

Suturas mecánicas. Concepto y evolución histórica

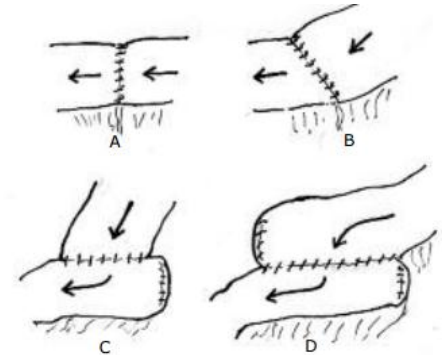
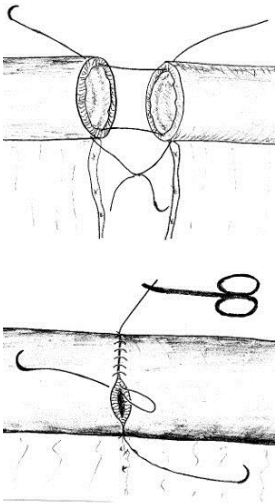
Rodríguez-García, José Ignacio
Cirugía General y del Aparato Digestivo
Hospital Universitario de Cabueñes

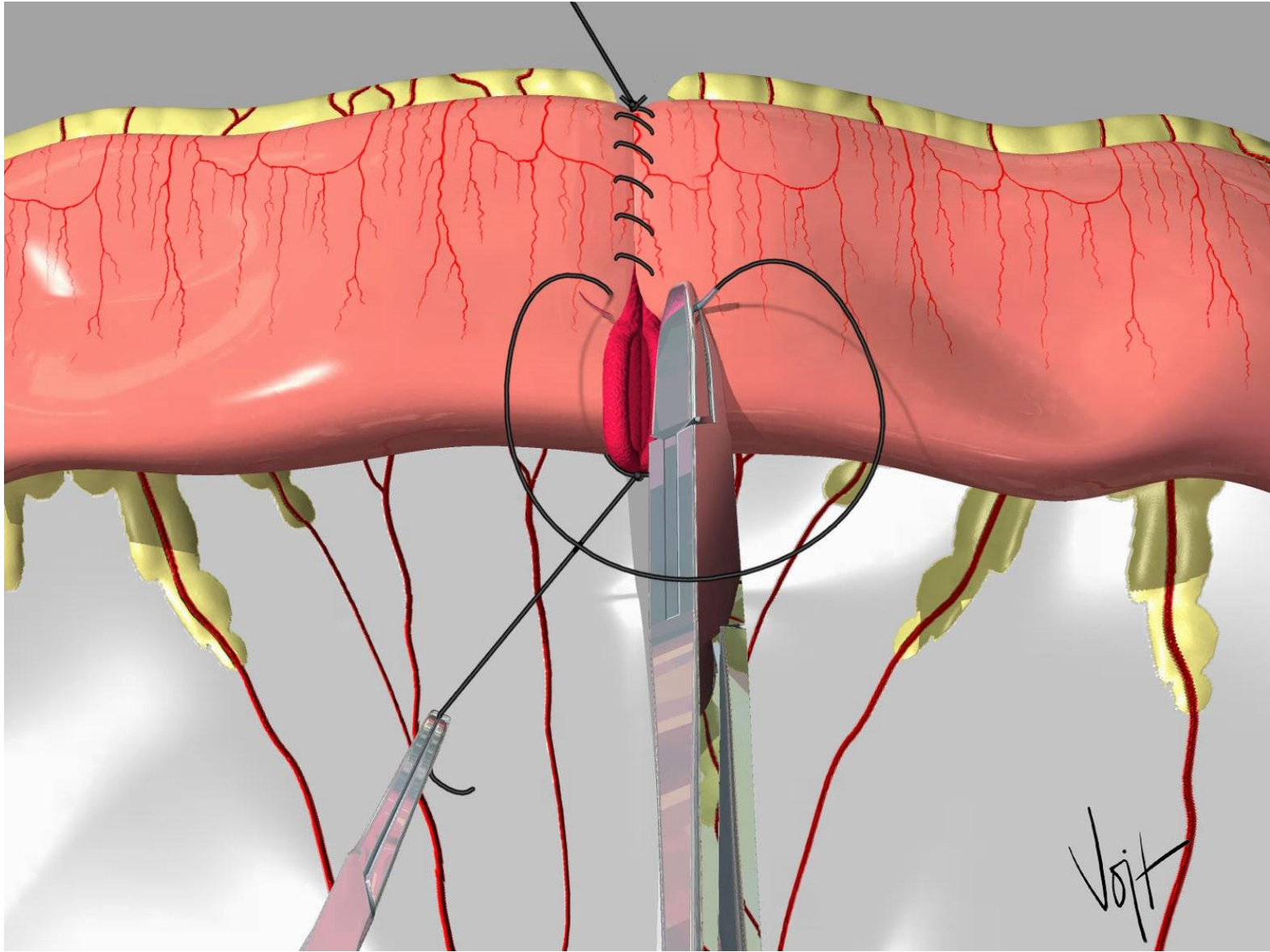


Conceptos

Sutura: Unión quirúrgica que se realiza con hilos, grapas u otros materiales para cerrar una herida o para unir tejidos u órganos.

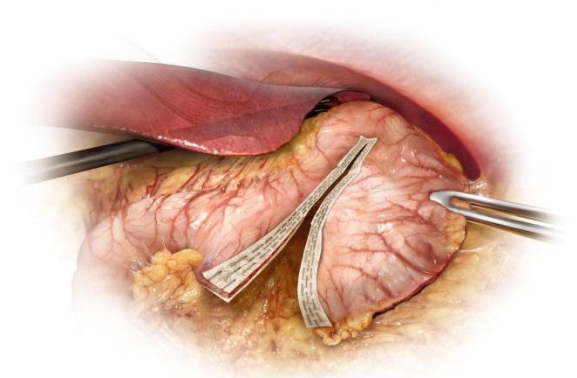
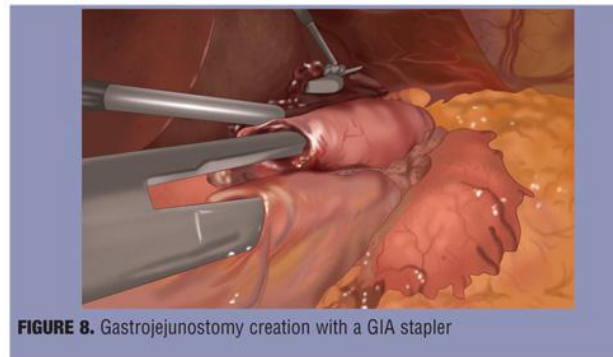
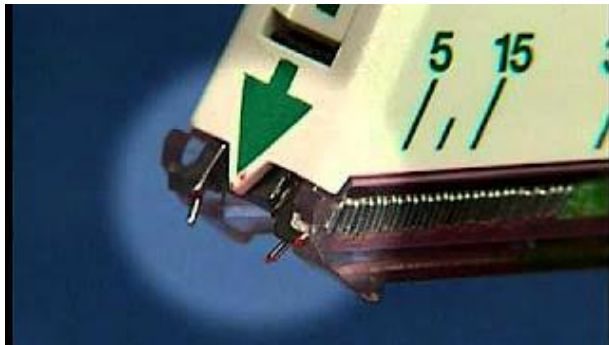
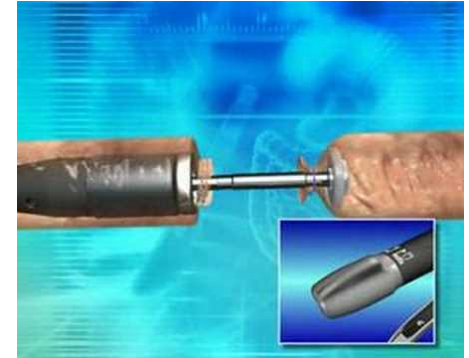
- Continua
- Discontinua
 - Digestiva:
 - » Término-terminal
 - » Látero-lateral
 - » Término-Lateral o Látero-terminal





Sutura mecánica. Surgical Stapling

- Grapa (*staple*)
- Linea de grapas (*Staple line*)
- Grapadora/pistola (*Staplers and cuters*)



Dispositivos quirúrgicos

- Acceso:
 - Trócares/Sistemas de mano-asistencia/agujas de Veress/microtrócares/Sistemas de “single-port”/NOTES
- Energía:
 - Monopolar/ Bipolar/ Sellantes/ Por ultrasonidos/ Mixtos
- Sutura mecánica:
 - Cutánea/ visceral

Sistemas de acceso/abordaje a grandes cavidades

- Laparotomía/toracotomía: abierto
- Laparoscopia/Toracoscopia: cerrado
- Endoscópico monopuerto:
 - Cirugía toracoscópica videoasistida (VATS)
 - Laparoscopia de puerto único, SILS...
- Transorificial o a través de orificios naturales (NOTES)
- Híbrida (laparoendoscópica)
- Laparoscópica robótica (Da Vinci)

Cirugía laparoscópica

Robótica

Puerto único

NOSE

TAMIS

Tiempo

NOTES

OTSC

REM/RES

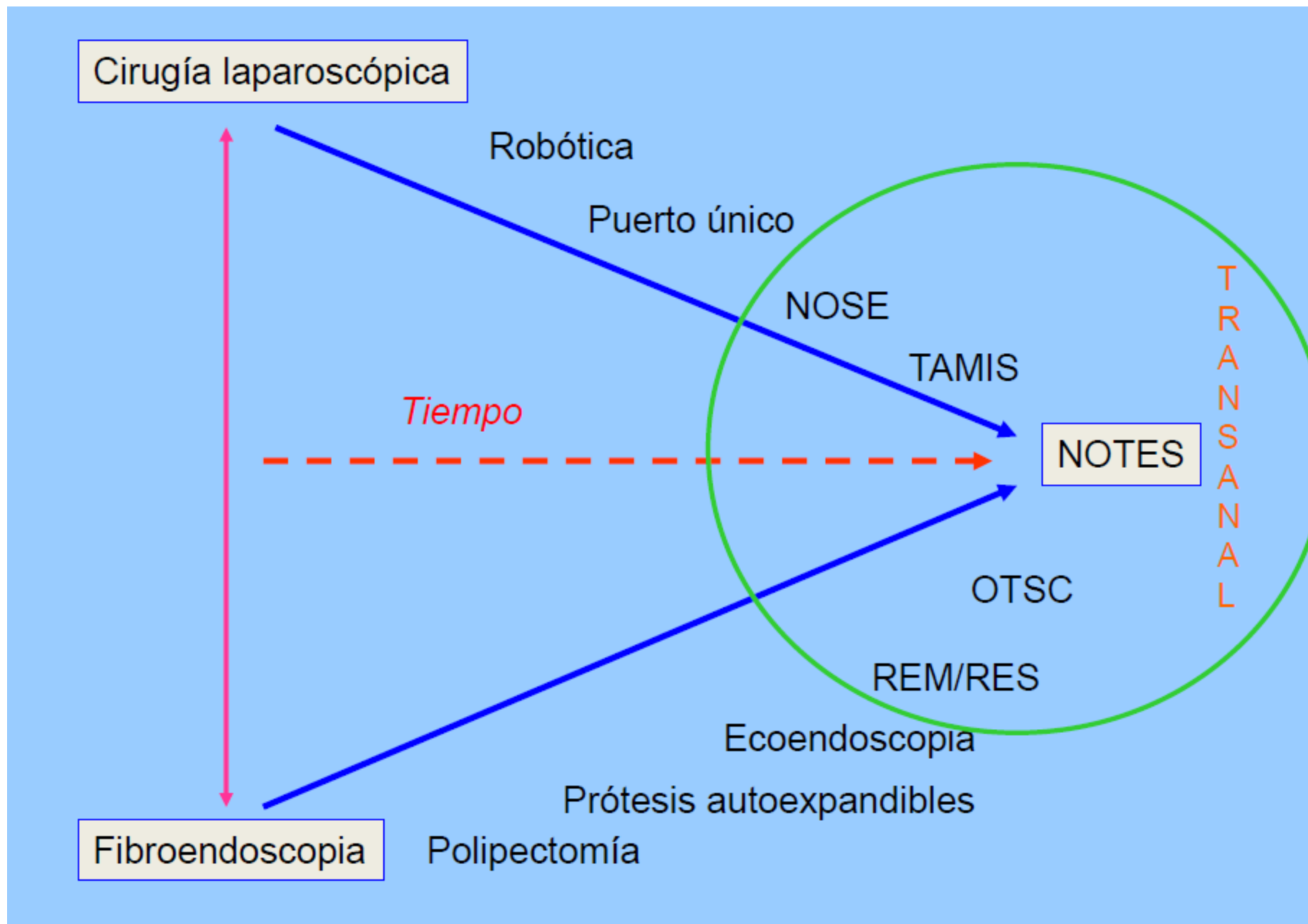
Ecoendoscopia

Prótesis autoexpandibles

Fibroendoscopia

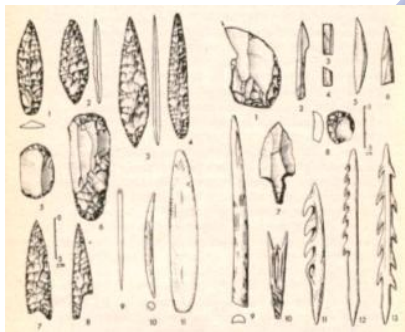
Polipectomía

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"The history of surgery is the history of the last 100 years, which started in 1846 with the discovery of narcosis and the possibility of no-pain operation. Everything, which was before, is just a night of ignorance, pain and barren groping in the dark."

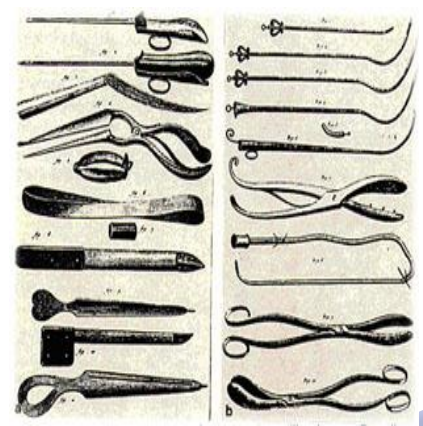
(Bertrand Gosset, 1956)



Historia



EDAD ANTIGUA



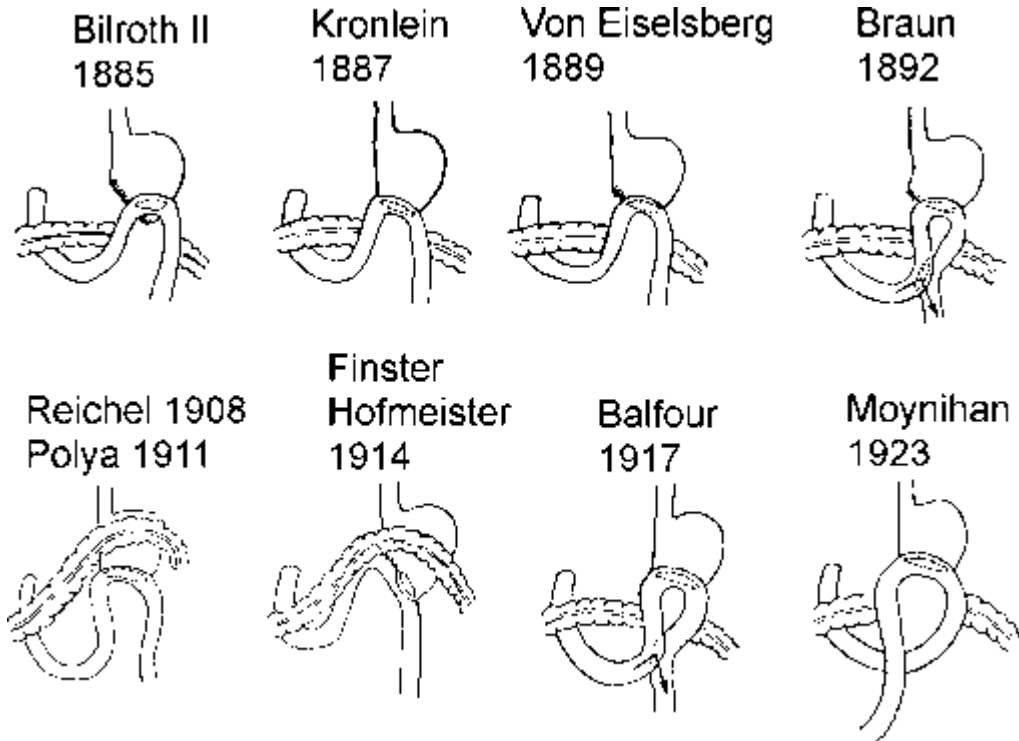
EDAD MEDIA



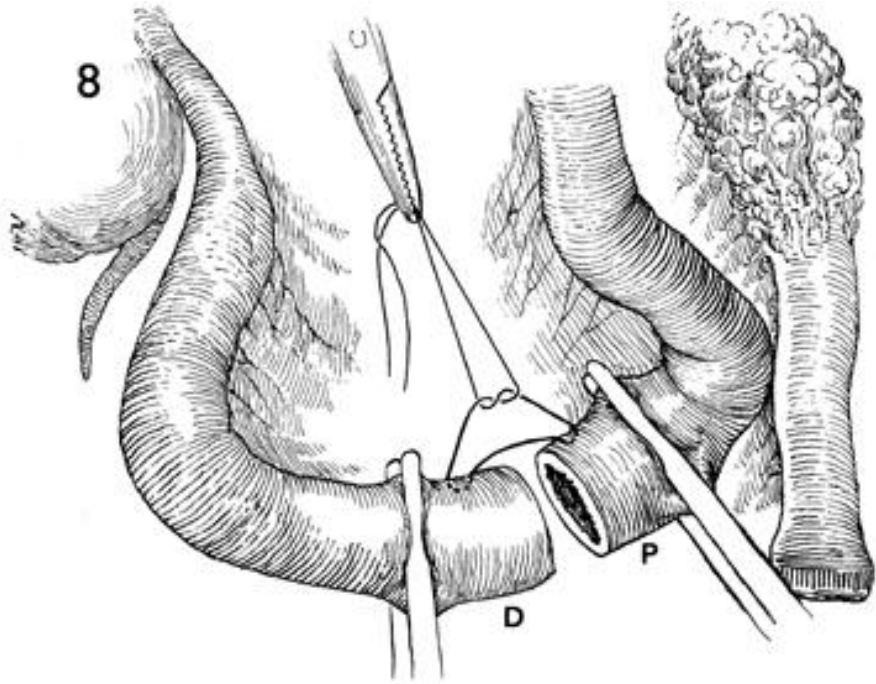
EDAD MODERNA

EDAD CONTEMPORÁNEA



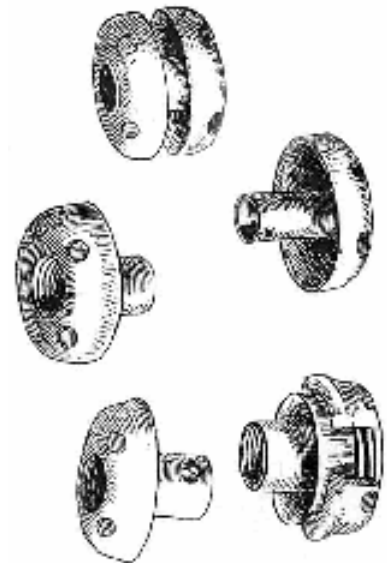


[Theodor Billroth](#) desarrolla la técnica quirúrgica para [gastrectomía](#) que lleva su nombre ([1881](#))



End to end bowel anastomosis
Anastomosis término-terminal (T-T)

<https://www.youtube.com/watch?v=ClojiWeJPdk>





Johns Hopkins Hospital. Operating room from 1892 to 1927



Hummer Hütl

Budapest (Hungria) 1908

Von Petz: Modificaciones en 1934

Friedrich (grapadora líneal)

URSS: Avances más importantes, después de la II Guerra Mundial

Ravitch. Llevó el instrumento a USA en 1958



Chirurgische Nahtapparate Surgical Staplers

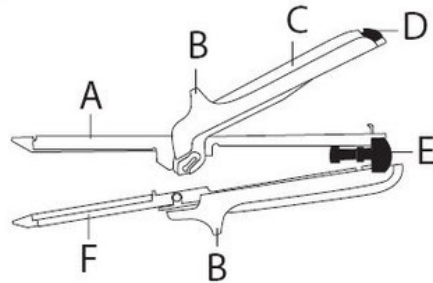
Ein virtuelles Museum der Kammernaht-Technologie
A virtual museum of surgical stapling technology
www.surgicalstaplermuseum.com



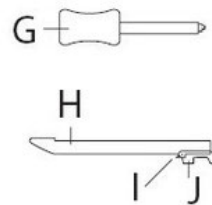
<http://www.surgicalstaplermuseum.com/>

GIA (Gastro-Intestinal-Anastomosis)

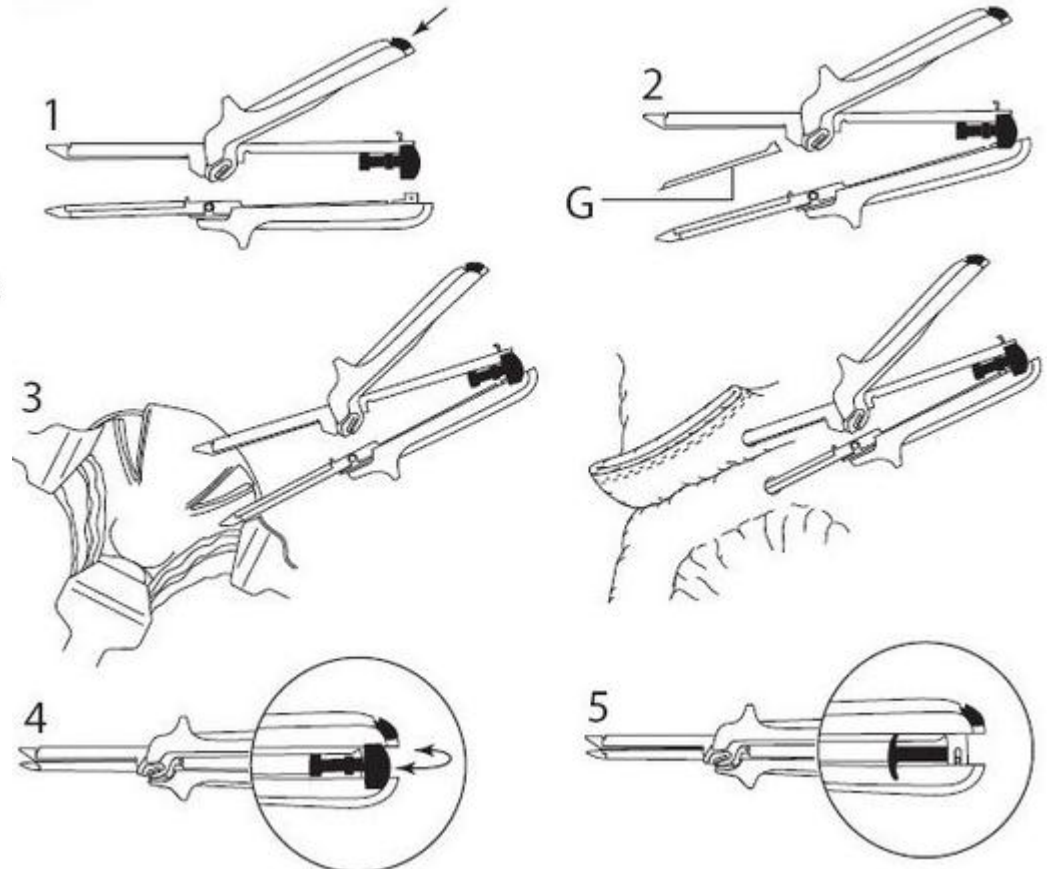
Instrucciones para disparar



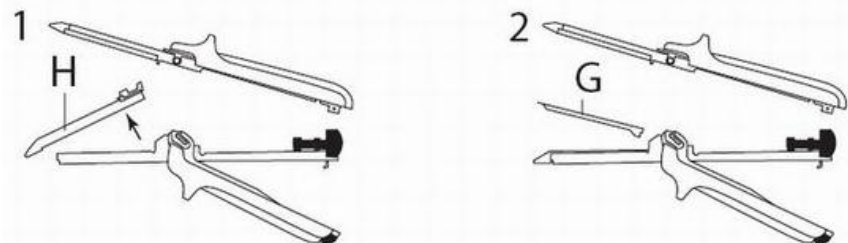
- A) HORQUILLA DEL CARTUCHO
- B) HOMBRO
- C) MANIJA DE BLOQUEO-CARTUCHO
- D) BOTÓN DE LIBERACIÓN-CARTUCHO
- E) DISPARADOR



- F) HORQUILLA DEL YUNQUE
- G) SEPARADOR DE TRANSPORTE (VISTA SUPERIOR)
- H) UNIDAD DE CARGA DE UN SOLO USO
- I) BISTURÍ
- J) SEGURO



Instrucciones para cargar otra vez



March 12, 1963

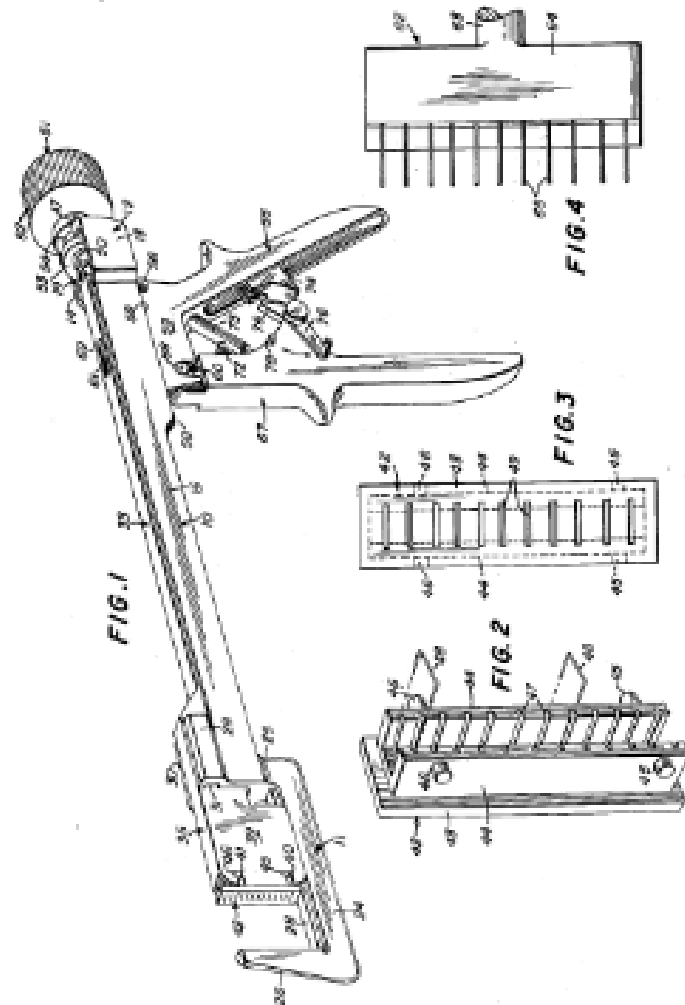
A. A. STREKOPITOV ET AL

3,080,564

INSTRUMENT FOR STITCHING HOLLOW ORGANS

Filed Sept. 10, 1960

3 Sheets-Sheet 1



Feb. 10, 1970

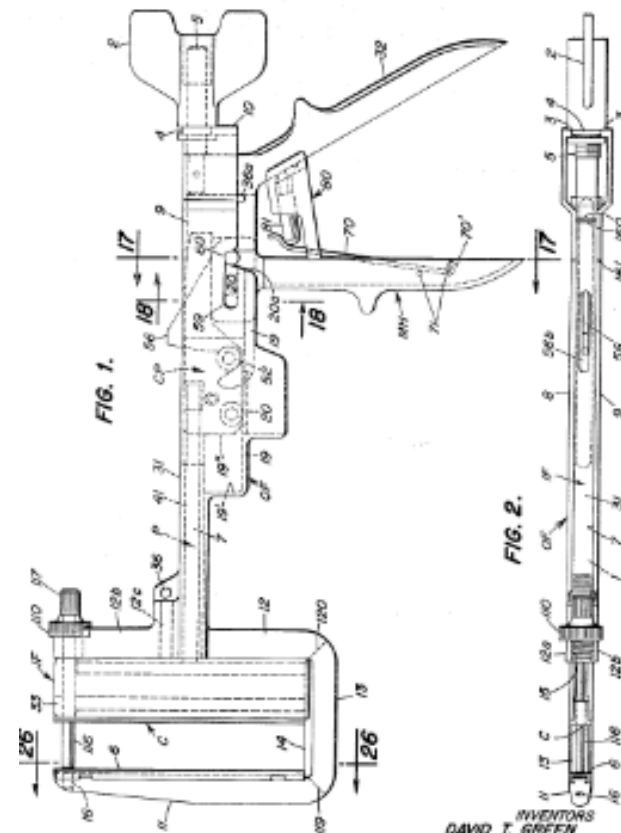
D. T. GREEN ET AL

3,494,533

SURGICAL STAPLER FOR STITCHING BODY ORGANS

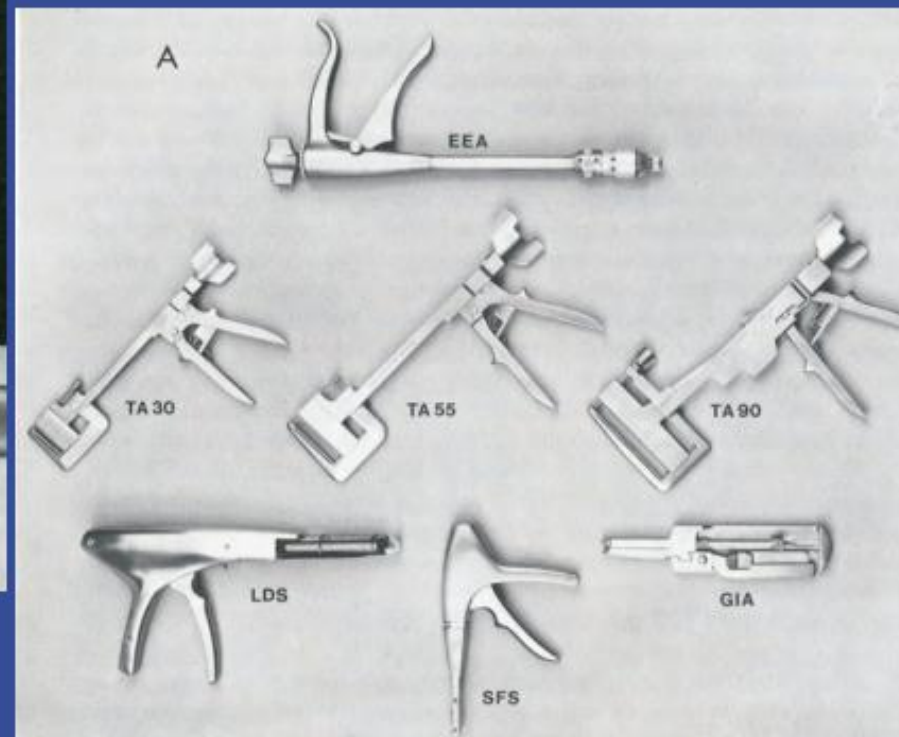
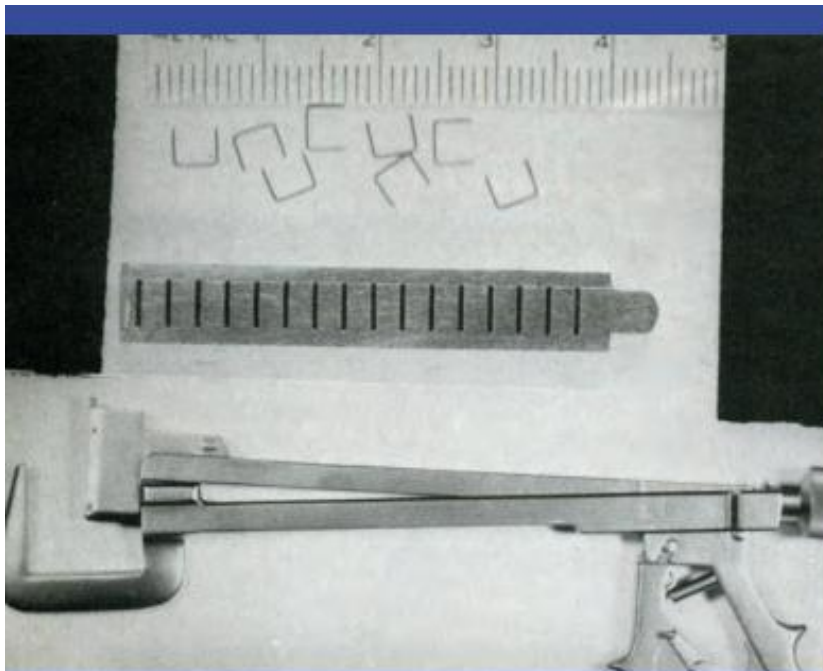
Filed Oct. 10, 1966

26 Sheets-Sheet 1



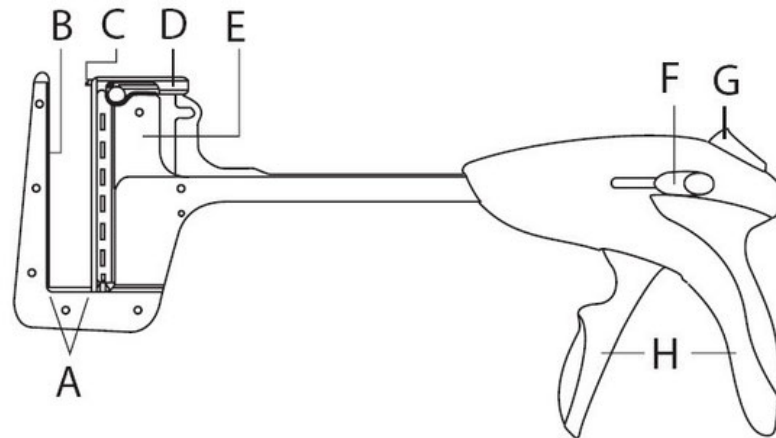
INVENTORS
DAVID T. GREEN
PHILLIP W. KING
LOUIS SOLTANOFF

BY *Levens, Davis, Miller & Mosher*
ATTORNEYS



LEFT: The first stapling instrument Ravitch brought home from the Soviet Union, a bronchial stapler. RIGHT: The original line of American surgical staplers, each loaded with disposable, presterilized, preloaded, and interchangeable staple cartridges.

Grapadora TA (ToracoAbdominal)



- A) MORDAZAS
- B) YUNQUE
- C) PIN DE SUJECIÓN
- D) UNIDAD DE CARGA DE UN SOLO USO
- E) UBICACIÓN DE LA UNIDAD DE CARGA
- F) BOTONES DEL PIN DE SUJECIÓN
- G) BOTÓN DE LIBERACIÓN
- H) MANGO

TA* NUEVO DISEÑO DEL PRODUCTO

Intuitivo, para ser usado con una sola mano, ergonómico de fácil uso

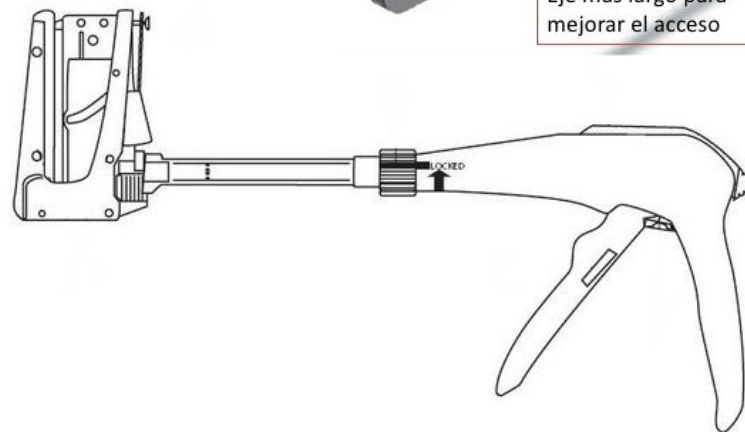
Pin automatico y manual imposible de olvidar

"DST" Directional Staple technology Mejorando la perfecta formación de las grapas.



Eje mas largo para mejorar el acceso

Mangos antiresbalantes para mayor seguridad con guantes



Disposable surgical stapler for performing anastomosis

EP 0050553 A1

RESUMEN

A disposable surgical stapler comprising:

- a tubular housing (12)
- a tubular pusher axially located within the bore of said housing, said pusher having an axial slot extending through its tubular wall,
- a central rod (18) axially located within said pusher, said central rod having an axial groove in its lateral surface,
- a handle (24) pivotally mounted on the tubular wall of said housing (12).

A second part of said handle being located on the other side of the pivotal mounting, adjacent to said housing, and being positioned within a slot in said housing and within the slot in said pusher. The second part of said handle being adapted to move distally against the distal end of the slot in said pusher to move said pusher distally within the bore of said housing.

Número de publicación	EP0050553 A1
Tipo de publicación	Solicitud
Número de solicitud	EP19810401570
Fecha de publicación	28 Abr 1982
Fecha de presentación	9 Oct 1981
Fecha de prioridad	16 Oct 1980

También publicado como [CA1169732A](#), 5 más »

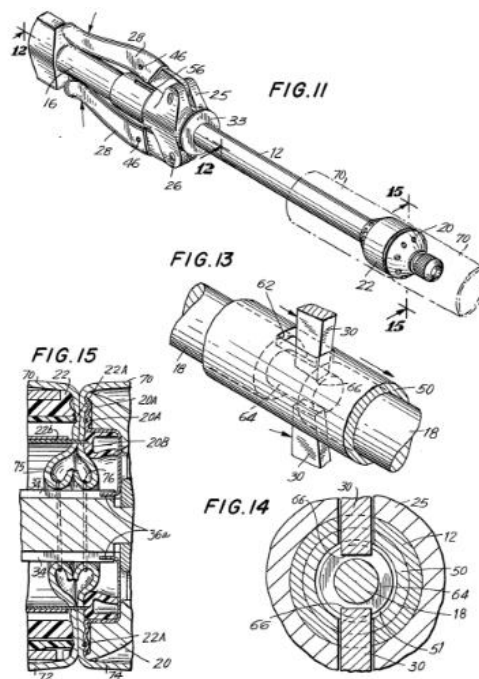
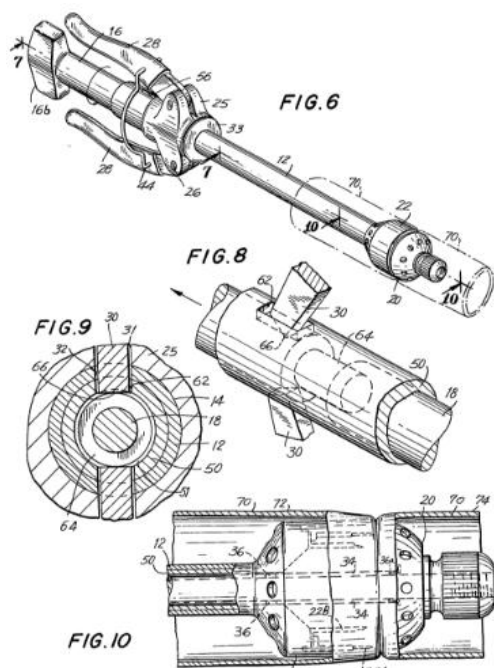
Inventores [Douglas Georges Noiles](#)

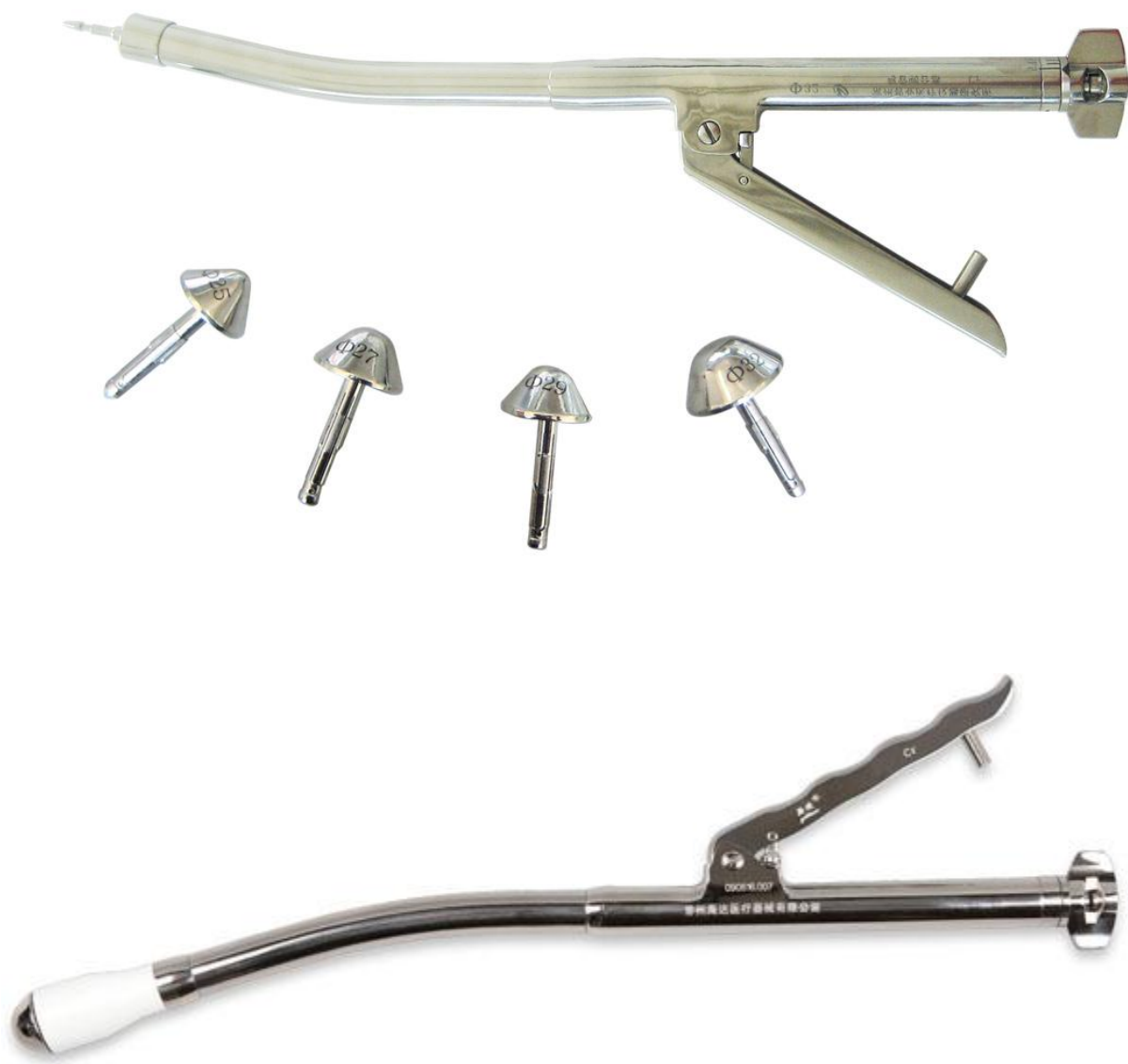
Solicitante [United States Surgical Corporation](#)

Exportar cita [BiBTeX](#), [EndNote](#), [RefMan](#)

[Citas de patentes](#) (3), [Citada por](#) (4), [Clasificaciones](#) (5), [Eventos legales](#) (21)

Enlaces externos: [Espacenet](#) , [Registro europeo de patentes](#)





Surgical stapling apparatus

US 6330965 B1

RESUMEN

A surgical stapling device particularly suited for endoscopic procedures is described. The device can be used with both articulating and non-articulating disposable loading units and has a sensing mechanism for sensing the type of disposable loading unit secured to the device.

Número de publicación US6330965 B1

Tipo de publicación Concesión

Número de solicitud US 09/680,093

Fecha de publicación 18 Dic 2001

Fecha de presentación 5 Oct 2000

Fecha de prioridad 23 Sep 1997

Tarifa Pagadas

También publicado como [CA2304750A1](#), 72 más »

Inventores [Keith L. Milliman](#), Frank J. Viola, Joseph Urban, III, Randolph F. Lehn

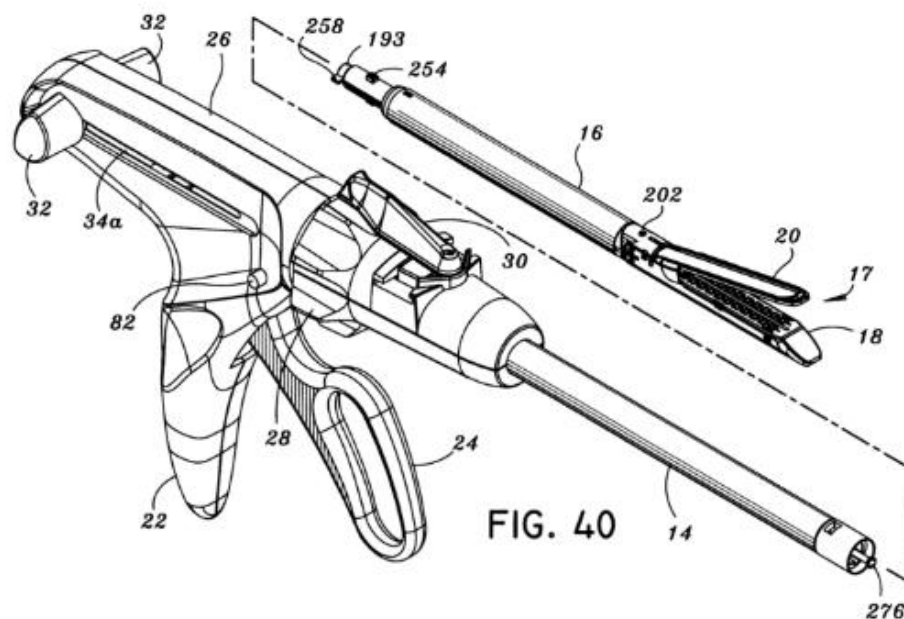
Cesionario original United States Surgical Corporation

Exportar cita BiBTeX, EndNote, RefMan

[Citas de patentes \(75\)](#), [Citada por \(726\)](#), [Clasificaciones \(23\)](#), [Eventos legales \(5\)](#)

Enlaces externos: [USPTO](#) , [Cesión de USPTO](#) , [Espacenet](#)

IMÁGENES (40)



Disposable loading unit for surgical stapling apparatus

US 7857185 B2

RESUMEN

A disposable loading unit for operable attachment to a surgical stapling apparatus. The disposable loading unit may have a carrier that supports a staple cartridge and an anvil assembly that is movable coupled to the carrier. The various embodiments may further have an axial drive assembly that is configured to impart a closing motion to the anvil assembly and also supports a cutting blade thereon. The axial drive assembly is configured to receive firing motions and retraction motions from the surgical stapling apparatus. Various embodiments have an anvil release assembly that enables the anvil assembly to be released from a clamping orientation in the event that the cutting blade becomes jammed during operation.

Número de publicación US7857185 B2
Tipo de publicación Concesión
Número de solicitud US 12/031,539
Fecha de publicación 28 Dic 2010
Fecha de presentación 14 Feb 2008
Fecha de prioridad 14 Feb 2008
Tarifa ? Pagadas

También publicado como CN101584596A, 4 más »

Inventores Jeffrey S. Swayze, 15 más »

Cesionario original Ethicon Endo-Surgery, Inc.

Exportar cita BiBTeX, EndNote, RefMan

Citas de patentes (747), Otras citas (8), Citada por (279), Clasificaciones (8), Eventos legales (3)

Enlaces externos: USPTO , Cesión de USPTO , Espacenet

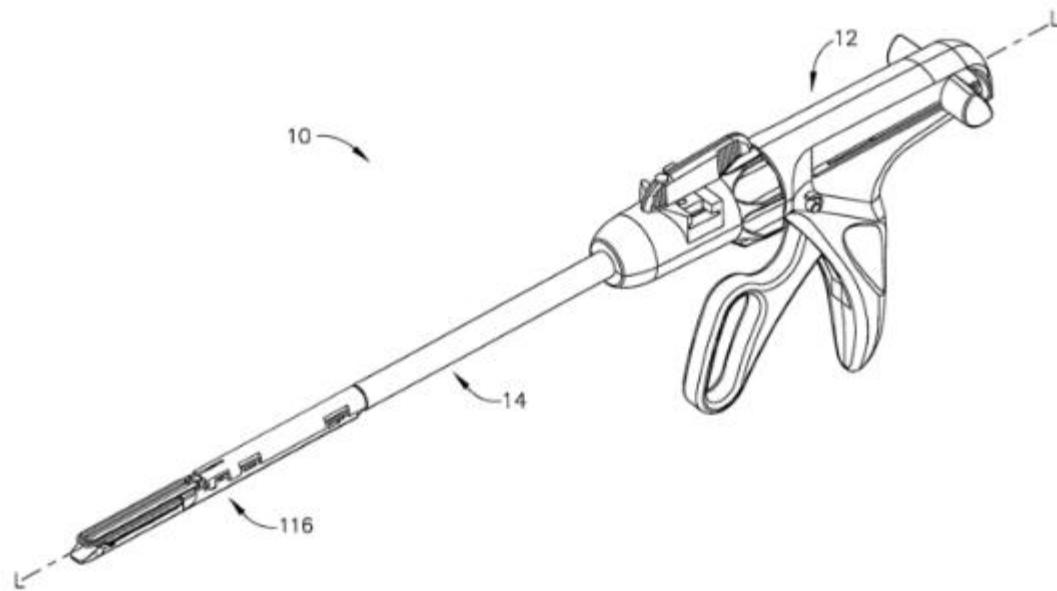
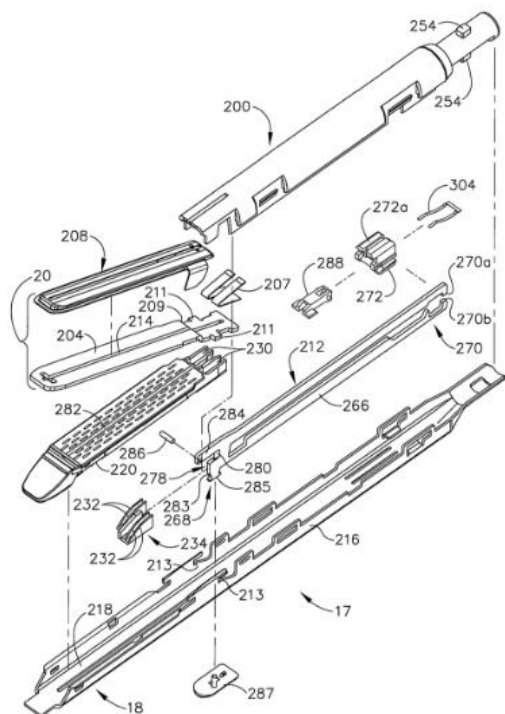


FIG. 4

Surgical stapling instruments including a cartridge having multiple staples sizes

US 8925786 B2

RESUMEN

A surgical stapling apparatus includes a staple cartridge and an anvil member. The staple cartridge includes a plurality of surgical fasteners disposed in rows of retention slots. The staple cartridge may have an annular or linear configuration of retention slots. The tissue contacting surface of the staple cartridge may be tapered or stepped. The anvil member has a tissue contacting surface that includes a number of pockets arranged for substantially aligning with the retention slots. In addition, the tissue contacting surface of the anvil member may complement the tissue contacting surface of the staple cartridge.

Número de publicación US8925786 B2
Tipo de publicación Concesión
Número de solicitud US 14/249,820
Fecha de publicación 6 Ene 2015
Fecha de presentación 10 Abr 2014
Fecha de prioridad 15 Ago 2005

También publicado como [US8579178](#), 11 más »

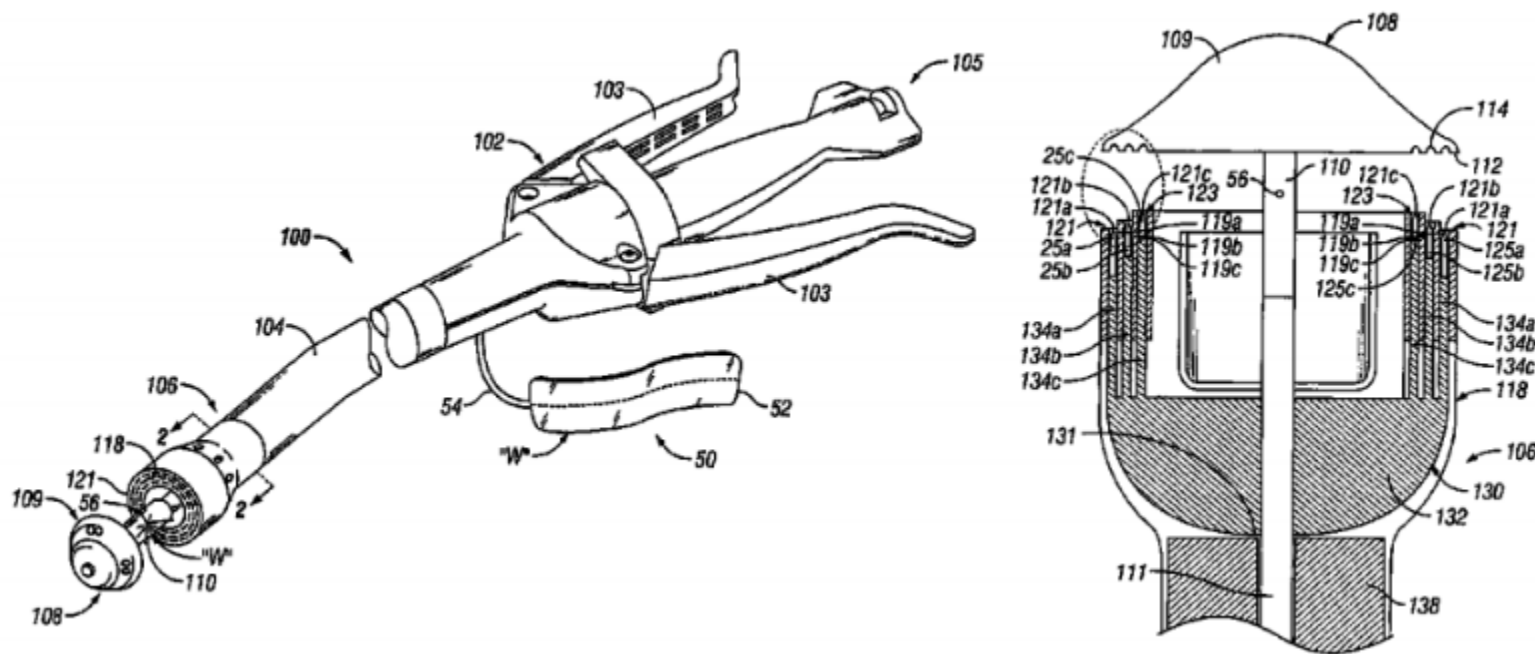
Inventores [Henry E. Holsten](#), 5 más »

Cesionario original Covidien Lp

Exportar cita [BiBTeX](#), [EndNote](#), [RefMan](#)

[Citas de patentes](#) (121), [Otras citas](#) (4), [Citada por](#) (1),
[Clasificaciones](#) (27), [Eventos legales](#) (1)

Enlaces externos: [USPTO](#) , [Cesión de USPTO](#) , [Espacenet](#)





Powered ECHELON FLEX™



iDrive™ Ultra Powered Stapling System

Adult male circumcision with a circular stapler versus conventional circumcision: A prospective randomized clinical trial

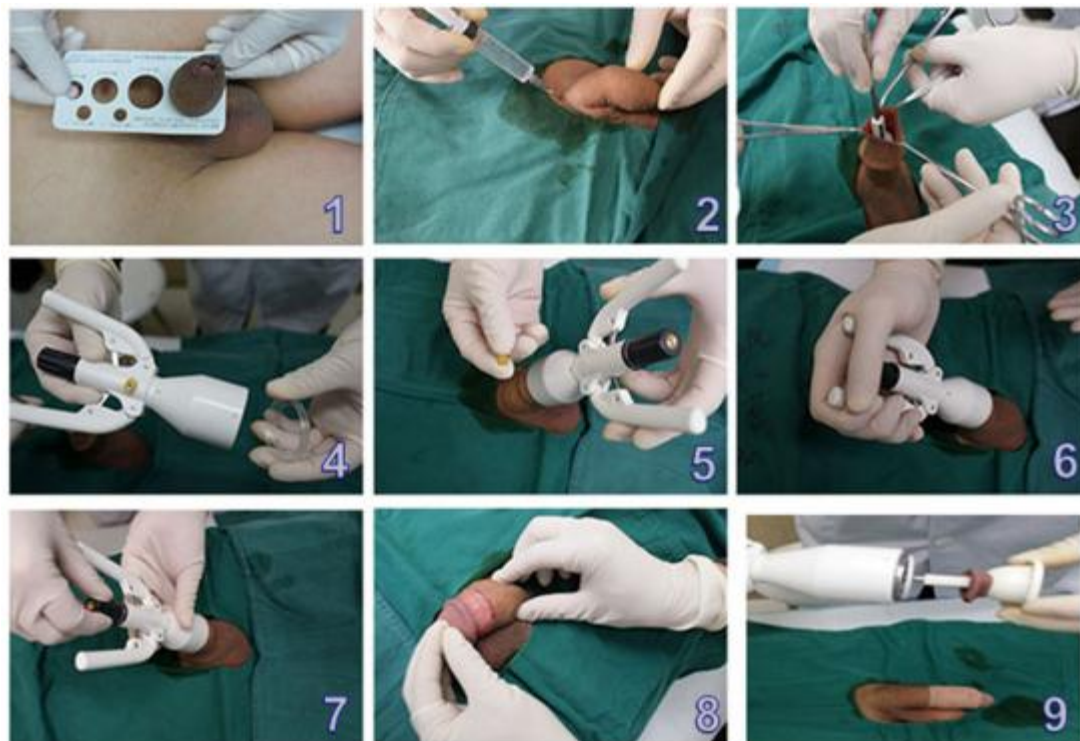
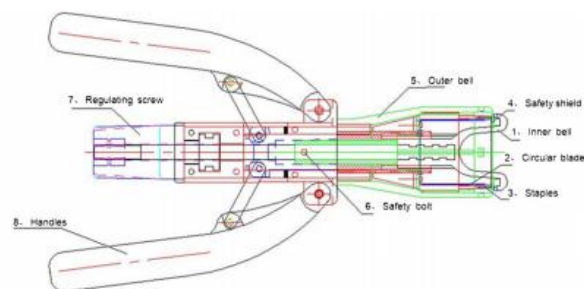
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DaVinci Robotic Surgical System - Endowrist Stapler Animation



DaVinci Robotic Surgical System - Endowrist

Demonstration of Phase 1

Operating Room with no People

