

06-118604

Castillo Grau & Asociados
ABOGADOS

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Señora Jefe
DIVISIÓN DE NUEVAS CREACIONES
SUPERINTENDENCIA DE INDUSTRIA
Bogotá, D.C.

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 06-118604-00003-0000

Fecha: 2008-03-13 17:30:58 Dep. 2020 NUECREACIONI
Tra 11 PATENTEIYII Eve: 378 FASENACIONALI
Act 538 PETICION Folios: 2

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Re.: Expediente No. 06 118.604
Fase Nacional Solicitud PCT
a nombre de
SYNTHESES GmbH
Código 02 – 01 - 538

En relación con la solicitud contenida en el Expediente de la referencia y, en particular, con la publicación del extracto de la misma en la Gaceta de la Propiedad Industrial No. 581 de 31 de Octubre de 2007, por medio del presente escrito muy respetuosamente me permito solicitarle se sirva proceder a efectuar el **EXAMEN DE PATENTABILIDAD** de la solicitud aquí contenida.

Para tal efecto, acompaño el comprobante de pago por concepto de la tasa correspondiente, Recibo No. 27.495

De Usted Atentamente,

LUIS FELIPE CASTILLO GIBSONE
T.P. No. 68.995 del C.S.J.

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

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0041 CUATROCENTOS VEINTE MIL PESOS

RESPONSIBLE
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...CUIDO DE CADA APLICADO AL EXPEDIENTE NÚM. _____

DIVISIÓN DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No. 06-118604

EL EXTRACTO DE LA PRESENTE SOLICITUD DE **PATENTE DE INVENCION**

FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No **581** DE

FECHA **31 DE OCTUBRE DE 2007** EL TÉRMINO HÁBIL SEÑALADO POR LA

LEY EXPIRA EL **31 DE ENERO DE 2008**

NOTA: Dentro del plazo de los seis (6) meses siguientes a partir de la fecha de publicación en la gaceta de Propiedad Industrial, deberá solicitar y cancelar el examen de patentabilidad so pena de que la solicitud caiga en abandono, de acuerdo con lo establecido en el Artículo 44 de la Decisión 486/2000.

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI _____

NO X

65
62



US005913860A

United States Patent [19]
Scholl

[11] **Patent Number:** **5,913,860**
[45] **Date of Patent:** **Jun. 22, 1999**

[54] **SURGICAL NAIL INSERTER**

Attorney, Agent, or Firm—Pennie & Edmonds LLP

[75] **Inventor:** **Christopher Hargest Scholl**, West Chester, Pa.

[57] **ABSTRACT**

[73] **Assignee:** **Synthes (USA)**, Paoli, Pa.

[21] **Appl. No.:** **09/031,751**

[22] **Filed:** **Feb. 27, 1998**

[51] **Int. Cl.⁶** **A61B 17/56**

[52] **U.S. Cl.** **606/100; 606/86**

[58] **Field of Search** 606/99, 100, 104, 606/86

[56] **References Cited**

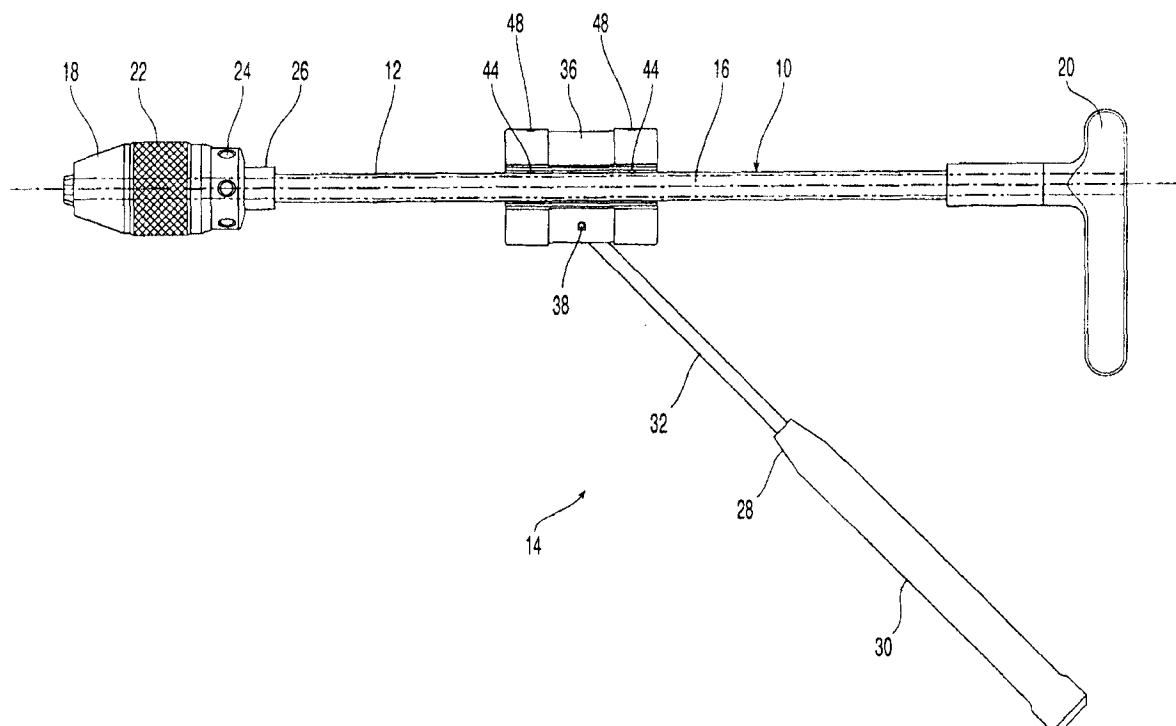
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5,417,696	5/1995	Kashuba et al.	606/99
5,476,467	12/1995	Benoist	606/100
5,505,732	4/1996	Michelson	606/61

Primary Examiner—Michael Buiz

Assistant Examiner—Daphna Shai

16 Claims, 2 Drawing Sheets



63

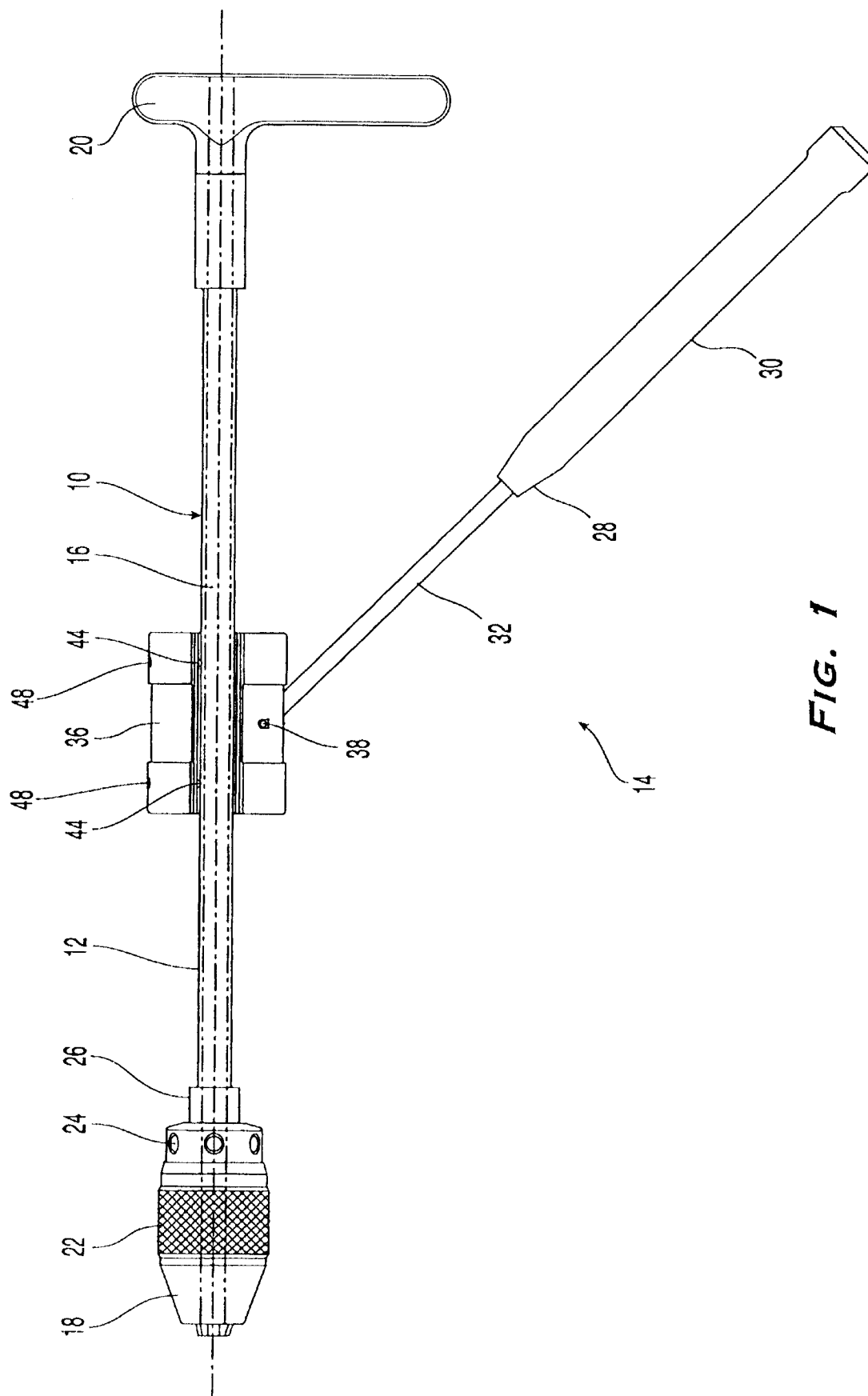


FIG. 1

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U.S. Patent

Jun. 22, 1999

Sheet 2 of 2

5,913,860

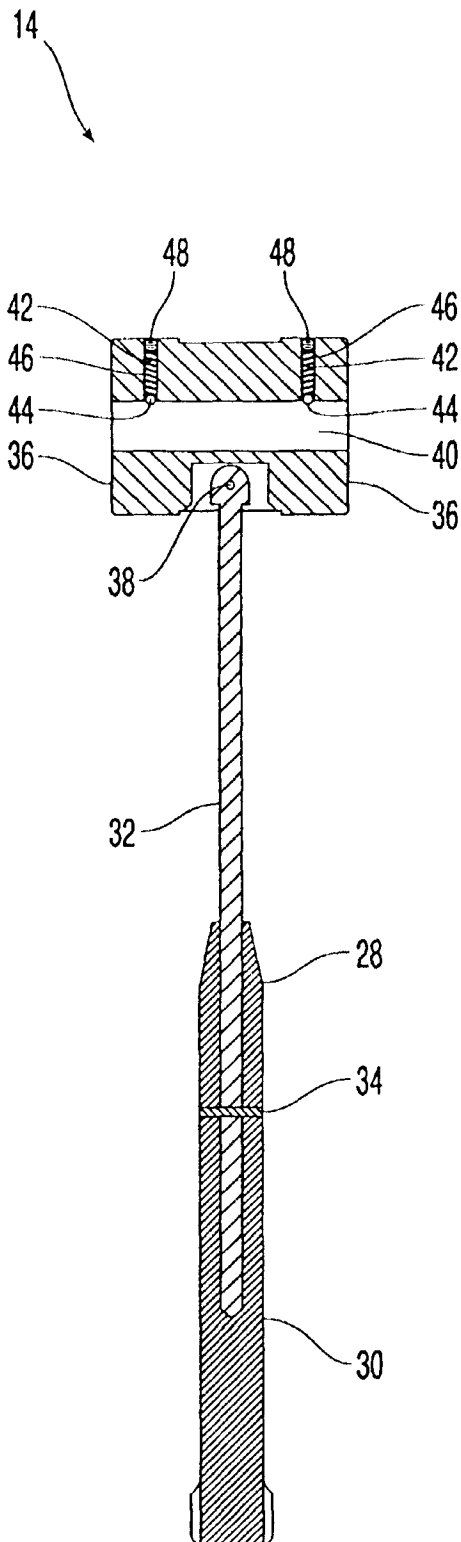


FIG. 2

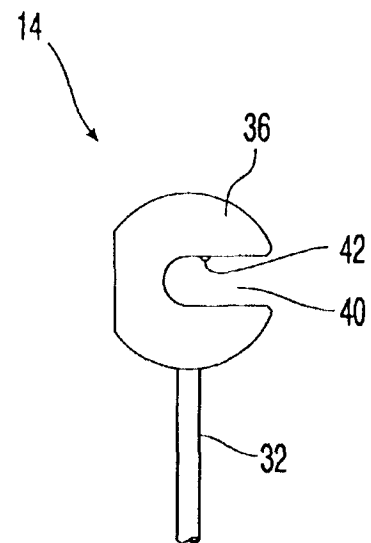


FIG. 3

SURGICAL NAIL INSERTER

FIELD OF THE INVENTION

The present invention is directed to a surgical tool for impacting and extracting an implant used for the internal fixation of a bone fracture.

BACKGROUND OF THE INVENTION

The internal fixation of a fractured long bone using an elongated nail, pin, or wire is frequently desirable. However, it is difficult to drive the nail into both halves of the fracture so that the fractured portions are properly aligned in close apposition.

A wide variety of surgical instrumentation has been developed to facilitate the internal fixation of fractures. For example, U.S. Pat. No. 5,476,467 discloses a surgical hammer for driving K-wires. The tool disclosed in this patent can only accommodate a limited number of sizes of wires and the collet must be changed for each wire size. Another disadvantage of the tool is that the slap hammer cannot be removed from the tool. Manipulating the tool with the extra weight of the slap hammer is cumbersome. Further, unwanted movement of the slap hammer could interfere with proper implantation of the wire.

Thus, there exists a need for an improved device for the impaction and extraction of an internal fracture fixation implant.

SUMMARY OF THE INVENTION

The present invention relates to a device for impaction and extraction of an implant into bone. The device comprises a slide rod having a tubular body with first and second ends and a bore for receiving the implant, a securing element located on the first end of the slide rod for maintaining the implant in the bore, a handle on the second end of the slide rod for manipulation of the device, and a slap hammer having a body member configured and dimensioned to be releasably and slideably connected to the slide rod so that displacement against the securing element results in impaction while displacement against the handle results in extraction of the implant. It is preferred that the securing element is a keyless chuck that has a variable opening that accommodates implants having diameters ranging from 0.6 to 6 mm. Although the chuck can be tightened or loosened by hand, slots on the chuck allow tool-assisted tightening or loosening. In a preferred embodiment, the slap hammer has a grip and the slap hammer body member has a channel for receiving the slide rod and at least one retaining element for maintaining the slide rod in the channel. Preferably, the grip is pivotally connected to the body member of the slap hammer. In a preferred embodiment, the retaining element comprises a ball plunger biased to partially protrude into the channel by a spring and held in place by a threaded body. Contact by the slide rod forces the ball plunger out of the channel to allow the slide rod to slideably engage the channel.

The present invention also relates to a method for impacting or extracting an implant into bone of a patient. The method includes the steps of: configuring a slide rod to have a tubular body with first and second ends and a bore for receiving the implant; providing a securing element on one end of the slide rod and a handle on the other end; associating an implant with the slide rod by engaging a portion of the implant with the securing member; releasably connect-

member of the slide rod either against the securing element to impact the implant into the bone or against the handle to extract the implant from the bone. In one embodiment, the implant is initially associated with the slide rod and the method includes positioning and placing the implant in the patient's body before releasably connecting the slap hammer to the slide rod. In another embodiment, an entry point is drilled for insertion of the implant and the implant is initially positioned and placed in the patient's body and then engaged with the securing member. The method also includes the step of visualizing the implant during the impaction or extraction using a radiographic imaging system. As the implant is impacted or extracted the portion of the implant engaged with the securing member is adjusted.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view of the device according to the present invention;

FIG. 2 is a cross-sectional view of a slap hammer according to the present invention; and

FIG. 3 is an end view of a body member of the slap hammer.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIG. 1 shows the surgical nail inserter 10 according to the present invention. Inserter 10 has a slide rod 12 and a slap hammer 14. Slide rod 12 is a tube that has a bore 16 for receiving an implant, such as a nail. The inserter 10 can also be used with a wire, pin, or other implants. Inserter 10 can even be used with a reaming rod, i.e., instrumentation used to guide a reamer for preparing the medullary canal prior to insertion of an intermedullary nail. One end of slide rod 12 has a chuck 18 for securing the implant in bore 16 and the other end has a handle 20. Handle 20 is shown as a L-shaped handle, but any configuration which would allow a surgeon to control and rotate inserter 10 can be used. The rotation of inserter 10 is desirable so that the implant can be twisted during impaction or extraction. The twisting motion controls the direction of the implant. Thus, if the implant has a feature such as curved tip, the surgeon can ensure that the feature is properly oriented. Preferably, handle 20 is open-ended so that bore 16 extends the full length of inserter 10, and, if needed, the implant can protrude through handle 20.

Chuck 18 is a keyless chuck that can accommodate implants of various sizes. Typically, the implant would have a diameter of 0.6 to 6 mm. As chuck 18 is keyless, it can be tightened and loosened by hand. Thus, intraoperative changing of the portion of the implant that is held by chuck 18 is facilitated. This allows a surgeon to easily move the implant through bore 16 as the implant is impacted or extracted. As some implants are specifically designed to be flexible, it is important that the portion of the implant anterior to chuck 18 not be too long to avoid bending of the implant. Raised surface 22 provides the surgeon a surer grip while twisting chuck 18. Slots 24 are sized to receive a tool such as a wrench for situations in which the surgeon wishes to supplement hand tightening or loosening.

After an implant has been inserted in bore 16 and chuck 18 has been tighten, the movement of slap hammer 14 against collar 26 provides the driving force for impaction. Collar 26 is optional and slap hammer 14 could directly contact chuck 18 if desired. The use of collar 26 is preferred to reduce the force of the impaction to avoid damage to chuck 18. In an analogous fashion, the movement of slap hammer 14 against handle 20 provides the driving force for

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Slap hammer 14 can be removed from slide rod 12 to increase the manageability of inserter 10. Slap hammer 14 has a grip member 28 that includes a gripping portion 30 and a connecting portion 32. Gripping and connecting portions 30, 32 are joined by a rivet 34. Connecting portion 32 is attached to a body member 36 by pin 38 in such a manner that body member 36 can pivot about grip member 28. The ability of body member 36 to pivot about grip member 28 increases the maneuverability of inserter 10. Body member 36 is substantially cylindrical in shape with a flattened side and has a channel 40 sized to receive slide rod 12. Channel 40 has two retaining elements 42 that maintain slide rod 12 in channel 40 while still permitting slap hammer 14 to slide along slide rod 12. Retaining elements 42 are positioned in channel 40 so that when slap hammer 14 is attached to slide rod 12, slide rod 12 rests against the surfaces of channel 40 and retaining elements 42. Retaining element 42 consists of a ball plunger 44 that partially protrudes into channel 40, a spring 46 for spring loading ball plunger 44, and a threaded body 48 for holding ball plunger 44 and spring 46 in place.

In order to connect slap hammer 14 to slide rod 12, the surgeon inserts slide rod 12 into channel 40. In so doing, slide rod 12 contacts the portion of ball plungers 44 that protrudes into channel 40. The contact force is sufficient to compress springs 46 and cause all of ball plunger 44 to be clear of channel 40 so that slide rod 12 can be seated in channel 40. When slide rod 12 is seated in channel 40, spring 46 forces the protruding portion of ball plunger 44 back into channel 40, and thus maintains slide rod 12 in channel 40. In order to remove slap hammer 14 from slide rod 12, the surgeon simply moves slide rod 12 laterally in channel 40. The contact pressure of slide rod 12 against ball plunger 44 is sufficient to overcome the biasing of spring 46 and clear channel 40 of ball plunger 44.

As previously noted, the movement of slap hammer 14 against collar 26 provides the driving force for impaction and the movement of slap hammer 14 against handle 20 provides the driving force for extraction. Providing inserter 10 with grip member 28 and handle 20 separates the surfaces the surgeon uses to hold inserter 10 from the surfaces that slap hammer 14 strikes. Simultaneous rotation or turning and impaction or extraction of the implant is made possible by handle 20, grip member 28, and the manner in which slap hammer 14 attaches to slide rod 12.

A method of fixing a fracture using the surgical nail inserter according to the present invention will now be described using the fixation of a diaphyseal femoral fracture in a child as an example.

The surgeon first selects the proper nail diameter. The appropriate diameter depends upon a number of factors including the bone being fixed, the number of nails used to fix the fracture, and the size of the medullary isthmus. The medullary isthmus can be determined using standard imaging techniques. Once the nail is selected, the fracture is reduced. The reduction of the fracture should be confirmed with fluoroscopy in both the anterior-posterior and medial-lateral views. Fluoroscopy can also be used to ascertain the placement of the surgical incision for the entry point of the nail. After the incision has been made and the soft tissue has been dissected and retracted to expose the bone, the surgeon drills the entry point. Inserter 10 can also be used without creating an entry point with a drill. The desirability of drilling an entry point will depend on a number of factors including the patient's bony stock, the implant, and the surgical technique.

Once the desired angle of the entry point has been created,

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hand. Alternatively, the nail can already be secured in bore 16 of slide rod 12 by chuck 18 and the surgeon uses inserter 10 to introduce the nail into the entry point. After the nail has been secured to inserter 10 and introduced into the entry point, the surgeon fluoroscopically determines if the nail needs to be rotated to align the curved tip so that the convex side will properly glance off the far cortex. If the nail does need to be rotated, the surgeon does so by turning handle 20.

The surgeon attaches slap hammer 14 to slide rod 12 in the manner described above. The movement of slap hammer 14 against collar 26 provides the driving force for impaction and advancement of the nail through the medullary canal. The surgeon monitors the advance of the nail with fluoroscopy. The nail is advanced until the fracture site is reached. If another nail is to be used, the second nail should be inserted on the opposite side of the first nail up to the level of the fracture.

With the fracture reduced, the nail is driven across the fracture using fluoroscopy for visualization. The nail can be rotated using handle 20 so that its curved tip can spear the opposite fragment of the fracture. If the nail needs to be rotated, it is easier to do so while the nail is being advanced or retracted rather than when the nail is stationary. If the nail does not successfully cross the fracture gap, the movement of slap hammer 14 against handle 20 provides the driving force for extraction of the nail so that another attempt to cross the fracture gap can be made. Providing inserter 10 with grip member 28 and handle 20 separates the surfaces the surgeon uses to hold inserter 10 from the surfaces that slap hammer 14 strikes. Simultaneous rotation or directing and impaction or extraction of the nail is made possible by handle 20, grip member 28, and the manner in which slap hammer 14 attaches to slide rod 12. Once the nail captures the opposite fragment, the nail position can be confirmed using both anterior-posterior and medial-lateral views. If a second nail is used, it can now be advanced across the gap.

When the nail is in its final position, chuck 18 can be loosened to remove the nail from inserter 10. After the fracture has healed or the surgeon otherwise determines that the nail should be removed, inserter 10 can be used to facilitate the explantation process.

While it is apparent that the illustrative embodiments of the invention herein disclosed fulfil the objectives stated above, it will be appreciated that numerous modifications and other embodiments may be devised by those skilled in the art. Therefore, it will be understood that the appended claims are intended to cover all such modifications and embodiments which come within the spirit and scope of the present invention.

What is claimed is:

1. A device for impaction and extraction of an implant into bone comprising:

a slide rod having a tubular body with first and second ends and a bore for receiving an implant;

a securing element located on the first end of the slide rod for maintaining the implant in the bore;

a handle on the second end of the slide rod for manipulation of the device; and

a slap hammer having a body member configured and dimensioned to be releasably and slideably connected to the slide rod so that displacement of the body member against the securing element results in impaction of the implant while displacement of the body member against the handle results in extraction of the implant,

wherein the slap hammer can be releasably connected to

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US005871204A

United States Patent [19]
Spirer

[11] **Patent Number:** **5,871,204**
[45] **Date of Patent:** **Feb. 16, 1999**

[54] **HAND TOOL WITH ADJUSTABLE HEAD**
[76] Inventor: **Steven E. Spirer**, 391 Haworth Ave.,
Haworth, N.J. 07641

[21] Appl. No.: **758,352**

[22] Filed: **Dec. 3, 1996**

Related U.S. Application Data

[60] Provisional application No. 60/009,645 Dec. 4, 1995.

[51] Int. Cl.⁶ **B25C 11/00**

[52] U.S. Cl. **254/26 R; 254/27; 254/31;**
81/177.8; 81/22

[58] Field of Search **254/26 R, 26 E,**
254/27, 28, 21, 23, 19, 25, 18, 17, 131;
81/22, 20, 177.8, 177.9

[56] **References Cited**

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Primary Examiner—James G. Smith

Assistant Examiner—Lee Wilson

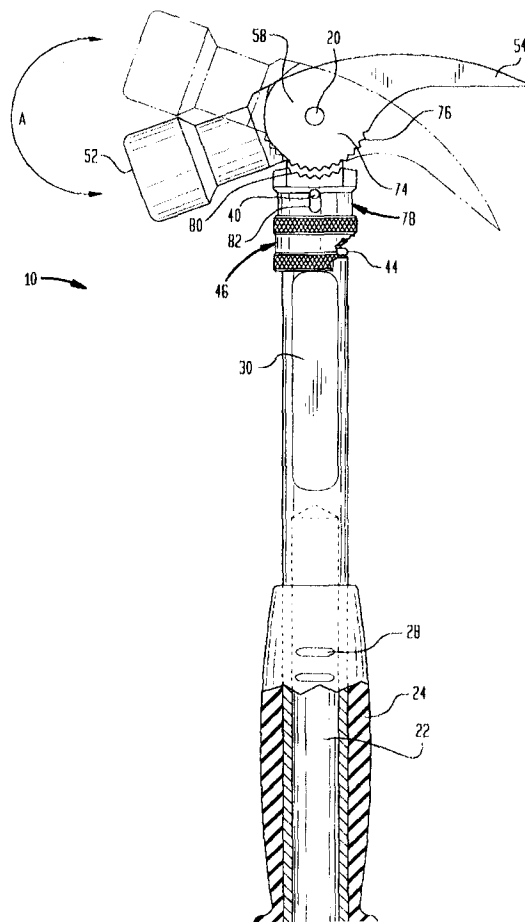
Attorney, Agent, or Firm—Weingram & Associates, P.C.

[57]

ABSTRACT

A hand tool with a pivotal head portion includes a first manually rotatable collar which causes movement of a second slidable collar along a handle of the tool to secure the head portion at a desired angle with respect to the handle. Serrations on the tool head and slidable collar releasably engage each other to lock the head at the desired angle. The tool head is mounted on the handle using either ball and socket or tongue and groove configurations.

19 Claims, 6 Drawing Sheets



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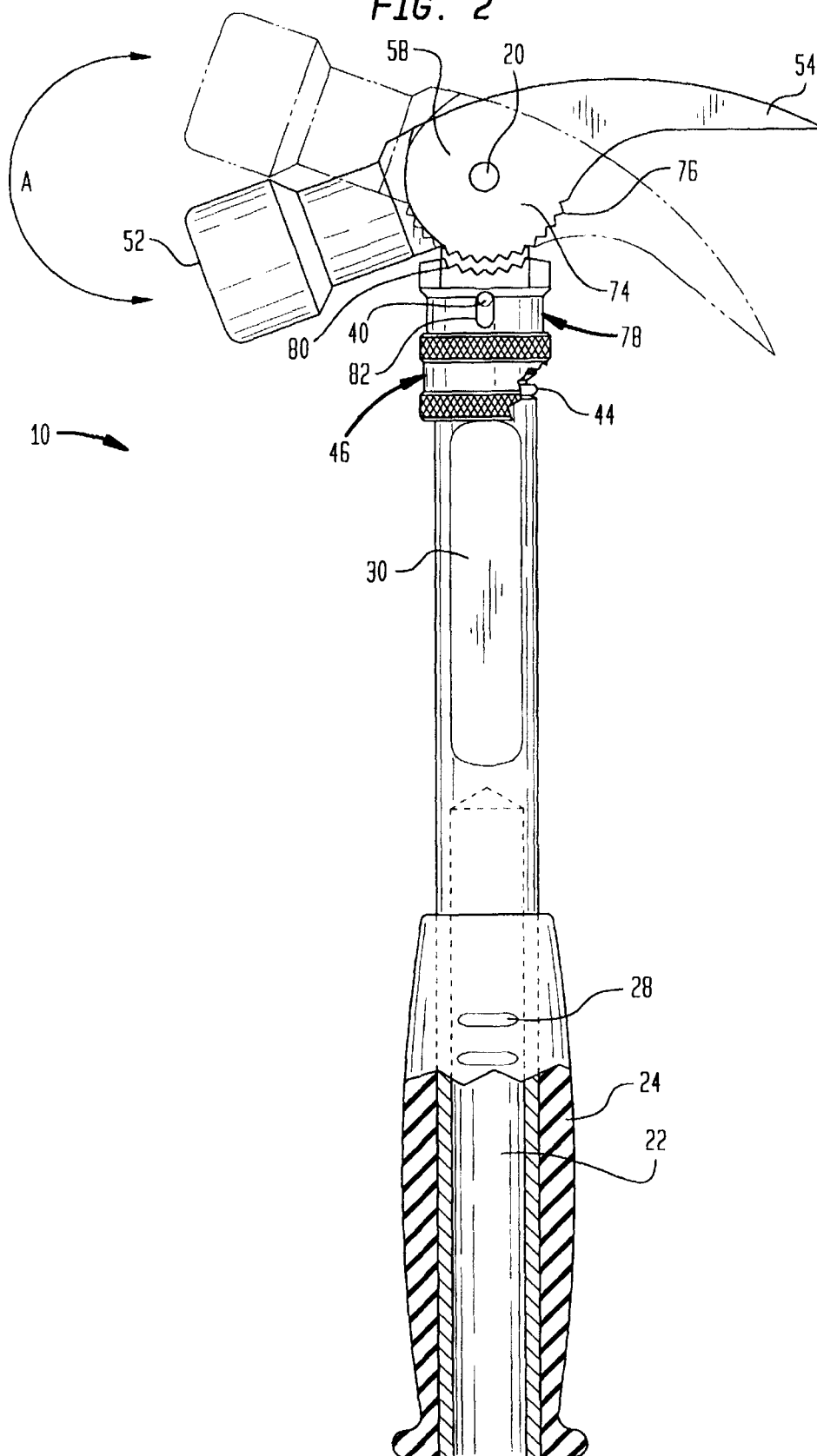
U.S. Patent

Feb. 16, 1999

Sheet 2 of 6

5,871,204

FIG. 2



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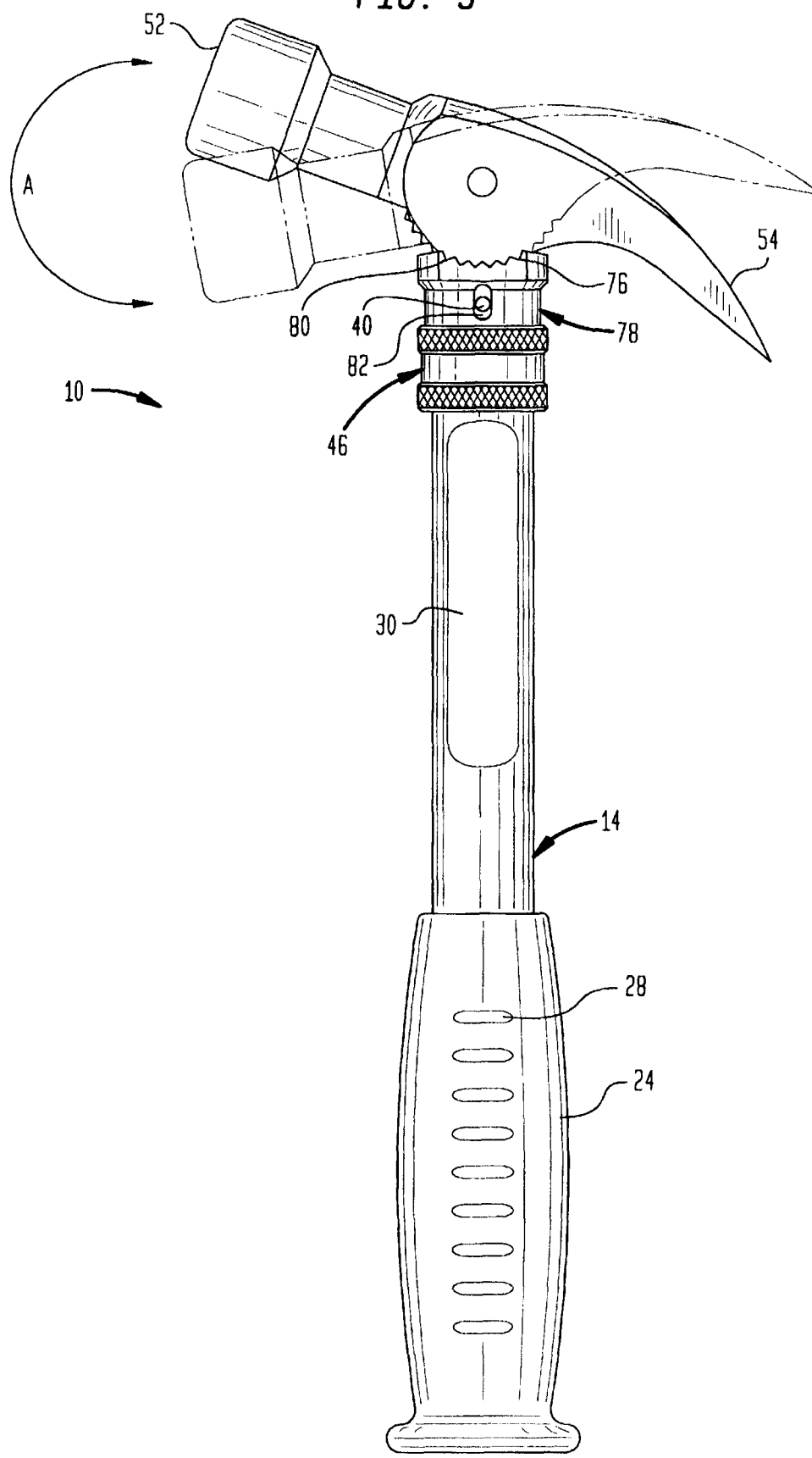
U.S. Patent

Feb. 16, 1999

Sheet 3 of 6

5,871,204

FIG. 3



then retracted away from the head 12 so that the teeth 76,80 disengage. The head 12 is then pivoted to the desired angle, afterwhich the locking collar 132 is once again turned to secure the positioning collar 78 against the head 12 to releasably engage the respective sets of teeth 76,80.

This locking collar assembly 132 can be used with the embodiment of FIGS. 4 and 5, although such assembly is preferably used with the embodiment shown in FIGS. 1-3.

It will be understood that the embodiments described herein are merely exemplary and that a person skilled in the art may make many variations and modifications without departing from the spirit and scope of the invention. All such variations and modifications are intended to be included in the scope of the invention as described herein and defined in the appended claims.

What is claimed is:

1. A hand tool comprising:

a head comprising:

- a butt portion having an intended striking surface being coaxial with a line perpendicular to the striking surface for striking an object;
- a pair of claws spaced apart for gripping the object;
- a convex portion disposed between the butt portion and the pair of claws, the convex portion having a first set of teeth formed thereon;
- a concavity extending to an interior of said head between the butt portion and the pair of claws, and having a substantially spherical shape;
- a pair of arcuate grooves separate and discrete from each other formed at opposed sides of the concavity;
- a pair of cushioning elements, each one of said pair of cushioning elements being disposed in a respective one of said pair of grooves and extending therefrom into said concavity;
- a pair of shelf portions formed in said head at opposed sides of said concavity and adjacent to said concavity;

a handle comprising:

- a first end and a second end opposed to said first end;
- a ball shape formed at said first end and constructed for being disposed in the concavity of said head;
- a first portion having a diameter less than a diameter of said ball and said handle, said first portion arranged at said first end where said ball shape joins said handle, wherein said first portion and said pair of shelf portions coact to permit the head to pivot with respect to the handle through a range of arc;
- a mounting pin connecting the head with the ball shape, the mounting pin disposed in said head intersecting a line drawn perpendicularly from the center of the striking surface of the butt portion to eliminate moments produced by blows to the striking surface;
- a guide pin extending from opposed sides of the first end of said handle;

means for positioning said head at a select angle with respect to said handle, said positioning means comprising:

- a first collar mounted to said first end of said handle in proximity to said ball shape, said first collar having a concave portion with a second set of teeth for cooperative releasable engagement with said first set of teeth along said convex portion of said head, and movable between a first position where said first and second sets of teeth are spaced apart for pivoting said head to a select position, and a second position where said first and second sets of teeth releasably engage each other for securing said head at the select angle

a cutout in said first collar for receiving said guide pin for controlling movement of said first collar along said handle;

means for securing said positioning means, comprising:

- a second collar movably mounted to said handle for coacting with said first collar to secure said first collar between said first and second positions;
- an O-ring mounted around said handle beneath said second collar for maintaining said second collar at a select position on said handle;
- grip means surrounding said handle at said second end; and

a bore in said handle extending from said second end into said handle for receiving an extension for said handle; wherein movement of said second collar from said first position to said second position disposes said second set of teeth of said securing means to releasably engage said first set of teeth of said head to coact and secure said head at a select angular position on said ball with respect to the handle.

2. A hand tool comprising:

a tool head, including:

- a rounded concavity extending to an interior of said tool head,
- a pair of arcuate grooves separate and discrete from each other formed at opposed sides of the concavity,
- a pair of cushioning elements, each one of said pair of cushioning elements being disposed in a respective one of said pair of grooves and extending therefrom into said concavity,
- a pair of shelf portions formed in said tool head at opposed sides of said concavity and adjacent to said concavity;
- a first pair of spaced arcuate toothed first fixing means extending from said tool head;

a handle, said handle having a rounded end portion receivable in said rounded concavity of said tool head such that the tool head pivots about the rounded end portion of said handle to a select angular position,

said shelf portions of said tool head coacting with a portion of said handle adjacent to said rounded end portion to limit an arc of travel of the tool head over the rounded end portion of the handle;

a securing pin connecting said tool head with said handle;

a first collar having a second pair of spaced arcuate toothed fixing means mounted to said handle, said second pair of arcuate fixing means constructed for coaction with said first arcuate fixing means; and

a second collar rotatably mounted to the handle and movable into and out of contact with said first collar for said first fixing means and said first collar to coact and secure the tool head at a select angle with respect to the handle.

3. The hand tool according to claim 2, wherein the portion of said handle adjacent to said rounded end portion is constructed with a diameter less than a diameter of the rounded end portion.

4. The hand tool according to claim 2, further comprising:

- a guide pin extending from said handle for coaction with said first collar such that said first collar is in registration for coaction with said first fixing means.

5. The hand tool according to claim 2, wherein said securing pin is disposed in said tool head to intersect a line drawn perpendicularly from a center of a striking surface of the tool head to eliminate moments induced by blows to the

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**SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIRECCIÓN DE NUEVAS CREACIONES**

2020
Bogotá, D.C.

Doctor(a)
LUIS FELIPE CASTILLO GIBSON
Apoderado.

ASUNTO	Radicación	06-118604
	Trámite	011
	Evento	379
	Actuación	519
	Oficio	
	Folios	15 - 2663

Patente de Invención	☒	Patente de Modelo de Utilidad	☐
Vía Nacional	☐		
Vía PCT (fase nacional)	☒	Cap. I	☐
		Cap. II	☒
No. Sol. Internacional		PCT/US2005/013600	
Fecha de Presentación Internal.		2005-04-21	

Como resultado del examen de fondo, realizado con fundamento en el artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le comunica:

1. Documentos estudiados

Descripción:	Folios: 4 - 22
Reivindicaciones:	Folios: 23 - 28
Dibujos:	Folios: 29- 38
Prioridad:	Se aceptó la prioridad de Estados Unidos con registro número 10/831569 de fecha 2004-04-23, según el folio 1.

El peticionario presentó una solicitud de examen de patentabilidad de acuerdo con lo estipulado por el artículo 44 de la Decisión 486. (Folios 62-63)

2. Objeto de la invención

La presente solicitud fue titulada originalmente: "Dispositivo y método para insertar, posicionar y retirar un implante", folio 1.

De acuerdo con el texto de la descripción, los dibujos y las reivindicaciones, el objeto

del hueso, y/o para reposicionar un implante en el hueso. En particular, el dispositivo puede utilizarse para insertar una varilla dentro de un hueso, retirar hacia atrás y/o retirar una varilla de un hueso, o reposicionar una varilla en el hueso". (Folio 5).

Por lo anterior para solucionar este problema la presente solicitud trata de proporcionar: reivindicaciones 1- 48, folios 23 – 28.

IPC: A61B17/58.

3. De la solicitud de Patente

Reivindicación 1, 15, 28: se sugiere incluir las referencias numéricas de cada uno de los elementos los cuales se nombran en dichas reivindicaciones, lo anterior con el fin de especificar aún más las características del dispositivo que se solicita protección. Para la reivindicación 1 se sugiere sumar características adicionales que aumenten la distinción con los documentos del estado de la técnica citados.

4. Excepción a la patentabilidad (artículo 20 D486 literal d)

La reivindicación 34 que trata del método de implantación ósea define específicamente un método quirúrgico para el tratamiento humano y que depende exclusivamente del paciente a quien se le trata con dicho elemento mediante la colocación o inserción de éste ya que la correcta ubicación y pasos consecutivos del método varían dependiendo del estado y la fisonomía de la parte del cuerpo de la persona donde va a ser colocado. Por lo anterior se concluye que dichas reivindicaciones 34-48 no son patentables y estarían dentro de las consideraciones del artículo 20 literal d) de la decisión 486 de la Comunidad Andina de Naciones.

5. Determinación del Estado de la Técnica

Teniendo en cuenta que la fecha de prioridad es el 2004-04-23, se encontraron los siguientes documentos relevantes:

Nº	Documento	Título	Fecha de Publicación
D1	US5913860 Inventor: Christopher Hargest Scholl Solicitante: Synthes	Surgical nail inserter (Insertador de clavo quirúrgico)	1999-06-22
D2	US5871204 Inventor y solicitante: Steven E, Spirer	Hand tool with adjustable head (herramienta manual con cabeza ajustable)	1999-02-16

Se anexa las páginas correspondientes a los documentos, ver folios 65-74.

6. Análisis de patentabilidad (artículo 81 D486)

Novedad y Nivel inventivo (artículo 16 y 18 D486)

Respecto a la solicitud en estudio se evaluarán las reivindicaciones independientes 1, 15, 28, 34 que se encuentran en los folios 23 – 28, y las cuales se soportan por medio de la siguiente figura:

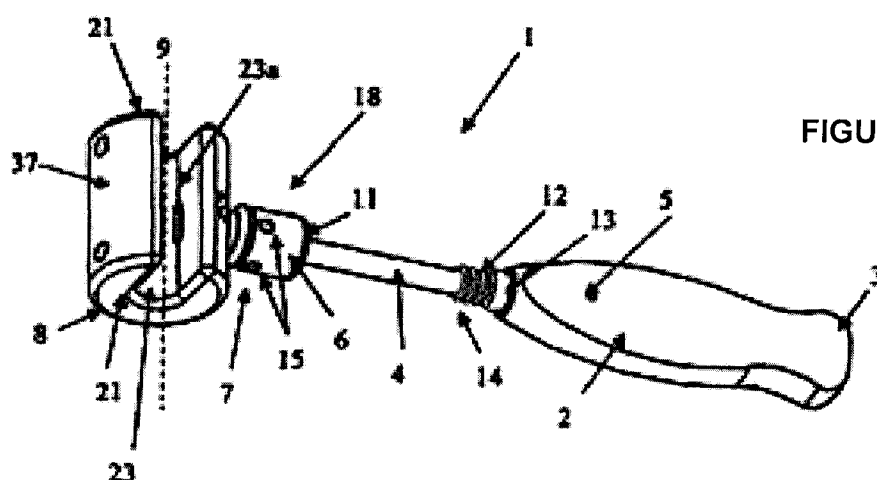


FIGURA 1

Respecto al estado de la técnica D1 divulga un dispositivo y método para la inserción y remoción de un implante de fijación en una fractura interna. El dispositivo incluye una barra de la corredera que tiene un cuerpo tubular con primero y segundos extremos y un mandril para recibir el implante, un elemento de seguridad localizado en el primer extremo de la barra de la corredera para mantener el implante en el mandril, una manija en el segundo extremo de la barra de la corredera para la manipulación del dispositivo.

D2 describe una herramienta manual con una porción de cabeza pivotante que incluye un primer collar giratorio manual que causa que el movimiento de un segundo collar deslizable a lo largo de la manipulación de la herramienta asegure la porción de cabeza en un ángulo deseado con respecto al manipulador. Las estrías en la cabeza de herramienta y el collar deslizable se enganchan para bloquear la cabeza en el ángulo deseado. La cabeza de herramienta se monta en el manipulador usando las configuraciones de la bola y del encastre o de la lengüeta y la ranura.

Análisis de las diferencias con respecto al estado de la técnica:

Teniendo en cuenta tal y como se plantea la reivindicación 1 y de acuerdo al estado de la técnica establecido en el numeral principal 5, se plantea la siguiente tabla comparativa de elementos característicos dando a entender que las contiene (SI) o que no las contiene (NO)

REIVINDICACION 1	D1	D2
1) Un dispositivo para uso con un implante óseo que comprende: un cuerpo de impactación;	SI Se cita el elemento 36 figuras 1 y 2 folios 66-67.	SI No es un dispositivo para uso con un implante pero posee un cuerpo de impactación (52) figuras 1-3 folios 71-73.
2) Un canal a través del cuerpo de impactación. el canal tiene un eje longitudinal:	SI Se cita el elemento 40 figuras 2 y 3 folio 67.	NO
3) Un vástago que tiene un extremo proximal y un extremo distal; el extremo distal del vástago está conectado al cuerpo de impactación de modo que el vástago pueda girar con respecto al cuerpo de impactación; y	SI Se cita el elementos 28, 30 y 32 conforman el vástago de dicho dispositivo y que puede girar en el punto (38), figuras 1 y 2 folios 66-67.	SI Elemento 14 figura 3 folio 73.

4) Un mecanismo de retención que tiene al menos dos posiciones de operación, una primera posición en donde el mecanismo de retención permite que el vástago gire con respecto al cuerpo de impactación y una segunda posición en donde el mecanismo de retención impide que el vástago gire con respecto al cuerpo de impactación.	NO	SI Posee un mecanismo de retención (46) que tiene dos posiciones de operación como se ilustran en las figuras 2 y 3 folios 72-73.
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El documento D1 es el estado de la técnica más cercano pero tiene la diferencia de no poseer un mecanismo de retención que tiene al menos dos posiciones de operación, una primera posición en donde el mecanismo de retención permite que el vástago gire con respecto al cuerpo de impactación y una segunda posición en donde el mecanismo de retención impide que el vástago gire con respecto al cuerpo de impactación, por tal razón el estudio anterior permitiría afirmar que la presente solicitud SI es nueva y SI cumpliría en la reivindicación 1 con lo estipulado en el artículo 16 de la Decisión 486 de la Comunidad Andina de Naciones correspondiente a novedad de la solicitud.

Como el objetivo de dicha solicitud es proporcionar un dispositivo para impactar o insertar un implante dentro de un hueso y/o para retirar hacia atrás, extraer o retirar un implante del hueso, y/o para reposicionar un implante en el hueso. En particular, el dispositivo puede utilizarse para insertar una varilla dentro de un hueso, retirar hacia atrás y/o retirar una varilla de un hueso, o reposicionar una varilla en el hueso; el documento D2 sugiere un mecanismo de retención (46) en la que mantiene dos posiciones fijas de operación girando la cabeza del martillo como se ilustran en las figuras 2 y 3 folios 72-73. Por lo que se puede disponer de tal dispositivo adicional en conjunto con el aparato del documento D1 para dar solución al problema objetivo de esta solicitud y conformar así un dispositivo para insertar, posicionar y retirar un implante.

En conclusión, con el empleo de los dos documentos: D1 y D2 que hacen parte del estado de la técnica, se proporcionan herramientas de conocimiento a una persona del oficio normalmente conocedora de la materia técnica correspondiente, para emplearlos y derivar de ellos el resultado obtenido y que se desea proteger con la presente solicitud, por tal razón la presente solicitud, en la reivindicación 1 con sus dependientes 2-14, no tiene nivel inventivo.

El estudio anterior permitiría afirmar que la solicitud NO cumpliría con lo estipulado en el artículo 18 de la Decisión 486 de la Comunidad Andina de Naciones.

Las reivindicaciones 15 y 28 tienen novedad y nivel inventivo pero se sugiere seguir las recomendaciones hechas en el numeral 3 para dejar uniforme toda la solicitud.

7. Conclusión:

Los requisitos de patentabilidad de la presente solicitud se encuentran afectados así:

N°	Documento	Reivindicaciones Afectadas	Requisito que Afecta
D1	US5913860	1-14	NIVEL INVENTIVO
D2	US5871204	1-14	NIVEL INVENTIVO

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta días contados a partir de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la circular única N° 10 de 2001.



ALIX CARMENZA CÉSPEDES DE VERGEL
Directora de Nuevas Creaciones (C).

26 FEB 2010

El anterior requerimiento fue notificado por fijación en lista, de fecha _____

CONCEPTO TÉCNICO No. 410	EXAMINADOR TÉCNICO Código No. 202083
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