNOVA NATALIYA COVIDIEN TYCO HEALTHCARE
WO2012158774	Optical recognition of tissue and vessels COVIDIEN TYCO HEALTHCARE
CA2770228	Systems and methods for identifying tissue and vessels COVIDIEN TYCO HEALTHCARE
WO2012158788	Apparatus for optical tissue sealing COVIDIEN

Medical ultrasound instrument with articulated jaws
CA2776755

- **Patent Assignee**
  COVIDIEN TYCO HEALTHCARE
- **Inventor**
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  MISUCHENKO IGORIS
  RUIN ALEXEY
  VASIL EV VLADIMIR
- **International Patent Classification**
  A61B-017/00 A61B-017/29 A61B-017/295 A61B-017/32 A61B-017/94 A61B-018/00 A61B-018/04
- **US Patent Classification**
  PCLO=606169000 PCLO=606169000 PCLX=606052000 PCLX=606205000
- **CPC Code**
  A61B-017/32/0092; A61B-018/00; A61B-2017/00734; A61B-2017/2927; A61B-2017/2929; A61B-2017/2933; A61B-2017/2939; A61B-2017/2947

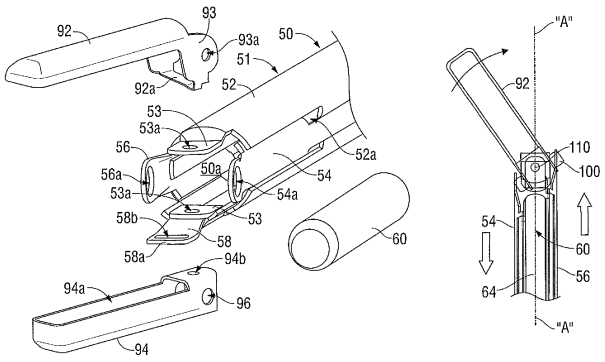
- **Publication Information**
  CA2776755 A1 2012-11-16 [CA2776755]
- **Priority Details**
  2011US-13108117 2011-05-16
  2013US-13867896 2013-04-22

- **Fampat family**

CA2776755	A1	2012-11-16	[CA2776755]
EP2524660	A1	2012-11-21	[EP2524660]
US2012296356	A1	2012-11-22	[US20120296356]
AU2012202874	A1	2012-12-06	[AU2012202874]
JP2012239901	A	2012-12-10	[JP2012239901]
US8444664	B2	2013-05-21	[US8444664]
US2013231664	A1	2013-09-05	[US20130231664]
JP5404849	B2	2014-02-05	[JP5404849]
AU2012202874	B2	2014-03-13	[AU2012202874]
CA2776755	C	2014-07-29	[CA2776755]
US8894674	B2	2014-11-25	[US8894674]
EP2524660	B1	2015-06-17	[EP2524660]

- **Abstract:**

(US8444664)
A forceps includes a housing, a shaft assembly, an end effector assembly, and a waveguide assembly. The housing has one or more transducers that generate a mechanical vibration in response to energy transmitted thereto from an energy source. The shaft assembly extends from the housing and includes one or more articulating and clamping members and a longitudinal axis defined therethrough. The end effector assembly is disposed at a distal end of the shaft assembly and includes a pair of opposing jaw members pivotable between approximated and unapproximated configurations in response to movement of the one or more clamping members. The articulating members articulate the jaw members relative to the longitudinal axis of the shaft assembly. The waveguide assembly is positioned within the shaft assembly and receives the mechanical vibration generated by the transducer. The waveguide assembly is positionable within one or both of the jaw members.



Ultrasonic medical instrument with a curved waveguide
US20130197511

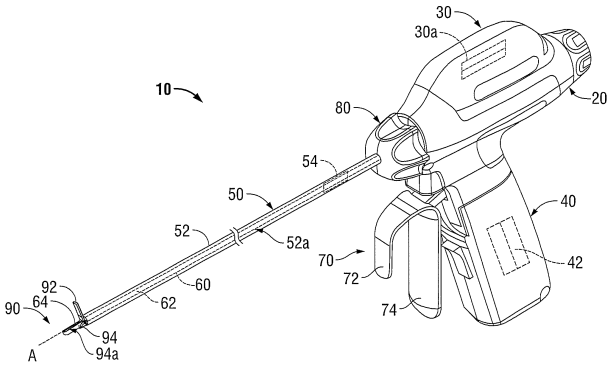
- **Patent Assignee**
  COVIDIEN
- **Inventor**
  BALANEV ANDREY
  KVASHNIN SERGEY
  MARTSINOVSKIY GEORGY
  MISUCHENKO IGORIS
  RUIN ALEXEY
- **International Patent Classification**
  A61B-017/29 A61B-017/32
- **US Patent Classification**
  PCLO=606041000
- **CPC Code**
  A61B-017/32/0068; A61B-017/32/0092; A61B-2017/2904; A61B-2017/2929

- **Publication Information**
  US2013197511 A1 2013-08-01 [US20130197511]
- **Priority Details**
  2012US-13360910 2012-01-30

- **Fampat family**

US2013197511	A1	2013-08-01	[US20130197511]
US9351753	B2	2016-05-31	[US9351753]

- **Abstract:**
  (US9351753)
  A forceps includes a housing, a curved waveguide, one or more movable members, and an end effector assembly. The housing includes one or more transducers configured to generate a mechanical vibration in response to energy transmitted thereto from an energy source. The curved waveguide extends from the housing and is configured to receive the mechanical vibration generated by the one or more transducers. The one or more movable members are positioned along the curved waveguide. The one or more movable members are configured to translate mechanical movement from the housing to the end effector assembly. The end effector assembly is disposed at a distal end of the curved waveguide and includes a movable jaw member pivotable between approximated and unapproximated positions relative to a distal end of the curved waveguide in response to movement of the one or more movable members.



Optical energy-based methods and apparatus for tissue sealing
US20120296324

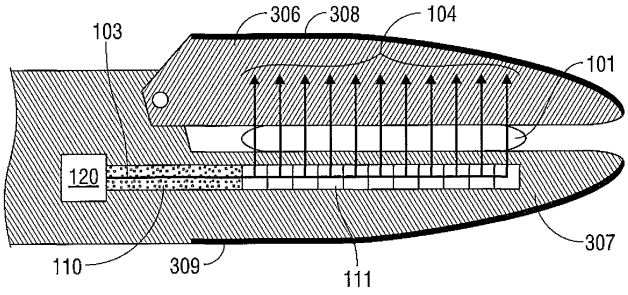
- **Patent Assignee**
  COVIDIEN
- **Inventor**
  CHERNOVA NATALIYA
  CHERNOV BORIS
  MISUCHENKO IGORIS
  MARTSINOVSKIY GEORGY
  VERBITSKY MIKHAIL
- **International Patent Classification**
  A61B-017/29 A61B-017/295 A61B-018/00 A61B-018/14 A61B-018/20 A61B-018/22
- **US Patent Classification**
  PCLO=001001000 PCLO=606015000
- **CPC Code**
  A61B-017/295; A61B-017/29; A61B-018/14/42; A61B-018/20; A61B-2018/0063; A61B-2018/00702; A61B-2018/0072; A61B-2018/0075 A61B-2018/0075; A61B-2018/00791; A61B-2018/00875; A61B-2018/2065; A61B-2018/2266; A61B-2018/2272; A61B-2018/2294 A61B-2018/2294;

- **Publication Information**
  US2012296324 A1 2012-11-22 [US20120296324]
- **Priority Details**
  2011US-13108177 2011-05-16
  2015US-14811563 2015-07-28

- **Fampat family**

US2012296324	A1	2012-11-22	[US20120296324]
US9113933	B2	2015-08-25	[US9113933]
US2015327931	A1	2015-11-19	[US20150327931]

- **Abstract:**
  (US9113933)
  Optical energy-based methods and apparatus for sealing vascular tissue involves deforming vascular tissue to bring different layers of the vascular tissue into contact each other and illuminating the vascular tissue with a light beam having at least one portion of its spectrum overlapping with the absorption spectrum of the vascular tissue. The apparatus may include two deforming members configured to deform the vascular tissue placed between the deforming members. The apparatus may also include an optical system that has a light source configured to generate light, a light distribution element configured to distribute the light across the vascular tissue, and a light guide configured to guide the light from the light source to the light distribution element. The apparatus may further include a cutting member configured to cut the vascular tissue and to illuminate the vascular tissue with light to seal at least one cut surface of the vascular tissue.



Method and apparatus for vascular tissue sealing with active cooling of jaws at the end of the sealing cycle

US20120123413

- **Patent Assignee**
  COVIDIEN
- **Inventor**
  CHERNOV BORIS
  MISUCHENKO IGORIS
  MARTSINOVSKIY GEORGY
  VERBITSKY MIKHAIL

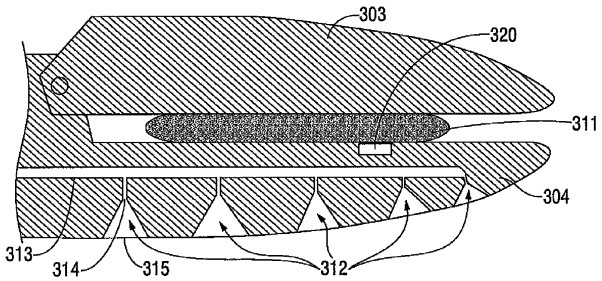
- **International Patent Classification**
  A61B-018/02
- **US Patent Classification**
  PCLO=606051000 PCLX=606052000
- **CPC Code**
  A61B-018/14/45; A61B-2018/00011; A61B-2018/0063; A61B-2018/00791

- **Publication Information**
  US2012123413 A1 2012-05-17 [US20120123413]
- **Priority Details**
  2010US-12948144 2010-11-17

- **Fampat family**

US2012123413	A1	2012-05-17	[US20120123413]
US8685021	B2	2014-04-01	[US8685021]

- **Abstract:**
  (US8685021)
  An end effector assembly for use with an electrosurgical instrument is provided. The end effector assembly has a first jaw member and a second jaw member. The second jaw member includes a channel defined therein and coupled to a cooling agent source and at least one venting port defined therein and fluidly coupled to the channel. During active cooling of the second jaw member, the cooling agent source is configured to supply a cooling agent to the channel.



Method and apparatus for vascular tissue sealing with reduced energy consumption

CA2758426

- **Patent Assignee**
  COVIDIEN TYCO HEALTHCARE
- **Inventor**
  CHERNOV BORIS
  MISUCHENKO IGORIS
  MARTSINOVSKIY GEORGY
  VERBITSKY MIKHAIL
- **International Patent Classification**
  A61B-017/00 A61B-017/28 A61B-017/29 A61B-017/295 A61B-018/00 A61B-018/12 A61B-018/14 A61B-018/20
- **US Patent Classification**
  PCLO=606051000 PCLO=606041000
- **CPC Code**
  A61B-018/14/42; A61B-018/14/45; A61B-2017/0088; A61B-2018/00083; A61B-2018/0016; A61B-2018/00404; A61B-2018/0063; A61B-2018/1452; A61B-2018/1467

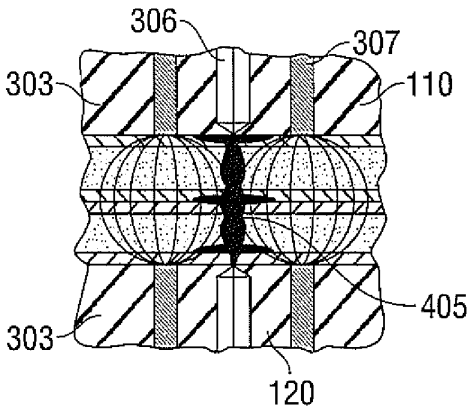
- **Publication Information**
  CA2758426 A1 2012-05-17 [CA2758426]
- **Priority Details**
  2010US-12948081 2010-11-17
  2014US-14578884 2014-12-22

- **Fampat family**

CA2758426	A1	2012-05-17	[CA2758426]
US2012123402	A1	2012-05-17	[US20120123402]
EP2455033	A1	2012-05-23	[EP2455033]
AU2011250824	A1	2012-05-31	[AU2011250824]
JP2012105987	A	2012-06-07	[JP2012105987]
AU2011250824	B2	2014-06-12	[AU2011250824]
US8932293	B2	2015-01-13	[US8932293]
US2015112330	A1	2015-04-23	[US20150112330]
EP2455033	B1	2015-08-19	[EP2455033]
JP5844623	B2	2016-01-20	[JP5844623]

- **Abstract:**

(US8932293)
An end effector assembly for use with an electrosurgical instrument is provided. The end effector assembly includes a pair of opposing jaw members configured to grasp tissue therebetween. Each of the opposing jaw members includes a non conducting tissue contact surface and an energy delivering element configured to perforate the tissue to create an opening, extract elastin and collagen from the tissue and denaturize the elastin and the collagen in the vicinity of the opening.



Thread-like knife for tissue cutting
US20120296332

- **Patent Assignee**
  COVIDIEN
- **Inventor**
  CHERNOV BORIS
  MISUCHENKO IGORIS
  MARTSINOVSKIY GEORGY
  VERBITSKY MIKHAIL
- **International Patent Classification**
  A61B-017/32 A61B-018/14 A61B-018/20
- **US Patent Classification**
  PCLO=606051000 PCLO=606013000 PCLX=606001000
  PCLX=606041000 PCLX=606045000 PCLX=606048000
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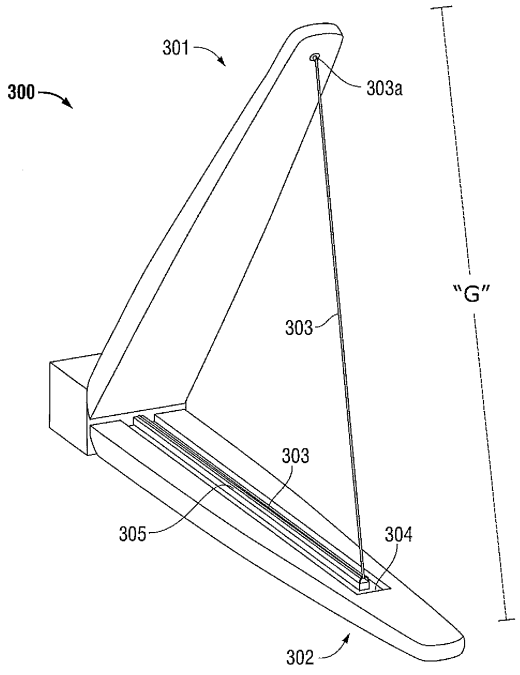
  PCLX=606206000 PCLX=606207000 PCLX=606208000
- **CPC Code**
  A61B-017/295; A61B-017/32/0068; A61B-017/32/0092; A61B-018/08/2; A61B-018/08/5; A61B-018/14/42; A61B-018/14/45; A61B-018/14/47; A61B-2017/32006; A61B-2018/1452

- **Publication Information**
  US2012296332 A1 2012-11-22 [US20120296332]
- **Priority Details**
  2011US-13108441 2011-05-16
  2014US-14183217 2014-02-18

- **Fampat family**

US2012296332	A1	2012-11-22	[US20120296332]
US8685009	B2	2014-04-01	[US8685009]
US2014163553	A1	2014-06-12	[US20140163553]

- **Abstract:**
  (US8685009)
  An end effector assembly for use with an electrosurgical instrument is provided. The end effector assembly includes a pair of opposing jaw members configured to grasp tissue therebetween. The assembly also includes a thread-like member having a first end coupled to at least one jaw member and a drive member coupled to a second end of the thread-like member. The drive member is configured to position the thread-like member between a first position and a second position, wherein the thread-like member cuts tissue when positioned in the second position.



Optical energy-based methods and apparatus for tissue sealing
US20120296317

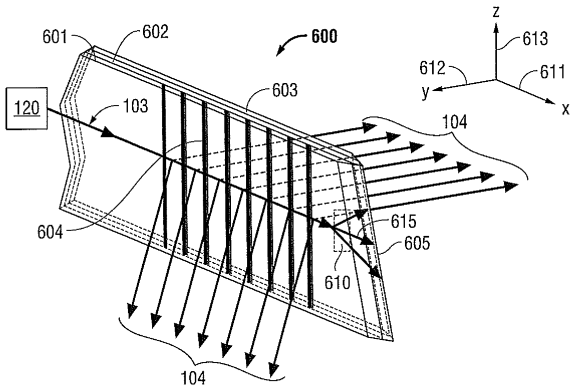
- **Patent Assignee**
  COVIDIEN
- **Inventor**
  CHERNOV BORIS
  MISUCHENKO IGORIS
  MARTSINOVSKIY GEORGY
  VERBITSKY MIKHAIL
- **International Patent Classification**
  A61B-017/00 A61B-017/28 A61B-017/285 A61B-018/00 A61B-018/14 A61B-018/20 A61B-018/22 A61N-005/06
- **US Patent Classification**
  PCLO=001001000
- **CPC Code**
  A61B-017/28/12; A61B-017/285; A61B-018/20; A61B-018/22; A61B-2017/00508; A61B-2018/00404; A61B-2018/00619; A61B-2018/0063; A61B-2018/00702; A61B-2018/00732; A61B-2018/00791; A61B-2018/00875; A61B-2018/1452; A61B-2018/2261; A61B-2018/2272

- **Publication Information**
  US2012296317 A1 2012-11-22 [US20120296317]
- **Priority Details**
  2011US-13108093 2011-05-16

- **Fampat family**

US2012296317	A1	2012-11-22	[US20120296317]
US9113934	B2	2015-08-25	[US9113934]

- **Abstract:**
  (US9113934)
  Optical energy-based methods and apparatus for sealing vascular tissue involves deforming vascular tissue to bring different layers of the vascular tissue into contact each other and illuminating the vascular tissue with a light beam having at least one portion of its spectrum overlapping with the absorption spectrum of the vascular tissue. The apparatus may include two deforming members configured to deform the vascular tissue placed between the deforming members. The apparatus may also include an optical system that has a light source configured to generate light, a light distribution element configured to distribute the light across the vascular tissue, and a light guide configured to guide the light from the light source to the light distribution element. The apparatus may further include a cutting member configured to cut the vascular tissue and to illuminate the vascular tissue with light to seal at least one cut surface of the vascular tissue.



Electrosurgical system with jaws and with means for imparting mechanical perturbations to a jaw

EP2524663

- **Patent Assignee**
  COVIDIEN TYCO HEALTHCARE
- **Inventor**
  CHERNOV BORIS
  MISUCHENKO IGORIS
  MARTSINOVSKIY GEORGY
  VERBITSKY MIKHAIL

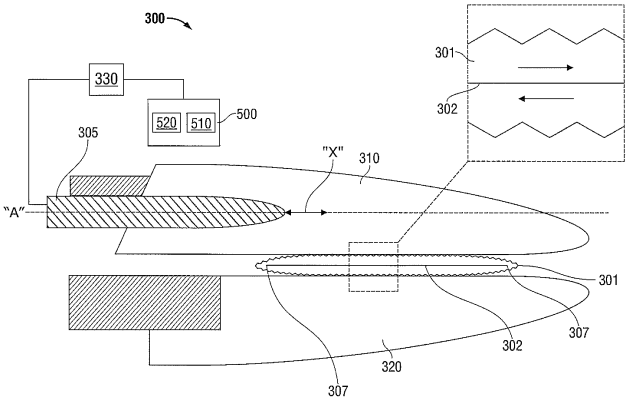
- **International Patent Classification**
  A61B-017/00 A61B-017/32 A61B-018/00 A61B-018/12 A61B-018/14
- **US Patent Classification**
  PCLO=001001000
- **CPC Code**
  A61B-017/32/0092; A61B-018/14/45; A61B-2018/00196; A61B-2018/0019; A61B-2018/00589; A61B-2018/00595; A61B-2018/00607; A61B-2018/0063; A61B-2018/00994; A61B-2018/1412; A61B-2018/1455

- **Publication Information**
  EP2524663 A1 2012-11-21 [EP2524663]
- **Priority Details**
  2011US-13108468 2011-05-16

- **Fampat family**

EP2524663	A1	2012-11-21	[EP2524663]
US2012296239	A1	2012-11-22	[US20120296239]
JP2012239899	A	2012-12-10	[JP2012239899]
US9265568	B2	2016-02-23	[US9265568]

- **Abstract:**
  (EP2524663)
  An end effector assembly (300) for use with an electrosurgical instrument is provided. The end effector assembly includes a pair of opposing jaw members (310, 320) configured to grasp tissue (301) therebetween, at least one jaw member adapted to connect to a source of electrosurgical energy (500) to seal tissue disposed between jaw members during a sealing process. At least one of the jaw members includes an activator (305) configured to selectively impart mechanical perturbations to the at least one jaw member during the sealing process.



Stand alone energy-based tissue clips
WO201309623

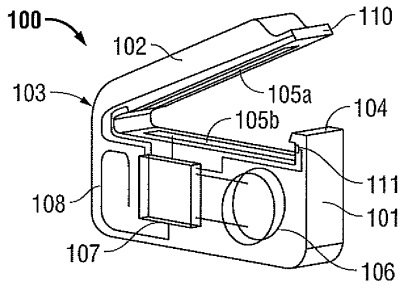
- **Patent Assignee**
  COVIDIEN
- **Inventor**
  CHERNOV BORIS
  MISUCHENKO IGORIS
  MARTSINOVSKIY GEORGY
  VERBITSKY MIKHAIL
- **International Patent Classification**
  A61B-005/05 A61B-017/00 A61B-017/122 A61B-017/32 A61B-018/00 A61B-018/12 A61B-018/14 A61B-018/20 A61B-018/22 A61B-019/00
- **US Patent Classification**
  PCLO=606014000 PCLX=606041000 PCLX=606045000 PCLX=606049000
- **CPC Code**
  A61B-005/05; A61B-017/122; A61B-018/14/42; A61B-018/20; A61B-2017/00004; A61B-2017/00026; A61B-2017/00119; A61B-2017/00199; A61B-2017/00221; A61B-2017/00517; A61B-2017/00734; A61B-2017/00867; A61B-2018/00273; A61B-2018/00428; A61B-2018/00607; A61B-2018/0063; A61B-2018/00642; A61B-2018/00702; A61B-2018/00779; A61B-2018/00875; A61B-2018/1226; A61B-2090/065

- **Publication Information**
  WO2013009623 A2 2013-01-17 [WO201309623]
- **Priority Details**
  2011US-13179960 2011-07-11
  2012WO-US45762 2012-07-06

- **Fampat family**

WO2013009623	A2	2013-01-17	[WO201309623]
US2013018364	A1	2013-01-17	[US20130018364]
WO2013009623	A3	2013-07-11	[WO201309623]
EP2731530	A2	2014-05-21	[EP2731530]
EP2731530	A4	2015-07-08	[EP2731530]

- **Abstract:**
  (EP2731530)
  The present disclosure is directed to a tissue clip for use in electrosurgical procedures. The tissue clip includes an arm having a first electrode formed thereon. The tissue clip also includes a body pivotally coupled to the arm. The body includes a power source and a second electrode. The arm is moveable from a first position relative to the body for approximating tissue and a second position closer to the body for grasping tissue therebetween (From US2013018364 A1)



Methods of measuring conditions of an ultrasonic instrument
US20130121366

- **Patent Assignee**
  COVIDIEN
- **Inventor**
  MISUCHENKO IGORIS
  MARTSINOVSKIY GEORGY
- **International Patent Classification**
  A61B-017/32
- **US Patent Classification**
  PCLO=374001000 PCLX=606169000 PCLX=606170000 PCLX=606171000 PCLX=606172000 PCLX=606173000 PCLX=606174000
- **CPC Code**
  A61B-017/32/0092; A61B-2017/00022; A61B-2017/00026; A61B-2017/00084

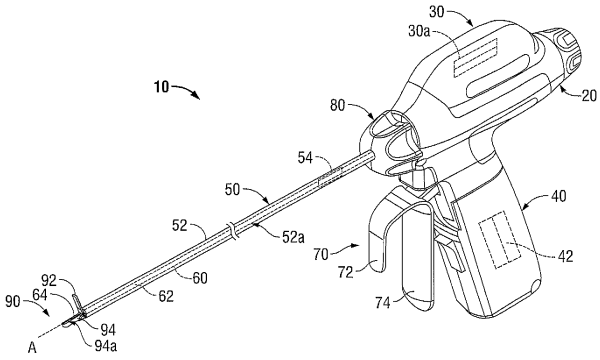
- **Publication Information**
  US2013121366 A1 2013-05-16 [US20130121366]
- **Priority Details**
  2011US-13294743 2011-11-11

- **Fampat family**

US2013121366	A1	2013-05-16	[US20130121366]
US8662745	B2	2014-03-04	[US8662745]

- **Abstract:**

(US8662745)
A method of measuring conditions of an ultrasonic instrument includes providing an ultrasonic instrument that includes an end effector and a waveguide operably coupled to a generator and the end effector. The method involves generating one or more pulses with the generator, transmitting the one or more pulses to one or both of the waveguide and the end effector, generating one or more waves that scatter in an interferential pattern in response to the transmission of the one or more pulses, registering a signal indicative of the interferential pattern, generating an actual interferential pattern based upon the signal, and identifying one or more conditions of the end effector based upon the actual interferential pattern.



Optical Energy-Based Methods and Apparatus for Tissue Sealing
US20120296323

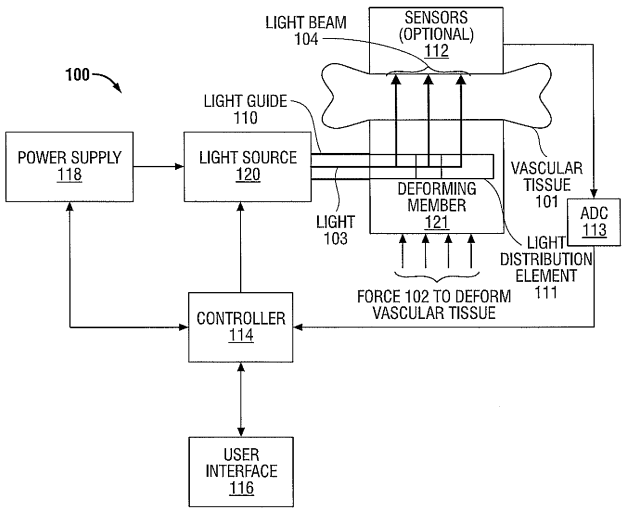
- **Patent Assignee**
  COVIDIEN
- **Inventor**
  CHERNOV BORIS
  CHERNOVA NATALIYA
  MISUCHENKO IGORIS
  MARTSINOVSKIY GEORGY
  VERBITSKY MIKHAIL
- **International Patent Classification**
  A61B-018/20
- **US Patent Classification**
  PCLO=606013000
- **CPC Code**
  A61B-017/295; A61B-017/29; A61B-018/20; A61B-2018/0063; A61B-2018/00702; A61B-2018/00791; A61B-2018/00875; A61B-2018/2065; A61B-2018/2266; A61B-2018/2272; A61B-2018/2294

- **Publication Information**
  US2012296323 A1 2012-11-22 [US20120296323]
- **Priority Details**
  2011US-13108152 2011-05-16

- **Fampat family**

US2012296323	A1	2012-11-22	[US20120296323]

- **Abstract:**
  (US20120296323)
  Optical energy-based methods and apparatus for sealing vascular tissue involves deforming vascular tissue to bring different layers of the vascular tissue into contact each other and illuminating the vascular tissue with a light beam having at least one portion of its spectrum overlapping with the absorption spectrum of the vascular tissue. The apparatus may include two deforming members configured to deform the vascular tissue placed between the deforming members. The apparatus may also include an optical system that has a light source configured to generate light, a light distribution element configured to distribute the light across the vascular tissue, and a light guide configured to guide the light from the light source to the light distribution element. The apparatus may further include a cutting member configured to cut the vascular tissue and to illuminate the vascular tissue with light to seal at least one cut surface of the vascular tissue.



System for energy-based sealing of tissue with optical feedback
WO2012158777

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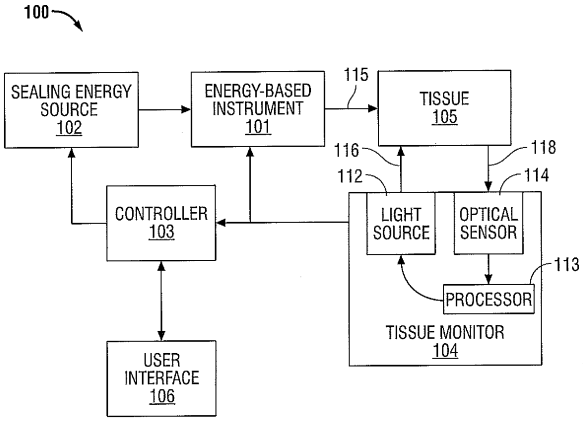
- **International Patent Classification**
  A61B-017/11 A61B-018/18 A61N-007/00
- **US Patent Classification**
  PCLO=601002000 PCLX=606012000 PCLX=606033000
- **CPC Code**
  A61B-018/14/42; A61B-018/20; A61B-090/30; A61B-2017/00026; A61B-2017/00057; A61B-2017/00066; A61B-2017/00084; A61B-2017/00221; A61B-2017/00907; A61B-2018/00642; A61B-2018/00702; A61B-2018/00726; A61B-2018/0072; A61B-2018/00732; A61B-2018/0075; A61B-2018/00761; A61B-2018/00767; A61N-007/02

- **Publication Information**
  WO2012158777 A1 2012-11-22 [WO2012158777]
- **Priority Details**
  2011US-13108129 2011-05-16
  2012WO-US38112 2012-05-16

- **Fampat family**

WO2012158777	A1	2012-11-22	[WO2012158777]
US2012296238	A1	2012-11-22	[US20120296238]
EP2709549	A1	2014-03-26	[EP2709549]
EP2709549	B1	2016-01-20	[EP2709549]

- **Abstract:**
  (WO2012158777)
  An energy-based tissue-sealing system and method provide higher sealing quality by measuring and using optical feedback parameters that are directly correlated to structural changes of tissue. The tissue-sealing system includes a sealing energy source, an instrument having a mechanism for grasping and deforming the tissue and for delivering sealing energy to the tissue, a light source, optical sensors, and a controller for controlling parameters of the sealing energy generated by the sealing energy source based upon the optical parameters of the tissue structure sensed by the optical sensors. At the beginning of a sealing procedure, the controller may monitor an initial optical parameter of the tissue and select a target trajectory of tissue optical parameters based on the initial optical parameter. During the sealing procedure, the controller monitors at least one optical parameter of the tissue structure and controls at least one parameter of the sealing energy based on the at least one optical parameter.



Optical recognition of tissue and vessels
WO2012158774

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- **International Patent Classification**
  A61B-006/00 A61B-018/14
- **US Patent Classification**
  PCLO=600431000 PCLX=600479000
- **CPC Code**
  A61B-005/00/71; A61B-005/00/84; A61B-017/28/12; A61B-018/14/45; A61B-090/30; A61B-2017/00057; A61B-2017/00061; A61B-2018/00404; A61B-2018/0063; A61B-2018/00702; A61B-2018/00726; A61B-2018/00732; A61B-2018/00791; A61B-2018/00827; A61B-2018/00875; A61B-2018/00892; A61B-2018/00982; A61B-2090/3941; A61B-2562/0238; A61B-2562/046

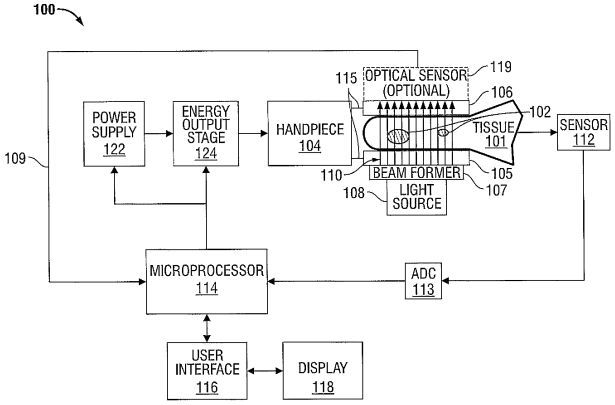
- **Publication Information**
  WO2012158774 A1 2012-11-22 [WO2012158774]
- **Priority Details**
  2011US-13108196 2011-05-16
  2012WO-US38104 2012-05-16

- **Fampat family**

WO2012158774	A1	2012-11-22	[WO2012158774]
US2012296205	A1	2012-11-22	[US20120296205]
EP2709548	A1	2014-03-26	[EP2709548]

- **Abstract:**

(EP2709548)
Methods and apparatus for optically recognizing tissue parameters during an energy-based tissue-sealing procedure involve grasping tissue with a tissue-sealing instrument, illuminating the grasped tissue or tissue adjacent to the grasped tissue with light, analyzing the light that is transmitted, scattered, or reflected by the tissue, and recognizing the tissue based on the result of analyzing the light. The wavelength of the light may be selected so that a vessel is sufficiently recognizable in tissue containing the vessel. A marker may also be introduced into fluid flowing in the vessel to increase the contrast between the vessel and tissue containing the vessel. Analyzing the light includes analyzing the spatial and spectral distribution of light. Analyzing the light may also include forming the light into an image of the illuminated tissue. The image of the illuminated tissue may be projected onto the eyes of a surgeon or sensed by a matrix of light detectors disposed on a jaw member of the tissue-sealing instrument and transmitted to a display. (From US2012296205 A1)



Systems and methods for identifying tissue and vessels
CA2770228

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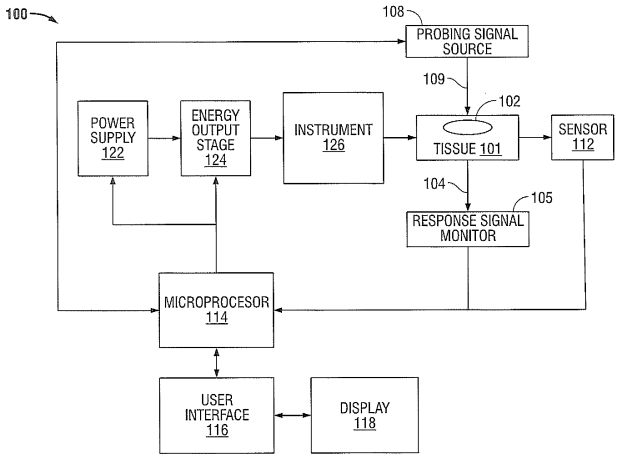
- **International Patent Classification**
  A61B-005/00 A61B-005/026 A61B-005/0295 A61B-005/053 A61B-006/00 A61B-008/00 A61B-008/08 A61B-018/04 A61B-018/12 A61B-018/18 A61B-019/00 G01N-033/48
- **US Patent Classification**
  PCLO=606034000 PCLX=600504000
- **CPC Code**
  A61B-005/00; A61B-005/0295; A61B-005/053; A61B-018/04; A61B-018/14/42; A61B-2017/00106; A61B-2018/0063; A61B-2018/00875; A61B-2018/00982

- **Publication Information**
  CA2770228 A1 2012-09-04 [CA2770228]
- **Priority Details**
  2011US-13040347 2011-03-04

- **Fampat family**

CA2770228	A1	2012-09-04	[CA2770228]
EP2494917	A1	2012-09-05	[EP2494917]
US2012226272	A1	2012-09-06	[US20120226272]
AU2012201308	A1	2012-09-20	[AU2012201308]
JP2012183313	A	2012-09-27	[JP2012183313]

- **Abstract:**
  (EP2494917)
  A surgical system and corresponding methods for identifying tissue or vessels and assessing their conditions includes a probing signal source for applying a probing signal to the tissue and a response signal monitor for monitoring a response signal that varies according to the level of blood circulation in the tissue or vessels. The response signal monitor monitors the response signal over an interval equal to or longer than an interval between two successive cardiac contractions. The surgical system includes a microprocessor that analyzes the amplitude and/or phase of the response signal to determine the level of blood circulation in the tissue or in different portions of the tissue, and determines a tissue parameter based upon the level of blood circulation. The surgical system may monitor a cardiac signal related to cardiac contractions and correlate the response signal and the cardiac signal to determine a level of blood circulation in the tissue.



Apparatus for optical tissue sealing
WO2012158788

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- **International Patent Classification**
  A61B-018/22
- **CPC Code**
  A61B-017/295; A61B-017/29; A61B-2018/0063; A61B-2018/00702; A61B-2018/00791; A61B-2018/00875; A61B-2018/2065; A61B-2018/2266; A61B-2018/2272; A61B-2018/2294

- **Publication Information**
  WO2012158788 A1 2012-11-22 [WO2012158788]
- **Priority Details**
  2011US-13108093 2011-05-16
  2011US-13108152 2011-05-16
  2011US-13108177 2011-05-16
  2012EP-0724464 2012-05-16
  2012WO-US38126 2012-05-16

- **Fampat family**

WO2012158788	A1	2012-11-22	[WO2012158788]
WO2012158788	A8	2013-03-21	[WO2012158788]
EP2709550	A1	2014-03-26	[EP2709550]
EP2709550	B1	2016-04-06	[EP2709550]
EP3034027	A1	2016-06-22	[EP3034027]

- **Abstract:**

(EP3034027)
An energy-based instrument for sealing vascular tissue, comprising: a first deforming member and a second deforming member configured to move relative to one another about a pivot from a first position wherein the first deforming member and second deforming member are disposed in spaced relation relative to one another to a second position wherein the first deforming member and the second deforming member cooperate to deform the vascular tissue; and an optical system configured to illuminate a portion of the vascular tissue with light to seal the vascular tissue, the optical system comprising: a light source configured to generate light; a light distribution element configured to distribute the light over the portion of the vascular tissue; and a light guide configured to guide the light from the light source to the light distribution element, wherein at least one of the first deforming member and the second deforming member includes optical reflective material that is configured to reflect light that has passed through the vascular tissue so that the light passes through the vascular tissue a second time.

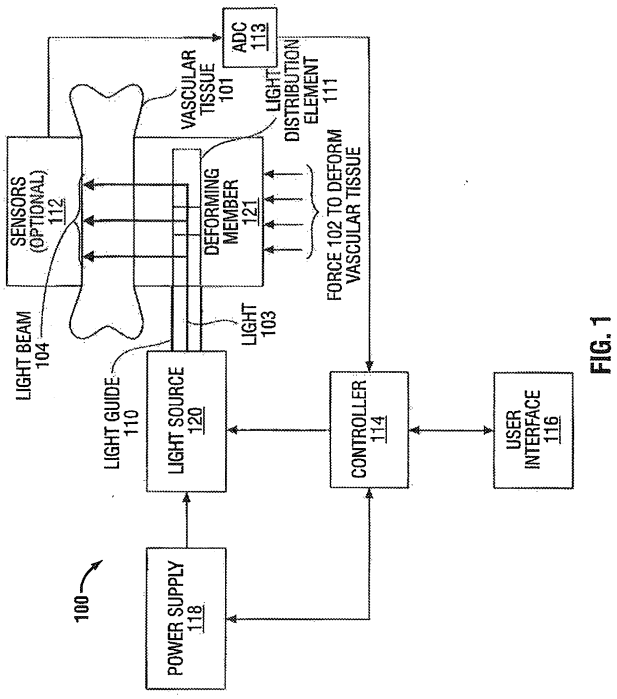

FIG. 1